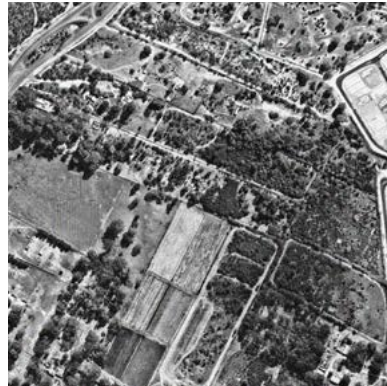


LOT 9101 WARTON ROAD STRUCTURE PLAN



**PART ONE
IMPLEMENTATION REPORT**

**April
2023**

Title: Lot 9101 Warton Road Structure Plan
Part One - Implementation Section

Prepared for: Aigle Royal

Reference: CLE Ref: 3287Rep15C
Rowe Group Ref: 9672

Date: April 2023

Status: Final

Review date: 21 March 2022

Prepared by: CLE Town Planning + Design. Modifications for endorsement completed by Rowe Group

Project team: Town Planning and Design - CLE Town Planning + Design and Rowe Group
Hydrology - JDA Consulting Hydrologists
Engineering - Cossill & Webley Consulting Engineers
Traffic - Transcore
Landscape - LD Total
Bushfire - Bushfire Safety Consulting
Acoustics - Lloyd George Acoustics

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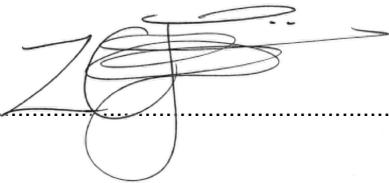
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IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

29 August 2023

Signed for and on behalf of the Western Australian Planning Commission:


.....

an officer of the Commission duly authorised by the Commission pursuant to section 24 of the Planning and Development Act 2005 for that purpose, in the presence of:


..... Witness

29 August 2023 Date

29 August 2033 Date of Expiry

Table of Amendments

AMENDMENT NO.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC
<hr/> <hr/>			

EXECUTIVE SUMMARY

The Lot 9101 Warton Road Structure Plan (the Structure Plan) comprises approximately 10.2ha of land, being generally bound by Warton Road to the west, Southampton Drive to the east, the future West Piara Waters Secondary College to the south and an approved (under construction) lifestyle village to the north (Lot 9007).

The Structure Plan area is zoned 'Urban' under the Metropolitan Region Scheme and 'Urban Development' under the City of Armadale Town Planning Scheme No. 4 (TPS4). This Structure Plan is lodged in accordance with TPS4 provisions, which requires a structure plan prior to development or subdivision for land zoned 'Urban Development'.

The Structure Plan is consistent with the strategic planning for the area with Perth and Peel@3.5million and the South Metropolitan Peel Sub-regional Framework which identified the area for future residential development. This was realised with the land recently being zoned for urban development in the Metropolitan Region Scheme.

The Structure Plan will facilitate the creation of a residential estate that responds to its surrounding land use context, presenting as a logical extension to the existing residential community in Piara Waters to the east, while interfacing with the West Piara Waters Secondary College to the south and the lifestyle village to the north. Offering densities of R25, R30 and R40, the Structure Plan is capable of delivering approximately 150 to 160 dwellings, achieving a target of 24.5 dwellings per residential site hectare. This exceeds state government density targets.

The Structure Plan provides for a single, consolidated area of public open space which will provide residents with a recreational focus whilst also serving a local drainage purpose. A simple but highly permeable local road network connects the Structure Plan to the surrounding road network at Warton Road (west) and Southampton Drive (east).

The site can be readily serviced, with essential infrastructure located within proximity and easily extended to the Structure Plan area. In preparation of the Structure Plan the following reports have been prepared, and are summarised in Part 2 of the Structure Plan report, with complete copies included as technical appendices:

- Environmental Assessment Report
- Bushfire Management Plan
- Landscape Master Plan
- Local Water Management Strategy
- Transport Impact Assessment
- Noise Impact Assessment
- Engineering Servicing Review

These reports comprehensively address all of the relevant planning considerations, and demonstrate that the land is suitable for urban development in the form proposed.

Table 1 provides a land use summary of the Structure Plan.

Table 1: Land Use Summary

ITEM	DATA	SECTION NUMBER REFERENCE WITHIN PART TWO OF THE STRUCTURE
Total area covered by the structure plan	10.2 hectares	Section 1.2.2
Area of each land use proposed		
Zones (as per the Scheme)		
- Residential	6.4 hectares	Section 3.1
• Reserves (as per the Scheme and MRS)		
- Road Reserves	2.7 hectares	
- Parks and Recreation	1.07 hectares	
Total estimated lot yield	157 lots	
Estimated number of dwellings	157 dwellings	
Estimated residential site density		
- Dwellings per residential site hectare	24.5 dwellings per residential site hectare	
- <i>As per Perth & Peel@3.5 million and Liveable Neighbourhoods</i>	15.3 dwellings per gross urban hectare	Section 3.2.1
Estimated population	439 people @ 2.8 people per household	
Number of Primary Schools	None	Section 3.8
Number of Secondary Schools	None	
• Amount of Public Open Space	1.07 hectares (total) 0.8 hectares (unrestricted) 0.2 hectares (restricted)	Section 3.3

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- 2.0 STRUCTURE PLAN CONTENT
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- 4.0 INTERPRETATION AND RELATIONSHIP WITH STATUTORY PLANNING FRAMEWORK
- 5.0 STAGING
- 6.0 LAND USE
 - 6.1 Land Use and Zones
 - 6.2 Residential
 - 6.2.1 Dwelling Target
 - 6.2.2 Density
 - 6.3 Public Open Space
- 7.0 SUBDIVISION AND DEVELOPMENT
 - 7.1 Local Development Plans
 - 7.2 Notifications on Title
 - 7.3 Bushfire Management
- 8.0 OTHER REQUIREMENTS
 - 8.1 Conditions of Subdivision Approval
 - 8.2 Development Contributions

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Plan 1: Local Structure Plan Map

1.0 STRUCTURE PLAN AREA

This Structure Plan shall apply to Lot 9101 Warton Road, Piara Waters being the land contained within the inner edge of the line denoting the structure plan boundary on the Structure Plan Map.

The Structure Plan is identified as the Lot 9101 Structure Plan.

2.0 STRUCTURE PLAN CONTENT

This Structure Plan comprises:

- Part One – Implementation Section
- Part Two – Explanatory Report
- Appendices – Technical Reports

Part One of the Structure Plan comprises the Structure Plan Map and planning provisions. Part Two of the Structure Plan is the planning report component which can be used to interpret and implement the requirements of Part One.

3.0 OPERATION

The Lot 9101 Structure Plan comes into effect on the date that it is endorsed by the Western Australian Planning Commission.

4.0 INTERPRETATION AND RELATIONSHIP WITH STATUTORY PLANNING FRAMEWORK

The Lot 9101 Structure Plan constitutes a Structure Plan pursuant to Part 4E of the City of Armadale Town Planning Scheme 4 and the *Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 - Deemed provisions for local planning schemes*. The Structure Plan Map outlines future land use, zones and reserves applicable within the structure plan area.

Pursuant to the *Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 - Deemed provisions for local planning schemes*, a decision maker of an application for development approval or subdivision approval is to have due regard to the provisions of this Structure Plan, including the Structure Plan Map, Implementation Report, Explanatory Report and Technical Appendices.

5.0 STAGING

Development staging will follow an orderly sequence and shall not exceed the extension of essential service infrastructure or constructed road access.

6.0 LAND USE

6.1 Land Use and Zones

The subdivision and development of land is to generally be in accordance with the Structure Plan.

Land use permissibility within the Structure Plan area shall be in accordance with the corresponding zone or reserve under City of Armadale Town Planning Scheme No. 4 and subject to 'Special Control Area – Public Drinking Water Protection – Priority P3*' as shown on the scheme map and in accordance with Section 5.3 of the Scheme.

6.2 Residential

6.2.1 Dwelling Target

Subdivision and development within the structure plan is to achieve a dwelling target of 24 dwellings per site hectare.

6.2.2 Density

Residential densities applicable to the Structure Plan shall be those residential densities shown on the Structure Plan map.

6.3 Public Open Space

The provision of public open space being provided generally in accordance with the Structure Plan Map.

7.0 SUBDIVISION AND DEVELOPMENT

7.1 Local Development Plans

The preparation of a Local Development Plan shall be required by the Western Australian Planning Commission (WAPC), on the advice of the City of Armadale, as a condition of subdivision approval where deemed necessary for land comprising, (but not limited to):

- (i) Lots subject to 'Quiet House Design' requirements as identified in the Noise Impact Assessment.
- (ii) Lots abutting Public Open Space.

7.2 Notifications on Title

In respect of applications for the subdivision of land the Council shall recommend to the Western Australian Planning Commission that a condition be imposed as part of a subdivision approval for a notification to be placed on the Certificate(s) of Title(s) to advise of the following:

- (i) Land or lots deemed to be affected by road traffic or dog kennel noise as identified in the Noise Impact Assessment contained within **Appendix 6**.
- (i) Land or lots identified to be within a Bushfire Prone Area of BAL-12.5 or above as shown in the Bushfire Management Plan.

7.3 Bushfire Management

This Structure Plan is supported by a Bushfire Management Plan (Appendix 2). Regardless of whether the land has been formally designated as bushfire prone, any building to be erected on land identified as falling within 100 metres of a bushfire hazard is designated as bushfire prone land and shall comply with the requirements of Australian Standard 3959 under the Building Code of Australia.

8.0 OTHER REQUIREMENTS

8.1 Conditions of Subdivision Approval

The following technical reports/strategies are to be prepared and submitted as a condition of subdivision approval (where applicable):

- Urban Water Management Plan
- Bushfire Management Plan
- Noise Wall Design
- Acid Sulphate Soils Management Plan (if applicable)
- Mosquito Management Plan
- Landscape Master Plan

8.2 Development Contributions

The Local Structure Plan is subject to contribution to the costs of common infrastructure in accordance with a Development Contribution Plan and Cost Apportionment Schedule prepared pursuant to Part 5A and Schedule 9B Development Contribution Plans.



LEGEND

- SUBJECT SITE
- ZONES**
- RESIDENTIAL R25
- RESIDENTIAL R30
- RESIDENTIAL R40
- RESERVES**
- PARKS AND RECREATION
- OTHER**
- NEIGHBOURHOOD CONNECTOR
- ACCESS STREET
- DECELERATION LANE TO MRWA STANDARDS, SUBJECT TO DESIGN AND APPROVAL
- INDICATIVE NOISE WALL, TO BE PROVIDED IN ACCORDANCE WITH AN APPROVED NOISE MANAGEMENT PLAN
- INDICATIVE BIN PRESENTATION PADS

INDICATIVE BIN PAD LOCATIONS SCALE @ A3: 1:1500

INDICATIVE BIN PAD LOCATIONS SUBJECT TO ENGINEERING DESIGN AND APPROVAL

LOCAL STRUCTURE PLAN
 LOT 9101 WARTON ROAD
 PIARA WATERS

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SCALE @ A3: 1:2000

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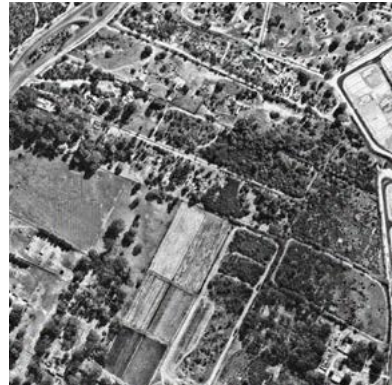
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LOT 9101 WARTON ROAD STRUCTURE PLAN



**PART TWO
EXPLANATORY REPORT**

**April
2023**

Title: Lot 9101 Warton Road Structure Plan
Part Two - Explanation Section

Prepared for: Aigle Royal

Reference: CLE Ref: 3287Rep16C
Rowe Group Ref: 9672

Lodgement Date: April 2023

Status: Final

Prepared by: CLE Town Planning + Design. Modifications for endorsement completed by Rowe Group.

Project team: Town Planning + Design - CLE Town Planning + Design
& Rowe Group
Environmental - Coterra Environment
Hydrology - JDA Consulting Hydrologists
Engineering - Cossill & Webley Consulting Engineers
Traffic - Transcore
Landscape - LD Total
Bushfire - Bushfire Safety Consulting
Acoustics - Lloyd George Acoustics

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Appendix 3 Landscape Master Plan (LD Total)

Appendix 4 Local Water Management Strategy (JDA Consulting Hydrologists)

Appendix 5 Transport Impact Assessment (Transcore)

Appendix 6 Noise Impact Assessment (Lloyd George Acoustics)

Appendix 7 Engineering Servicing Report (Cossill & Webley Consulting Engineers)

1.0 PLANNING BACKGROUND

1.1 Introduction and Purpose

This Structure Plan has been prepared by CLE Town Planning + Design (with final modifications for endorsement completed by Rowe Group) on behalf of the owners of Lot 9101 Warton Road, Piara Waters.

The Lot 9101 Warton Road Structure Plan (the Structure Plan) has been prepared and lodged in accordance with the City of Armadale Town Planning Scheme No. 4 which requires a structure plan for land zoned 'Urban Development'. This Structure Plan is to provide the planning framework to guide future subdivision and development across Lot 9101.

The Structure Plan realises the intent of Perth and Peel @ 3.5million and the Sub Regional Planning Framework and represents the next stage of planning, following the recent zoning of the site for urban development in the Metropolitan Region Scheme.

The format of the Structure Plan follows that set out in the Western Australian Planning Commission's (WAPC) Structure Plan Framework, comprising three parts:

Part 1: Implementation Section: Contains the Structure Plan Map and outlines the requirements that will be applied when assessing subdivision and development applications.

Part 2: Explanatory Section: Discusses the key outcomes and planning implications of the background and technical reports, and describes the broad vision and more detailed planning framework being proposed. Part 2 is based on a detailed site specific analysis of opportunities and constraints and the following Technical Reports and Strategies:

- Environmental Assessment Report (Coterra Environment);
- Bushfire Management Plan (Bushfire Safety Consulting);
- Local Water Management Strategy (JDA Consulting Hydrologist);
- Transport Impact Assessment (Transcore);
- Noise Impact Assessment (Lloyd George);
- Engineering Servicing Report (Cossill & Webley Consulting Engineers); and
- Landscape Master Plan (LD Total).

Part 3: Technical Appendices: Includes the technical reports and supporting plans and maps as prepared by the technical consultants in support of the proposal.

1.2 Land Description

The following section provides a brief summary of the location, land use and ownership of the Structure Plan area.

1.2.1 Location

The Structure Plan is located within the City of Armadale, approximately 10km west of the Armadale Strategic Metropolitan Centre and 19km south of the Perth CBD. The Cockburn Central Strategic Metropolitan Centre is located approximately 5km to the west, which includes access to the Cockburn Train Station. (Figure 1: Location Plan).

The Structure Plan area is generally bound by Warton Road to the west, Southampton Drive to the east, the West Piara Waters Secondary College (currently under construction) to the south and a future lifestyle village (currently under construction) to the north.

With ready access to the Kwinana Freeway and Tonkin Highway (via Armadale Road) and the Cockburn Train Station, the Structure Plan area has excellent access to regional transport infrastructure.

The Structure Plan represents a logical expansion to the existing Piara Water residential areas to the eastern side of Southampton Drive.



Figure 1 - Location Plan

[1.2.2 Area and Land Use](#)

The Structure Plan comprises a single title, namely Lot 9101 (No. 713) Warton Road, West Piara which has a total area of approximately 10.2ha.

Lot 9101 is an undeveloped (vacant) land parcel that historically was cleared and used for agricultural purposes (Figure 2: Site Plan).

Lot 9101 is not currently used for any specific purpose. The past agricultural uses have had a considerable impact on the natural environment of the site resulting in it being largely cleared of vegetation.

[1.2.3 Ownership and Title Details](#)

Lot 9101 is owned by ARD No. 19 Pty Ltd and is legally addressed as Lot 9101 Warton Road, Piara Waters, Deposited Plan 65831, Volume 2752, Folio 684.

[1.2.4 Surrounding Land Use and Context](#)

The Structure Plan represents the next phase in the planned expansion of the West Piara community with the following a brief summary of the local context:

- Land to the eastern side of Southampton Drive consists of existing residential estates, most notably Heron Park Estate.
- The southern edge of the Structure Plan area abuts the West Piara Waters Secondary College (currently under construction). The high school open in 2023.

- Land on the western side of Warton Road consists of larger private rural-lifestyle lots, a number from which operate dog kennels and catteries.
- Armadale Road runs in an east-west direction approximately 1.7km south of the Structure Plan area, reserved as 'Primary Regional Roads'.
- Kwinana Freeway and the Tonkin Highway (both reserved 'Primary Regional Roads') are located approximately 5km west and east of the Structure Plan area respectively, with the Cockburn Central Train Station situated near the intersection of the Kwinana Freeway and Armadale Road. Collectively these provide the Structure Plan excellent accessibility to key regional transport infrastructure.
- Armadale Strategic Metropolitan Centre (10km east) and the Cockburn Central Secondary Centre (5km west) are both accessible from the Structure Plan area along Armadale Road, offering employment opportunities and access to retail, commercial and community services.

1.3 Planning Framework

[1.3.1 Metropolitan Region Scheme](#)

The Structure Plan area is zoned 'Urban' in the Metropolitan Region Scheme (MRS). Lot 9010 to the south is reserved 'Public Purpose – High School' (Figure 3: MRS Zoning).

[1.3.2 City of Armadale Town Planning Scheme No 4.](#)

The Structure Plan area is currently zoned 'Urban Development' in the City of Armadale Town Planning Scheme No. 4 (TPS4) rezoned from 'General Rural' by Scheme Amendment 119 ('SA 119') on 2 December 2022.

Under an 'Urban Development' zone a structure plan is required prior to development.

The land is also included within Schedule 8 – Development (Structure Planning) Areas of TPS 4 as Development Area 71. Schedule 8 sets out a number of provisions that are to be provided as part of a local structure plan (if applicable), as summarised in Table 1.

Table 1: Schedule 8 (West Piara Urban Precinct North)

Provision No.	Applicable Provision(s)	Assessed within the Structure Plan
71.1	Subdivision and development of land is to generally be in accordance with a structure plan prepared and approved pursuant to Part 4 of the Deemed Provisions.	This Structure Plan is prepared in accordance with Part 4 of the Deemed Provisions.
Required Technical Studies to Guide Structure Plan		
71.2	The following plans are to be prepared and approved by the local government, used to inform the Structure Plan:	
a)	Local Water Management Strategy	Refer Attachment 4 – Local Water Management Strategy.
b)	Bushfire Management Plan	Refer Attachment 2 – Bushfire Management Plan.
c)	Acoustic Assessment	Refer Attachment 6 – Noise Impact Assessment
d)	Environmental Management Plan	Refer Attachment 1 – Environmental Assessment Report.
Design and Management Responses Required as Part of Structure Plan		
71.3	The Structure Plan shall provide design and management responses for implementation through subdivision and development addressing:	
a)	Road intersections to Warton Road and Southampton Drive/ Pipeline Boulevard for safe and efficient traffic distribution and congestion management, on the advice of the local government.	The structure plan proposes a new left in-left out intersection with Warton Road, which will be serviced by a new deacceleration lane. In pre-lodgement consultation with the city of Armadale's technical staff, five (5) intersection options were investigated at the Southampton Drive/Pipeline Boulevard intersection. The Structure Plan proposes the extension of Southampton Drive through to a new 'access street c', and the closure and revesting of a portion of Southampton Drive (Jayes Road) to facilitate the safe and efficient movement of traffic within the precinct. Refer Section 4.4.2 and Attachment 10 (Traffic Impact Statement) to this report.
b)	High Pressure Gas Mains	The proposed development does not include any 'sensitive' land uses within the policy trigger distance for high pressure gas pipelines. Refer Section 4.8.4 and Attachment 11 (Engineering Servicing Report) to this report.
c)	Visual Impact of Noise Attenuation Measures	The proposed Structure Plan will require a noise wall (up to 2.4 metres in height in some sections) generally along its Warton Road frontage. Refer Section 3.6 and Attachment 5 (Noise Impact Assessment) to this report.
d)	Mosquito Management	A condition of Subdivision Approval will require the preparation and implementation of a Mosquito Management Plan.
71.5(b)	Protection of significant flora, vegetation, environmental features	Refer Structure Plan map (Part 1), Sections 2.2 and 3.3 (Part 2), Appendix 1 (Environmental Assessment Report, Coterra Environment) and Appendix 3 (Landscape Master Plan, LD Total) – no vegetation of significance for retention.

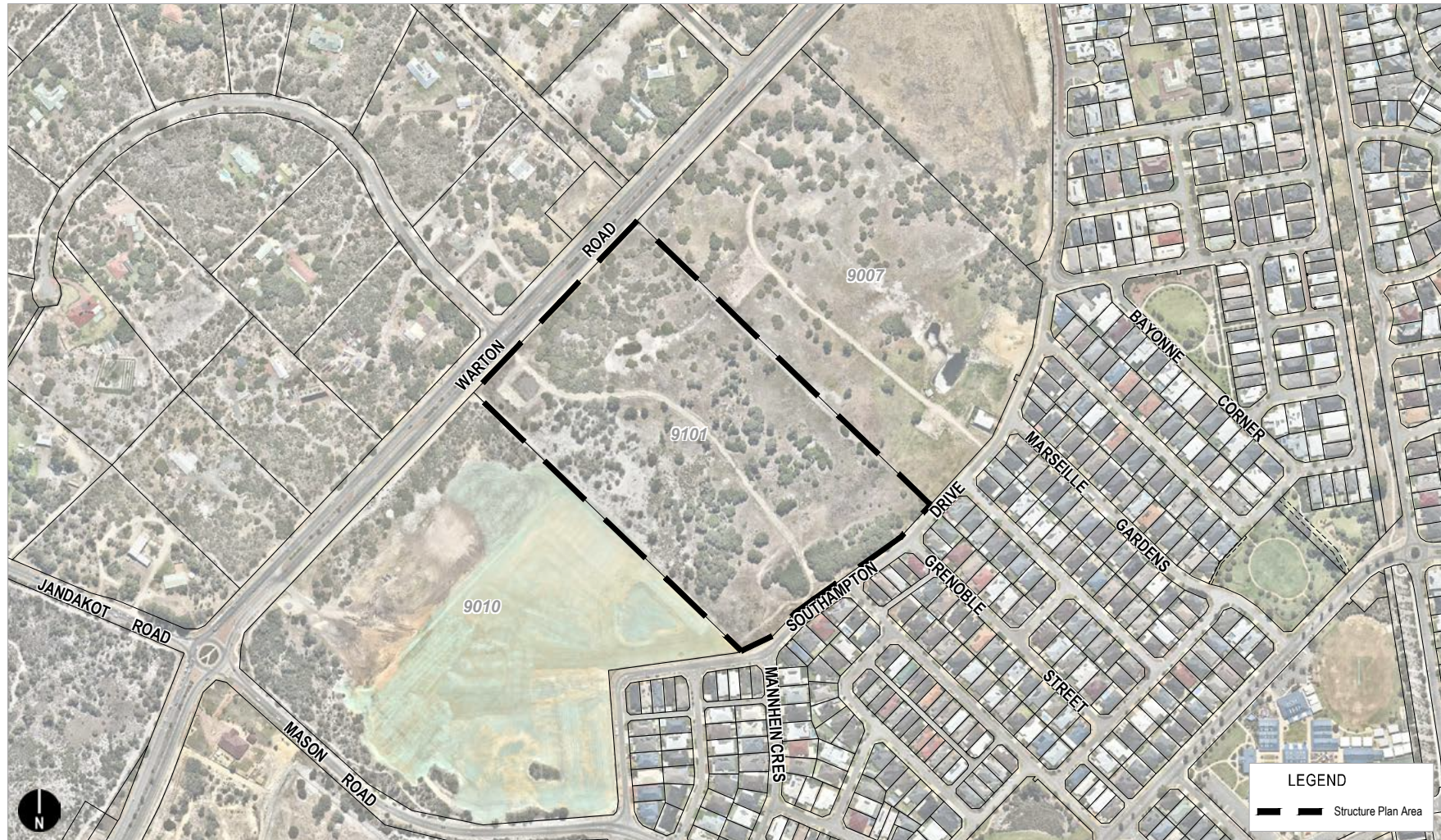


Figure 2 - Site Plan
Source: Nearmap

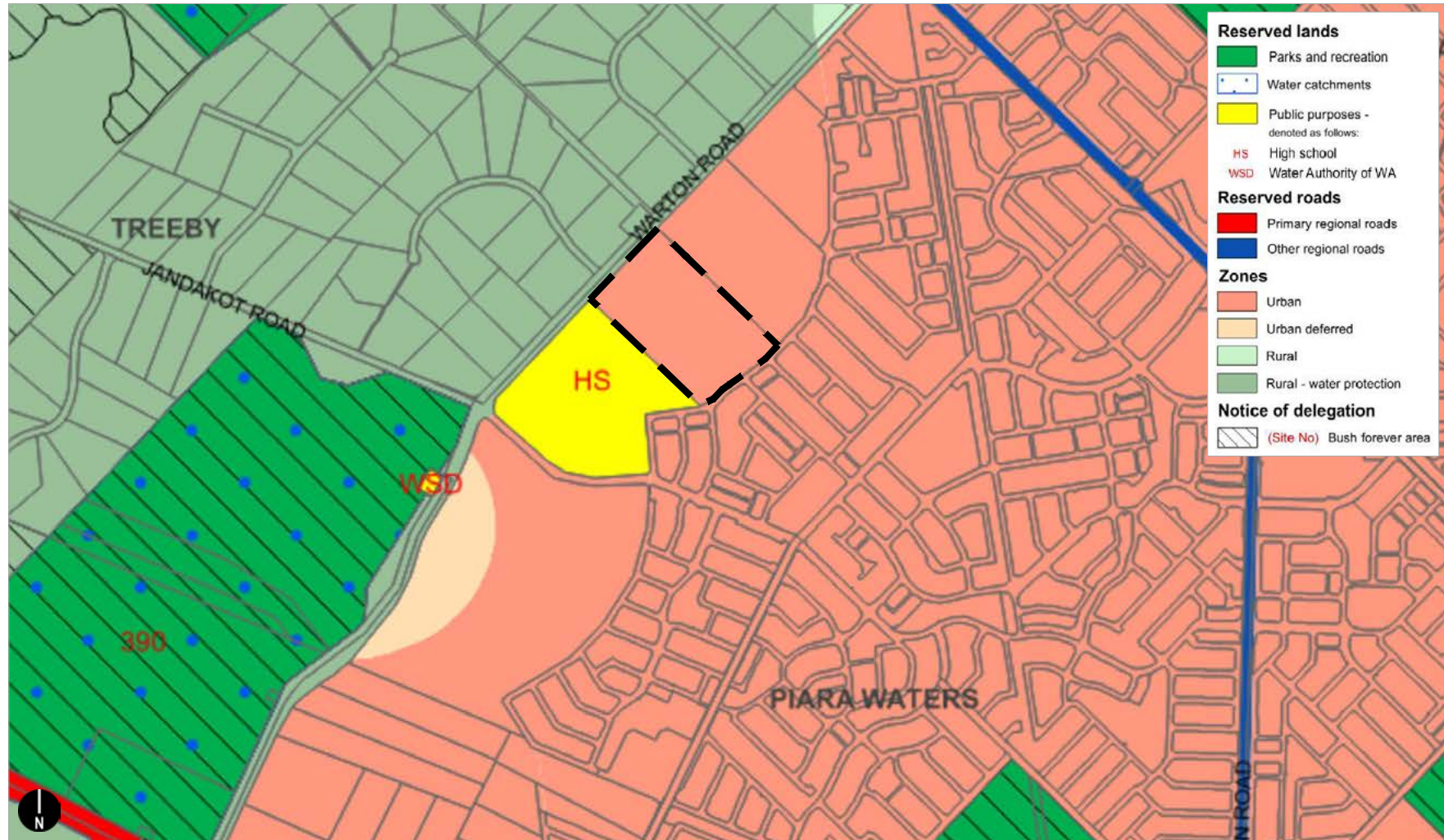


Figure 3 - MRS Zoning
Source: WAPC

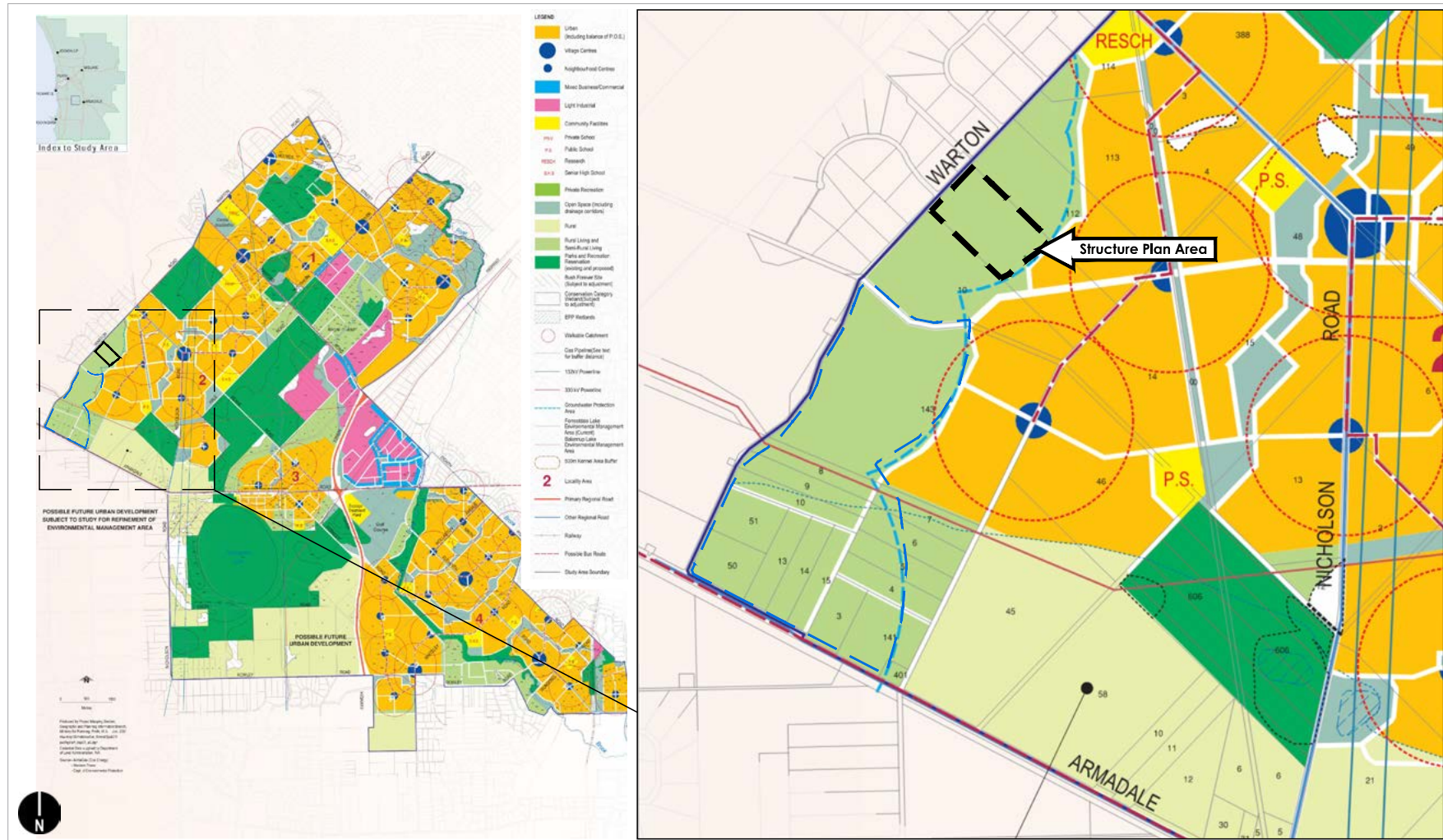


Figure 4 - Southern River/Forrestdale/Brookdale/Wungong District Structure Plan
 Source: WAPC

[1.3.3 Southern River/Forrestdale/Brookdale/Wungong District Structure Plan \(2001\)](#)

The Structure Plan area is located within the Southern River/Forrestdale/Brookdale/Wungong District Structure Plan (DSP).

Adopted by the Western Australian Planning Commission (WAPC) in 2001, the DSP sets out the high level framework for land use, major roads, commercial centres, community infrastructure and public open space and has successfully guided the development of a number of localities within the City of Armadale, including Piara Waters (Figure 4: Southern River/Forrestdale/Brookdale/Wungong District Structure Plan).

The DSP shows the Structure Plan area as Rural Living which simply reflected the zoning of the land in TPS4 at that time on the basis that the DSP did not contemplate urban development over the Jandakot Groundwater Mound, considering it unsuitable for (urban) development but critically the DSP predates Perth and Peel@3.5million, the South Metropolitan Peel Sub-regional Planning Framework and the recent minor amendment to the Metropolitan Region Scheme (Amendment 1369/57), all which have since confirmed that the land is suitable for urban development.

The dated nature of the DSP is best demonstrated by the land immediate east (north of Armadale Road) which is also not shown for residential development but which has since been developed for this purpose (Holland Park and Aspiri Estates).

[1.3.4 North Forrestdale Local Structure Planning Area](#)

The Structure Plan abuts the North Forrestdale Local Structure Planning area which actually comprises a number of individual (local) structure plans which have collectively guided subdivision and development throughout the Piara Waters/Harrisdale locality (refer Figure 5: Composite North Forrestdale Structure Plan).

The Composite North Forrestdale Structure Plan is silent with regards to the Lot 9101 Structure Plan, which reflects the previous rural zoning of the land in MRS, with there being no approved structure plans (for lot 9101); however in a similar fashion to the DSP (discussed above), this predates Perth and Peel@3.5million and the Sub-regional Planning Framework which now identifies the land as being suitable for urban development. This was confirmed by the zoning of the land 'Urban' in the MRS.

While not being directly applicable, the Composite North Forrestdale Structure Plan does provide important context for the Lot 9101 Structure Plan, suggesting that proposed residential development (of Lot 9101) will facilitate a logical expansion of the Piara Waters-Harrisdale locality.

It is anticipated that the Composite North Forrestdale Structure Plan will be updated to incorporate the Lot 9101 Structure Plan, once operative.

[1.3.5 Strategic Planning Framework](#)

The Structure Plan is consistent with, and supported by the relevant strategic planning framework as detailed below.

[Perth and Peel@3.5million \(March 2018\)](#)

Perth and Peel@3.5million is a high level 'spatial framework' and strategic plan that defines the growth of the metropolitan region for the next 30 years, setting out where new residential areas will be located whilst making best use of existing and proposed infrastructure, and protecting important environmental assets.

Perth and Peel@3.5million includes the Structure Plan area within the South Metropolitan Peel Sub-region, forecasting this sub-region to experience considerable economic and population growth, more than double from 523,400 people in 2011 to 1.26 million by 2050. This is discussed in more detail later in this report.

[South Metropolitan Peel Sub-regional Planning Framework \(March 2018\)](#)

The South Metropolitan Peel Sub-regional Framework (the Framework) supports Perth and Peel@3.5million by providing *"high-level strategic guidance for the future development of the Metropolitan South-West, Metropolitan South-East and Peel sectors to accommodate part of the long-term growth of the Perth and Peel regions to 3.5 million people."*

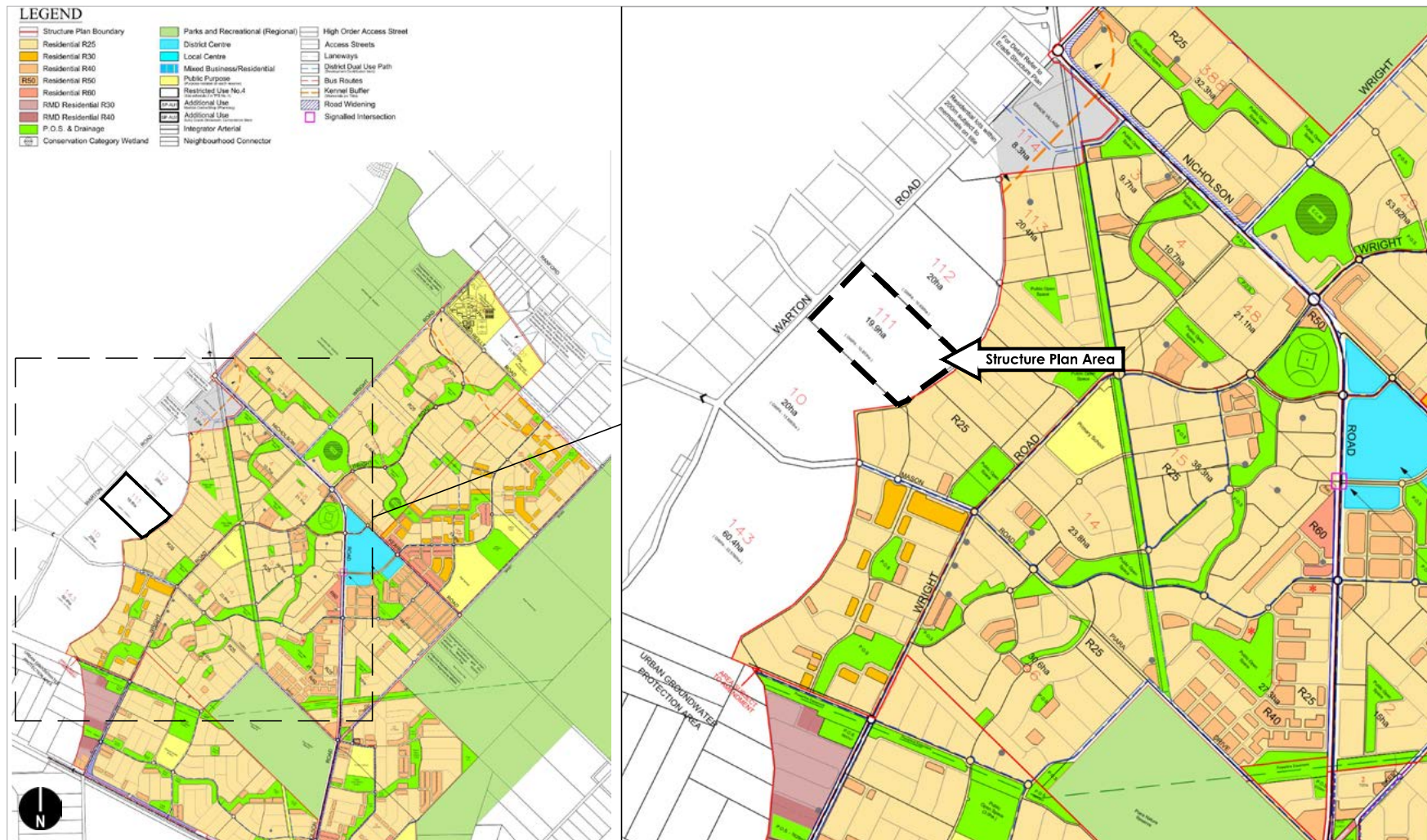


Figure 5 - Composite North Forrestdale Structure Plan
Source: City of Armadale

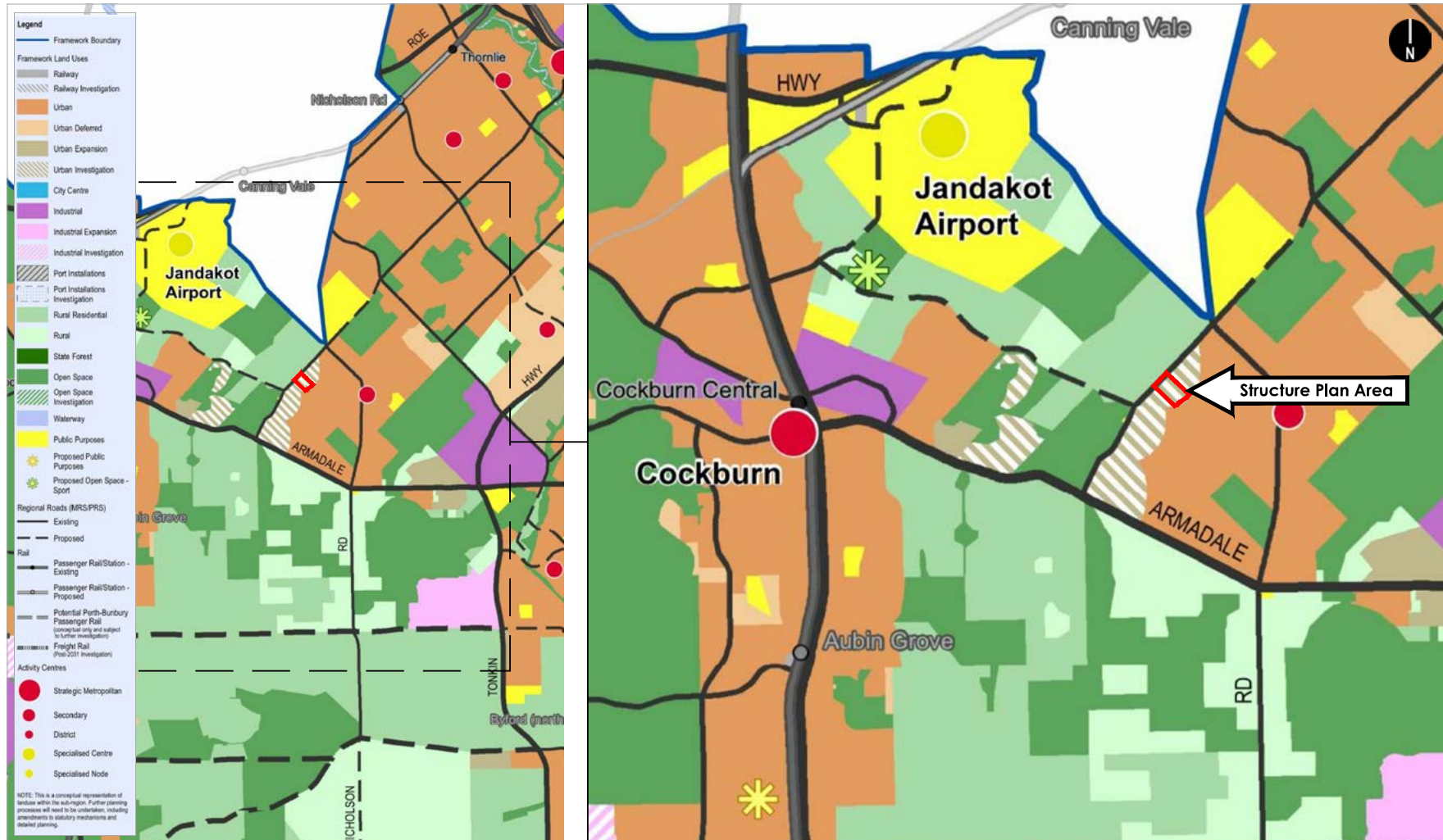


Figure 6 - South Metropolitan Peel Sub-regional Framework

Source: WAPC

The Framework shows the Structure Plan area as being an 'Urban Investigation' category area, with the Framework clarifying that this category applies to land that is suitable for urban development, but further detailed planning is to be undertaken to support a rezoning in the MRS (Figure 6: South Metropolitan Peel Sub-regional Framework).

In this instance, this related to addressing any impacts, risks and management of the Jandakot groundwater resource (existing Priority 2 Source Protection Area). The Framework was clear that subject to addressing the Jandakot groundwater resource, urban development would consolidate and 'round off' existing Piara Waters/Harrisdale residential areas (Figure 6: South Metropolitan Peel Sub-regional Framework).

Informed by the Framework and supported by a comprehensive District Water Management Strategy (approved by DWER 11 August 2020) detailing how the Jandakot groundwater resource will be protected, the Structure Plan area was zoned for urban development in November 2020 (Minor Amendment 1369/57). The Structure Plan will further solidify the objectives of the Framework by continuing to expand upon the ground water protection measures established as urban planning and development progresses.

City of Armadale Local Planning Strategy (2016)

This Local Planning Strategy was endorsed in December 2016 and sets out the objectives and recommended actions associated with future development within the City of Armadale.

The Strategy shows the Structure Plan area as 'Rural – Drinking Water Protection', a reflection of the (then) zoning of the land. Like the Southern River/Forrestdale/Brookdale/Wungong District Structure Plan, the City's Local Planning Strategy predates the outcomes of Perth and Peel@3.5million and the Sub-regional Planning Framework. Informed by these more contemporary policies and supported by a comprehensive District Water Management Strategy (approved by DWER, 11 August 2020) that assured the ongoing protection of the Jandakot groundwater resource, the land was subsequently zoned for urban purposes in the MRS.

The Strategy recognises that development within Forrestdale (Harrisdale, Piara Waters) has accounted for the most significant growth for the City of Armadale in recent times.

1.3.6 Other Policies

The following section summarises other government policies relevant to the Structure Plan.

WAPC State Planning Policy 2.3: Jandakot Groundwater Protection

SPP 2.3 seeks to ensure that all development within the Jandakot Groundwater Protection Area is compatible with the long-term protection and management of that resource. This is achieved through a three-tier classification system consisting of Priority 1, Priority 2 and Priority 3 (P1, P2 and P3) categories defined on the basis of hydrological factors and land tenure.

The Structure Plan area was reclassified as a "Priority 3" Groundwater Protection Area (formerly classified as "Priority 2" Groundwater Protection Area) as part of MRS Amendment 1369/57.

The protection of the Jandakot Groundwater Area is addressed in the Local Water Management Strategy prepared by JDA Consulting Hydrologists, in support of the Structure Plan and in Section 3.4 of this report.

WAPC State Planning Policy 2.7: Public Drinking Water Source Policy and SPP 2.9: Water Resources

These two State Planning Policies provide high-level strategic guidance for policy-making and decision-making where water resources are a relevant consideration. The policy measures contained in these documents seek to manage outcomes for water resources of all types and outline the WAPC's expectations for the protection of drinking water sources.

The water resource that is relevant to the Structure Plan area is the Jandakot Groundwater Protection Area, which is managed under SPP 2.3 (discussed above). SPP 2.3 encapsulates the objectives of both SPP 2.7 and SPP 2.9, and as such, in complying with SPP 2.3, this Structure Plan is considered consistent with these policies.

WAPC State Planning Policy 3.0: Urban Growth and Settlement

SPP 3.0 sets out the principles and considerations that guide the location of new urban growth and settlements. It focuses on contiguous expansion of urban areas, consolidation in areas with good access to employment, services and transportation, minimised environmental impact and efficient use of suitable land and infrastructure.

The Structure Plan is consistent with SPP 3.0 as it realises planned urban expansion of the Piara Waters/Harrisdale locality. The Structure Plan has excellent access to existing (regional) transport infrastructure, educational facilities, employment nodes and activity centres, all in addition to there being no environmental constraints on the site. All essential service infrastructure can be readily and efficiently connected from immediate surrounding areas.

WAPC State Planning Policy 3.7: Planning in Bushfire Prone Areas

SPP 3.7 – Planning in Bushfire Prone Areas was gazetted in December 2015 and sets out a range of matters that need to be addressed through the planning process to provide an appropriate level of protection of life and property from bushfires.

The Structure Plan is accompanied by a Bushfire Management Plan which includes a Bushfire Hazard Assessment as per the associated Guidelines. The manner in which the Structure Plan responds to bushfire risk is discussed in detail in Section 3.5 below and the BMP is attached in full as Appendix 2.

WAPC State Planning Policy 5.4: Noise and Rail Noise

SPP 5.4 requires consideration of transport noise for sensitive land uses abutting major transport and strategic freight routes, to avoid or minimise unreasonable level of transport noise impacts to the community.

The Structure Plan area abuts Warton Road which is an identified strategic freight route.

As a consequence, Lloyd George Acoustics have prepared a Noise Impact Assessment to assess transport noise associated with Warton Road, and to understand potential impacts and mitigation measures on the Structure Plan area.

While not strictly forming part of this SPP's remit, the Assessment also considers noise emissions from a number of nearby (operational) dog kennels, assessing this against the *Environmental Protection (Noise) Regulations 1997*.

The Assessment concludes that interface treatments such as Quiet House Design criteria and notifications on title will be applied where required; meaning noise and environmental noise considerations can be adequately addressed to satisfy the objectives of SPP 5.4 and to comply with the *Environmental Protection (Noise) Regulations 1997*. Road and environmental noise considerations are set in detail in Section 3.6 with the Lloyd George Noise Impact Assessment attached in full as Appendix 6.

Liveable Neighbourhoods

Liveable Neighbourhoods is the WAPC's 'operational policy' for greenfields development in Western Australia. Liveable Neighbourhoods sets out the key considerations for the planning of new communities including subdivision layout and movement networks, the location of open space, community facilities, schools and activity centres.

The Structure Plan has been prepared in accordance with Liveable Neighbourhoods and best practice urban design principles, creating a walkable neighbourhood supported by an interconnected network of local roads and pathways, and adopting an integrated approach to the design of public open space and urban water management. These aspects of the Structure Plan are described in more detail in Section 3.0.

Draft Development Control Policy 4.3 – Planning for High Pressure Gas Pipelines

Development Control Policy 4.3 (DC4.3) is a draft WAPC policy which controls development in the vicinity of high-pressure gas pipelines, ensuring that development nor the pipeline itself is exposed to unnecessary risk resulting from development.

The Structure Plan is in proximity to an ATCO high pressure gas main located in the western side of the Warton Road reserve, with ATCO advising that no sensitive or high-density residential land use (taken as being 50 dwellings/ha or above) are permitted within 42m of this pipeline. Approximately 11m of the western-most edge of the Structure Plan falls within this buffer. In response, the Structure Plan proposes no sensitive land uses within this affected land, or indeed the entire Structure Plan area, with only low density (single) residential lots proposed. This satisfies the advice received by ATCO.

City of Armadale Local Planning Policy PLN 2.4: Landscape Feature and Tree Preservation

The City of Armadale's Local Planning Policy PLN 2.4 sets out to achieve the preservation of significant trees as part of development proposals; however, in this instance comprehensive flora and vegetation assessments undertaken for the site confirms that no flora or vegetation (including trees) of significance is located within the Structure Plan area. Consequently, the Structure Plan looks to increase the vegetated values of the site through utilising native species (post-development) in the finishing of the central open space area and using streetscape landscaping.

This is discussed further in Section 3.3.1 of this report with the LD Total Landscape Master Plan attached in full as Appendix 3.

City of Armadale Local Planning Policy PLN 2.6: Water Sensitive Design

The City of Armadale's Local Planning Policy Water Sensitive Design (PLN 2.6) sets out to integrate quality urban development with the natural environment through the use of sensitive water design principles.

While the Structure Plan area does not accommodate any natural water bodies or courses, the centrally located open space (within the Structure Plan area) is integral to water management as it allows for the storage, treatment and onsite infiltration of stormwater. This will be undertaken in accordance with sensitive water design principles by way of two landscaped basins that will improve water quality, through the use of native vegetation. The result is a drainage system with native species that will enhance the environmental value and visual appeal of the Structure Plan area.

Water management principles set out in the supporting Local Water Management Strategy prepared by JDA Hydrologist (Appendix 4) follows the District Water Management Strategy that was approved as part of the preceding rezoning of the land and is discussed further in Sections 3.3.1 and 3.4 of this report.

City of Armadale Local Planning Policy 2.9: Landscaping

The City of Armadale's Local Planning Policy Landscaping (PLN 2.9) looks to use landscaping as an opportunity to enhance environmental amenity in the area.

Comprehensive flora and vegetation assessments have shown that the site is devoid of any significant flora or vegetation (including trees). As a result, LD Total has prepared a Landscape Masterplan that looks to reintroduce environmental and biodiversity attributes for the site through the landscaping of the centrally located open space area, through the creation of two landscaped rain gardens that will be used to accommodate and treat stormwater, utilising native vegetation for these basins. Further, the streets throughout the Structure Plan area will incorporate a variety of tree species which will strengthen the landscaped character of the development. Species of tree will be selected based on their suitability for the Swan Coastal Plain Precinct, as set out in the City of Armadale Urban Forestry Strategy.

This is discussed further in Sections 3.3.1 and 3.3.2 of this report with the LD Total Landscape Master Plan attached in full as Appendix 3.

City of Armadale Local Planning Policy 3.10: Residential Design Code Variations & R- MD Codes

The City of Armadale's Local Planning Policy Residential Design Code Variations & R-MD Codes (PLN 3.10) applies medium density single house development standards (RMD Codes) in areas zoned Urban Development, including variations to: street and lot boundary setbacks, open space, garage widths and setbacks, front fences, parking, visual privacy and solar access. Future residential development within the Structure Plan area will be implemented by way of PLN 3.10, by virtue of the site being zoned 'Urban Development' in TPS4. PLN 3.10 will only be superseded where an approved Local Development Plan is in place, in which case the Local Development Plan will prevail.

Notwithstanding the above, SPP 7.3: Residential Design Codes has recently been released with a deferred Gazettal Date of 1 September 2023. SPP 7.3 encourages Local Governments to repeal any local planning policies which vary the Codes. Should this occur, PLN 3.10 will no longer be applicable to the site and SPP 7.3 will prevail, unless otherwise varied through an approved Local Development Plan.

City of Armadale Local Planning Policy 3.14: Designing Out Crime

The Structure Plan will satisfy four of the five key CPTED principles of Surveillance, Access Control, Territorial Reinforcement and Management and Maintenance through urban design and landscaping that encourages the ongoing surveillance of all public spaces, as required by the City's Local Planning Policy: Designing Out Crime (PLN 3.14). This will reduce the likelihood of crime and anti-social behaviour within the future residential estate. The remaining CPTED principle of Target Hardening is not applicable at the structure planning phase, being of more relevance for subsequent more detailed stages.

The public open space will be landscaped in a manner that will encourage resident use and the activation of this space, which coupled with a safe and legible pedestrian movement network throughout the Structure Plan area, will see this park, the surrounding street network and the adjacent high school provided with a high level of ongoing passive surveillance.

Final assessment of future development will be undertaken at the time of subdivision and individual dwelling design, ensuring that CPTED are implemented within the Structure Plan area.



Figure 7 - West Piara Water Secondary College

Source: Architecture Studio

1.3.7 Other Approvals and Decisions

West Piara Waters Secondary College

On 8 December 2020 the Premier, the Hon Mark McGowan, and the Minister for Education, the Hon Sue Ellery, announced the funding of the \$60 million West Piara Waters Secondary College on Lot 9010, immediately south of the Structure Plan area, accommodating student years 7 to 12. Construction of this Secondary College has commenced and is expected to open in 2023 (Figure 7: West Piara Water Secondary College).

The Structure Plan accommodates the delivery of this college by providing a shared 18m wide road interface wholly within the structure plan area, for access to both the college and future residential development.

Lot 9007 Southampton Drive Lifestyle Village Approval

On 10 December 2020 the Metro Outer Joint Development Assessment Panel granted approval for the development of Lot 9007 as a lifestyle village (Park Home/Caravan Park, as defined under the City of Armadale Town Planning Scheme 4).

This lifestyle village generally consists of:

- 247 single storey (detached) park homes.
- Communal building containing shared amenities for the residents, including a clubhouse, pool and entertainment facilities.
- Outdoor leisure facilities (tennis court, bowling green).
- Minor areas of open space, accessible to residents and visitors only (i.e. not public).
- Caravan and boat parking area.
- Internal (private) road network, accessed exclusively from Warton Road, with Southampton drive accessible for emergencies only.

Most pertinent to the Structure Plan area is the lifestyle village is proposed to be fenced from the neighbouring properties (including Lot 9101), with the Structure Plan responding by appropriately backing onto this future development purposes (Figure 8: Approved Lifestyle Village).

Amendment 115 to the City of Armadale Town Planning Scheme 2

Amendment 115 to the City of Armadale Town Planning Scheme 4 gazetted in the Government Gazette on 2 December 2022. Scheme Amendment 115 undertook a major review of the previous Development Contribution Plan No. 3 (DCP 3), which related to the North Forrestdale precinct. As part of this review, SA 115 encapsulates all land recently rezoned for urban development within (West) Piara Waters, which includes the Structure Plan within the Development Contribution Area No. 3 (DCA 3).

DCP 3 requires landowners within DCA 3 to contribute financially towards the provision of key infrastructure including road and drainage infrastructure, urban water management initiatives and multi-use community/sporting facilities. This is recognised in Part 1 of the Structure Plan.



Figure 8 - Approved Lifestyle Village
 Source: Richard Hammond Architect

2.0 SITE CONDITIONS AND CONSTRAINTS

The Structure Plan area has been cleared for many years for agricultural purposes which has resulted in most of the natural environment being removed, highly disturbed and/or degraded.

The following section summarises the key findings of the comprehensive Environmental Assessment Report (EAR) prepared by Coterra Environment. The EAR details the site conditions and constraints within the Structure Plan area and demonstrates that the relevant environmental factors, including groundwater, drainage and bushfire management, can all be adequately addressed through the planning approval process via the application of appropriate land use responses and management practices.

A complete copy of the EAR can be found as Appendix 1.

2.1 Topography, Landform and Soils

The Structure Plan area is relatively flat, ranging in height from approximately 22m Australian Height Datum (AHD) in the north-east corner up to 24m AHD in a number of pockets across the site.

Regional geology mapping shows the Structure Plan area as primarily comprising fine to medium grained Bassendean Sand (white to pale grey at the surface, yellow at depth) overlying sandy clay to clayey sand of the Guildford Formation. There is one pocket of grey to black fine to medium grained Peaty Sand situated at the northern most corner of the site (adjacent to Warton Road).

2.1.1 Acid Sulphate Soils

The Department of Water and Environmental Regulation (DWER) Acid Sulphate Soil (ASS) risk mapping shows the majority of the site as moderate to low risk of ASS occurring within 3m of the natural soil surface but a high to moderate risk beyond this depth. The isolated pocket of Peaty Sand (discussed above, section 2.1) is identified as having a high to moderate risk of ASS occurring within 3m of the natural surface.

As a consequence, the Structure Plan area is suitable for urban development through an ASS investigation to be undertaken prior to subdivision. If found to be necessary, an ASS Management Plan can be prepared in the usual manner prior to any site works or dewatering (as part of the subdivision).

2.1.2 Contamination

The Structure Plan is not located within any DWER listed contaminated sites with past use of the land for predominantly stock grazing not likely to generate a high risk of contamination.

2.2 Flora and Vegetation

The Structure Plan area has been subject to historic periods of clearing, a result of past agricultural activity, with limited ecological value and only isolated patches of vegetation remaining.

In accordance with the EPA (2004) Guidance, a Level 2 flora and vegetation survey was completed by Bennett Environmental Consulting in May 2011. On the advice of the Department of Biodiversity, Conservation and Attractions, further botanical surveys were subsequently undertaken in November 2019 and 2020, with the scope of these surveys as follows:

- Undertake a targeted survey for *Drakaea elastica* and *Austrostipa jacobsoniana*, targeted to the *melaleuca* area.
- Undertake a targeted survey for *Caladenia huegelii* potential habitat, targeted to the Banksia woodland area.

- Undertake a review of the Bennett Environmental Consulting 2011 survey, to determine the presence of the Banksia woodland Threatened Ecological Community (Banksia woodlands TEC).

The key findings of this work are as follows:

- None of the target species, or any Threatened or Priority flora species were observed onsite.
- The vegetation within the Structure Plan area was found to range from 'Completely Degraded' to 'Degraded to Good', with the majority falling in the 'Completely Degraded' category.
- The limited Banksia woodland onsite was found to be significantly degraded, comprising only a few trees and very little ground storey. This ground storey was deemed to be highly degraded due to stock grazing on the property.
- The extents of Banksia woodland was discovered to be less than previously mapped, being found to a degraded remnant of former Banksia woodland rather than true Banksia woodland.
- No Banksia woodland TEC was found onsite.
- The likelihood of any *Caladenia huegelii* was considered 'unlikely'.
- The Bennett Environmental Consulting 2011 survey was largely confirmed, subject to some minor refinements and additional descriptions.

2.3 Fauna

A Level 1 fauna habitat and black cockatoo habitat survey was undertaken in 2018 to identify fauna values of the site and to investigate the potential for the proposed development to impact upon native fauna and fauna habitat.

The survey found:

- The overall fauna habitat values within the Structure Plan area had been severely compromised through the removal of most of the native vegetation, with remnant patches that are degraded in nature.
- The diversity of fauna species has been significantly reduced with the site having very little conservation significance to fauna in general, a consequence of the site being primarily cleared.
- No black cockatoo habitat trees were found onsite, with no evidence of roosting activity recorded during the survey period.
- Due to the patchy, fragmented nature of vegetation of variable quality, it is difficult to calculate the quality of any foraging habitat (if present).

The survey concluded that no significant impacts to fauna are expected through development of the Structure Plan area.

2.4 Hydrology

The management of ground and surface water is comprehensively addressed within the Local Water Management Strategy (LWMS) prepared by JDA Consulting Hydrologists.

The LWMS has been prepared in accordance with the principles established by the approved West Piara Waters District Water Management Plan, prepared in support of the urban zoning of the site in the MRS.

The LWMS clearly demonstrates that hydrology is not a constraint to development and the existing hydrological conditions of the Structure Plan area are summarised below, whilst the key principles of the LWMS are discussed further in Section 3.4.

[2.4.1 Ground Water](#)

The regional scale groundwater mapping shows that maximum groundwater level ranges between approximately 26m to 27m AHD. The groundwater typically flows in an easterly direction.

A pre-development monitoring programme was undertaken by JDA Consulting Hydrologist by way of five monitoring bores, with results taken between July 2018 and September 2020. The results generally confirming current groundwater mapping.

2.4.2 Surface Water

A minor artificial waterbody has been constructed within the northern end of the Structure Plan area; however, this waterbody is a legacy of the previous agricultural activity and will not be retained as part of future development. The sandy soils and depth to the water table will mean that surface runoff from within the Structure Plan area will not occur.

There are no Conservation Category or Resource Enhancement wetlands located within the Structure Plan area.

The Department of Biodiversity, Conservation and Attractions geomorphic wetlands database indicates that the majority of the Structure Plan area is mapped as a Multiple Use management category wetland, which is the lowest order management category for wetlands with little or no ecological value, making it suitable for development.

2.5 Heritage

The Department of Planning, Lands and Heritage Aboriginal Heritage Enquiry System lists no registered sites within or adjacent to the Structure Plan area. There are no listed European sites of heritage significance located within the structure plan area.

2.6 Bushfire Management

The Structure Plan area is designated as bushfire prone, so as a consequence Bushfire Safety Consulting has prepared a Bushfire Management Plan (BMP) in support of the Structure Plan. This BMP has been proposed in accordance with WAPC's State Planning Policy 3.7: Planning in Bushfire Prone Areas and its Guidelines.

The BMP concludes that bushfire risk is not an impediment to development and that the bushfire risk can be managed through the implementation of asset protection zones, interface treatments and the construction of dwellings within 100m of bushfire prone vegetation in accordance with AS3959 Construction of buildings in bushfire prone areas.

A complete copy of the BMP is included as Appendix 2 with the manner in which the Structure Plan responds to bushfire hazards, discussed in further detail within Section 3.5 of this report.

2.7 Environmental Noise

A Noise Impact Assessment has been undertaken by Lloyd George Acoustics, assessing the impacts from traffic movements along Warton Road (as a designated freight route) which abuts the western boundary of the Structure Plan. This Assessment has been prepared in accordance with State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4).

In addition to road noise the Assessment also considers noise impacts from dog kennels on the western side of Warton Road, with this component assessed against the *Environmental Protection (Noise) Regulations 1997*.

The Assessment identifies a number of dwellings where road noise will exceed the noise targets set out in SPP 5.4 but demonstrates that this impact can be addressed through the construction of a noise wall along Warton Road, as well as the implementation of Quiet House Design construction standards. Notification would also be lodged against titles of impacted properties to inform future owners of potential impacts and necessary construction standards. A preliminary design of the noise wall will be required at the time of subdivision, demonstrating that this wall will be both 'fit for purpose' and will not impose any untoward visual impact upon the locality (as seen from the public realm).

Notification would be placed onto titles of affected properties to inform future owners of potential impacts and required treatments.

This is discussed in further detail in Section 3.7 of this report, with a copy of the Noise Impact Assessment provided in Appendix 6.

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LEGEND	
	SUBJECT SITE
	CONTOURS
	EXISTING BOUNDARIES
	EXISTING LOT NUMBERS
	PROPOSED BOUNDARIES
	RESIDENTIAL - R25
	RESIDENTIAL - R30

LOT SUMMARY	
ORIGINAL AREAS	1
LOT 9101	10.20ha
PROPOSED RESIDENTIAL LOTS	157
MINIMUM LOT AREA	221m ²
AVERAGE LOT AREA	407m ²
MAXIMUM LOT AREA	549m ²
TOTAL AREA	6.40ha
PUBLIC OPEN SPACE	1.07ha

Figure 9 - Subdivision Concept Plan

3.0 LAND USE AND SUBDIVISION REQUIREMENTS

3.1 Land Use

A Subdivision Concept Plan has been prepared showing the delivery of a residential estate, nestled between the West Piara Waters Secondary College (south) and the Lifestyle Village (north), developed in accordance with the Structure Plan principles and requirements (Figure 9: Development Concept Plan).

The key aspects of the Subdivision Concept Plan are to:

- Allow for the creation of a range of housing choices that appeal to a wide market segment, acknowledging that higher (residential) densities do not necessarily commensurate with the locational context of the Structure Plan.
- As a result of being situated over the Jandakot reclassified from P2 to P3*, only residential development is anticipated in the Structure Plan area. This will be reflected in a modification to the underlying Special Control Area (Priority P3* Groundwater Protection Area), as proposed by Amendment 119.
- Deliver one consolidated, high quality area of multi-functional open space area that serves both resident amenity and local drainage function.
- Deliver a permeable, interconnected local road and path network.

- Create a residential estate that is suburban form, wholly appropriate for its local context and situation within the broader Piara Waters locality, representing a logical expansion of the existing West Piara community to the east.
- Extend the necessary services and infrastructure in a timely and coordinated manner to support the future development.
- Accommodate the requirements of the West Piara Waters Secondary College through the delivery of the wider (18m) road interface. The road and interface is provided within the structure plan area.

Based on these principles, the Structure Plan provides for:

- A yield of approximately 150-160 dwellings with residential densities of R25 and R30. The R25 density provides for a broader mix of lot sizes and affordability throughout the site, while R30 is focused fronting the Public Open Space and future West Piara Waters Secondary College to support the contemporary 'compact' dwelling types.

- A consolidated area of public open space, measuring approximately 1.07 hectares (approx.), ensuring opportunities for passive recreation and delivering key local drainage objectives.
- A simple but highly permeable local road network that connects to the surrounding road network at Warton Road (west) and Southampton Drive (east), providing for pedestrian and cycling infrastructure, and future public transport services.
- Delivery of an 18m wide road along the West Piara Waters Secondary College, ensuring an appropriate interface with this facility whilst maximising vehicle movement efficiencies.
- Appropriate separation between identified bushfire hazards along the western side of Mason Road and all future dwellings.

A Land Use Schedule is included as Table 2 which should be read in conjunction with the Subdivision Concept Plan (Figure 9).

Table 2: Lot 9101 Warton Road, Piara Waters - Public Open Space Schedule

8/06/2023				
Site Area (Structure Plan Boundary)		102,032		
Deductions				
nil				
Net Site Area		102,032		
Other Deductions				
Dedicated Drainage (first 15mm)		470		
Total			470	
Gross Subdivisible Area		101,562		
POS @10%		10,156		
Public Open Space Contribution				
May comprise:				
Min 80% unrestricted POS		8125		
Min 20% restricted use POS		2031		
Total Required POS		10156		
POS Reference Number		Dedicated Drainage (m²)	Restricted POS (m²)	Unrestricted POS (m²)
1	10660	470	1530	8660
Total	10660	470	1530	8660
Percentage of gross subdivisible area			1.51%	8.53%

Notes:

1. This Public Open Space Schedule is based on the Local Structure Plan prepared by Rowe Group (Plan ID: 9672-CON-02-E)
2. Restricted Open Space area calculated on basis of 5 yr ARI (20% AEP) area less the 1 yr ARI (first 15mm) drainage area
3. 1 yr ARI (first 15mm) drainage is considered dedicated drainage and is included as a deduction to site area and not credited towards Restricted Open Space
4. Site area based on Landgate Lot areas
5. Drainage areas based on JDA Plan Ref: J6962, dated April 2021

3.2 Residential

The Structure Plan will deliver of a wide range of housing choice, with the size and style of this housing appropriate to its locational context within the Structure Plan.

3.2.1 Dwellings Yields and Density Targets

Based on a Subdivision Concept Plan prepared for the site, the Structure Plan is anticipated to deliver approximately 157 dwellings, with residential density codes of R25 and R30. Residential density codes are applied as follows:

- A base coding of R25 applies, providing opportunities to deliver a range of traditional, front loaded lots ranging in size from 375m² to 450m².
- R30 coded lots identified in selected higher amenity locations throughout the Structure Plan, to provide a range of more affordable and diverse dwelling options. These are provided as a mix of front loaded compact lots and rear loaded terrace product. Lot sizes range from 221m² to 549m².

No higher residential densities are proposed, in recognition of the locational context of the Structure Plan area with there being no particular areas of higher amenity or services that would otherwise warrant a denser urban form.

Liveable Neighbourhoods recommends a residential site density target of 22 dwellings per residential site hectare with the aim of this target to encourage more efficient use of infrastructure and housing. Based on current concept planning, this Structure Plan has the potential to achieve approximately 24.5 dwelling per residential site hectare, exceeding this target

3.2.2 Local Development Plans

Local Development Plans (LDPs) will be required where specific variations to the Residential Design Codes are needed to deliver a contemporary built form response. These LDPs will be required as a condition of subdivision approval and be approved by the City of Armadale.

The City of Armadale Local Planning Policy PLN 3.10 'Residential Design Codes Variation & R-MD Codes' sets out acceptable variations to the deemed-to-comply provisions of the R-Codes for lots coded R25 to R60. Unless otherwise rescinded, the variations set out in PLN 3.10 will apply to the Structure Plan area and thereby constitute Acceptable Development. This will avoid the need for LDP's over the majority of lots, improving efficiencies

and minimising costs to the end user and to the local government.

LDP's will only be required for lots adjoining public open space, and lots affected by environmental noise (road traffic and/or dog kennel noise), as identified in the associated Lloyd George Noise Impact Assessment. This Assessment identifies required acoustic treatments that must be incorporated into affected dwelling designs. The Noise Impact Assessment is discussed in further detailed in Section 3.7 and provided in its entirety as Appendix 6.

3.3 Public Open Space

There is a total of approximately 1.07 hectares of public open space within the Structure Plan area, provided by way of a multi-purposed space. Once credits are applied, a total of 10% public open space is provided, exceeding the minimum 10% requirement of Liveable Neighbourhoods as shown in Table 2 (Land Use Schedule).

A Landscape Master Plan has been prepared by LD Total as part of the Structure Plan, providing more detail of the landscaped response for this central area of public open space (Figure 10: Landscape Master Plan).

This Landscape Master Plan can be found in its entirety at Appendix 3.

The following is a summary of the key aspects of the public

open space provision, based on Liveable Neighbourhoods requirements:

- The Structure Plan provides over 1 hectare of public open space which serves a shared drainage function, while not compromising on the recreational use of this space.
- Approximately 470m² of the open space will receive drainage from the first 15mm storm events (for calculation purposes this is treated as the 1 year storm event and taken as a deduction, as set out in Liveable Neighbourhoods). This stormwater will be infiltrated close to source, using two landscaped bio-retention areas.
- The public open space will also accommodate all stormwater flows over and above the first 15mm, which will be retained and infiltrated within a vegetated rain gardens generally located to the north-western portion of the open space.
- Liveable Neighbourhoods specifies that no more than 2% of the 10% public open space can be made up of restricted use open space. With 0.86 hectares of the public open space being unrestricted (taking stormwater flows over and above the first 15mm), the Structure Plan satisfies this requirement.

A more detailed description of the public open space is detailed below.

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Figure 10 - Landscape Master Plan

Source: LD Total

3.3.1 Description of the Public Open Space

The landscape strategy is to construct a highly functional yet aesthetically pleasing environment for future residents, to be delivered early as one consolidated area of public open space, provided as part of the first stage of development.

This open space area has been carefully designed by LD Total to support a variety of uses within the one space, as shown on the Landscape Master Plan (Figure 10: Landscape Master Plan). In broad terms the open space is divided into the distinct portions, each offering different function and use but collectively, creating one area of truly multi-use open space.

The design of the open space is based on the following objectives:

- Open turfed area to the southern side of the space will provide for informal play and a kick-about space.
- Shared pathways and footpaths that connects the space with the broader residential estate.
- Create a picnic node adjacent to the turfed area, which may include shade shelters and picnic facilities, easily accessible from safe shared pathways.
- Opportunities to provide a small playground area, located adjacent to the picnic node.
- Accommodates drainage (first 15mm) within two small landscaped rain gardens.

- Conveys drainage from the two rain gardens into a larger, vegetated basin, accommodating flows from the larger (less frequent) storm events.
- Provision of embayed parking to the western edge of the open space.

3.3.2 Streetscape Planting

Streets throughout the project are important elements in promoting access and the design character of the Structure Plan.

A Street Tree Master Plan has been prepared by LD Total (Figure 11: Street Tree Master Plan), showing how streets throughout the Structure Plan shall incorporate a variety of tree species, which will strengthen the landscape character of this new residential area.

Tree selection includes both local and exotic species; all which have been assessed as suitable for the Swan Coastal Plain Precinct, as set out in the City of Armadale Urban Forestry Strategy, and with regard to the width of reserves and the role particular roads will serve. Detailed engineering and landscaping schedule of the streets and their trees will be determined in consultation with the City at subdivision stage.

3.4 Water Management

The Structure Plan adopts best practice urban water management principles through the integration of stormwater detention and infiltration within the central public open space area, while still creating a multi-purpose space that does not compromise the amenity or functionality.

In accordance with the WAPC's Better Urban Water Management Guidelines, JDA Consulting Hydrologists have prepared a Local Water Management Strategy (LWMS) for the Structure Plan. The LWMS is a strategy for the management of groundwater quality and stormwater runoff and follows the Piara Water West District Water Management Strategy (DWMS) that was endorsed by the Department of Water and Environmental Regulation on 11 August 2020 as part of the rezoning of the land in the Metropolitan Region Scheme. The primary reason for the DWMS was to show how future urban development was compatible with the long-term protection and management of the Jandakot groundwater Area.

The strategy outlined in the LWMS will then be refined and implemented as part of Urban Water Management Plans (UWMP) which will be prepared at the time of subdivision.

The JDA LWMS is provided as Appendix 4.

3287Rep16C



Figure 11 - Street Tree Master Plan

Source: LD Total

3.4.1 Stormwater Management

Stormwater management will be in accordance with DWER's water sensitive design practices and refines the stormwater strategy set out in the approved Piara Water West District Water Management Strategy.

The key aim of the DWMS was to ensure any subsequent stormwater strategy would effectively manage water quality and water quantity from all storm events in a manner that would not be detrimental to the Jandakot Groundwater Protection Area, with key elements (of the DWMS) being:

- Define land area requirement for conveyance of flood flows and protect future development from peak flood events.
- Propose a drainage design strategy that is appropriate for local conditions that incorporate best practice water sensitive urban design measures.
- Prescribe the design criteria for both water quantity and water quality.
- Develop an overall drainage network concept based on the local hydrologic and hydraulic parameters for the site.
- Define an implementation framework for the drainage design objectives.

- Recommend an ongoing monitoring program for water quantity and quality (both pre- and post-development) to ensure the drainage strategy is robust.

The LWMS refines the stormwater strategy set out in the DWMS as set out below.

Small Event (First 15mm Rainfall) Management

In accordance with City of Armadale requirements, the first 15mm of stormwater runoff (equating to the 1 year ARI, 1 hour event) will be infiltrated at source through the use of soakwells within individual lots.

Stormwater runoff from the roads will be discharged to the central public open space, for treatment within one of two vegetated bio-retention areas, with these bio-retention areas underlain with subsoil drainage pipes to ensure these spaces do not become water logged.

Minor Event Management

The stormwater drainage network will be design based on the 20% AEP event (5 year ARI) event.

Stormwater runoff generated from within residential lots (in excess of onsite soakwell capacity) and roads will flow overland into the road drainage pit and pipe network, to prevent significant water ponding.

This stormwater will then be discharged into the two vegetated bio-retention areas within the central public open space, and once these bio-retention areas reach capacity, stormwater will overflow into the adjacent sections of the public open space.

Major Event (Flood) Management

Major stormwater drainage up to the 1% AEP event (100 year ARI) event will comprise run off from lots (in excess of onsite soakwell capacity) and road run off. These flows will convey overland via the road reserves to the area of public open space.

This area of public open space will then provide flood storage and stormwater retention via infiltration, with a subsoil drainage connection to the adjacent lifestyle village development (Lot 9007 Southampton Drive) to act solely as a contingency.

Finished lot level will be at least 0.3m above the estimated 1% AEP flood level, to minimise the risk of property damage.

3.4.2 Groundwater Management

A preliminary earthworks strategy prepared by Cossill & Webley consulting engineers for the Structure Plan shows how the use of clean, free-draining imported fill will provide adequate separation between finished levels and groundwater.

The separation between finished levels and groundwater is determined by the need to provide a gravity-reliant sewer network, expected to vary between 1.5m to 3.5m.

As there is adequate separation to groundwater, subsoil drainage within road reserves is not required. Subsoil drainage is only proposed beneath the central public open space as a contingency measure, should groundwater levels rise higher than predicted. This subsoil drainage will connect to the adjacent lifestyle village (Lot 9007 Southampton Drive), which is consistent with the approved DWMS.

3.4.3 Implementation and Monitoring Program

The LWMS sets the overall water management strategy for development within the Structure Plan area.

Initially it will be the responsibility of the developer to construct and maintain the stormwater drainage system in accordance with UWMP(s) that will be prepared at subdivision stage, but longer term maintenance will revert to the City of Armadale.

Post-development monitoring of groundwater levels and quality will operate over a three year period. All sampling will be conducted in accordance with Australian Standards and will be undertaken by a NATA approved laboratory.

3.5 Bushfire Management

The Structure Plan provides a design response and the planning framework to address potential bushfire hazards. A Bushfire Management Plan (BMP) has been prepared by Bushfire Safety Consulting, in accordance with the WAPC 'State Planning Policy 3.7: Planning in Bushfire Prone Areas' and the 'Planning for Bush Fire Protection Guidelines'. The BMP shows how bushfire risk can be managed through a combination of asset protection zones, mandatory dwelling setbacks and appropriate construction standards (of dwellings).

The BMP includes a Hazard Assessment (post-development) showing that vegetation which poses a bushfire risk is restricted to pockets of 'Woodland' and 'Forest' located on the western side of Warton Road and within the western-most portion of the West Piara Waters Secondary College site. What is currently identified as unmanaged 'Grassland' within the adjacent lifestyle development (to the north) is expected to be removed as this development moves towards its construction phase. The public open space also contains a small portion of 'Grassland' within the stormwater bio-retention area.

The BMP requires that an Asset Protect Zone (APZ) be established between these pockets of identified (bushfire prone) vegetation and any future dwellings in order to achieve a Bushfire Attack Level (BAL) of 29 or less in accordance with AS3959 "Construction of buildings within bushfire prone areas." The Structure Plan achieves this by positioning local roads between this vegetation and residential lots, with mandatory building setbacks to ensuring BAL-40 and BAL-FZ construction standards are not required. Where lots are affected by a BAL rating (BAL-12.5 or greater), notifications will be placed on title to inform purchasers of potential increase in construction standards.

3.6 Movement Network

A comprehensive Transport Impact Assessment (TIA) has been prepared by Transcore traffic engineers, which forecasts traffic volumes and sets out a recommended road network hierarchy to accommodate expected traffic flows.

The following section discusses the key findings of the TIA, including existing and planned movement network, road hierarchy classification and an overview of the cyclist and pedestrian network, with the TIA provided in its entirety as Appendix 5.

3.6.1 Existing Movement Network

The Structure Plan has excellent connections to the regional road network that allows for convenient access to local, district and regional destinations. Key aspects of the existing road network are:

- **Armadale Road** is reserved as a Primary Regional Road in the MRS and is classified as a Primary Distributor by Main Roads WA. With a posted speed limit of 80km/h in proximity to the Structure Plan, it was recently upgraded to a dual carriageway (two lanes each way). Armadale Road is an identified primary freight route.
- **Warton Road** abuts the western edge of the Structure Plan and is classified as a District Distributor A Road by Main Roads and an Integrator Road A. It is constructed as a dual carriageway, (two lanes each way) with a posted speed limit of 80km/h (abutting the Structure Plan area). Warton Road is also an identified primary freight route.
- **Southampton Drive** abuts the eastern edge of the Structure Plan and is classified as an Access Road, constructed as a single carriageway, (6m pavement) with a default speed limit of 50km/h
- **Mason Road** runs in an east-west direction and is classified as a Local Distributor by Main Roads WA. Constructed as a single carriageway (rural standard) between Warton Road and Southampton Drive,

Mason Road has been upgraded to a Neighbourhood Connector A (urban standard) east of Southampton Drive, comprising one lane each way with on road cycle lands. A default speed limit of 50km/h applies.

- **Jandakot Road** runs in an east-west direction to the west of Mason Road (within the City of Cockburn), currently constructed as a single carriageway with a posted speed limit of 80km/h. Jandakot Road is classified as a Regional Distributor by Main Roads WA.
- **Wright Road** is located approximately 450m east of the Structure Plan area. Classified by Main Roads WA as a Local Distributor, Wright Road is generally constructed as a Neighbourhood Connector A, comprising one lane each way with on road cycle lanes and a 2m central median.

Armadale Road, Warton Road and Jandakot Road are currently part of the Restricted Access Vehicles (RAV) Network 4, accommodating heavy vehicle combinations up to 27.5m in length, with appropriate RAV permits issued by Main Roads WA.

A four-arm roundabout, comprising four through lanes in the north-south direction, with two through lanes in the east-west direction is constructed at the Warton Road/ Mason Road/Jandakot Road intersection to the south of the Structure Plan.

Public bus service 518 connects to Murdoch to Cockburn Train Station, running along Armadale Road from Cockburn Central to Wright Road, providing an hourly service Monday to Friday with more frequent services in the peak AM and PM periods.

3.6.2 Proposed Movement Network

The Transport Impact Assessment has been prepared by which comprehensively addresses traffic movement considerations within the Structure Plan area.

Road Network

The planned road network shown on the Subdivision Concept Plan provides a permeable local road network for the Structure Plan area with strong, linkages in an east-west direction to the wider network, along with providing excellent circulation about the West Piara Waters Secondary College.

The Road Hierarchy Plan shows the hierarchy of the movement network planned for the area and the connections to the existing network (Figure 12: Road Hierarchy Plan).

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Figure 12 - Road Hierarchy Plan

Source: Transcore

The key aspects of the planned road network are as follows:

- **Warton Road** is to remain as currently classified, as an Integrator A Road.
- **Southampton Road** is also to remain as an Access Street C, with traffic movements forecast to be less than 3,000vpd.
- **Neighbourhood Connector** road that runs along the southern edge of the Structure Plan area (abutting the West Piara Waters Secondary College) will have a minimum reserve width of 18m to accommodate anticipated traffic volumes and provide for embayed parking associated with the school.
- **Access Streets C** will make up the remainder of all roads within the Structure Plan area, with a reserve width of 15.4 and reduced to 13.2m when adjacent to public open space.

The Warton Road/Neighbourhood Connector intersection will be constructed as left in/left out only, primarily to accommodate traffic movements associated with the West Piara Waters Secondary College. The limited movement nature of this intersection will ensure that vehicle circulation in and around the College will be maximised, whilst not resulting in any undue queuing from vehicles that would otherwise be looking to turn right (north) onto Warton Road.

The Southampton Drive/Access Street B/Mannheim Crescent intersection is to be constructed as a four-arm roundabout to ensure the most efficient vehicle access to and from the Structure Plan area possible.

The Development Concept Plan reflects these planned outcomes.

Pedestrian & Cyclist Facilities

The Structure Plan will deliver a safe and legible pedestrian and cycle movement network for future residents, expanding upon connections currently found in the surrounding areas, which in turn can be further expanded upon as other developments proceed within the locality.

A 2.5m shared pathway already exists, running on the eastern side of Warton Road, between Armadale Road (to the south) and Nicholson Road (to the north).

The key principles for determining the planned pedestrian and cycling facilities are as follows:

- A shared path will be provided to the Neighbourhood Connector, being the street abutting the West Piara Waters Secondary Collage.
- Footpaths on at least one side of all other access roads within the Structure plan area.

These key principles and the final location of footpaths and shared paths will be determined in consultation with the City of Armadale as part of the detailed engineering stage following subdivision approval.

Public Transport

Development of the Structure Plan area will in part provide the catalyst for a future public transport service. Presently bus route 518 runs along Armadale Road and Wright Road from the Cockburn Train Station. It is anticipated that this bus route will continue to service the Structure Plan area, with plans by the Department of Transport indicating that Armadale Road may be upgraded as a high priority transit corridor to further improve public transport in the area.

3.6.3 Analysis of the Transport Network

Transcore have undertaken comprehensive traffic modelling for the movement network proposed by the Structure Plan. It demonstrates that the proposed network and associated reserve widths have the capacity to accommodate expected traffic volumes. Traffic modelling undertaken has incorporated forecast volumes up to the year 2031, which is the year that full development of the wider West Piara Waters locality is assumed to be complete which ensure a transparent and robust model.

With the Structure Plan only generating approximately 1,360vpd, all movements fall well within the acceptable limits outlined by *Liveable Neighbourhoods* for the respective road categories proposed by the Structure Plan. Therefore, all roads within the Structure Plan are categorised as Access Streets B or less, highlighting the limited impact the Structure Plan will have on the wider network.

Warton Road/Mason Road/Jandakot Road Roundabout

A SIDRA intersection capacity analysis shows that the Warton Road/ Mason Road/Jandakot Road roundabout to the south of the Structure plan area is already operating at capacity, prior to development of the Structure Plan area. The analysis identified the need for a 50m left turn slip lane to improve the capacity of this roundabout, a result of the minor increase in traffic resulting from development of the Structure Plan area.

Southampton Drive/Access Street B/Mannheim Crescent Roundabout

The Southampton Drive/Access Street B/Mannheim Crescent intersection is planned to be upgraded as a four-arm roundabout to accommodate the safe and efficient movement of vehicle to and from the Structure plan area. With the majority of vehicle movements expected to head westwards, impact on this intersection is expected to be minimal.

External Roundabouts

For thoroughness, the SIDRA intersection capacity analysis was expanded to include the existing Mason Roads/Mannheim Crescent and mason Road/Southampton intersection roundabouts, both which outside the Structure Plan area.

Both roundabouts were shown to accommodate the additional traffic generated by the Structure Plan area based on their current standard of construction with no upgrades required.

Internal Intersections

The precise nature and function of all internal intersections will be determined once the location and alignment of access streets has been finalised as part of the subdivision approval. All intersection spacing and treatments will be designed to accord with *Liveable Neighbourhoods* standards.

The SIDRA capability analysis carried out for the site confirms that uninterrupted traffic flows can be expected at all internal intersections during typical operating conditions.

3.7 Environmental Noise

A Noise Impact Assessment has been prepared by Lloyd George Acoustics.

The purpose of the Assessment is two-fold, to consider the impact of:

- Traffic noise made by vehicles travelling along Warton Road, being a designated freight route; and
- Noise emissions from a number of operating dog kennels, to the western side of Warton Road.

Traffic Noise

The Assessment concludes that noise received at a number of future residences located adjacent to Warton Road will have the potential to exceed acceptable noise limit targets, as set out in State Planning Policy 5.4 (Roads and Rail Noise); however, this impact can be reduced to accessible levels through:

1. The construction of a 3m noise wall along Warton Road, reducing in height to 2.4m at the estate entry.
2. The incorporation of acoustic treatment (quiet house design principles) into future dwelling designs (affected lots).

A preliminary design of the noise wall will be required at the time of subdivision, demonstrating that this wall will be both 'fit for purpose' and will not impose any untoward visual impact upon the locality (as see from the public realm).

Kennel Noise

The Assessment also focussed on the impact of noise associated with a number of dog kennels located to the western side of Warton Road. This dog kennel noise was assessed against the provisions of the Environmental Protection (Noise) Regulations 1997. The modelling parameters set out in the Assessment was adopted in consultation with the City of Armadale, City of Cockburn, Department of Water and Environmental Regulation and the kennel owners, resulting in the following:

- The survey (noise logging) being undertaken during school holidays when kennels are at peak occupancy, and at feeding time when noise emissions are at their highest level.
- Confirmation from the Ashridge kennel owner of 100% kennel occupancy during the survey.
- Adopting a cumulative effect of an additional kennel being considered to ensure a conservative assessment.

As a result of the Assessment adopting this cumulative noise level scenario, the outcomes can be considered as 'worst case' but which also provide for a robust and transparent model.

The Assessment found that a number of future properties located within the Structure Plan area have the potential to be affected by kennel noise, but that this impact will be reduced to acceptable levels through the use of the noise wall along Warton Road and acoustic treatments (quiet house design principles) incorporated into future dwelling designs (of affected lots).

For all properties affected by traffic or kennel noise, notifications will be lodged on titles to inform future owners of potential impacts and necessary construction standards.

The Lloyd George Acoustics Noise Impact Assessment Plan is included as Appendix 6.

3.8 Education

The Structure Plan is extremely well serviced by existing and planned educational facilities notwithstanding that there are no educational facilities within the Structure Plan area itself.

The Department of Education owns Lot 9010, immediately south of the Structure Plan area, with this land reserved in the MRS as 'Public Purpose – High School'. On 8 December 2020 the Premier, the Hon Mark McGowan, and the Minister for Education, the Hon Sue Ellery, announced the funding of the \$60 million West Piara Waters Secondary College on Lot 9010, accommodating student years 7 to 12. Construction of this Secondary College has commenced and is expected to open in 2023. In addition to the West Piara Waters Secondary College, a primary school has been identified, co-located with an area of district open space on Lot 9009 to the south of Mason Road to also serve the broader community.

Further to these two schools, the Structure Plan is also in close proximity to a number of other existing educational facilities, including the Harrisdale Senior High School located approximately 2km east and the Forrestdale Primary School located approximately 1km. Carey Baptist College (Harrisdale) is a Baptist facility located on Wright Road approximately 2.5km north-east, while St John Bosco College is a Catholic facility located on Armadale Road approximately 3km south-east from the Structure Plan area, with both these Colleges offering Kindergarten to Year 12, they provide a non-government school option for future residents.

In accordance with Liveable Neighbourhoods and based on the estimated yield of between 150-160 lots, the Structure Plan falls well short of constituting a complete school catchment.

It is important to note that the Structure Plan will provide one (18m wide) road abutting the West Piara Waters Secondary College, to help provide this future school with excellent access and circulation, consistent with the principles of Liveable Neighbourhoods.

3.9 Servicing and Staging

Lot 9101 can be connected to all essential services, which typically involve extending the infrastructure network from adjacent developed areas.

An Engineering Servicing Report prepared by Cossill & Webley consulting engineers can be found as Appendix 7.

3.9.1 Earthworks Strategy

A preliminary earthworks strategy has been prepared for the Structure Plan area with finished levels to be dictated by a number of considerations being:

- Achieve minimum clearance between finished levels and the groundwater table.
- Providing minimum cover and adequate grades of sewer pipes.
- Match into levels of surrounding road reserves and the adjacent Piara Waters Secondary College to the south. A retaining wall at the boundary between Lot 9101 and the future lifestyle village to the north will ensure an appropriate interface.
- Provide for adequate cover of clean, free draining sand over underlying subsoil material to achieve 'Class A' soil classification.

As part of civil subdivision works, the Structure Plan area will be earthworked through cut and import fill operation to ensure all these considerations are met.

3.9.2 Waste Water

Waste water from development within the Structure Plan area will be gravity fed to an existing DN150 sewer main located within the Southampton Drive reserve. Offsite sewer works will be required with the Water Corporation advising that an existing DN150 sewer main situated between Dortmund Gardens and Wright Road (to the east of the Structure Plan) not having capacity. This involves one of two options:

1. Upgrade the existing DN150 main to a DN225; or
2. Duplicate the DN150 main within the western verge of Bordeaux Parade between Dortmund Gardens and Wright Road.

The Water Corporation has advised that the first option (upgrade) is the preferred option but that the second option (duplication) may be considered if local constraints render Option 1 unfeasible.

3.9.3 Water Reticulation

The Structure plan will be supplied with water reticulation via a connection to an existing DN150 water main located in the Southampton Drive reserve.

[3.9.4 Power Supply](#)

The existing power network within the vicinity will be extended to provide a power supply to the Structure Plan. An existing Western Power underground high voltage power cable is located within Warton Road, approximately 40m south of Lot 9101. This HV cable will be extended to the Structure Plan area, having adequate capacity to service future development.

[3.9.5 Gas Supply](#)

The Structure Plan will be serviced via a 110PE high pressure main (ATCO gas infrastructure) installed in Southampton Drive, which has capacity to service future development.

[3.9.6 Telecommunications](#)

The current Federal Government telecommunication policy identifies the National Broadband Network Company (NBN Co) as becoming the wholesale telecommunications provider. The design and installation of a standard pit and pipe network will be undertaken as development of the site progresses, with the installation of fibre optic infrastructure to be provided by the NBN Co.

[3.9.7 Staging and Timing](#)

The Structure Plan will be constructed in a manner that meets market demand; however, is envisaged to only comprise two stages.

The first stage of development is envisaged to be focused about the Southampton Drive intersection to facilitate the construction of an estate entry and for easy extension of necessary services. This stage will also deliver the critical 18m wide road abutting the West Piara Waters Secondary College

The second stage will deliver the remainder of the structure plan area, typically progressing east to west, providing for a logical extension to the estate, but this should be taken as indicative only and may be subject to change depending on market and other variables.

3.10 Developer Contributions

The Structure Plan is subject to contribution to the costs of common and community infrastructure in accordance with a Development Contribution Plan and Cost Apportionment Schedule prepared pursuant to Part 6B and Schedule 13B Development Contribution Plans.

A Development Contributions Scheme is presently being prepared by the City of Armadale, with a draft DCS soon to be advertised by way of Amendment 115 to TPS4.





APPENDIX 1

ENVIRONMENTAL ASSESSMENT REPORT



APPENDIX 2 BUSHFIRE MANAGEMENT PLAN



APPENDIX 3
LANDSCAPE MASTER PLAN



APPENDIX 4

LOCAL WATER MANAGEMENT STRATEGY



APPENDIX 5
TRAFFIC IMPACT ASSESSMENT



APPENDIX 6 NOISE IMPACT ASSESSMENT



APPENDIX 7
ENGINEERING SERVICING REPORT