



Treendale East.

DRAFT LOCAL STRUCTURE PLAN

NOVEMBER 2023



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Prepared by.



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Document Status.

In Collaboration with.



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Civil Engineering



Emerge Associates
Environment, Landscape,
Hydrology, Bushfire



Transcore
Traffic & Transport



Thompsons
Surveying



RPS Australia
Retail & Market Sustainability Assessment



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Road Acoustics

Version	Comment	Prepared	Reviewed	Issued
1	Draft client Review	DM	JH	26.09.2023
1a	Final edits	DM	JH	20.10.2023
2	City requested format modifications	DM	JH	24.11.2023

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Endorsement.

This Structure Plan is prepared under the provisions of the Shire of Harvey Local Planning Scheme No. 2.
IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN
AUSTRALIAN PLANNING COMMISSION ON

..... Date

..... Witness

..... Date

..... Date of Expiry

Table of Amendments.

No.	Summary	Date Approved by WAPC

Executive Summary.

The *Treendale East Local Structure Plan* (**Structure Plan**) has been prepared to support subdivision and development of Lots 151, 152, and 50 on the north-east corner of Forrest Highway and Raymond Road, Roelands, within the Shire of Harvey.

Purpose

This Structure Plan provides an overarching planning framework to guide and facilitate the development of 188.5 hectares of land on Lots 151 on Deposited Plan 418088, Lot 152 on DP418089, and 50 on DP421006.

The Structure Plan provides for an integrated and coordinated approach to provision of an appropriate mix of residential land uses, supporting commercial and community purposes development, and infrastructure to create a strong and vibrant new community in Bunbury's northern corridor.

Vision

The vision for Treendale East is to develop a future-ready contemporary and sustainable residential community within the Greater Bunbury area that has a distinctive identity and sense of place in response to its physical and social context.

Treendale East will provide a well-treed, pedestrian and cycle-friendly environment for residents and visitors, with the regenerated Treendale Gully as a visual and activity focal point for passive recreation and interpretation of Wardandi cultural heritage. Engagement with Wardandi elders will inform the detailed design of the waterway and foreshore remediation.

In devising a vision and preliminary design concept for Treendale East, the project team has engaged with multiple subject matter experts and service delivery agencies including the Shire of Harvey, to understand how genuinely sustainable buildings and public realm can be implemented. Ongoing engagement, goodwill, and cooperation between the developer and stakeholders will be required to achieve the genuinely innovative and successful outcomes sought.

Design Approach

The approach to design has involved a rigorous multidisciplinary process with continuous reflection upon the purpose of the Structure Plan and improving sustainability outcomes. Design principles and considerations which have informed the design approach include:

- a) Public open space allocation, including retention of quality remnant vegetation and community creation.
- b) Urban structure and place making.
- c) Movement systems and connectivity.
- d) Innovative built form.
- e) Landform and environment.
- f) Cultural heritage.

Project Overview

The Treendale East development will provide an anticipated 2,200 dwellings, which will ultimately house a new community of around 5,720 residents within a variety of lot product and dwelling types and generous public open space and streetscapes.

In addition to approximately 1,500 dwellings within the 'Domain' precinct, the Structure Plan will provide approximately 700 dwellings and compatible land uses within a survey strata 'Village' precinct, along with a Neighbourhood Centre Precinct and a Primary School with co-located Senior Playing Field. The development will focus on high quality public realm and a public open space system linked to the significant landscape feature of Treendale Gully, a tributary of the Collie River and a registered Aboriginal Heritage site.

Summary Table.

Item	Data	Reference (Section No.)
Total Structure Plan Area	188.50 ha	1.2.2 Area, Land Use & Ownership on pg 2
Area of each land use proposed: <ul style="list-style-type: none"> Residential 'Village' Neighbourhood Centre Primary School Public Open Space (Gross) Public Purpose/Service Infrastructure 	100.99 ha 30.09 ha 3.14 ha 3.50 ha 50.57 ha 0.20 ha	4.7 Land Uses on pg 47
Total Estimated Lot Yield Comprising: <ul style="list-style-type: none"> Domain Precinct Village Precinct 	2,200 (1,500) (700)	4.8.1 Bunbury-Geographe Sub-Regional Strategy on pg 49
Estimated Number of Dwellings	2,200	
Estimated Residential Site Density – Domain Precinct <ul style="list-style-type: none"> Per Gross Urban Zone Per Site Hectare 	12 Dwellings 24 Dwellings	4.8.1 Bunbury-Geographe Sub-Regional Strategy on pg 49 4.8.2 Liveable Neighbourhoods on pg 49
Estimated Population (Permanent Residents) @ 2.6/dew	5,720	4.8.1 Bunbury-Geographe Sub-Regional Strategy on pg 49
Number of High Schools	0	4.13.1 High Schools on pg 63
Number of Primary Schools	1	4.13.2 Primary Schools on pg 63
Estimated Commercial Floor Space (retail)	4,000m ² NLA	4.14.1 Overview on pg 65
Estimated Open Space and Percentage of Total Site (Number/Area/Percentage): <ul style="list-style-type: none"> Regional Open Space District Open Space Neighbourhood Parks Local Parks Conservation Bushland Riparian Corridor Landscape / Acoustic Buffer 	0 /0/ 0.0% 1 / 4.50ha / 2.97% 1 / 6.57ha / 4.34% 5 / 4.06ha / 2.68% 1 / 12.07ha / 7.96% 4 / 15.16ha / 10% 5 / 8.19ha / 5.40%	4.12 Public Open Space on pg 60
Estimated percentage of natural area (% of gross area)	50.57ha / 33.36%	4.12 Public Open Space on pg 60 4.6.5 Conservation Public Open Space on pg 46 4.6.6 Foreshore Public Open Space (Riparian Corridors) on pg 46

Key Abbreviations.

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ASS	Acid Sulphate Soils
AS	Australian Standard
BGL	Below Ground Level
BMP	Bushfire Management Plan
BORR	Bunbury Outer Ring Road
BRA	Bio-Retention Areas
CBD	Central Business District
CCW	Conservation Category Wetland
DPLH	Department of Planning, Lands & Heritage
DWER	Department of Water & Environmental Regulation
DWMS	District Water Management Strategy
EPA	Environmental Protection Authority
GBRS	Greater Bunbury Region Scheme
LDP	Local Development Plan
LILO	Left In, Left Out
LWMS	Local Water Management Strategy
LPP	Local Planning Policy
MUW	Multiple Use Wetland
OP	Operational Policy (formerly Development Control Policy)
PCA	Planning Control Area
REW	Resource Enhancement Wetland
SPP	State Planning Policy
UWMP	Urban Water Management Plan
WAPC	Western Australian Planning Commission
WAPC	Western Australian Planning Commission

Contents.

Part One - Implementation

1. Structure Plan Area	16
2. Operation	16
3. Purpose	16
4. Staging	16
5. Subdivision & Development Requirements	17
5.1 Structure Plan Map	17
5.2 Land Use Permissibility	17
5.3 Neighbourhood Centre Zone.....	17
5.3.1 Objectives.....	17
5.3.2 Density Code	17
5.3.3 Retail Floorspace.....	17
5.4 Mixed Use Zone (Village)	18
5.4.1 Objectives.....	18
5.4.2 Variation to Use Class Permissibilities in Mixed Use Zone	18
5.4.3 Density Code	18
5.5 Residential Zone (Domain).....	19
5.5.1 Dwelling Targets	19
5.5.2 Density Targets	19
5.5.3 Density Plans	19
5.6 Public Open Space	20
5.7 Road Reserves.....	21
5.8 Other reserves	21
5.9 Other requirements	21
5.9.1 Bushfire Protection.....	21
5.9.2 Noise Management	21
5.9.3 High Pressure Gas Pipeline.....	21
5.9.4 Protection or management of environmental or landscape features	22
5.9.5 Infrastructure Arrangements	22
5.9.6 Development Contributions.....	22
5.9.7 Water Resource Management.....	22
6. Local Development Plans.....	23
6.1 Prescribed Requirements.....	23
6.2 WAPC Planning Bulletin 112/2016	23
7. Additional Details	24

Part Two - Explanatory Section

1. Planning Background	2
1.1 Introduction & Purpose	2
1.2 Land Description	2
1.2.1 Location	2
1.2.2 Area, Land Use & Ownership	2
1.3 Planning Framework	5
1.3.1 Zoning & Reservations	5
1.3.2 Strategic Plans & Policies	5
1.4 Pre-Lodgement Consultation	16
2. Site Characteristics & Context	19
2.1 Context	19
2.1.1 Surrounding Land Uses	19
2.1.2 Movement Network	19
2.1.3 Existing Retail & Commercial	21
2.1.4 Employment Land	21
2.1.5 Education Facilities	21
2.1.6 Open Space & Reserves	21
2.1.7 Service Infrastructure	21
2.1.8 Powerline Easement	23
2.1.9 Natural & Manmade Drainage	23
2.1.10 Residential Land Supply	24
2.2 Biodiversity & Natural Area Assets	24
2.2.1 Flora	24
2.2.2 Reserves & Conservation Areas	25
2.2.3 Fauna	25
2.3 Landform & Soils	26
2.3.1 Topography	26
2.3.2 Soils	26
2.3.3 Geotechnical	26
2.3.4 Acid Sulphate Soils	27
2.3.5 Views	27
2.4 Surface & Groundwater	27
2.4.1 Surface Water	27
2.4.2 Groundwater	27
2.4.3 Wetlands	28
2.4.4 Flooding & Inundation Risk	28
2.5 Bushfire Hazard	28
2.6 Heritage	28
2.6.1 Aboriginal Heritage	28
2.6.2 Non-Indigenous Heritage	28
2.7 Noise Impact	29

3. Opportunities & Constraints.....	31
4. Structure Plan Proposal.....	33
4.1 Structure Plan Objectives	33
4.2 Design Philosophy	33
4.2.1 Context and character.....	33
4.2.2 Landscape quality.....	34
4.2.3 Built form and scale.....	34
4.2.4 Functionality and build quality.....	34
4.2.5 Sustainability.....	34
4.2.6 Amenity.....	35
4.2.7 Legibility.....	35
4.2.8 Safety.....	35
4.2.9 Community.....	35
4.2.10 Aesthetics	35
4.3 Urban Design Response	36
4.3.1 Domain Precinct	38
4.3.2 Village Precinct (mixed use)	39
4.4 Green Streets	40
4.5 Quiet Streets	41
4.6 Landscape Strategy	45
4.6.1 Linear Open Space.....	45
4.6.2 Neighbourhood & Local Parks.....	45
4.6.3 Playing Fields.....	45
4.6.4 Civic.....	46
4.6.5 Conservation Public Open Space	46
4.6.6 Foreshore Public Open Space (Riparian Corridors)	46
4.6.7 Buffer	46
4.6.8 Streetscapes	47
4.7 Land Uses.....	47
4.7.1 Land Use Permissibility.....	48
4.8 Dwelling Forecasts	49
4.8.1 Bunbury-Geographe Sub-Regional Strategy.....	49
4.8.2 Liveable Neighbourhoods.....	49
4.9 Residential Densities.....	50
4.9.1 Residential R25 and R30.....	50
4.9.2 Residential R40.....	50
4.9.3 Residential R60 and R80.....	51
4.10 Local Development Plans.....	52
4.10.1 RMD Codes.....	52
4.10.2 Prescribed Requirements.....	52
4.10.3 Neighbourhood Centre Zoned Land	52
4.10.4 Village Precinct	53

4.11 Movement Network	53
4.11.1 Proposed Road Network.....	53
4.11.2 Public Transport.....	55
4.11.3 Pedestrians & Cyclists	55
4.12 Public Open Space	60
4.13 Education & Community Facilities.....	63
4.13.1 High Schools.....	63
4.13.2 Primary Schools	63
4.13.3 Community Facilities.....	63
4.14 Activity Centres	65
4.14.1 Overview	65
4.14.2 Neighbourhood Activity Centre.....	66
4.15 Water Management	68
4.15.1 Water Management Strategy.....	68
4.16 Infrastructure Servicing & Staging	69
4.16.1 Earthworks.....	69
4.16.2 Drainage.....	69
4.16.3 Sewer.....	69
4.16.4 Water.....	69
4.16.5 Power.....	69
4.16.6 Gas.....	69
4.16.7 Telecommunications.....	70
4.16.8 Primary Road Infrastructure Funding	70
4.16.9 Staging and Implementation	70
4.17 Development Contribution Arrangements.....	70
5. Technical Appendices Index.....	71

Plans.

<i>Plan 1. Treendale East Structure Plan.....</i>	<i>25</i>
<i>Plan 2. Public Open Space Provision</i>	<i>26</i>

Figures Part One.

<i>Figure 1 - 1. Integrator Arterials & Neighbourhood Connectors.....</i>	<i>28</i>
<i>Figure 1 - 2. Neighbourhood Connector B, Access Streets A, C & D</i>	<i>29</i>
<i>Figure 1 - 3. Access Street D alternatives, Laneways.....</i>	<i>30</i>

Figures Part Two.

<i>Figure 1. Location.....</i>	<i>3</i>
<i>Figure 2. Aerial Photograph & Land Ownership</i>	<i>4</i>
<i>Figure 3. GBRS Zoning.....</i>	<i>6</i>
<i>Figure 4. Shire of Harvey LPS 2 Zoning.....</i>	<i>7</i>
<i>Figure 5. Bunbury-Geographe Sub-regional Strategy Map</i>	<i>17</i>
<i>Figure 6. Shire of Harvey Local Planning Strategy Map - Roelands.....</i>	<i>18</i>
<i>Figure 7. District Context</i>	<i>20</i>
<i>Figure 8. School Catchments Plan</i>	<i>22</i>
<i>Figure 9. Noise Exposure Level.....</i>	<i>30</i>
<i>Figure 10. Opportunities & Constraints.....</i>	<i>32</i>
<i>Figure 11. Concept Master Plan.....</i>	<i>37</i>
<i>Figure 12. Green Street Concept</i>	<i>40</i>
<i>Figure 13. Quiet Streets Overview</i>	<i>42</i>
<i>Figure 14. Quiet Street 'Choker Green'</i>	<i>43</i>
<i>Figure 15. Quiet Street 'Choker'</i>	<i>43</i>
<i>Figure 16. Quiet Street 'Choker' 20 metre wide reserve.....</i>	<i>44</i>
<i>Figure 17. Quiet Street 'Cul-de-sac'</i>	<i>44</i>
<i>Figure 18. Indicative Road Hierarchy.....</i>	<i>56</i>
<i>Figure 19. Higher Order Road Network Cross-Sections.....</i>	<i>57</i>
<i>Figure 20. Middle Order Road Network Cross-Sections</i>	<i>58</i>

Figure 21. Lower Order Road Network Cross-Sections & Regional Road Interfaces	59
Figure 22. Public Open Space Provision	61
Figure 23. Primary School & Senior Playing Field	64
Figure 24. Indicative Neighbourhood Centre Concept	67

Tables Part One.

Table 1 - 1. Retail Floorspace	17
Table 1 - 2. Additional Use Class Permissibilities to Local Planning Scheme – Mixed Use Zone	18
Table 1 - 3. Density Locational Criteria	19
Table 1 - 4. Road Hierarchy	21
Table 1 - 5. Other Reserves	21
Table 1 - 6. Additional Information Requirements	24
Table 1 - 7. Studies to be Required as a Condition of Subdivision or Development Approval	24

Tables Part Two.

Table 1. Title Details	2
Table 2. Planning Framework	8
Table 3. Pre-Lodgement Consultation	16
Table 4. Unmodified Soil Classes	27
Table 5. Land Use Composition (Rounded)	47
Table 6. Proposed Mixed Use zone permissibility	48
Table 7. Comparative Directions 2031 Targets	49
Table 8. Public Open Space Summary	62



Part One Implementation

**TREENDALE EAST
LOCAL STRUCTURE PLAN**

1. Structure Plan Area

This Structure Plan applies to parts of Lots 151, 152, and 50 on Deposited Plans 418088, 410889, and 421006 respectively, being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan Map (**Plan 1**).

The Structure Plan is identified as the **Treendale East Local Structure Plan**.

2. Operation

This Structure Plan comes into effect on the date shown on the cover and for a period of ten years.

The Structure Plan is to be given due regard when considering development or subdivision applications. Other instruments informing implementation of the Structure Plan include State Planning Policies (**SPPs**) the Greater Bunbury Region Scheme (**GBRS**) and policies, the Shire of Harvey's operative Local Planning Scheme (**LPS**) and local planning policies (**LPPs**).

3. Purpose

The Structure Plan provides for an integrated and coordinated approach to provision of an appropriate mix of residential land uses, supporting commercial and community purposes development, and infrastructure to create a strong and vibrant new community in Bunbury's northern corridor.

4. Staging

The development of the Structure Plan Area will be implemented in stages. The exact timing, location and composition of the future stages will be dependent on market demand and detailed design, however it is projected to be a 15 – 20 year project based on 100 lots sold per annum.

Staging will commence in the south-central and south-western portions of the estate fronting Raymond Road so to utilise existing services and road infrastructure. A Display Village, Sales Office and 'first release' residential land (i.e. 100 – 150 lots) is expected to be within the first stage. Subsequent stages will be constructed from south to north, spanning west then east, for efficient incremental advancement of road and service infrastructure.

A comprehensive program for provision of traffic intersections with Raymond Road and Forrest Highway will be prepared as part of ongoing detailed planning and design of service infrastructure. The early construction of the Forrest Highway (left-in/left-out) access will be influenced by peak traffic demands at the Raymond Road main intersection. The eastern-most left-in/left-out access off Raymond Road will be retained to service an existing farming property, and to offer interim secondary access for fire and emergency services.

Staging of the Neighbourhood Centre zone will be subject to the development's commercial catchment viability. Some aspects of the Neighbourhood Centre zone may see early development without prejudicing the site's overall built form and social objectives. The same may apply to the Mixed Use zone (Village Precinct) whereby early demand for tourism, lifestyle, or other complementary land uses may see development of this precinct concurrent with the initial residential stages. The progress of this precinct is not reliant on advancement of the residential (Domain) precinct other than construction of the Raymond Road main entry.

Development of the primary school is subject to local demand, namely more than 1,000 residential lots, pursuant to Department of Education policy frameworks. It is expected that the District parkland (playing field) will be developed ahead of the primary school.

5. Subdivision & Development Requirements

5.1 Structure Plan Map

Plan 1. Treendale East Structure Plan designates proposed zones and reserves in the Structure Plan area in accordance with Schedule 1, cl. 16(1A) of the Regulations; this to guide decision making for subdivision development in the Treendale East area.

5.2 Land Use Permissibility

Land use permissibility within the Structure Plan area is to be in accordance with the corresponding zone or reserve under the operative Shire of Harvey Local Planning Scheme ('the Scheme') unless otherwise varied under the Structure Plan zones below.

5.3 Neighbourhood Centre Zone

5.3.1 Objectives

The objectives for this zone are:

- a) To provide a diverse range of land uses to meet the daily and weekly needs of residents and to promote tourism/in-transit activity, including inter alia:

Shop	Restaurants/Cafe	Hotel or Tavern
Office	Consulting Rooms	Holiday Accommodation
Medical Centre	Motel	Brewery (small)

- b) To provide street block and lot sizes which support the future role, character, and purpose.
- c) To provide buildings and structures that respond to neighbourhood character and scale to promote a genuine sense of place and contribute to a safe, inclusive, and pedestrian friendly environment.

5.3.2 Density Code

A density code of R80 shall apply to any residential dwellings within the Neighbourhood Centre Zone.

5.3.3 Retail Floorspace

Retail floorspace or Nett Lettable Area (NLA) within the Structure Plan Area will generally be in accordance with **Table 1 - 1. Retail Floorspace**.

The maximum NLA included in **Table 1 - 1. Retail Floorspace** may be exceeded through a Local Development Plan for the entire centre where the requirements of *State Planning Policy 4.2 - Activity Centres* are met to the satisfaction of the WAPC and the Shire of Harvey.

Table 1 - 1. Retail Floorspace

Land Use	Maximum Nett Lettable Area (NLA)
Neighbourhood Activity Centre	4,000m ²

5.4 Mixed Use Zone (Village)

5.4.1 Objectives

The objectives for this zone are:

- a) To provide a diverse range of land uses to meet resident and tourism needs and activities, including inter alia:

Shop	Restaurants/Cafe	Holiday Accommodation
Convenience Store	Club Premises	Market
Park Home Park	Car Park	Residential Aged Care
Recreation – Private	Single/Grouped/Multiple Dwellings	Tourist Development
Independent Living Complex	Caravan Park	Bed and Breakfast
Holiday House	Home Office	Restaurant/café

- b) To provide street block, lot sizes and road cross-sections which support the future role, character, and purpose;
- c) To provide buildings and structures that respond to neighbourhood character and scale to promote a genuine sense of place and contribute to a safe, inclusive, and pedestrian friendly environment.

5.4.2 Variation to Use Class Permissibilities in Mixed Use Zone

Additional uses may be considered within the Mixed Use zone, to support its land use objectives, as provided in **Table 1 - 2. Additional Use Class Permissibilities to Local Planning Scheme – Mixed Use Zone**.

Table 1 - 2. Additional Use Class Permissibilities to Local Planning Scheme – Mixed Use Zone

Use Class	Structure Plan
Holiday Accommodation	D
Holiday House	D
Home Business	D
Home Occupation	P
Park Home Park	D
Single House	D
Small Bar	D
Tavern	D
Tourist Development	D
Storage	D*

*Rationale: The proponent is considering the development of a caravan/trailer parking and storage facility within the powerline easement. By including this use class as a 'D' use, the design details and suitability of any such proposal can be assessed at development application stage.

5.4.3 Density Code

A density code of R30 - R80 shall apply to any residential development within the Mixed Use Zone in accordance with **5.5 Residential Zone (Domain)**.

5.5 Residential Zone (Domain)

5.5.1 Dwelling Targets

The subdivision of land zoned **Residential** should aim to achieve a density of approximately 15 dwellings per gross urban hectare, or 22 dwellings per site hectare, in accordance with State strategic targets.

5.5.2 Density Targets

Residential density will be within ranges of R25 – R60 (Domain) and R30 - R80 (Village). The allocation of a specific residential density code to a lot shall be consistent with the residential density range identified on the Structure Plan map and the locational criteria specified in **Table 1 - 3. Density Locational Criteria**.

Table 1 - 3. Density Locational Criteria

Density Code	Locational Criteria
R25 (R-MD)	The base residential density code shall be R25 unless an R30, R40 or R60 residential density code is applied in accordance with the locational criteria set out below.
R30 (R-MD)	An R30 residential density may function as the base code where: <ul style="list-style-type: none">• minimum lot sizes are less than that prescribed for the R25 density code under Table 1 of the Residential Design Codes – Volume 1; .or• a desired streetscape outcome is proposed at the time of detailed subdivision design. To apply as the base code within the ‘Village’.
R40 (R-MD)	An R40 residential density code may only be applied where a lot is: <ul style="list-style-type: none">• provided at the end of a street block and/or with rear laneway access; and/or• located within 100 metres (walking distance) of public open space, community nodes, and/or key distributor roads.
R60 (R-MD)	An R60 residential density code may only be applied where a lot is: <ul style="list-style-type: none">• contiguous with R60 lots with a combined minimum area of 1,000m²• located at the end of a street block with direct frontage to two intersecting roads, and/or with rear laneway access; and• located adjacent to (that is, separated by no more than a constructed and dedicated public road) public open space; or• located abutting a key public transport node or route.
R80	An R80 residential code may only be applied where a lot is: <ul style="list-style-type: none">• contiguous with R80 lots with a combined minimum area of 1,000m²; and• addressing the criterion stipulated in ii. – iv. under the R60 density code; or• land zoned Neighbourhood Centre in the Structure Plan.

5.5.3 Density Plans

- A residential density code plan is to be submitted to the WAPC at the time of subdivision, unless exempt from this requirement by **clause 5.5.3 d)** of this Structure Plan. This plan is to identify the residential density code applicable to each proposed lot, in accordance with the locational criteria set out in **Table 3. Pre-Lodgement Consultation**.
- The residential density code plan is to include a summary of the proposed dwelling yield and demonstrate how the targets, as specified in Sections **5.5.1 Dwelling Targets** of this Part and **4.8 Dwelling Forecasts on pg 49** of Part Two, are progressively being achieved.

- c) The WAPC is to determine the residential density code plan together with the related subdivision application. If approved, the residential density code plan will then form part of the Structure Plan and shall be used to assess and determine any future applications for development approval.
- d) A residential density code plan is not required if the purpose of the subdivision application is to:
 - i. Amalgamate lots;
 - ii. Create a lot or lots for the purposes of facilitating the provision of access, services, or infrastructure;
 - iii. Create a lot or lots which cannot be developed for residential purpose; or
 - iv. Create residential lots in accordance with a previously approved residential density code plan.
- e) As each stage of subdivision is finalised and a deposited plan depicting the lot(s) is submitted to the WAPC for its endorsement, a consolidated residential density code plan is to be prepared and forwarded to the local government and WAPC, and this shall supersede each previous residential density code plan(s).

5.6 Public Open Space

- a) The Structure Plan (***Plan 1. Treendale East Structure Plan***) nominates a provisional area of 46.476 hectares as creditable Public Open Space. The proposed Public Open Space meets the minimum 10% requirement as outlined in Public Open Space Provision/Schedule (***Plan 2. Public Open Space Provision***) and Part Two (Explanatory Section) of this report.
- b) A progressive Public Open Space schedule is to be provided at the time of subdivision for determination by the WAPC with advice from the Shire of Harvey.

5.7 Road Reserves

The proposed hierarchy of roads is depicted on **Plan 1. Treendale East Structure Plan** and summarised in **Table 1 - 4. Road Hierarchy**.

Indicative cross-sections are provided in **Figure 1 - 1. Integrator Arterials & Neighbourhood Connectors**, **Figure 1 - 2. Neighbourhood Connector B, Access Streets A, C & D** and **Figure 1 - 3. Access Street D alternatives, Laneways**.

Table 1 - 4. Road Hierarchy

Road type	Indicative Reserve widths
Integrator Arterial	30.0 – 31.5 metres
Neighbourhood Connector A	31.5 metres
Neighbourhood Connector B	19.5 – 26 metres
Access Street A	21 – 26 metres
Access Streets C & D	13.0 – 20.0 metres
Laneways	6 metres

5.8 Other reserves

Plan 1. Treendale East Structure Plan indicates the other reserves proposed, summarised in **Table 1 - 5. Other Reserves**.

Table 1 - 5. Other Reserves

Reserve	Description
Foreshore	Comprises two riparian corridors within a 15.16ha total land area. These sites will be subject to a Foreshore Management and/or Revegetation Plan.
Primary School	1 site of 3.5ha co-located with a District Public Open Space (playing fields).
Public Purpose – Water Corporation	2 pump station sites comprising 1,000m ² each.

5.9 Other requirements

5.9.1 Bushfire Protection

Residential lots identified within the Bushfire Prone Area as designated under the Department of Fire and Emergency Services Mapping of Bushfire Prone Areas and indicated on **Plan 1. Treendale East Structure Plan** will require a Bushfire Attack Level assessment to be undertaken at subdivision stage.

5.9.2 Noise Management

A Detailed Noise Management Plan is to be prepared and implemented in accordance with *State Planning Policy 5.4 - Road and Rail Noise* and the associated implementation guidelines for lots identified as affected by noise from Forrest Highway and the Bunbury Outer Ring Road.

5.9.3 High Pressure Gas Pipeline

Applications for subdivision or development approval abutting or involving works within a high-pressure gas pipeline corridor are to be accompanied by a pipeline risk management plan.

5.9.4 Protection or management of environmental or landscape features

- a) The riparian corridor is to be subject to a Foreshore Management and/or Revegetation Plan.
- b) Following Shire of Harvey approval of the foreshore management and/or revegetation plan, in consultation with relevant environmental agencies (as applicable), a Bushfire Attack Level Contour Plan is to be prepared that reflects the outcomes required by the plan and determines any bushfire risks and potential impacts on the adjoining residential zoned land.

5.9.5 Infrastructure Arrangements

Road Infrastructure

Subject to agreement with Main Roads WA, in consultation with WAPC and Shire of Harvey, the proponent is to arrange funding contribution towards, or construction of (as works in kind), primary regional road intersections, including:

- a) Four-way roundabout intersection of Raymond Road, (southern) Estate entry and Ronson Drive.
- b) Left-in/Left-out intersection of Forrest Highway and (north-western) Estate entry road.
- c) Left-in/Left-out intersection of Raymond Road and (south-eastern) Estate entry road.
- d) Three-way T-intersection of Raymond Road and Forrest Highway.

Utility Upgrades

The delivery of sewer pump stations, in accordance with Water Corporation catchment planning requirements, are to be installed in the following locations:

- a) Adjacent the north-western portion of the District POS 3 (playing fields); and
- b) Adjacent the southern portion of Neighbourhood POS 4.

5.9.6 Development Contributions

A development contribution plan is not required as the whole of the Structure Plan area is to be developed by a single entity.

A private deed of agreement between the proponent and Shire, to contribute towards required community infrastructure, may be considered in addition to Local, State or Federal funding arrangements.

5.9.7 Water Resource Management

Management of water resources is to comply with the requirements of an approved Local Water Management Strategy.

6. Local Development Plans

6.1 Prescribed Requirements

Local development plan(s) are to be prepared as a condition of subdivision in the following situations:

- a) Lots designated as **Neighbourhood Centre** zone to address the following:
 - i. The creation of a main street environment that encourages pedestrian movement through provision of footpaths, carriageway treatments, continuous shade tree canopy on both sides, good lighting of the public realm, and embayed parking;
 - ii. Provision of a plaza/civic space, as appropriate to the neighbourhood scale, adjacent to the main street;
 - iii. Built form that suitably addresses and frames surrounding streets by providing:
 - A minimum two-storey height (as constructed or perceived from public view) with nil or minimal setback to the street boundary;
 - Active frontages with no blank facades and having windows and entrances accessible or visible from the street or public realm and use of glazing to provide visual engagement with the street;
 - Weather protection in the form of continuous awnings and/or colonnades along public frontages; and
 - Visual interest through the use of building articulation, a mixture of appropriate materials, and architectural features to emphasise street corners where applicable.
 - iv. Car parking provided on-street with any additional parking areas located behind buildings and predominantly screened from the main street; and
 - v. Landscaping and/or other treatments to address the visual and acoustic interface with any adjoining residential areas.
- b) Lots affected by noise which exceeds the noise target defined by State Planning Policy 5.4 Road and Rail Noise, to address quiet house design in accordance with the Acoustic Assessment prepared under this Structure Plan.
- c) Lots immediately adjacent to public open space, to address:
 - i. Built form orientation;
 - ii. The provision of visually permeable uniform fencing; and
 - iii. Window openings from habitable rooms to overlook public open space and the street as applicable.
- d) Any other lots identified under a Plan of Subdivision that fulfil the objectives of the Framework for Local Development Plans pursuant to Part 6 of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

6.2 WAPC Planning Bulletin 112/2016

A Local Development Plan is not required to vary 'Deemed to Comply' provisions of the Residential Design Codes where such variations are adopted under relevant Shire Policy or consistent with WAPC Planning Bulletin 112/2016 *Medium-density single house development standards – Structure Plan Areas*.

7. Additional Details

The additional information required and the stage at which it is to be provided is summarised in **Table 1 - 6. Additional Information Requirements**. Studies or plans that will be required as a condition of subdivision or development approval are identified in **Table 1 - 7. Studies to be Required as a Condition of Subdivision or Development Approval**

Table 1 - 6. Additional Information Requirements

Additional Information/ Purpose	Approval Stage	Responsible Agency
Density Plans	Subdivision application	WAPC Shire of Harvey
Public Open Space Schedule	Subdivision application	WAPC Shire of Harvey
Detailed Noise Management Plan	Subdivision application	Shire of Harvey
Bushfire Management Plan	Subdivision application, or development application for identified lots.	Shire of Harvey Department of Fire & Emergency Services

Table 1 - 7. Studies to be Required as a Condition of Subdivision or Development Approval

Additional Information	Responsible Agency
Detailed Noise Management Plan	Shire of Harvey
Bushfire Attack Level Assessment	Shire of Harvey
Urban Water Management Plan	Shire of Harvey
Foreshore Management Plan	Shire of Harvey
Local Development Plan	Shire of Harvey
Green Street and Quiet Street strategy/ies	Shire of Harvey
Gas Pipeline Risk Management Plan, as required	ATCO

STRUCTURE PLAN LEGEND

LOCAL SCHEME ZONES

- RESIDENTIAL
- NEIGHBOURHOOD CENTRE
- MIXED USE (VILLAGE)
- PUBLIC PURPOSES PS (PRIMARY SCHOOL)
- RECREATION (PUBLIC OPEN SPACE)
- CONSERVATION VALUES
- LOCAL NEIGHBOURHOOD DRAINAGE

GREATER BUNBURY REGION SCHEME ZONES

- PRIMARY REGIONAL ROADS
- FUTURE PRIMARY REGIONAL ROADS
- PUBLIC PURPOSES WC (WATERCORP)

LAND USE PLANNING ELEMENTS THAT INFORM THE STRUCTURE PLAN

- STRUCTURE PLAN BOUNDARY
- RESIDENTIAL DENSITY RANGE BOUNDARIES
- PRINCIPAL SHARED PATH
- LOCAL DEVELOPMENT PLAN REQUIRED
- EXISTING GAS PIPELINE EASEMENT
- REALIGNED 132kV POWERLINE EASEMENT, PYLONS
- CONSTRUCTION OR CONTRIBUTION TOWARDS INTERSECTION UPGRADE

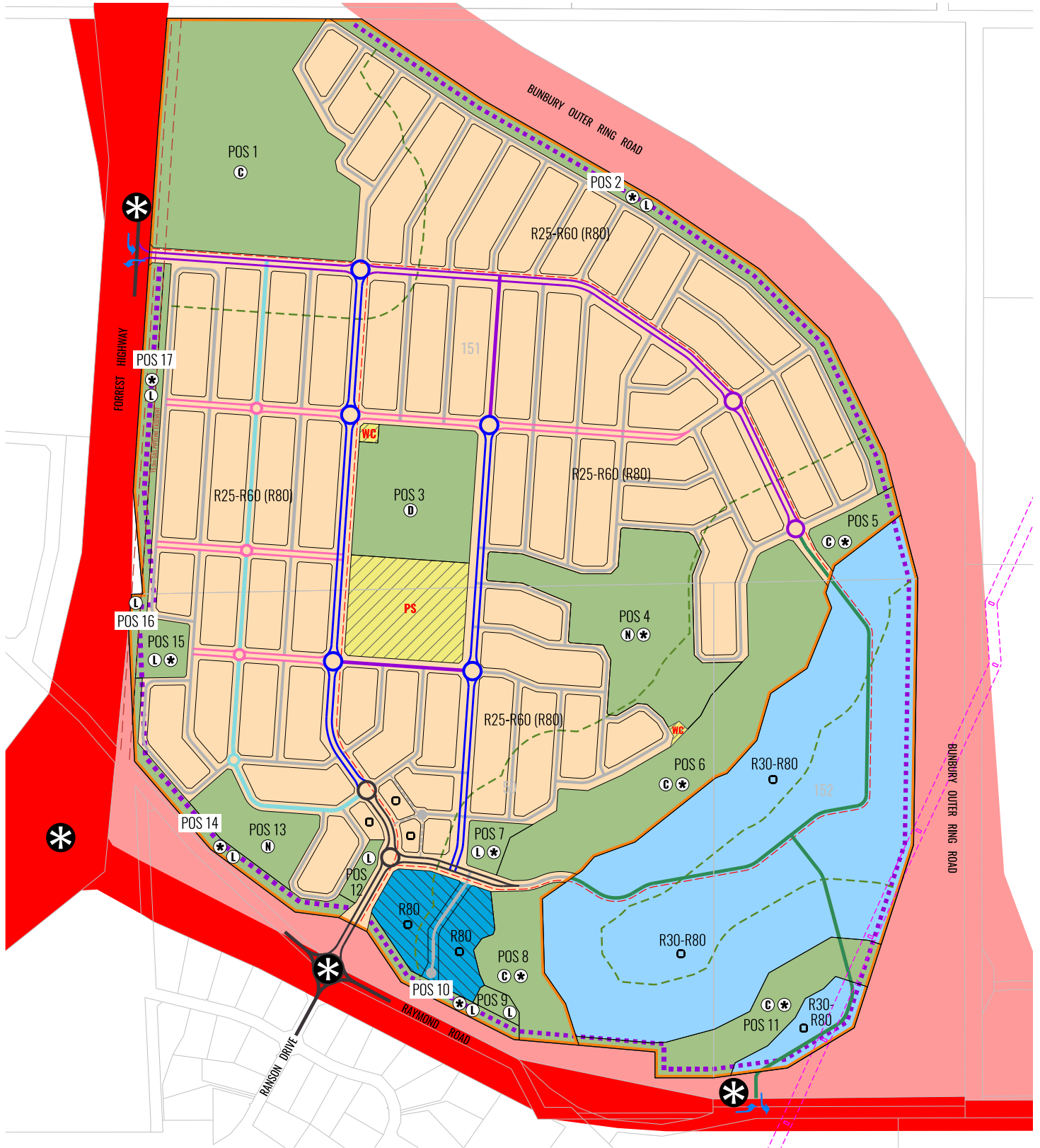
LEFT IN/LEFT OUT INTERSECTION

- ACQUSTIC CONSIDERATIONS (SPP 5.4)

- LOTS WITHIN 100m OF "CLASSIFIED VEGETATION" AND SUBJECT TO BUSHFIRE ATTACK LEVEL ASSESSMENT, REFER BUSHFIRE MANAGEMENT PLAN AND ANY SUBSEQUENT BAL ASSESSMENTS.

ROAD HIERARCHY

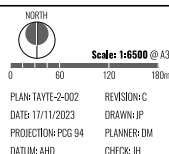
- INTEGRATOR ARTERIAL B
- NEIGHBOURHOOD CONNECTOR A
- NEIGHBOURHOOD CONNECTOR B
- ACCESS STREET A
- ACCESS STREET C
- ACCESS STREET D
- LANEWAY
- VILLAGE - COMMUNAL ROAD B



TREENDALE EAST STRUCTURE PLAN - PLAN 1

Lots 151, 152 & 153 Raymond Road, TREENDALE

A Taycot Development Project



Unit 2, 464 Murray Street
Perth WA 6000
(08) 6333 1888
info@cdpaus.com.au
www.cdpaus.com.au

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LEGEND

- SUBJECT SITE
- PUBLIC OPEN SPACE
- FUNCTION:
- C CONSERVATION VALUES
 - L LOCAL
 - N NEIGHBOURHOOD
 - D DISTRICT
 - * DRAINAGE

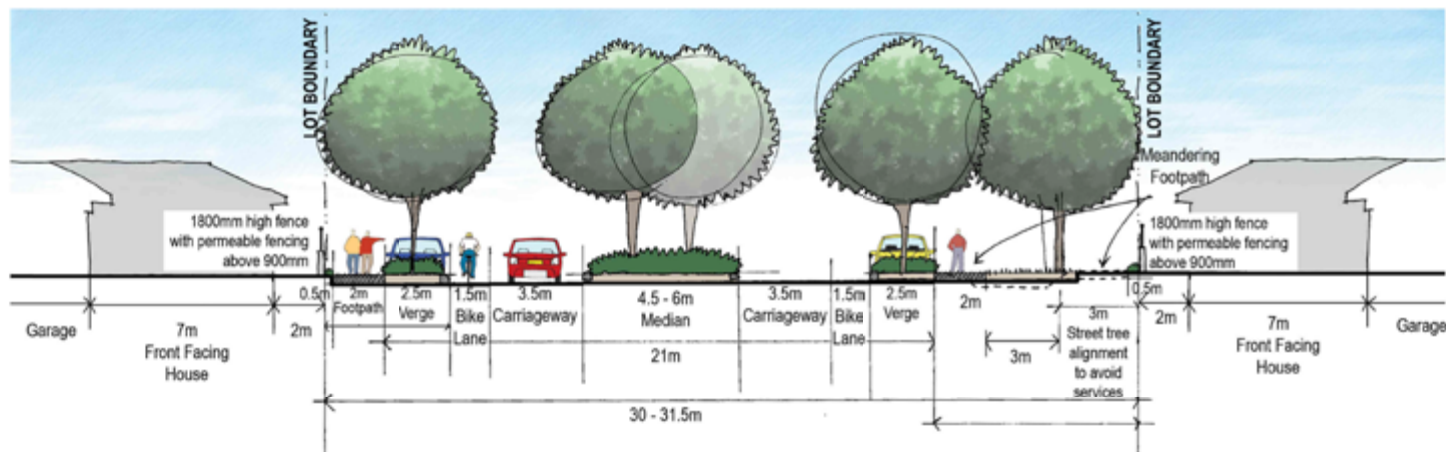


Plan 2. Public Open Space Provision

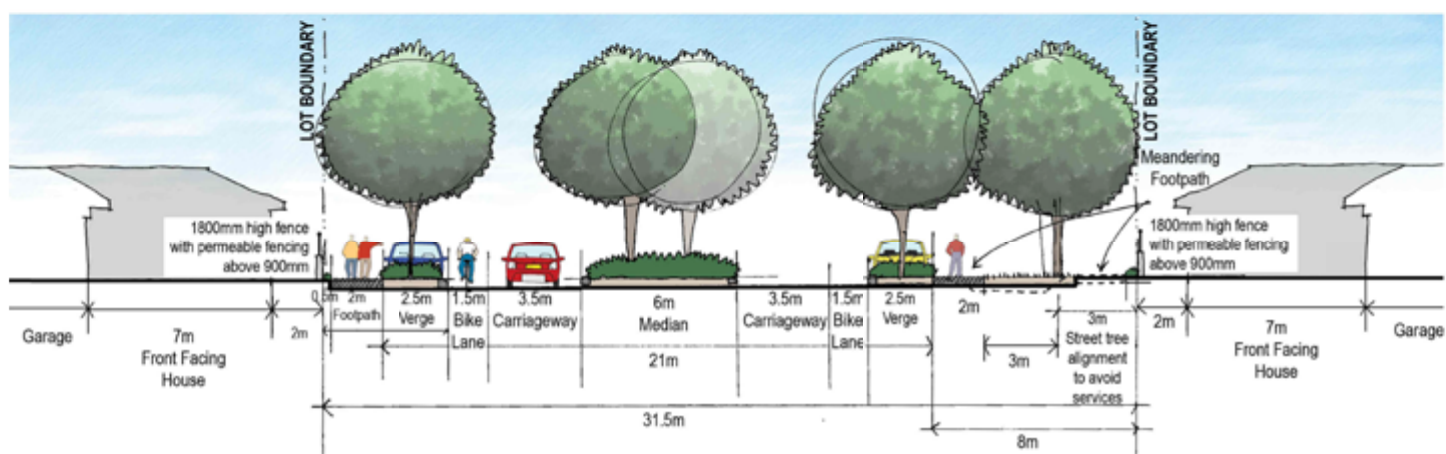
PUBLIC OPEN SPACE SCHEDULE	
Area	
GROSS SITE AREA (Hectares)	188.500
Minus GBRS (Non-Urban) Deductions	
Total GBRS (Non-Urban) Deductions	0.000
Gross Urban Zone Are	188.500

Minus Non-Residential Deductions (Hectares)		
Primary School	3.503	
Village Precinct (NB. Communal Open Space TBA)	30.090	
Neighbourhood Centre - West Site	1.518	
Neighbourhood Centre - East Site	1.626	
Sewer Pump Station Site	0.100	
Dedicated drainage reserve	1.072	
Total Non-Residential Deductions		37.909
Gross Subdivisible Area		150.591

Drainage Provision & Creditable Open Space - Breakdown					
		Non-Credit	Restricted POS	Unrestricted Open Space (drainage)	Total Credited Open Space
POS Reference	Gross Area	(Deduction) First 15mm Drainage Area (ha)	Flood Storage Area (First 15mm - 20% AEP) (ha)	Flood Storage Area (20% - 1% AEP) (ha)	Combined (ha)
1	12.0697	-	-	-	12.070
2	3.8121	0.1455	-	-	3.667
3	4.5039	-	-	-	4.504
4	6.5742	0.2240	2.2762	0.2303	3.844
5	0.9987	-	0.5003	0.0117	0.487
6	8.2304	0.1930	-	-	8.037
7	0.5980	0.0770	-	-	0.521
8	2.6145	-	-	-	2.615
9	0.2758	-	-	-	0.276
10	0.8260	-	-	-	0.826
11	3.3218	-	-	-	3.322
12	0.3392	-	-	-	0.339
13	1.9892	-	-	-	1.989
14	1.3407	0.1944	-	-	1.146
15	0.8592	0.0346	-	-	0.825
16	0.2370	-	-	-	0.237
17	1.9760	0.2030	-	-	1.773
Total	50.5664	1.072	2.77	0.242	46.476
POS Above 10% Contribution					31.659

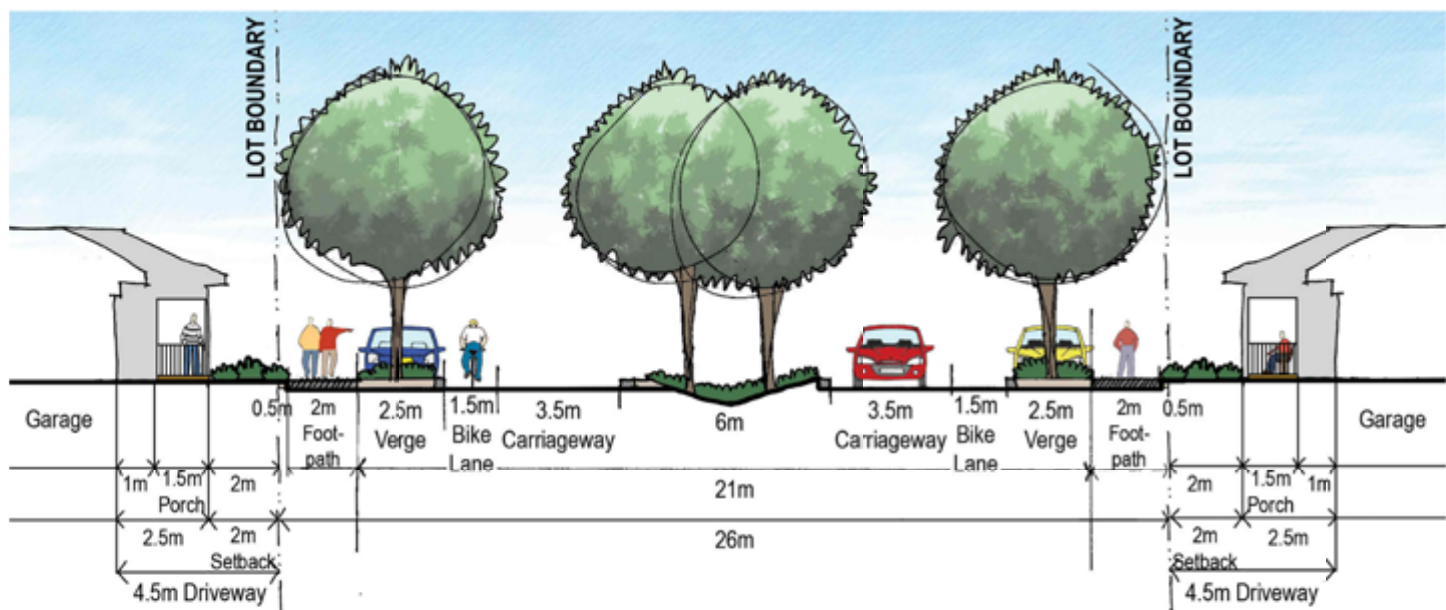


INTEGRATOR ARTERIAL B (30 - 31.5m)



NEIGHBOURHOOD CONNECTOR A (31.5m)

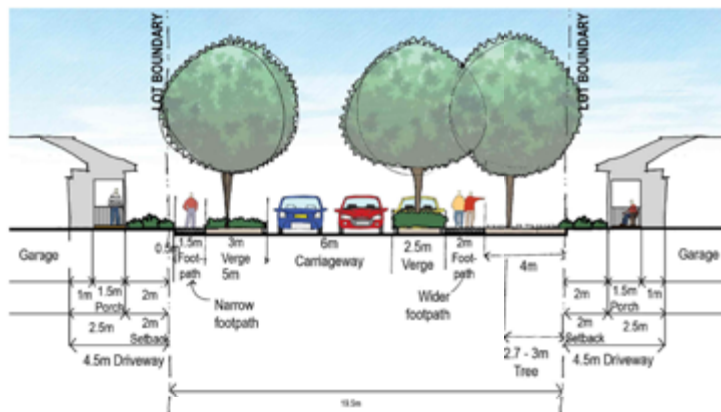
NEIGHBOURHOOD CONNECTOR B (31.5m) - WIDER MEDIAN AND VERGE TREATMENTS



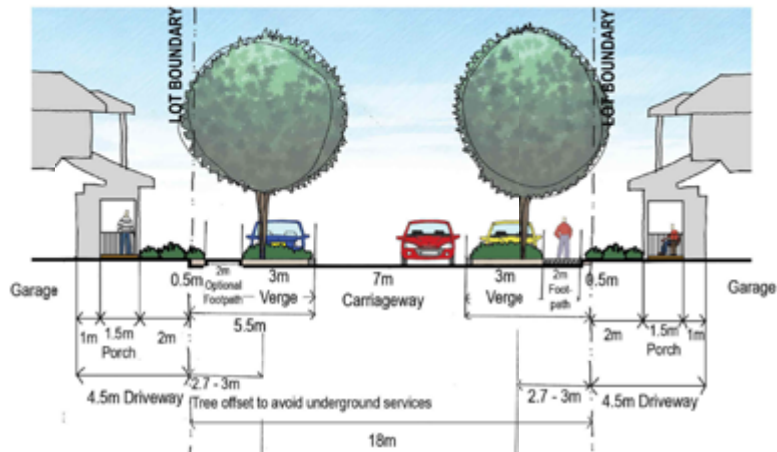
NEIGHBOURHOOD CONNECTOR B (26m)

ACCESS STREET A (26m) - WIDER MEDIAN AND VERGE TREATMENTS

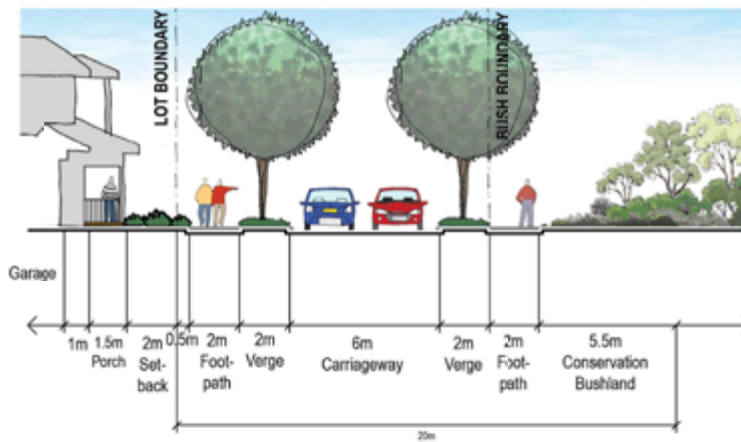
Figure 1 - 1. Integrator Arterials & Neighbourhood Connectors



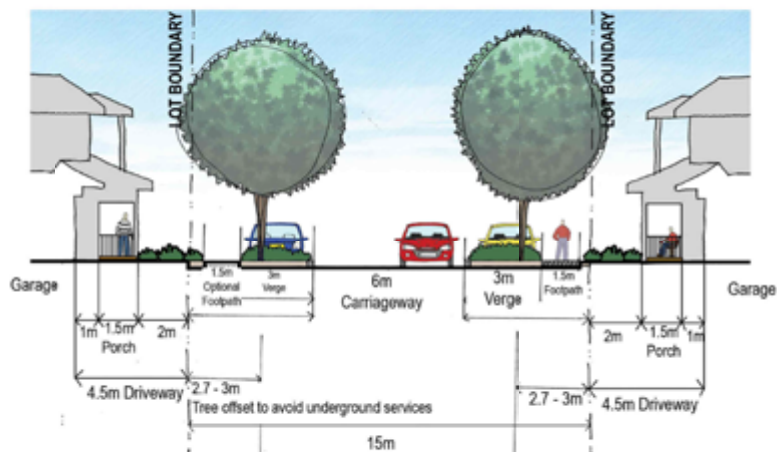
NEIGHBOURHOOD CONNECTOR B (19.5m)
ACCESS STREET A (19.5m) - WIDER MEDIAN AND VERGE TREATMENTS



ACCESS STREET C - (18m)

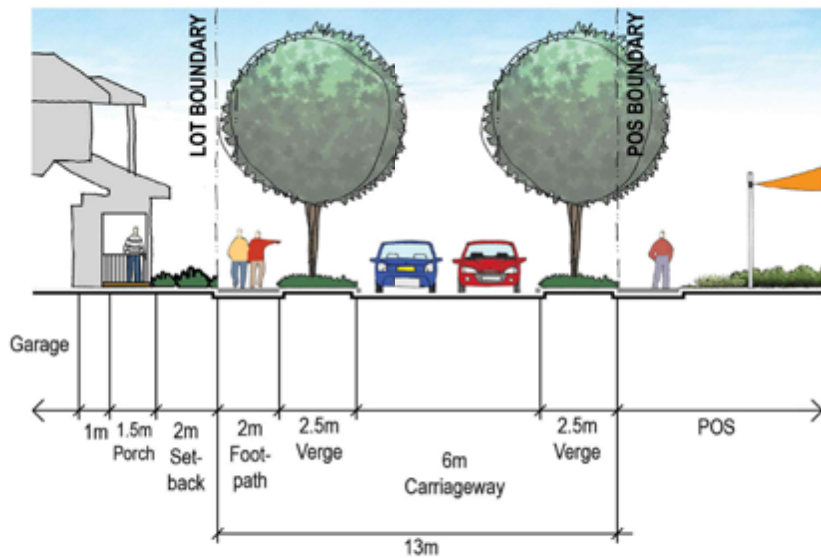


ACCESS STREET D - ADJACENT BUSHLAND (20m)

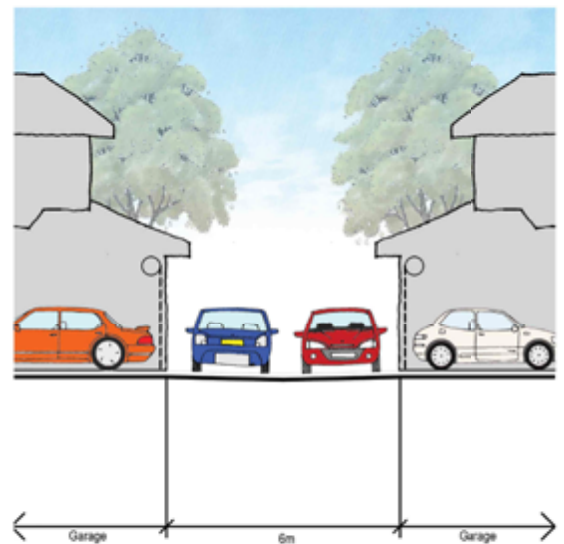


ACCESS STREET D - (15m)

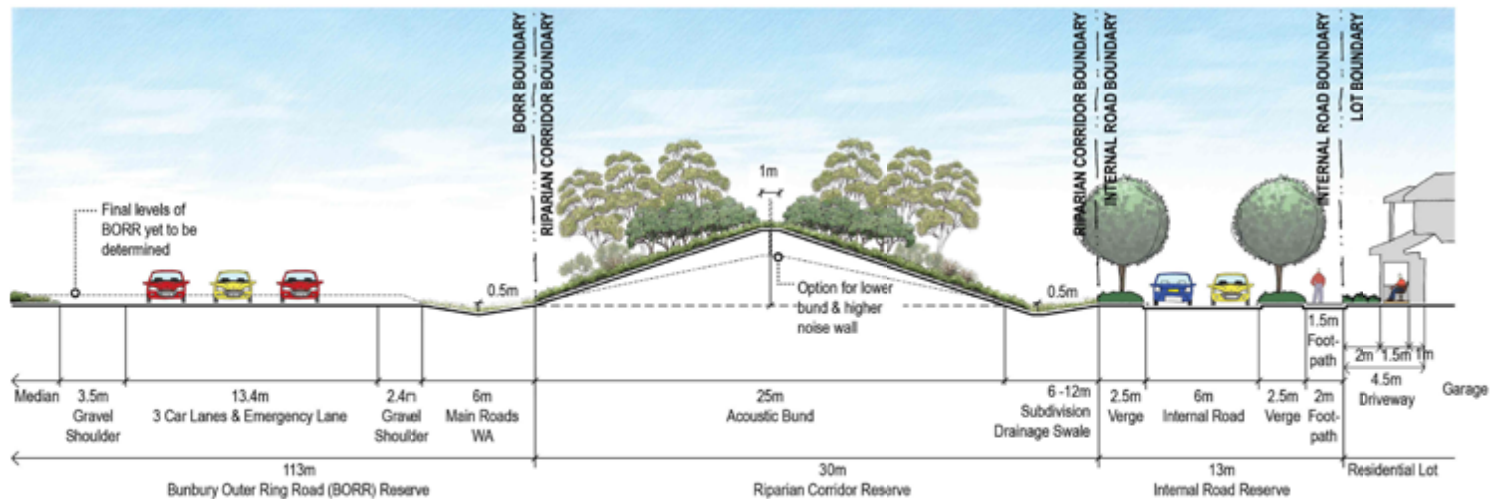
Figure 1 - 2. Neighbourhood Connector B, Access Streets A, C & D



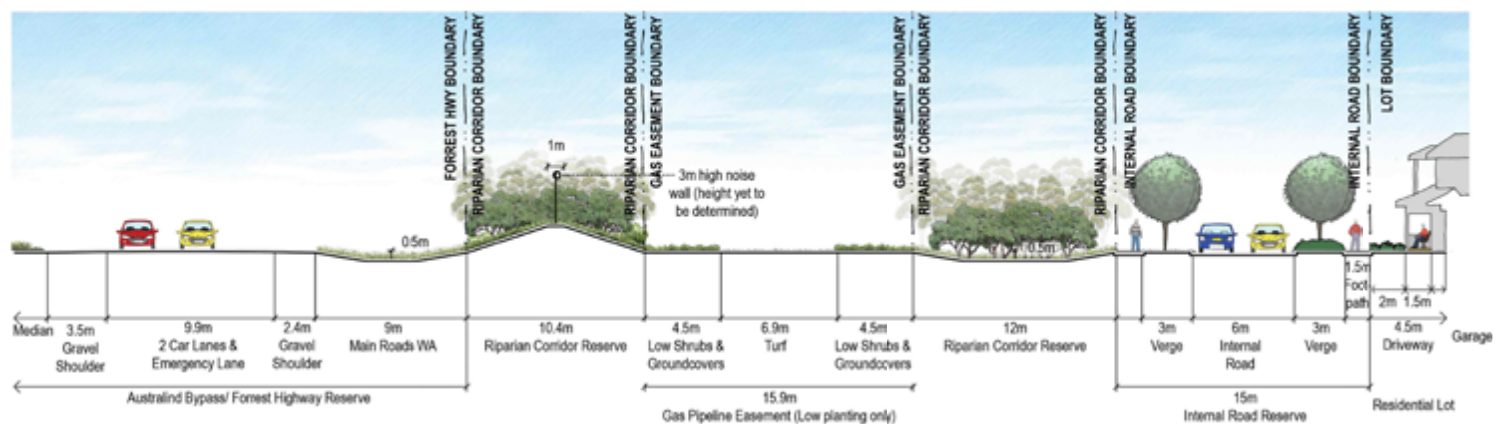
ACCESS STREET D - ADJACENT POS (13m)



LANEWAY (6m)



**ACCESS STREET D - ADJACENT BIORETENTION SWALE/
LANDSCAPED BUFFER & BORR (13m)**



**ACCESS STREET D - ADJACENT GAS PIPELINE EASEMENT
& AUSTRALIND BYPASS/FORREST HWY (15m)**

Figure 1 - 3. Access Street D alternatives, Laneways