ROWE GROUP DESIGN

STRUCTURE PLAN

BYFORD TOWN CENTRE

WAPC REF: SPN 0098M – 3

OUR REF: 8861 19/10/2021

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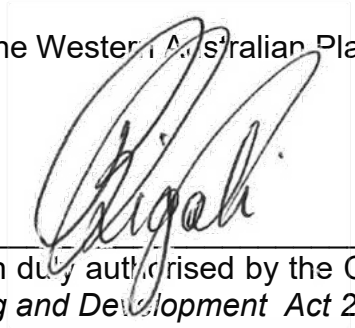
IT IS CERTIFIED THAT AMENDMENT NO. 3 TO BYFORD TOWN CENTRE STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

15 FEBRUARY 2022

Signed for and on behalf of the Western Australian Planning Commission



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an officer of the Commission duly authorised by the Commission pursuant to Section 16 of *the Planning and Development Act 2005* for that purpose.

TABLE OF AMENDMENTS

AMENDMENT NO.	SUMMARY OF THE AMENDMENT	DATE APPROVED BY WAPC
1	Land use reallocation – Public Open Space to Town Centre – Lot 4 South Western Highway.	December 2015
2	Density recoding from R30 to R60 – Lot 2 Abernethy Road.	18 June 2018
3	- Modification to road layout in accordance with District Structure Plan; - Redistribution of density (R-Code allocations); and - Additional Commercial land use.	15 February 2022

EXECUTIVE SUMMARY

This Structure Plan has been prepared by Rowe Group on behalf of Aigle Royal Group, the owner of Lot 1 Abernethy Road, Byford. This Structure Plan reflects an amendment to the existing approved *Byford Town Centre Structure Plan* (approved December 2015, amended June 2018), prepared by Urbis (WAPC Reference SPN-0098M-2). The proposed amendment seeks to revise the land use allocations and spatial design across the approved Local Structure Plan area, generally bringing it in to alignment with the draft *Byford District Structure Plan*.

Portions of the approved Local Structure Plan have already been implemented through the delivery of the Byford Village and Byford Market Place shopping centres, providing for a large format supermarket, retail and specialty shops. Land to the south of Abernethy Road and east of the railway line has also been developed, including the Byford Secondary College, commercial uses and medium density residential development. Therefore, this amendment request only applies to the undeveloped land within the Local Structure Plan area.

The proposed Local Structure Plan Amendment incorporates the following modifications:

- Realignment of San Simeon Boulevard in accordance with the draft *Byford District Structure Plan*;
- Reconfiguration of the multiple use corridors in accordance with the draft *Byford District Structure Plan*;
- Inclusion of additional Commercial land;
- Rationalisation of the local road network;
- Redistribution of residential density; and
- Consideration for transit oriented design in light of an indicative METRONET station precinct.

The objective of this Amendment is to introduce a number of the key initiatives contemplated under the draft *Byford District Structure Plan*, as well as consideration for an indicative METRONET station precinct. Such initiatives are proposed to address the requirements for the reconfiguration of the multiple use corridors (incorporating public open space and drainage), residential cells, the inclusion of additional commercial land, and transit oriented design. This Amendment therefore provides for the reconsideration and rationalisation of the existing approved Local Structure Plan in this context.

The intention of this Amendment is to allocate a mix of land uses which are suited to, and complement the site's location and surrounding land uses through a modified urban layout, providing an appropriate land use transition across the site, which is legible and pedestrian orientated, whilst also addressing the significant drainage requirements for the site (as stipulated under the approved Local Structure Plan).

This report has been prepared in accordance with the requirements of the *Shire of Serpentine-Jarrahdale Town Planning Scheme No. 2* (LPS 2) and the *Planning and Development (Local Planning Schemes) Regulations 2015* (the Regulations), and is supported by technical assessments and

reporting from a consultant team comprising fire management, hydrology, acoustic, environmental, traffic and retail studies (included as Appendices to this report).

This Amendment has been undertaken in collaboration with the Shire of Serpentine-Jarrahdale and in consultation with relevant government stakeholders. As noted above, the Amendment has also given due regard to the draft *Byford District Structure Plan*, which has been adopted for advertising by the Shire of Serpentine Jarrahdale. The Amendment is proposed to run in parallel and support of the draft *Byford District Structure Plan*.

STRUCTURE PLAN SUMMARY

ITEM	DATA	SECTION NUMBER REFERENCED IN PART 2 OF REPORT
Total area covered by the Structure Plan	78.4 hectares (34.8 hectares subject to amendment)	2.2
Area of each land use proposed: - Residential - Commercial / Mixed Use	 16.3 hectares 19.6 hectares	
Estimated number of dwellings	up to 840 dwellings, subject to design	5.3
Estimated residential site density	50-60 dwellings per site hectare	5.3
Estimated population	2,520 people, based on 3 people per household (2016 Census)	5.3
Number of high schools	1 high school	5.6
Number of primary schools	0 primary schools	5.6
Estimated area and percentage of public open space given over to: - Multiple Use Corridors - Local Parks - Community Purpose	 - 6.2 hectares - 1.2 hectares - 0.7 hectares	5.2

Note: All information and areas are approximate only and are subject to survey and detailed design.

CONTENTS

FIGURES

TECHNICAL APPENDICES

APPENDIX NUMBER	DOCUMENT TITLE	NATURE OF DOCUMENT	REFERRAL/APPROVAL AGENCY	APPROVAL STATUS
1	Certificate of Title	Reference	Landgate	-
2	Draft Byford District Structure Plan	Reference	Shire of Serpentine-Jarrahdale	-
3	Approved Byford Town Centre Local Structure Plan	Reference	Shire of Serpentine-Jarrahdale	-
4	Approved Plan of Subdivision 153951	Reference	Western Australian Planning Commission	-
5	Bushfire Management Plan	Approval Required	Department of Fire and Emergency Services	
6	Environmental Management Plan	Approval Required (at subdivision stage)	Shire of Serpentine-Jarrahdale	
7	Landscape Concept Masterplan	Supporting	Shire of Serpentine-Jarrahdale	-
8	Transport Impact Assessment	Supporting	Main Roads WA / Shire of Serpentine-Jarrahdale	-
9	Local Water Management Strategy Addendum	Approval Required	Department of Water and Environmental Regulation	Approved
10	Assessment of Commercial Development Potential	Supporting	Shire of Serpentine-Jarrahdale	-
11	Engineering Servicing Summary	Supporting	Shire of Serpentine-Jarrahdale	-

PART ONE

IMPLEMENTATION

ROWE GROUP DESIGN

1. STRUCTURE PLAN AREA

This Structure Plan applies to the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map (Refer Plan 1 situated at the end of Part 1 of this Structure Plan report).

2. OPERATION

In accordance with Schedule 2, Part 4 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, this Structure Plan shall come into operation when it is approved by the Western Australian Planning Commission (WAPC) pursuant to Schedule 2, Part 4, Clause 22 of the Regulations.

Pursuant to clause 27(1) of Schedule 2 of the Planning Regulations:

> *A decision-maker for an application for development approval or subdivision approval in an area covered by a structure plan that has been approved by the Commission is to have due regard to, but is not bound by, the structure plan when deciding the application.*

Pursuant to clause 28(1) of Schedule 2 of the Planning Regulations this Structure Plan has effect for a period of 10 years, commencing on the day which the WAPC approves the plan.

3. STAGING

Staging of the Structure Plan is to occur from the east to west, and in accordance with the provision of services and infrastructure. Further staging is to be addressed and considered through the subdivision and detailed design stages.

4. SUBDIVISION AND DEVELOPMENT

4.1 LAND USE AND ZONES

The Structure Plan Map (Plan 1) outlines the land uses, zones and reserves applicable within the Structure Plan area. The zones and reserves designated under this Structure Plan apply to the land within it as if the zones and reserves were incorporated into the Scheme.

4.2 PUBLIC OPEN SPACE

Public open space (including multiple use corridors) should be provided generally in accordance with the Structure Plan Map (Plan 1) and the approved Local Water Management Strategy.

4.3 RAILWAY STATION PRECINCT (METRONET)

A Precinct Structure Plan is to be prepared for the area identified on Plan 1 in accordance with *State Planning Policy 7.2: Precinct Design* and approved under the Deemed Provisions of the *Planning and Development (Local Planning Scheme) Regulations 2015*. The Precinct Structure Plan is to address the following:

a) Location and configuration of park-and-ride and bus interchange facilities;

b) Built form and orientation to park-and-ride and bus interchange;

c) Access and building orientation within the immediate proximity to the station entrance;

d) Density coding to achieve a target of 30 dwellings per gross urban hectare;

e) Built form, access and orientation fronting the local street network; and

f) Built form and orientation fronting Multiple Use Corridors.

The Precinct Structure Plan may be prepared in two stages, being:

1. North of Clara Street, inclusive of Clara Street; and
2. South of Clara Street, inclusive of the Multiple Use Corridor.

Each stage must address the principles listed above and demonstrate the interface between the two stages can be coordinated.

4.4 HIGHWAY COMMERCIAL (RESTRICTED USE PRECINCT)

The land fronting Abernethy Road and allocated as 'Highway Commercial (Restricted Use Precinct)' on the Structure Plan is subject to the following land use restrictions:

LAND USE	PERMISSIBILITY
Automotive Sales	AA
Health Studio	AA
Medical Centre	P
Office	P
Service Station	SA
Showroom	P
Warehouse	AA
Veterinary Establishment	AA

4.5 INTERFACE WITH ADJOINING LAND

Subdivision and development within the Structure Plan area shall have due consideration for land use allocation and ensure the seamless connection of roads and other infrastructure with existing development (as constructed) on the adjoining land.

4.6 RESIDENTIAL DENSITY TARGETS

The residential density codes applicable to the Structure Plan shall be in accordance with those shown on the Structure Plan Map (Plan 1).

In accordance with Liveable Neighbourhoods targets, the Structure Plan area shall provide for a minimum average of 30-40 dwellings per residential site hectare.

4.7 LOCAL DEVELOPMENT PLANS

Local Development Plan(s) are to be prepared for lots with one or more of the following attributes:

- Commercial land abutting or adjacent to Rural zoned areas to the west is to address the rural/urban interface, including provisions for building setbacks and orientation, access, landscaping, fencing and earthworks;
- Residential land fronting public open space and drainage is to address building orientation, building height, streetscape, fencing and site works; and
- Residential and commercial land fronting San Simeon Boulevard is to address built form, access and urban design outcomes to ensure an urban frontage reflective of the METRONET Precinct objectives.

4.8 NOTIFICATIONS ON TITLE

In respect of applications for the subdivision of land, the Council shall recommend to the WAPC a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate(s) of Title to advise of the following:

g) Lots deemed to be affected by a noise impact from road or rail infrastructure, as identified in an approved Noise Management Plan; and/or

h) Lots created within areas exposed to a Bushfire Attack Level (BAL) rating exceeding BAL-Low, as specified in an approved Bushfire Management Plan.

5. OTHER REQUIREMENTS

5.1 BUSHFIRE MANAGEMENT

This Structure Plan is supported by a Bushfire Management Plan. Any buildings to be erected on land identified as falling within 100 metres of a bushfire hazard, as identified in the Bushfire Management Plan, shall comply with the requirements of *Australian Standard 3959* under the *Building Code of Australia*.

5.2 INFRASTRUCTURE REQUIREMENTS

The following infrastructure is required as a precursor to the development of the site:

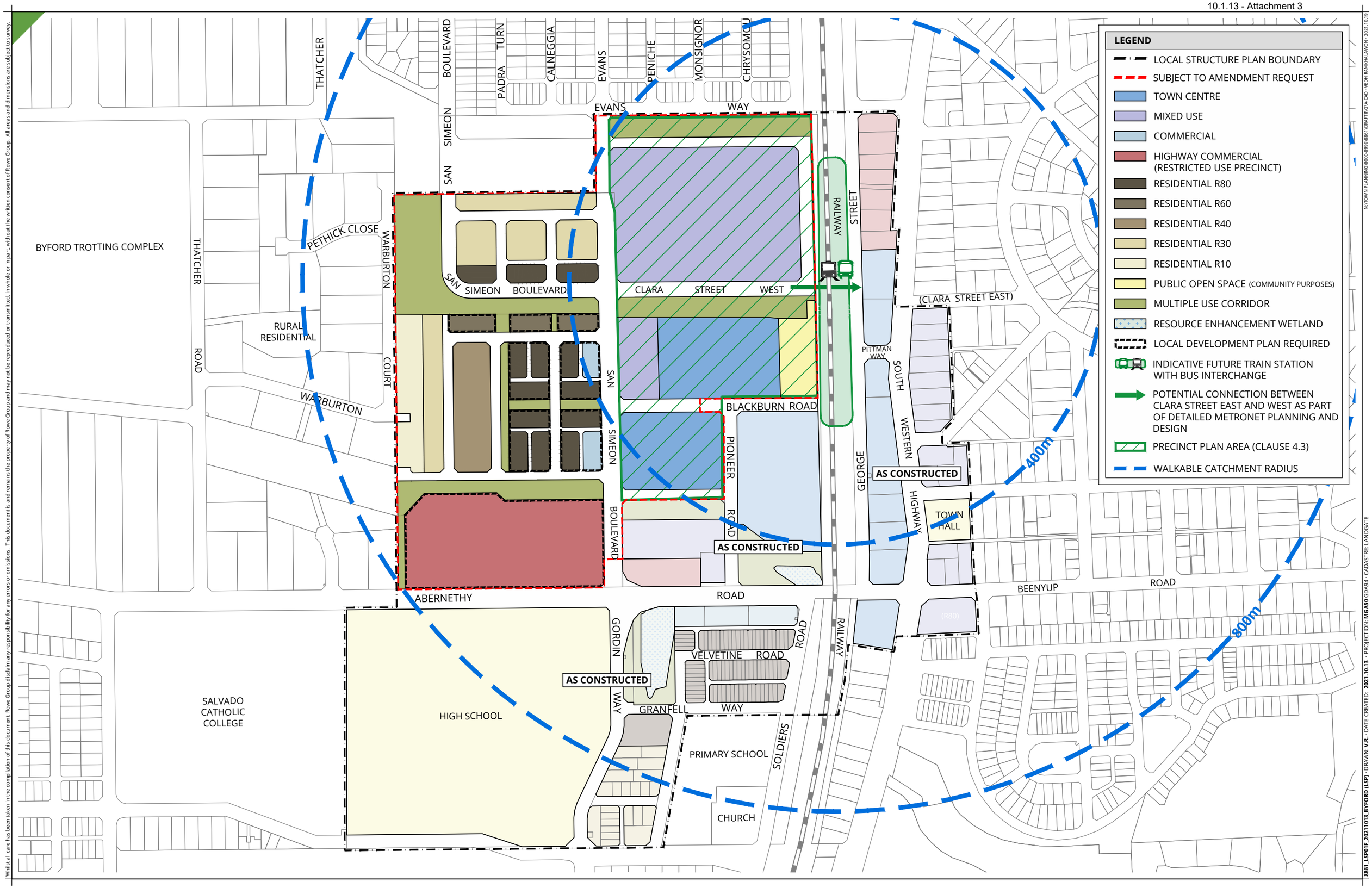
- Extension of San Simeon Boulevard from the northern Structure Plan boundary to Abernethy Road; and
- Construction of the multiple use corridors, as identified on the Structure Plan Map (Plan 1).

The internal road infrastructure shall have due regard to the existing design, service alignments and connection points to the immediate surrounding development.

5.3 DEVELOPMENT CONTRIBUTION ARRANGEMENTS

Funding arrangements for the provision of traditional and community infrastructure are pursuant to Clause 9.3 of the Shire of Serpentine-Jarrahdale Town Planning Scheme No.2.

In accordance with Town Planning Scheme No. 2, the Structure Plan is included within Development Contribution Areas 1 and 4. Contributions are to therefore be paid in accordance with the requirements of the Scheme.



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NORTH

PLAN 1

LOCAL STRUCTURE PLAN (WAPC REFERENCE: SPN 0098M-3)

PART TWO

EXPLANATORY SECTION

ROWE GROUP DESIGN

1. INTRODUCTION AND PURPOSE

This Structure Plan comprises a major amendment to the existing approved Byford Town Centre Local Structure Plan, prepared by Urbis (2018). Therefore, for the purposes of the 'Part Two – Explanatory Section' of the Structure Plan, this report (from herein) will primarily focus on the portion of the Structure Plan subject to modification (herein referred to as the subject site), as defined on Plan 1.

The purpose of the Structure Plan amendment is to facilitate the urban development of Lot 1 Abernethy Road and make provision for the future development of the METRONET Train Station Precinct on Lot 2. The Amendment provides for an urban environment which contributes to the vitality of the Byford Town Centre through the revised spatial allocation of appropriate land uses and residential densities. The Structure Plan is intended to provide for a land use transition from the Byford Town Centre and indicative METRONET station, to the 'Special Residential' precinct to the west. The proposed Structure Plan has been considered in the context of the existing and draft state and local planning frameworks, as well as the drainage requirements for the broader area, which impact upon the design of the site.

The Structure Plan is intended to provide for urban development in accordance with the broad land use parameters of the approved *Byford Town Centre Local Structure Plan* ('BTCLSP'). The proposed amendments have also given due regard to achieving the aspirations of the draft *Byford District Structure Plan* ('BDSP').

1.1 PROJECT TEAM

The following multi-disciplinary project team has been engaged by the proponent to progress the preparation of the Structure Plan:

DISCIPLINE	CONSULTANT
Project Manager / Developer	Aigle Royal Group
Bushfire	Emerge Associates
Civil Engineering	Tabec
Environmental	GHD
Hydrological	Hyd2o
Town Planning and Design	Rowe Group
Traffic	Cardno
Retail	MacroPlan

Aigle Royal and Rowe Group are the primary points of contact for all matters relating to this Structure Plan.

2. LAND DESCRIPTION

2.1 LOCATION

The subject site is located in the Shire of Serpentine-Jarrahdale, approximately 40 kilometres south-east of the Perth Central Area.

The subject site is situated immediately west of and adjacent to the historic Byford Town Centre, bound by Abernethy Road to the south, the South Western Highway to the east, Byford Secondary College to the south and residential development to the north. The site abuts the Byford Special Residential area located to the west.

Refer **Figure 1** – Regional Location.

A Local Context Plan (refer **Figure 2**) has been prepared to illustrate the subject site's proximity to existing and future local community services and infrastructure. The Local Context Plan recognises the site's proximity to the existing Byford Town Centre, the future (indicative) Byford train station (METRONET), primary schools, public and private high schools, and associated areas for active recreation within an 800-metre radius. The site lies within proximity to the recreational amenity afforded by surrounding Regional Open Space and the Darling Ranges.

In addition to demonstrating the subject site in the context of existing and proposed local community services and infrastructure, the Local Context Plan illustrates how the future development of the subject site will provide for infill residential development within this locality, in accordance with State Government policy initiatives.

Refer to **Figure 2** – Local Context Plan.

2.2 AREA AND LAND USE

The Structure Plan comprises a total area of approximately 78.4 hectares, of which approximately 34.8 hectares is subject to this amendment.

The land subject to amendment has been cleared and is currently vacant. There are two existing watercourses traversing the site, which will be retained within the multiple use corridors identified on the Structure Plan.

The balance of the Structure Plan area has already been developed for urban purposes, comprising a high school, residential and commercial development.

Refer **Figure 3** – Site Plan.

2.3 LEGAL DESCRIPTION AND OWNERSHIP

The undeveloped land comprising the Structure Plan amendment, comprises two landholdings, legally described as follows:

LOT NUMBER / ADDRESS	DEPOSITED PLAN	VOLUME / FOLIO	OWNER	AREA (APPROX.)
Lot 1 Abernethy Road	D65664	1671 /911	ARD No. 5 Pty Ltd	19.72 ha
Part Lot 2 (No. 20) Abernethy Road	D65664	1671 / 912	Coles Group Property Developments Ltd and LWP Byford Syndicate Pty Ltd	15.1 ha (19.27 ha total lot area)

Refer **Appendix 1** – Certificates of Title.

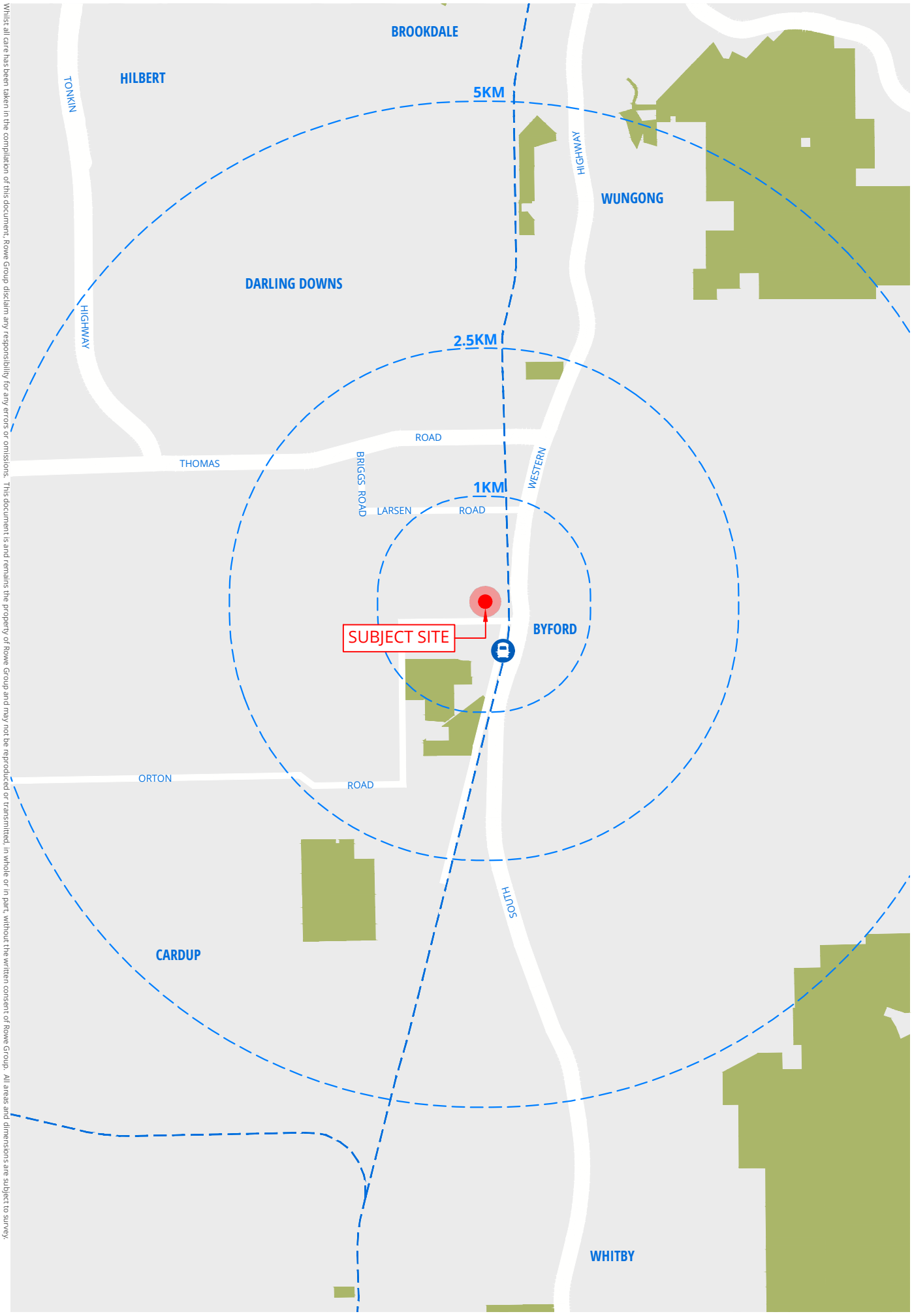

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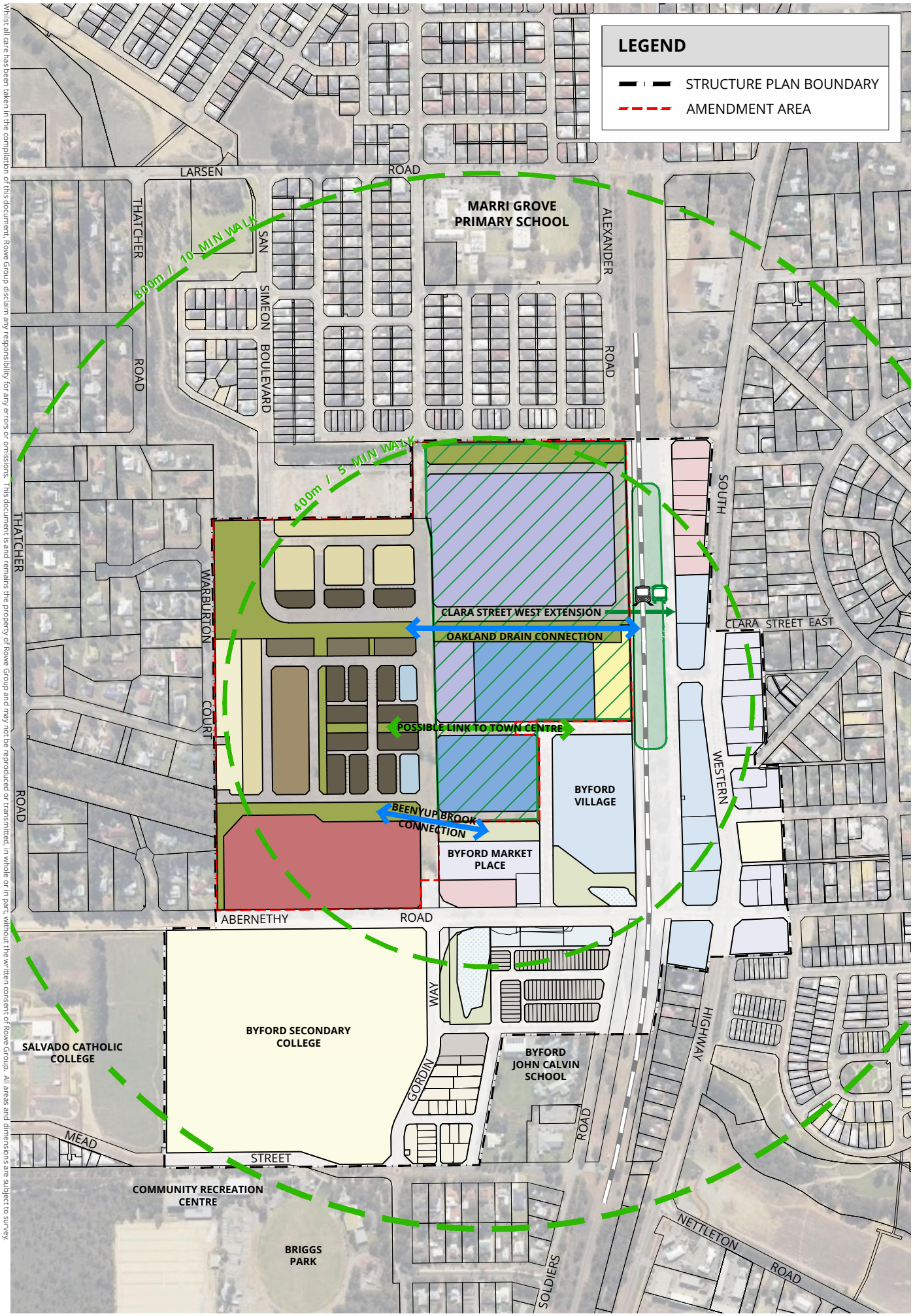
FIGURE 1

REGIONAL LOCATION



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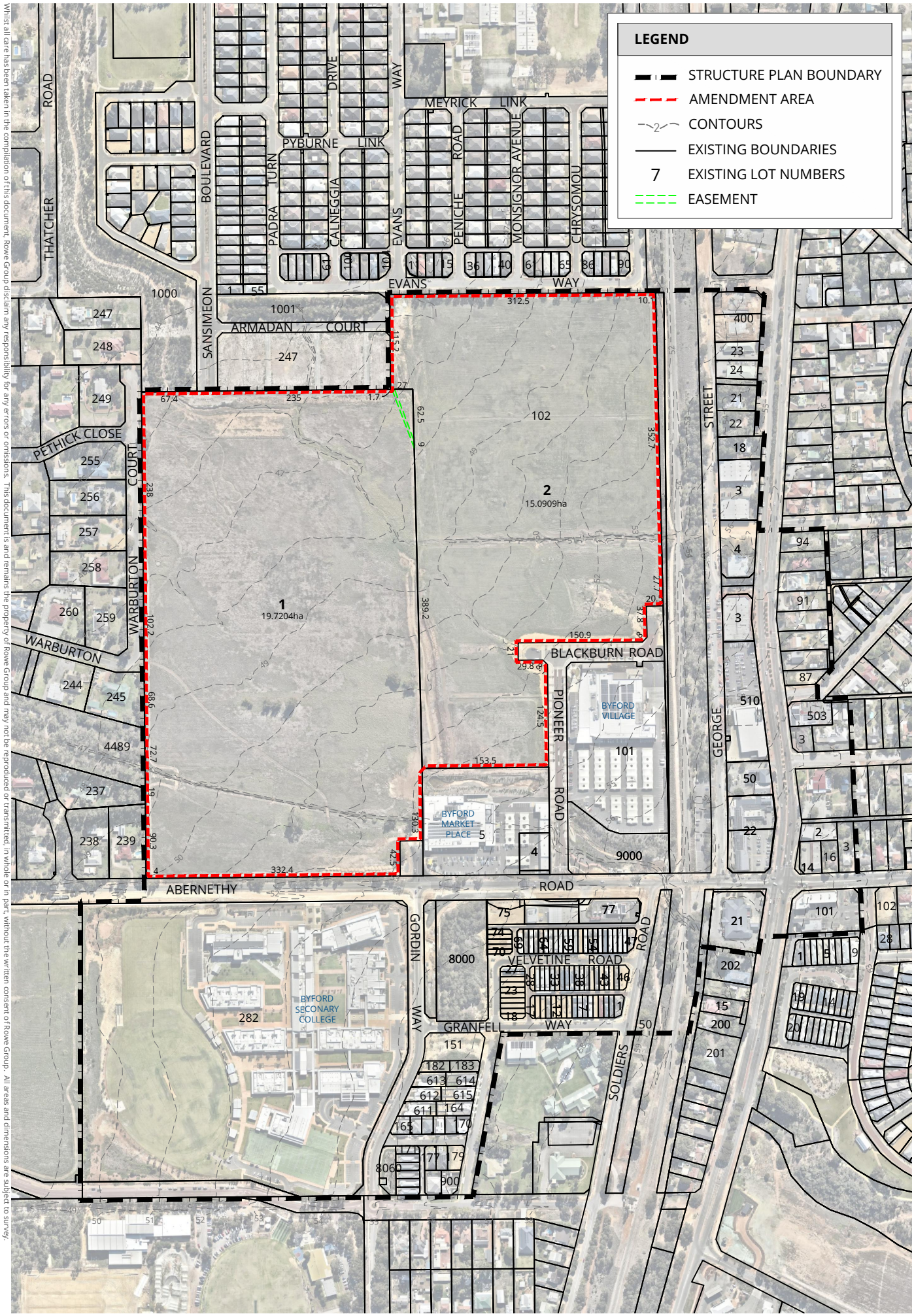
NORTH

FIGURE 2

LOCAL CONTEXT PLAN



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NORTH

FIGURE 3

SITE PLAN

3. PLANNING FRAMEWORK

3.1 ZONING AND RESERVATIONS

3.1.1 METROPOLITAN REGION SCHEME

The majority of the site is zoned 'Urban' under the provisions of the *Metropolitan Region Scheme* (MRS). A small portion of the site in the north-western corner (which is identified as a 'Multiple Use Corridor' on the Structure Plan) is currently zoned 'Urban Deferred' under the MRS.

Refer to **Figure 4** – Metropolitan Region Scheme Zoning.

3.1.2 SHIRE OF SJ TOWN PLANNING SCHEME NO. 2

The subject site is zoned 'Urban Development' under the provisions of the Shire of Serpentine Jarrahdale *Town Planning Scheme No. 2* (TPS 2), as well as Draft *Town Planning Scheme No. 3*.

The objective of the 'Urban Development' zone, as stated in clause 5.18 of TPS 2, is:

> *To provide for the orderly planning of large areas of land in a locally integrated manner and within a regional context, whilst retaining flexibility to review planning with changing circumstances.*

This Structure Plan has therefore been prepared in accordance with objectives of the 'Urban Development' Zone.

Refer to **Figure 5** – Town Planning Scheme No. 2 Zoning.

3.2 REGIONAL AND SUB-REGIONAL STRUCTURE PLAN

3.2.1 SOUTH METROPOLITAN PEEL SUB-REGIONAL PLANNING FRAMEWORK

Perth and Peel @ 3.5 Million seeks to meet the targets identified under *Directions 2031 and Beyond* ('Directions 2031') and the *State Planning Strategy 2050*. The suite of documents also includes four sub-regional planning frameworks for the Central, North-West, North-East and South Metropolitan Peel sub-regions. The four sub-regional planning frameworks detail where future homes and employment should be located, and where important environmental assets should be avoided and protected.

The subject site is located within the *South Metropolitan Peel Sub-Regional Planning Framework* (the 'Framework'). The Framework represents a whole of State Government approach to managing the future urban growth within the sub-region, and identifies sufficient land to meet the increased demand for residential dwellings. Under the Framework, the Shire of Serpentine-Jarrahdale is expected to require an additional 35,800 dwellings by 2050. The subject site is identified as 'Urban' under the Framework, consistent with the site's zoning under the MRS.

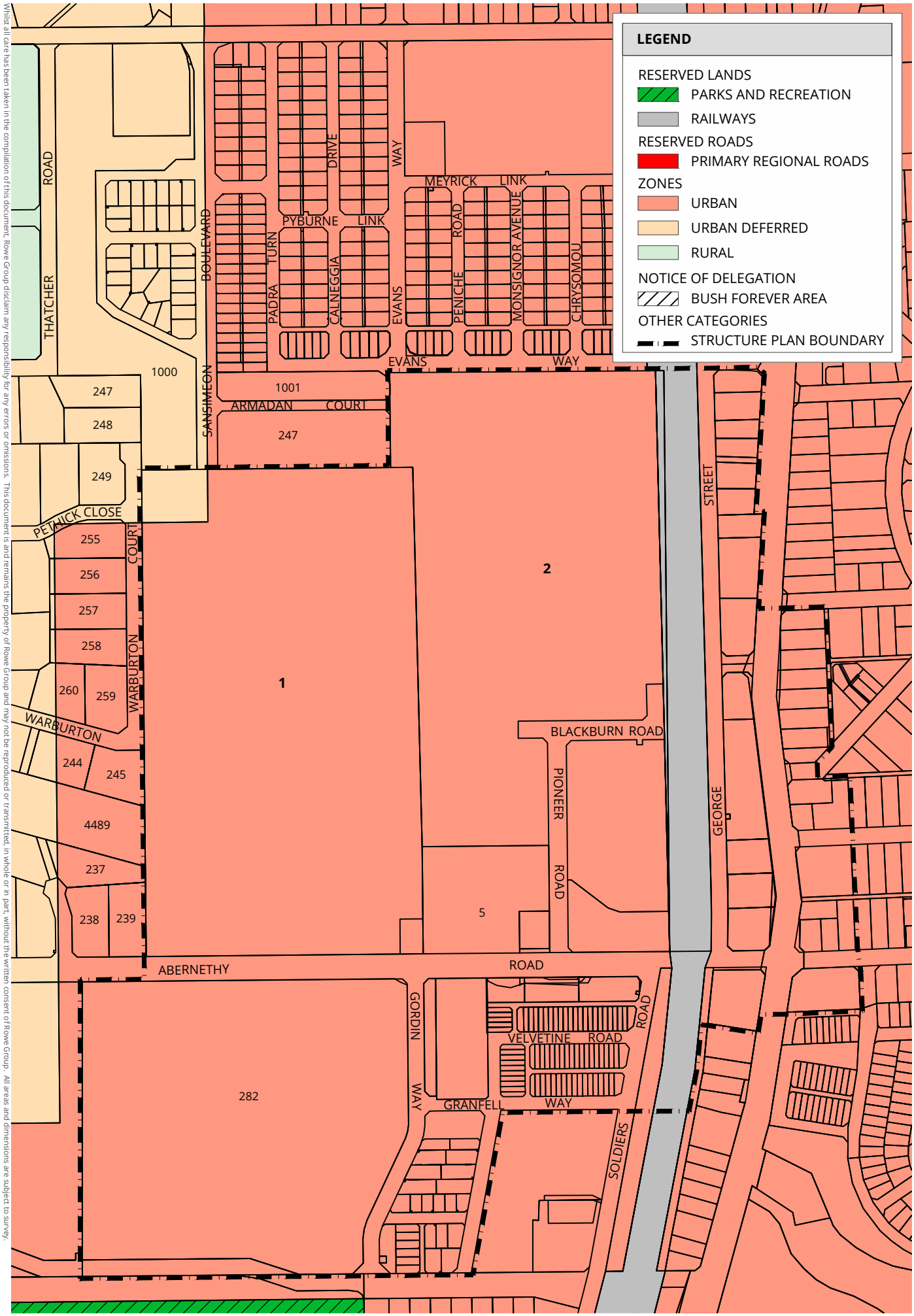

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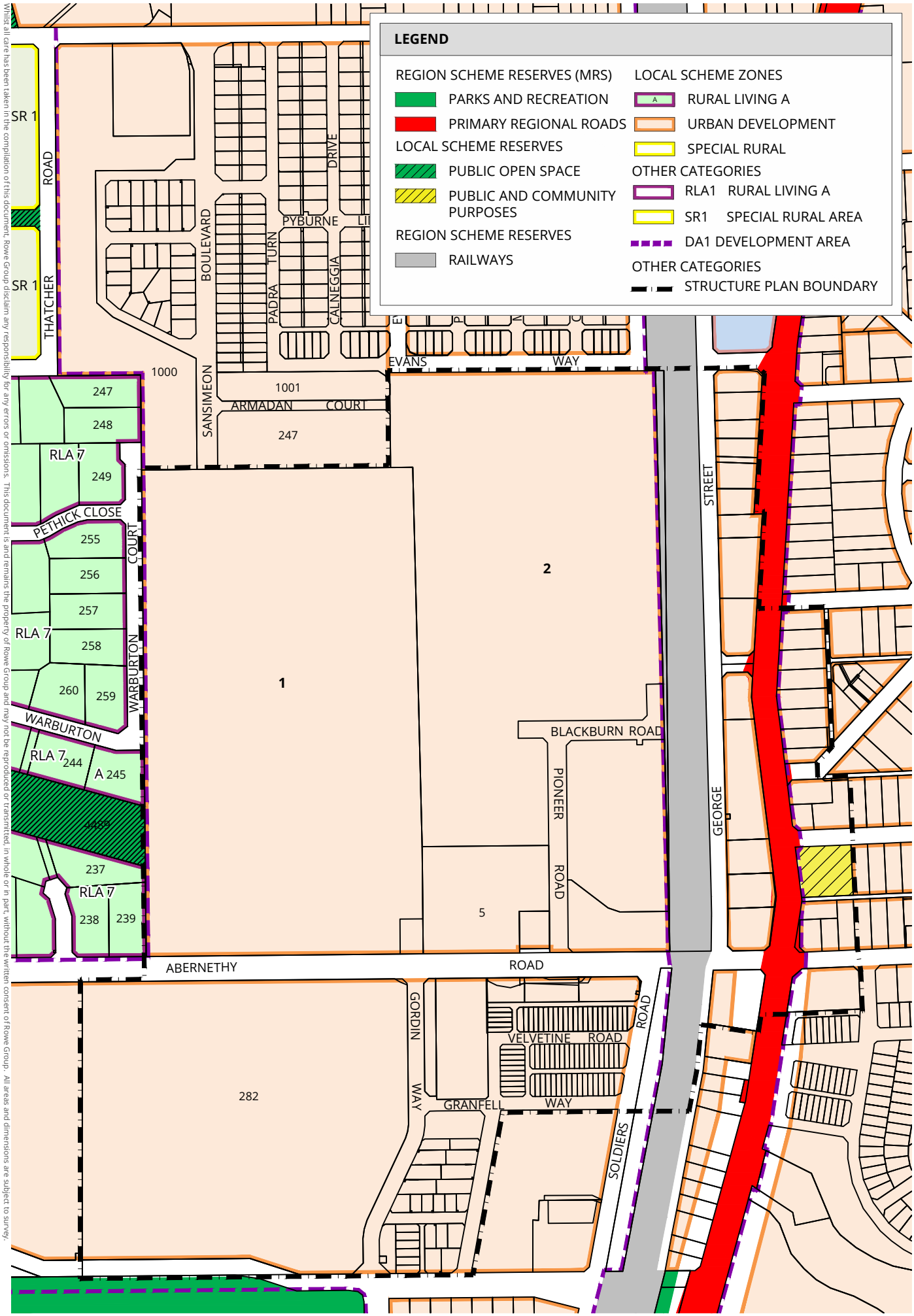
FIGURE 4
METROPOLITAN REGION SCHEME ZONING



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NORTH

FIGURE 5

SHIRE OF SERPENTINE - JARRAHDALE TOWN PLANNING SCHEME No. 4 ZONING

3.2.2 BYFORD DISTRICT STRUCTURE PLAN (DRAFT)

The original *Byford District Structure Plan* was approved in 2005 and sought to guide development and subdivision of the Byford locality, setting the foundation for the initial growth and expansion of the town centre and surrounds. The revised *Byford District Structure Plan* reflects and builds upon the key objectives and principles of the original District Structure Plan in order to consolidate the work undertaken to date and to sustainably guide the future growth of Byford.

The Shire of Serpentine-Jarrahdale adopted the draft *Byford District Structure Plan* ('BDSP') for public advertising at its 17 December 2018 Ordinary Council Meeting. Whilst yet to be finalised and approved, the draft BDSP is considered to be a seriously entertained document, and as such, has been given due regard in the preparation of this Structure Plan amendment.

Preparation of the BDSP was driven by several factors, including the significant population growth forecast for Byford (and the broader Region) under the Sub Regional Framework, the likelihood of a future railway station within the town centre, and the identification of a future district centre within Byford.

The subject site is identified as being within '*LSP Area A – Byford Town Centre*' under the draft BDSP, which identifies the following key matters to be addressed as part of structure planning, subdivision and development at the site:

- Subject to outcomes of METRONET investigations for extension of the Armadale rail line to Byford, address the integration of a transit-oriented development to service a new railway station within the town centre;
- Provide for a diversity of land uses, lot sizes and housing types at a greater density to support activation of the Byford centre;
- Design buildings and dwellings with a high level of adaptability to suit different lifecycle stages/changing demographic needs;
- Maximise connectivity for vehicular, pedestrian and cycling transport networks both internally and to the surrounding street network;
- Demonstrate the retail and commercial demand for the Byford Town Centre as a district level activity centre;
- Sensitively address the interface between the Byford Town Centre and the Byford Trotting Complex Precinct; and
- Protect a connected network of multiple use corridors.

In giving consideration to the above, the proposed Structure Plan provides for a land use framework which contributes to and supports the Byford Town Centre. This is achieved through providing opportunities for increased commercial activity and medium to high density residential dwellings within a legible movement network, with strong pedestrian links to the town centre and future railway station.

The draft BDSP proposes a range of initiatives which will guide the future development of the subject site. In accordance with the draft BDSP, this Structure Plan proposes to realign the future San Simeon Boulevard along the eastern boundary of Lot 1. The San Simeon Boulevard

realignment will provide an improved rectilinear interface with the town centre to the east, and provides a discernible edge for the residential precinct. The draft BDSP designates a significant portion of the land as 'medium to high density residential', with the land east of San Simeon Boulevard primarily identified as 'Commercial'. The draft BDSP also makes provision for two multiple use drainage corridors running in an east-west direction.

The proposed Structure Plan is considered to be consistent with the draft BDSP through the implementation of the following design criteria:

- Proposal to align San Simeon Boulevard along the eastern boundary;
- Provision of a range of residential densities including low, medium and high;
- Provision of two (2) multiple use corridors; and
- Provision of a METRONET Station precinct.

The proposed Structure Plan provides for a larger area of commercial land than allocated within the draft BDSP. The additional area of commercial land is proposed to comprise non-retail uses and is considered to be an appropriate land use in the location fronting Abernethy Road. It is supported by a comprehensive Retail Assessment, discussed in Section 5.7 of this report. The additional commercial area will provide a significant contribution to supporting the development of a future district centre at Byford, within a walkable catchment of the proposed future passenger railway station.

The proposed commercial area fronting Abernethy Road is envisaged to be created as a single lot, likely to accommodate a single showroom / warehouse development in the short to medium term. Longer term, given the landholding will be in single ownership and unfragmented, this may facilitate the transition of the holding to other uses which support the town centre, such as apartments or other commercial type land uses, should those uses be feasible in the future.

Refer **Appendix 2** – Draft Byford District Structure Plan (map only).

3.2.3 BYFORD TOWN CENTRE STRUCTURE PLAN

The current approved *Byford Town Centre Local Structure Plan* ('BTCLSP') was formally endorsed by the WAPC in 2015. The BTCLSP provides the framework for the allocation of land uses within the Byford Town Centre. This Structure Plan proposes to modify and therefore supersede the existing approved BTCLSP. The proposed amendment to the BTCLSP seeks to maintain the general objectives of the existing BTCLSP, whilst rationalising portions of the spatial layout to provide for a legible, rectilinear urban layout, providing for commercial, residential and multiple use corridors, as well as identifying a future METRONET station precinct, reflecting the draft BDSP and the future direction for the Byford Town Centre.

Refer **Appendix 3** – Current approved Byford Town Centre Local Structure Plan (map only).

3.2.4 LOT 1 SUBDIVISION APPROVAL (WAPC REFERENCE 153951)

Subdivision Approval (WAPC Reference 153951) was issued for part of the subject site (Lot 1) on 3 February 2017, comprising 173 residential lots and 3.54 hectares of multiple use corridors in accordance with the existing BTCLSP. This approval was obtained by the previous landowner and

will be superseded by a revised Plan of Subdivision to be prepared and lodged in accordance with the amended BTCLSP, once approved.

Refer **Appendix 4** – Existing Subdivision Approval (WAPC Ref: 153951).

3.3 PLANNING POLICIES

3.3.1 LIVEABLE NEIGHBOURHOODS

Liveable Neighbourhoods represents the WAPC's primary policy to guide the design and assessment of residential structure plans and subdivision. The underlying objective of *Liveable Neighbourhoods* is to create safe, sustainable and attractive neighbourhoods with a strong site-responsive identity that reduce dependency on private vehicles, and which are more energy and land efficient. As such, *Liveable Neighbourhoods* seeks to promote an urban structure based on walkable, mixed-use neighbourhoods with interconnected street patterns. It functions by consolidating key policy aspects into a single 'integrated planning and assessment policy' to provide for a performance-based approach to planning assessment. These aspects include:

- Community;
- Movement;
- Lot Layout;
- Urban Water Management;
- Public Open Space; and
- Schools.

Liveable Neighbourhoods identifies a series of objectives and requirements for structure plans that, when met, demonstrate compliance with the overall outcomes sought by *Liveable Neighbourhoods*. These objectives and requirements relate to items such as road layout, relationship of housing to open space, activity centres and schools, school location/distribution, public open space layout and location, housing densities and urban drainage considerations.

This Structure Plan has been prepared to satisfy the various objectives and requirements of *Liveable Neighbourhoods,* to ensure that more detailed proposals at subdivision stage are also capable of satisfying the relevant criteria.

3.3.2 STATE PLANNING POLICY 4.2 – ACTIVITY CENTRES FOR PERTH AND PEEL

Byford is identified as a 'District Centre' within *State Planning Policy 4.2 – Activity Centres for Perth and Peel* ('SPP 4.2'). The main purpose of SPP 4.2 is *'to specify broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel'*.

The draft BDSP recognises the importance of the Byford Town Centre and states,

> *'the Byford Town Centre is of particular importance as it is projected to service a catchment of approximately 50,000 people. Through appropriate land use planning and*

> *transport integration the Byford District Structure Plan must enable the Byford Town Centre to provide a range of employment opportunities, access to retail and entertainment, housing diversity, and sufficient access to public transport.'*

In the context of SPP 4.2, the Structure Plan provides for town centre uses associated with a transit-oriented development, with a medium to high density walkable residential catchment, consistent with the draft BDSP. Consideration has been given to the objectives of SPP 4.2 to provide for integrated urban development which facilitates opportunities for employment within proximity to higher density housing and high frequency public transport.

This Structure Plan seeks to support the objectives of SPP 4.2 through the optimisation of development generally in accordance with the draft BDSP. It provides for a commercial interface with the adjoining district distributor road network and a transition from the town centre to mixed use/residential land uses of medium to high densities, including consideration for transit-oriented design outcomes to support the indicative METRONET station precinct.

SPP 4.2 is addressed further in Section 5.7 of this report.

3.3.3 STATE PLANNING POLICY 3 – URBAN GROWTH AND SETTLEMENT

State Planning Policy 3 – Urban Growth and Settlement ('SPP 3') sets out the principles and considerations which apply to planning for urban growth and settlement in WA. SPP 3 recognises:

> *The orderly planning of urban growth and settlement should be facilitated by structure plans, which should take into account the strategic and physical context of the locality, provide for the development of safe, convenient and attractive neighbourhoods which meet the diverse needs of the community, and facilitate logical and timely provision of infrastructure and services. Structure plans may consist of a hierarchy of plans ranging from broad district structure plans to more detailed plans for neighbourhoods and precincts.*
>
> *Proposals for future urban growth will be determined having regard to-*
>
> - *the State Planning Strategy, relevant statements of planning policy and regional and subregional strategies in the State Planning Framework;*
> - *population projections provided by the Department for Planning and Infrastructure;*
> - *land release plans published by the Commission; and*
> - *local planning strategies prepared by local government and endorsed by the Commission.*

The proposed Structure Plan is consistent with the abovementioned objectives for future urban growth. Consideration of the strategic and physical context of the subject site is discussed further within this report and more detailed design provisions are to be addressed and considered through the subdivision and detailed design stage.

3.3.4 STATE PLANNING POLICY 3.7 – PLANNING IN BUSHFIRE PRONE AREAS

State Planning Policy 3.7 – Planning in Bushfire Prone Areas ('SPP 3.7') seeks to guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. The subject site is identified under the Department of Fire and Emergency Services ('DFES') *Mapping of Bush Fire Prone Areas* as being

'bushfire prone', with the mapped bushfire risk coming from the adjacent areas of remnant vegetation to the west and surrounding grasslands.

Due to the site being identified as bushfire prone, consideration of the principles and objectives of SPP 3.7 need to be considered as part of the design and development process. A Bushfire Management Plan has therefore been prepared by Emerge Associates in support of the proposed Structure Plan, and is included at **Appendix 5** of this report.

SPP 3.7 is addressed further in Section 4.4 of this report.

3.3.5 LOCAL PLANNING POLICIES

The following Shire of Serpentine-Jarrahdale Local Planning Policies are to be addressed and considered through the subdivision and detailed design stages.

- Local Planning Policy 2.8 – Public Open Spaces Policy;
- Local Planning Policy 3.5 – Byford Town Centre – Public Realm Guidelines; and
- Local Planning Policy 3.8 – Byford Town Centre Built Form Guidelines.

Local Planning Policies 3.5 and 3.8 will be updated by the Shire following approval of the amended Structure Plan.

4. SITE CONDITIONS AND CONSTRAINTS

4.1 BIODIVERSITY AND NATURAL AREA ASSETS

The Structure Plan area has been cleared of any remnant vegetation, with only a few trees remaining on site, and therefore holds little to no environmental value from and fauna or vegetation perspective.

There are two existing water courses traversing the site, comprising the Beenyup Brook and the Oaklands Drain. These water courses provide an important district drainage function and, as such, will be retained as part of the urban development of the site. These water courses will be incorporated within public open space, created and landscaped as living streams.

An Environmental Management Plan has been prepared in support of the future development of the Structure Plan area. A copy of the Environmental Management Plan is provided at **Appendix 6**.

4.2 LANDFORM AND SOILS

4.2.1 GEOTECHNICAL

The Structure Plan area is described as having a site classification of M (AS 2870). The soils in the area comprise sands, silty sands and clayey sands, overlying clayey and sandy gravels to depths of up to 2.5 metres below existing ground level of the following types:

- Ridge Hill colluvium of the Yogannup formation
- Guildford Clays – low to medium plasticity clays with silts and sands
- Bassendean Sands – bleached grey to pale yellow, fine to coarse sands.

4.2.2 TOPOGRAPHY

The subject site is relatively 'flat' in nature and is generally 'at grade' with the adjoining land. The topography of the land falls from approximately 53 metres AHD at the south east interface with Abernethy Road to 45 metres AHD in the north west corner.

There is a requirement to earthwork the site to allow for adequate treatment of stormwater runoff and separation to groundwater. Earthworks have been undertaken and a significant amount of fill has been placed on the adjoining site to the east comprising the Byford shopping centre. Future earthwork requirements have been considered in this regard and an Engineering Servicing Summary has been prepared in support of this Structure Plan, which is explained in Section 5.8 of this report.

4.2.3 ACID SULPHATE SOILS

A review of the DWER Acid Sulphate Soils (ASS) risk mapping indicates the site is located in an area having a moderate to low risk of ASS occurring within 3 metres of the natural ground surface.

If ASS is to be disturbed, a suitably qualified environmental consultant will be engaged to conduct an investigation of the area and, if necessary, prepare an ASS Management Plan. The ASS

Management Plan will detail the actions to minimise and mitigate potential adverse environmental effects during the works. If required, the ASS Management Plan will be prepared as a condition of subdivision approval.

4.2.4 CONTAMINATION

A search of the DWER Contaminated Sites Database identified no registered contaminated sites within the Structure Plan area or immediate surrounds.

4.3 GROUNDWATER AND SURFACE WATER

Recognising the site's susceptibility to flooding (given its location and existing natural topography), effective urban water management is critical to mitigating the risk of flooding and supporting the proposed urban development. The site is traversed by two drainage corridors which direct stormwater runoff from the Darling Escarpment, comprising:

- **Beenyup Brook**, which passes through the southern portion of the site. The Brook has been configured to the east of the site to direct water through landscaped drainage swales. The Brook continues to the west of the site through a dedicated drainage corridor within a natural setting.
- The **Oaklands Drain** passes through the north eastern portion of the site. It aligns within a semi formalised channel to the east and dedicated drainage corridor, where it exits the site in the north-west.

Surface water requirements for the site have been considered at district and local levels as part of the approved BTCLSP, through the consideration of the District Water Management Plan ('DWMP') and in the preparation a Local Water Management Strategy ('LWMS'). Drainage has been further considered across the site through the preparation of an Urban Water Management Plan ('UWMP') as a condition of Subdivision Approval (WAPC Ref: 153951).

The urban water management documents prepared in support of the BTCLSP and approved Plan of Subdivision have been reviewed in the preparation of this Structure Plan and are discussed further in Section 5.5 of this report.

4.4 BUSHFIRE HAZARD

In accordance with the Department of Fire and Emergency Services mapping, the subject site is identified as being bushfire prone. In accordance with the requirements of *State Planning Policy 3.7* and the associated *Guidelines for Planning in Bushfire Prone Areas*, a Bushfire Management Plan (BMP) has been prepared by Emerge Associates as a strategic guide to demonstrate how development compliance will be delivered at future planning stages. Refer to **Appendix 5** for a full copy of the BMP.

The BMP considers the bushfire hazards abutting the site and the associated bushfire risk. As demonstrated in the BMP, the risk to property and persons from bushfire is readily manageable through standard management responses. Upon implementation of the proposed management measures, the site will be able to be developed with a manageable level of bushfire risk while maintaining full compliance with the relevant bushfire controls.

4.5 HERITAGE

4.5.1 ABORIGINAL HERITAGE

A search of the Department of Planning, Lands and Heritage ('DPLH') Aboriginal Heritage Inquiry System has identified *Beenyup Brook*, which traverses the site, as a site of aboriginal heritage significance. Beenyup Brook is listed as Aboriginal Site 24991 and is noted as having mythological significance. Aboriginal Site 24991 is not, however, classified as a protected area and therefore, does not impact upon the development of the proposed Structure Plan area.

4.5.2 EUROPEAN HERITAGE

A search of the Western Australian Register of Heritage Places identified no sites of State heritage significance within the site or immediate surrounds.

A search of the Shire of Serpentine - Jarrahdale's Municipal Heritage Inventory identified no sites of local historic significance within the subject site or immediate surrounds.

4.6 CONTEXT AND OTHER LAND USE CONSTRAINTS AND OPPORTUNITIES

4.6.1 INDICATIVE METRONET STATION

As part of its METRONET roll out, the State Government has proposed an extension of the Armadale passenger railway line through Byford, with a station (including bus interchange) proposed for the Byford Town Centre, within the Structure Plan area.

The Byford METRONET project has been committed to by Government and is currently with the Office of Major Transport and Infrastructure Delivery (OMTID) for delivery. The OMTID are currently undertaking a procurement process for an alliance contractor to construct the project.

Following engagement of a contractor, further detailed planning of the station and its immediate precinct will be undertaken. This will include engagement with the Shire of Serpentine-Jarrahdale and other key stakeholders. Based on current programming, stakeholder engagement is intended to commence by the end of 2021, following an announcement by Government. It is anticipated construction will commence at the end of 2022, for a proposed 2025 opening.

Given the above process, the Structure Plan has not endeavoured to provide a complete detailed design of the transit-oriented development. Rather, a METRONET station precinct has been identified on the Structure Plan, set aside for further detailed planning in accordance with the requirements of draft *State Planning Policy 7.2: Precinct Design*, prior to subdivision and development taking place.

Notwithstanding the further detailed planning to be undertaken, the Station Precinct is anticipated to provide for the following uses, subject to detailed design and consultation with the Shire of Serpentine-Jarrahdale:

- Library, community and innovation centre,
- Town square,

- Allied health hub,
- TAFE and technical skills education hub,
- Police and justice hub, and
- Mixed use development with ground floor food, beverage and entertainment.

The balance of the Structure Plan area has made careful consideration for the future station by way of providing for strong pedestrian connections and designation of appropriate land uses and densities. The proposed Structure Plan concept has been designed as such that it not only supports a transit-oriented development outcome, but also supports the growth of the town centre regardless of the train station, in the event the station does not eventuate.

4.6.2 NOISE MANAGEMENT

Given the proximity of the site to the proposed METRONET station and associated rail infrastructure, the Structure Plan area may be impacted by noise nuisance. However, given the detailed design for the rail extension and future station is yet to be undertaken, an acoustic assessment has not been undertaken for the site. Should further detailed planning be available at the time of subdivision, an acoustic assessment and Noise Management Plan will likely be required as a condition of subdivision approval.

4.6.3 INTERFACE WITH ADJOINING RURAL RESIDENTIAL LAND

There is an existing Rural Residential subdivision, associated with the Byford Trotting Complex, situated adjacent to the Structure Plan area to the west.

To minimise any impacts to the existing Rural amenity of this land, the Structure Plan provides interface treatments along the western boundary of the site, comprising an R10 transitional zone and public open space.

The R10 lots will be configured to complement the existing Special Residential development whilst contributing to the streetscape through wider lot frontages and sympathetic built form. They will provide for lots with an average size of 1000m^2, with frontages of approximately 25 metres and depths of 40 metres. The low-density residential transitional zone extends along approximately one-third of the Structure Plan boundary.

The balance of the interface will be softened by areas of proposed public open space, providing a suitable buffer to the urban residential development to the east, within the Structure Plan area. Whilst providing a buffer, this open space also provides for pedestrian connections through to the town centre and train station from the Rural Residential lots, via Warburton Court. Please refer to the cross-sections included as part of the Landscape Master Plan provided at **Appendix 7**.

To further minimise any potential land use conflicts or adverse amenity impacts, no vehicle access will be permitted from Warburton Court, running along the western boundary of the site, into the Structure Plan area. Limited lot access to the R10 coded lots is proposed (with only 7 lots relying on access from Warburton Court), with the balance accessed from internally within the Structure Plan area.

5. LAND USE AND SUBDIVISION REQUIREMENTS

5.1 LAND USE

The Structure Plan map (**Plan 1**) identifies the proposed land uses, residential densities, multiple use corridors and movement networks applicable to the Structure Plan area. The Structure Plan also identifies an indicative METRONET station precinct, which will require further detailed planning to be undertaken prior to any subdivision or development taking place.

The Structure Plan proposes urban development in accordance with the zoning of the site under the MRS and TPS 2, as well as the objectives of the existing approved BTCLSP and the draft BDSP. It comprises land uses such as strategically located 'Commercial' areas, orientated towards the major roads and rail infrastructure, 'Residential' with densities ranging from R10 to R80, as well as public open space and drainage in the form of multiple use corridors.

The spatial modifications to the existing BTCLSP, as proposed by this Structure Plan, include the following:

- Realignment of San Simeon Boulevard in accordance with the BDSP;
- Realignment of the multiple use corridors in accordance with the BDSP;
- Reconfiguration of the internal movement network;
- Reconfiguration of density and land uses;
- Consideration of the interface with adjoining roads, public open space and existing development;
- Increase in commercial floorspace; and
- Identification of an indicative METRONET station precinct.

Refer **Plan 1** – Structure Plan Map (as amended).

The following sections of this report address the relevant elements of Liveable Neighbourhoods, describing the design response proposed under the Structure Plan. Please refer to the Structure Plan Amendment summary table provided within the Executive Summary on Page v of this report.

5.2 PUBLIC OPEN SPACE

The provision of public open space across the Structure Plan area has been considered with regard to the requirements of Liveable Neighbourhoods. The proposed Structure Plan provides for approximately 5.83 hectares of public open space (excluding those areas which have already been developed), comprising approximately 19.4% of the gross subdivisible area. Including the existing areas of public open space, the Structure Plan provides for a total of approximately 8.1 hectares of public open space.

Refer **Figure 6** – Public Open Space Plan, and **Figure 7** – Public Open Space Schedule.

The Structure Plan provides for public open space which reflects the parameters of the draft BDSP, utilising water sensitive urban design principles that incorporate public open space and drainage through the provision of multiple use corridors ('MUCs').

The Structure Plan provides for two primary MUCs, running east-west across the site generally in accordance with the draft BDSP. Each of these have been considered with regard to their dual function in the conveyance, retention and infiltration of stormwater runoff, whilst also providing landscaped public open space amenity for recreation, serving both and active and passive function.

For further detail, refer to the Landscape Concept Masterplan prepared by Emerge Associates, provided at **Appendix 7**.

5.2.1 MULTIPLE USE CORRIDORS

The Multiple Use Corridors (MUCs) form the basis for the provision of public open space across the site. Whilst the corridors are required to convey stormwater at a district level, it is intended the corridors will make a significant contribution to the landscaped open space amenity across the site, serving both active and passive recreation functions.

5.2.1.1 NORTH

The northern MUC comprises an extension and formalisation of the Oaklands Drain, which enters the site from the east and runs parallel with San Simeon Boulevard and Clara Street West. The MUC will be 'framed' by the extension of San Simeon Boulevard/ Clara Street West on its northern boundary and have a direct interface with residential and mixed use/ commercial development to the south. These direct interfaces create opportunities for strong passive visual surveillance, access, and amenity.

The MUC will maintain its dual function under the proposed Structure Plan, providing primarily for the conveyance of district storm water and recreational space. The drainage swale will be created as a living stream through the site, designed to capture the 1 and 5 year ARI rainfall events. The MUC will be landscaped with a mix of vegetation and turf, incorporating a connected path network and pedestrian boardwalk style crossings.

The MUC widens in the west of the Structure Plan area, allowing for greater useability for active open space. This will include an open turf area providing for a 'kick about' space, as well as the provision of other public amenities such as picnic areas, play equipment, hard courts, shelters, barbecue facilities and seating. The provision of such amenities is subject to detailed design, in consultation with the Shire.

5.2.1.2 SOUTH

The southern MUC provides a link from the formally landscaped portion of Beenyup Brook as it passes the existing shopping centres in the east of the Structure Plan area, through to the informal drainage corridor traversing the Special Residential area to the west of the site.

This MUC will be constructed and landscaped similar to the northern MUC, providing for an enhanced pedestrian connection, linking the Special Residential lots to the west with the Town Centre, within a safe walkable corridor.

This MUC has direct frontage to residential development on its northern interface and commercial development to the south.

5.2.1.3 NORTH-SOUTH LINK

The north-south MUC provides for the dispersion of district drainage across the site, mitigating reliance on the capacity of Beenyup Brook downstream from the site. This MUC corridor will be constructed as a landscape feature to contribute to the site's amenity, providing for a strong pedestrian connection between the northern and southern MUCs.

5.2.2 WESTERN LINEAR PUBLIC OPEN SPACE

The Structure Plan provides for an east-west linear public open space corridor, west of San Simeon Boulevard. This open space corridor provides a connection between the western residential land and the Town Centre.

This open space provides opportunities for both passive and active recreation, as well as a children's play space, subject to detailed design and in consultation with the Shire.

This open space has direct residential frontage to both the north and south, increasing public safety through enhanced passive surveillance and opportunities for activation, as well as providing amenity for the adjacent lots.

5.2.3 NORTH-EASTERN PUBLIC OPEN SPACE

The Structure Plan provides for an area of public open space in the north of the site, fronting existing residential development. This open space will provide for both passive and active recreation opportunities, including picnic and children's playground facilities, subject to detailed design. This open space also provides for a drainage function.

5.2.4 EASTERN PUBLIC OPEN SPACE

This area of public open space provides for unrestricted local open space east of San Simeon Boulevard, serving both passive and active recreation functions. This open space provides a connection between other existing and proposed areas of open space, as well as providing for a 'buffer' between the proposed residential and town centre uses.

5.2.5 INDICATIVE METRONET PRECINCT

The public open space provision for the METRONET station precinct is to be detailed as part of the further detailed planning to be undertaken for that site. Any community facilities required for the Structure Plan area are likely to be situated within this precinct, which may include uses such as a library, community centre, and town square.

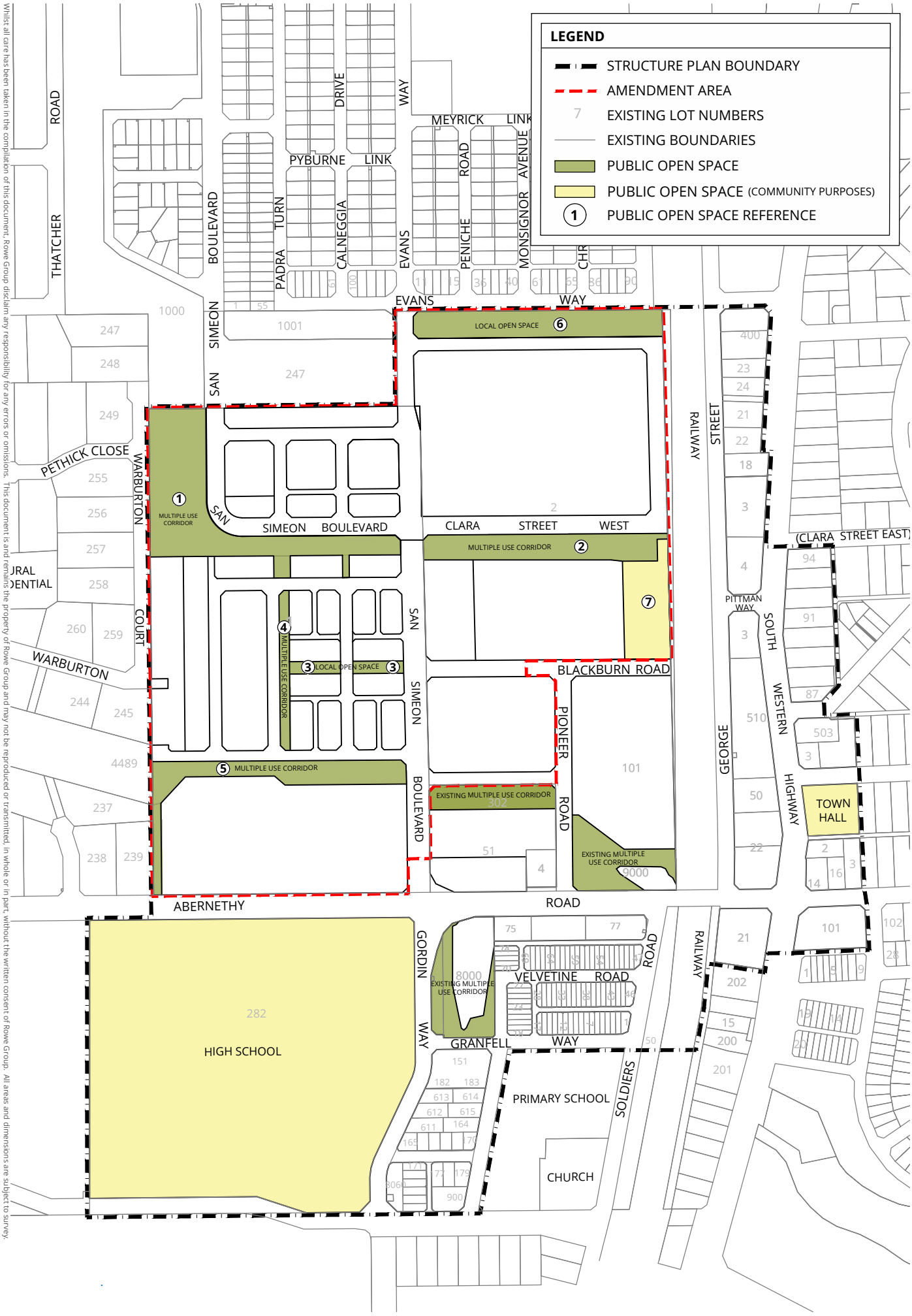

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FIGURE 6

PUBLIC OPEN SPACE PLAN

Byford Town Centre Local Structure Plan (as amended) – Public Open Space Schedule

29/06/2021

Site Area (Local Structure Plan Boundary)			78.39 ha
Deductions			
Commercial/ Town Centre/ Mixed Use Zoned Land (incl. existing)	25.76 ha		
Existing Open Space and Drainage	2.26 ha		
Railway Reserve	3.95 ha		
High School Site	13.05 ha		
South Western Highway Reserve	1.53 ha		
District Drainage (1:5 Year ARI)	1.77 ha		
1:1 Year ARI Subdivision Drainage	0.03 ha		
Public Access Ways	0.02 ha		
Total		**48.37 ha**	
Gross Subdivisible Area			**30.02 ha**
POS @10%			3.00 ha
Public Open Space Contribution			
May comprise:			
Min 80% unrestricted POS		2.40 ha	
Min 20% restricted use POS		0.60 ha	
Total Required POS			**3.00 ha**

POS Reference Number	**Total Area (m^2)**	**1:1yr Drainage (m^2)** *Deduction from Net*	**Unrestricted Urban POS sites (m^2)**	**Restricted Urban POS sites (m^2)**	**1:5 Year District Drainage (m^2)**
1 (MUC Oakland Drain West)	19074	118	9726	1230	8000
2 (MUC Oakland Drain East)	9033	41	5838	554	2600
3 (Linear Open Space)	1855	0	1855	0	0
4 (MUC Beenyup - Oakland link)	2295	0	795	0	1500
5 (MUC Beenyup Brook West)	9096	53	3968	975	4100
6(Northern Open Space)	9905	52	8292	61	1500
7 (Community Purpose)	7003	0	7005	0	0
Total	**58261**	**264**	**37479**	**2820**	**17,700**
	5.83	**0.03**	**3.75**	**0.28**	**1.77**
Percentage of gross subdivisible area	**19.4%**	**0.09%**	**12.48%**	**0.94%**	**5.90%**

Notes:

1. This Public Open Space Schedule is based on the Local Structure Plan prepared by Rowe Group (Plan ID: 8861-LSP01-D).

2. This Public Open Space Schedule is based on the drainage assumptions as per the Local Water Management Strategy prepared by Hyd2o

FIGURE 7

PUBLIC OPEN SPACE SCHEDULE

5.3 RESIDENTIAL

The spatial layout of the Structure Plan area has been configured to provide for a range of residential densities and dwelling types which are appropriate to the site's location, within immediate proximity to the Town Centre and indicative METRONET station, as well as allowing for a transition to the surrounding residential land uses. The layout has been considered in the context of the draft BDSP to provide for regularity and conformity through its design response.

The proposed residential layout has been designed to provide for a focus on areas of amenity (such as the multiple use corridors). The residential cells are oriented perpendicular and parallel to the external surrounding road network in accordance with the draft BDSP, to allow for efficiency in design and affordability in dwelling construction through the provision of regular shaped lots, as well as to provide for better solar-responsive design. The residential layout provides for a legible and safe movement network and enhanced pedestrian connections.

Residential density is allocated in accordance with the R-Codes, with due consideration given to the density codes identified within the existing BTCLSP (R15, R25, R30 and R60) and the density aspirations illustrated in the draft BDSP (Medium to High, R40 - R100), which provide for a range of lot sizes to meet the varying requirements for housing, cognisant to a town centre and transit-oriented development. Density codes across the site range from R10 at the western interface to R80.

To assist in providing for a high quality urban development outcome, the Structure Plan, through the implementation of Local Development Plans, requires all lots coded R40 and above to have a minimum height requirement of two storeys.

5.3.1 R10 DENSITY CODE

The Structure Plan provides a R10 transition zone along the western boundary of the site, providing for a suitable interface with the existing Special Residential subdivision to the west.

These lots will be configured to complement the existing Special Residential development whilst contributing to the streetscape through wider lot frontages and sympathetic built form. They will provide for lots with an average size of 1000m^2, with frontages of approximately 25 metres and depths of 40 metres.

5.3.2 R30 DENSITY CODE

R30 is the predominate density code across the site, which allows for flexibility in the provision of a suitable range of lot sizes to accommodate a wide range of dwelling types and affordability. Lot sizes are proposed to be of standard dimensions to accommodate project homes (i.e. frontages of 12.5 to 15 metres with depths of 30 metres).

5.3.3 R40 DENSITY CODE

R40 coded lots are proposed directly adjoining the multiple use corridors. These lots will be considered to provide for a uniform and aesthetic interface with the multiple use corridors to provide for enhanced passive surveillance and opportunities for activation. These areas are proposed to comprise elevated lots with 8.5 to 10 metre frontages, which will facilitate the

construction of double storey homes with outdoor living areas located at the interface with the multiple use corridor.

5.3.4 R60-R80 DENSITY CODE

Higher density areas, comprising density codes of R60 to R80, are proposed generally central within the Structure Plan area. These areas form an 'urban core', comprising development sites with direct frontage to areas of public open space and key movement corridors, providing strong, direct connections to the town centre and proposed train station.

The indicative METRONET Station precinct provides for an average density code of R60, however noting this area is subject to further detailed precinct planning, which may result in a review of density codes at that time.

5.3.5 DENSITY TARGETS

Based on the R-Codes allocated, excluding the Station Precinct area, the Structure Plan area is capable of achieving a residential density of approximately 36.5 dwellings per residential site hectare, subject to design.

Whilst a portion of the Structure Plan area is already constructed, the densities achieved over the majority of the Structure Plan will be subject to detailed design at the subdivision and development stages. Notwithstanding, a minimum average density of 30-40 dwellings per residential site hectare will be required to be achieved, consistent with the requirements of Liveable Neighbourhoods for land within 400 metres of a town centre or metropolitan railway station. The proposed Structure Plan is capable of achieving this target.

The above density targets are calculated on the assumption the Structure Plan amendment area can achieve a yield in the order of 255 dwellings, excluding the Station Precinct, based on the minimum average lot size requirements for the R-Codes allocated on the Structure Plan (refer Plan 1). This would equate to an approximate residential population of 765 people, based on 3 people per household (2016 Census). Whilst the amendment area is capable of achieving such yields, it is dependent on the detailed design of lots, as well as the market realities of the site. On this basis, it is likely the final dwelling yield will be less than 255.

As noted, the above calculations are exclusive of the Station Precinct.

Higher densities are expected within the Station Precinct, with density targets to be determined as part of further detailed precinct planning to be undertaken, with consideration for the requirements of State Planning Policy 4.2, Liveable Neighbourhoods and other relevant policies. However, based on the assumption that 75% of the station precinct will be developed for residential purposes, at an average density code of R80, and therefore achieving approximately 450 dwellings in that area, the Structure Plan is more likely to achieve densities in the order of 50 to 60 dwellings per residential site hectare

Based on an approximate 450 dwellings within the Station Precinct and 255 dwellings within the balance of the amendment area, the amendment area is anticipated to yield in the order of 705 dwellings, being approximately 55.5 dwellings per residential site hectare. There are also 113 dwellings existing within the balance of the Structure Plan area, which has the potential to increase

to 135 dwellings based on current zoning. The entire Structure Plan area therefore has the potential to yield approximately 840 dwellings, subject to detailed design.

5.3.6 LOCAL DEVELOPMENT PLANS

Given the prominence of the Structure Plan within the Byford Town Centre and the importance of delivering functional urban built form outcomes, Local Development Plan(s) are to be prepared for any lots with one or more of the following attributes:

- Lots with an area less than 260m^2;
- Grouped and/or multiple dwelling sites;
- Irregular shaped lots;
- Lots with particular site constraints;
- Lots abutting public open space;
- Lots abutting multiple use corridors;
- To address vehicle access and egress;
- Lots subject to a notification on Title;
- Lots with a Bushfire Attack Level rating of 12.5 or greater;
- Lots requiring quiet house design for noise attenuation through deemed-to-comply noise insulation packages, and/ or lots identified as requiring specialist acoustic requirements;
- Lots within the METRONET Train Station Precinct (unless otherwise satisfied by a Precinct Plan in accordance with the requirements of draft *State Planning Policy 7.2: Precinct Design*), to the satisfaction of the Shire of Serpentine-Jarrahdale; and
- Commercial, Mixed Use and Town Centre zoned land.

Local Development Plans are to address, as a minimum, the following requirements (where appropriate):

- Dwelling orientation;
- Type of fencing;
- Location of carports/garages and vehicular access;
- Passive surveillance;
- Setback variations;
- Solar passive design;
- Building height;
- Lots coded R40 and above are to consider a minimum building height of two-storeys;
- Building articulation; and

- Requirements of dwelling construction to enable compliance with an approved Bushfire Management Plan.

It is anticipated that where a Local Development Plan(s) is required, in accordance with the abovementioned criteria, a condition of subdivision approval will be imposed by the WAPC requiring the preparation and approval of a Local Development Plan.

5.4 MOVEMENT NETWORK

The proposed movement network has been considered in the context of the road network identified under the draft BDSP, in consultation with officers of the Shire of Serpentine-Jarrahdale.

The Structure Plan proposes the following key modifications to the movement network identified under the existing BTCLSP:

- Realignment of San Simeon Boulevard in accordance with the draft BDSP;
- Incorporation of an efficient and legible modified grid layout;
- Orientation of pedestrian corridors to align with the proposed town centre and indicative railway station;
- Inclusion of multiple use corridors for drainage and recreation in accordance with the draft BDSP; and
- Provision for roundabouts at the intersections of San Simeon Boulevard and Abernethy Road, and at Clara Road West.

The vehicular and pedestrian connections provide for a highly legible and permeable movement network, which runs parallel and perpendicular to the existing roads, allowing safe and efficient movements across the site. Consideration has been given to the interface with the surrounding roads to allow for integration with proposed intersections and adjoining development.

A Traffic Impact Assessment has been prepared by Cardno, in support of this Structure Plan, which confirms the proposed movement network provides for an acceptable level of service and does not have a significant impact on the existing surrounding road network. The proposed Structure Plan represents a total two-way trip generation of approximately 1,709 vehicles during the morning peak hour and 3,026 vehicles during the afternoon/ evening peak hour.

It is anticipated the opening of the Byford METRONET station will result in a proportion of vehicular trips generated by the Structure Plan being shifted to public transport. The Traffic Impact Assessment therefore applies a 5% reduction to the total vehicle trips generated by the Structure Plan as a result of the station opening, reduced to 1,623 vehicles during the morning peak hour and 2,875 vehicles during the afternoon/ evening peak hour.

Refer **Appendix 8** – Traffic Impact Assessment.

5.4.1 NEIGHBOURHOOD CONNECTOR A

San Simeon Boulevard is the main distributor through the Structure Plan area, connecting from Larsen Road in the north to Abernethy Road in the south.

San Simeon Boulevard will function as a 'Neighbourhood Connector A' road, in accordance with the classification under Liveable Neighbourhoods. San Simeon Boulevard is proposed at widths varying between 22.5 and 27.5 metres in accordance with identified Development Contribution Plan requirements. The road reserve will be constructed with a central median and serves to link the north west areas of Byford with the town centre and indicative METRONET station precinct.

San Simeon Boulevard has been designed to facilitate a future connection to Clara Street West.

The intersection of San Simeon Boulevard with Abernethy Road is controlled by an existing roundabout, creating a four-way intersection with Gordon Street to the south.

Consideration for safe and efficient pedestrian movements across San Simeon Boulevard will be paramount to ensuring the effective connectivity through the site to the town centre and train station. Such movements will be included as part of the detailed design phase at subdivision, in consultation with the Shire of Serpentine-Jarrahdale, once the detailed lot layout is known.

5.4.2 ACCESS STREET B

The internal road network will function as typical residential access roads, which fall under the 'Access Street B' classification in accordance with Liveable Neighbourhoods. These roads have reserve widths ranging between 13.2 metres and 15 metres, servicing the residential lots.

The internal road network proposes streets in a regular north-south, east-west alignment providing for a legible and highly permeable road network, which facilitates vehicular and pedestrian movement to areas of high amenity, including the town centre and train station precinct, and the Byford Secondary College.

5.4.3 PUBLIC TRANSPORT

The Byford Town Centre is identified as providing for a future railway station as part of the State government's METRONET initiative. Whilst the specific design detail for the station is yet to be confirmed, its development will ultimately provide for a direct and efficient high frequency public transport connection to the Perth CBD, via an extension of the Armadale train line. The train station will be supported by a network of feeder bus services to reduce the number of car trips generated by the district.

At this stage, the station is anticipated to commence construction at the end of 2022, for a proposed 2025 opening.

The closest existing bus routes servicing the site are Transperth Services 254, 251, 252 and 253, all of which provide a connection to the Armadale station. These routes also service Byford and further afield, Mundijong and Jarrahdale. The closest existing bus stops are situated approximately 500 metres from the site on Soldiers Road and approximately 600 metres from the site on South Western Highway.

5.4.4 PEDESTRIAN AND CYCLE NETWORK

The public open space and multiple use corridor network provides for direct pedestrian access to the Byford Town Centre, the indicative METRONET station precinct and Byford Secondary College, all situated within a 400 metre walkable catchment. In accordance with Liveable Neighbourhoods, footpaths will also be provided on at least one side of all streets.

On street cycle lanes are accommodated within the San Simeon Boulevard and Clara Street West cross sections, providing east-west connections through the site to the town centre and train station, and north-south between Larson and Abernethy Roads. Traffic volumes on the access streets are anticipated to be relatively low, providing for a safe shared cycle and motor vehicle environment.

Under the draft BDSP, Principle Shared Paths are proposed along Abernethy Road and parallel to the railway line. These routes will include dedicated cycle infrastructure, integrated with the existing Perth Bicycle Network.

5.5 URBAN WATER MANAGEMENT

Urban water management is critical to the practical implementation of urban development across the site. The site's location at the foot of the Darling Ranges on the Swan Coastal Plain poses challenges for the conveyance and dispersion of stormwater runoff. The most significant consideration for stormwater management impacting the site is that at a district level.

Significant studies have been undertaken to ensure adequate areas of land are set aside for drainage purposes. Current urban water management studies have been reviewed and considered in the preparation of this Structure Plan, in conjunction with up to date stormwater modelling to provide for a well-considered and holistic approach to future urban water management.

Surface water runoff will be managed both on a development scale and individual lot scale. The principle behind the stormwater management strategy is to ensure post development flows are restricted to pre-development conditions. The strategy also ensures water discharged from the subject site is of suitable quality. The drainage system has been designed to achieve these objectives.

The proposed methodology for addressing stormwater runoff is through Water Sensitive Urban Design principles incorporating living streams within multiple use corridors. The multiple use corridors have been configured to provide for the dual functions of providing for public open space amenity and drainage to convey district stormwater runoff, whilst also attenuating subdivision drainage requirements.

5.5.1 LOCAL WATER MANAGEMENT STRATEGY

A Local Water Management Strategy (LWMS) has previously been approved for the site as part of the existing BTCLSP (GHD, 2014). The existing approved LWMS outlines the overall water management strategy for the site, including principles, objectives, description of the pre-development environment, a water conservation strategy, groundwater management strategy, monitoring and implementation.

Subsequently, an LWMS addendum has been prepared by Hyd2o, in support of the proposed Structure Plan. A copy of the LWMS addendum is provided at **Appendix 9**. The addendum seeks to update the LWMS to align the stormwater management strategy with both the updated Structure Plan and the *Byford District Water Management Strategy* (DWMS) (Urbaqua, 2018).

The DWMS provides the overall approach to water management for the site, with associated arterial drainage modelling.

The LWMS addendum provides an update to the LWMS through the refinement of stormwater modelling, surface water management and the groundwater management to both a district and local scale. The LWMS has been prepared in accordance with the Water Sensitive Urban Design practices as described in the *Stormwater Management Manual of WA* and *Better Urban Water Management*.

In accordance with the processes defined under *Better Urban Water Management*, an Urban Water Management Plan ('UWMP') will be required to be prepared and implemented as a condition of subdivision approval. The UWMP will refine and implement the proposed drainage network/system, as identified under the LWMS.

Refer **Appendix 9** – Local Water Management Strategy Addendum.

5.5.1.1 MULTIPLE USE CORRIDORS

To ensure adequate stormwater management of the site, development of landscaped bioretention basins within multiple use corridors will be constructed to manage up to the 1% Annual Exceedance Principle ('AEP') flood event as a result of urbanisation of the site, as well as the 20% AEP, which impacts the site through district drainage conveyance requirements. Two primary multiple use corridors traverse the site in a general east-west direction to manage the majority of the district drainage, whilst a north-south drainage link is provided to attenuate drainage flows through the site.

The design of the bioretention basins/swales within the multiple use corridors have been considered in a landscape context, which are illustrated in the Landscape Masterplan Concept at **Appendix 7**.

5.6 EDUCATION FACILITIES

The Byford Primary School is situated approximately 400 metres to the east of the subject site. Salvado Catholic College is also situated to the south of the site, providing for enrolments from Kindy to Year 6.

Further, the Byford Secondary College is situated within the town centre, south of Abernethy Road.

The future population of the Structure Plan area will be included within the catchments of the existing schools, and therefore, in accordance with the BDSP, no additional primary or high schools are proposed within the Structure Plan area.

5.7 ACTIVITY CENTRES AND EMPLOYMENT

Byford is identified as a District Centre within the *Sub Regional Planning Framework - Perth and Peel @3.5 million* and SPP 4.2. The site is also identified for a METRONET station as part of current State Government initiatives. Consideration has therefore been given to the objectives of the relevant planning framework to provide for integrated urban development which facilitates opportunities for employment within proximity to higher density housing and high frequency public transport.

The proposed Structure Plan seeks to support the objectives of SPP 4.2 through the optimisation of development generally in accordance with the draft BDSP. It provides for a commercial interface

with the adjoining district distributor road network and a transition from the town centre to mixed use/residential land uses, providing the ability to incorporate employment generators. The spatial layout of the Structure Plan incorporates commercial land uses appropriately located within proximity to proposed residential development, which offers a range of mixed-use development opportunities and housing choice within a walkable and legible catchment of the town centre and future railway station precinct.

The Structure Plan also provides for a METRONET station precinct. Whilst subject to further detailed planning, it is anticipated the station precinct will comprise a mix of uses, including: a library, community and innovation centre, town square, allied health hub, TAFE and technical skills education hub, police and justice hub, and mixed use development with ground floor food, beverage and entertainment.

The subject site is easily accessible and well-located on Abernethy Road, immediately to the west of the existing retail and commercial facilities within the existing Byford Town Centre. Future uses at the site are well placed to serve the substantial and rapidly growing population of Byford and the surrounding area.

In support of the proposed Structure Plan, a retail and commercial analysis has been undertaken for the site, provided at **Appendix 10**.

5.7.1 COMMERCIAL

The Byford district is undergoing sustained growth, which is expected to increase significantly in the future. To support this growth, the Structure Plan proposes additional commercial land, west of San Simeon Boulevard fronting Abernethy Road, to what was originally contemplated under the existing BTCLSP. By way of comparison, the Structure Plan proposes an approximate additional 3 hectares of commercially zoned land.

The proposal for additional commercial land has been investigated by retail consultant MacroPlan Dimasi, which has ascertained the site, and its location, orientation and interface with Abernethy Road provides for a logical transition in land use which is suitable for supporting retail and non-retail uses, including:

- A medical hub anchored by a medical centre and pharmacy (depending on location rules);
- A gymnasium of around 400m^2;
- Five (in the short term, and potentially more in the longer term) large format retail outlets of around 500m^2 – 1,000m^2 each;
- A service station; and
- Fast food outlets.

It is anticipated the inclusion of additional commercial land uses will complement and support the existing and future commercial development within close proximity to the site.

In the short to medium term, the proposed commercial area fronting Abernethy Road is envisaged to be created as a single lot, likely to accommodate a single showroom / warehouse development. Longer term, given the landholding will be in single ownership and unfragmented, this may facilitate

the transition of the holding to other uses which support the town centre, such as apartments or other commercial type land uses (as noted above).

Refer **Appendix 10** – Assessment of Commercial Development Potential.

5.8 INFRASTRUCTURE COORDINATION, SERVICING AND STAGING

The servicing and infrastructure requirements specific to the provision of sewer, water, power, telecommunications and gas have been considered and are understood to be generally unchanged from the endorsed BTCLSP.

An Engineering Servicing Summary has been prepared by TABEC Consulting Engineers, in support of this Structure Plan, which identifies the earthworks and servicing requirements to facilitate urban development and integration with the surrounding development.

Refer **Appendix 11** – Engineering Servicing Summary.

5.8.1 HIGH PRESSURE GAS PIPELINE

ATCO operates High Pressure gas pipeline/s (DN150ST HP 1900kPa) and associated gas infrastructure in the immediate area, located within the rail reserve to the immediate east of the site.

ATCO advised in its submission on the Structure Plan that it does not have any objection to the proposal, subject to any costs associated with additional protection (if required) for the existing High Pressure gas mains and gas infrastructure being recognised and met by the Proponent. This is to be reflected in any future detailed engineering design for the areas where the ATCO assets may be impacted.

ATCO also advised the site is situated within the High Pressure gas pipeline trigger distance (as specified under the WAPC's Draft *Development Control Policy 4.3: Planning for High Pressure Gas Pipelines*), which requires any change in the land use from when the HP gas pipeline was installed to meet design requirements that will not impact the existing 'Safety Case' of the High Pressure Gas Pipeline.

Any new impact (if any) to the gas infrastructure and network due to the proposed development will require the High Pressure gas pipeline and associated infrastructure to be protected. ATCO requests any proponents contact Engineering Services at ATCO to identify where this is identified, at the earliest possible opportunity.

Prior to commencement of any works within 15 metres either side of the HP gas pipeline or any ground truthing/disturbance occurring, Notification is required in accordance with ATCO procedures.

5.8.2 WATER PLANNING

The Water Corporation has prepared conceptual water and wastewater infrastructure planning for Byford, including provision to service the future development of the Town Centre and Station Precinct. The Water Corporation's planning provides a guide to land developers in the area. This conceptual planning can be adapted and modified as needed in consultation with the Water

Corporation at the subdivision and development stages. Any major departures from the Water Corporation's planning may necessitate a review of the planning to examine capacity issues and to determine if any network upgrades are required to enable servicing of the area.

Wastewater infrastructure for the servicing of the Town Centre and adjacent land includes the need for future 300mm and 375mm gravity sewers through the Town Centre area. These sewers will need to be laid within road reserves and/or public open space.

The Water Corporation has a current project to install approximately 1.5 kilometres of 400mm diameter water distribution main along Abernethy Rd from the corner of Soldiers Road westwards to the corner of Briggs Road. This project is in early stage of design.

In the long term (approximately 2040) a large water trunk main will be constructed to transfer bulk water from southern water sources to various metropolitan storage tanks and reservoirs. The trunk main will be extended from the Serpentine Trunk Main (located south of Mundijong) heading northwards for approximately 14 kilometres along the Water Corporation's Mundijong-Byford pipe corridor, then east along Abernethy Road to South Western Highway. A secure alignment is required for the 1400mm diameter trunk transfer main along Abernethy Road. The trunk main alignment has been the subject of previous discussions between the Water Corporation and the Shire of Serpentine-Jarrahdale.

5.9 DEVELOPER CONTRIBUTION ARRANGEMENTS

The Structure Plan is subject to two Development Contribution Plans/ Areas, being DCA 1 for traditional infrastructure and DCA 4 for community infrastructure. Contributions are therefore required to be paid in accordance with the requirements of Town Planning Scheme No. 2 and the relevant Development Contribution Scheme.

Notwithstanding the above, there is currently an amendment being progressed for DCA 1 (Amendment 208), which will likely impact cost contributions for the site. Further information should be sought regarding the status of the amendment and relevant cost implications at the time of subdivision.

APPENDIX 1

CERTIFICATES OF TITLE

ROWE GROUP DESIGN

APPENDIX 2

DRAFT BYFORD DISTRICT STRUCTURE PLAN

ROWE GROUP DESIGN

APPENDIX 3

EXISTING APPROVED BYFORD TOWN CENTRE LOCAL STRUCTURE PLAN

ROWE GROUP DESIGN

APPENDIX 4

APPROVED PLAN OF SUBDIVISION (WAPC REF: 153951)

ROWE GROUP DESIGN

APPENDIX 5

BUSHFIRE MANAGEMENT PLAN

ROWE GROUP DESIGN

APPENDIX 6

ENVIRONMENTAL MANAGEMENT PLAN

ROWE GROUP DESIGN

APPENDIX 7

LANDSCAPE CONCEPT MASTER PLAN

ROWE GROUP DESIGN

APPENDIX 8

TRANSPORT IMPACT ASSESSMENT

ROWE GROUP DESIGN

APPENDIX 9

LOCAL WATER MANAGEMENT STRATEGY ADDENDUM

ROWE GROUP DESIGN

APPENDIX 10

ASSESSMENT OF COMMERCIAL DEVELOPMENT POTENTIAL

ROWE GROUP DESIGN

APPENDIX 11

ENGINEERING SERVICING SUMMARY

ROWE GROUP DESIGN