

STRUCTURE PLAN AMENDMENT REPORT

DAYTON LOCAL STRUCTURE PLAN NO.4

LOTS 572 AND 573 LORD STREET, DAYTON

CITY OF SWAN

PREPARED BY:

burgess design group
TOWN PLANNING + URBAN DESIGN

Lots 7, 16, 20 & 22 Harrow Street, Lots 500, 572, 573, 574 & 9031 Lord Street, Lot 565 Cranleigh Street, Lots 21, 29, 30, 50, 559, 560, 563 & 9032 Arthur Street, Lots 23, 24, 27, 28, 551, 552, 555 & 556 Blundell Street, Lots 26, 547, 548 & 8284 Malvern Street, Dayton

City of Swan

DAYTON LOCAL STRUCTURE PLAN NO.4

Issue 10: April 2018

Prepared for: **PRM Property**

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| Issue 9 (Amendment No.2) | 25 July 2016 | Mitch Bisby | Mark Szabo |
| Issue 10 | 12 April 2018 | Mitch Bisby | Mark Szabo |

RECORD OF AMENDMENTS MADE TO THE LOCAL STRUCTURE PLAN FOR LOTS 7, 16, 20 & 22 HARROW STREET, LOTS 500, 572, 573, 574 & 9031 LORD STREET, LOT 565 CRANLEIGH STREET, LOTS 21, 29, 30, 50, 559, 560, 563 & 9032 ARTHUR STREET, LOTS 23, 24, 27, 28, 551, 552, 555 & 556 BLUNDELL STREET, LOTS 26, 547, 548 & 8284 MALVERN STREET, DAYTON, CITY OF SWAN

| AMENDMENT NO. | DESCRIPTION OF AMENDMENT | DATE OF WAPC APPROVAL |
|----------------------|--|------------------------------|
| 2 | Modify the land use classification of Lot 22 Harrow Street and Lot 23 Blundell Street from 'Public Open Space' to 'Residential', with applicable density codes of R30 & R40 over portions, and include a small area of Public Purpose Reserve to accommodate drainage. | 07/06/2016 |
| 3 | Modify residential density code for cells in the vicinity of Blundell Street in the southern portion of the Structure Plan Area | 03/04/2018 |

ENDORSEMENT PAGE

This structure plan is prepared under the provisions of the City of Swan Local Planning Scheme No. 17.

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

03 December 2014

In accordance with Schedule 2, Part 4, Clause 28 (2) and refer to Part 1, 2. (b) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Date of Expiry:

19 October 2035

EXECUTIVE SUMMARY

Burgess Design Group has been engaged by GM Dayton Land Pty Ltd, the registered landowners of Lots 50 & 9032 Arthur Street and Lots 9031 & 574 Lord Street, Dayton (forming part of the land within Local Structure Plan No.4 (LSP4)), to prepare and lodge the Local Structure Plan for land that is generally bound by Lord Street, Harrow Street, Malvern Street and Cranleigh Street, Dayton.

The subject land is currently zoned “Urban” under the Metropolitan Region Scheme (MRS) and “Special Use No.11” under the City of Swan Local Planning Scheme No.17 (LPS17) and is subject to the provisions of Schedule 4 of LPS17. LSP4 has evolved from the high level structure planning that has occurred over the West Swan area, including; the Sub-Regional Structure Plan for the Swan Urban Growth Corridor that was endorsed by the Western Australian Planning Commission (WAPC) in 2009 and the Dayton District Structure Plan that was endorsed by the WAPC in early 2012.

This Local Structure Plan report has been prepared in consultation with a number of sub-consultants and is informed by a suite of technical investigations and documentation that includes: Environmental Assessment, Traffic Impact Assessment, Civil Engineering and Servicing Report, Local Water Management Strategy and a Landscape Management Plan.

The main land uses proposed to be accommodated within the LSP4 are residential, local and district open space and an existing primary school.

Copies of the consultant reports are attached as appendices and, where relevant, details have been summarised within the report in support of proposed LSP4. The report clearly demonstrates that the land is suitable for residential land uses and is consistent with the endorsed Dayton District Structure Plan and all relevant state and local planning policies.

It should be noted that this Local Structure Plan is located within Development Contribution Area 2 (DCA2) Dayton and relevant DCA provisions will apply.

A summary of the key statistics and planning outcomes of proposed LSP4 is provided in the following table:

Table 1 – Local Structure Plan No.4 Summary Table

| Item | Data | Section Number referenced within the LSP Part Two Report |
|---|-------------------------------|---|
| Total area covered by the Structure Plan: | 63.2106 ha | 1.2.2 |
| Net Subdivisible Area | 58.0534 ha | 3.3 |
| Area of each land use proposed: | | |
| - Residential (exc. roads) | 28.4082 ha | 3.3 |
| - Private Primary School | 2.3900 ha | |
| - Gas Pipeline Corridor | 2.1280 | |
| - Gross POS | 16.0694 ha | |
| - 1:1 Drainage Area | 0.5800 ha | |
| - Creditable POS | 15.4894 ha (26.68%) | |
| Maximum Potential Lot Yield: | 923 lots | 3.3 |
| Estimated Actual Lot Yield: | 827 lots | |
| Estimated Number of Dwellings: | 827+ dwellings | 3.3 |
| Estimated Nett Residential Site Density: | 29 dwellings per site hectare | 3.3 |
| Estimated Population: | 2,106 people | 3.3 |
| Number of High Schools: | Nil | |
| Number of Primary Schools (existing): | 1 | Various |
| Estimated Commercial Floor Space: | Nil | |

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PART ONE | **IMPLEMENTATION**

1. STRUCTURE PLAN APPLICATION AREA

This Structure Plan shall apply to Lots 7, 16, 20 & 22 Harrow Street, Lots 500, 572, 573, 574 & 9031 Lord Street, Lot 565 Cranleigh Street, Lots 21, 29, 30, 50, 559, 560, 563 & 9032 Arthur Street, Lots 23, 24, 27, 28, 551, 552, 555 & 556 Blundell Street, Lots 26, 547, 548 & 8284 Malvern Street, Dayton being the land contained within the inner edge of the line denoting the structure plan boundary as shown on the Structure Plan Map (refer to **Plan 1 – Structure Plan Map**).

2. STRUCTURE PLAN CONTENT

This Structure Plan comprises:

- a) **Part One** – Statutory Section
This section contains the structure plan map and statutory planning provisions and requirements.
- b) **Part Two** – Non-Statutory (Explanatory) Information
This section is to be used as a reference guide to interpret and justify the implementation of Part One.
- c) **Appendices** – technical reports, plans, maps and supporting documents.

3. INTERPRETATION AND RELATIONSHIP TO THE SCHEME

Unless otherwise specified in this part, the words and expressions used in this Structure Plan shall have the respective meanings given to them in the City of Swan Local Planning Scheme No.17 (the Scheme) including any amendments gazetted thereto.

The Structure Plan Map (refer to **Plan 1 - Structure Plan Map**) outlines land use, zones and reserves applicable within the structure plan area. The zones and reserves designated under this Structure Plan apply to the land as if the zones and reserves were incorporated into the Scheme.

Pursuant to clause 5A.1.12.2 of the Scheme:

- a) The provisions, standards and requirements specified under Part One of this Structure Plan shall have the same force and effect as if it were a provision, standard or requirement of the Scheme. In the event of there being any variations or conflict between the provisions, standards or requirements of the Scheme and the provisions, standards or requirements of this Structure Plan, then the provisions, standards or requirements of the scheme shall prevail to the extent of any inconsistencies;
- b) Any other provision, standard or requirement of Part One of the Structure Plan that is not otherwise contained in the Scheme, shall apply to the structure plan area as though it is incorporated into the Scheme, and shall be binding and enforceable to the same extent as if part of the Scheme; and

- c) Part Two of this Structure Plan and all appendices are to be used as a reference only to clarify and guide interpretation and implementation of Part One.

4. OPERATION

In accordance with clause 5A.1.12 of the Scheme, this Structure Plan shall come into operation when it is certified by the Western Australian Planning Commission (WAPC) pursuant to clause 5A.1.10 of the Scheme, or adopted, signed and sealed by the Council pursuant to clause 5A.1.9 of the Scheme, whichever is the latter.

5. LAND USE AND SUBDIVISION REQUIREMENTS

The Structure Plan Map outlines land use, 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.

5.1 Land Use Permissibility

Land use permissibility within the Structure Plan area shall be in accordance with the corresponding zone or reserve under the Scheme with the exception of the following:

| Applicable Zone | Additional Use Class & Permissibility |
|-----------------|---|
| Residential | 'Residential Sales Office', 'Display Home Centre' and 'Temporary Car Park' are 'A' uses |

Definitions:

'Residential Sales Office': A building of either a temporary or permanent nature, and incidental car parking, used directly in relation to the sale of land and dwellings in new residential estates.

'Display Home Centre': A group of two or more dwellings and incidental car parking which are intended to be open for public inspection as examples of dwelling design.

'Temporary Car Park': Means premises used for a limited period of time for parking vehicles open to the public and incidental to the sale of land and dwellings in new residential estates but does not include any part of a public road used for parking, or any premises in which cars are displayed for sale.

5.2 Residential Zoned Land

5.2.1 Dwelling Target

- a) An estimated minimum of 827 dwellings within the Structure Plan area.

5.2.2 Density

- a) The **Structure Plan Map** defines the residential densities that apply to the Structure Plan area.
- b) The WAPC may approve a variation to a density code where the variation is consistent with a Council approved Local Development Plan.

5.3 Public Open Space

Public open space is to be provided in accordance with the requirements of relevant State Policies and/or with an updated public open space schedule to be provided at the time of subdivision for determination by the WAPC, upon the advice of the City of Swan.

The District Structure Plan indicates a provision in excess of the 10% minimum creditable Public Open Space required by Liveable Neighbourhoods. Details of the proposed Public Open Space provision as it relates to this Structure Plan, and more broadly across the District Structure Plan area, are provided at **Appendix 1**. This structure plan proposes the provision of 26.68% creditable public open space.

5.4 Conditions of Subdivision Approval

At the time of subdivision the City of Swan may recommend conditions to the WAPC as applicable, requiring the preparation and/or implementation of the following:

- a) Urban Water Management Plan (which is to give recommendations in MGL);
- b) A Section 70A Notification on each Certificate of Title within the AS3959 construction zone. The notification shall alert purchasers and successors in title, to these exposed lots, of the responsibilities of the Fire Management Plan and bushfire building construction requirements; and/or
- c) Local Development Plans (if appropriate).

6. DEVELOPMENT REQUIREMENTS

6.1 Local Development Plans (referred to as Detailed Area Plans in the Scheme)

Local Development Plans must to be prepared in accordance with 5A.1.15 of the Scheme prior to any subdivision and/or development of:

- a) grouped/multiple housing sites;
- b) lots that abut a public laneway;
- c) lots that abut public open space;
- d) lots that are adjacent to an activity corridor;
- e) lots that have an area less than 350m²;
- f) lots impacted by a bushfire attack level requiring construction standards in accordance with AS3959;and/or
- g) where a variation to the density code is proposed.

6.2 Residential Design Code Variations

- a) All corner lots that are coded R20 or R25 can be developed/subdivided to a maximum density of R30 except where affected by the gas pipeline buffer; and
- b) Other variations to the R-Codes may be detailed at the Local Development Plan or subdivision stages of the development approval process.

6.3 Fire Management

In accordance with the recommendations of the Bushfire Management Plan, refer **Appendix 6**, a number of areas are identified on the Structure Plan requiring bushfire considerations as required below:-

- **AS3959 Construction Zone** – Notwithstanding any statement to the contrary within AS3959-2009 (or relevant equivalent), any buildings to be erected on lots designated as AS3959 Construction Zone shall comply with the requirements of AS3959-2009, or equivalent Australian Standard;
- **Building Protection Zone** – No dwellings are permitted within the Building Protection Zone unless it can be demonstrated that the fire risk has varied since the preparation of this Structure Plan;
- **Staging considerations** - Each development stage will require a 100 metre cleared zone surrounding the perimeter and located within the lot boundary. This will be achieved by clearing vegetation in this zone as stages are developed. It is the responsibility of the developer to establish the temporary staging and perimeter BPZ including landscaping in the power line easement (not shown on the Structure Plan but detailed in the Bushfire Management Plan).

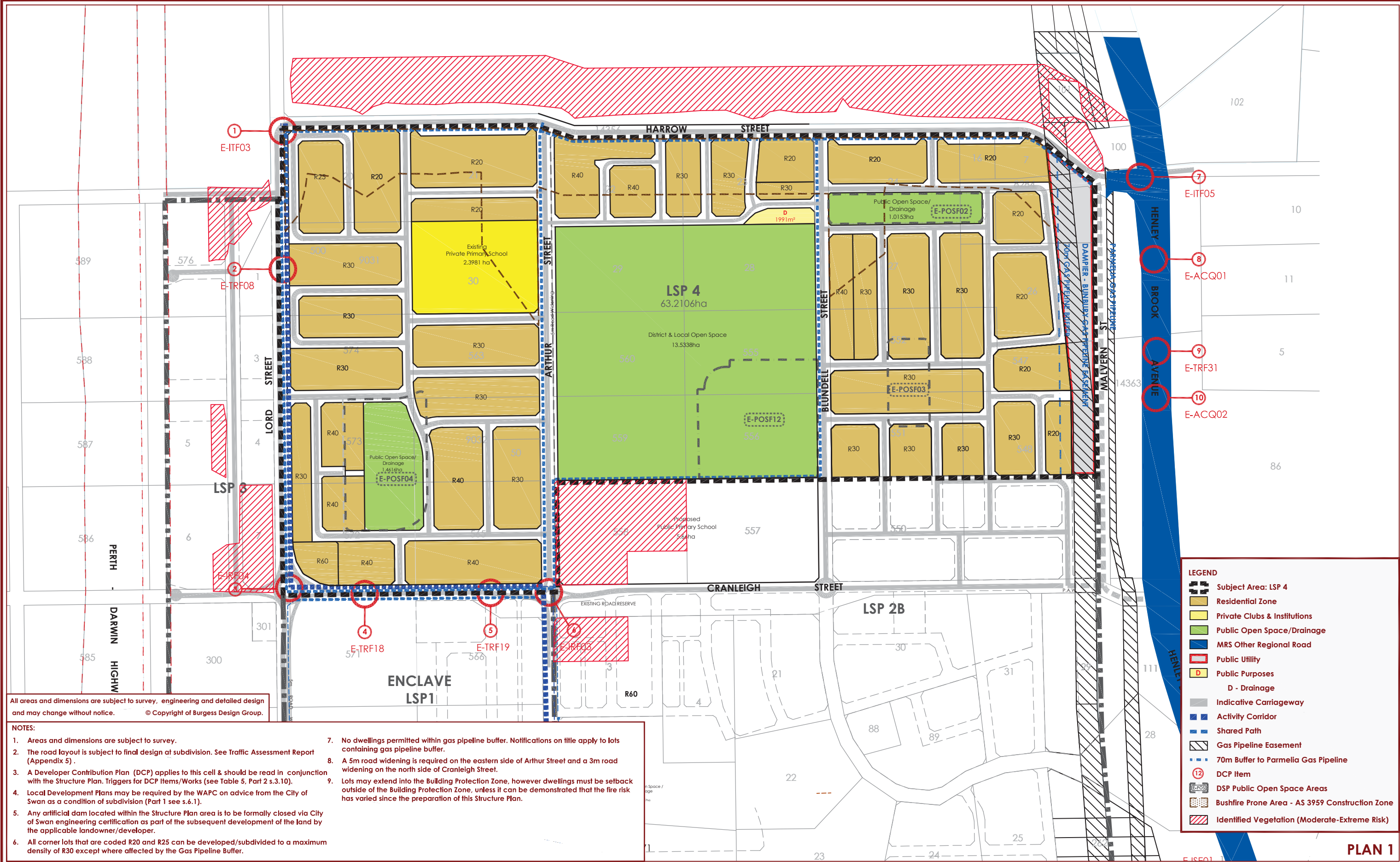
6.4 Dampier to Bunbury Natural Gas Pipeline Easement

The land containing the Dampier to Bunbury Natural Gas Pipeline easement will be ceded free of cost to the crown, vested in the Department of Regional Development and Lands with a Management Order to the Dampier to Bunbury Natural Gas Pipeline.

7. DAYTON DEVELOPMENT CONTRIBUTION PLAN

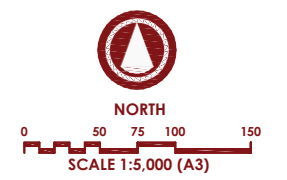
The West Swan East District Structure Plan area, which includes LSP4, is identified as 'Developer Contributions Area 2' (DCA2) within Schedule 13 of LSP 17. DCA 2 in Schedule 13 gives effect to the Dayton Development Contributions Plan (DCP). The object of the DCP is to ensure equitable distribution of development costs between stakeholders and is the mechanism that delivers the Swan Urban Corridor Sub Regional Structure Plan, the Urban Growth Corridor – Sub Regional Planning Community Facilities Analysis and the West Swan East District Structure Plan outcomes.

More details of the DCP and how it relates to LSP4 are provided in part two, Section 3.10.



All areas and dimensions are subject to survey, engineering and detailed design and may change without notice. © Copyright of Burgess Design Group.

- NOTES:**
1. Areas and dimensions are subject to survey.
 2. The road layout is subject to final design at subdivision. See Traffic Assessment Report (Appendix 5).
 3. A Developer Contribution Plan (DCP) applies to this cell & should be read in conjunction with the Structure Plan. Triggers for DCP Items/Works (see Table 5, Part 2 s.3.10).
 4. Local Development Plans may be required by the WAPC on advice from the City of Swan as a condition of subdivision (Part 1 see s.6.1).
 5. Any artificial dam located within the Structure Plan area is to be formally closed via City of Swan engineering certification as part of the subsequent development of the land by the applicable landowner/developer.
 6. All corner lots that are coded R20 and R25 can be developed/subdivided to a maximum density of R30 except where affected by the Gas Pipeline Buffer.
 7. No dwellings permitted within gas pipeline buffer. Notifications on title apply to lots containing gas pipeline buffer.
 8. A 5m road widening is required on the eastern side of Arthur Street and a 3m road widening on the north side of Cranleigh Street.
 9. Lots may extend into the Building Protection Zone, however dwellings must be setback outside of the Building Protection Zone, unless it can be demonstrated that the fire risk has varied since the preparation of this Structure Plan.



STRUCTURE PLAN MAP
LOCAL STRUCTURE PLAN No.4
DAYTON

PART TWO | EXPLANATORY SECTION

1. PLANNING BACKGROUND

1.1 Introduction and Purpose

This Local Structure Plan (LSP) and report has been prepared on behalf of GM Dayton Land, in consultation with other landowners within the subject area. This LSP has been prepared in accordance with the WAPC's Structure Plan Preparation Guidelines and the City of Swan Local Planning Scheme No.17 (the Scheme) provisions under Part 5A - Structure Planning Areas. This LSP refines the adopted District Structure Plan for Dayton (previously West Swan East) as it applies to the northern cell and is hereby referred to as Local Structure Plan 4 (LSP4).

LSP4 has been prepared by Burgess Design Group with technical inputs from a multidisciplinary team comprising:-

- Transcore – Traffic and Transport Engineering
- JDA – Local Water Management Strategy
- PlanE – Landscape Management Plan
- Serling Consulting – Civil and Servicing Engineer

This Structure Plan is the most conventional of all the Dayton Structure Plans as it will accommodate only three main landuses being a relatively large component of POS, an existing school, and new residential development.

It should be noted that this Local Structure Plan is located within 'Development Contribution Area 2' (DCA2) Dayton and relevant DCA provisions will apply.

1.2 Land Description

1.2.1 Location

The subject site is located approximately 20 kilometres north-east of the Perth CBD, and 8 kilometres north-west of the Midland Regional Centre. The site is located on the northern side of Reid Highway, and is accessed from Lord Street via Harrow, Arthur and Blundell Streets (refer to **Figure 1 – Location Plan**).

LSP4 is generally bound by Harrow Street, Cranleigh Street, Arthur Street and the Dampier – Bunbury Gas Pipeline.

1.2.2 Area and Land Use

LSP4 encompasses a total land area of 63.2106 hectares.

The current land uses accommodated within the subject area include, but are not limited to:

- rural residential development; and
- a primary school (the Riverlands Montessori Primary School).

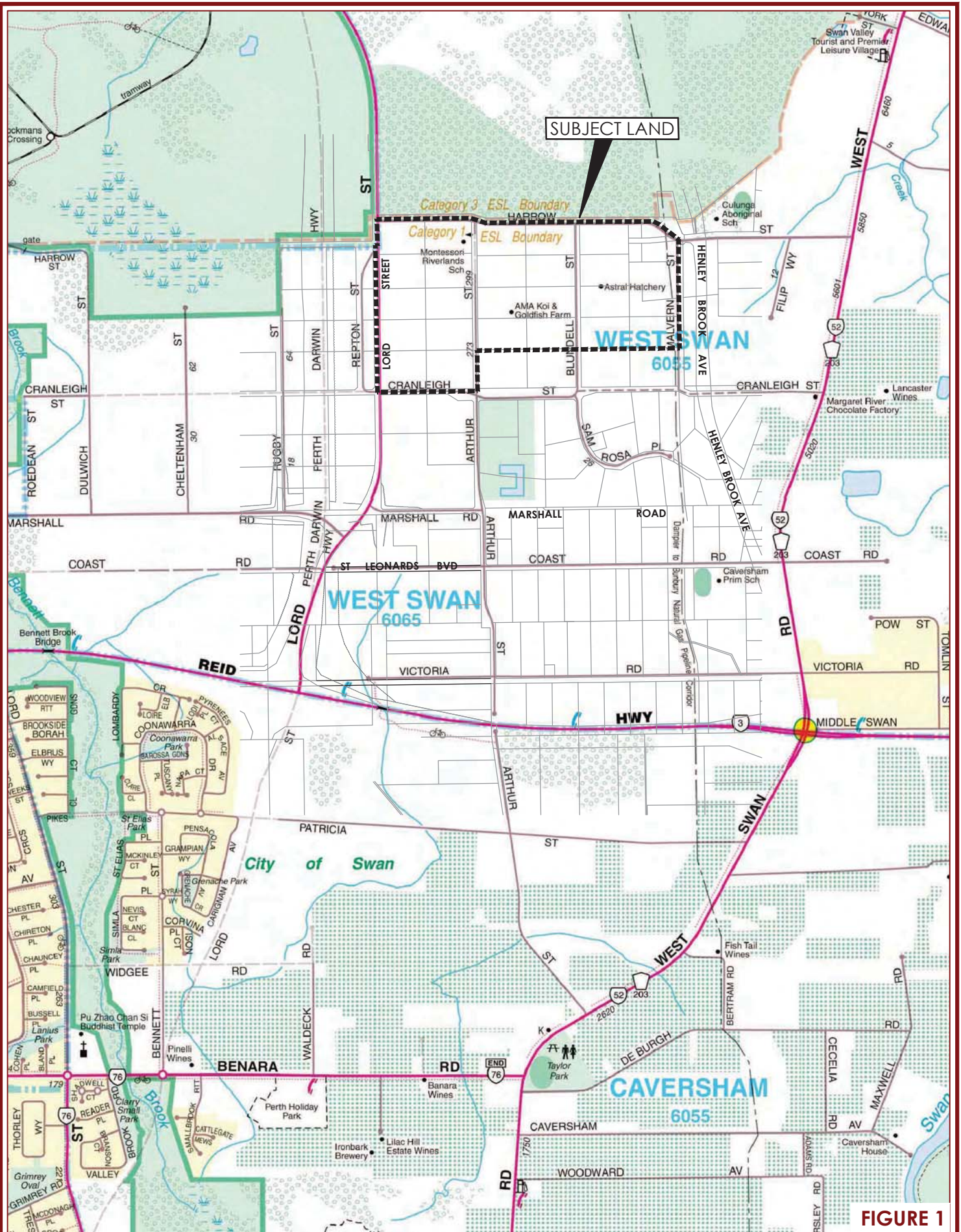


FIGURE 1



1.2.3 Legal Description and Ownership

A copy of each of the Certificate of Titles for the lots within LSP4 are attached at **Appendix 2**. Additionally, a **Land Ownership Plan** is shown at **Figure 2**.

1.3 Planning Framework

1.3.1 Zoning and Reservations

Metropolitan Region Scheme

The subject land has been zoned 'Urban' under the Metropolitan Region Scheme (MRS) since 2002. It is noted that the boundary of the 'Urban' zone at the eastern extent of LSP4, does not correlate with existing cadastral boundaries but instead follows the gas pipeline easement, refer **Figure 3 - MRS Zoning Plan**. The proposed development of LSP4 for residential and public open space purposes is consistent with the MRS 'Urban' zoning.

An 'Other Regional Road' reservation under the MRS exists to the east of the site and is proposed to accommodate Henley Brook Avenue that will ultimately carry traffic in a north south direction replacing some of the traffic function of existing West Swan Road.

City of Swan Local Planning Scheme No.17

The City of Swan Local Planning Scheme No.17 (the Scheme) zones the subject land and the surrounding Dayton area as 'Special Use – West Swan' (refer **Figure 4 – LPS No.17 Zoning Plan**).

The relevant objectives and Scheme provisions relating to the 'Special Use' zone are included within Schedule 4 of the Scheme and guide both the preparation of the District Structure Plan (DSP) and required (Local) Structure Plans.

LSP4 has been prepared in accordance with both the generic Scheme provisions relating to the preparation of structure plans and also those contained within Schedule 4. The objectives of the Special Use zone are detailed in Table 3 below.

Table 3: Scheme's Special Use Provisions

| | Objectives of Special Use Site No.11 | Structure Plan Achieves Objectives By |
|----|---|---|
| 1. | To ensure that development in the estate achieves optimal integration with development in surrounding area; | LSP4 connects to the approved LSP 1 and significantly progressed LSP2B and consequently to the broader locality. |
| 2. | To provide for the development of a functional and cohesive community consistent with the orderly and proper planning and in the interest of the amenity of the Estate; | LSP4 has been prepared based on a legible movement network and landuse mix with connectivity to the surrounding Cells. |
| 3. | To develop the Estate in a manner that protects, conserves and enhances the natural environment and cultural assets and to investigate and manage impacts upon the natural environment; | LSP4 accommodates an existing Resource Enhancement Wetland that has been identified and integrated into the major area of public open space. However, it is recognised that investigations to date have indicated that this wetland has limited |

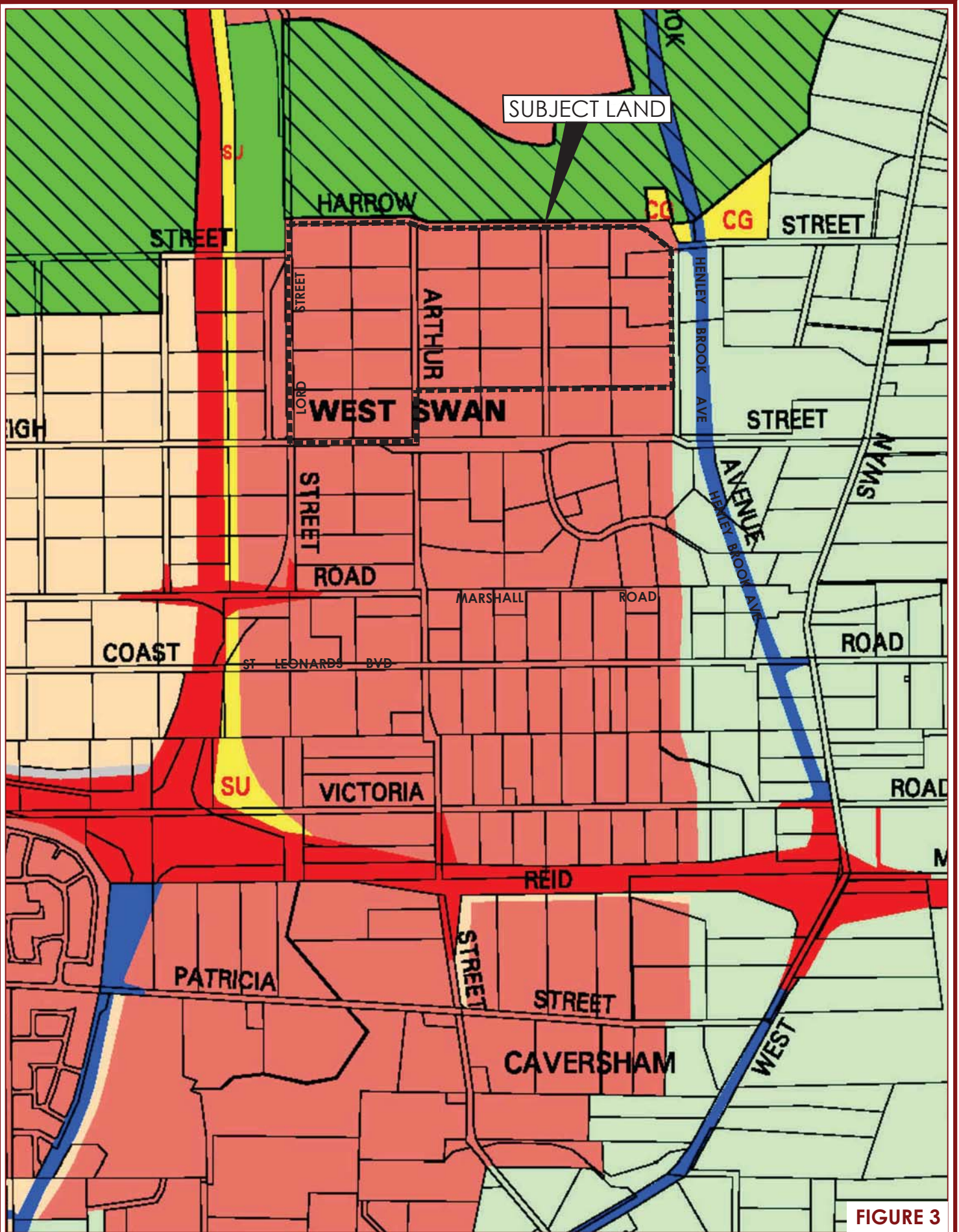


FIGURE 3



burgess design group
TOWN PLANNING + URBAN DESIGN

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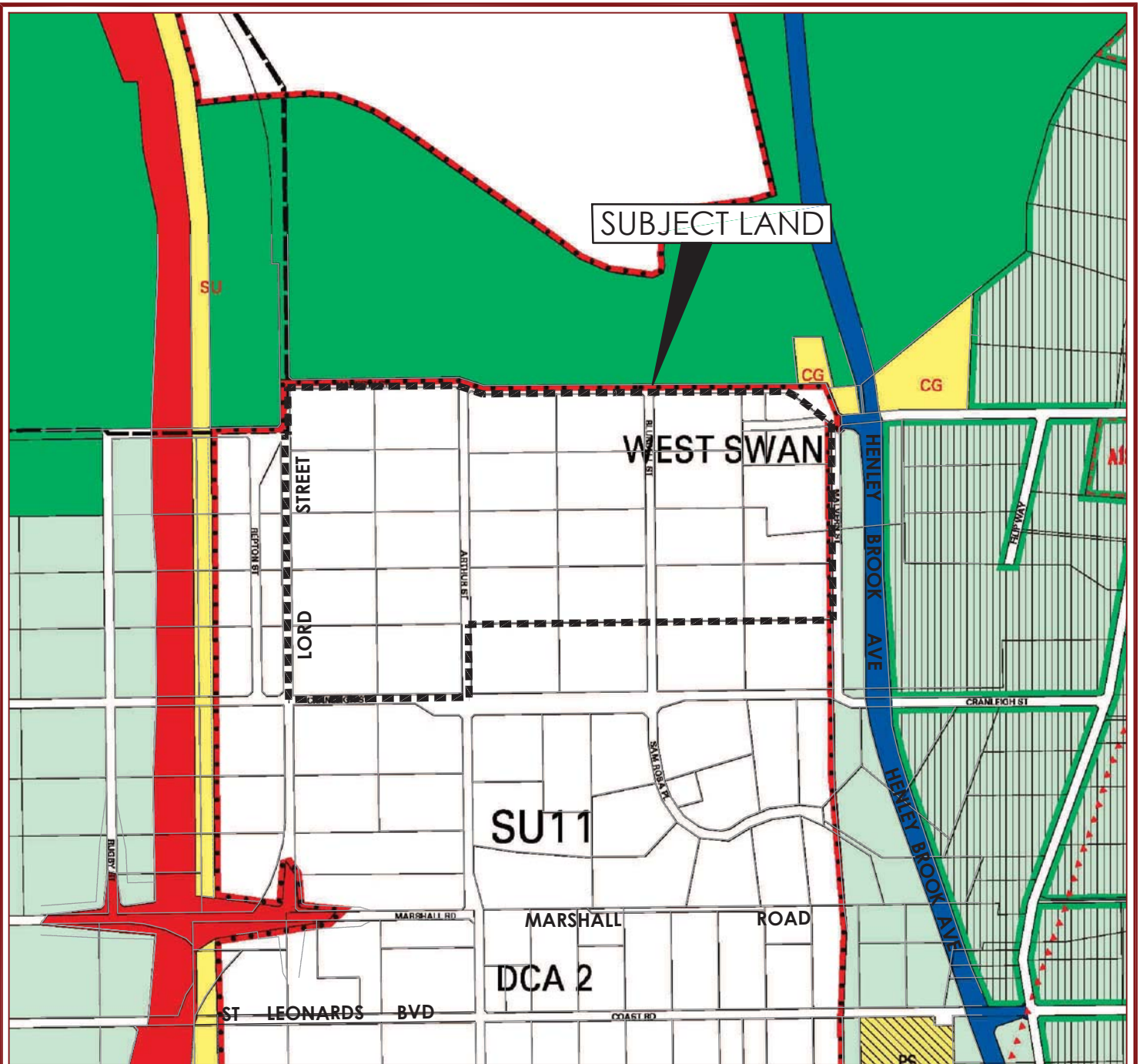
NORTH

P (08) 9328 6411
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METROPOLITAN REGION SCHEME MAP

Planner: MS
Client: WEST SWAN UNIT TRUST
Date: 12.11.12
Plan No: WES LSP4 9-02

LSP 4 DAYTON
CITY OF SWAN



LEGEND

METROPOLITAN REGION SCHEME RESERVES

- PARKS AND RECREATION
- PRIMARY REGIONAL ROADS
- OTHER REGIONAL ROADS
- PUBLIC PURPOSES - DENOTED AS FOLLOWS:
 - HOSPITAL
 - COMMONWEALTH GOVERNMENT
 - SPECIAL USES

LOCAL SCHEME RESERVES

- LOCAL ROAD
- PUBLIC PURPOSES - DENOTED AS FOLLOWS:
 - PRIMARY SCHOOL
 - RECREATION

ZONES

- RESIDENTIAL
- RESIDENTIAL DEVELOPMENT
- SPECIAL USE
- GENERAL RURAL
- RURAL RESIDENTIAL
- SPECIAL RURAL
- SWAN VALLEY RURAL

OTHER

- R CODES
- ADDITIONAL USES
- SPECIAL USE AREA (SEE SCHEME TEXT)
- DEVELOPMENT CONTRIBUTION AREA BOUNDARY (SEE SCHEME TEXT)
- FLOOD PRONE AREA
- AIRCRAFT NOISE EXPOSURE
- STRATEGIC REGIONAL CENTRE BOUNDARY

FIGURE 4



LOCAL PLANNING SCHEME No17

Planner: MS
 Client: WEST SWAN UNIT TRUST
 Date: 12.11.12
 Plan No: WES LSP4 9-02

LSP 4 DAYTON
 CITY OF SWAN

| | | |
|----|---|---|
| | | environmental values and a possible reclassification is recommended. The structure plan also recognises the existing topography of the area and ensures a manageable approach to development and fill levels. |
| 4. | To encourage variety in the range of lot sizes and dwelling types within the Estate but consistent with cohesive (sic); | LSP4 identifies a range of low to high density residential densities ranging between R20 and R60. These density codes will encourage a mix of single residential and grouped (possibly multiple) dwelling developments of varying lot and dwelling sizes. |
| 5. | To enhance the Estate with the provision of open space and recreation networks and facilities with particular attention being given to the timely provision of appropriate community services; | <p>Three distinct parcels of public open space have been nominated within LSP4 and have been located to provide maximum accessibility to future residents.</p> <p>The largest of the three POS areas is located in the centre of LSP4. This POS area will provide multiple local and district functions and may accommodate the existing Resource Enhancement Wetland.</p> <p>The City of Swan has planned for the provision of local and district facilities within the public open space areas and they will be provided by Council as the area is developed.</p> |
| 6. | To make provision for school sites and other appropriate education facilities within the Estate in a manner that facilitates their management and use as a resource for local communities; | An existing primary school site is located within LSP4 and is 2.39 ha in size. The site accommodates the Riverlands Montessori School. It is noted that a further public primary school site has been nominated on land adjoining the southern boundary of LSP4. |
| 7. | To provide appropriate retail and commercial facilities to service the needs of residents of the Estate and with a view to the integration of retail areas with other commercial and business areas and with social services so as to maximise convenience; | There is no retail or commercial facilities provided within LSP4. The District Structure Plan identifies the location of these facilities in adjoining LSP areas. |
| 8. | To provide retail and commercial centres, business parks and service areas to satisfy the need for such services within the Estate and to provide local employment opportunities; and, | As above. |
| 9. | To employ strategies and design aimed at optimising accessibility to the local centre and future public transport node(s) by the use of comprehensive movement networks and by other means which will facilitate connection | The neighbourhood centre and 'Activity Corridor' have been centrally located within the District Structure Plan area to maximise accessibility and encourage walkable catchments, supported by adjoining medium |

| | | |
|--|--|---|
| | <p>with public transport and arterial road links to Midland, Perth and other parts of the Metropolitan Region.</p> | <p>densities.</p> <p>The road and dual use path network, including the adjoining Activity Corridor along Arthur Street, shall be used to encourage connections towards this local centre and destinations further afield.</p> |
|--|--|---|

Dayton is included within ‘Development Contribution Area 2’ (DCA2) of the Scheme which requires a ‘Development Contribution Plan’ to be prepared in accordance with Schedule 13 of the Scheme. This matter is addressed in the District Structure Plan report via a Financial Assessment Report included in the final adopted version of the West Swan East (Dayton) District Structure Plan and more recently in a Development Contribution Plan for the DCA2 area. This is discussed further in Section 3.10 of this report.

1.3.2 Regional and Sub-Regional Structure Plan

Sub-Regional Structure Plan for the Swan Urban Growth Corridor:

The City of Swan and the Department of Planning, in consultation with key landowners and other government agencies, prepared the Sub-Regional Structure Plan for the Swan Urban Growth Corridor, being land located generally between Midland and Ellenbrook in the suburbs of West Swan (including Dayton, within which LSP4 is located), Caversham and Albion.

The Sub-Regional Structure Plan is a strategic planning document designed to guide the coordinated growth and development of the Swan Urban Growth Corridor to ultimately accommodate over 30,000 new residents along with associated community, commercial, open space and infrastructure land uses, refer **Figure 5 – Sub Regional Structure Plan**.

District Structure Plan:

A District Structure Plan (DSP) for Dayton was endorsed by the WAPC in March 2012. The DSP broadly guides the land uses across all of Dayton, ensuring coordination of district matters such as drainage, road connections, schools and employment opportunities.

The DSP also nominates local structure plan cells, predominantly based upon drainage catchments, existing street networks and logical boundaries for ease of future planning. LSP4 is one such cell within which the broad land uses including; public open space, key road networks and infrastructure corridors have already been defined by the DSP, refer **Figure 6 – West Swan East (Dayton) District Structure Plan**.

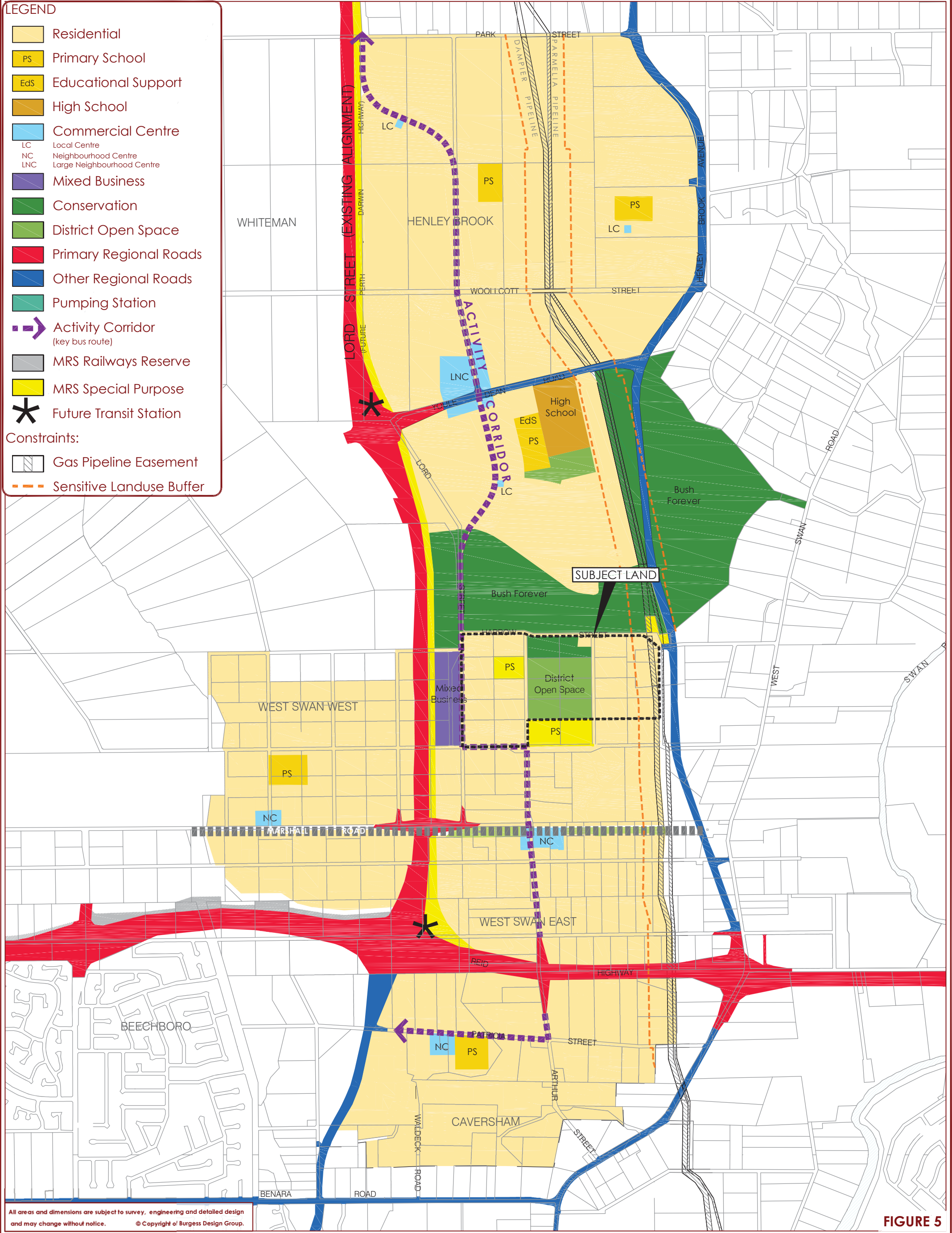
Table 4 below summarises the key features of the Sub-Regional Plan and District Structure Plan relevant to LSP4:

LEGEND

- Residential
- PS Primary School
- EdS Educational Support
- High School
- Commercial Centre
- LC Local Centre
- NC Neighbourhood Centre
- LNC Large Neighbourhood Centre
- Mixed Business
- Conservation
- District Open Space
- Primary Regional Roads
- Other Regional Roads
- Pumping Station
- Activity Corridor (key bus route)
- MRS Railways Reserve
- MRS Special Purpose
- Future Transit Station

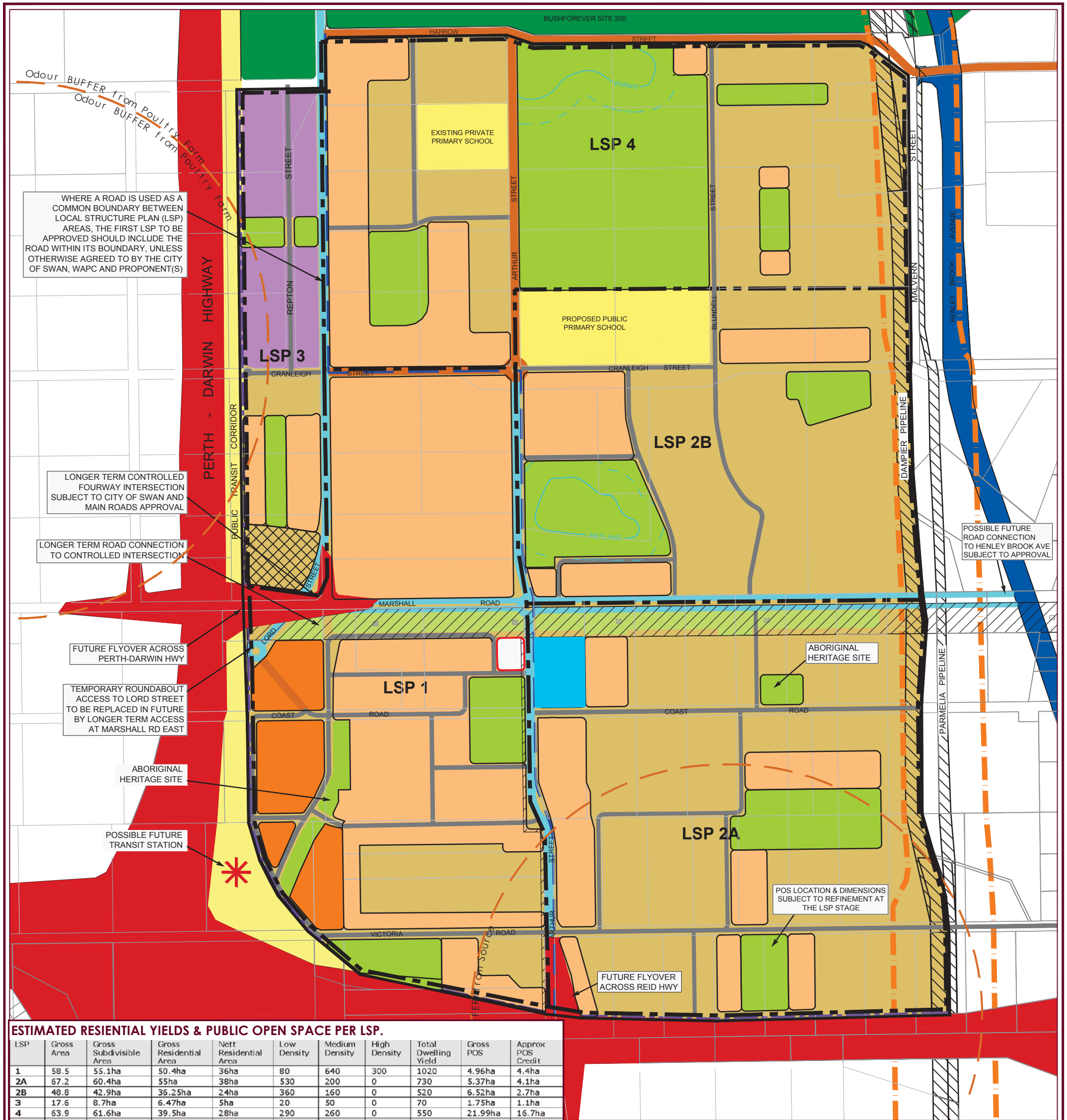
Constraints:

- Gas Pipeline Easement
- Sensitive Landuse Buffer



All areas and dimensions are subject to survey, engineering and detailed design and may change without notice. © Copyright of Burgess Design Group.

FIGURE 5



WHERE A ROAD IS USED AS A COMMON BOUNDARY BETWEEN LOCAL STRUCTURE PLAN (LSP) AREAS, THE FIRST LSP TO BE APPROVED SHOULD INCLUDE THE ROAD WITHIN ITS BOUNDARY, UNLESS OTHERWISE AGREED TO BY THE CITY OF SWAN, WAPC AND PROPONENT(S)

LONGER TERM CONTROLLED FOURWAY INTERSECTION SUBJECT TO CITY OF SWAN AND MAIN ROADS APPROVAL

LONGER TERM ROAD CONNECTION TO CONTROLLED INTERSECTION

FUTURE FLYOVER ACROSS PERTH-DARWIN HWY

TEMPORARY ROUNDABOUT ACCESS TO LORD STREET TO BE REPLACED IN FUTURE BY LONGER TERM ACCESS AT MARSHALL RD EAST

ABORIGINAL HERITAGE SITE

POSSIBLE FUTURE TRANSIT STATION

POSSIBLE FUTURE ROAD CONNECTION TO HENLEY BROOK AVE SUBJECT TO APPROVAL

POS LOCATION & DIMENSIONS SUBJECT TO REFINEMENT AT THE LSP STAGE

FUTURE FLYOVER ACROSS REID HWY

ESTIMATED RESIDENTIAL YIELDS & PUBLIC OPEN SPACE PER LSP.

| LSP | Gross Area | Gross Subdivisible Area | Gross Residential Area | Nett Residential Area | Low Density | Medium Density | High Density | Total Dwelling Yield | Gross POS | Approx POS Credit |
|--------------|--------------|-------------------------|------------------------|-----------------------|-------------|----------------|--------------|----------------------|----------------|---------------------|
| 1 | 58.5 | 55.1ha | 50.4ha | 36ha | 80 | 640 | 300 | 1020 | 4.96ha | 4.4ha |
| 2A | 67.2 | 60.4ha | 55ha | 38ha | 530 | 200 | 0 | 730 | 5.37ha | 4.1ha |
| 2B | 48.8 | 42.9ha | 36.25ha | 24ha | 360 | 160 | 0 | 520 | 6.52ha | 2.7ha |
| 3 | 17.6 | 8.7ha | 6.47ha | 5ha | 20 | 50 | 0 | 70 | 1.75ha | 1.1ha |
| 4 | 63.9 | 61.6ha | 39.5ha | 28ha | 290 | 260 | 0 | 550 | 21.99ha | 16.7ha |
| Total | 256ha | 228.7ha | 187.62ha | 131ha | 1280 | 1310 | 300 | 2890 | 40.59ha | 29ha (12.7%) |

All figures are estimates only & subject to refinement at the local structure planning stages.

NOTES

PUBLIC OPEN SPACE AND DRAINAGE
Public Open Space and Drainage areas are indicative and subject to detailed design and modelling at the Local Structure Plan stage.

DISTRICT OPEN SPACE FACILITIES
12ha of District Open Space Facilities are to be located within a minimum of 15ha of public open space, co-located with the Resource Enhancement Wetland and adjacent to the Public Primary School along Arthur street.

SERVICE COMMERCIAL
Uses within the site are as per the Service Commercial Use class table listed in the District Structure Plan with emphasis on creating a Mixed Business/Service Commercial development site to cater for commercial uses not suitable for the local neighbourhood centre.

LOCAL NEIGHBOURHOOD CENTRE
Uses within the local neighbourhood centre site are as per the City of Swan General Commercial use class with emphasis on encouraging a main street style local neighbourhood centre.

SPECIAL USE - COMMUNITY SITE
Uses within the site are generally intended for civic and community purposes, with emphasis on a design complementary to the Activity corridor and public open space.

SPECIAL USE - INFRASTRUCTURE SITE
The Special Use - Infrastructure site may be required for a 2 ha power substation site. In the event agreement is reached for an alternative location, this site is designated for low density residential.

ODOUR BUFFER
Subdivision within the designated odour buffer is not permitted until the satisfactory removal or reduction of the buffer in accordance with section 4.4 of the report

HERITAGE
The identified heritage sites are to be protected within public open space or alternative, subject to detailed design at the Local Structure Plan stage.

RESIDENTIAL
Uses within the Residential areas are as per the City of Swan Residential Zone use class. Residential densities are indicative only and shall be confirmed at the local structure plan stage, aiming to achieve a minimum of 22 dwelling units per hectare across the structure plan area with higher/medium densities concentrated along the Activity Corridor, Commercial centre and areas of POS.

ACTIVITY CORRIDOR
The Activity Corridor is intended as the central spine for movement and activity connecting Albion with Caversham through West Swan and shall provide the function of a frequent public transport route with higher residential densities, home based businesses and some commercial and community uses encouraged alongside it.

INFRASTRUCTURE CORRIDOR & EASEMENT
Use, development and ownership of the infrastructure corridor & easement are to be to the satisfaction of the City of Swan and Western Power and is subject to more detailed design at the Local Structure Plan stage.

GAS PIPELINE SETBACK
Use and development within the gas pipeline setback area is restricted and subject to further refinement at the Local Structure Plan Stage.

LOCAL STRUCTURE PLANS
Subdivision and development of the subject area is to be in accordance with an endorsed applicable Local Structure Plan unless otherwise approved by the City of Swan and/or Western Australia Planning Commission.

LEGEND

- Subject Area
- Special Use - Community
- Powerline Easement
- Gas Pipeline Easement
- Infrastructure Corridor
- Special Use- Infrastructure
- Gas Pipeline Setback
- Noise Attenuation Measures as appropriate
- Odour Buffer
- Possible Future Transit Station
- Activity Corridor
- MRS Primary Regional Road
- MRS Other Regional Roads
- Integrator B Road
- Neighbourhood Connector Road
- Access Streets
- MRS Public Purpose Reserve
- Local Structure Plan Boundaries

Table 4: Sub Regional and District Structure Plan Requirements/Compliance

| Sub-Regional Plan Requirements | District Structure Plan Requirements | LSP Compliance |
|---|---|---|
| An 'Activity Corridor' connecting Albion District Centre in the north to Caversham in the south via the Arthur Street flyover across Reid Highway. | Provision and access to an adjoining 'Activity Corridor'. | Located on the western and southern boundaries of LSP4 along Lord Street and Cranleigh Street. |
| One local neighbourhood centre centrally located along the Activity Corridor. | | No local centre is proposed in LSP4. LSP2A accommodates a Local Neighbourhood Centre that will cater for the requirements of the Dayton Area. |
| A predominance of residential land uses across the LSP area which assists in the broader District achieving an overall nett residential density target of 22 dwelling units per hectare. | Allocation of nominated residential densities and density targets; location and areas for public open space and drainage; and external and internal road network. | A variety of residential densities has been provided within LSP4 achieving a residential density of 29 dwelling units per nett hectare. All other relevant issues have been addressed. |
| Recognition of the operating mushroom farm and its associated 500m buffer within which subdivision is restricted. | | The mushroom farm buffer does not impact LSP4. |
| The existence of the Dampier to Bunbury and the Parmelia gas pipeline easements and their associated buffer requirements to sensitive land uses along the eastern boundary of LSP4. | Recognition of adjoining gas pipeline easements and their setback requirements. | Provision is made for the exclusion of the easement from development, and recognition of constraints within the buffer. No risk assessment report associated with the gas pipelines is included given that no departures from established easement and setback requirements have been proposed. |
| An integrated traffic management study across the Sub-Region, confirming road networks and hierarchy as proposed, including an upgraded intersection in the interim for Marshall Road (north-west) and Lord Street intersection, which also acts as the main entry to the estate. | Inclusion of supporting management plans as required by the DSP, specifically a wetland management plan and a cultural heritage management plan. | An integrated traffic management study has been undertaken that facilitates a range of permeable transport movements (car, bus and possible future bus rapid transit) through appropriate road widths, grid-like street networks, appropriate road hierarchy, provision for future public |

| | | |
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| | | transport, and regular cell blocks ultimately allowing for a well connected and surveilled local street network. |
|--|--|--|

The above requirements have formed the basis for progressing the planning, design, traffic management, infrastructure provision and land use allocation within LSP4.

1.3.3 Planning Strategies

Directions 2031 and Beyond:

Directions 2031 recognises the benefits of a more consolidated city and sets realistic goals to promote housing affordability and sustainable urban growth. LSP4 is considered compliant with the key objectives and themes of Directions 2031 and responds in the following manner:-

- LSP4 forms part of a wider urban area experiencing significant growth and development that will ultimately provide a range of local and district level facilities. The area has been fully planned to comply with State policies, integrate with existing development and represents an efficient use of urban zoned land;
- The proposed development seeks to increase patronage levels of existing and proposed public transport services, improve the viability of existing and proposed district and regional centres whilst enhancing community and environmental health; and
- Achieve a minimum target of 22 dwellings per nett hectare of urban zoned land in new development areas as recommended in Directions 2031. LSP4 achieves a minimum 29 dwellings per nett hectare.

Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy:

The Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy forms part of the implementation programme for Directions 2031 and provides further commentary and guidance specific to the various sub regions, including the north-east corridor within which the subject land is located.

Dayton (including LSP4) is identified in the draft Strategy as undeveloped urban land intended to accommodate 2800+ dwellings. LSP4 is consistent with the strategic framework and will assist in achieving the target number of dwellings.

1.3.4 Policies & Guidelines

Liveable Neighbourhoods:

Liveable Neighbourhoods is a state-wide development control policy to facilitate the development of sustainable communities. It provides an integrated planning and assessment policy for the preparation of Structure Plans and subdivision designs and represents an alternative performance-based approach to conventional subdivision policies.

The Local Structure Plan presented within this report adopts the principles of Liveable Neighbourhoods policy and has been developed to meet the objectives and requirements of each of the Liveable Neighbourhoods design elements.

Swan Urban Growth Corridor – Urban Growth Policy:

The City of Swan has prepared and adopted an Urban Growth Policy package, incorporating the ‘Urban Growth Policy’, the ‘Neighbourhood Planning Policy’, ‘Environmental Planning Policy’ and the ‘Community and Economic Planning Policy’. In summary, these policies contain objectives for Structure Plans within the Swan Urban Growth Corridor (relating to Dayton). The objectives of these Policies are reflective of those contained within the Scheme provisions for Special Use Site No.11.

LSP4 has been developed to reflect the engineering, ethnographic, community and economic development, financial reporting commitments, fire and emergency access information and environmental management strategies and plans prepared at the District Structure Plan stage. Additional landscape management, traffic management and a refinement of infrastructure servicing requirements has been provided as part of the LSP4 documentation.

LSP4 has been prepared and designed to reflect the requirements of Special Use Site No.11 and in so doing achieves the objectives of Council’s Urban Growth Policy package and the specific objectives and requirements applicable to structure plan preparation.

Planning for Bushfire Protection Guidelines

Planning Guidelines: Planning for Bush Fire Protection is a set of guidelines that outline a range of matters that need to be addressed at various stages of the planning process, to provide an appropriate level of protection to life and property from bush fires and avoid inappropriately located or designed land use, subdivision and development on land where a bush fire risk is identified.

1.3.5 Previous Approvals

The land contained within LSP4 has been the subject of three previous conditional planning approvals issued by the WAPC, those being:-

WAPC Ref: 134942 – Lot 23 Blundell Street, Dayton.

WAPC Ref: 134951 – Lot 575 Lord Street, Dayton.

WAPC Ref: 145922 – Lot 564 Arthur Street, Dayton.

2. SITE CONDITIONS AND CONSTRAINTS

A Context and Constraints Plan (refer **Figure 7**) has been prepared to illustrate the main issues discussed in this section of the LSP.

2.1 Biodiversity and Natural Area Assets

An environmental assessment report was prepared by RPS in August 2008 as part of the wider District Structure Plan. Additionally, in 2012, 360 Environmental prepared a Wetland Management Plan over the (then) Resource Enhancement Wetland located in the major public open space area of LSP4. It is noted that the management category of Resource Enhancement was modified by the Department of Parks and Wildlife to a Multiple Use management category on 11 November 2013.

Both of the environmental assessments determined that the condition of the vegetation within LSP4 is generally degraded. There are a few remaining natives and a dominance of exotic species. The ground cover and understory of the site have been subject to clearing and fire damage, as such there is little-to-no native understory or ground cover remaining. It has also been determined that there is no evidence of significant fauna usage of the site due to the lack of appropriate vegetation and surface water. Refer to **Figure 8 - Aerial Plan**.

2.2 Landform and Soils

RPS conducted an Environmental Assessment Report as part of the preparation of the District Structure Plan. The report confirmed that the subject land located within LSP4 is generally flat and about 20m – 21m above Australian height datum (AHD). However, it is noted that there is a high point rising to 26 metres AHD generally in the south east corner of the of the proposed District Open Space area.

A preliminary Acid Sulfate Soil (ASS) Investigation was undertaken by RPS in April 2007. It found that the land within LSP4 has very low risk of ASS occurring within the first 3 metres of the soil surface. However, there is a moderate risk of ASS occurring at depths greater than 3 metres. It should be noted that any urban development must meet the requirements of the Western Australian Planning Commission's Acid Sulfate Soils Planning Guidelines of September 2010.

2.3 Groundwater and Surface Water

The Local Water management Strategy (LWMS) compiled by JDA has found that the site comprises Guildford clays, with a thin overlay veneer of Bassendean sands at high-points, with existing drainage being a combination of natural drainage lines, with excavated drains (extended or deepened) to enhance flows.

Floodplain mapping indicates a 100 year flood level of 7.77m above the Australian High Datum (AHD), well below the minimum surface level of 14m AHD, and maximum of 26m AHD in the subject area. There are currently no Environmental Water Requirements or Environmental Water Provisions applicable to the land.

In relation to surface water quality, the LWMS found that pH levels were generally neutral and within the ANZECC guideline values, whilst Conductivity and Nitrogen concentrations exceeded ANZECC guidelines.

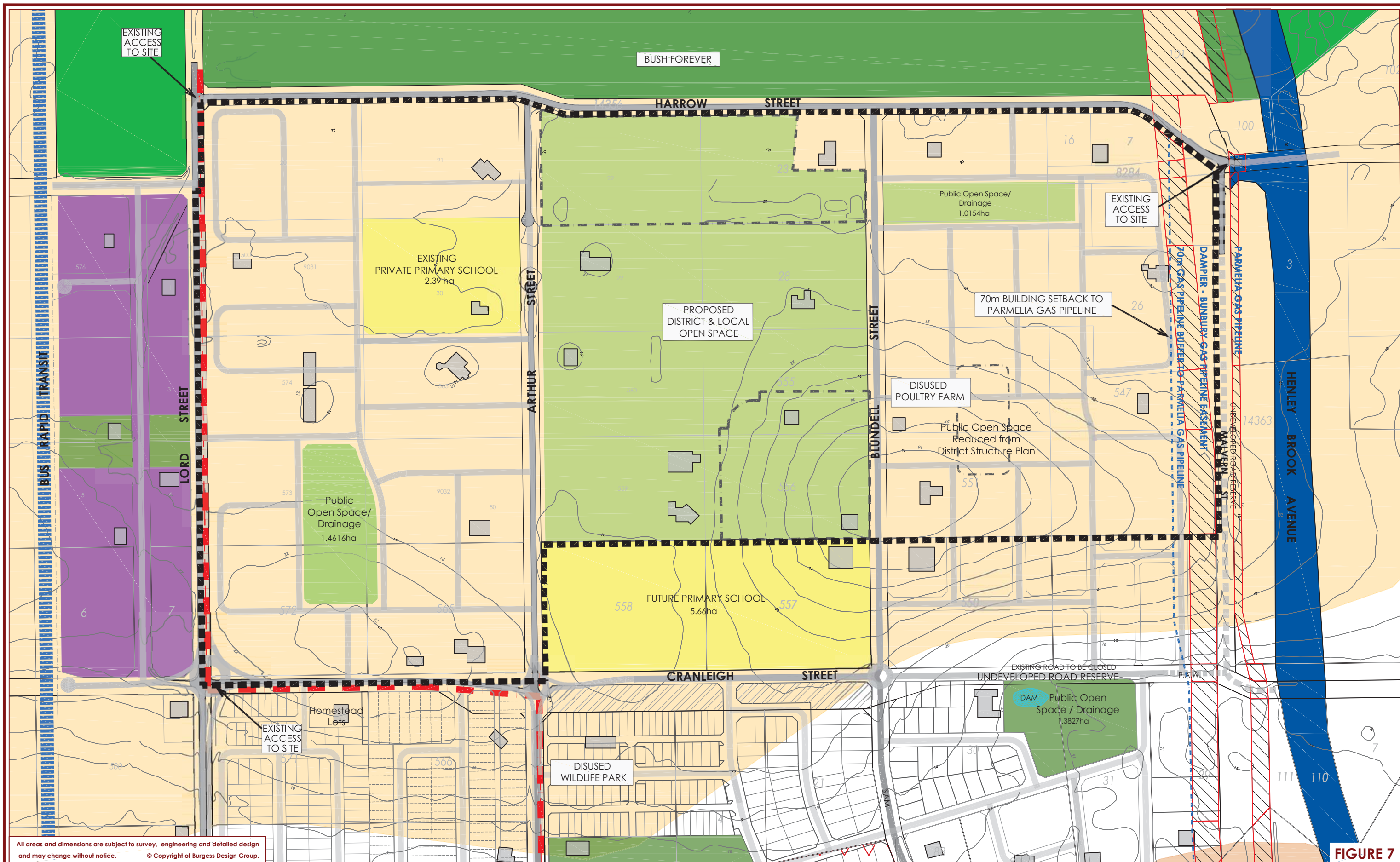


FIGURE 7

All areas and dimensions are subject to survey, engineering and detailed design and may change without notice. © Copyright of Burgess Design Group.

- LEGEND:**
- Subject Land
 - Blue Road
 - Bus Rapid Transit
 - Activity Corridor
 - Existing Roads
 - Proposed Roads
 - Parks and Recreation
 - Bushforever
 - Proposed Public Open Space
 - Approved Public Open Space
 - Gas Pipeline Easements
 - 70m Setback to Parmelia Pipeline
 - Moderate to High Acid Sulphate Soil Risk (DEC)
 - Low to Moderate Acid Sulfate Soil Risk (DEC)
 - School
 - Mixed Use
 - Existing Houses
 - Public Open Space from DSP



In relation to groundwater quality, the LWMS found that pH levels were generally neutral and within the ANZECC guidelines. Conductivity (particularly within LSP4), concentrations of Total Dissolved Solids and Phosphorus levels were beyond ANZECC guideline values. Additionally, Nitrogen levels varied considerably across the site, owing to the conditions of existing land use, soils and local hydrological regimes. A mean and median level of 9.6 mg/L and 5.1 mg/L respectively is beyond the Swan River Trust Swan River Trust (1999) and ANZECC (2000) guideline values of 1 mg/L and 1.2 mg/L respectively.

The major hydro-geological groundwater formations, in descending order of depth, are as follows:

- Superficial aquifer;
- Mirrabooka aquifer (semi-confined);
- Leederville aquifer (confined); and
- Yarragadee aquifer (confined).

The LWMS identified that whilst low groundwater levels reduces the need for fill, the clayey soils present potential for inadequate infiltration in the event of storms. Historical rural land uses, coupled with a lack of groundwater quality controls, has negatively impacted groundwater quality.

The key urban water management aspects employed by LSP4 protects and rehabilitates existing waterways, utilising linear and localised POS for the detention, retention, conveyance and treatment of stormwater. The utilisation of controlled groundwater levels (filling of house pads and subsoil drainage) along with water sensitive urban design will alleviate drainage concerns and maintain or improve surface and groundwater quality.

2.4 Bushfire Hazard

FirePlan WA prepared a Fire Management Plan in October 2009 in support of the Dayton DSP. It determined that portions of the existing remnant vegetation in the north of the district area (LSP4) is considered as “Extreme”. With a combination of prevailing winds and dry vegetation, there is an extreme fire risk and bush fire controls are considered essential for the protection of life and property.

A Bushfire Management Plan has been prepared for the LSP4 area by Bushfire Safety Consulting. The Plan has made a number of recommendations that have been addressed by the Local Structure Plan.

It is noted that the Bushfire Management Plan requires a number of 20m wide Building Protection Zones along Harrow Street, and the northern ends of Arthur and Blundell Streets adjoining the central POS area. The BMP text and maps has shown the incorrect reserve widths for those streets thus indicating that the BPZ extends into the LSP4 residential areas. However, both Harrow and Blundell Streets have reserve widths of 20m while Arthur Street has 25m. The 20.0 metre BPZ therefore does not directly impinge upon the LSP4 residential development areas. There are however areas impacted by BAL12.5 and BAL19 Construction Zones which have been appropriately shown on the Structure Plan Map.

2.5 Heritage

Investigations by 360Environmental have indicated that there are no Aboriginal Heritage sites located within LSP4.

2.6 Context and Other Land Use Opportunities/Constraints

LSP4 has evolved from higher level structure planning including; the Sub-Regional Structure Plan for the Swan Urban Growth Corridor that was endorsed by the Western Australian Planning Commission (WAPC) in 2009 and the West Swan East (Dayton) District Structure Plan that was endorsed by the WAPC in early 2012.

Many of the context issues, opportunities and constraints affecting the broader planning for Dayton have been addressed via the District Structure Plan. These opportunities and constraints within LSP4 have been broadly defined in the Context and Constraints Plan (refer **Figure 7**).

2.6.1 Public Open Space

The District is significantly oversupplied in terms of POS.

The Sub-Regional Structure Plan and the Dayton DSP identified the need for a large central area of District Open Space to provide for a minimum of 12ha of district level facilities.

LSP4 indicates the total area of the central district and local POS at 13.5338ha.

2.6.2 District Playing Fields

The location of 12 hectares (11.151ha in accordance with the DCP) of District Playing Fields and facilities within LSP4 provides the locality with a high level of amenity. These fields and facilities will be within very short walking distance of all residential dwellings in LSP4.

2.6.3 Gas Pipeline Easements

The Dampier to Bunbury Natural Gas Pipeline (DBNGP) is located within the eastern boundary of LSP4 and is contained within its own easement which excludes residential uses. The Parmelia Pipeline, which runs parallel to the east of the DBNGP has a 70m setback from the pipeline to residential uses and is identified on the LSP4 Structure Plan Map.

The LSP has been designed to limit interface issues with the pipeline easements and their buffers. Where possible, road reserves have been located within the buffers or abutting the easements.

2.6.4 Existing School Interface

The existing private primary school site takes its access from Arthur Street on its eastern boundary. It is proposed that the School site will be provided with new road frontages on its southern and western boundaries. The northern boundary will directly abut new residential development. This situation is unavoidable due to development design requirements and the limitations of the space between the School's northern boundary and the Harrow Street road reserve. The school has raised no objections to these proposals.

2.6.5 Regional Connections Harrow Road

LSP4 has a number of existing road reserves that frame the Structure Plan area. Of importance for connectivity to the regional road network is Harrow Street to the north extending east west and providing a direct connection to Lord Street and West Swan Road.

2.6.6 Interface with Service Commercial

LSP4 is located opposite the Mixed Business area proposed on the western side of Lord Street within LSP3. It will be important that when LSP3 is prepared that it gives appropriate consideration to the interface with the residential uses in LSP4. Access issues, building design and appropriate land uses will all need to be considered in the preparation of the LSP.

2.6.7 Activity Corridor

The Swan Sub-Regional Structure Plan and Dayton District Structure Plan both designated an Activity Corridor leading from Albion in the north, down Lord Street to Cranleigh Street and then routing along Arthur Street to Caversham in the south. This Activity Corridor forms the western boundary of LSP4 as shown on the plan.

The Activity Corridor is literally a corridor intended to accommodate a range of activities, including higher vehicular transport use, public transport, dedicated pedestrian and cyclist routes, development and land uses which generate higher visitation such as retail uses and community destinations in a manner that is easily accessible.

LSP4 will only propose one direct road connection to the Lord Street Activity Corridor other than the two existing connections at Harrow Street and Cranleigh Street. Direct access from the residential lots within LSP4 to Lord Street has been restricted to avoid garage domination and traffic conflict.

3. LAND USE AND SUBDIVISION REQUIREMENTS

3.1 Land Use

The proposed land uses within LSP4 consist of predominately low and medium density urban residential uses, district and local public open space and a private primary school site. Refer to **Plan 1 - Structure Plan Map**. Additionally, refer to the summary table in the Executive Summary for detail of the land areas of each land use. It is noted that the private primary school is an existing land use and has been appropriately incorporated into the design of LSP4.

3.2 Public Open Space

In summary, LSP4 provides well in excess of the 10% required Public Open Space (POS), when taken in isolation as well as in combination with the other Dayton LSP's. Please refer to the overall Dayton POS schedule contained at **Appendix 1**. It has been considered more practical that only one overall district level schedule is prepared, this ensures that if there is a change in one Local Structure Plan area, that the change is calculated in the context of the overall open space provision, thus making the open space calculations more transparent and easier to manage.

3.2.1 Public Open Space Distribution

The proposed areas of POS within LSP4 generally reflect those originally proposed under the adopted sub-regional and district structure plans. Consequently three areas of open space are proposed as illustrated in **Figure 9**. These three areas of POS provide a diversity of parkland forms and functions as required by Liveable Neighbourhoods. Integrated into the open space are areas for local drainage.

A Landscape Management Plan has been prepared by Plan E in relation to the public open space areas to be provided in LSP4 (refer **Appendix 3**).

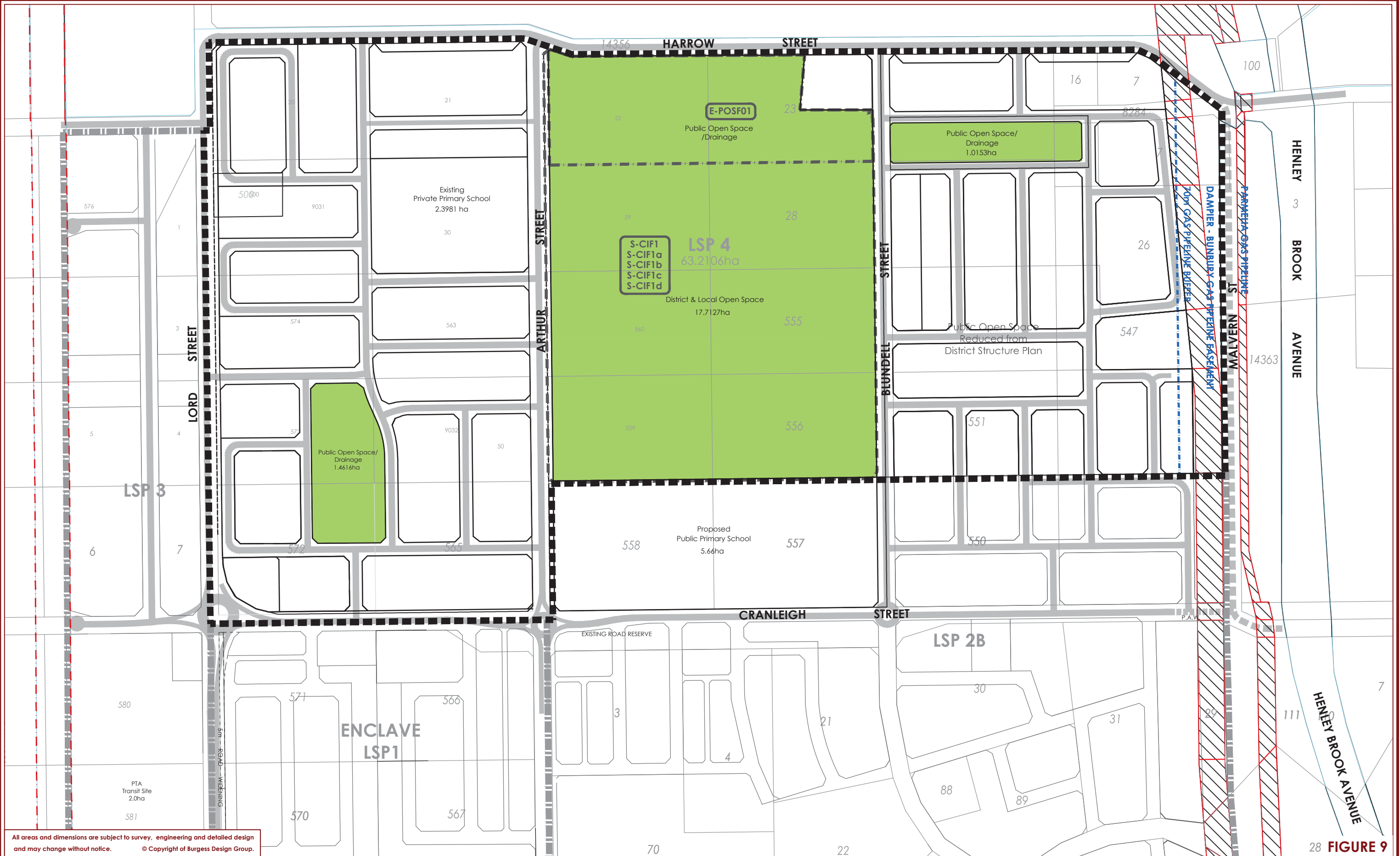
District Open Space S-CIF1 and S-CIF1a-b - The Sub-Regional Structure Plan and the Dayton DSP identified the need for a large central area of District Open Space provide for a minimum of 12ha of District level facilities and Neighbourhood parkland.

Local Park E-POSF02 – This is a local park located in the northeast of the LSP area and has an area of 1.0153ha. Extending in a linear direction east from Blundell Street, with full road frontage this open space provides a high level of amenity for surrounding and neighbouring residents.

E-POSF04 – This area of POS is 1.4616ha. This portion of POS generally reflects the size and location of the POS area proposed as part of the Dayton District Structure Plan. The location has also been modified to permit the retention of an existing stand of trees that will now be located along the eastern edge of the POS area.

E-POSF12 – This forms part of the broader area of District Open Space and occupies an area of approximately 2.8155ha.

E-POSF03 has been deleted from LSP4 due to its proximity to other POS areas and on the basis that there is a significant overprovision of POS in LSP4 and the broader District. The deletion of this portion of POS has been discussed and agreed with the City. It is considered



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28 FIGURE 9

- LEGEND**
- Proposed Public Open Space
 - Public Open Space from DSP
 - DSP Public Open Space



NORTH



SCALE 1:4,000 (A3)

PUBLIC OPEN SPACE & DRAINAGE
LSP4 DAYTON
CITY OF SWAN



that E-POSF03 had very limited potential to provide the POS function for which it was originally proposed, that is, a local POS function given its extreme proximity to both E-POSF12 and the area of District Open Space that comfortably cater for this need.

It is noted that E-POSF03 formed part of the LWMS. JDA has advised that the LWMS has been updated to incorporate this modification and that there is sufficient storage capacity elsewhere within the LSP area.

The distribution of open space, when also taking into consideration the open space located in the neighbouring LSP2B, ensures a high level of accessibility with the majority of lots being located within a 200m walking distance of an area of public open space.

3.3 Residential

LSP4 generally proposes a range of low to medium residential densities ranging from R20 to R40. In addition the grouped/multiple dwelling site in the southwest corner of the site is indicated at R60. This mix of densities is in accordance with the residential density requirements recommended in Directions 2031.

The total area available for residential development is just over 28 hectares (excluding roads) and will accommodate an estimated minimum of 827 lots. It is anticipated that those lots will provide for approximately 827 + dwellings. The proposed number of lots and dwellings represent an approximate nett yield of 29 dwellings per residential zoned hectare. It is estimated that this will allow for a population of approximately 2,106 people within LSP4.

The proposed low and medium density residential land uses within LSP4 are consistent with the planning framework for the district, including the Swan Corridor Urban Growth Sub-Regional Structure Plan and the Dayton District Structure Plan.

Wider structure planning for the district has determined that the LSP4 area will generally accommodate a mix of residential densities between Residential R20 and R60.

It is noted that the eastern portion of the site adjoining the gas pipelines was originally mooted for low density R5 residential development but that has been modified to reflect updated advice from the City of Swan regarding how land in this vicinity should be developed.

The surrounding Dayton LSP areas (LSP1, 2A, 2B and 3) accommodate a mixture of land uses, including low to high density residential development, service commercial, local centre, primary school and public open space. The proposed residential development within LSP4 seeks to continue the character and form of that already developed and proposed within the adjoining LSP areas south of the subject land and is reflective of that proposed under the broader regional and district structure plans.

The proposed lot layout has been orientated such that it can provide effective surveillance of the public domain such as the streets, future bus routes, the private primary school and public open spaces. The proposed street block pattern has been influenced by the need to achieve a permeable and grid-like network whilst considering existing cadastral boundaries and road reserves.

The design seeks to permit as many individual landowners to develop their land independently of adjoining landowners thus permitting any landowners who wish to retain their existing landholdings/dwellings to remain unaffected.

3.4 Movement Networks

A Transport Assessment Report has been prepared by Transcore and is attached at **Appendix 4**. Outlined below is a summary of the key findings.

- The future traffic flows and road network of the West Swan East District Structure Plan are assessed in the *West Swan East Structure Plan, City of Swan, Transport Impact Statement Update* (October 2009).
- Two long-term road network scenarios have been assessed:
- Interim Scenario: Perth-Darwin National Highway (north of Reid Highway) and Arthur Street flyover (across Reid Highway) not yet constructed. Lord Street still connects directly to Reid Highway.
- Ultimate Scenario: Perth-Darwin National Highway (PDNH, north of Reid Highway), Marshall Road flyover (across PDNH) and Arthur Street flyover (across Reid Highway) all constructed. Lord Street no longer connects directly to Reid Highway. LSP4 access west and south is via these two flyovers and connections to Henley Brook Avenue in the east.
- In the ultimate scenario Arthur Street will carry up to 6,000 vpd adjacent to LSP4.
- In the interim scenario Lord Street will carry up to 21,000 vpd adjacent to LSP4 but would reduce to 8,000 vpd in the ultimate scenario.
- In the LSP4 area, a 25m road reserve is proposed for Lord Street to accommodate an undivided 4-lane road standard in the interim period and an Integrator B road standard with a 2m median in the ultimate scenario.
- Roundabouts are proposed at the Lord St / Harrow St, Lord St / Cranleigh St and Arthur St / Cranleigh St intersections.
- Any other access points on Lord Street abutting LSP4 should be restricted to left in / left out movements only.
- Appropriate road cross sections based on Liveable Neighbourhoods guidelines have been identified for all roads within the LSP4 area.
- Potential future bus routes on Lord Street and Blundell Street within the LSP4 area have been identified through consultation with the Public Transport Authority.
- Shared paths are to be provided on one side of Lord Street, Arthur Street, Blundell Street, Cranleigh Street, Harrow Street and around the proposed primary school site within the LSP4 area.
- The pedestrian network is intended to provide direct and legible access within the development and to major land uses such as the neighbourhood centre and primary schools.

Existing Road Network

| Road | Existing Cross-Section | Speed Limit | Road Classification | Jurisdiction |
|---|---|--|------------------------|---------------|
| Reid Highway (Lord Street to West Swan Rd) | 2-lane undivided rural cross-section | 90 km/h | Primary Distributor | Main Roads WA |
| West Swan Rd (Reid Hwy to Harrow Street) | 2-lane undivided | 70 km/h | District Distributor A | City of Swan |
| Arthur Street (South of Harrow Street) | 2-lane rural cross-section, school zone south of Harrow Street | 70 km/h; 40 km/h school zone in vicinity of school | Local Distributor | City of Swan |
| Arthur Street (South of Marshall Road) | 2-lane undivided, cul-de-saced north of Reid Hwy | 70 km/h | Local Distributor | City of Swan |
| Victoria Road (west of West Swan Road) | 2-lane undivided, cul-de-saced east of Lord Street | 70 km/h | Local Distributor | City of Swan |
| Coast Road | 2-lane undivided with teardrop traffic islands before and after school. | 70 km/h, 40 km/h school zone near West Swan Road | Access Road | City of Swan |
| Marshall Road (Arthur Street to Lord Street) | 2-lane undivided | 70 km/h | Access Road | City of Swan |
| Cranleigh Street | 2-lane undivided unmarked narrow rural cross-section | 70 km/h | Access Road | City of Swan |
| Blundell Street | 2-lane undivided rural cross-section | 70 km/h | Access Road | City of Swan |
| Sam Rosa Place | Narrow 2-lane undivided, rural cross-section | 70 km/h | Access Road | City of Swan |
| Malvern Street | Narrow 2-lane undivided rural cross-section, gravel shoulders | 70 km/h | Access Road | City of Swan |
| Harrow Street | 2-lane rural cross- | 70 km/h, 40 | Local Distributor | City of Swan |

| | | | | |
|--|---------|-------------------------------------|--|--|
| | section | km/h school zone near Arthur Street | | |
|--|---------|-------------------------------------|--|--|

Arthur Street is currently cul-de-saced midway between Cranleigh Street and Harrow Street opposite the existing private primary school. Access to the school is provided from the northern section of Arthur Street.

Existing Traffic Control Measures

| Intersection | Level of Traffic Control | Turn Pockets/Intersection Flaring |
|---|--|---|
| Reid Hwy / Lord Street | Stop sign control on Lord St approach | Left turn slip lanes on west and north approaches and right turn pocket on east approach. |
| Lord St / Marshall Rd west / St Leonards Bvd | 4-way roundabout | |
| Lord Street / Marshall Rd east | Give Way control on Marshall Rd approach | Lord Street northbound approach flares to the west to allow northbound through traffic to pass right turning vehicles. |
| Lord Street / Cranleigh Street | Stop sign control on Cranleigh St approaches | |
| Arthur Street / Victoria Street | Give Way control on Arthur St approach | |
| Arthur Street/ Coast Road | Give Way control on Coast Rd approach | |
| Arthur Street / Marshall Road | Give Way control on Marshall Rd approach | |
| Arthur Street / Cranleigh Street | Give Way control on Arthur St approaches | |
| Cranleigh Street / Blundell Street / Sam Rosa Place | Give Way control on Sam Rosa Pl approach | |
| Reid Hwy / West Swan Road | Signalised 4-way intersection | Both roads widened to 4 lanes through the intersection. Left turn slip lanes and right turn pockets on all approaches. |
| West Swan Road / Victoria Road | Stop sign control on Victoria Rd approaches | |
| West Swan Road / Coast Road | Give Way control on Coast Rd approaches | West Swan Rd southbound approach flares to the east to allow southbound through traffic to pass right turning vehicles. |
| West Swan Road / Harrow Street | Give Way control on Harrow St approach | West Swan Rd southbound approach flares to the east to allow southbound through traffic to pass right turning vehicles. |
| Harrow Street / Blundell Street | Give Way control on Blundell St approach | |
| Harrow Street / | Give Way control on | |

| | | |
|-----------------------------|--|--|
| Malvern Street | Malvern St approach | |
| Lord Street / Harrow Street | Give Way control on Harrow St approach | |
| Lord Street / Repton Street | Give Way control on Repton St approach | |

3.4.1 Future Road Network

The proposed road network is based upon integration with the existing roads within and adjoining LSP4 (particularly given that a number of established homes are reliant upon the existing road network for access), those incorporated into the LSP2B subdivision design as well as with those future roads identified in previously agreed structure planning documents, such as Henley Brook Avenue to the east of the subject land which has previously been reserved for a future road under the Metropolitan Region Scheme.

From the above framework, a series of local access streets are proposed to extend through the LSP4 cell, connecting the existing roads to create a legible and permeable grid-like pattern with views towards the public open space areas (where practicable), Activity Corridor and primary school; all successfully achieved whilst attempting to minimise the impact on existing homes, particularly those homes in which landowners have previously expressed a desire to retain. Such an outcome encourages efficiency for vehicles, cyclists and pedestrians as well as for the future lot yields of individual landowners. The proposed LSP4 road network also links with the road network proposed as part of the broader District Structure Plan and the public transport routes within or adjoining, and hence the associated West Swan East DSP should be read in conjunction with this LSP.

It should also be noted that in designing the road network, consideration was also given to road widths, noting in particular that the existing Lord Street, Cranleigh Street and Arthur Street reserves need to be adjusted as part of the structure planning, with widening to occur relevant to the anticipated traffic volumes and road pavement design.

Similarly, the road network reflects the ideal access scenarios. Residential driveways directly accessing Lord Street was deemed undesirable, and as such, the use of parallel roads, battleaxe lots or opportunities for dwellings to gain driveway access from perpendicular or rear access streets is proposed. These design elements will maintain attractive streetscapes whilst reducing opportunities for traffic conflict.

As LSP4 has an interface with adjoining local structure plan cells (particularly LSP2B to the southeast), consideration has also been given to the proposed road layout within this adjoining cell to ensure logical, safe and well integrated connections can be achieved.

The future Perth-Darwin National Highway (PDNH) alignment northwards from Reid Highway is reserved as Primary Regional Road (red road) in the MRS as shown in Figure 1. Detailed concept designs have been developed by the Department of Planning for the section of the PDNH alignment from Reid Highway to Gngangara Road. This includes several interchanges and flyovers in the vicinity of the West Swan East DSP area, including a flyover serving the site directly at Marshall Road and full interchanges at Reid Highway and Youle-Dean Road (to the south-west and north-west of the subject lands, respectively).

Main Roads WA comments on the West Swan East DSP advised that access to Primary Regional Roads will be limited to the existing planned locations.

In the vicinity of the West Swan East DSP area, the PDNH would function as the primary north-south road transport corridor in the area and would remove most of the through traffic currently carried by Lord Street.

Earlier in 2012 the City of Swan considered a Main Roads WA proposal that involves realignment of the future Perth-Darwin National Highway to the west of Whiteman Park. This would completely change the ultimate road network scenario considered in this report but in accordance with discussions with planning officers at City of Swan the PDNH alignment currently reserved in the Metropolitan Region Scheme must be taken into consideration until such time as the proposed alternative alignment becomes official. If this proposal to realign the future PDNH alignment to the western side of Whiteman Park does proceed through the MRS amendment process it is assumed that a district distributor road would ultimately be constructed on the current PDNH alignment west of Dayton as planning of this area has been based on this road alignment ultimately relieving traffic demand on Lord Street. Further information relating to planning in 2013 for a potential district distributor road on the PDNH alignment is presented in Appendix E of the attached Traffic report.

3.4.2 Road Hierarchy

Whilst exterior to LSP4, the proposed Henley Brook Avenue to the east is the highest road category reflected in the LSP4 documentation as it shall ultimately be designed to provide a regional north-south traffic route relieving significant traffic from West Swan Road and assisting in connecting LSP4 to destinations such as Midland and Albion. Harrow and Cranleigh Streets will ultimately provide the closest connections with Henley Brook Avenue, the timing of its constructions being unknown at this time.

Based on the estimated daily traffic volumes and the anticipated function of the existing and proposed roads, **Figure 10** illustrates the resultant proposed road classifications for the structure plan road network. The road hierarchy has been determined based on the principles of Liveable Neighborhoods.

| Road Classification | Indicative upper volume (vpd) | Indicative road reserve width (m) | Indicative road pavement width (m) |
|--|-------------------------------|-----------------------------------|--|
| Integrator B – outside centres (LN Figure 15) | 15,000 | 29.2 | 2 x 7.5m (incl. on-street parking and cycle lanes), 6m median |
| Integrator B – centres (LN Figure 16) | 15,000 | 25.2 | 2 x 7.5m (incl. on-street parking and cycle lanes), 2m median |
| Neighbourhood Connector A | 7,000 | 23.0 - 24.4 | 2 x 7.1m (incl. embayed or on-street parking and cycle lanes), 2m median |

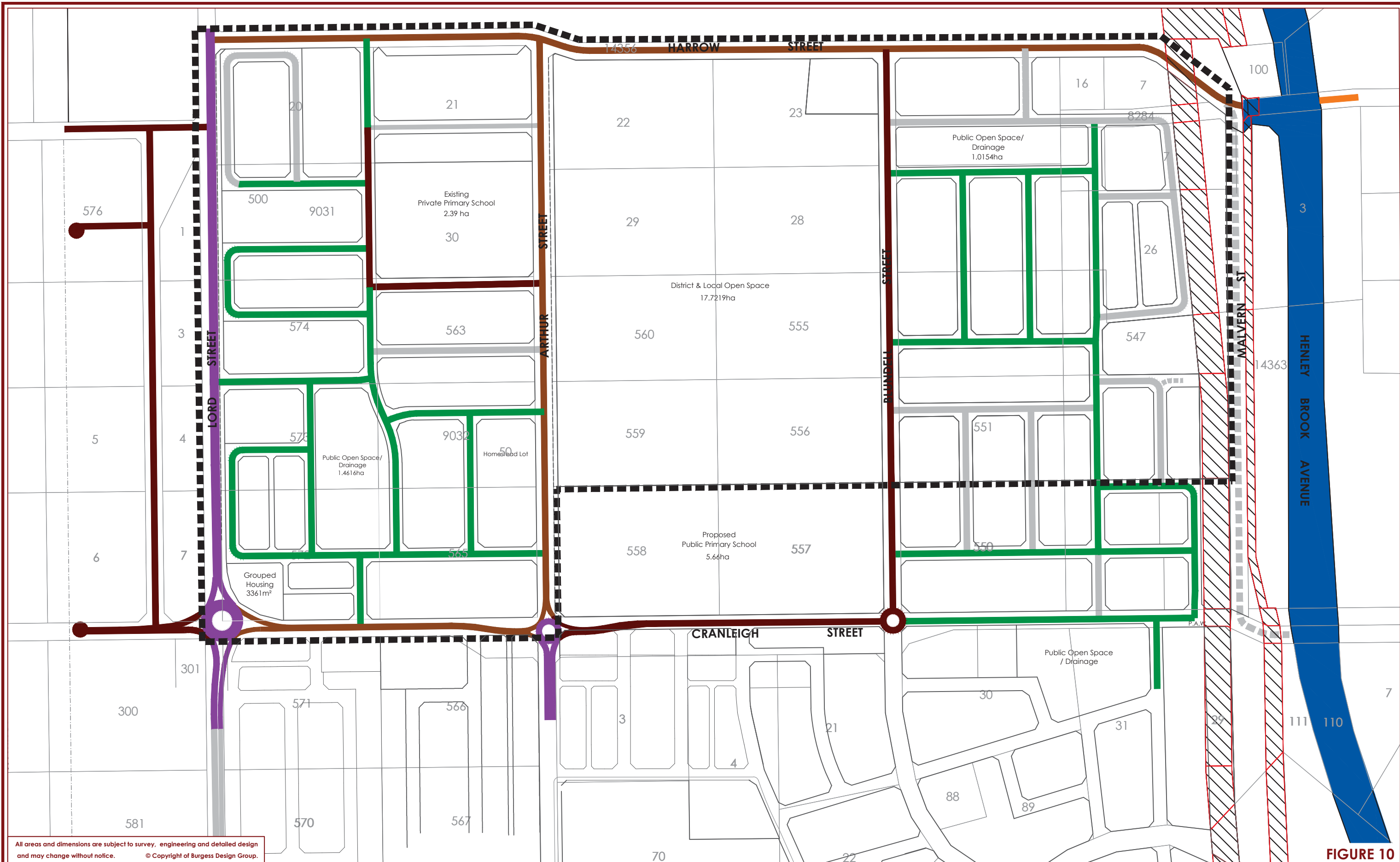


FIGURE 10

All areas and dimensions are subject to survey, engineering and detailed design and may change without notice. © Copyright of Burgess Design Group.

LEGEND

- Other Regional Road
- District Distributor Integrator B
- Neighbourhood Connector A
- Neighbourhood Connector B
- Access Street B
- Access Street C
- Access Street D



0 25 50 75 100m
SCALE 1:4,000 (A3)

ROAD CLASSIFICATION & HIERARCHY
LSP4 DAYTON
CITY OF SWAN

| | | | |
|---|-------|-------------|--|
| (LN Figure 17) | | | |
| Neighbourhood Connector B (LN Figure 18) | 3,000 | 18.0 – 19.4 | 11.2m (incl. embayed or on-street parking) |
| Access Street B (LN Figure 20) | 3,000 | 16.5 – 18.0 | 9.7m (incl. embayed or on-street parking) |
| Access Street C (LN Figure 21) | 3,000 | 15.4 – 16.0 | 7.2m |
| Access Street D (LN Figure 22) | 1,000 | 14.2 – 15.0 | 6m typical |
| Laneway (LN Figure 24) | 300 | 6.0 – 6.4 | 6m typical |

It should be noted that these reserve widths are indicative and might be subject to further adjustment in consultation with the Department of Planning during detailed subdivision design.

With the exception of Harrow Street, Arthur Street, Lord Street and the section of Cranleigh Street, west of Arthur Street, the balance of the roads have been designated as *Access Road A* and *C* roads.

Lord Street

Under the ultimate scenario, following construction of the PDNH, Lord Street will ultimately have traffic flows of 8,000 – 9,000 vpd, which are appropriate to an *Integrator B*. Therefore a road reserve width of approximately 25m would be appropriate in this ultimate scenario.

In the interim period until the construction of PDNH (or the potential district distributor road on the PDNH alignment) the existing alignment of Lord Street will provide access from the West Swan East DSP area to the surrounding road system.

Lord Street is likely to require upgrading to four lanes to accommodate traffic growth in this interim period. This is addressed in the West Swan East TIS report and Dayton LSP1 Transport Assessment report.

If and when PDNH (or the potential district distributor road) is constructed this section of Lord Street will no longer connect to Reid Highway and traffic flows on Lord Street will be substantially reduced.

In the interim period the traffic volumes on Lord Street could potentially build up to over 20,000 vpd. During this period Lord Street could be upgraded to a four-lane undivided road within this 25m road reserve. The Dayton LSP1 Transport Assessment report suggested a 15m carriageway, which would allow wider kerbside lanes (eg. 4.2m wide) to be shared by

motor vehicles and cyclists. On-street parking would not be appropriate on Lord Street during this interim period.

Arthur Street

Arthur Street is anticipated to function as a *Neighbourhood Connector* road in the interim scenario but the planning needs to take into consideration the ultimate scenario of an Arthur Street flyover over the Reid Highway. In the ultimate scenario all of Arthur Street south of Cranleigh Street is planned to form part of an activity corridor linking through Albion, West Swan and Caversham. However, the section north of Cranleigh Street within LSP4 is expected to carry less than 5,000 vpd and will be classified as a Neighbourhood Connector A road.

Cranleigh Street

The section of Cranleigh Street between Lord and Arthur Streets, which forms part of the planned activity corridor, is designated as a Neighbourhood Connector road in LSP1. This section may carry up to 4,000vpd in one long term scenario so the existing 20m road reserve is recommended to be widened to 23m to accommodate a Neighbourhood Connector A cross-section with on street bicycle lanes and embayed (indented) parking in accordance with Liveable Neighbourhoods guidelines. This is the only section of Cranleigh Street abutting LSP4.

Harrow Street

Harrow Street forms the northern boundary of LSP4. This road may carry up to 7,000vpd in one long term scenario so the existing 20m road reserve is recommended to be widened if future development is expected on both sides to 23m to accommodate a Neighbourhood Connector A cross-section with on street bicycle lanes and embayed (indented) parking in accordance with Liveable Neighbourhoods guidelines. On this section it is proposed that driveway access to abutting properties will be provided via a CAP road (a controlled access place, which is a type of service road) or from side roads so that vehicles will not reverse out into traffic.

It is noted that the land on the northern side of Harrow Street is an MRS Reserve for Parks and Recreation and will not be developed for urban purposes. Transcore has confirmed that a 20m road reserve width will be sufficient in this instance given all servicing can be accommodated on the southern side as additional verge width will not be required on the northern side.

Henley Brook Avenue

The future Henley Brook Avenue is reserved as an Other Regional Road (blue road) in the MRS east of the West Swan East DSP area, as shown in Figure 1. It will take over the district distributor road function currently performed by West Swan Road between Reid Highway and Ngangara Road. The Other Regional Roads reservation indicates that Henley Brook Avenue will have connections on the west at Victoria Road and Harrow Road within the West Swan East DSP area and on the east side the connection to West Swan Road is shown at Coast Road.

In discussions with the Department of Planning in relation to Dayton LSP2B it was agreed that Marshall Road should also connect to Henley Brook Avenue to improve access to the West Swan East DSP area. This principle was supported by submissions on Dayton LSP2B from the Department of Planning and the Department of Transport.

In 2013 the Department of Planning has investigated future intersection requirements on Henley Brook Avenue in this area. The Department has advised that current planning now indicates four-way signalised intersections at Harrow Street and at Marshall Road.

Access Streets

Other existing roads within the LSP4 area will be classed as Access Streets. Blundell Street is already 20m wide road reserves and will not be changed from this existing reserve width.

Within the West Swan East District Structure Plan area the *Access Street B* classification (typical reservation of 16.5m) will be used for streets adjacent to high-density residential development (R60 and R80), schools, shops and the service commercial area. On-street parking will be highly utilised in these areas. A reservation width of 18m is recommended for Access Street B roads that may potentially form future bus routes. This 18m road reserve could accommodate a 7.4m carriageway for bus routes and 5.3m verges with embayed parking.

The *Access Street C* (typical reservation of 15.4m) will be used for streets adjacent to medium-density development (R30 and R40) and other access streets with volumes likely to exceed 1,000 vpd.

The *Access Street D* (typical reservation of 14.2m to 15m) will be used for low volume (less than 1,000 vpd) streets adjacent to residential development of R20 or less. The standard Access Street D width in *Liveable Neighbourhoods* is 14.2m although the City of Swan prefers 15m road reserve width. The City of Swan has advised that it would consider a 13m road reserve on access streets that abut public open space provided that they have no services (including street lights) on the verge of the POS, otherwise these streets have to be 15m unless previously approved.

Restricted Access

The WAPC *Liveable Neighbourhoods* requires that “Development along integrator B and neighbourhood connector streets with ultimate vehicle volumes over 5000 vehicles per day should be designed either so vehicles entering the street can do so travelling forward, or are provided with alternative forms of vehicle access. Wider lots with paired driveways and protected reversing areas in the parking lane may be used on streets with up to 7000 vehicles per day.”

Future traffic volumes will be greater than 5000 vpd only on Lord Street within the LSP4 area. No direct access from properties abutting Lord Street is proposed in LSP4.

Only the southernmost section of Arthur Street will exceed 5000 vpd within the LSP4 area and in this section the proposed R40 medium density zoning will allow driveway access to be

designed with turnaround areas on site or side or rear access so that vehicles do not need to reverse onto this section of Arthur Street.

In the long term scenario represented in Appendix E with Harrow Street connecting from West Swan Road all the way across to a potential district distributor road on the PDNH alignment, traffic volumes are also expected to exceed 5000 vpd on Harrow Street, so driveway access to abutting properties will be provided via a CAP road (a controlled access place, which is a type of service road) or from side roads so that vehicles will not reverse out into traffic.

Laneways

In relation to the minimum requirements for the proposed rear laneways within the Structure Plan area, a minimum width of 6.0 metres (in accordance with Liveable Neighbourhoods) is acceptable to accommodate two-way movement and rubbish collection. Details relating to the design of these laneways will be addressed in more detail during the subdivision planning stages.

Visitor car parking (in a ratio of 1 bay per 2 lots) is to be constructed in the road reserve adjacent to proposed lots serviced by laneways.

3.4.3 Public Transport

Existing public transport services in the area consist of a bus service (Route 956: Ellenbrook North-Bassendean Station) along Lord Street, the western boundary of the LSP area with 10 to 15 minute services during the weekday peak periods, 15 minute services during the midday off-peak period and hourly services in the evenings. Weekend services consist of 30 minute service frequencies on Saturday and hourly services on Sundays and public holidays.

Previous liaison with PTA/Transperth has indicated some opportunities to service the West Swan East District Structure Plan area (including LSP4) with additional bus services.

The Department of Transport's public transport plan, Public Transport for Perth in 2031 (July 2011) proposes Morley to Ellenbrook bus rapid transit infrastructure before 2020. It states, "The Plan supports the development of a rapid transit service for Ellenbrook, with the projected numbers of passengers justifying a road-based rapid transit service for the next 10 to 20 years. An option of running a Bus Rapid Transit (BRT) service between Ellenbrook and Bassendean and across to Morley is feasible. This provides quick transfer to the railway at Bassendean for trips to the central area and Midland, and access to commercial / community facilities at Morley. A railway reservation should be identified and secured, and a master plan prepared, to provide a long term rail option for the corridor (It is noted that the Government has allocated funding in 2012/13 for a Master Plan to be undertaken)." This work subsequently indicated a potential bus rapid transit alignment along Marshall Road (west) as shown in Figure 5, however the current state government position has returned to favouring rail as the future rapid transit service in this area.

3.4.4 Pedestrian and Bicycle Network

The reasonably flat topography of the area and the proposed permeable grid of the road network within the LSP4 area create an excellent opportunity for provision of good pedestrian and cyclist facilities to maximise non-motorised transport modes.

It is proposed to provide shared paths on the *Integrator Arterial* and *Neighbourhood Connector* roads. These roads would also have a footpath on the opposite side as required in Liveable Neighbourhoods. In the case of Marshall Road the service corridor along its southern side provides an opportunity for a regional shared path through Dayton and across the future PDNH, linking the Swan Valley to Whiteman Park.

It is also proposed to provide shared paths on some of the *Access Street B* roads where a demand is anticipated such as next to the primary school. The City of Swan also requires a shared path along the northern boundary of the proposed primary school site between Arthur Street and Blundell Street.

Footpaths will be provided on at least one side of all roads. There would be paths on both sides of roads adjacent to schools.

Laneway lots are to have footpath access to the visitor parking bays provided for them in the road reserve.

On-street cycle lanes will be included on the Integrator B and Neighbourhood Connector A roads.

3.5 Gas Pipelines

The Dampier to Bunbury Gas Pipeline and the Parmelia Gas Pipeline are existing pipelines traversing the Perth metropolitan region and the Dampier to Bunbury Gas Pipeline forms the eastern extent of the LSP 4 whilst the Parmelia Gas Pipeline is further east and falls outside of the Structure Plan boundary. Both are proposed to be retained in an unaltered fashion within their current trenches and respective easements.

3.5.1 Parmelia Pipelines

As mentioned the Parmelia pipeline easement is outside of the LSP4 boundary and no change of ownership or land use is proposed within or immediately adjoining the easement. In accordance with State Planning Policy, the Parmelia Pipeline has a 70m setback from the pipeline to residential uses and is identified as a 70 metre buffer on the face of the LSP. The impact of the buffer from the Parmelia Pipeline extends very marginally along portion of length of the western extremity of the Structure Plan. No dwellings are proposed to be located within the buffer.

3.5.2 Dampier to Bunbury Natural Gas Pipelines (DBNGP)

To appropriately manage the DBNGP pipeline easement, forming the eastern boundary of the LSP, it is the preference of the state to exclude the land, the subject of the DBNGP easement from residential development.

To ensure appropriate management of the DBNGP easement, no residential lot or development is to extend into or over the DBNGP easement. Rather it is proposed that at the time of subdivision of properties containing the pipeline easement, a condition of subdivision approval will be imposed requiring that the land containing the easement will be ceded free of cost to the crown, vested in the Department of Regional Development and Lands with a Management Order to the Dampier to Bunbury Natural Gas Pipeline.

3.6 Water Management

A Local Water Management Strategy (LWMS) has been prepared by JDA Consultant Hydrologists on behalf of West Swan Estate Pty Ltd for the West Swan East District Structure Plan area (JDA, 2009) (**Appendix 7**). At the request of the City of Swan a revision to the LWMS was completed by JDA, July 2012. Due to service easements now identified in Marshall Rd, parts of the local drainage strategy identified in the approved West Swan East LWMS (2009) cannot be implemented. In March 2012 the City advised JDA that a revision to the LWMS would be necessary to address the required changes and provide guidance to all landowners within the West Swan East development cell.

Following discussion with the Dept of Water and the Swan River Trust a revised LWMS was completed by JDA and submitted to the relevant agencies on 25 July 2012. The revised LWMS supports the various LSP's (LSP2B, LSP2A, LSP3 and LSP4) and will be finalised once all comments from the agencies are resolved. Given the nature of Structure Planning, further minor modifications have been undertaken to the internal street network and public open space, whilst this will have some bearing on the final LWMS it does not vary the principles of the LWMS. JDA has undertaken revised modelling for the modifications to the open space and road network and have no issue with the modifications.

3.7 Education Facilities

LSP4 accommodates an existing Private Primary School which is located in the north west of the site and gains existing access off Arthur Street. The School will be provided with frontage to two proposed local road reserves. The existing school site is 2.39 ha in area and accommodates the Riverlands Montessori School.

It is noted that the southern boundary of LSP4 abuts the Public Primary School site located within LSP2B.

3.8 Activity Centres and Employment

There are no commercial or retail land uses within LSP4.

However, it is noted that the future residents within LSP4 and the broader Dayton area will be appropriately serviced by commercial and retail facilities. These landuses have been provided for in the endorsed Dayton District Structure Plan.

3.9 Infrastructure Coordination, Servicing and Staging

Serling Consulting prepared a Civil Infrastructure and Servicing Strategy in September 2012 to support the preparation of LSP4 (refer **Appendix 5**). The report confirms that there are no identified servicing constraints that prevent the land from being developed for urban purposes. The site is capable of being provided with all essential services and infrastructure. A summary of the report is provided below.

3.9.1 Power

Existing electrical services in Cranleigh Street, Blundell Street, Arthur Street and Malvern Street will be required to be removed and replaced with underground infrastructure upon development of lots fronting those roads.

Major Infrastructure requirements are to be confirmed upon appointment of an electrical consultant. However, it is likely that these requirements will include a series of transformer/switchgear pad-mount sites throughout LSP4.

3.9.2 Telecommunications

Telecommunications services are planned through the National Broadband Network system, otherwise known as the NBN. Plans should be submitted to NBN once the electrical layout for the development has been prepared. The network and system upgrades will then be determined, with plans produced by NBN and a construction programme agreed upon to suit the development works. All system upgrade costs and external reticulation requirements will be paid for in-full by the developer. This is to be completed at subdivision stage.

3.9.3 Water

Water infrastructure extensions maybe required from locations external to the Dayton DSP area in order to service LSP4.

Extension of a 600mm-diameter water distribution main near the intersection of Patricia Street and Lord Street (located south of the Dayton DSP area) in Caversham, which is adjacent to the existing Brookleigh development, located at the intersection of Marshall Road and Lord Street. It is understood that these works are required once approximately 500 lots have been connected to the existing infrastructure in both Brookleigh and St Leonards.

Extension of a 375mm-diameter water distribution main along Marshall Road between Lord Street and Arthur Street is also required.

Water infrastructure extensions are also required within the Dayton DSP area to improve the overall service reliability including;

- Extension of a 250mm-diameter water main (funded by the developer) along Arthur Street between Marshall Road and Cranleigh Street.
- Extension of a 250mm-diameter water main (funded by the developer) along Cranleigh Street between Lord Street and Arthur Street.
- Extension of a 600mm-diameter water distribution main (under Water Corporation management) along Lord Street or the PDNH corridor between Marshall Road and Cranleigh Street.

3.9.4 Sewer

The LSP4 area is divided into two wastewater catchments (i.e. landholding west of Blundell Street and landholding east of Blundell Street.)

Landholdings west of Blundell Street will gravitate into the proposed 225mm diameter wastewater main to be constructed at the intersection of Arthur Street and Cranleigh Street.

Landholdings east of Blundell Street will need to connect to a proposed Type 10 wastewater pumping station to be located somewhere in the vicinity of the intersection of Malvern Street and Cranleigh Street.

3.9.5 Stormwater Management

Stormwater and groundwater management in LSP4 will be implemented as follows:

- a) The approved Urban Water Management Plan shall be implemented by the subdivider, including the construction of the identified stormwater and groundwater management systems;
- b) Although subdivision may be prepared over a single landholding, the drainage planning in a UWMP cannot be limited to the extent of the subdivision and must demonstrate how the UWMP integrates with the approved LWMS;
- c) If the UWMP significantly varies from the approved LWMS and is approved by the Department of Water and Local Government, the relevant UWMP is to state that there has been a modification to the LWMS subcatchment and future development within the modified subcatchment should be undertaken in a manner consistent with that modification accordingly. If the Department of Water or City of Swan requests the LWMS to be amended this is to be undertaken at the applicant's expense with the structure plan modified in accordance with the provisions of 5A.1.14 of Local Planning Scheme 17;
- d) Where groundwater and stormwater management systems are proposed in a POS, all works and land required for the drainage functions will be delivered through conditions of subdivision;
- e) Where the work/embellishment of a POS is in excess to what is prescribed in the adopted DCP for DCA 2, the completion of this component of the work by a landowner or a collective group of landowners cannot offset their liability under the DCP for DCA 2;
- f) As per the Swan River Trust's advice and Council's resolution on the District Structure Plan, Urban Water Management Plans at subdivision shall: (1) Use the most recent data for estimated annual flow for Bennett Brook for its percentage runoff calculations and design, which is available from Swan River Trust website; (2) Use information on the ecological water requirements from the recently released Swan Canning Water Quality Improvement Plan, which is available from Swan River Trust website, and; (3) Where Controlled Groundwater Levels (CGL) are proposed, provide justification regarding the implications for water quality treatment, and where necessary specify alternative treatment measures;
- g) Subsequent Urban Water Management Plans are to implement the water efficiency and conservation principles in the approved Local Water Management Strategy.

3.9.6 Gas

A High Pressure gas main in Marshall Road will provide the local point of connection for all future services within Dayton. A Pressure Reduction Valve was constructed near the intersection of Marshall Road and Arthur Street to allow for direct connection to residential assets.

Connection for Dayton LSP4 is expected to be via Arthur Street and San Remo Place into Cranleigh Street as Dayton LSP1 and LSP2B are developed.

3.9.7 Staging of Subdivision and Development

Upon successful advertising, adoption and endorsement of the LSP, landowners within the LSP4 may progress to subdivision and/or development. It is likely that subdivision over the GM Property Group owned land between Lord and Arthur Street shall be sought and approved soon after LSP4 approval. The timing of other subdivisions is dependent upon individual landowner intentions and is therefore indicatively nominated as a third and fourth stage.

An indicative staging plan is included at **Figure 11** to assist in illustrating the likely order of staging and subdivision construction works within the LSP area but is simply a guide to likely logical progression partially based on proponents aspirations and partially on proximity to servicing extensions, noting that the 500 lot sewer allocation provides an initial hurdle for release of lots until additional extensions are realised.

In relation to the infrastructure items and the triggers mentioned in Table 5 above, it is intended that the completion of these upgrades will be constructed before or at subdivision clearance of deposited plan that generates the lot (unit of equivalent demand) that meets or exceeds the triggers.

3.10 Developer Contribution Arrangements

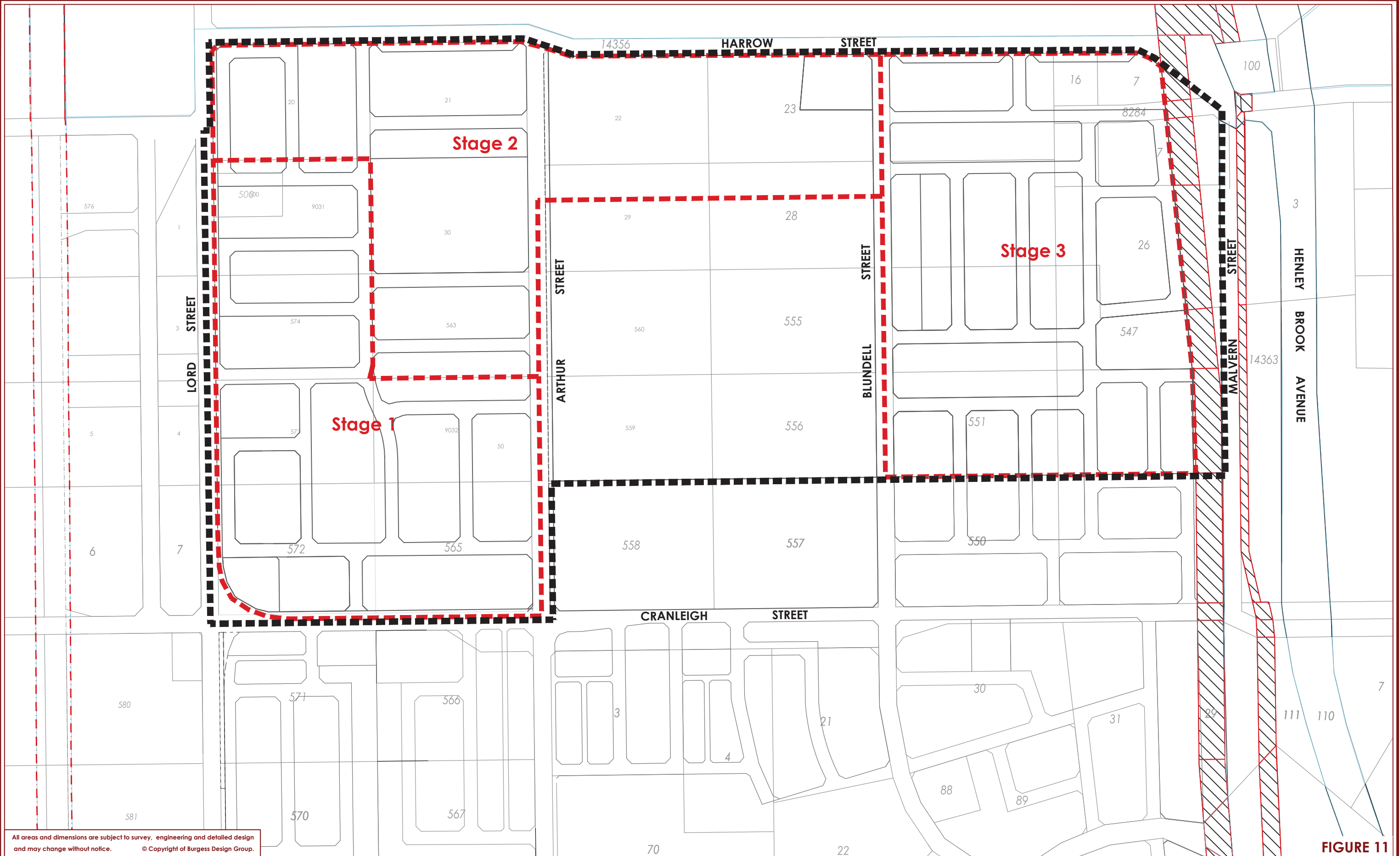
The West Swan East District Structure Plan area, which includes LSP4, is identified as 'Developer Contribution Area 2' (DCA2) within Schedule 13 of LPS17. DCA2 gives effect to the Dayton Development Contribution Plan (DCP).

The objective of the DCP is to ensure equitable distribution of development costs between landowners/developers and is the mechanism that delivers the items required to fully implement the Swan Urban Corridor Sub Regional Structure Plan, the Urban Growth Corridor – Sub Regional Planning Community Facilities Analysis Report and the West Swan East District Structure Plan.

The DCP applicable to DCA2 identifies a number of infrastructure items within or immediately adjoining LSP4. Each developer will be required to make Cost Contribution payment based on the area that they develop and the applicable Contribution Rate for DCA2.

Table 5 below lists:

- a) The DCP items that are within or border the LSP4 area or are works/arrangements that need to commence as part of the development of LSP4, and;



All areas and dimensions are subject to survey, engineering and detailed design and may change without notice. © Copyright of Burgess Design Group.

FIGURE 11



LEGEND
- - - Stages 1-3



0 25 50 75 100m
SCALE 1:4,000 (A3)

- b) The triggers for the completion of these DCP items before or at the subdivision clearance of the deposited plan that generates the lot (or its unit of equivalent demand) that meets or exceed the trigger specified in that table.

This is not a comprehensive listing of works and land identified in the endorsed Development Contribution Plan for DCA2.

The construction of DCP items will be guided by subdivision and the CEP, which will give due regard to the triggers in the endorsed LSP and availability of funds.

Any developers seeking subdivision within LSP4 must contribute to the endorsed DCP applicable to DCA 2 as contemplated by Clause 5A.2.5.2 of the Scheme. If subdivision is sought prior to the final endorsement of the DCP and its incorporation into Schedule 13 of the Scheme, the owner/developer shall first enter into a deed with the City of Swan that requires the owners/developers to make an appropriate cost contribution upon notification by Council that payment is required and securing payment of any balance that might be due on gazettal of the DCP for DCA 2.

Table 5 - Triggers for DCP Works

| DCP Code | Description of DCP item | Comments | Trigger (dwelling units or equivalent) |
|--|--|---|--|
| E-ITF03 | Lord & Harrow Streets intersection | Construct roundabout | 800 du |
| E-TRF08 | Lord Street (Harrow St to Cranleigh St) | Road widening and upgrade | 2019 (construction of Lord St extension south of Reid Hwy) |
| E-IRF04 | Lord and Cranleigh Streets intersection | Construct roundabout | 760 du |
| E-TRF18 & E-TRF19 | Cranleigh Street (Lord St to Arthur St) | Upgrade to neighbourhood connector B standard | 800 du |
| E-IRF03 | Arthur and Cranleigh Streets intersection | Construct roundabout | Primary School or 1200 du |
| E-TRF22, 23, 24, 31, 33, 34, 35, E-ACQ01 to 11 | Construct Henley Brook Avenue (Harrow St to Coast Rd) | Land acquisition and construct first carriageway. | Year 2019 |
| | | Construct second carriageway | Year 2023 |
| E-TRF25 to 29, E-ACQ12 & 13 | Construct Henley Brook Avenue (Coast Road to Reid Highway) | Land acquisition and construct first carriageway. | 1200 du |
| | | Construct second carriageway | Year 2023 |
| E-ITF04 | Intersection of Henley Brook Ave and Victoria Rd | Construct priority controlled intersection | 1200 du |

4. CONCLUSION

The Dayton Local Structure Plan 4 report, accompanying plans and appendices satisfy Council's Scheme requirements with respect to a District Structure Plan being in place prior to the more detailed Local Structure Plan endorsement and substantive subdivision and development of the land.

The Local Structure Plan as described in this report satisfies the planning frameworks adopted by the City of Swan and the Western Australian Planning Commission and the advice received during consultation with other agencies. The Plan should ultimately assist in achieving a contemporary and well integrated suburb that provides the foundation for a strong and cohesive community.

In light of the above, the Local Structure Plan as submitted represents a logical, well planned and timely addition to the ongoing development of the City of Swan's Urban Growth Corridor and the next stage of implementing the Dayton District Structure Plan.