# BURSWOOD LAKES STRUCTURE PLAN

## Amendment No. 2

Our Ref: 9202
7 February 2023

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# Document Control

*Printed 20/02/2023  9202_21jul01R_cr v4 update*

| Version | File Name | Prepared By | Approved By | Date |
|---|---|---|---|---|
| 1 | 9202_21jul01R_cr v2 | Claire Richards | Rod Dixon | 25/02/2022 |
| 2 | 9202_21jul01R_cr v3 | Claire Richards | Rod Dixon | 06/04/2022 |
| 3 | 9202_21jul01R_cr v4 | Claire Richards | Rod Dixon | 20/04/2022 |
| 4 | 9202_21jul01R_cr v4 update | Claire Richards | Rod Dixon | 20/02/2023 |

This report has been authorised by;

**Rod Dixon**
Director

**Clare Richards**
Senior Urban Planner

**Jamie Baxter**
Quality Control


Rowe Group

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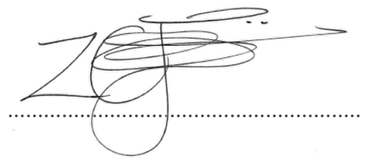
# Record of Endorsement

This structure plan is prepared under the provisions of the Town of Victoria Park Town Planning Scheme No. 1.

IT IS CERTIFIED THAT AMENDMENT NO. 2 TO THE BURSWOOD LAKES STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

**23 March 2023**

Signed for and on behalf of the Western Australian Planning Commission



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

**24 March 2023** ..... Date

**07 February 2033** ..... Date of Expiry

# Table of Amendments

| Amendment No. | Summary of the Amendment | Amendment Type | Date Approved by Wapc |
|---|---|---|---|
| N/A | Structure Plan Variation. Increased the maximum allowable dwelling density to 176 dwellings and included 170m2 of 'Office' use on Lot 10 Bow River Crescent | N/A | March 2014 |
| No. 1 | Modified land use permissibility, increased permitted dwelling yield, building height and plot ratio development standards on Lots 9 and 25 Victoria Park Drive, Burswood | Standard | September 2017 |
| No. 2 | Increased permitted dwelling yield, building height and plot ratio development standards on Lot 9001 Bow River Crescent, Burswood<br>Extended approval period of 10 years for the Structure Plan | Standard | 23 March 2023 |

# Executive Summary

This report has been prepared by Rowe Group on behalf of Mirvac in support of a formal request to amend the Burswood Lakes Structure Plan adopted in 2003 and amended in 2017 (herein referred as 'the Structure Plan'). Once adopted, the proposed Amendment will be referenced as "Amendment No. 2 to the Burswood Lakes Structure Plan".

The proposed Amendment has been prepared following a comprehensive review of the Structure Plan by Mirvac in collaboration with the Town of Victoria Park. The need for a review of the Structure Plan was identified on the basis of significant changes that have occurred in relation to the surrounding built environment and the overarching strategic and statutory planning framework since the Structure Plan was adopted in 2003. The most notable changes to the surrounding built form include construction of Perth (Optus) Stadium, Matagarup Bridge across the Swan River and expansion of the Crown Entertainment Complex, in addition to the planned high-density Belmont Park Racecourse and Burswood Station East and West redevelopments, which have (and will continue to) significantly change the landscape of the Burswood Peninsula.

This report represents the accumulation of work undertaken by Mirvac and the Town of Victoria Park in responding to these changes and addresses the following specific matters:

- Land use;
- Dwelling density and yield;
- Building height;
- Plot ratio;
- Building envelopes;
- Infrastructure servicing and road capabilities;
- Car parking; and
- Public open space.

The need for review of the Burswood Lakes Structure Plan is also recognised as a key action in the Town of Victoria Park's Local Planning Strategy and Corporate Business Plan. In June 2020, the Town prepared a review report of the Burswood Lakes Structure Plan (internal paper) setting out the matters that needed to be considered as part of the Structure Plan review. This review report forms the basis of the work undertaken by Mirvac and has been used to inform the preparation of (this) proposed Amendment No. 2 to the Burswood Lakes Structure Plan.

Development of the Structure Plan Area has been substantially progressed, with only a few undeveloped sites remaining. Whilst the Structure Plan review undertaken by Mirvac and the Town has examined the Structure Plan Area in its entirety, the amendments proposed in this document are primarily focused on Mirvac's undeveloped sites located at Lots 1 and 21 Bow River Crescent.

The Structure Plan Amendment is consistent with the overall strategic intent for the area and fits within the existing planning framework that includes the Burswood Peninsula District Structure Plan (2015), the Town of Victoria Park Local Planning Scheme No. 1 ('LPS1'), Precinct Plan and associated local planning policies.

The Amendment request has been prepared in the accordance with the requirements under Schedule 2, Part 4 of the *Planning and Development (Local Planning Schemes) Regulations 2015* ('Regulations') and is presented in the manner required under the Western Australian Planning Commission's ('WAPC') Structure Planning Framework.

The Structure Plan Amendment has been designed to be read in conjunction with the original Structure Plan (2003) and Amendment No. 1 (2017) and, accordingly, these documents are appended to this report. Where applicable, plans and figures within the appended documents have been marked 'superseded' to avoid confusion. A list of updated figures is also provided within Part One of this report for ease of reference (Refer **Table 1**).

Unless modified by the Structure Plan Amendment No. 2 (this document), the provisions contained within the Burswood Lakes Structure Plan (2003) and Amendment No. 1 (2017) continue to apply.

The Structure Plan is recognised as requiring review to ensure its alignment with the current town planning framework, the significantly changed pattern of development on the Burswood Peninsula and to update matters within the Structure Plan Area itself. As a document that is now 18 years ago, many of the original assumptions are now outdated. This Structure Plan Amendment will ensure the Burswood Peninsula continues to develop in a manner that both recognises and respects the original vision whilst reflecting the evolving context.

# Structure Plan Amendment Summary

| Item | Data | | Section Number Referenced in Part Two of Report | |
|---|---|---|---|---|
| Total land area covered by the Structure Plan Amendment | Lot 1: 0.42 hectares<br>Lot 21: 0.51 hectares<br>Total: 0.93 hectares | | 2 | Structure Plan Amendment Land Description |
| Area of each land use proposed:<br>- Residential (Lot 1 & 21)<br>- Retail | 0.93 hectares<br>N/A | 2 lots<br>N/A | 4.5 | Permitted Uses |
| Estimated number of dwellings | Lot 1 – 220 dwellings<br>Lot 21 – 125 dwellings | | 4.6 | Dwelling Numbers |
| Total estimated lot yield | As per Structure Plan | | 4.6 | Dwelling Numbers |
| Estimated population | 380 people | | 4.6 | Dwelling Numbers |
| Number of high schools | N/A | | N/A | |
| Number of primary schools | N/A | | N/A | |
| Estimated commercial floorspace | N/A | | N/A | |
| Estimated area and percentage of public open space given over to:<br>- Public Open Space | As per Structure Plan | | 4.8 | Public Open Space |

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

# Contents

# Technical Appendices

| Appendix Number | Document Title | Nature of Document | Referral/ Approval Agency | Approval Status and Modifications |
|---|---|---|---|---|
| 1. | Burswood Lakes Structure Plan (2003) | Structure Plan | N/A | Adopted |
| 2. | Burswood Lakes Structure Plan Amendment No. 1 (2017) | Structure Plan Amendment | N/A | Adopted |
| 3. | Traffic Impact Assessment, Revised Burswood Lakes Structure Plan (2021) | Technical Report | N/A | N/A |

# Part One
# Implementation

# 1 Structure Plan Amendment Area

This Structure Plan Amendment applies to the Burswood Lakes Structure Plan Area and includes specific provisions in relation to Lots 1 and 21 Bow River Crescent, Burswood. The Amendment Area is defined as the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan Map (Refer **Amended Figure 19 – Structure Plan**).

# 2 Operation and Objectives

## 2.1 Operation

In accordance with Schedule 2, Part 4, Clause 22 of the Regulations, this Structure Plan Amendment shall come into effect on the date it is approved by the WAPC.

Pursuant to Clause 28 (1), of the Regulations the approval of the Burswood Lakes Structure Plan has effect for a period of 10 years commencing on the day on which the WAPC approves the Structure Plan, or another period as determined by the WAPC. Pursuant to Clause 28 (4), the Burswood Lakes Structure Plan is taken to have been approved on 19 October 2015.

By endorsement of (this) Amendment No. 2 to the Burswood Lakes Structure Plan, the WAPC grants approval to the Structure Plan under Clause 28 (1) (b) for a period of 10 years commencing on the day on which approval to Amendment No. 2 is granted.

## 2.2 Objectives

The objectives of the Structure Plan are as follows:

- A Unique Place – create a place which responds to its unique location and context, delivering an attractive addition to inner city Perth.
- Links to the Town of Victoria Park – create a place which integrates with the wider Burswood Peninsula and community of Victoria Park by forging, where possible, social, commercial and physical connections.
- Built Form and Response to Setting – provide flexibility and robustness in built form design which create a place that fits within the urban fabric and setting, and responds to the site's strategic location.
- Connectivity and Transport Oriented Design – respond to the site's proximity to public transport by providing opportunities for a well-connected place.
- Importance of Public Place - the Public Realm – create an accessible and useable public realm which delivers exceptional public spaces through hard and soft landscaping, street furniture (such as seating and lighting), public art, and active and passive recreation options.
- Ecologically Sustainable Development – create a development that conserves resources takes advantage of natural amenities and ecologically sustainable development initiatives to deliver a residential community that will contribute to the social and cultural life of the Town of Victoria Park. Make the best use of a valuable urban land resource, while recognising geotechnical constraints, to provide opportunities for ESD demonstration.

# 3 Staging

The Burswood Lakes Structure Plan has been operational for a number of years and is approaching completion. In this regard, all necessary major infrastructure and roads are already in existence. Additional servicing and capacity needs will be addressed at the development application stage.

# 4 Development Requirements – Structure Plan Amendment

The following development standards apply to the Structure Plan Area.

Unless specified below, the development standards, principles and design guidelines contained within 'Part B – Structure Plan' of the 2003 Structure Plan report (Refer **Appendix 1**), shall continue to apply. For ease of refence, the headings used below are consistent with those contained within the 2003 Structure Plan report and the corresponding section number, where applicable, is annotated in brackets.

Updated Figures are provided at the end of Part One. For ease of reference, Figure numbers remain consistent with those contained within the 2003 Structure Plan report.

## 4.1 Built Form – Building Height And Plot Ratio (S. 3.3)

Maximum building heights and plot ratio are to be generally consistent with the following:

- Amended Figure 19 – Structure Plan
- Amended Figures 24 to 29 – Building Control Envelopes

Minimum and Average 'Site Area Per Dwelling' requirements do not apply.

Any development and/or construction equipment (such as cranes) proposed to exceed a height of 80m AHD is to be referred to Perth Airport for assessment and approval (as needed) in accordance with the Airports (Protection of Airspace) Regulations 1996. A maximum height of 150m AHD applies.

## 4.2 Built Form – Setbacks (S. 3.3)

Minimum building setbacks, building separation and view corridors are to be generally consistent with the following:

- Amended Figure 22 - Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route
- Amended Figures 24 to 29 – Building Control Envelopes

## 4.3 Permitted Uses (S. 4.3)

Land use permissibility within the Structure Plan Area is to comply with the 'Use Area' Table for the Special Use Zone as contained within the Town of Victoria Park Local Planning Scheme No. 1 ('LPS1') Burswood Precinct Plan P2.

## 4.4 Dwelling Numbers (S. 4.4)

Maximum dwelling numbers for each lot shall generally be in accordance with the following:

- Amended Figure 19 - Structure Plan

No overall maximum dwelling number applies to the Structure Plan Area.

## 4.5 Lot Patterns And Sizes (S. 4.5)

The pattern and size of lots should generally be in accordance with the following:

- Amended Figure 19 – Structure Plan, and
- Amended Figure 23 – Indicative Subdivision Plan

## 4.6 Public Open Space And Landscape (S. 4.8)

Public Open Space should generally be provided in accordance with the following:

- Amended Figure 19 – Structure Plan
- Amended Figure 31 – Indicative Public Realm

## 4.7 Site Specific Development Criteria

The following site specific development criteria shall apply to Lots 1 and 21:

**(a) Lot 1**

(i) Development on Lot 1 is to:

i. Provide visual connectivity north and east of the lot to the wider Burswood Peninsula and Perth Stadium having regard to the identified 'Proposed Masterplan View Corridor' locations in Amended Figure 22; and

ii. Incorporate suitable articulation of the building façade facing Bow River Crescent and Victoria Park Drive including, where possible, land use activation at the street level and podium levels.

**(b) Lot 21**

(i) Development on Lot 21 is to provide visual connectivity beyond the lot to the wider Burswood Peninsula and Perth Stadium having regard to the identified 'Proposed Masterplan View Corridor' location in Amended Figure 22.

## 4.8 Residential Design Codes

Unless varied by this Structure Plan, residential development within the Structure Plan Area is to be in accordance with the provisions and requirements contained in the WAPC's State Planning Policy No. 7.3: Residential Design Codes – Volume 1 and Volume 2 (Apartments) and the Town of Victoria Park LPS1 Burswood Precinct Plan P2 Sheet B.

# 5 Local Development Plans

The following Local Development Plan applies to the Structure Plan Area:

- Local Development Plan No. 1 (2018)

No further Local Development Plans will be required as the level of detail contained within this Structure Plan Amendment, read in conjunction with the Structure Plan itself and the Burswood Peninsula District Structure Plan, provide sufficient detail to guide the assessment of the development concepts while not prejudicing future development.

# 6 Local Planning Policies

Where there are inconsistencies between this Structure Plan (including Amendments) and Council's Local Planning Policies, then the criteria of this Structure Plan (including Amendments) prevails to the extent of the inconsistency.

# 7 Public Open Space

Notwithstanding the current or any future legal agreement between the Town of Victoria Park and the landowners, public open space is to be developed and maintained for at least two summers in accordance with the requirements of WAPC operational policy Liveable Neighbourhoods Element 5.

# 8 Public Art

A public art contribution will be imposed in respect of any future Development Applications on Lots 1 and 21 to a maximum total contribution of $500,000 for each lot. Any existing obligations for the provision of a public art contribution under current Development Approvals within the Structure Plan Area are to remain.

# 9 Ecologically Sustainable Development

Future developments on Lots 1 and 21 are to address the requirements at Section 4.15 of the RDC Volume 2 relating to Energy Efficiency at the Development Application stage. The developments shall also consider Part Two Section 4.15 of this amendment when considering potential ESD commitments. These provisions of the RDC Volume 2 supersede the provisions at Section 4.11 of the 2003 Structure Plan report.

# 10 Amended Structure Plan Figures

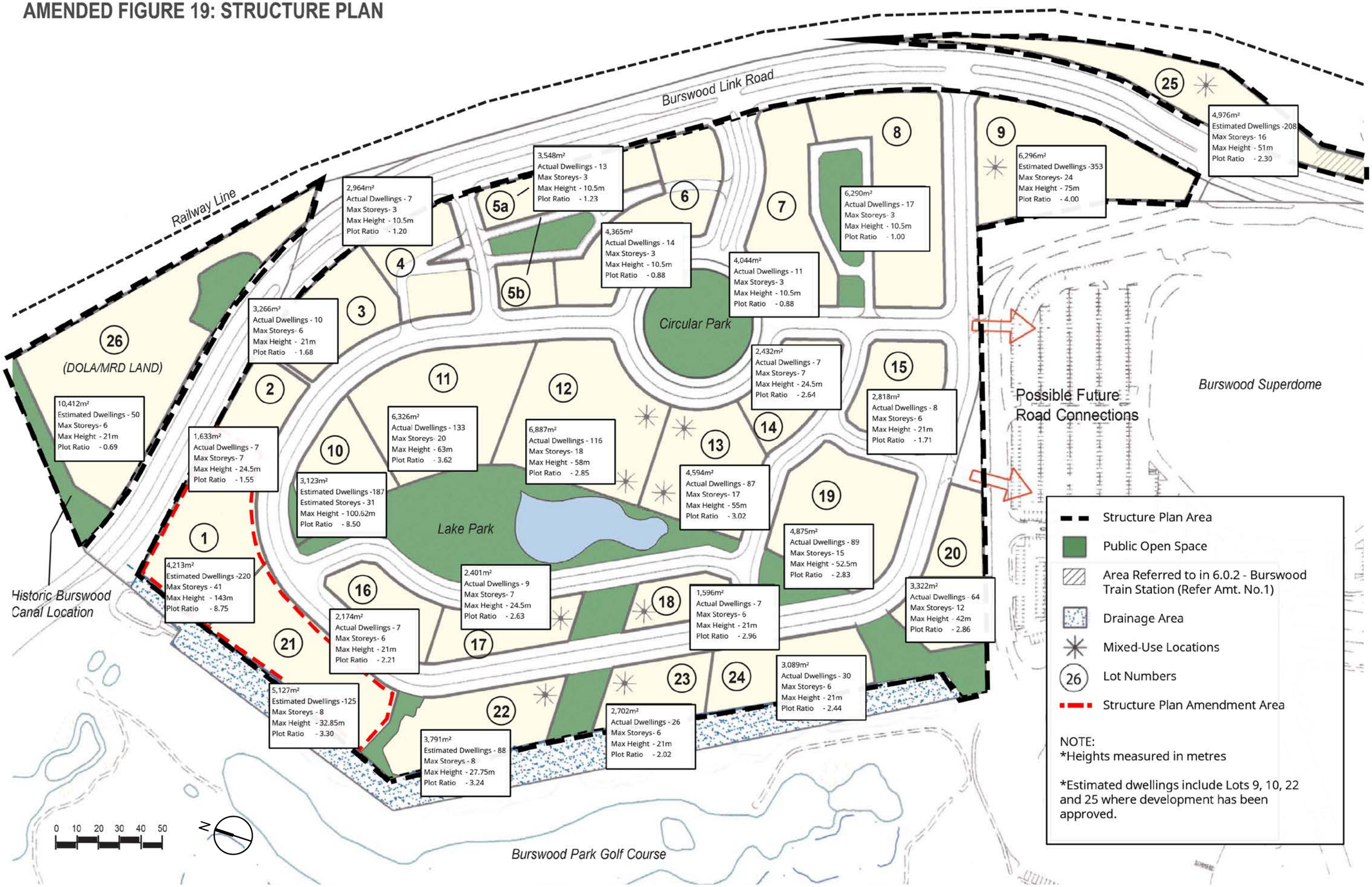
Figures 19, 22 - 25, 27, 29 and 31 of the 2003 Burswood Lakes Structure Plan (Refer **Appendix 1**) are amended in accordance with **Table 1** below:

| Figure Number | Figure Title |
|---|---|
| 19 | Structure Plan |
| 22 | Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route |
| 23 | Indicative Subdivision Plan |
| 24 | Building Control Envelopes |
| 25 | Building Control Envelopes |
| 27 | Building Control Envelopes |
| 29 | Building Control Envelopes |
| 31 | Indicative Public Realm |

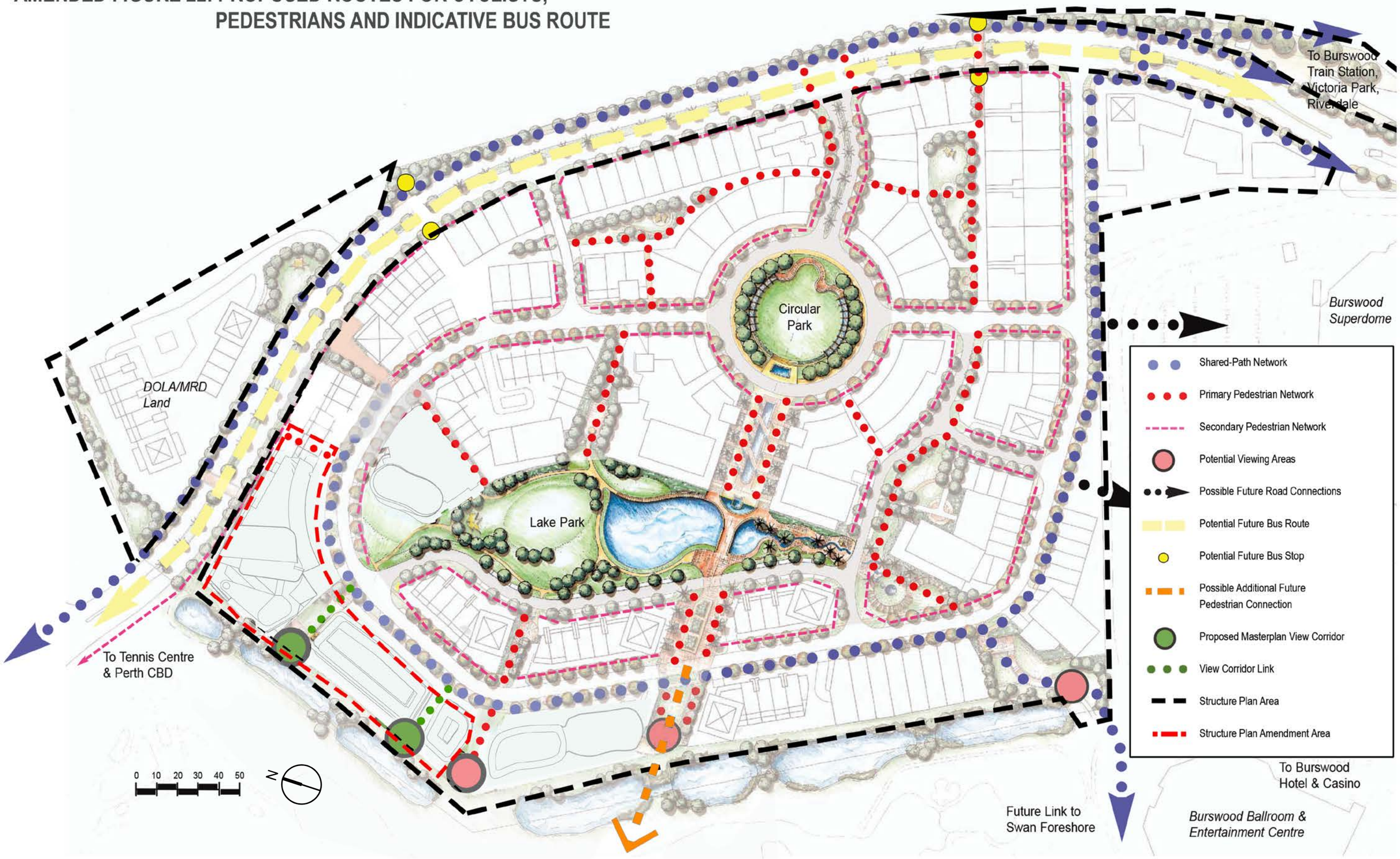
***Table 1: Amended Structure Plan Figures***

All remaining figures contained within the 2003 Structure Plan continue to apply. To avoid confusion, where a figure has been updated by this Amendment, the original figure in Attachment 1 (Burswood Lakes Structure Plan 2003) contains a 'Superseded' watermark.

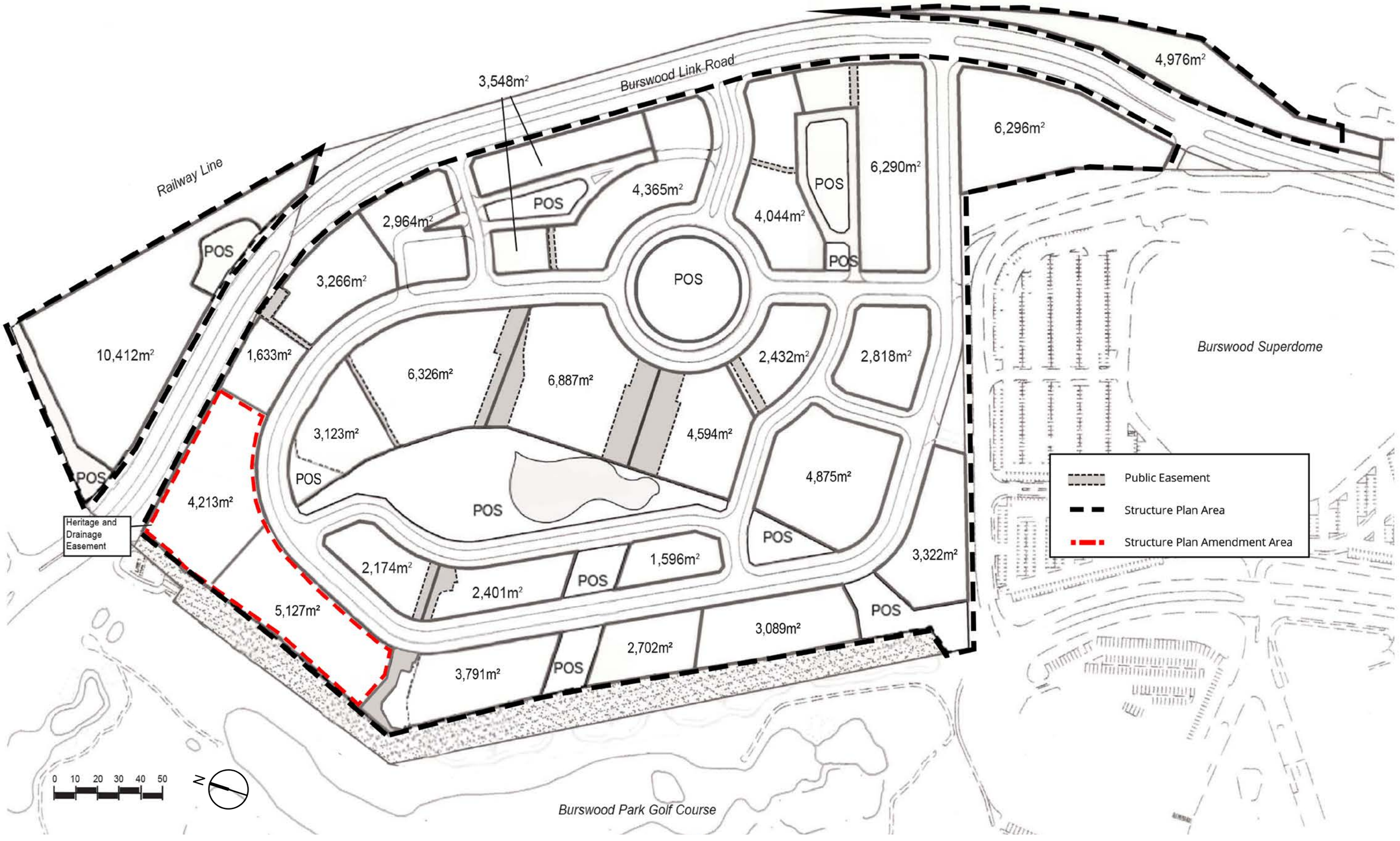
# AMENDED FIGURE 19: STRUCTURE PLAN



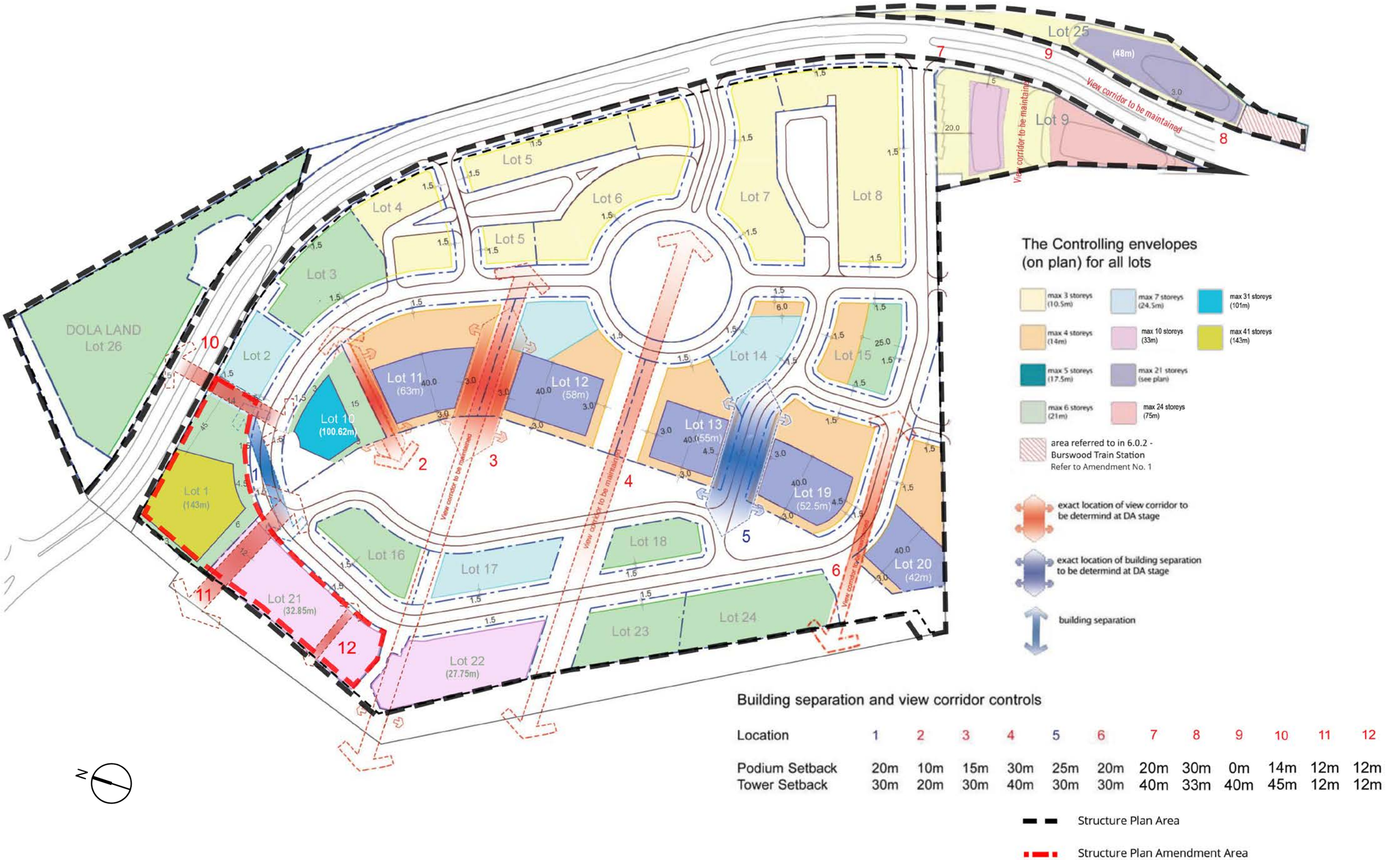
## AMENDED FIGURE 22: PROPOSED ROUTES FOR CYCLISTS, PEDESTRIANS AND INDICATIVE BUS ROUTE



## AMENDED FIGURE 23: INDICATIVE SUBDIVISION PLAN



# AMENDED FIGURE 24: BUILDING CONTROL ENVELOPES




The Controlling envelopes (on plan) for all lots

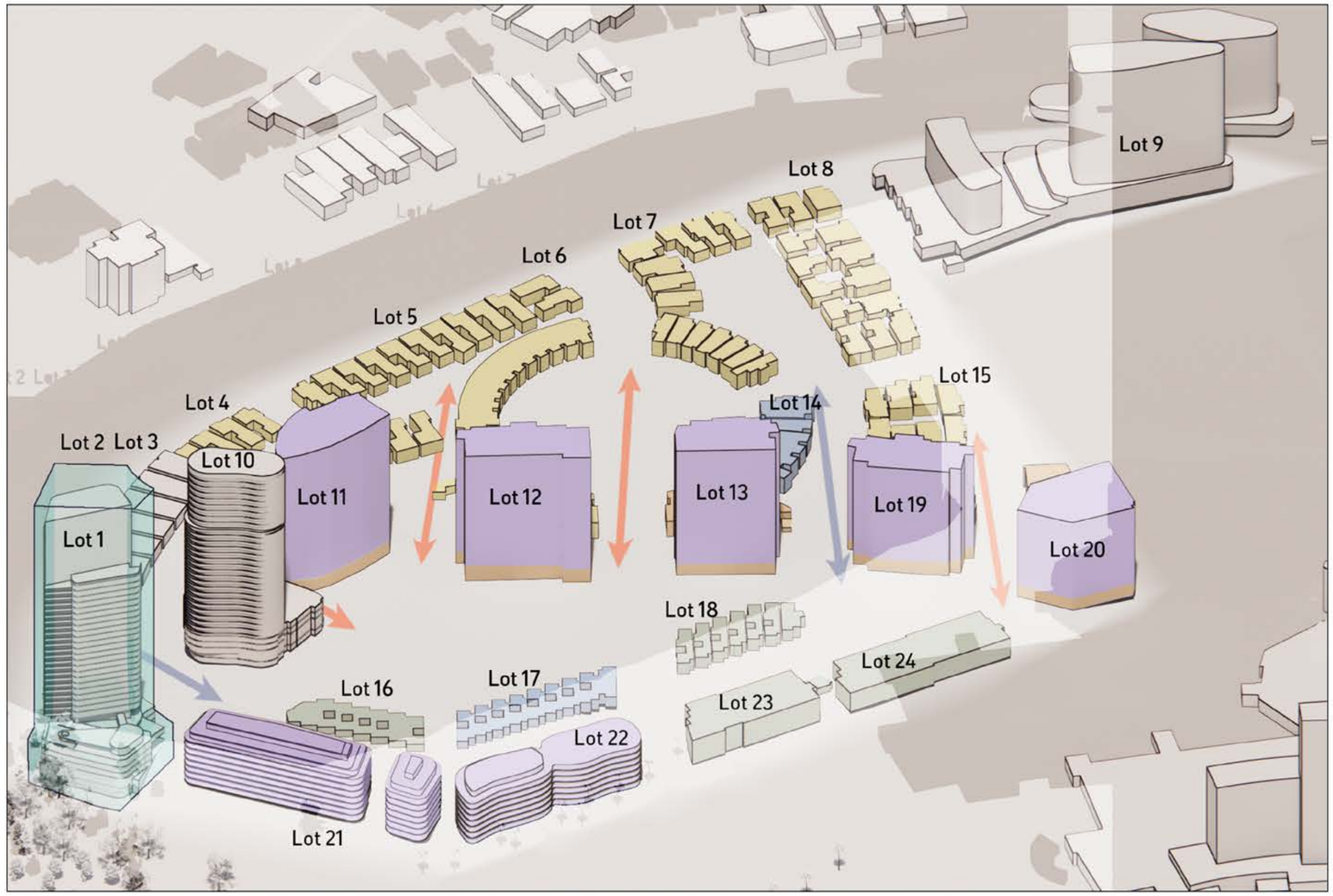
- max 3 storeys (10.5m)
- max 4 storeys (14m)
- max 5 storeys (17.5m)
- max 6 storeys (21m)
- max 7 storeys (24.5m)
- max 10 storeys (33m)
- max 21 storeys (see plan)
- max 24 storeys (75m)
- max 31 storeys (101m)
- max 41 storeys (143m)
- area referred to in 6.0.2 - Burswood Train Station Refer to Amendment No. 1
- exact location of view corridor to be determind at DA stage
- exact location of building separation to be determind at DA stage
- building separation

Building separation and view corridor controls

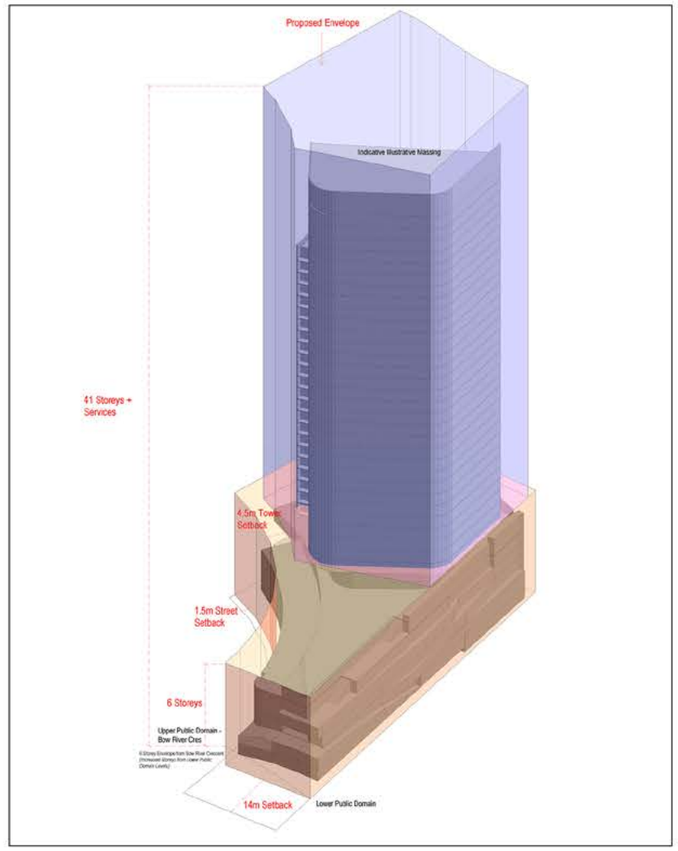
| Location | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Podium Setback | 20m | 10m | 15m | 30m | 25m | 20m | 20m | 30m | 0m | 14m | 12m | 12m |
| Tower Setback | 30m | 20m | 30m | 40m | 30m | 30m | 40m | 33m | 40m | 45m | 12m | 12m |

- Structure Plan Area
- Structure Plan Amendment Area

# AMENDED FIGURE 25: BUILDING CONTROL ENVELOPES

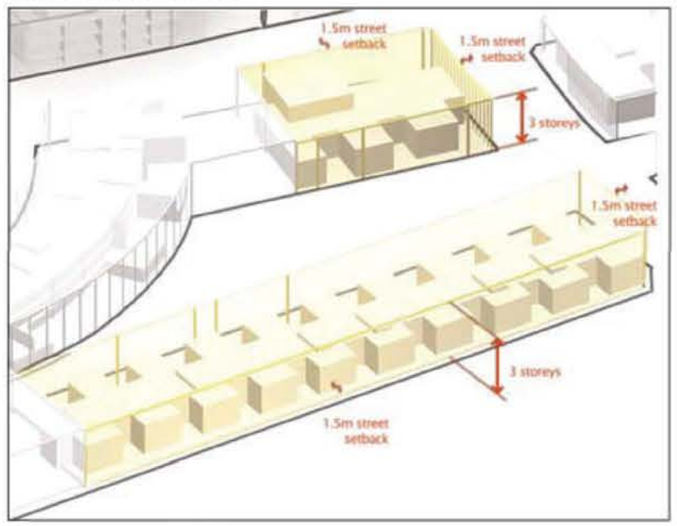



*Hames Sharley, 2022*



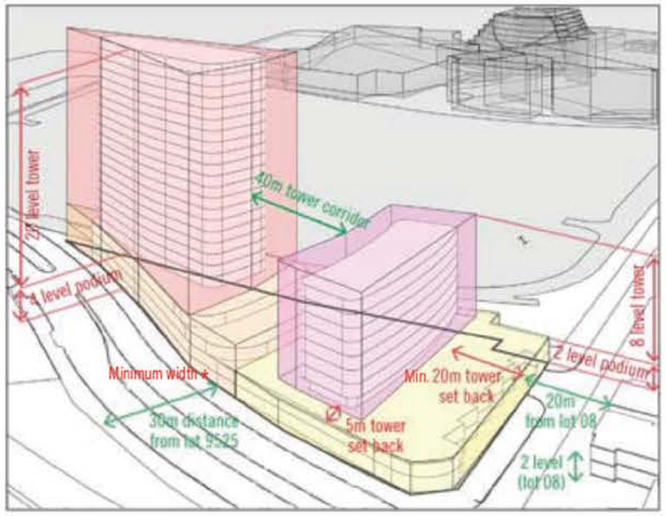

**LOT 1**
(Proposed Amendment No.2)

*Hames Sharley, 2022*

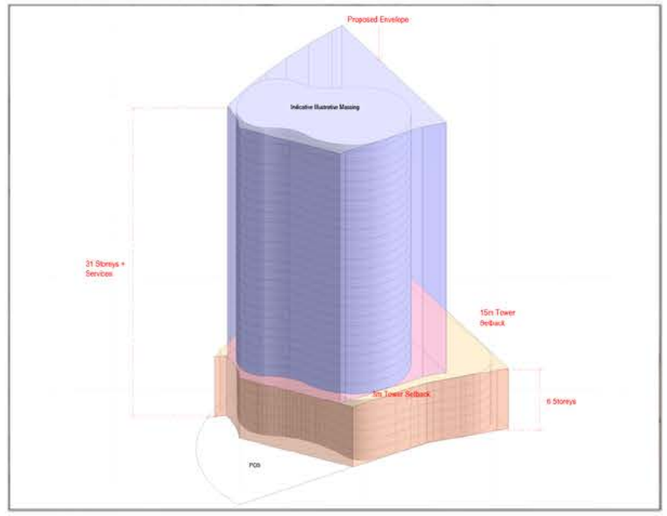



**LOT 5**
(Original 2003 Structure Plan)

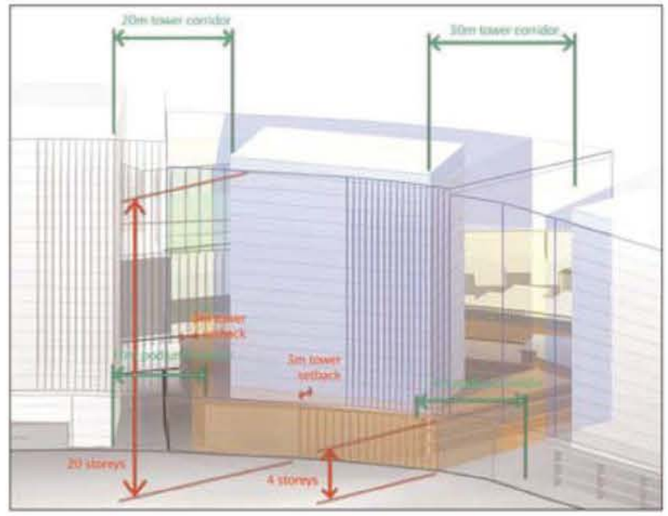
# AMENDED FIGURE 27: BUILDING CONTROL ENVELOPES



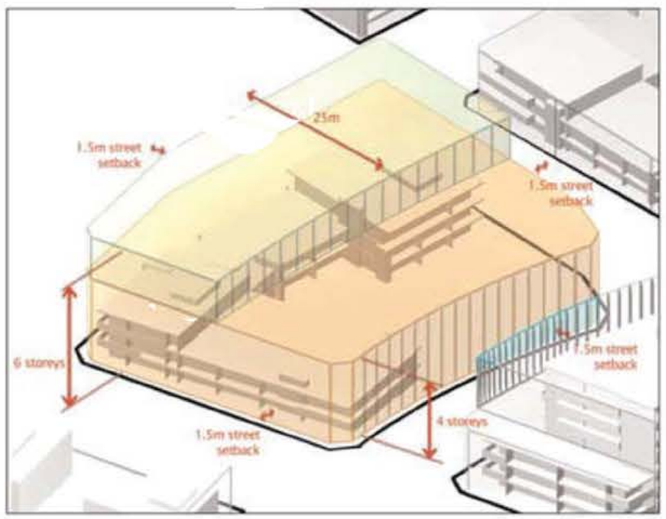

LOT 9 * Pedestrian access to be minimum width of 8m
(Amendment No.1, 2017)



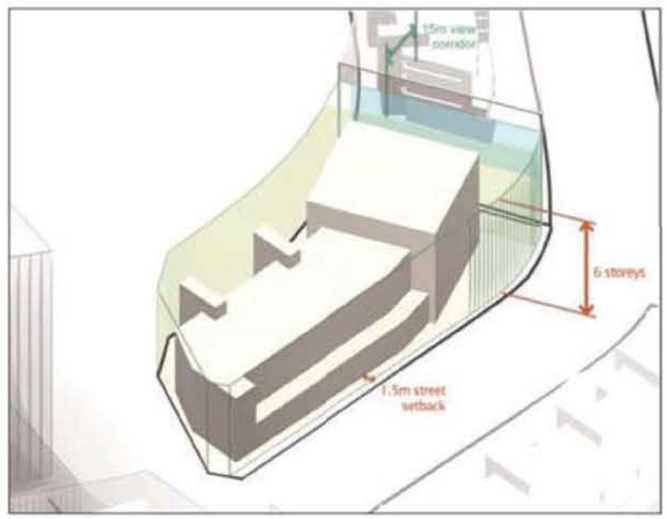

LOT 10 *Hames Sharley, 2022*
(Proposed Amendment No.2)



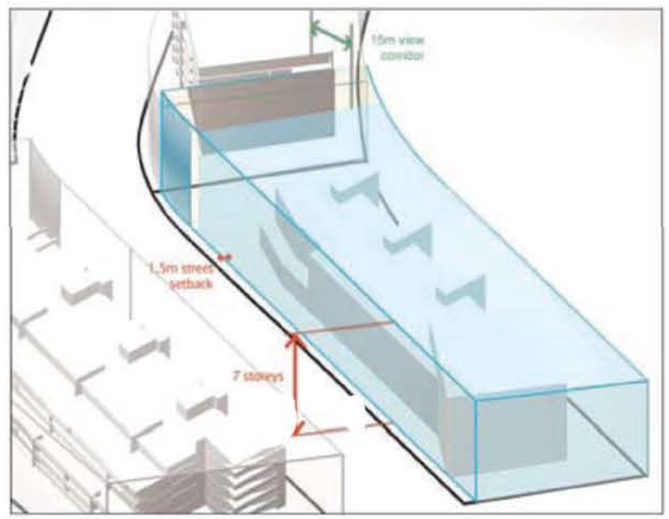

LOT 11
(Original 2003 Structure Plan)




LOT 15
(Original 2003 Structure Plan)

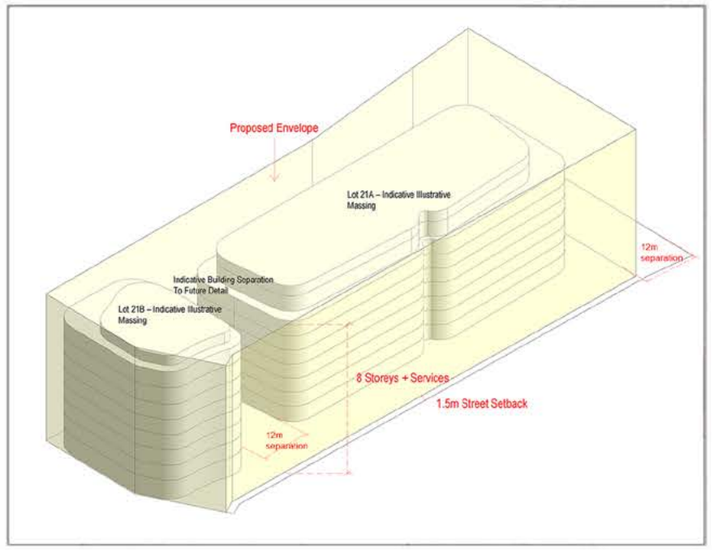



LOT 16
(Original 2003 Structure Plan)



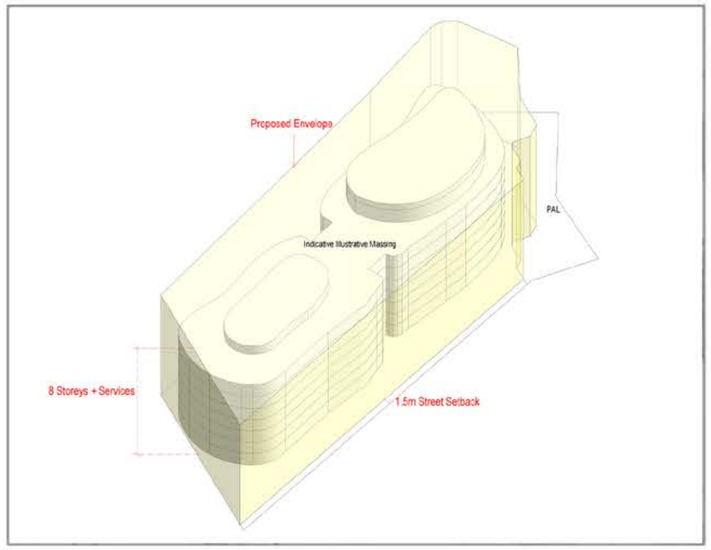

LOT 17
(Original 2003 Structure Plan)

# AMENDED FIGURE 29: BUILDING CONTROL ENVELOPES



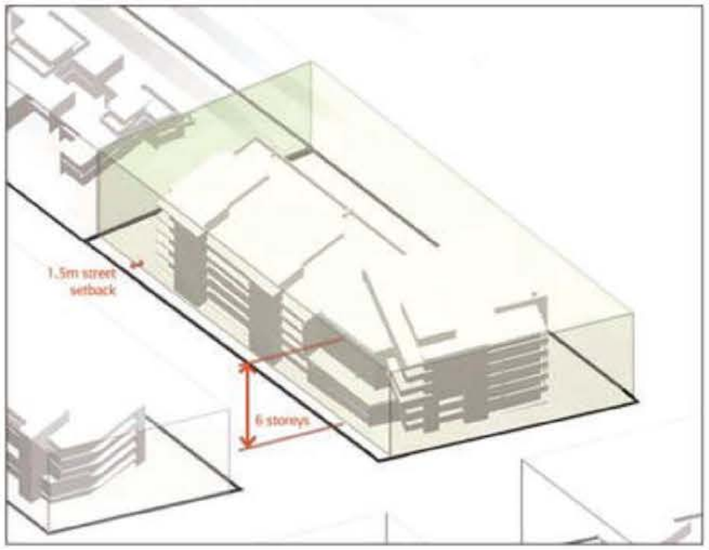

LOT 21
(Proposed Amendment No.2)

*Hames Sharley, 2022*

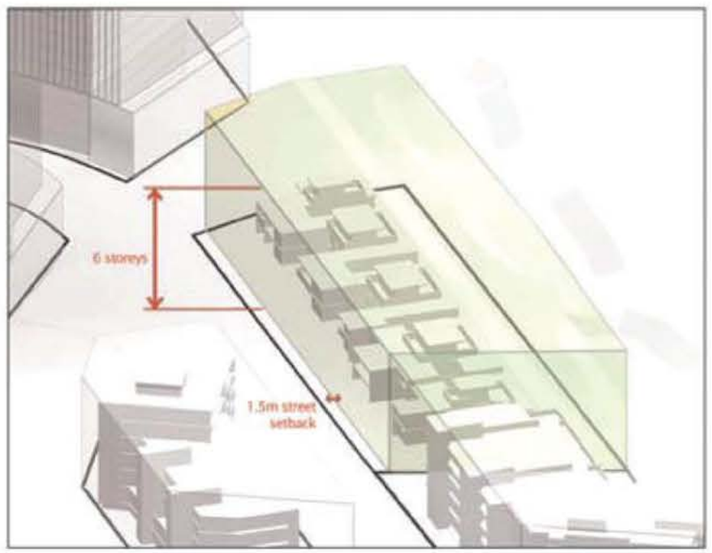



LOT 22
(Proposed Amendment No.2)

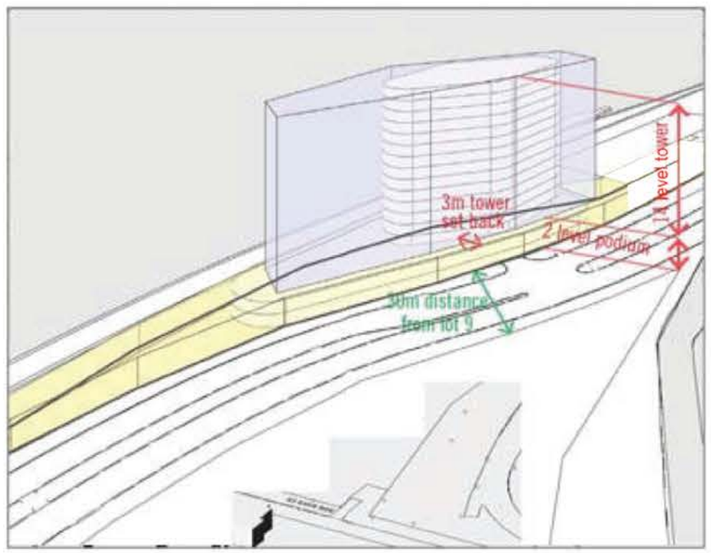
*Hames Sharley, 2022*



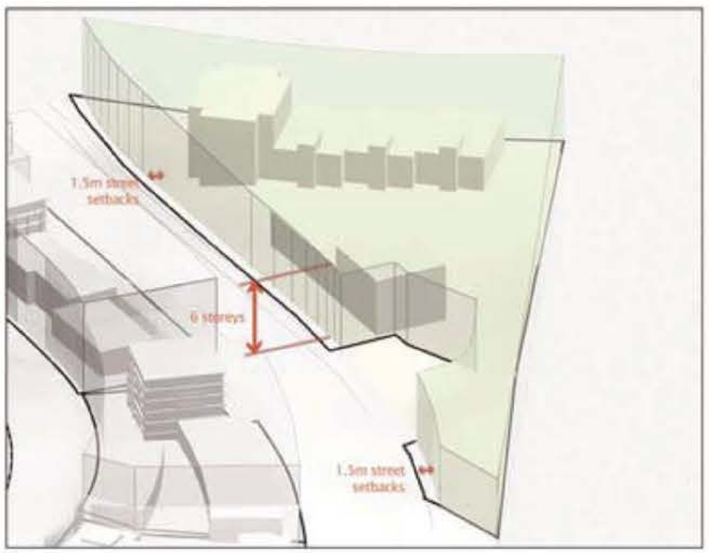

LOT 23
(Original 2003 Structure Plan)




LOT 24
(Original 2003 Structure Plan)

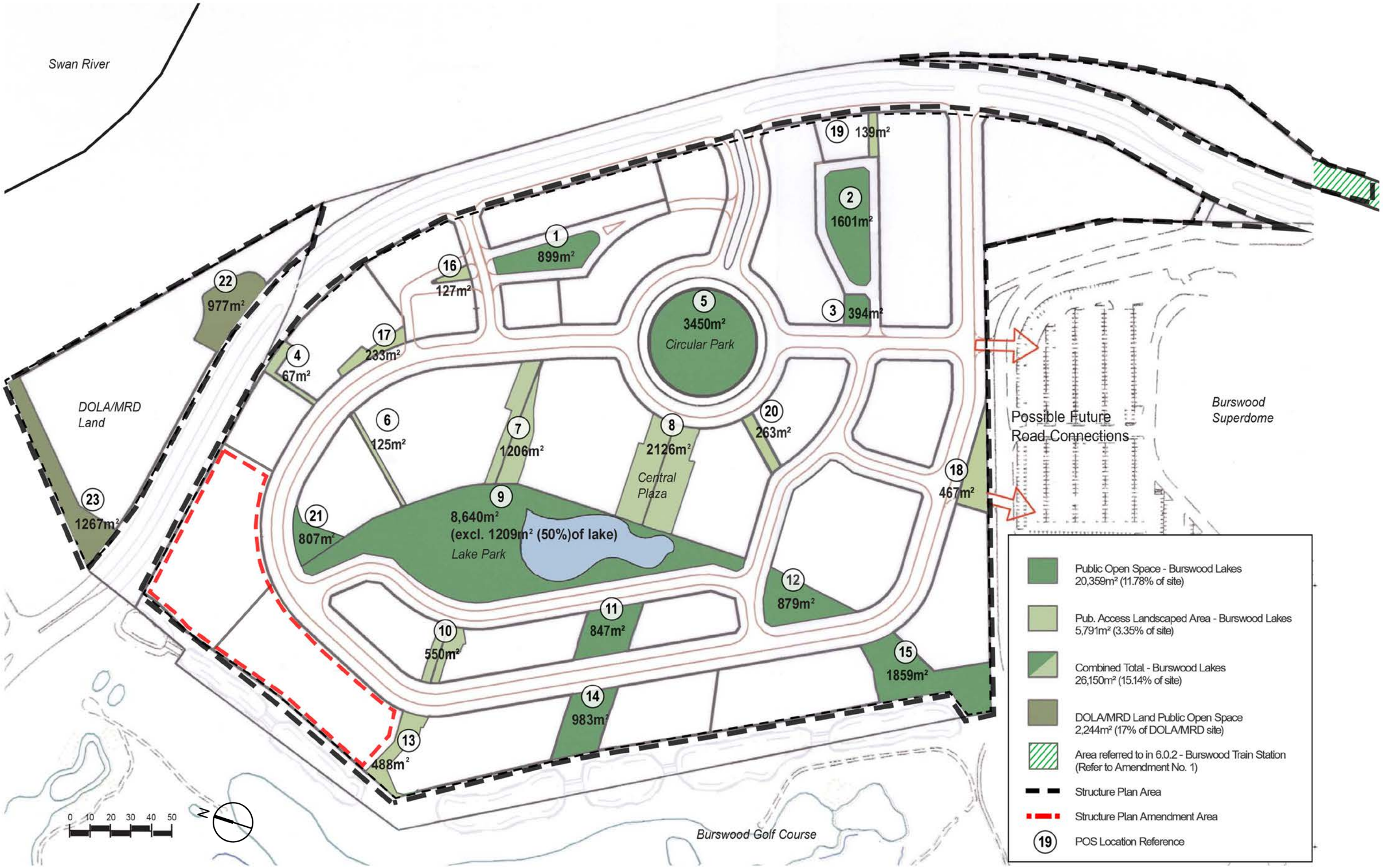



LOT 25
(Amendment No.1, 2017)




DOLA / MRD LAND (LOT 26)
(Original 2003 Structure Plan)

# AMENDED FIGURE 31: PUBLIC REALM



# Part Two
# Explanatory Section

# 1 Introduction and Purpose

The purpose of Part Two of this report is to provide the planning background and explanatory information used to prepare the Structure Plan Amendment and to inform the controls detailed in Part One. It addresses relevant development standards and demonstrates that the proposed amendments are suitable and appropriate having regard to the site's current planning framework.

The Structure Plan Area has been progressively developed, with the built form and road network generally consistent with the adopted Structure Plan. Development of the Structure Plan Area is largely complete with only a few undeveloped sites remaining.

It is widely acknowledged that the Burswood Precinct has undergone significant change since adoption of the Structure Plan in 2003. Recent developments including Perth (Optus) Stadium, Matagarup Bridge across the Swan River and expansion of the Crown Entertainment Complex, in addition to the planned high-density Belmont Park Racecourse and Burswood Station East and West redevelopments, have significantly changed the landscape of the Burswood Peninsula. The strategic and statutory planning framework has also evolved and these changes have highlighted the need for a review prior to the final development sites progressing.

The Structure Plan Amendment has been designed to be read in conjunction with the original Structure Plan (2003) and Amendment No. 1 (2017) and, accordingly, these documents are appended. Where applicable, plans and figures within the appended documents have been marked 'superseded' to avoid confusion. A list of updated figures is also provided within Part One of this report.

Unless modified by Structure Plan Amendment No. 2 (this document), the provisions contained within the Burswood Lakes Structure Plan (2003) and Amendment No. 1 (2017) continue to apply.

The Structure Plan review work commenced in May 2020 and has been supported by the Town's *Review of Burswood Lakes Structure Plan* (June 2020) internal paper. As a major stakeholder in the planning and development of the Burswood Peninsula, Mirvac has committed to resourcing the Structure Plan Amendment and has engaged a project team of consultants to undertake this work. The consultant team comprises the following:

| Discipline | Consultant Name |
|---|---|
| Town Planning | Rowe Group |
| Architecture and Urban Design | Mirvac Design and Hames Sharley |
| Traffic | Flyt |
| Geotechnical | Golder Associates |

***Table 2: Structure Plan Review Consultant Team***

In preparing this report, consultation has been undertaken with senior planning staff at the Town of Victoria Park and the DPLH. The Structure Plan Amendment has also been presented to the Town of Victoria Park's Design Review Panel for discussion on three occasions. Feedback received from the Design Review Panel has assisted in informing this Amendment.

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| 2 | Local Location |
| 3 | MRS Zoning |
| 4 | LPS Zoning |
| 5 | Burswood Peninsula DSP |
| 6 | Burswood Peninsula Aerial circa 2013 |
| 7 | Conceptual Illustration of the Burswood Peninsula Vision |
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# 2 Structure Plan Amendment Land Description

This section of the report defines and describes the Structure Plan Area.

## 2.1 Legal Description and Ownership

The Structure Plan Amendment applies to the Burwood Lakes Structure Plan Area in its entirely, with particular focus on Mirvac's two remaining undeveloped lots, described on **Amended Figure 19 – Structure Plan** as Lots 1 and 21 Bow River Crescent. The Structure Plan Area is defined in Part One of this report.

Lots 1 and 21 form part of a larger land parcel (Lot 9001) which is legally described as follows:

*"Lot 9001 on Plan 416588 and held within Certificate of Title Volume 2973 Folio 916".*

Lot 9001 is located in the north-western corner of the Structure Plan Area. It measures approximately 1.370 hectares in area and maintains frontage to Bow River Crescent in the east and Victoria Park Drive in the north. The land the subject of the Amendment (Lots 1 and 21) has a combined total area of approximately 0.93 hectares.

## 2.2 Regional Context

The Structure Plan Area is located within the municipality of the Town of Victoria Park, within the suburb of Burswood. It is situated approximately 2.5 kilometres east of the Perth Central Area within an area known as the Burswood Peninsula. It is accessible via the Graham Farmer Freeway in the east or Great Eastern Highway in the south. Refer **Figure 1 – Regional Location.**

*Aerial view of Structure Plan Area looking towards Perth CBD.*

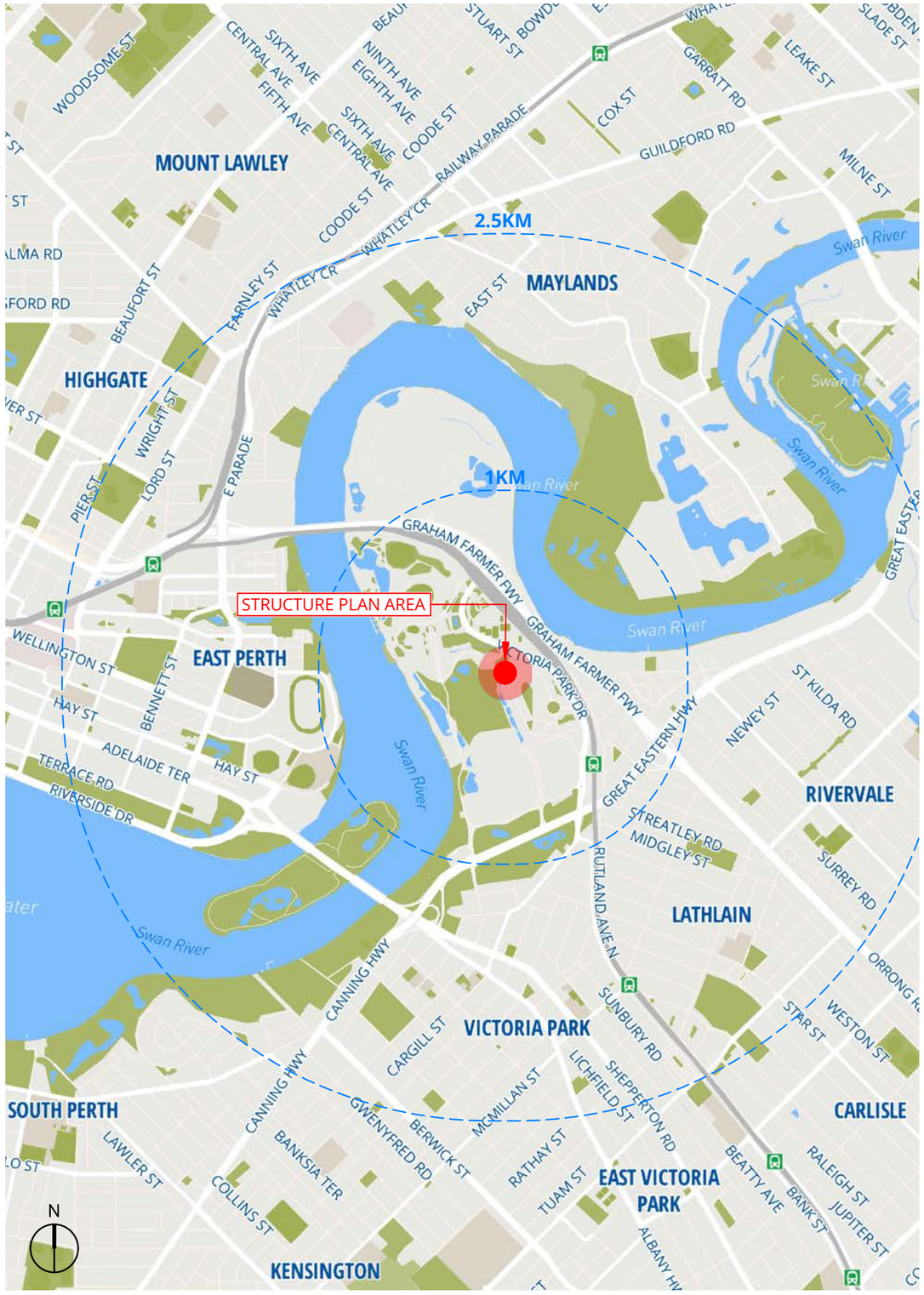



***Figure 1 - Regional Location***

## 2.3 Local Context

The Structure Plan Area is well located with access to the Perth Central Area, the Burswood Train Station, the Swan River, Graham Farmer Freeway and Great Eastern Highway.

It enjoys access to the expanded Crown Complex, Perth (Optus) Stadium, State Tennis Centre, Burswood Station and Matagarup Bridge which provides pedestrian connectivity between the Burswood Peninsula and East Perth. These facilities are all located within 400m of the Structure Plan Area.

Since adoption of the Burswood Lakes Structure Plan in 2003, the Structure Plan Area has undergone considerable change in terms of its surrounding built environment. The most notable additions to the area include the construction of Crown Towers, Matagarup Bridge across the Swan River, Perth (Optus) Stadium and associated Train Station. Additionally, planning has progressed for the redevelopment of the Belmont Park Racecourse as well as the Burswood Station East and West areas, which will introduce significant higher density to the area.

As a result of these changes, the Structure Plan Area sits within a very different local context to when the Structure Plan was adopted. Refer **Figure 2 – Local Location.**

*Matagarup Bridge to the west of the Structure Plan Area*


***Figure 2 - Local Location***

# 3 Planning Framework

This section of the report provides an overview of the statutory and strategic planning framework relevant to the Structure Plan Area. It also identifies the various changes that have occurred to this framework since adoption of the Structure Plan in 2003 which is important in illustrating the significantly altered environment within which the Structure Plan now sits.

## 3.1 Zoning and Reservations

### 3.1.1 Metropolitan Region Scheme

The Structure Plan Area is zoned 'Urban' under the provisions of the Metropolitan Region Scheme ('MRS').

The 'Urban' Zone is described as:

> *"Areas in which a range of activities are undertaken, including residential, commercial recreational and light industry".*

The Structure Plan Amendment maintains a focus of providing residential land uses and, in this regard, remains consistent with its 'Urban' zoning. Refer **Figure 3 – MRS Zoning.**

### 3.1.2 Town of Victoria Park Local Planning Scheme No. 1

The Structure Plan Area is zoned 'Special Use', forming part of the Burswood Lakes Environmental and Geotechnical Special Control Area ('ENV1'), and is within Precinct Plan P2 – Burswood Precinct, pursuant to the *Town of Victoria Park Local Planning Scheme No.1* ('LPS1').

The purpose of the Burswood Lakes Environmental and Geotechnical Special Control Area is as follows:

1. *To identify areas that have had environmental hazards and have now been remediated;*
2. *To ensure that development that involves excavation in these areas takes into account the state of remediation.*
3. *Highlight the need for development applications to include a geotechnical assessment appropriate for the proposed development."*

In addition to its 'Special Use' zoning, the Structure Plan Area is located within Precinct Plan P2 – Burswood Precinct ('Precinct Plan'), pursuant to LPS1. The Precinct Plan outlines the Town's intentions for the future development of the Precinct and contains provisions relating to land use permissibility and development standards such as setbacks, plot ratio, dwelling density, building height and car parking. It requires that development within the Special Use Zone be generally consistent with the approved Structure Plan.

The Precinct Plan contemplates the following objectives to be met by development proposals within the Precinct:

- The Precinct should be redeveloped primarily for residential uses with integrated mixed-use development west of the railway.
- Development should acknowledge the prominence of the Burswood Peninsula. Buildings and landscaping should be of a high visual standard to complement a key entry route to the City.

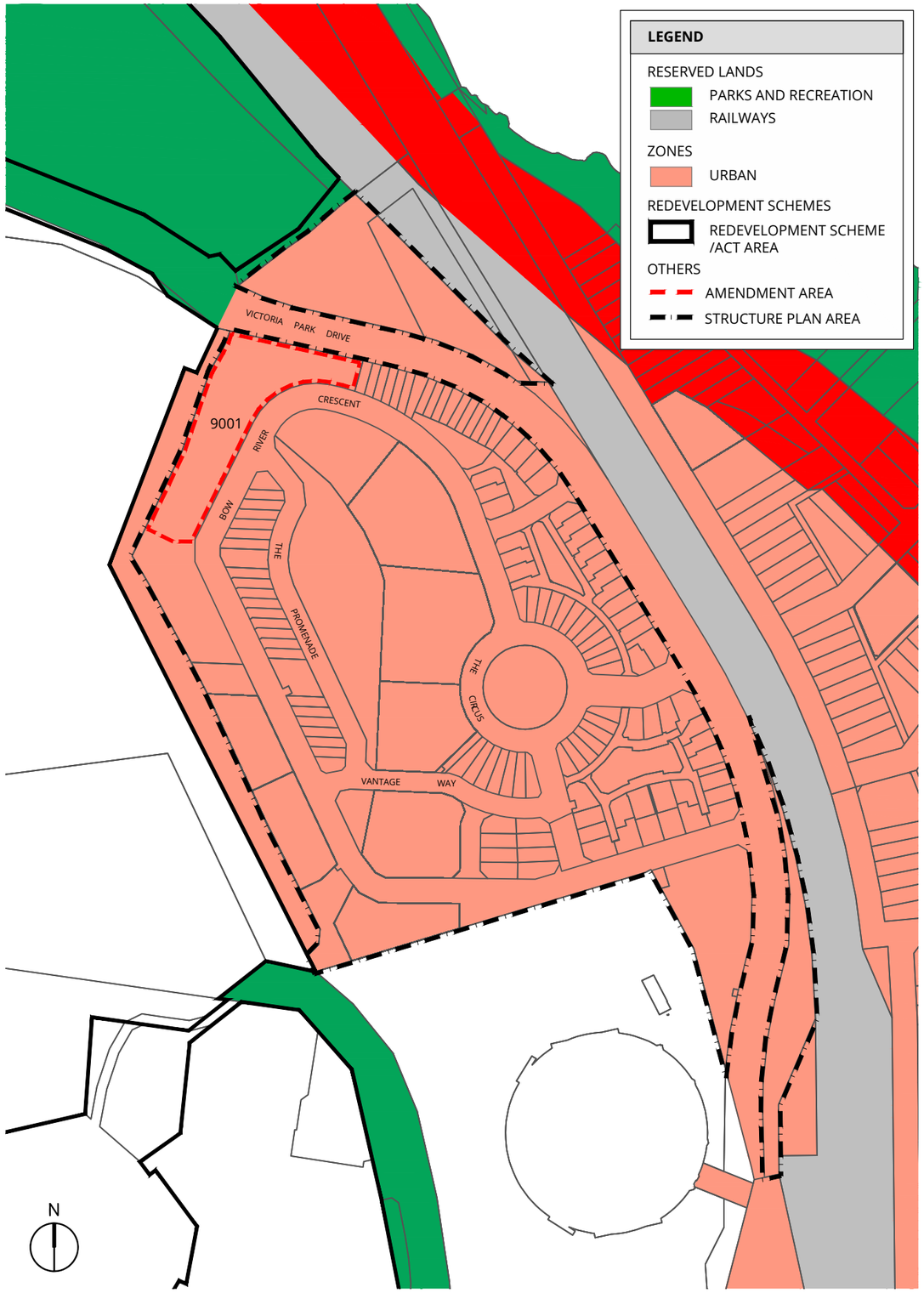



***Figure 3 - MRS Zoning***

- Development adjacent to the Crown Resort Complex should have regard for the proximity of this area to the complex, the importance of the Precinct as a backdrop to the river setting and views of the Peninsula from various vantage points.
- New development will contribute to the development of a well-integrated pedestrian network through site layout and building design.
- Public places such as parks, reserves and streets will be used, maintained and enhanced so that they contribute to a pleasant environment in the Precinct.

The Structure Plan Amendment does not propose any modifications that would alter the overall Statement of Intent for this area under the Precinct Plan. Notwithstanding, to ensure that the development standards and requirements contained within the Precinct Plan remain consistent with the amended Structure Plan, modifications to LPS1 will be undertaken by Town of Victoria Park, as part of the preparation of its Local Planning Scheme No. 2. Refer **Figure 4 – LPS Zoning**.

## 3.2 Structure Plans

### 3.2.1 Burswood Peninsula District Structure Plan

The *Burswood Peninsula District Structure Plan* ('DSP') was prepared by the (then) Department of Planning and adopted by the WAPC in March 2015. It covers a broad area that includes the Structure Plan Area, the land north of Great Eastern Highway, extending north to the Swan River, the Belmont Racecourse, and areas east of the railway line and Graham Farmer Freeway.

The DSP provides a strategic framework to guide the development of key projects in the short term, and support the planning, assessment, coordination and implementation of longer-term development over the Peninsula. It is not a statutory document, but rather is intended to be used by State and Local government to inform planning and development decisions. In this regard the DSP does not supersede the provisions of LPS1, Precinct Plan P2 – Burswood Precinct or the Burswood Lakes Structure Plan but rather, is to be read in conjunction with these documents.

The vision outlined in the DSP aims to facilitate the development of sustainable and attractive housing, recreation, entertainment, tourism and employment opportunities that take advantage of the area's proximity to transport infrastructure and public transport services. It recognises that the Burswood Peninsula has an important role to play in accommodating the population growth projections outlined in Directions 2031 and the Perth and Peel @ 3.5 million framework and seeks to achieve the dwelling targets established under these documents.

The Structure Plan Area is identified under the DSP as the *"Peninsula Urban Neighbourhood"* and is shown as *"Residential – High Density"*.

The DSP notes that the Burswood Peninsula has the potential to accommodate up to 12,000 dwellings and a population of approximately 20,000 residents. This additional capacity is considered achievable due to the proximity of the area to higher order road and rail infrastructure, accessibility to the Perth city centre, the Swan River and substantial public parklands, and the ability to achieve higher residential densities without impacting on existing lower density neighbourhoods. Refer **Figure 5 – Burswood Peninsula DSP.**

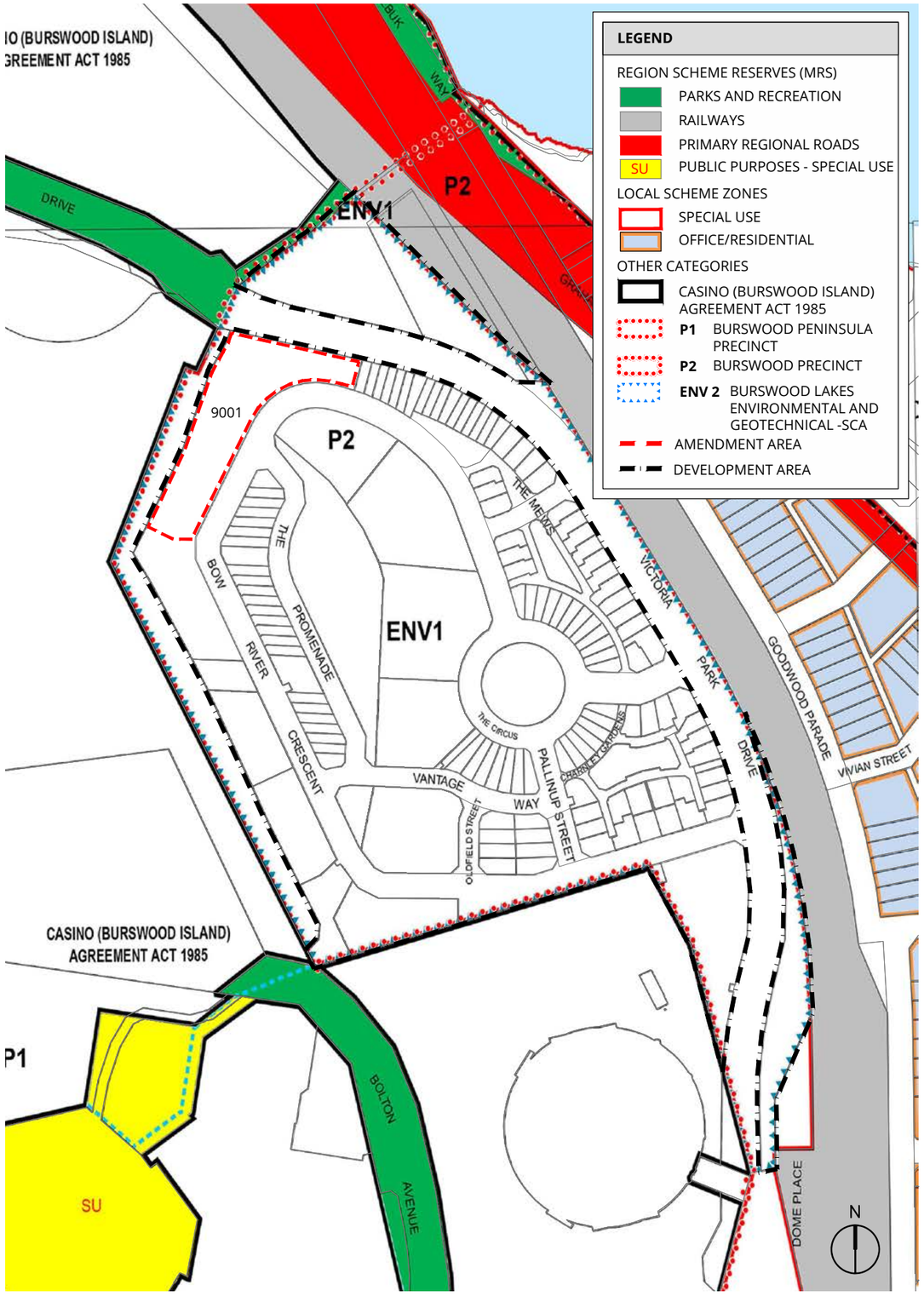



*Figure 4 - LPS Zoning*


*Figure 5 - Burswood Peninsula DPS (Source: WAPC, 2015)*

The DSP contains an aerial photograph of the Burswood Peninsula circa 2013. It shows the extent of development in and around the Burswood Peninsula which was generally limited to The Peninsula Estate, Crown Perth and the Burswood Dome, which was demolished in 2013. It also shows the location of major planned redevelopments at Belmont Racecourse, Optus Stadium and Crown Perth. Refer **Figure 6 – Burswood Peninsula Aerial Photograph, circa 2013.**

The DSP also contains a conceptual illustration of the vision for the Burswood Peninsula showing the ultimate built form potential. The illustration shows the location, form and height of buildings in the area, both completed and/or planned, and includes development at Belmont Park, The Peninsula (the Amendment Area), Optus Stadium, Burswood Station West, Burwood Station East, Crown Entertainment Complex, and The Springs. Refer **Figure 7 - Conceptual illustration of the Burswood Peninsula Vision.**

Figures 6 and 7 demonstrate the significant changes to the planning framework that have occurred since the Structure Plan was adopted in 2003 and how the Structure Plan Area now sits within a very different built form context.

## 3.2.2 Burswood Lakes Structure Plan

### 3.2.2.1 Overview

The *Burswood Lakes Structure Plan* ('Structure Plan') was adopted by the Town of Victoria Park on 17 December 2002 and approved by the WAPC on 22 April 2003. It was prepared to fulfil the requirements of LPS1 which required development within the Special Use Zone to be generally consistent with a Structure Plan approved by the WAPC.

The purpose of the Structure Plan is to provide a framework to guide the future subdivision and development of land forming part of the Burswood Peninsula known as 'Burswood Lakes'. Its primary objective was to facilitate the area's transformation from an industrial area to a new urban neighbourhood of some 1,250 new dwellings, accommodating a population of some 3,000 people.

The Structure Plan establishes a design rationale for future development and contains guidelines and development standards relating to matters such as land use, dwelling density, lot pattern, and built form such as building height, plot ratio and setbacks. The Burswood Lakes Structure Plan is depicted on Figure 19 of the Structure Plan Report. It identifies the overall pattern of development which includes 26 'superlots', as well as roads, Public Open Space ('POS') and drainage areas. It also outlines the primary development standards that apply to each of the superlots, being lot size, dwelling yield, building height, plot ratio, and the preferred location of mixed uses.

Following adoption of the Structure Plan, amendments were undertaken to the Burswood Precinct Plan (P2) under LPS1 (Amendments No. 28 and 29) to implement the outcomes contemplated by the Structure Plan. These amendments incorporated development standards from the Structure Plan into LPS1, altered some of the requirements within Table 1 of the Residential Design Codes of WA ('RDC'), and introduced density controls through maximum dwelling numbers.


*Figure 6 - Burswood Peninsula Aerial, circa 2013 (Source: WAPC, 2015)*

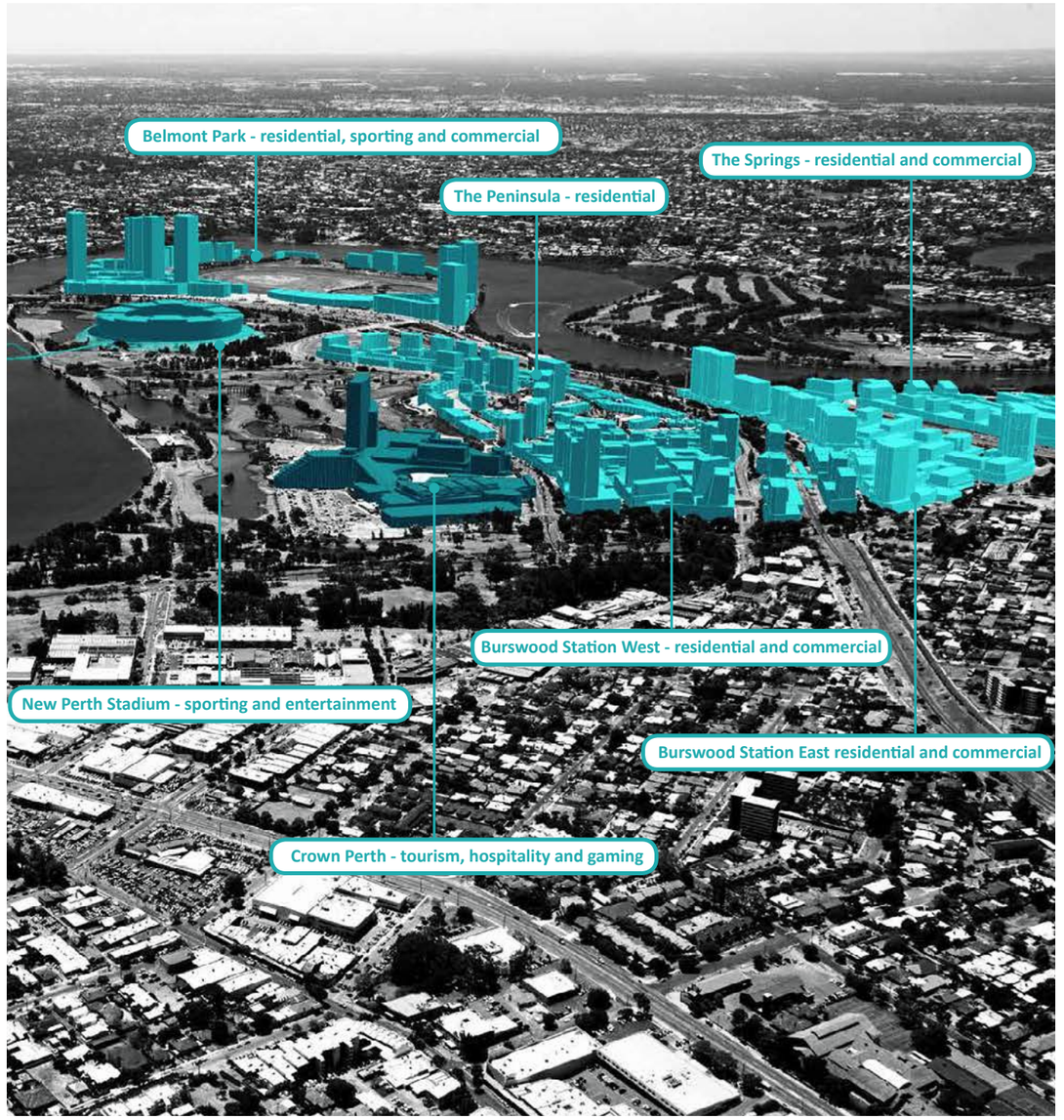



*Figure 7 - Conceptual Illustration of the Burswood Peninsula Vision (Source: WAPC, 2015)*

### 3.2.2.2 Structure Plan Amendments

Amendment No. 1 to the Structure Plan was adopted by the Town in November 2016 and the WAPC in September 2017. The Amendment related to Lots 9 and 25 (also known as Lot 9525) Victoria Park Drive, Burswood. It modified land use permissibility and increased permitted dwelling yield, building height and plot ratio requirements for these lots.

Following Structure Plan Amendment No.1 an amendment to the Burswood Precinct Plan (P2) under LPS1 was gazetted on 25 January 2019 (Scheme Amendment No. 79) to reflect the development standards modified by the Structure Plan Amendment.

A variation to the Structure Plan was approved by the Town of Victoria Park in March 2014 following the granting of Development Approval by the Metro Central Joint Development Assessment Panel in relation to Lot 10 Bow River Crescent. The variation increased the maximum allowable dwelling density to 176 and included 170m$^2$ of 'Office' use.

### 3.2.2.3 Development Approvals

The Structure Plan Area has been progressively developed, with the built form and road network generally being consistent with the adopted Structure Plan. Development of the Structure Plan Area is largely complete with only a few vacant sites remaining. A plan showing the location of developed sites; sites wherein Development Approval has been granted but construction not commenced; and sites that are vacant and yet to obtain Development Approval are shown in **Figure 8 – Site Plan**. Figure 8 also illustrates the three key development areas within the Structure Plan, as described below:

- **Area A:** Lot 26 – held by the State of WA and leased to the Public Transport Authority ('PTA'). Area A is east of Victoria Park Drive and used as a bus set down and parking area;
- **Area B:** All lots comprising 'The Peninsula' estate by Mirvac and including Lots 1 and 21 that are the focus of this Amendment; and
- **Area C:** Lots 9 and 25, being the EG Funds sites at the eastern end of the Structure Plan Area and the land subject to Amendment No. 1.

As Figure 8 shows, only a few sites remain vacant and without Development Approval, being Lots 1 and 21 (located within the parent lot known as Lot 9001 Bow River Crescent and that are subject to this Strutcure Plan Amendment), Lot 26 (legally described as Lot 202 and Reserve 53241 Victoria Park Drive and herein referred to as 'Lot 26'), Lots 9 and 25 that were subject to Structure Plan Amendment No.1.

### 3.2.2.4 Dwelling Yield Review

As part of the Structure Plan review process, Mirvac has undertaken an analysis of completed construction works to date. This includes consideration of existing and projected dwelling yields, parking supply and POS provision. The analysis includes a comparison of the maximum dwelling yields permitted for each superlot under the Structure Plan against the number of dwellings constructed and approved. The analysis is represented in **Table 5** overleaf.

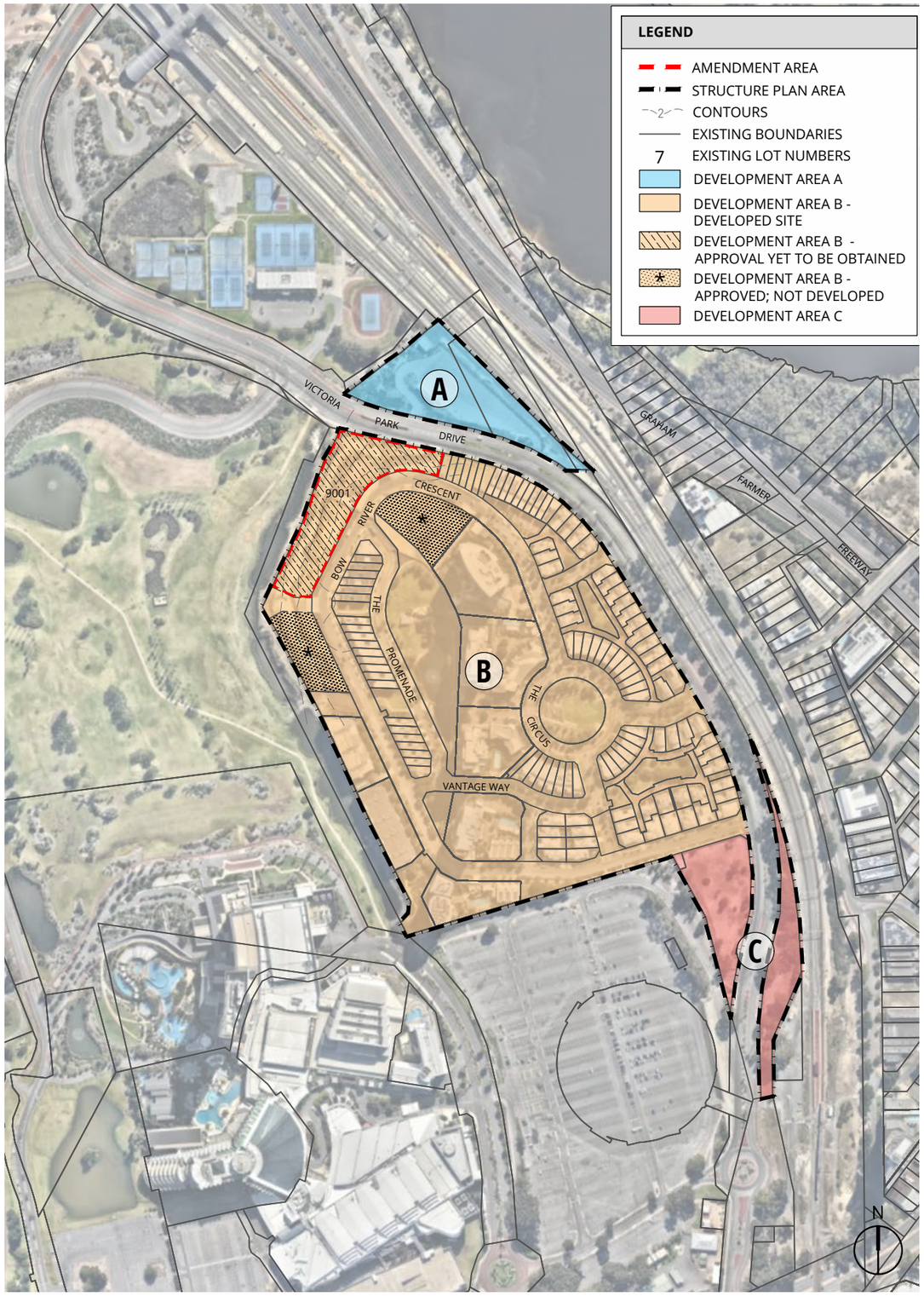



*Figure 8 - Site Plan*

| Area of Structure Plan (Refer Figure 8) | Lot No. | Dwelling Yield per Structure Plan (2003) * | Dwelling Yield per Structure Plan Amd. No1 (2017)*** | Dwelling Yield based on development status of individual sites **** | | | Variation to Structure Plan |
|---|---|---|---|---|---|---|---|
| | | | | Constructed | Approved | Vacant | |
| A (State of WA) | 26 | 50 | | - | - | 50 | - |
| **Sub-total Area A (State of WA)** | | **50** | **-** | **-** | **-** | **50** | **-** |
| B (Mirvac) | 1 | 74 | | - | - | 74** | - |
| | 2 | 30 | | 7 | - | - | -23 |
| | 3 | 31 | | 10 | - | - | -21 |
| | 4 | 13 | | 7 | - | - | -6 |
| | 5 | 16 | | 13 | - | - | -3 |
| | 6 | 14 | | 14 | - | - | 0 |
| | 7 | 13 | | 11 | - | - | -2 |
| | 8 | 23 | | 17 | - | - | -6 |
| | 10 | 106 | | - | 187 | - | 81 |
| | 11 | 140 | | 133 | - | - | -7 |
| | 12 | 119 | | 116 | - | - | -3 |
| | 13 | 85 | | 87 | - | - | 2 |
| | 14 | 45 | | 7 | - | - | -38 |
| | 15 | 28 | | 8 | - | - | -20 |
| | 16 | 32 | | 7 | - | - | -25 |
| | 17 | 42 | | 9 | - | - | -33 |
| | 18 | 32 | | 7 | - | - | -25 |
| | 19 | 80 | | 89 | - | - | 9 |
| | 20 | 61 | | 64 | - | - | 3 |
| | 21 | 47 | | - | - | 47** | - |
| | 22 | 42 | | - | 88 | - | 46 |
| | 23 | 31 | | 26 | - | - | -5 |
| | 24 | 31 | | 30 | - | - | -1 |
| **Sub-total Area B (Mirvac)** | | **1135** | | **662** | **275** | **121** | **-77** |
| C (EG Funds) | 9 | 60 | 353 *** | - | | 353 | 293 |
| | 25 | 5 | 208 *** | - | | 208 | 203 |
| **Sub-total Area C (EG Funds)** | | **65** | **561*** ** | **-** | **-** | **561** | **+496** |
| | | **1,250** | **1,746*** ** | | | | |

***Table 5: Breakdown of Dwelling Yield***

** Comprising 1,250 total dwelling yield per 2003 Structure Plan.*

*** Subject to change under this Amendment.*

**** Varied by Amendment No. 1 (2017). Note the appropriate adjustment of total dwelling yield from 1,250 to 1,746 was not formally documented despite the site yield increases being approved in Amendment No.1.*

***** Development Status – refers to status of development: Constructed - final constructed number of dwellings; Approved - not built (number of dwellings in Development Approval granted); and Vacant (Development Approval yet to be granted - dwelling numbers per 2003 Structure Plan).*

The analysis of dwelling yields in **Table 5** shows that:

- **Overall:**
  - Development has occurred on 19 of the 26 lots within the Structure Plan Area; and
  - A total of 662 dwellings have been constructed, with an additional 275 granted Development Approval (Lots 10 and 22), totalling 937.
- **Area A, comprising Lot 26 and leased to the PTA:**
  - Is still forecast to provide 50 dwellings; but
  - Is expected to remain as a bus parking and transfer area for the foreseeable future.
- **Area B, comprising 'The Peninsula' by Mirvac:**
  - Was originally forecast to provide 1,135 dwellings;
  - Is currently forecast to provide 1,058 dwellings, being 77 dwellings less; and
  - Is currently forecast to provide 121 dwellings on Lots 1 and 21 the subject of this Amendment.
- **Area C, comprising the EG Funds sites 9 and 25:**
  - Was originally forecast to provide 65 dwellings;
  - Has increased this dwelling yield via Amendment No.1 by 496 dwellings to a total of 561 dwellings; and
  - The appropriate adjustment of total dwelling yield from 1,250 to 1,746 was not formally documented despite the site yield increases being approved for Lots 9 and 25 in Amendment No.1.
- **Summary:**
  - The total combined number of constructed (662), approved (275) and estimated (732) dwellings is 1,669;
  - This exceeds the 2003 Structure Plan dwelling yield of 1,250, which should have been updated by an additional 496 dwellings to a new total of 1,746 at the time of Amendment No.1 to properly account for the amendment changes; and
  - The above estimates are subject to further amendment for sites 1 and 21 via this Amendment.

Amendment No. 1 (2017) to the Structure Plan varied the allowable dwelling yield on Lots 9 and 25 by 496 however the overall allowable dwelling yield (1,250) was not adjusted up accordingly. Without this anomaly being corrected, the Structure Plan creates uncertainty and reflects a 'first in best dressed' scenario with regard to dwelling yield. Put simply, those lots that develop first could seek to take advantage of an overall dwelling limit to the detriment of later developments and the broader precinct.

This Structure Plan Amendment proposes to remove the maximum overall dwelling yield provision under the Structure Plan and, in its place, apply estimated dwelling yields for each identified lot. This ensures that the Town of Victoria Park, DPLH, key stakeholders and the wider community have clarity that the shown dwelling yield estimates are those that will be used as a guide for the determination of Development Approvals. Rationale and justification in support of this proposed modification in discussed in Section 4.6 of this report.

### 3.2.3 Belmont Park Racecourse Redevelopment Structure Plan

The *Belmont Park Racecourse Redevelopment Structure Plan* ('Belmont Park Structure Plan') was approved by the WAPC in 2013. It proposes a diverse mix of land uses ranging from retail and commercial to entrainment, cultural, tourism and civic land uses and includes high density residential development. The intent of the land use mix is to facilitate vibrant, diverse, interactive and safe neighbourhoods.

The Belmont Park Redevelopment will transform the northern area of the Peninsula and provide a range of facilities and activities that complement the existing sporting and entertainment uses. The development is expected to include:

- approximately 4,500 dwellings across four precincts;
- a population of 8,000 people;
- up to 31,000sqm of retail floor space;
- up to 60,000sqm of office floor space; and
- approximately 5,500 jobs.

Permitted building heights under the Belmont Park Structure Plan range from low rise (3 storeys or less), mid-rise (4 to 13 storeys), and high-rise (38 to 53 storeys).

Development Approval for the first stage of works at Belmont Park, comprising Towers 1 and 2, was granted in October 2019. The approved development consists of 457 dwellings across two towers measuring 32 and 27 storeys, respectively, along with 943sqm of commercial and retail floorspace and a total of 731 parking bays. Refer **Figure 9 – Illustration of Belmont Racecourse Redevelopment**.

### 3.2.4 Burswood Station East and West Redevelopment Precincts

The Burswood Station East and West Precincts are identified as future redevelopment areas under the DSP, concentrating growth around the upgraded Burswood Railway Station.

The Burswood Station East Precinct is located to the east and south-east of the Structure Plan Area. It currently comprises an older and under-utilised service industrial area immediately east of Burswood Station and is intended to be redeveloped into a new residential and mixed use neighbourhood. The Burswood Station West Precinct is located to the immediate south of the Structure Plan Area. It comprises the land formerly occupied by the Burswood Dome and surrounding carpark and is envisaged as a mixed residential, commercial and entertainment precinct.

The Burswood Station East Precinct is intended to accommodate the majority of the residential development whereas Burswood West is intended to accommodate the majority of retail and commercial floorspace given its exposure to high-traffic areas, proximity to the Crown Complex and Optus Station, and location further away from The Springs residential development.

The Burswood Peninsula District Structure Plan (2015) estimated that the redevelopment of the two Precincts was expected to accommodate:

- approximately 4,500 dwellings;
- a population of approximately 7,700 people;
- up to 160,000sqm of office/commercial floorspace; and
- up to 30,000sqm of retail floorspace

*Figure 9 - Illustration of Belmont Racecourse Redevelopment (source: Racecourse Structure Plan, 2013)*

Since this time, the planning framework for Burswood Station East has progressed with the Town estimating that the East Precinct will generate in the order of between 3,000 – 3,500 dwelling and up to 5,000sqm of retail floorspace.

The Town has initiated an Amendment to LPS1 (Scheme Amendment No. 82) which will include new development objectives and basic development standards for the Burswood Station East Precinct. The Town has also progressed a draft Local Planning Policy (draft LPP 40) which will provide additional development guidance. Scheme Amendment No. 82 and draft LPP 40 are expected to be finalised this year.

### 3.2.5 Burswood Lakes Master Plan

The land to the west of the Structure Plan Area, comprising the former Burswood golf course, is owned and managed by the Burswood Park Board. In 2020, the Board released a Concept Plan as a 'blueprint' for future development of Burswood Park (see **Figure 10**).

The Burswood Park Concept Plan is a high-level strategic document which divides the Park into three distinct landscape precincts based on their location and intended future use and is intended to be used to guide future detailed design. The land immediately west of the Structure Plan Area is identified as the 'Forest Precinct' which is described as "an urban forest for the city with a quieter landscape and strong connections to nature through native plantings and water". The Burswood Park Concept Plan has not been considered formally by the Town of Victoria Park, or the Town's Design Review Panel.

At present, physical connection between Burswood Park and the Structure Plan Area is hindered by site level differences and the location of the canal. The canal is in separate ownership and lies outside the Structure Plan Area and the Burswood Park land. To accommodate a potential future connection, the Structure Plan Amendment retains a possible future pedestrian connection in the vicinity of Lots 22 and 23. This connection is shown in Amended Figure 22 – Proposed Routes for Cyclists, Pedestrians and Indicative Bus Route. The Amended Figure also incorporates two additional view corridors in the vicinity of Lots 1 and 21 which are intended to accommodate views across the Burswood Park towards Matagarup Bridge.

*View from Bulton Ave looking north towards the Structure Plan Area.*


***Figure 10 - Burswood Lakes Concept Plan (Source: Burswood Park Board, 2020)***

## 3.3 Statutory Planning Changes

### 3.3.1 Planning and Development (Local Planning Schemes) Regulations 2015

The Regulations, gazetted in 2015, introduced 'deemed provisions' that are automatically incorporated into local planning schemes. This includes provisions relating to the preparation, modification and adoption of Structure Plans.

The introduction of the Regulations has changed the weight and status afforded to Structure Plans such that they no longer form part of a local planning scheme and are no longer given statutory significance. Decision-makers are required to have due regard to, but are not bound by, a structure plan when determining an application for development or subdivision approval.

### 3.3.2 Amendment No. 75 to the Town of Victoria Park LPS1

Scheme Amendment No. 75 to the LPS1 was gazetted on 23 June 2017. It removed or amended provisions, references and schedules in LPS1 that were superseded or amended by the introduced of deemed provisions (Schedule 2) of the Regulations.

In relation to the Structure Plan Area, this meant that the 'deemed provisions' under the Regulations relating to Structure Plans were inserted into LPS1 such that the following requirements now apply:

> *"Development within the Special Use zone is to be generally consistent with the approved Burswood Lakes Structure Plan. In relation to applications for development or subdivision approval within the Special Use Zone, the decision-maker is to have due regard to the approved structure plan when determining the application.*
>
> *The approved structure plan may be amended in accordance with deemed clause 29, and inclusive of public consultation".*

### 3.3.3 Amendment No. 79 to the Town of Victoria Park LPS1

Scheme Amendment No. 79 to LPS1 was gazetted on 25 January 2019. It amended a number of the provisions under the Burswood Precinct Plan (P2) to reflect the development standards modified by the approval of Structure Plan Amendment No. 1 relating to Lots 9 and 25 Victoria Park Drive, Burswood.

## 3.4 Regional Planning Strategies

### 3.4.1 Directions 2031 and Beyond

Released in 2010, *Directions 2031 and Beyond* ('Directions 2031') is a high-level strategic plan for the Perth and Peel regions that establishes a vision for future growth that is based on creating a world-class city that is green, vibrant, more compact and accessible and with a unique sense of place. It estimates that in less than 20 years, Perth's population will grow from 1.7 million to 2.2 million, with an additional 328,000 homes and 353,000 jobs required to support the 500,000 new residents.

Directions 2031 seeks to respond to these population growth predictions by setting the following greenfield and infill housing targets:

- 50% increase in the current average residential density 10 dwellings per gross urban zoned hectare and 15 dwellings per gross urban zoned hectare of land in new development areas; and
- 50% improvement on current infill residential development trends of 30 - 35 per cent and 47% or 154,000 of the required 328,000 dwellings as infill development.

Directions 2031 identifies Burswood as a 'Metropolitan Attractor', which is defined as a place or destination that services both a local and regional catchment, is highly valued by residents and visitors, and serves to stimulate the local economy through investment and employment. The area's identification as a Metropolitan Attractor is based on its proximity to significant tourist, recreational and entertainment facilities that include the Perth (Optus) Stadium and Crown Perth along with future high density transit orientated neighbourhoods at Belmont Park and Burswood Station.

### 3.4.2 Central Metropolitan Perth Sub-Regional Strategy

The *Central Metropolitan Perth Sub-Regional Strategy* ('Sub-Regional Strategy') was released by the WAPC as a key implementation initiative of Directions 2031. The Sub-Regional Strategy identifies the following key elements in relation to the Burswood Peninsula:

- Belmont Park and Burswood railway stations are identified as the location for future major transit-oriented developments ('TOD');
- Belmont Park and the Burswood Station East and West precincts are identified as major growth areas;
- The Springs, The Peninsula and the area to the south of Belmont station are identified as minor growth areas;
- Burswood TOD is identified as a District Centre. District Centres generally serve the main weekly household shopping, service and community needs of the district. They are predominantly retail focused, but many also include a limited mix of other uses; and
- The Crown Perth complex is identified as a significant metropolitan attractor. Metropolitan attractors are places that generate economic and tourism activities.

The Sub-Regional Strategy was effectively superseded by the Central Metropolitan Sub-Regional Framework which was released by the State Government in 2018 as part of the Perth and Peel @3.5 million suite of documents. The Sub-Regional Framework responds to revised population projections and identifying additional growth opportunities in the Burswood Peninsula. The Sub-Regional Framework is discussed in further detail in Section 3.4.4 of this report.

### 3.4.3 Perth and Peel @ 3.5 Million

The *Perth and Peel @ 3.5 Million* suite of documents were released by the WAPC in March 2018. They outline how the dwelling targets identified under Directions 2031 and the State Planning Strategy 2050 will be achieved to accommodate a projected population of 3.5 million people by 2050.

The suite of documents associated with Perth and Peel @ 3.5 million includes four Sub-Regional Planning Frameworks for the Central, North-West, North-East and South Metropolitan Peel sub-regions. The four Sub-Regional Planning Frameworks detail where future homes and employment should be located, and where important environmental assets should be avoided and protected.

The Perth and Peel @ 3.5 Million Spatial Plan identifies the Structure Plan Area as an 'Activity Centre', forming part of the 'Burswood (Peninsula)' District Centre in the Activity Centres Hierarchy.

### 3.4.4 Central Metropolitan Perth Sub-Regional Planning Framework

The Structure Plan Area is located within an 'Activity Centre' under the WAPC's *Central Metropolitan Sub-Regional Planning Framework* ('Framework'), consistent with its designation under Perth and Peel @ 3.5 million. The Framework was released by the WAPC in March 2018 as part of the Perth and Peel @ 3.5 million suite of documents and follows the earlier release of the Central Metropolitan Sub-Regional Strategy. It represents a whole of State Government approach to managing the future urban form within the sub-region and identifies sufficient land to meet the increased demand for residential dwellings.

Activity Centres are defined under the Framework as hubs that attract people for a variety of activities, such as shopping, working, studying and living. These centres mainly consist of a concentration of commercial uses combined with a varying proportion of other land uses such as residential, schools and open space.

The Framework seeks to optimise the use of land in close proximity to existing transport infrastructure and key centres of activity and community amenity. It estimates that approximately 215,000 dwellings (56% of the total amount of new infill dwellings) are expected to be delivered in the Central Sub-Region. Of these 215,000 new dwellings, 19,320 are expected to be provided in the Town of Victoria Park.

The Framework identifies Belmont Park and the Burswood Railway Stations as locations for future major transit-orientated developments, with Belmont Park and the Burswood Station East and West precinct identified as major growth areas. The Framework also identifies the Crown Casino Complex as a significant metropolitan attractor, being a place that generates economic and tourism activities. Refer **Figure 11 – Central Metropolitan Perth Sub-Regional Planning Framework**.

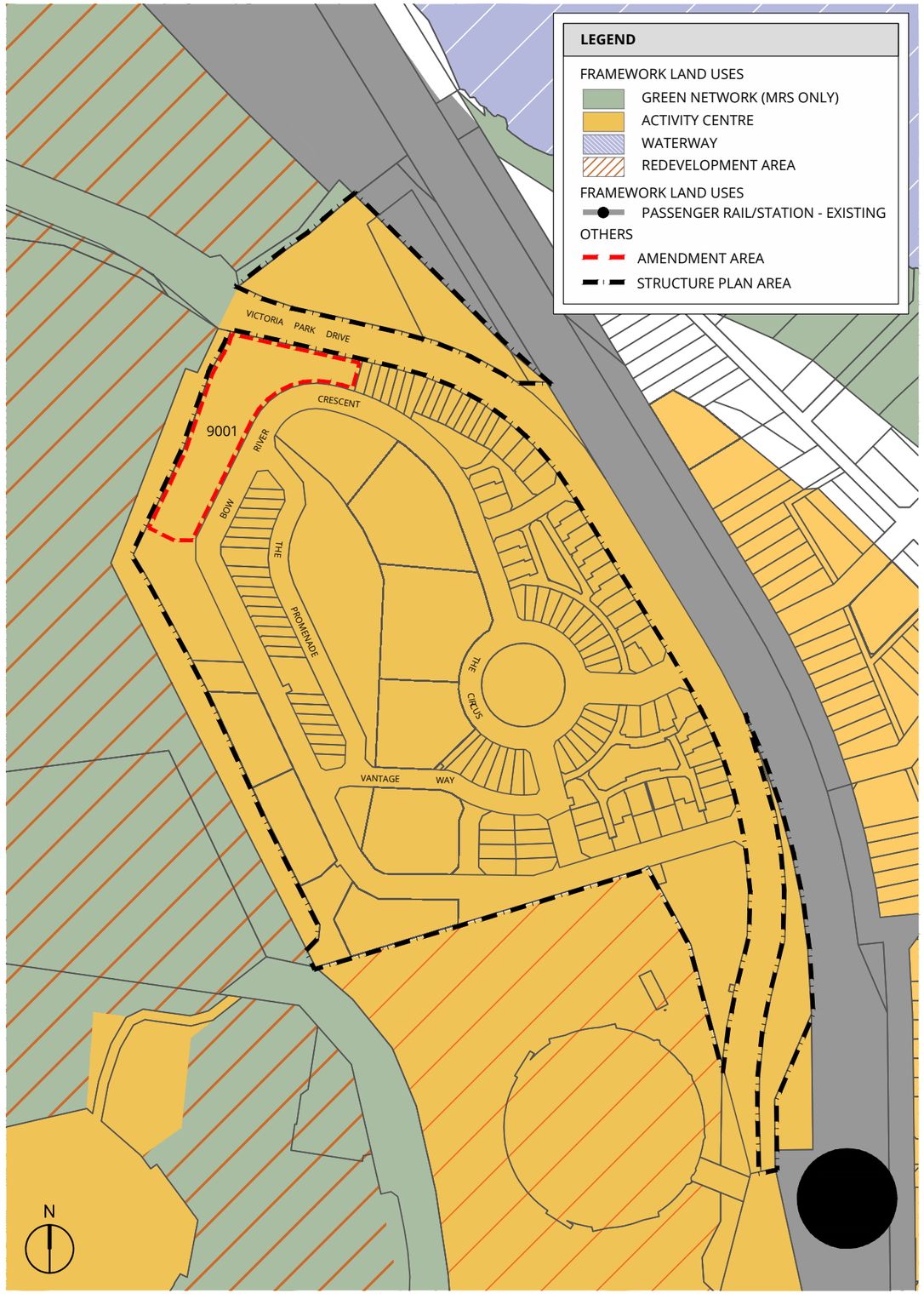



*Figure 11 - Central Metropolitan Perth Sub-Regional Planning Framework*

## 3.5 Local Planning Strategies

### 3.5.1 Town of Victoria Park Local Planning Strategy

The Town has prepared a Local Planning Strategy ('Strategy') which sets the strategic direction for urban planning and development for the next 10 to 15 years and will inform the preparation of a new Town Planning Scheme.

The Strategy identifies the Burswood Peninsula as an Activity Centre, consistent with the Central Sub-Regional Planning Framework and the land use guidance provided by the DSP. It defines the Burswood Peninsula as a neighbourhood that *"provides a diversity of places for living, working and entertainment"* and *"will provide the majority of the Town's future population growth, and demonstrate excellence in built form and urban design"*.

The objectives for the Burswood Peninsula are as follows:

- To develop a regional destination with a mix of world-class visitor activities, experiences and accommodation.
- To develop socially inclusive and environmentally sustainable higher density, mixed use urban neighbourhoods that reflect the unique context of the Peninsula.
- To coordinate the planning and delivery of social, economic and environmental infrastructure across sub-precincts and planning jurisdictions.

The Strategy provides for population growth within the Town from 18,000 dwellings (2020) to 35,000 dwellings by 2050. This represents an increase of around 17,000 new dwellings, designed to meet the State government's infill dwelling target under the Central Sub-Regional Planning Framework. The Strategy seeks to direct population growth in activity centres and around train stations, consistent with the principles outlined in Directions 2031 and the Perth and Peel @ 3.5 million suite of documents. As the Burswood Peninsula is classified as an 'Activity Centre' under the Sub-Regional Planning Framework, it is therefore an area wherein infill development should be promoted.

The Strategy recommends a number of 'Actions' for the Burswood Peninsula. One of the Actions is to:

- Work with landowners to review and update the Burswood Lakes Structure Plan (2003) and the Belmont Park Racecourse Redevelopment Structure Plan (2013) prior to expiry (Action BP.3).

This Structure Plan Amendment report encompasses a review of the 2003 Burswood Lakes Structure Plan and in doing so, fulfils a key Action of the Strategy.

## 3.6 State Planning Policies

### 3.6.1 Liveable Neighbourhoods

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

Liveable Neighbourhoods identifies a series of objectives and requirements for structure plans that, when met, demonstrate compliance with the overall outcomes sought. These objectives and requirements relate to matters such as road layout, relationship of housing to open space and schools, school location/distribution, POS layout and location, and housing densities.

Liveable Neighbourhoods (update 2, 2009) as well as the current 2015 draft, recognise the importance of collaboration between developer and local authority in the delivery and establishment of open space. Prior to Liveable Neighbourhoods, developers were expected to provide 10% POS, with the potential expenditure of 2% as cash-in-lieu funds for open space development. Liveable Neighbourhoods established a clearer position that open space be developed by a subdivider and maintained for two summers. Open space maintenance is discussed further in Section 4.9.

One of the key objectives of Liveable Neighbourhoods is the achievement of more sustainable urban outcomes through higher residential densities in suitable urban areas. Increased density will usually be associated with activity centres and areas well served by public transport such as the Burswood Peninsula. In this regard, the Structure Plan is located within an area recognised through the principles of Liveable Neighbourhoods as an area wherein higher residential densities can be accommodated.

### 3.6.2 State Planning Policy No. 3 – Urban Growth And Settlement

*State Planning Policy 3 – Urban Growth and Settlement* ('SPP 3') was adopted by the WAPC in 2006. It sets out the principles and considerations which apply to planning for urban growth and settlement in WA. SPP 3 recognises that the orderly planning of urban growth and settlement should be facilitated by structure plans which take into account the strategic and physical context of the locality; provide for the development of safe, convenient and attractive neighbourhoods which meet the diverse needs of the community; and facilitate logical and timely provision of infrastructure and services.

Proposals for future urban growth under SPP 3 will be determined having regard to matters such as:

- The State Planning Strategy, relevant statements of planning policy and regional and subregional strategies in the State Planning Framework;
- Population projections provided by the DPLH;
- Land release plans published by the WAPC; and
- Local planning strategies prepared by local government and endorsed by the WAPC.

Since the Structure Plan was adopted in 2003, significant changes to the strategic planning framework have occurred including release of Directions 2031, Perth and Peel @ 3.5 million and the Central Perth Sub-Regional Planning Framework. The updated framework places additional emphasis on urban consolidation, particularly in and around the Central Area such as the Burswood Peninsula.

### 3.6.3 State Planning Policy No. 3.6 – Infrastructure Contributions

Revised *State Planning Policy No. 3.6 – Infrastructure Contributions* ('SPP 3.6') was adopted by the WAPC in 2021. It sets out the principles and requirements that apply to the establishment and collection of infrastructure contributions in new and established areas. Infrastructure items may include POS, foreshore reserves, wetlands, schools, roads, utilities, recreation facilities, and other community services and facilities.

The ongoing maintenance of POS within the Burswood Lakes Structure Plan Area is identified as a matter that needs to be addressed to ensure suitable arrangements are in place to facilitate the formal handover of responsibilities to the Town.

The standard contribution requirement for POS under SPP 3.6 involves the development of POS consistent with the requirements of Liveable Neighbourhoods or other built environment policy of the WAPC, including full earthworks, basic reticulation, grassing of key areas, pathways that form part of the overall pedestrian and/or cycle network, trees, drainage, lighting, basic seating, and maintenance for two summers, and post water monitoring and establishment period of infrastructure such as living streams where required by WAPC policy.

Additional facilities for POS may be provided at the discretion of the landowner/developer and may include provision of basic playground equipment, water fountains/ features, litter bins. Upgrading of existing POS areas where comprehensive planning has been undertaken and public realm upgrade requirements are set out in a Structure Plan, or similar planning instrument.

Mirvac have been maintaining the POS at Burswood Peninsula for over 17 years. In accordance with the provisions of SPP 3.6, it is standard industry practice for a developer to manage and maintain roads and infrastructure for a two-year period following construction completion before handing over responsibility to the local government. Mirvac and the Town are party to a Deed entered into in 2005 and this Deed refers to construction and maintenance obligations over an area referred to as the "POS". In 2017, the parties commenced discussions in relation to the handover of maintenance responsibilities. A position was agreed between Mirvac and Town staff proposing that the Town take over the remaining POS maintenance from 1 October 2021. This was not agreed by Council and is the subject of ongoing discussions.

The Structure Plan Amendment changes look to reflect the provisions of SPP 3.6, acknowledging that ongoing discussion with the Town is required to formally update the existing maintenance agreement.

### 3.6.4 State Planning Policy No. 4.2 – Activity Centres for Perth and Peel

*State Planning Policy 4.2 – Activity Centres for Perth and Peel* ('SPP 4.2') was adopted by the WAPC in 2010. It sets out the broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel. SPP 4.2 seeks to guide the distribution, function, broad land use and urban design criteria for activity centres and coordinate their land use and infrastructure planning. It also seeks to guide the integration of activity centres with public transport; ensuring that they contain a range of activities to promote community benefits through infrastructure efficiency and economic benefits of business clusters; and lower transport energy use and associated carbon emissions.

The Burswood Peninsula is identified as a 'District' level activity centre in the Activity Centres Hierarchy under the Perth and Peel @ 3.5 million Spatial Plan, Central Metropolitan Perth Sub-Regional Planning Framework and the Town of Victoria Park Local Planning Strategy. District Centres are defined under SPP 4.2 as having a greater focus on servicing the daily and weekly needs of residents. Their relatively smaller scale catchment enables them to have a greater local community focus and provide services, facilities and job opportunities that reflect the particular needs of their catchments.

### 3.6.5 State Planning Policy No. 5.4 – Road and Rail Noise

The Graham Farmer Freeway (Primary Regional Road) and Metropolitan passenger railway are located in proximity to the Structure Plan Area and accordingly, the provisions of *State Planning Policy 5.4 - Road and Rail Noise* ('SPP 5.4') are a relevant consideration. Revised SPP 5.4 was adopted by the WAPC in 2019. Its general objectives are to ensure people are protected from unreasonable levels of transport noise, and to ensure new development is compatible with existing transport corridors and freight operations. It provides standards for sensitive development, in particular residential development, within set trigger distances of major road or rail corridors.

The Structure Plan Area is partially located within the trigger distances associated with the Freeway and railway line, which are located to the east. Implementation of SPP 5.4 provisions are typically applied at the development approval stage. The Structure Plan Amendment does not propose any changes to the permissibility of land uses within the Structure Plan or Precinct Plan and does not prejudice the implementation of SPP 5.4 provisions at the subdivision or development stage.

### 3.6.6 State Planning Policy No. 7.0 – Design of the Built Environment

*State Planning Policy 7.0 – Design of the Built Environment* ('SPP 7.0') was adopted by the WAPC in 2019. It addresses design quality and built form outcomes and seeks to deliver the broad economic, environmental, social and cultural benefits that derive from good design outcomes and supports consistent and robust design review and assessment processes. It seeks to achieve this by setting out the objectives, measures, principles and processes which apply to the design and assessment of built environment proposals.

General design guidelines for development in the Structure Plan Area are set out in the Town of Victoria Park's Local Planning Policy No. 9 – Design Guidelines for Burswood Lakes ('LPP 9'). The Structure Plan was developed on the basis of sound and rationale design approach that responded to the area's context at the time. This context has since evolved and is significantly different to the context within which the Burswood Lake Structure Plan was developed in the early 2000's.

Whilst the general design approach remains relevant, there are aspects of the built form that warrant review having regard to the area's current context, most notably the scale of existing and proposed development within the broader precinct.

The proposed Amendment has been informed by a robust design review process, having been presented to the Town of Victoria Park's Design Review Panel on several occasions. Feedback received from the Panel, combined with input provided by the Town's Planning Department and the DPLH throughout the Structure Plan review process, ensures that the proposed Amendment provides a comprehensive and considered proposal that seeks to maintain the delivery of high quality built form within the Precinct.

### Context and Character

The Structure Plan Amendment proposes a considered response to pre-existing development in 'The Peninsula', positively reinforcing the intended character of the area, whilst still creating an opportunity for new buildings with a sense of individuality that can be identified in its greater context. The proposed buildings will be sensitive to the existing context and will be designed in a manner that is considerate of neighbouring lots whilst responding to the local context of Burswood including Swan River, Optus Stadium, Matagarup Bridge and the Crown Entertainment Complex.

### Landscape Quality

The Structure Plan Amendment continues to provide the opportunity to deliver key landscaping elements both for the residents and the wider community. The opportunity for integrated landscaping around the Amendment Area will soften the built form, accommodating low- and high-level planting, integrating it within its context. Extensive high-quality landscaping will continue to highlight open space within the public realm, prioritising community interaction, whilst referencing existing ecologies.

### Built Form and Scale

The Structure Plan Amendment is informed by design to embrace the surrounds and landmark views that will provide a new profile for the Burswood Peninsula Masterplan. The Amendment ensures that the new buildings are appropriately scaled, with articulated and dynamic façades that create the feeling of interaction and site response two neighbouring sites, streets and maintaining key view corridors.

### Functionality and Build Quality

The Structure Plan Amendment provides the opportunity for remaining development to achieve well resolved apartment layouts as well as functional communal spaces, provide optimised views to the wider context but also create usable private outdoor space, encouraging outdoor living further connecting the occupant to the Burswood context.

### Sustainability

The orientation and design of remaining development will continue to respond to site configuration and context to maximise natural ventilation and natural light, focusing on the overall amenity, reinforced through landscaping, providing an unmatched lifestyle offering.

### Amenity

The Structure Plan Amendment provides the opportunity for various key areas of amenity both across the Structure Plan Area and on individual sites.

### Legibility

Through a carefully considered design the Amendment Area will remain well defined, site responsive to the immediate context and highly legible within the precinct.

### Safety

In order to maximise opportunities for passive surveillance, communal spaces remain clearly identifiable through the strategic use of landscape and the overall integration of view corridors.

### Community

The retention and integration of POS and PAL opportunities, potentially integrating to the wider surrounds will continue to encourage the development of community by providing spaces for gathering and contribute to the overall masterplan of Burswood and the wider peninsula.

### Aesthetics

Drawing from the existing design language of the Burswood Precinct, this Amendment seeks to contribute to the design excellence of this community by providing a new response to the original design arch vision. The Building Control Envelope response for Lots 1 and 21 recognise this from the local context of the new Burswood.

### 3.6.7 State Planning Policy No. 7.3 – Residential Design Codes Volume 2 - Apartments

*State Planning Policy 7.3 - Residential Design Codes, Volume 2 'Apartments'* ('RDC Volume 2') was released in 2019. It replaced, in part, the provisions of the former RDC such that there are now two volumes of the RDC. Volume 1 applies to all single houses, all grouped dwellings, and multiple dwellings in areas with a coding of less than R40. Volume 2 applies to residential dwellings (apartments) in areas coded R40 and above, within mixed use development and activity centres.

The RDC Volume 2 focuses on improving design outcomes for apartments. It is a performance based policy that is applied in the assessment of development applications and contains a series of design elements, each dealing with a different aspect of building siting and design.

The residential development standards contained within the Structure Plan were based on the provisions of the 2002 RDC, being the operative version of the RDC at that time. The 2002 RDC contained a (then) new R-Coding of 'R-IC', with the initials 'IC' representing the term 'Inner City'. The Structure Plan and Precinct Plan P2 under LPS1 subsequently required that land within the Structure Plan Area be developed in accordance with the 'R-IC' coding of the RDC unless specifically varied in the Precinct Plan.

In 2019, Volume 2 of the RDC was introduced to specifically address residential developments involving apartments in areas coded R40 and above, and the residential component of mixed-use developments. All other forms of residential development are addressed under Volume 1 of the RDC.

The R-coding 'R-IC' is no longer referenced in either Volume 1 or 2 of the RDC and, by default, is replaced with the 'R-AC3' coding.

Table 2.1 in Volume 2 of the RDC sets out the primary controls that apply to development under each Site R-Coding. Some of these controls have been amended or replaced by specific provisions in the Precinct Plan under LPS1, reflecting the area's unique site characteristics and the need for site-specific development standards. However, the controls amended in the Precinct Plan were prepared on the basis of the operative RDC at the time. These controls have changed as a result of the introduction of the RDC Volume 2 and accordingly, as part of the Structure Plan review process, the development standards set out in the Precinct Plan and Volume 2 of the RDC have been re-examined. A number of modifications are required to bring the Precinct Plan and Structure Plan controls into line with Volume 2 of the RDC. These are explained in Section 4.0 of this report.

### 3.6.8 Development Control Policy 1.6 – Planning to Support Transit Use and Development

*Development Control Policy 1.6 – Planning to Support Transit Use and Development* ('DC 1.6') was adopted by the WAPC in 2006. It seeks to maximise the benefits to the community of an effective and well-used public transit system by promoting planning and development outcomes that will support and sustain public transport use. DC 1.6 recognises, that within existing developed areas such as the Burswood Peninsula there are clear opportunities to intensify existing activities and to promote new uses that will make better use of transit facilities and services.

Higher residential densities and mixed use developments in the walkable catchments of transit facilities have the potential to reduce car dependence; to increase accessibility for those without access to private cars; to reduce congestion on the road network and the demand for new road space; to reduce fuel consumption and air pollution; and to provide quality diverse and affordable forms of housing and development. These benefits combine to produce an attractive and viable alternative to car-based suburban and urban fringe development.

The Structure Plan Area is well serviced by public transport with the Armadale Line of the metropolitan rail system running through the Burswood Peninsula, providing good access to the wider public transport network. The Structure Plan Area is located approximately 300m north of the Burswood Train Station with the majority of dwellings within the Structure Plan Area being located within a 800m 'walkable catchment' of this station. The Structure Plan Area is also located approximately 550m south-east of the Stadium Train Station, which currently operates as an 'event' station providing services during major sporting events at Optus Stadium.

The Structure Plan Area is also located in proximity to high frequency bus services which operate to the south along Great Eastern Highway.

The DSP notes that the Burswood Station may be upgraded as part of the integrated redevelopment of the Stations East and West precincts. It also notes that the Stadium Station may be upgraded from an event station to a full service station to accommodate increased demand for rail services

The Structure Plan Area's proximity to public transport provides strong transport links to the Perth CBD and regional centres and offers an opportunity for reduced car usage as promoted by DC 1.6.

## 3.7 Local Planning Policies

### 3.7.1 Local Planning Policy 9 – Design Guidelines for Burswood Lakes

*Local Planning Policy 9 – Design Guidelines for Burswood Lakes* ('LPP 9') was adopted by the Town of Victoria Park in May 2003. It sets out the planning and design framework for all development within the 'Special Use' Zone in Precinct Plan P2, which primarily comprises the Burwood Lakes Structure Plan Area. LPP 9 was drafted after the adoption of the Structure Plan and therefore is not specifically referenced in the Structure Plan report.

The Design Guidelines under LPP 9 seek high quality designs that respond sensitively to their context and respect current and/or future desired character of the area. A performance approach is taken in the Design Guidelines where the emphasis is upon requiring the design to "perform" by satisfying desired outcomes rather than by meeting a fixed set of standards. The Design Guidelines provide a generic set of design criteria to be applied to all sites within the Structure Plan Area and are to be read in conjunction with other relevant documents including LPS1, the Precinct Plans, the Structure Plan and the RDC Volume 2.

The RDC Volume 2 includes a number of design elements that are also contained within the Design Guidelines in LPP 9. Accordingly, there is a degree of crossover between the provisions of each. To avoid confusion, Section 6 in Part One of this Structure Plan Amendment report includes the following statement:

> *"Where there are inconsistencies between this Structure Plan (including Amendments) and Council's Local Planning Policies, then the criteria of this Structure Plan (including Amendments) prevails to the extent of the inconsistency".*

### 3.7.2 Local Planning Policy 20 – Design Guidelines for Development with Buildings Above 3 Storeys

*Local Planning Policy 20 – Design Guidelines for Development with Buildings Above 3 Storeys* ('LPP 20') was adopted by the Town in October 2004. It sets the planning and design framework for any development incorporating buildings above 3 storeys or 11.5m in height (whichever is the lesser) and applies to all forms of development including residential, commercial and mixed use. The aim of LPP 20 is to facilitate appropriate high quality designs that respond to their context and respect the current and/or future desired character of an area.

As with the provisions of LPP 9, LPP 20 is a performance-based policy that is based on satisfying the intent of the Design Guidelines rather than meeting fixed prescriptive standards. It addresses matters such as site planning, streetscape, building appearance and neighbourhood character, private open space and resource efficiency.

The Design Guidelines contained in LPP 20 are similar in many respects to those contained in LPP 9 and the RDC Volume 2. Accordingly, there is a degree of crossover between the provisions of each. In order to avoid the duplication of design guidelines and streamline the assessment process, Section 6 in Part One of this Structure Plan Amendment report includes the following statement:

> *"Where there are inconsistencies between this Structure Plan (including Amendments) and Council's Local Planning Policies, then the criteria of this Structure Plan (including Amendments) prevails to the extent of the inconsistency".*

### 3.7.3 Local Planning Policy 23 – Parking Policy

*Local Planning Policy 23 – Parking and Access Policy* ('LPP 23') was adopted by the Town in September 1998 and most recently revised in January 2011. It sets out the Town's parking requirements and outlines its approach to the provision of parking facilities for non-residential and residential uses. The aim of LPP 23 is to facilitate the development of adequate parking facilities and safe, convenient and efficient vehicle and bicycle access for pedestrians, cyclists and motorists.

LPP 23 provides specific rates for parking provision based on land use. For residential land uses, parking is to satisfy the requirements of the RDC. The Precinct Plan (P2) under LPS1 provides for variations to the parking provisions of the RDC within the Structure Plan Area.

### 3.7.4 Local Planning Policy 29 – Public Art Private Developer Contributions

*Local Planning Policy 29 – Public Art Private Developer Contributions* ('LPP 29') sets out the Town's requirements for the provision of public art as a condition of Development Approval. It was adopted in May 2008 and most recently reviewed in March 2020. It requires that for developments within certain Precincts with a construction value in excess of $5 million, a contribution to public art is required to the value of 1% of the total construction value. LPP 29 is not a statutory document and can be varied in situations where the requirement is not fair or reasonable.

Provision 1.2 (a) of LPP 29 excludes the requirement for a public art contribution to be made for development within an area the subject of an approved Structure Plan which contains alternative requirements for the provision of public art. The Burswood Lakes Structure Plan was adopted in 2003, some five years before the original LPP 29 was prepared, and accordingly it doesn't contain any provisions which specifically reference and seek to vary the requirements of LPP 29. It does, however, contain alternative requirements to public art in conjunction with the delivery of significant public realm.

The Structure Plan Area is a master-planned precinct which Mirvac has been exclusively responsible for planning and delivering over the past 18 years. During this time, Mirvac has delivered exceptional public realm amenity outcomes through the provision of high-quality design, POS provision and treatments, and public art well beyond normal development standards and well prior to LPP 29 being drafted.

Given the high-quality amenity already provided and maintained within the Structure Plan Area, the requirement to provide public art as a condition of Development Approval is capped for Lots 1 and 21. Public art is discussed in further detail at Section 4.11 of this report.

# 4 Local Structure Plan Amendment

This section of the report identifies the modifications proposed in this Structure Plan Amendment request and provides rationale and justification in support.

## 4.1 Building Height

Maximum building heights under the current Structure Plan are applied on a lot-specific basis and are addressed in Part 3 - Section 3.3 and illustrated in **Figure 19 – Structure Plan** and **Figures 24 – 29 Building Control Envelopes** of the 2003 Structure Plan.

Notwithstanding the standards set out in the Structure Plan, variations to building height have been approved and/or constructed. These are listed in **Table 6** below:

| Lot No. | Building Height Standard under Structure Plan* | | Approved Building Height | | Variation | |
|---|---|---|---|---|---|---|
| | Height (storeys) | Height (metres) | Height (storeys) | Height (metres) | Height (storeys) | Height (metres) |
| 9* | ~~6~~ 24 | ~~21~~ 75 | 24 | 75 | 18 | 54 |
| 10 | 21 | 66 | 31 | 100.62 | 10 | 34.6 |
| 22 | 7 | 24.5 | 8 | 27.75 | 1 | 3.25 |
| 25* | ~~5~~ 16 | ~~17.5~~ 51 | 16 | 51 | 11 | 33.5 |

** Varied by Amendment No. 1 (2017)*

***Table 6: Approved Building Height Variation Examples***

The proposed Amendment seeks to modify the building height standards for Mirvac's two remaining undeveloped lots (Lots 1 and 21). The modifications proposed are shown in **Table 7** below:

| Lot No. | Building Height Standard under Structure Plan | | Building Height Proposed in this Amendment | | Variation | |
|---|---|---|---|---|---|---|
| | Height (storeys) | Height (metres) | Height (storeys) | Height (metres) | Height (storeys) | Height (metres) |
| 1 | 12 | 42 | 41 | 143 | 29 | 101 |
| 21 | 6 | 21 | 8 | 32.85 | 2 | 11.85 |

***Table 7: Proposed Building Heights for Lots 1 and 21***

Figures 19 and 24 - 30 of the Structure Plan have been updated to reflect the variations previously approved (**Table 6**) and to modify the building height standards for the Lots 1 and 21 (**Table 7**).

The proposal to increase building height and plot ratio standards for Lots 1 and 21 is based on a sound and considered architectural and land use planning rationale. In reviewing the Structure Plan, the overall form and function of the Structure Plan Area within its current and future context was considered.

The Peninsula Development commenced in 2003 and is now nearing completion of the last few stages. This inner urban site in the Town of Victoria Park is an attractively planned new neighbourhood and one that has undergone a change in character with the construction of the new stadium, Matagarup Bridge across the Swan River, expansion of the Crown Entertainment Complex, blueprint for the Burswood Park Masterplan as well as planned increase to residential densities and evolving urban form of surrounding areas.

The Peninsula is a highly visible landmark development particularly from Graham Farmer Freeway and the new stadium with the evolution of the tower arc providing a key principle feature of the precinct. Lower scale residential development creates a foreground for the spine of towers and provides interface to the proposed Burswood Park Masterplan.

The design response for the remaining stages is a response to the changing nature of Burswood Peninsula and evolution of the character of the precinct.

The northern precinct of the Structure Plan Area is defined by Lot 2 on Victoria Park Drive, Lots 21 and 22 Bow River Crescent facing the proposed Urban Forest (refer to Section 3.2.5 and Figure 10), and importantly the landmark towers, being Tower 6 (Lot 10) and Tower 7 (Lot 1) on the northern corner at the junction of the proposed Urban Forest and Victoria Park Drive.

Since the original Structure Plan was published in 2003, the built form and landscape context has evolved significantly. Between the western boundary of the Structure Plan Area and the Swan River was the (larger) Golf Course and open spaces associated with the Casino. The Casino was the most significant local structure at the time and was an important height reference. The closest residential buildings of a scale similar to those proposed in 2003 were on Terrace Road in the Perth CBD or on the South Perth foreshore. The 2003 urban context is described in the photomontage study pages of the 2003 Structure Plan document.

Today, the precinct still provides commanding views to the west towards the Perth CBD but with a substantially altered skyline capturing now iconic landmarks including the Matagarup Bridge and Optus Stadium, and with Crown Towers bookending the south-western corner of the Structure Plan Area. Refer **Figure 12 – Burswood Peninsula Skyline 2021**.

The Burswood Park has also evolved with an adopted Burswood Park Masterplan providing the "blueprint" for future development of Burswood Park. This high-level plan proposes a range different community land-uses for Burswood Park, including the Urban Forest Parkland, which importantly provides not only a guide to detailed design for the adjacent landholding, but provides context, consideration, and response for the proposed Structure Plan Amendment.

There are now a number of buildings of similar or greater scale either completed, underway or proposed in the immediate neighbourhood. This includes the planned high-density redevelopment of the Belmont Park Racecourse (maximum height of 53 storeys) and Burswood Station East and West precincts (up to 28 storeys). This new urban context is explored in the Burswood Peninsula DSP (2013) and illustrated in **Figures 6** and **7** of this report.

Additionally, there are several significant landmark building developments completed or approved including The Crest on Goodwood Parade (21 storeys) and the recently approved mixed-use development at 43 - 47 Burswood Road (22 storeys).

The original 2003 Structure Plan sets out the rationale for building heights which was based on a 'height arc' principle with a graduated increase in the height of towers towards the north of the site and then a stepping down. This approach was both design-led and influenced by Perth Airport height limitations applicable at the time which are no longer a restriction.

In terms of the wider site context, the 'height arc' principle has lost its relevance given the changes to the built environment, and the strategic planning that has occurred in the surrounding area. In this context there is now a broader acceptance of taller buildings in and around the Burswood Peninsula.


*Drone photograph over the Swan River looking south west across the Burswood Peninsula.*

*Drone photograph looking west across the Burswood Peninsula towards the Perth CBD.*

***Figure 12: Burswood Peninsula Skyline 2021***

It is appropriate to now consider the height profile of the chain of buildings that include the completed towers within the Structure Plan Area, Crown Towers to the south and Optus Stadium to the north-west. In this context, rather than providing a smaller transitional building as in the 2003 Structure Plan, Lot 1 takes on a role as an important gateway and landmark, distinguishing the corner of Victoria Park Drive and the Golf Course in addition to providing an architectural bookend to balance the height of Crown Towers.

As a result, the 2003 height arc, in the 2022 context, inverts with high points at Victoria Park Drive and the Crown Towers. The 2003 bell curve is however still relevant for the lower buildings along the western edge providing a transition to the two and three storey scale of the housing on Victoria Park Drive on Lots 2 through to 8 and a transition to the completed three and four storey buildings on Lots 24 and 23 to the south. Refer **Figure 13 – Amended Figure 2 - Site Section and Elevation**.

The proposed increase in building height on Lots 1 and 21 is acceptable in this new site context. The increase in building heights will sit comfortably within the wider Burswood site context when viewed both from a distance and having regard to the likely future form and height of other buildings in the immediate area.

Updated photomontages are provided at **Figure 14 – Amended Figure 5: Photomontage of Burswood Lakes**, and **Figure 15 – Amended Figure 8: Photomontage of Burswood Lakes**.

The impact of increased building height on overshadowing in and around the Structure Plan Area has been considered through a revised shadow analysis. As part of this analysis, indicative building massing plans were prepared for Lots 1 and 21 based on the height, plot ratio and setback modification proposed in this Amendment. Massing plans reflecting the approved building form on Lots 9, 10, 22 and 25 were also included. These plans were then inserted into the model used to generate the shadow analysis contained in the 2003 Structure Plan Report. The results of the analysis are illustrated in **Figure 16 – Amended Figure 9: Proposed Summary Shadow Analysis** and **Figure 17 – Amended Figure 10: Proposed Winter Shadow Analysis**.

Shadow studies have been undertaken to measure the impact that a taller building on Lot 1 would have on the Lake Park, internal streets, and open spaces. Consideration has been given to the impact on the skyline that a taller building might have, seen from the houses and open spaces to the south. Finally, consideration has been given to the impact a taller building will have on views from other towers, both existing and proposed, and how the proportions of these buildings and the spaces between them will appear on the skyline from a distance.

All these considerations have informed the development of the envelope for a tower form on Lot 1. The envelope is slender along a north-south axis casting a long, moving shadow that has no impact of consequence on the amenity of the streets and open spaces to the south. The profile of the envelope also ensures that the Lot 1 tower will appear as an elegant building against the sky seen from the Lake Park or Bow River Crescent.

## 4.2 Plot Ratio

As is the case with building heights, plot ratio standards under the current Structure Plan are applied on a lot-specific basis and are addressed in Part 3 - Section 3.3 and illustrated in **Figure 19 – Structure Plan** and **Figure 30 – Plot Ratio Calculations** of the 2003 Structure Plan Report.

Several variations to plot ratio have previously been approved. These are listed in **Table 8** below:

| Lot No. | Plot Ratio Standard under Structure Plan* | Approved Plot Ratio | Variation |
|---|---|---|---|
| 9* | ~~1.36: 1~~ 4.00:1 | | 2.64: 1 |
| 10 | 5.34: 1 | 6.55:1** | 1.21:1 |
| 22 | 1.87: 1 | 3.24: 1 | 1.37:1 |
| 25* | ~~0.91: 1~~ 2.30:1 | | 1.39: 1 |

** Varied by Amendment No. 1 (2017)*
***Based on original lot area including land proposed to be set aside for POS as shown in Amended Figure 31. If POS is excluded the revised plot ratio is in the order of 8.50:1.*

***Table 8: Approved Plot Ratio Variation Examples***

The proposed amendment seeks to modify the plot ratio standards for Lots 1 and 21. The modifications proposed are shown in **Table 9** below:

| Lot No. | Plot Ratio Standard under Structure Plan | Proposed Plot Ratio | Variation |
|---|---|---|---|
| 1 | 2.44: 1 | 8.75: 1 | 6.31: 1 |
| 21 | 1.81: 1 | 3.30: 1 | 1.49: 1 |

***Table 9: Proposed Plot Ratios for Lots 1 and 21***

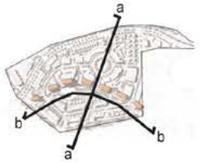
The inclusion of a plot ratio development standard within the Structure Plan was originally questioned during preparation of the Structure Plan with Section 3.3 noting that:

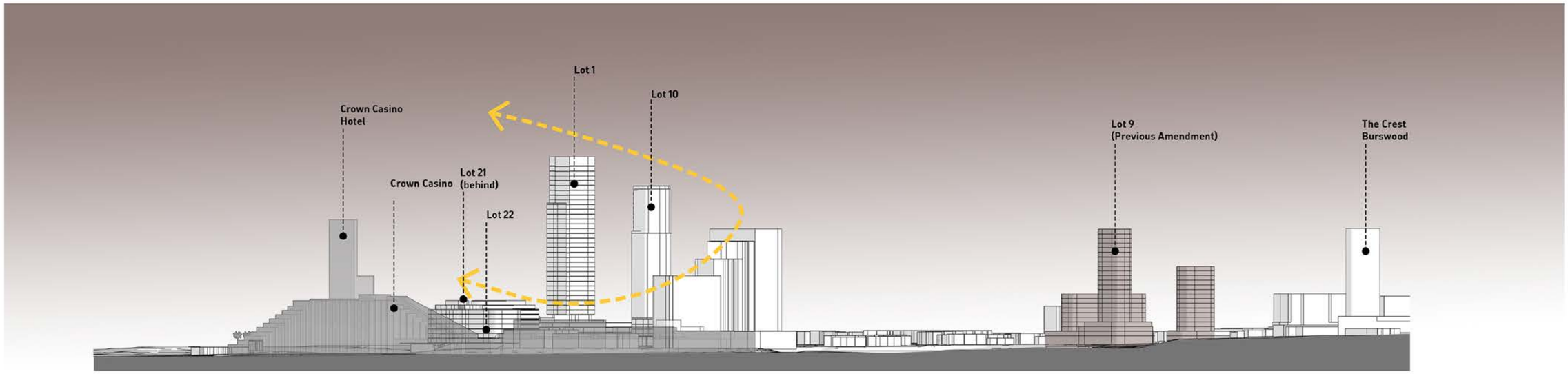
> *"As a tool for influencing built form, plot ratio is imprecise. Within a particular plot ratio (in the absence of other controls), owners can build a tall thin building or a short squat building. Limiting the total floor area does not necessarily ensure view sharing opportunities, provide human-scale at the street, limit overshadowing of adjacent properties or public spaces, mitigate wind areas, or ensure appropriate form. Therefore, in addition to plot ratio, this Structure Plan contains building control envelopes…".*

**Table 8** above, demonstrates the type of variations to plot ratio standards that have been supported to date under the Structure Plan. As plot ratio is a planning control under LPS1, clause 29 of LPS1 is taken into consideration when determining the acceptability of any plot ratio variation proposed.

Volume 2 of the RDC prescribe a maximum plot ratio of 2.0 in areas coded 'R-AC3', however this standard may be varied by a Local Government through the preparation of local planning policies or local development plan, or alternatively assessed under the corresponding Element Objectives.

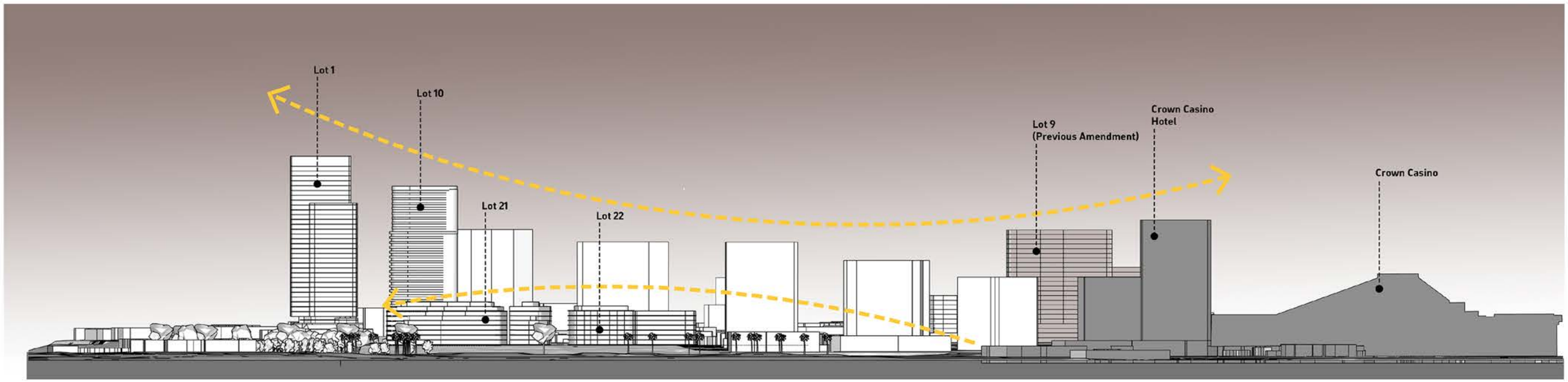
# AMENDED FIGURE 2: SITE SECTION AND ELEVATION




East-West Section A-A

*Hames Sharley 2022*




North-South Section through Lake Park B-B

*Hames Sharley 2022*

***Figure 13 - Amended Figure 2: Site Section and Elevation***

## AMENDED FIGURE 5: UPDATED PHOTO MONTAGE

Montage view of the proposed skyline from the western bank of the Swan River

*Hames Sharley 2022*

**Figure 14 – Amended Figure 5: Photomontage of Burswood Lakes**

## AMENDED FIGURE 8: UPDATED PHOTO MONTAGE

Hames Sharley 2022

Montage view of the proposed skyline from Camfield Drive, looking south-east across the Structure Plan Area.

**Figure 15 – Amended Figure 8: Photomontage of Burswood Lakes**

# AMENDED FIGURE 9: PROPOSED SUMMER SHADOW ANALYSIS

SUMMER SOLSTICE - DECEMBER 21ST

Shadow Analysis by Hames Sharley, 2022

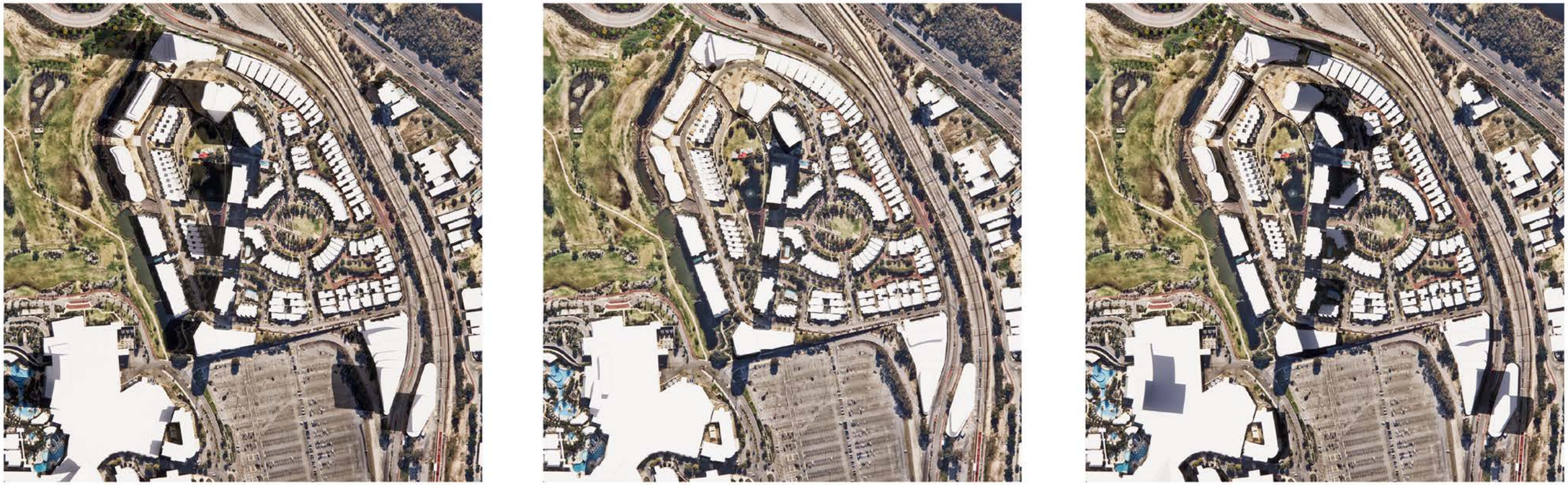


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*Figure 16 - Amended Figure 9: Proposed Summer Shadow Analysis*

# AMENDED FIGURE 10: PROPOSED WINTER SHADOW ANALYSIS

WINTER SOLSTICE - JUNE 21ST

Shadow Analysis by Hames Sharley, 2022

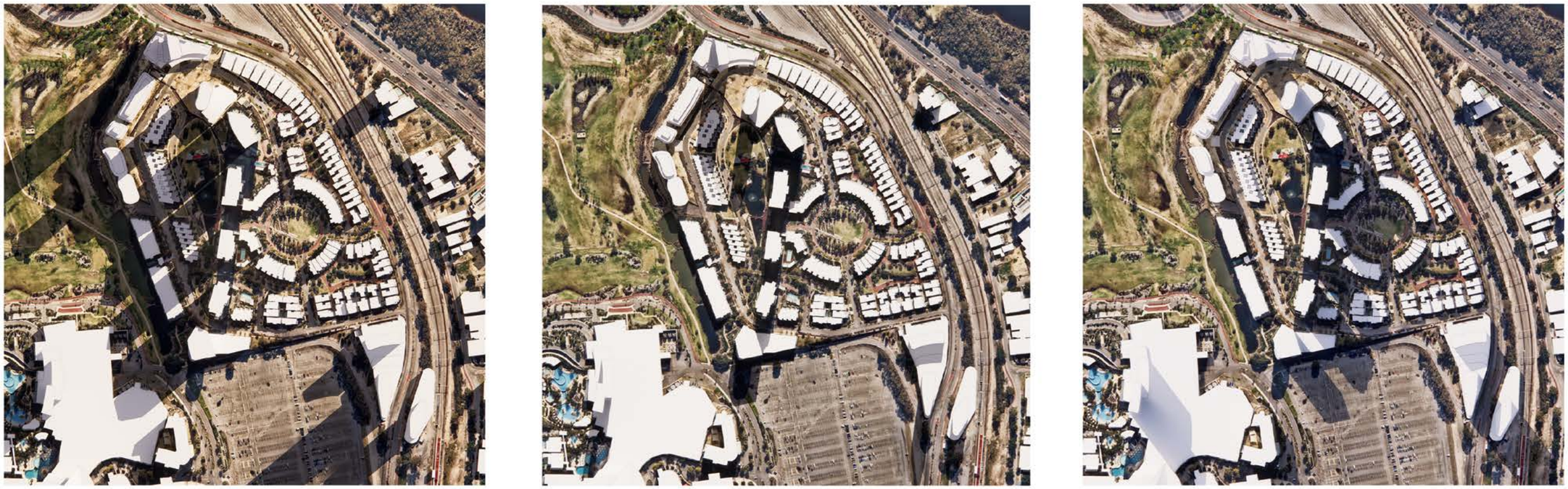

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*Figure 17 - Amended Figure 10: Proposed Winter Shadow Analysis*

It is important to note that the Structure Plan contains detailed Building Control Envelopes for each of the 26 lots within the Structure Plan Area (Refer to Figures 24 – 29). These Building Control Envelopes reflect the desired bulk of built form through consideration of specific building elements such as height, site coverage, width and setbacks. In this context, a prescribed plot ratio is less relevant as a form of building control within the Structure Plan Area given the existence of lot-specific Building Control Envelopes, and this is reflected in the number of plot ratio variations approved.

This Amendment proposes that the plot ratio for Lot 1 be amended to 8.75: 1 and for Lot 21 to 3.30: 1. These plot ratios are more formally influenced by the amended Building Control Envelopes for these lots. Refer **Amended Figures 24 – 29 – Updated Building Control Envelopes** in Part One of this document. The updated Building Control Envelopes are discussed in further detail under section 4.4 Setbacks.

## 4.3 Site Areas Per Dwelling

Figure 30 of the current Structure Plan provides for Minimum and Average 'Site Area Per Dwelling' requirements for each superlot.

This planning control existed in the version of the RDC that was operative when the Structure Plan was adopted in 2003. In 2010, amendments to the RDC removed the requirement of minimum site areas for multiple dwellings in medium to high density coding in place of other development controls such as plot ratio, building height and setbacks. Accordingly, minimum and average 'Site Area Per Dwelling' requirements no longer apply to the Structure Plan Area.

## 4.4 Setbacks

Development standards relating to building setbacks are set out in Part B – Section 3.3 of the current Structure Plan and illustrated in a series of three-dimensional massing plans referred to as Building Control Envelopes and contained in Figure 24 to 29.

As part of the Structure Plan review process, the location and form of future development on Lots 1 and 21 has been examined. Variations to the Building Control Envelopes for Lots 1 and 21 are proposed to reflect the desired design outcome for each site. **Tables 10** and **11** below set out the current and proposed setback controls relating to Lots 1 and 21 Bow River Crescent. Figures 24 - 29 have also been amended to reflect the setback modifications proposed. Refer **Amended Figures 24 - 29 - Updated Building Control Envelopes** in Part One of this document.

| Setback | Current Requirement | | | | Proposed Structure Plan Amendment Modification | |
|---|---|---|---|---|---|---|
| | Structure Plan | | | Precinct Plan (RDC) | | |
| | Ground to Level 4 | Level 5 to Level 7 | Level 8 above | | Ground to Level 6 | Level 7 above |
| Northern | 1.5m | 1.5m | 10.5m -21m | Nil | Nil | Nil |
| Eastern | Nil | 3m | 3m | Nil | 14m | 45m |
| South-East | 1.5m | - | 3m | 2m | 1.5m | 4.5m |
| Southern | 20m | 23m | 23m | Nil | Nil | 6m |
| Western | Nil | 3m | 3m | Nil | Nil | 3m |

***Table 10: Existing and Proposed Minimum Building Setbacks - Lot 1 Bow River Crescent***

| | Current Requirement | | Proposed Amendment |
|---|---|---|---|
| | Structure Plan | Precinct Plan (RDC) | |
| Northern | Nil | Nil | 12m |
| Eastern | 1.5m | 2m | 1.5m |
| South-East | Nil | Nil | Nil |
| Southern | Nil | Nil | Nil |
| Western | Nil | Nil | Nil |

***Table 11: Existing and Proposed Minimum Building Setbacks - Lot 21 Bow River Crescent***

The building on Lot 1 has been identified as a taller, landmark building with the site constraints of the warning barrier limiting the ability for basement parking. With the interface of the podium to the proposed Urban Forest (refer to Section 3.2.5 and Figure 10), height transition to Victoria Park Drive and the single housing on Lots 2 and 3 to the east, consideration to the articulation and treatment of the edges for this site will need to be considered.

The taller component of the building envelope for Lot 1 has been placed against the northern boundary to maximise the gap between the Lot 1 tower and the adjacent tower on Lot 10 when seen from the west or the east and as intended in the 2003 Structure Plan. This also enables views to the CBD, the Matagarup Bridge, and to Optus Stadium from the proposed Lot 10 tower. The envelope is set back from the western edge to allow the height of the podium to define the scale of the northern corner on Victoria Park Drive and step up to the height of the building on Lot 21 in line with the 2021 lower bell curve.

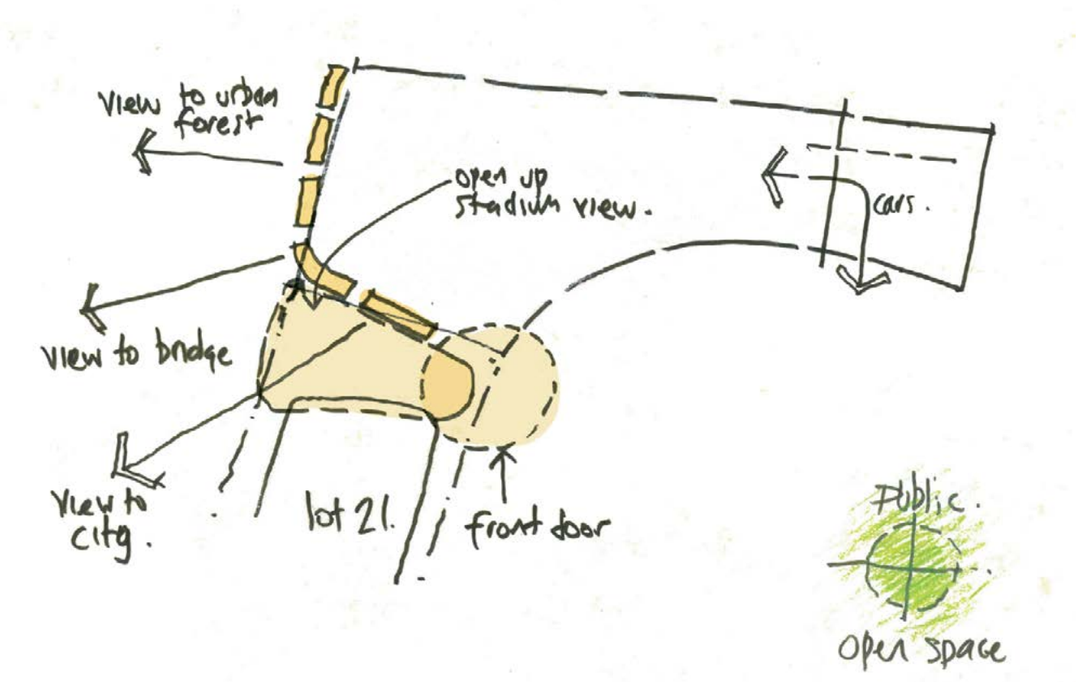



*Image: Hames Sharley, 2021*

On Bow River Crescent, Lot 1 faces the houses at the north end of the Lake Park and adjacent to the single residential dwellings on Lot 2. In this context, appropriate height, articulation and activation of the building form is intended, with some additional level change at street level to provide privacy for residents. The facade would be appropriately set back from the street to provide a clear residential street interface. Opportunities exist for the design to consider the terrace houses around the Circular Park or the apartment edge facing the Circular Park on Lots 12 and 13.

To the west, Lot 1 faces the future Urban Forest and benefits from views to Optus stadium, Matagarup Bridge, Swan River and the Perth CBD. The western and future plaza edges will be designed with best practices in mind and to ensure fundamental environmental design is captured to promote vibrant and safe environments. The scale of these facades will be defined by the height of the Lot 1 podium, responding to oriented views, and importantly overlooking the Urban Forest and future plaza.

The Victoria Park Drive podium edge will require design consideration to respond appropriately to the height transition. Victoria Park Drive is wide, hot and inhospitable and is edged to the north by a Perth Transit Authority ('PTA') bus laydown facility. Despite the difficulties at street level, above podium height there will be opportunities for views across the top of Victoria Park Drive and the PTA laydown facility to the bend in the river, to Ascot and to Maylands in the distance.

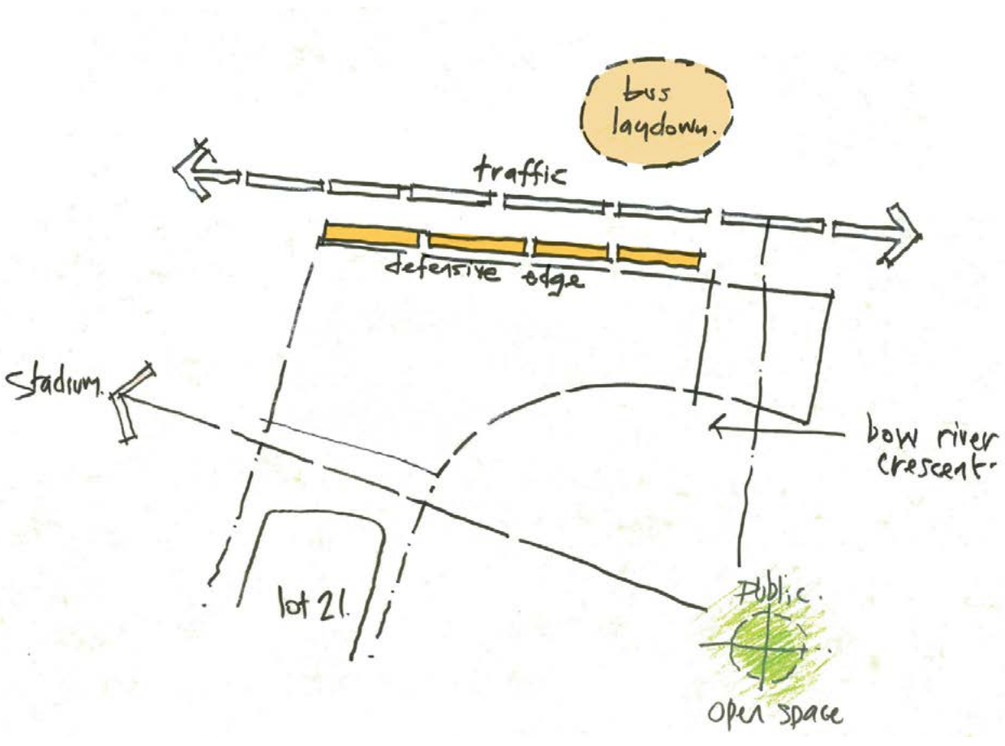



*Image: Hames Sharley, 2021*

There may be opportunities to create open spaces usable by residents or the public that are elevated above the street. The height of the podium will look to consider the transition to housing on Lot 2 with the tower having an open residential character and look north across Victoria Park Drive to the river.

A building on Lot 1 will be three-dimensional in its nature due to the prominence that Lot 1 has in all directions by way of location and geometry. In this regard, it is important to consider that the Victoria Park Drive façade will never be seen in isolation; it will be seen in context with and as a counterpoint to the busy residential façade facing the Urban Forest or the residential building above.

The envelope is placed against the northern boundary to maximise the gap between the Lot 1 tower and the adjacent tower on Lot 10 when seen from the west or the east and as intended in the 2003 Structure Plan. This also enables views to the CBD, the Matagarup Bridge, and to Optus Stadium from the proposed Lot 10 tower. The envelope is also set back from the western edge to allow the height of the podium to define the scale of the northern corner on Victoria Park Drive and step up to the height of the building on Lot 21 in line with the 2021 lower bell curve.

The road layout, location of built form and distribution of open space within the Structure Plan Area is illustrated in Figure 18 of the 2003 Structure Plan Report. This Figure has been updated as part of the Structure Plan review process to include the location and extent of built form approved within the Structure Plan Area but not yet constructed and to illustrate the location and extent of built form specifically proposed on Lots 1 and 21 by way of the setback modifications described above. Refer **Amended Figure 18 – Amended Figure 18: Indicative Development Plan**.

## 4.5 Permitted Uses

The permissibility of land uses within the Structure Plan Area is set out in Part B - Section 4.3 of the current Structure Plan. It lists the specific classes of land uses which are either 'Permitted' ('P') or 'Discretionary' ('AA') within the Special Use Zone.

The list is slightly inconsistent with the 'Use Area' Table for the Special Use Zone as contained within the Burswood Precinct – Precinct Plan (P2) under LPS1. **Table 12** below provides a comparison between the two.

The symbols used the table have the following meanings:

- *'P' means that the use is permitted by the Scheme.*
- *'AA' means that the use is not permitted unless the Council has granted Development Approval.*
- *'X' means a use that is not permitted by the Scheme.*

Where no symbol appears, that particular land use is not included as a land use under the Structure Plan.

# AMENDED FIGURE 18: INDICATIVE DEVELOPMENT PLAN


Hames Sharley, 2022

*Figure 18: Amended Figure 18 – Indicative Development Plan*

| Use Class | Permissibility | |
|---|---|---|
| | Structure Plan | Precinct Plan |
| Consulting Rooms, Day Care Centre | AA | AA |
| Convenience Store, Service Station | | X |
| Educational Establishment, Place and Worship | | AA |
| Fast Food Outlet, Restaurant | AA | AA |
| General Industry, Transport Depot | | X |
| Hazardous Industry. Noxious Industry | | X |
| Home Occupation | AA | AA |
| Home Office | P | P |
| Hospital, Nursing Home, Residential Building | | AA |
| Hotel, Motel, Tavern | | AA / X |
| Light Industry | | X |
| Liquor Store – Small | | X |
| Liquor Store - Large | | X |
| Lodging House, Serviced Apartment | AA | X / AA |
| Massage Rooms | | X |
| Motor Vehicles and Marine Sales Premises, Open Sir Sales and Display | | X |
| Nightclub | | X |
| Office | AA | AA |
| Restricted Premises | | X |
| Shop | AA | AA |
| Showroom | | X |
| Single House, Single Bedroom Dwelling, Group Dwelling, Aged or Dependent Persons' Dwelling, Multiple Dwelling | P | P |
| Warehouse | | X |

***Table 12: Comparison of Land Use Permissibility***

To ensure consistency between the land use permissibility controls in the Structure Plan and the Precinct Plan, Section 4.3 of the Structure Plan is to be amended to reflect the 'Use Class' Table in the Precinct Plan.

This amendment is of an administrative nature and does not alter the purpose or intent of the Special Use Zone.

## 4.6 Dwelling Numbers

The number of dwellings contemplated within the Structure Plan Area is currently 1,250 pursuant to Part B – Section 4.4. This calculation is the total of the individually identified maximum number of dwellings assigned to each of the 26 lots. Dwelling numbers are shown on **Figure 19 – Structure Plan** and **Figure 30 – Plot Ratio Calculations** of the 2003 Structure Plan Report.

Notwithstanding the maximum dwelling numbers prescribed under the Structure Plan, a number of variations have been granted over the years, some as a result of the exercise of discretion, and others as a result of Amendment No. 1 to the Structure Plan. In many instances sites have been underdeveloped when compared to the originally forecast yield. Few sites have delivered the exact dwelling number originally estimated as detailed naturally results in some variation. These variations are detailed in Section 3.2.2.4 and **Table 5**.

The analysis reveals that within the Structure Plan Area, a total of 662 dwellings have been constructed and an additional 275 have been granted Development Approval. A further 732 dwellings are estimated, resulting in a total estimate of 1,669.

This Amendment seeks to modify the dwelling yield for Lots 1 and 21 from 74 and 47 dwellings to 220 and 125 dwellings respectively (Refer **Table 13**). This represents an increase of 146 and 78 on the two sites, being a 224 total dwelling increase.

It is important to note that when broken down by the three identified 'Areas' within the Structure Plan in accordance with **Table 5**, the dwellings are:

- **Area A** (State of WA) – no change and still estimated to provide 50 dwellings;
- **Area B** (Mirvac 'The Peninsula') – now amended from a forecast reduction of 77 dwellings within Area B when compared to the 2003 Structure Plan (given underdevelopment of a number of sites), to an increase of 147 dwellings. Given the wider context analysis undertaken within this amendment document, this remains a very modest variation to the 2003 estimate for Area B; and
- **Area C** (EG Funds Lots 9 & 25) – already modified by Amendment No.1 from 65 dwellings to 561 dwellings, being a 496 dwelling increase. No further change proposed.

In summary:

- The total combined number of constructed (662), approved (275) and estimated (732) dwellings is 1,669;
- This exceeds the 2003 Structure Plan dwelling yield of 1,250, which should have been updated by an additional 496 dwellings to a new total of 1,746 at the time of Amendment No.1 to properly account for the amendment changes; and
- The above estimates are subject to further amendment for sites 1 and 21 via this Amendment.

Amendment No. 1 (2017) to the Structure Plan varied the allowable dwelling yield on Lots 9 and 25 by 496 however the overall allowable dwelling yield (1,250) was not adjusted up in proportion. Without this anomaly being corrected, the Structure Plan creates uncertainty and reflects a 'first in best dressed' scenario with regard to dwelling yield. Put simply, those lots that develop first could seek to take advantage of an overall dwelling limit to the detriment of later developments and the broader precinct.

To accommodate the variations granted to date and enable some limited increase in the number of dwellings permitted on Lots 1 and 21, this Amendment proposes to remove the maximum overall dwelling yield provision under the Structure Plan and, in its place, apply indicative dwelling yields for each Lot. For those lots which have already been developed, or are subject to an approved Development Application, the constructed and/or approved dwelling numbers for that lot will be shown on **Amended Figure 19 – Structure Plan** in Part One of this document. **Table 13** sets out the proposed dwelling yields for Lots 1 and 21.

| Lot No. | Dwelling yield as per 2003 Structure Plan | Dwelling yield proposed by Amendment | Variation |
|---|---|---|---|
| 1 | 74 | 220 | 146 |
| 21 | 47 | 125 | 78 |
| Total | 121 | 345 | 224 |

***Table 13: Proposed Dwelling Yields for Lots 1 and 21***

The dwelling yield for the remaining undeveloped lot owned by the State and leased to the PTA (Lot 26) is to remain at 50 dwelling as per the 2003 Structure Plan.

The additional dwelling capacity increase of 224 dwellings proposed by the Amendment is considered achievable in this location due to its proximity to high order road and rail infrastructure, accessibility to the Perth city centre, the Swan River and substantial public parklands, and the ability to achieve higher residential densities without impacting on existing lower density neighbourhoods.

An increase in the number of allowable dwellings will contribute to a greater population base within the Structure Plan however the increase is expected to be proportionally lower than predicted under the 2003 Structure Plan. In 2003, population estimates were based on an average of 2.5 people per dwelling (3,000 people accommodated in 1,200 dwellings). Changes in demographic profiles have increased the demand for single bedroom and more compact affordable dwellings. This is reinforced in the WAPC's Central Metropolitan Perth Sub-Regional Strategy which assumes an average of 1.7 people per household and a reduction in dwelling size from the current Western Australian average of 244 square metres. Applying an average ratio of 1.7 people per houseful, the addition of 224 extra dwellings on Lots 1 and 21 via the proposed Amendment would generate a population increase in the order of 380 people.

Significant changes have occurred since the Structure Plan was first adopted in 2003 such that the Structure Plan Area now sites within a very different context – both in terms of the surrounding built form and its statutory/strategic planning context. The Structure Plan Area now benefits from significantly improved entertainment, recreational and sporting services and infrastructure including Optus Stadium to the north west, and the expanded Crown Entertainment Precinct to the south west, which includes Crown Towers – a 5-star hotel. Pedestrian connectivity between the Structure Plan Area and the Perth CBD has also been improved through construction of the Matagarup Bridge across the Swan River adjoining the Stadium.

These nearby infrastructure projects have placed greater focus on the Burswood Peninsula as a key location to deliver high-quality infill development.

The Structure Plan Area is well serviced by public transport with the Armadale Line of the metropolitan rail system running through the Burswood Peninsula, providing good access to the wider public transport network. Public transport facilities and services within the area have improved and works are being considered at the State Government level to upgrade both the Burswood and Stadium Train Stations to accommodate increased demand for rail services resulting from redevelopment of the Belmont Park Racecourse and the Station East and Station West precincts. The Structure Plan Area's proximity to public transport provides strong transport links to the Perth CBD and regional centres and offers an opportunity for reduced car usage as promoted by DC 1.6.

Its proximity to public transport also fulfils one of the key objectives of Liveable Neighbourhoods, being the achievement of more sustainable urban outcomes through higher residential densities in suitable urban areas. Increased density will usually be associated with activity centres and areas well served by public transport such as the Burswood Peninsula. In this regard, the Structure Plan is located within an area recognised through the principles of Liveable Neighbourhoods as an area wherein higher residential densities can be accommodated.

The proposed Amendment is consistent with the principles of orderly planning of urban growth and settlement under SPP 3 given that the modifications proposed take into account the strategic and physical context of the locality. It is clear that the Structure Plan sits within a very different context to that which applied in 2003 and accordingly, modifications are required to ensure the Structure Plan continues to provide for the development of safe, convenient and attractive neighbourhoods which meet the diverse needs of the community.

The growth estimates originally provided for in the Structure Plan no longer accurately reflect current or future housing demand projections. The intent of the Structure Plan was to create a planning framework to facilitate development of a diverse range of housing types within the Structure Plan area to accommodate a rising inner-city population. The Structure Plan Report explains that at the time, the resident population of the Central Perth Area was projected to increase from 5,600 in 1996 to 10,100 people in 2031 (a growth of 4,500 people). These growth estimates formed the basis of the density controls contemplated within the Structure Plan.

Since this time, population projects have been revised. Directions 2031, released in 2010, estimated that by 2031, Perth's population would grow from 1.7 million to 2.2 million, with an additional 328,000 homes and 353,000 jobs required to support the 500,000 new residents. This growth projection was revised in 2018 with the release of the WAPC's Perth and Peel @ 3.5 million suite of documents which projected that the population of Perth and Peel would reach 3.5 million by 2050.

The WAPC's Central Metropolitan Sub-Regional Planning Framework seeks to optimise the use of land in close proximity to existing transport infrastructure and key centres of activity and community amenity. It estimates that approximately 215,000 dwellings (56% of the total amount of new infill dwellings) are expected to be delivered in the Central Sub-Region. Of these 215,000 new dwellings, 19,320 are expected to be provided in the Town of Victoria Park.

Although the Town does not currently have an adopted Local Planning Strategy, the Strategy endorsed by Council identifies the Burswood Peninsula as an infill housing opportunity. The Strategy provides for growth of the Town from 17,000 dwellings (2016 Census) to 35,000 dwellings by 2050. This represents an increase of around 18,000 new dwellings, designed to meet the State government's infill dwelling target under the Sub-Regional Planning Framework.

The Framework also recognises that with the rise in the number of one-person households, there will likely be greater demand for smaller, and a variety of choice of, dwellings located in areas with high levels of social infrastructure and amenity. As a result of these demographic changes, there will be growing demand for housing in areas with convenient access to a range of services (particularly community and health) or for different types of housing (for example, dwellings which are easier to maintain) to be permitted so that people can downsize from the traditional three or four-bedroom home but remain in the same suburb.

As the composition of the population progressively changes, planning must respond by anticipating the evolving needs and making provision for increased diversity of housing, that is, different types of housing in terms of size and type and/ or the location of homes required by communities.

The Strategy seeks to direct population growth in activity centres and around train stations, consistent with the principles outlined in Directions 2031 and the Perth and Peel @ 3.5 million suite of documents. As the Burswood Peninsula is classified as an 'Activity Centre' under the Sub-Regional Planning Framework, it is therefore an area wherein infill development should be promoted.

Adoption of the DSP and Belmont Park Structure Plan have shaped community expectations for height and density in the area. Given the proximity of the Amendment Area to these precincts, combined with the addition of new and significant buildings in the form of Optus Stadium and Crown Towers, is not unrealistic to expect that Amendment Area will continue in a similar pattern of development intensity, land use and character.

The modifications proposed to the Structure Plan support the vision outlined in the DSP to facilitate the development of sustainable and attractive housing, recreation, entertainment, tourism and employment opportunities that take advantage of the area's proximity to transport infrastructure and public transport services. The DSP recognises that the Burswood Peninsula has an important role to play in accommodating the population growth projections outlined in Directions 2031 and the Perth and Peel @ 3.5 million framework and seeks to achieve the dwelling targets established under these documents.

In support of this proposed Amendment, transport consultants flyt have undertaken a SIDRA Intersection Modelling Review to assess the road network capacity within the Structure Plan Area. A copy of the assessment is enclosed at **Attachment 3** and discussed in further detail in Section 4.13 of this report.

The modelling is based on predicted traffic volumes from approved (but not constructed) developments within the Structure Plan Area and future predicted dwelling yields arising from this proposed Amendment. It concludes that the existing road network can accommodate the proposed increase in dwelling yield.

The road layout, location of built form and distribution of open space within the Structure Pan Area is illustrated in Figure 18 of the 2003 Structure Plan Report. This Figure has been updated as part of the Structure Plan review process to include the location and extent of built form approved within the Structure Plan Area but not yet constructed and to illustrate the location and extent of built form specifically proposed on Lots 1 and 21 by way of the setback modifications described above. Refer **Figure 18 - Amended Figure 18: Indicative Development Plan.**

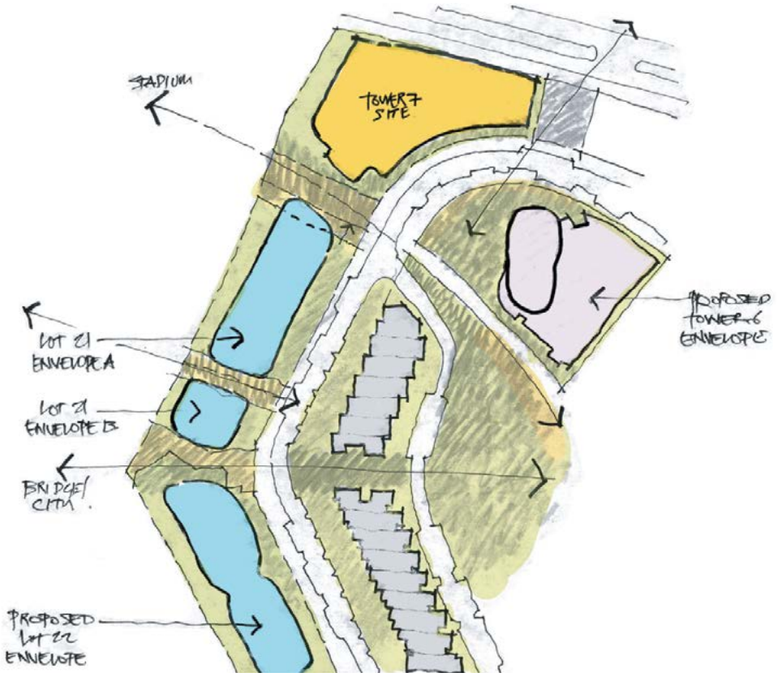



*Image: Hames Sharley, 2021*

## 4.7 Lot Patterns and Sizes

Matters relating to indicative lot patterns and sizes, the location of public easements and potential viewing areas are set out in Part B - Section 4.5 of the current Structure Plan and illustrated in **Figure 22 - Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route** and **Figure 23 – indicative Subdivision Plan**.

As part of the Structure Plan review process, the location of public easements and viewing areas along the northern and western boundaries of the Structure Plan Area has been considered. In 2003, the Structure Plan Area addressed a very different urban context. The construction of Optus Stadium and Matagarup Bridge have changed the landscape and introduced potential new view corridors.

Figure 22 has been updated to remove public easements that are shown in specific locations, where access or view opportunities can otherwise be dealt with by a more site-specific detailed design approach at the Development Application stage. Site-specific provisions have subsequently been included in Part One of this document for both Lot 1 and Lot 21. Refer **Amended Figure 22 – Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route** in Part One of this document.

Figure 23 has been updated to adjust the boundary between Lots 1 and 21 to directly align with the original view corridor to Optus Stadium as seen from the northern end of the Lake Park. With this in mind, the extent of publicly accessible open space at the northern end of the Lake Park has been increased taking up the western part of Lot 10. This area of open space connects the view corridor to the Stadium with the view corridor north to the river bend and provides further separation between Lot 1 and Lot 10.

To enable the view to the north, an open view corridor is planned at the eastern end of Lot 1, immediately to the west of Lot 2. This break will also provide a scale transition from the future Lot 1 tower podium to the existing single dwellings and, two to three level development along Victoria Park Drive from Lot 2 eastwards.

Lot 21 also offers the opportunity for the introduction of further enhancements of masterplan view corridors which look to benefit from the precinct evolutions of landmark vistas by reviewing the dimensions of the individual urban block and/or introducing a splitting of the building into two, enhancing the precinct view corridors.

## 4.8 Public Open Space

Provisions relating to the location and size of POS and publicly accessible landscaped areas within the Structure Plan Area are set out in Part B - Section 4.8 of the current Structure Plan and illustrated in **Figure 20 - Infrastructure and Amenities Plan** and **Figure 31 – Indicative Public Realm** of the 2003 Structure Plan Report. The general requirement under the Structure Plan is that a minimum of 10% of the gross subdividable area be provided as POS and that this POS is developed with earthworks, grassing and planting, with an irrigation and maintenance commitment for a minimum of two summers.

As part of the Structure Plan review process, an audit of POS provided and planned within the Structure Plan Area has been completed. The results of this audit are summarised in **Table 14** below.

| Location No. (Refer Figure 31) | Status | Location Description | Type | POS as per Structure Plan ($m^2$) | POS to be provided ($m^2$) | Variation ($m^2$) |
|---|---|---|---|---|---|---|
| **Public Open Space (POS)** | | | | | | |
| 1 | Delivered | Between The Mews and Vasse Rise | POS | 899 | 899 | 0 |
| 2 | Delivered | Charnley Gardens | POS | 1,502 | 1,601 | 99 |
| 3 | Delivered | Corner Pallinup Street and Charnley Gardens | POS | 274 | 394 | 120 |
| 5 | Delivered | Circular Park | POS | 3,137 | 3,450 | 313 |
| 9 | Delivered | Lake Park | POS | 8,640 | 8,640 | 0 |
| 11 | Delivered | Between Lots 17 and 18 connecting The Promenade to Bow River Crescent | POS | 879 | 847 | -32 |
| 12 | Delivered | Corner Vantage Way and Bow River Crescent | POS | 879 | 879 | 0 |
| 14 | Delivered | Lot 22 DA Approved connecting Between Bow River Crescent to Structure Plan boundary (south) | POS | 983 | 983 | 0 |
| 15 | Delivered | Bow River Crescent adjacent T5 | POS | 1,845 | 1,859 | 14 |
| 21 | Proposed | Tower 6 DA Approved | POS | 0 | 807 | 807 |
| 13 | Delivered as PAL | Lot 22 DA Approved connecting Bow River Crescent to western Structure Plan boundary (north) | PAL | 906 | 0 | -906 |
| **Total POS** | | | | **19944** | **20359** | **415** |
| **% of Site *** | | | | **11.7%** | **11.78%** | **0.24%** |
| **Publicly Accesible Landscaped Areas (PAL)** | | | | | | |
| 4 | Delivered | Between Lots 2 and 3 connecting Bow River Terrace to Burswood Link Road | PAL | 207 | 67 | -140 |
| 6 | Delivered | Between T4 and T6 connecting Lake Park to Bow River Crescent | PAL | 250 | 125 | -125 |
| 7 | Delivered | Between T2 and T4 connecting Lake Park to Bow River Crescent | PAL | 1,206 | 1,206 | 0 |
| 8 | Delivered | Central Plaza between T1 and T2 connecting Lake Park to Circular Park | PAL | 2,126 | 2,126 | 0 |
| Deleted | Proposed | Between Lots 1 and 2 connecting Bow River Terrace to Burswood Link Road | PAL | 220 | 0 | -220 |
| Deleted | Proposed | Between Lot 1 and 2 connecting Bow River Crescent to western Structure Plan boundary | PAL | 844 | 0 | -844 |
| 10 | Delivered | Between Lots 16 and 17 connecting The Promenade to Bow River Crescent | PAL | 462 | 550 | 88 |
| 13 | Delivered | Lot 22 DA Approved connecting Bow River Crescent to western Structure Plan boundary (north) | PAL | 0 | 488 | 488 |
| 16 | Delivered | Between The Mews and Vasse Rise | PAL | 0 | 127 | 127 |
| 17 | Delivered | East of T4 - Bow River Terrace | PAL | 0 | 233 | 233 |
| 18 | Delivered | East of T5 - Bow River Terrace | PAL | 0 | 467 | 467 |
| 19 | Delivered | East of Charnley Gardens | PAL | 0 | 139 | 139 |
| 20 | Delivered | Between T1 and Lot 14 connecting The Crescent to Vantage Way | PAL | 0 | 263 | 263 |
| **Total PAL** | | | | **5315** | **5791** | **476** |
| **% of Site *** | | | | **3.1%** | **3.35%** | **0.27%** |
| **Total Combined POS/PAL** | | | | **25259** | **26150** | **891** |
| **% of Site*** | | | | **14.8%** | **15.14%** | **0.51%** |

** Site Area is estimated as 17.2724ha based on areas provided in Figure 31 (excluding DOLA/MRD land)*

***Table 14: POS Audit***

The audit reveals that approximately 26,150m$^2$ of POS/PAL has been/will be provided within the Structure Plan Area once construction is complete. This represents approximately 891m$^2$ more land than was originally envisaged under the 2003 Strutcure Plan (25,259m$^2$).

The total amount of POS/PAL provided represents approximately 15.14% of the total site area which exceeds the amount of POS/PAL contemplated under the 2003 Structure Plan (14.8%) and significantly exceeds the standard 10% obligation required under Liveable Neighbourhoods.

Figures 19 and 31 have been amended to reflect the size, location and function of POS and/or PAL within the Structure Plan Area. Refer **Amended Figure 19 – Structure Plan** and **Amended Figure 31 – Indicative Public Realm** in Part One of this document. The following provides a summary of the modifications to Figure 31:

- An additional 807m$^2$ of POS is provided on Lot 10 (Tower 6) to reflect the approved development;
- The PAL between Lots 21 and 22 has been modified to reflect the approved development (Ador Apartments);
- PALs provided as part of the planning and construction process but not contemplated in the 2003 Structure Plan have been added. These additional PALs equate to approximately 1,229m$^2$ of additional public land;
- All POS and PAL areas have been checked against Landgate cadastral data and corrections made as required. Many of the POS and PAL areas provided are larger than required under the 2003 Structure Plan; and
- The PALs between Lots 1, 2 and 21 have been removed from their original location under the 2003 Strutcure Plan and replaced with site-specific provisions in Part One of this document. The new provisions will deliver view corridor opportunities in accordance with **Amended Figure 22 – Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route** in Part One of this document.

Pedestrian connectivity between the Structure Plan Area and surrounds is recognised as a previously identified, and ongoing consideration for the remaining Lots 1 and 21. The Structure Plan is restricted by height level differences and land ownership, with the parcel of land immediately west of the Structure Plan Area (referred as the 'canal land'), currently owned by the State. The wider Burswood Park is also separately owned. Notwithstanding this, the **Amended Figure 22** and new site specific provisions for Lots 1 and 21 ensure the need for visual linkages and view corridors are addressed. The opportunity for a physical linkage between the Structure Plan and Burswood Park is also acknowledged in **Amended Figure 22** as a Possible Additional Future Pedestrian Connection, noting that the land within the Structure Plan Area will be provided, while the ability to deliver the connection and provide land within Burswood Park does not form part of this Structure Plan.

## 4.9 Public Open Space Maintenance

In accordance with the provisions of SPP 3.6 (refer to Section 3.6.3 of this report), it is standard industry practice for a developer to manage and maintain roads and infrastructure for a period of two summers following construction before handing over responsibility to the local government.

Liveable Neighbourhoods (update 2, 2009) as well as the current 2015 draft, recognise the importance of collaboration between developer and local authority in the delivery and establishment of POS. Prior to Liveable Neighbourhoods, developers were expected to provide 10% POS, with the potential expenditure of 2% as cash-in-lieu funds for POS development. Liveable Neighbourhoods established a clearer position that POS be developed by a subdivider and maintained for two summers.

Mirvac have been maintaining the POS at Burswood Peninsula for over 17 years. In accordance with the provisions of SPP 3.6, it is standard industry practice for a developer to manage and maintain roads and infrastructure for a period of two summers following construction completion before handing over responsibility to the local government. Mirvac and the Town are party to a Deed entered into in 2005 and this Deed refers to construction and maintenance obligations over an area referred to as the "POS".

In 2017, the parties commenced discussions in relation to the handover of maintenance responsibilities. A position was agreed between Mirvac and Town staff proposing that the Town take over the remaining POS maintenance from 1 October 2021. This was not agreed by Council and is the subject of ongoing discussions.

The Structure Plan Amendment changes look to reflect the provisions of SPP 3.6, acknowledging that ongoing discussion with the Town is required to formally update the existing maintenance agreement. These discussions, once finalised, will supersede the provisions set out in Part B – Section 4.12 of the 2003 Structure Plan Report entitled 'Commitments by the Development Proponent and/or Burswood Ltd'.

*Landscaped road reserve within the Structure Plan Area.*

## 4.10 Deep Soil Areas

Consistent with the exceptional standard of development throughout Precinct B, the last remaining development sites (Lots 1 and 21) will again deliver an outcome that ensures the landscape strategy makes a significant contribution to the ecology, character and amenity of the Burswood Peninsula. With over 27,000sqm of publicly accessible land being provided within the Structure Plan area on completion, representing 15.82% of the site area, the landscape amenity and public realm offering remains a key structure plan objective and an important part of the success of the Burswood Peninsula precinct.

The adequacy of Deep Soil Areas as part of the overall provision of open space and landscaping within the Structure Plan Area has been raised as a consideration by the Town's Design Review Panel in its review of previous development applications. Deep Soils Areas are not specifically addressed in the current Structure Plan but are a requirement of the RDC Volume 2 – section 3.3.

Lots 1 and 21 are acknowledged as having geotechnical constraints that require development to be managed in accordance with Ministerial Statement 526, with associated management plans in place. With a geofabric warning barrier in place over sites within the Structure Plan there is a significant constraint to the depth and design of the built form and basement design options. Consequently, previous development applications have proposed some or all required landscaping 'on-structure' to meet the deep soil requirement. While this approach has been discussed at length at the development application assessment stage, approvals have been conditional upon the submission of a detailed Landscaping Plan that demonstrates raised planters, soil build-up and sloping structural slab to ensure sufficient soil area and planter dimensions to sustain healthy plant and tree growth for tree canopy with medium to large trees.

In accordance with RDC Volume 2 Element Objective 03.3.3 it is intended that Lots 1 and 21 include "deep soil zones" achieved via planting on structure which provide sufficient area, volume and width to sustain healthy plant and tree growth and infiltration of water as required. These planting on structure zones are to achieve the required 10% DSA areas. Commitment to the minimum number of trees will be as per Table 3.3a. Minimum deep soil area and tree provision requirements and Table 3.3b Tree sizes of the SPP 7.3 Residential Design Codes Volume 2 – Apartments.

## 4.11 Public Art

Local Planning Policy 29 – Public Art Private Developer Contributions ('LPP 29') sets out the Town's requirements for the provision of public art as a condition of Development Approval. It was adopted in May 2008 and most recently reviewed in March 2020.

Provision 1.2 (a) of LPP 29 excludes the requirement for a public art contribution to be made for development within an area the subject of an approved Structure Plan which contains alternative requirements for the provision of public art.

The Structure Plan was adopted in 2003, some five years before the original LPP 29 was prepared, and accordingly it doesn't contain any provisions which specifically reference and seek to vary the requirements of LPP 29. It does, however, contain alternative requirements to public art in conjunction with the delivery of significant public realm. The Structure Plan requires the following in relation to the provision of public art:

- *"The development has been carefully designed to ensure that all dwellings have access to an abundance of public amenities, including: 'kick-about areas', child-play and barbecue areas, areas for quiet contemplation, public art, an extensive ornamental lake system, and unrivalled views across the golf course and Swan River to the Perth CBD."*

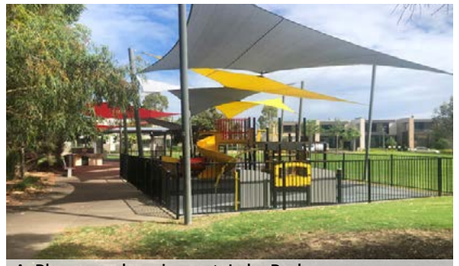
- *"The proposed two- and three-storey houses will be located throughout the development and will be generally grouped around "pocket parks". All streets, parks, and plazas will be defined and edged by buildings with windows overlooking these important public places. This, together with the careful integration of trees, shrubs, public art and street furniture will help to provide a vibrant street life and sense of community."*

These requirements have resulted in the provision of a number of high-quality public artworks within the Structure Plan Area, installed by Mirvac as part of an integrated approach to the delivery of an exceptionally high-quality public realm, consistent with the objectives of LPP 29.

The Structure Plan Area is a master-planned precinct which Mirvac has been exclusively responsible for planning and delivering over the past 18 years. During this time, Mirvac has delivered exceptional public realm amenity outcomes through the provision of high-quality design, POS provision and treatments, and public art well beyond normal development standards and well prior to LPP 29 being drafted. Examples of public art and public realm improvements within the Structure Plan Area (Development Area B) are provided in **Figure 19 – Public Realm Improvements**.

As Figure 19 demonstrates, the Structure Plan Area and surrounds do not lack in amenity. Public art installations are provided at key focal and reference points such as building entries and the central circular park. Public realm improvements are provided throughout the Precinct and include hard and soft landscaping, street furniture such as lighting and seating, and community facilities such as playground equipment.

The Structure Plan therefore proposes a new provision, included in Part One of this Amendment document, which states that a formal public art contribution will be capped at $500,000 in respect of any future Development Applications on Lots 1 and 21. Any existing obligations for the provision of a public art contribution under current Development Approvals within the Structure Plan Area are to remain. This includes Lot 10 (Tower 6) and Lot 22 (Ador Apartments).

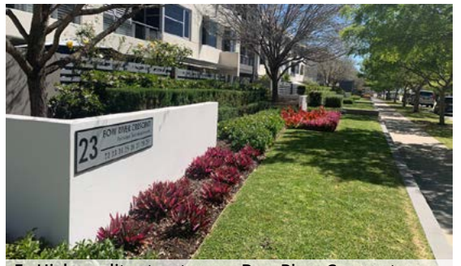


A. Playground equipment, Lake Park

B. Public Art, The Plaza

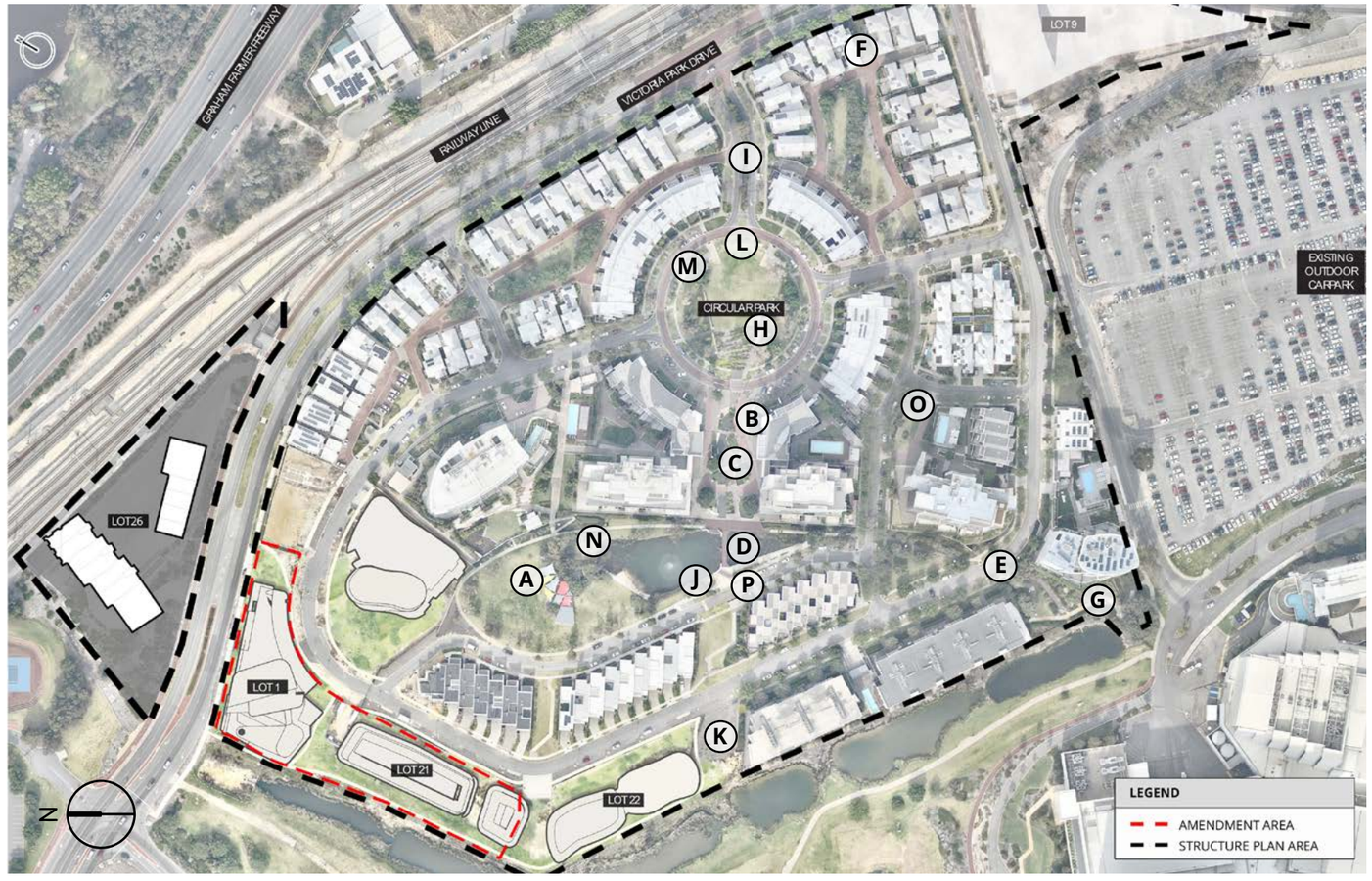
C. High-quality landscaped courtyard, The Plaza

D. Boardwalk connection to Lake Park



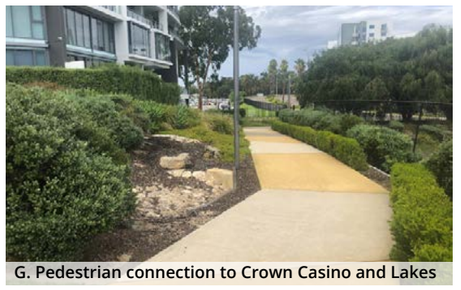

E. High-quality streetscape, Bow River Crescent

P. Public realm improvements, Lake Park




F . Landscaped accessway, Victoria Park Drive

O. Public Art entry statement, Vantage Way



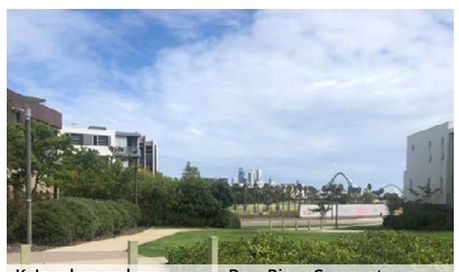
G. Pedestrian connection to Crown Casino and Lakes

N. High-quality Public Open Space, Lake Park

H. Public Art, The Circus

M. Public seating, The Circus

L. High-quality Public Open Space, The Circus



K. Landscaped accessway, Bow River Crescent

J. Open space treatment, Lake Park

I . Landscaped entry statement, The Circus

*Figure 19 – Public Realm Improvements*

*Public Art within The Circus park.*

## 4.12 CAR PARKING

Standards relating to the provision of car parking within the Structure Plan Area are set out in Part C – Section 5.11 of the 2003 Structure Plan report. The provisions incorporate variations to the (then) operational (2002) RDC as set out in **Table 15** below:

| Dwelling Type | Minimum Bays Required per Dwelling |
|---|---|
| Courtyard Homes, Detached Single Family Home, Zero-Lot-Lined Homes, and Townhouses | 2 |
| 1 Bedroom Apartment | 1 |
| 2 Bedroom Apartment | 1.5 |
| 3 Bedroom Apartment | 2 |
| Visitor Parking | 10% of required bays that may include, where appropriate, on street parking |

***Table 15: Parking standards under 2003 Structure Plan***

Since 2019, the planning and design standards for residential apartments (multiple dwellings) in areas coded R-AC3 have been subject to the provisions set out in the RDC Volume 2. The car parking standards applicable under the RDC Volume 2 are set out in **Table 16** below:

| Parking Types | | Location A | Location B |
|---|---|---|---|
| Car Parking | 1 Bedroom Dwelling | 0.75 bays per dwelling | 1 bay per dwelling |
| | 2+ Bedroom Dwelling | 1 bay per dwelling | 1.25 bays per dwelling |
| | Visitor | 1 bay per four dwellings up to 12 dwellings | |
| | | 1 bay per eight dwellings for the 13th dwelling and above | |
| Bicycle Parking | Resident | 0.5 space per dwelling | |
| | Visitor | 1 space per 10 dwellings | |
| Motorcycle / Scooter Parking | Developments exceeding 20 dwellings provide 1 motorcycle / scooter space for every 10 car bays | | |

***Table 16: Parking standards under current RDC Volume 2 (Table 3.9 – Parking Ratios)***

The car parking provisions contained in the 2003 Structure Plan no longer reflect the operative RDC and therefore need to be updated.

The Structure Plan Area is considered to fall within 'Location A' on the basis that it is located within 800m of both the Stadium and Burswood Train Stations. It is noted that the Stadium Train Station currently only operates on 'event days' however, the WAPC's Peninsula DSP notes that the Station may be upgraded from an event station to a full service station to accommodate increased demand for rail services. Regardless, the Structure Plan Area is located within 800m of the Burswood Train Station which is positioned to the south-east.

Given the Structure Plan Area's proximity to public transport and general location close to the Perth central area, it is considered appropriate that the parking requirements under the RDC Volume 2 be applied. The variations permitted under the 2003 Structure Plan are therefore proposed to be removed and future Development Applications on Lots 1 and 21 are to be assessed against the provisions of the RDC Volume 2 unless specified varied in Part One of this document.

In preparing the Structure Plan Amendment, Mirvac undertook an audit of visitor parking provision within Development Area B of the Structure Plan Area (refer to Figure 8 for Development Area B location). The audit compared the number of visitor bays required under the provisions of the 2003 Structure Plan against the number of visitor bays constructed (or proposed to be constructed) on site to date. The parking audit is provided at **Table 17** and the location of existing and proposed visitor bays (on street) is shown in **Figure 20 – Visitor Parking Plan**.

Key findings from the parking audit are summarised below:

- A total of 180 visitor bays are required in Development Area B based on the 2003 Structure Plan dwelling yield.
- The proposed Amendment generates a requirement for a further 36 visitor bays, bringing the total visitor parking requirement (post Amendment) to 216 bays.
- 235 visitor bays (including disabled bays) have been constructed on site to date and an additional 12 visitor bays are yet to be constructed (required as Conditions of Development Approval).
- Upon construction of the remaining bays, a total of 248 visitor bays will be provided within Development Area B, representing a surplus of 32 bays.

As part of the audit, site inspections were conducted at various times of the day to ascertain the number of vacant and occupied on-street visitor bays. The site inspections consistently revealed vacant visitor bays, suggesting the current supply of visitor bays within the Structure Plan Area is adequate.

| Lot No. | Status* | No. of Dwellings Constructed/Planned* | No. of bays required as per 2003 Structure Plan | | |
|---|---|---|---|---|---|
| | | | Resident | Visitor | Disabled |
| 1 | Proposed** | 74 | 111 | 11 | 0 |
| 2<br>3 | Constructed | 17 | 34 | 3 | 0 |
| 4 | Constructed | 7 | 14 | 1 | 0 |
| 5 | Constructed | 13 | 26 | 3 | 0 |
| 6 | Constructed | 14 | 28 | 3 | 0 |
| 7 | Constructed | 11 | 22 | 2 | 0 |
| 8 | Constructed | 17 | 34 | 3 | 0 |
| 10 | Approved | 187 | 286 | 29 | 0 |
| 11 | Constructed | 133 | 219 | 22 | 0 |
| 12 | Constructed | 116 | 197 | 20 | 1 |
| 13 | Constructed | 87 | 150 | 15 | 1 |
| 14 | Constructed | 7 | 14 | 1 | 0 |
| 15 | Constructed | 8 | 16 | 2 | 0 |
| 16 | Constructed | 7 | 28 | 3 | 0 |
| 17 | Constructed | 9 | 27 | 3 | 0 |
| 18 | Constructed | 7 | 14 | 1 | 0 |
| 19 | Constructed | 89 | 151 | 15 | 0 |
| 20 | Constructed | 64 | 106 | 11 | 0 |
| 21 | Proposed** | 47 | 71 | 7 | 0 |
| 22 | Approved | 88 | 138 | 14 | 0 |
| 23 | Constructed | 26 | 45 | 5 | 0 |
| 24 | Constructed | 30 | 50 | 5 | 0 |
| **Sub-Total** | | **1,058** | **1,781** | **178** | **2** |
| **Additional parking requirement based on increased dwelling numbers as per proposed Amendment*** ** | | | | | |
| 1 | Proposed | 151 | 233 | 23 | 0 |
| 21 | Proposed | 78 | 125 | 13 | 0 |
| Sub-Total | | 229 | 358 | 36 | 0 |
| **Overall Total** | | **1,287** | **2,139** | **214** | **2** |

* *Development Status – refers to status of development as follows: Constructed - final constructed number of dwellings; Approved - not built (number of dwellings in Development Approval granted); and Vacant (Development Approval yet to be granted - dwelling numbers per 2003 Structure Plan).*

** *Subject to change under this Amendment.*

*** *Represents the difference between the number of dwellings permitted under the 2003 Structure Plan and the number of dwellings proposed under Amendment No. 2.*

***Table 17: Car Parking Audit (Development Area B)***

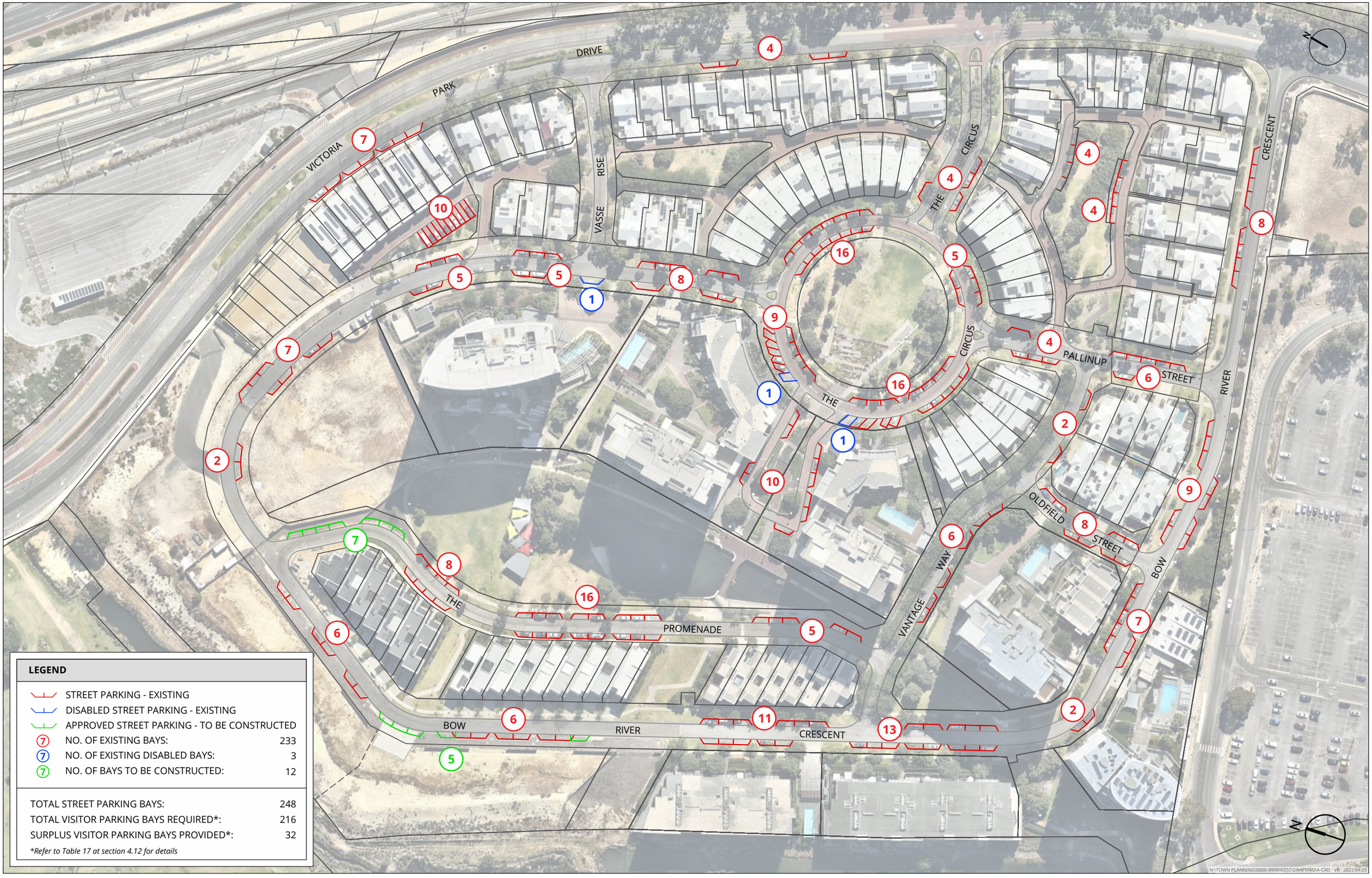



*Figure 20 – Visitor Parking Plan*

## 4.13 Traffic Modelling

The proposed hierarchy and projected future traffic volumes of roads within the Structure Plan Area are set out in Part A - Section 8.2 and illustrated in 11 - Projected Future Traffic Volumes of the 2003 Structure Plan Report. As part of the Structure Plan review process, Transport Consultants flyt have undertaken traffic modelling to assess updates to the Structure Plan Area. A copy of the assessment is enclosed at **Attachment 3**.

The modelling builds on previous assessments undertaken by Flyt for Mirvac and other landowners within the Structure Plan Area, and as part of the broader DSP for the State Government. It examines, in particular, the intersections of Victoria Park Drive with Vasse Rise, The Circus and Bow River Crescent and is based on predicted traffic volumes from approved (but not constructed) developments within the Structure Plan Area and future predicted dwelling yields arising from the proposed Amendment. In this regard, the modelling takes into account existing, approved and proposed dwelling yields.

The modelling demonstrates that:

- The existing road network will operate at a level of service 'A';
- The right turn from The Circus is predicted to carry significant traffic in both peak periods, but still within acceptable limits, operating at a level of service 'C';
- Victoria Park Drive has sufficient capacity to accommodate traffic volumes associated with ultimate development of the Structure Plan Area;
- As the Structure Plan Area has no local through roads, future residential and mixed-use development of surrounding areas (Belmont Park, Burswood Station West, Burswood Station East, and other possible development sites such as the Burswood Park Board parklands and State Tennis Centre) will not lead to an increase in local road traffic; and
- The forecast daily traffic volumes on local roads within the Structure Plan Area are lower than the original forecast in 2002. This is due in part to the daily trip rate used for the 2002 modelling being 10 trips per vehicle per day which is considered a significant overestimate for a predominately residential development of this nature in this location.

Changes to the projected future traffic volumes identified as part of the modelling exercise are illustrated in **Figure 21 - Amended Figure 11: Projected Future Traffic Volumes**.

The modelling notes that whilst the expansion of the Crown complex and the opening of Optus Stadium and the adjacent Camfield have increased traffic within the Burswood Peninsula and along Victoria Park Drive generally, these entertainment venues generate their greatest traffic volumes outside of regular road network AM and PM peak periods.

A road safety assessment was also undertaken which examined intersection and mid-block crash history of local roads and intersections. The assessment did not reveal any existing road safety issues within the local road network or the surrounding higher order roads.

Whilst it is appreciated that more detailed traffic assessments will be undertaken at the Development Application stage, the modelling demonstrates that the existing road network can accommodate the proposed increase in dwelling yield proposed in the Amendment.

## 4.14 Pedestrian Connectivity and Access to West of the Structure Plan Area

The inclusion of an additional pedestrian connection through Lot 1 has been investigated in detail by the Applicant and forms part of the Structure Plan Amendment, as shown in Amended Figure 22. Whilst recognising the significant level changes between Lots 1 and 2 Bow River Crescent and Victoria Park Drive the provision of a public pedestrian access which is *Disability Discrimination Act* (DDA) compliant at that location will be incorporated to allow for resident access to the Stadium train station, the Perth Stadium and the wider Burswood Peninsula. A lift, with stairs as an alternative for pedestrians, will be an acceptable option, subject to detailed design.

## AMENDED FIGURE 11: PROJECTED FUTURE TRAFFIC VOLUMES

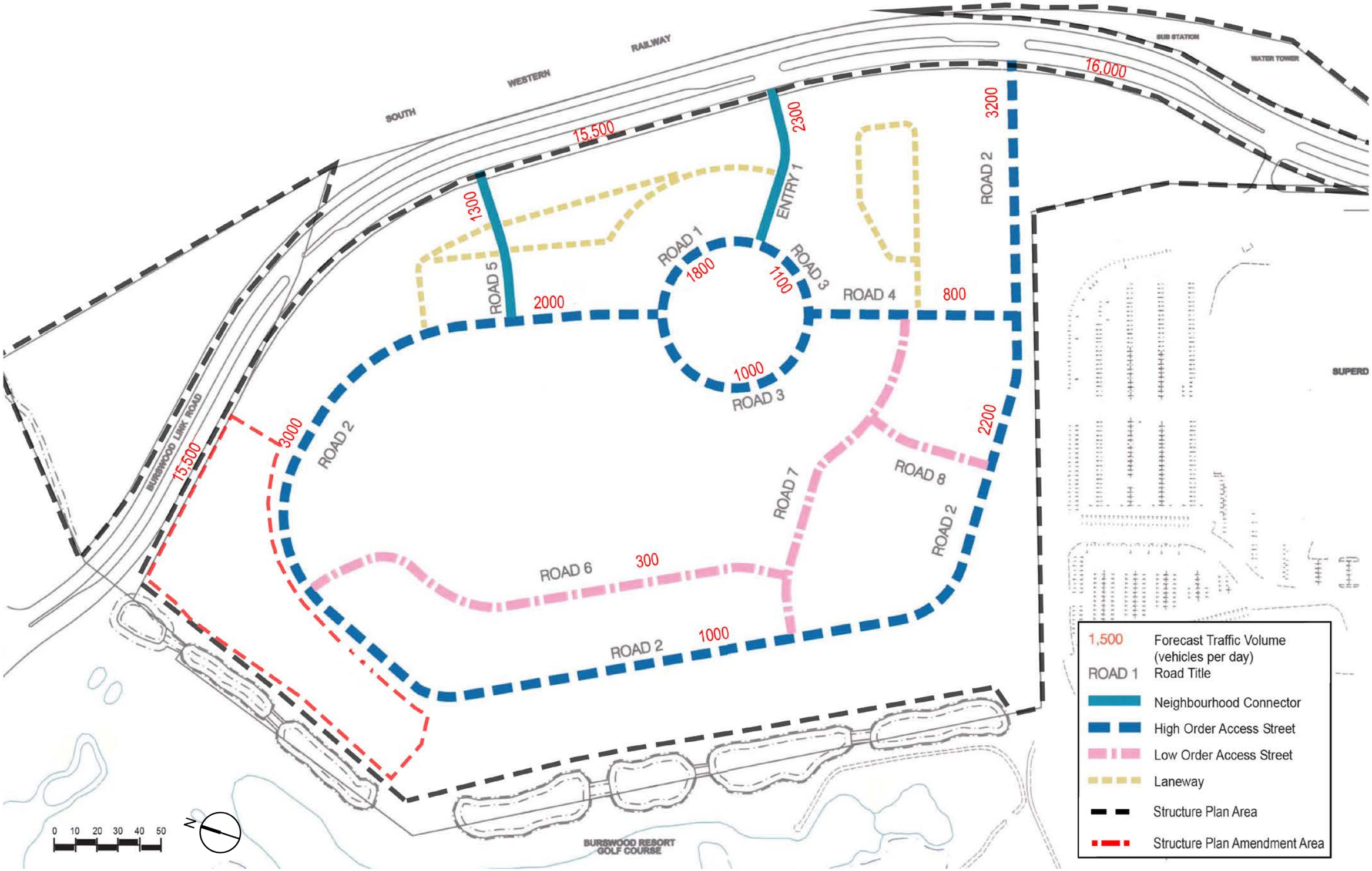



*Figure 21 - Amended Figure 11: Projected Future Traffic Volumes*

## 4.15 Sustainability

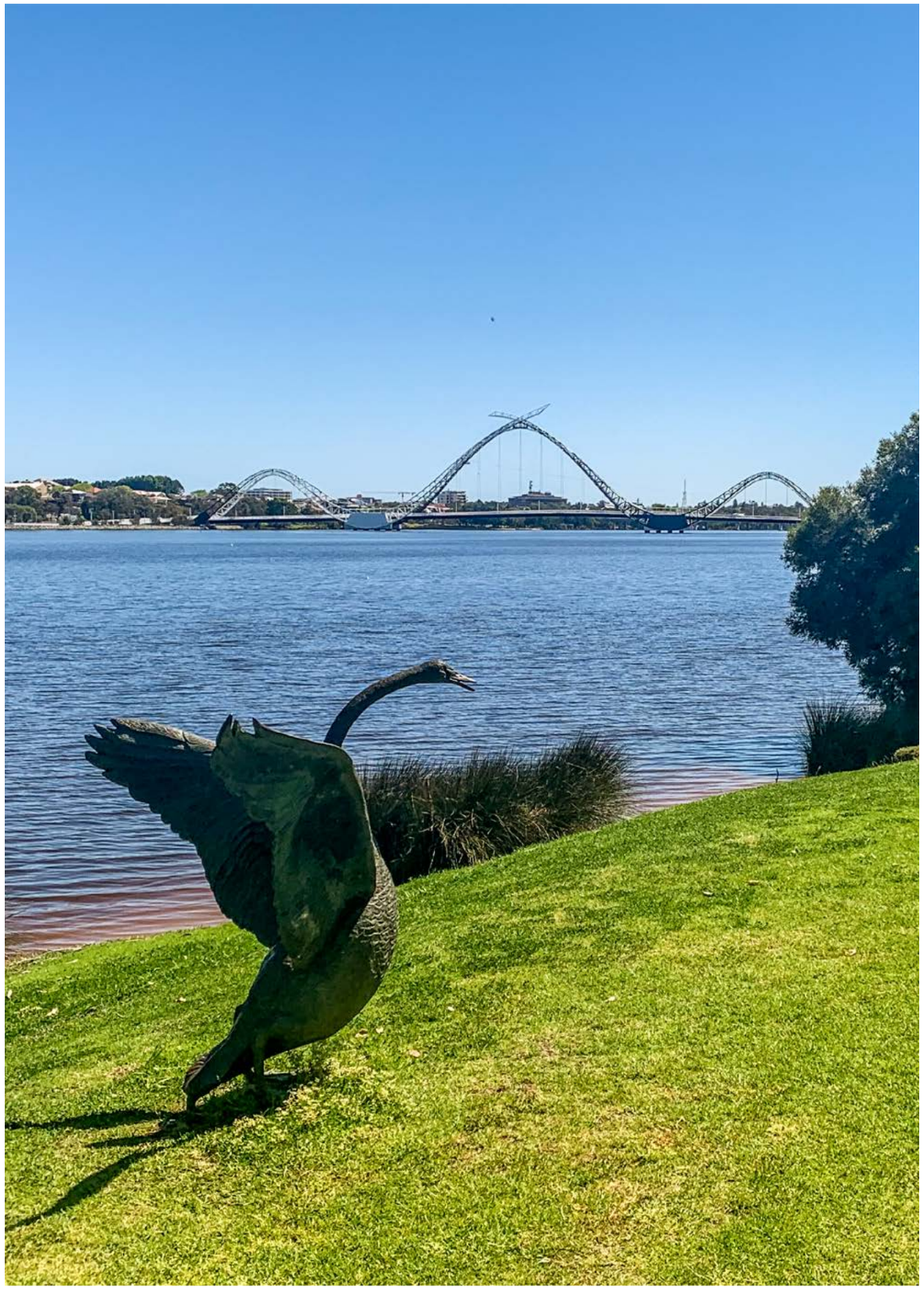
In accordance with the original Burswood Lakes Structure Plan (2003) objectives and Section 7.2 Sustainability, the remaining development sites will promote good design that optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.

Acknowledging that this is a structure plan, that there are limited development sites remaining within the structure plan and their development timeframes are not certain, site specific commitments regarding ecologically sustainable development (ESD) are not appropriate. Importantly, the structure plan requires that considerations of ESD with respect to each remaining development be assessed against and seek to meet and or exceed State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments with respect to the stated sustainability element objectives and acceptable outcomes.

Demonstrative of the structure plan's commitment to and intent to achieve ESD, the below list provides elements that should be specifically considered during each remaining development site's Development Application stage:

- Class 2 - Target plus 1 star increase to the average NatHERS performance requirement (against applicable National Construction Code requirement at time of Development Application).
- Class 1 - Target plus 0.5 star increase to the minimum NatHERS performance requirement (against applicable National Construction Code requirement at time of Development Application).
- Use of high-performance Double-Glazed windows and facades for all residential dwellings.
- Design of roof spaces to include Solar PV with optimised sizing and installation of Solar PV systems and consideration onsite energy storage.
- Future proofing by providing base infrastructure to allow for minimum 25% of all dwellings to allow for installation of EV chargers.
- All stormwater to be distributed to Burswood lakes stormwater infrastructure or utilised on site.
- Where possible, explore the opportunity for the landscape strategy to include for transplant mature trees.

The above is not intended to be a complete list but an important representative sample of opportunities. These are also acknowledged as likely to evolve over time as technology changes or development standards and materials change.



*View of Willem de Vlamingh Sculpture and Matagarup Bridge off Camfield Drive*

# 5 Conclusion

The purpose of the proposed Amendment is to ensure that the Structure Plan remains relevant and continues to align with the strategic planning work undertaken by the WAPC and the Town of Victoria Park since adoption of the Structure Plan in 2003. It also seeks to respond to the changing and evolving nature of surrounding development whilst addressing matters that have arisen through the assessment of development proposals within the Structure Plan Area. Notwithstanding this, it is important to recognise that Mirvac has two remaining sites (Lots 1 and 21) to seek development approval on, with the majority of the Structure Plan area now developed.

In recent years, a number of developments in the Structure Plan Area have been granted approval that vary from the development standards outlined in the current Structure Plan and Precinct Plan under LPS1. These approvals have generally been consistent with the broader strategic planning framework and Statement of Intent within the Precinct Plan but have, by necessity, been approved subject to the discretionary powers under LPS1. The proposed Amendment will aid in bringing the Structure Plan into line with broader strategic intentions and in doing so provide greater certainty to developers and decision-makers.

The Structure Plan Amendment is consistent with the overall strategic intent for the area and fits within the existing planning framework that includes the Burswood Peninsula DSP (2015), LPS1, Precinct Plan and associated local planning policies. It also fulfills one of the key recommendations of the Town's Local Planning Strategy.

The Amendment does not propose any modifications that would alter the purpose or intent of the Burswood Lakes Environmental and Geotechnical Special Control Area nor does it propose any modifications that would alter the overall Statement of Intent for the Burswood Precinct under Precinct Plan P2. The amendments reinforce the objective of developing high-quality residential land uses, set within a pedestrian-integrated landscaped environment that acknowledge and respect the prominence of the Burswood Peninsula. In this regard, the proposed Amendment remains consistent with its zoning under LPS1.

The proposed Amendment has been informed by a robust design review process, having been presented to the Town of Victoria Park's Design Review Panel on three occasions. Feedback received from the Panel, combined with input provided by the Town's Planning Department and the DPLH during the Structure Plan review process, ensures that the proposed Amendment provides a comprehensive and considered proposal that seeks to maintain the delivery of high quality built form within the Precinct.

# Appendix One

Burswood Lakes Structure Plan (2003)


mirvac

ROWE GROUP DESIGN

Hames Sharley

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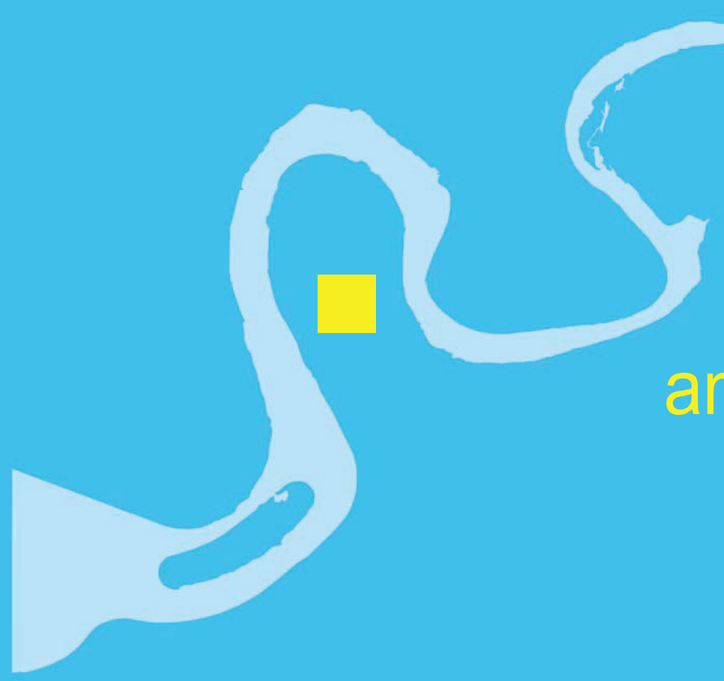
# burswood lakes

## structure plan

## &

## precinct plan amendment



mirvac fini - hpa architects - burswood ltd

**22 april 2003**

# burswood lakes

## structure plan

### & precinct plan amendment

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## Diagrams



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## Appendices(Separate Document)

*Ground level view from plaza, looking west*

# Executive Summary

## 1.0 Context

Burswood Lakes provides an exceptional opportunity to demonstrate how a coherent community can be developed in a holistic manner. This former industrial site is unique and unrivalled in its history, location and orientation. Previously landmarked by the tall chimneys of the Swan Portland Cement Works, it has magnificent views across the Golf Course and the Swan River, and a direct relationship with the Town of Victoria Park, Burswood Resort and Perth CBD.

The proposed development will embrace this uniqueness by creating an urban neighbourhood that will respond and relate to its environment, benefiting not only its residents but the community as a whole.

The site, which has for so long been inaccessible to the public, will soon become a new community of approximately 3,000 people. This community will grow in a planned, integrated, and cohesive way, providing many benefits and amenities to surrounding residents.

Located on the edge of the Town of Victoria Park, Burswood Lakes is a unique, landmark opportunity. With its exposure to the city, railway, Swan River, Graham Farmer Freeway, and Great Eastern Highway - it will become an ambassador for the Town of Victoria Park and will engage in a dialogue with other important centres of higher-density development, such as the Perth CBD and South Perth.

The development will take cues from the existing form and scale of the adjacent Burswood Resort. In doing so, Burswood Lakes will enhance the existing environment and become an important, integrated residential node and landmark for the Town of Victoria Park and the City of Perth.

## 2.0 Urban Consolidation, Demographics and Burswood Lakes

Providing housing choice is a key responsibility for all cities across the world. For cities such as Perth, which has a rapidly expanding population, this responsibility is particularly relevant.

Perth has traditionally developed along the north and south coastal corridors with residents choosing to live in one and two-

*Aerial view of Burswood Lakes site looking west to the Perth CBD.*

storey detached houses on large, self-contained blocks. The result of this development is the urban sprawl we see today which has historically catered to the 'traditional' Australian family. However, this 'traditional' family is changing.

In particular, trends point toward more-residents living closer to the inner city. This is confirmed by statistics within Perth, (and other cities in Australia), where the resident population of central Perth is projected to grow from 5,600 in 1996 to 10,100 in 2031.

The Western Australian Planning Commission (WAPC) and the Western Australian Government recognise that the current rate of urban sprawl in Perth is unsustainable. Issues such as high cost of providing services and facilities, concerns about security and safety, a desire for greater social, economic and environmental sustainability and the need to provide public transport more efficiently are all concerns which relate to an ever expanding city. The WAPC responded to these concerns in 1998 by producing the *Livable Neighbourhoods* document. This document, and its later revisions, offers stakeholders an alternative to the traditional policies on subdivision and enables greater sustainability in an urban context. The key drivers of this document are to create communities which provide higher densities in an urban neighbourhood context which encourage walking, community interaction, reduced reliance on motor vehicles, and mixed accommodation.

It is worth noting that if the anticipated population at Burswood Lakes of 3,000 were to be located on the urban fringe in a traditional Perth subdivision, approximately 100 hectares of land would be required. When the need to service such a suburb with infrastructure, roads and amenities such as schools, shopping centres etc is also factored in, the true cost to the community becomes prevalent. At Burswood Lakes the same 3,000 people will be housed on 17.1 hectares of rejuvenated inner city land and will utilise existing infrastructure and amenities in the Town of Victoria Park; at no additional cost to the community.

Both demographic trends and the need for urban consolidation have played a major role in the planning of Burswood Lakes. It is for these reasons that the site is proposed as a significant residential development. Low-density development on this site would waste a valuable opportunity to help slow the growth of Perth's urban fringe. As the WAPC's Regional Residential Guidelines states "*when large sites exist with spare infrastructure capacity...the site should be given priority consideration for residential development...*"

Not only will this development respond to this need by rejuvenating a rare land resource on the edge of the Swan River, it will also create a new vibrant inner city community, to the benefit of both the Town of Victoria Park and Perth as a whole.

## 3.0 The Design Approach

The first principle of the design approach was to look carefully at the location and the context of the site and understand its history - both natural and social. In doing so, a number of studies, reports and workshops have been implemented as follows:

- Context analysis studies
- Stakeholder consultation and workshops
- Review of all current and draft development controls
- Photographic analysis
- Wind and micro-climate studies
- Urban design and architectural analysis
- Historical research - natural and social
- Review of the local and regional movement network
- Engineering and technical assessments

### 3.1 What Will Burswood Lakes Offer as a Community?

The Burswood Lakes Structure Plan details the creation of a new urban neighbourhood comprising 1,250 dwellings (including 50 dwellings on the adjacent DOLA and MRD-owned land). It will include a diverse range of dwelling types: courtyard homes, detached single family homes, zero-lot-line homes, townhouses, and apartment buildings with one-, two- and three-bedroom units.

The approximate mix of dwelling types is:
- 17 percent courtyard homes, detached single family homes, zero lot lined homes and townhouses. The lot sizes for these dwellings will range from (approximately 200 - 350 square metres).
- 4 percent one bedroom apartments (approximately 65 square metres).
- 49 percent two bedroom apartments (approximately 100 square metres).
- 30 percent 3 bedroom apartments (approximately 130 square metres).

This dwelling mix can also be represented as follows:
- 10 percent of dwellings are detached single family homes, zero lot lined homes and courtyard homes.
- 7 percent of dwellings are two storey townhouses.
- 9 percent of apartments are in two to three storey apartment buildings.
- 29 percent of apartments are in four to seven storey apartment buildings.
- 45 percent of apartments are in twelve to twenty-one storey apartment buildings.

This indicative dwelling mix addresses and responds to the need for urban consolidation and demographic demand outlined above. It will provide a diverse community and add vitality to the area. Future residents of Burswood Lakes are likely to include singles, working couples without children, families, empty-nesters, and retirees. While households may vary in family-size and age, they will share an affinity for urban living that offers them easy access to all the amenities of central Perth.

The development has been carefully designed to ensure that all dwellings have access to an abundance of public amenities, including: 'kick-about areas', child-play and barbecue areas, areas for quiet contemplation, public art, an extensive ornamental lake system, and unrivalled views across the golf course and Swan River to the Perth CBD.

The development has excellent links to the local area and Perth CBD via the railway and the road and pedestrian networks.

Burswood Lakes residents will also have easy access to the extensive regional and local services available in the Town of Victoria Park as well as close-by amenities including the Swan River foreshore, the Burswood Resort and its many facilities, Tennis West and the Burswood Park Golf Course.

Once completed, Burswood Lakes will function as its own community, complete with a mix of dwelling types to accommodate a variety of residents, generous public open spaces, convenience retail, good access to transport, and excellent proximity to the amenities of central Perth.

## 3.2 What Will the Development Look Like?

Much of Perth's sense of place originates from its relationship with the Swan River. Crawley, South Perth, West Perth, the Perth CBD, and East Perth are all important urban nodes nestled along the river, seen in Diagram I, p.43, and Fig. 3, p.37. These nodes form focal points and landmarks within the riverscape and streetscape of Perth. Burswood Lakes will form a new landmark within the cityscape, creating further synergy between each of these important centres of community activity.

In order to create a landmark urban node, buildings on the site will be carefully located and arranged. Taller buildings will step down in height to both the northern and southern boundaries - acknowledging their adjoining neighbours - and rise toward the centre of the site. This height variation provides the opportunity for architectural expression within a cohesive overall form, and enables the site to become a true landmark within the Perth skyline. Burswood Lakes will be a visible symbol - a celebration - of the rejuvenation of this former industrial site.

The variety of dwelling types noted above will be integrated throughout the development. The taller buildings, which will be arranged in a central meandering spine, will be surrounded at street level by lower rise buildings and townhouses. These podiums will create human scale, shield the basement carparking, and activate the streets and surrounding areas.

The orientation of these buildings will create dramatic 'view corridors' through the site, some of which will be terminated by the landmark buildings of the Perth CBD. These will form public boulevards and plazas connecting two large areas of public green space, the Circular Park and the Lake Park. The careful design of these generously spaced corridors will ensure minimal overshadowing, no loss of privacy and no adverse wind effects. The proposed height controls allow the creation of these larger centralised parks and will provide an active edge and surveillance to the open space.

The low- and medium-rise buildings proposed at the edge of the golf course respond to the contours of the site and form an appropriate defining built edge to the west, as do the low / medium-rise buildings to the north on the DOLA/MRD land (lot 26).

The proposed two- and three-storey houses will be located throughout the development and will be generally grouped around "pocket parks". All streets, parks, and plazas will be defined and edged by buildings with windows overlooking these important public places. This, together with the careful integration of trees, shrubs, public art and street furniture will help to provide a vibrant street life and sense of community.

The future detailed design of all the dwellings will adhere to the principle of achieving architectural excellence through environmentally responsive design.

## 3.3 How Will Burswood Lakes Develop?

Burswood Lakes will be developed by one developer - Mirvac Fini. Unlike other developments in Perth, Mirvac Fini will design, construct, project manage and market the entire built form project from start to finish.

Mirvac Fini will draw on the extensive experience of the Mirvac Group, which has completed many large scale residential developments such as the award-winning Olympic Village in Newington (Sydney), the Beacon Cove development (Melbourne), the soon to be developed Waverley Park (Melbourne) and Stanhope Gardens (Sydney). These projects, based on similar urban neighbourhood principles as Burswood Lakes, have created successful communities which all add to the vitality of their surrounding areas.

Although Mirvac is a relative newcomer to Perth, its recent merger with the award winning Fini Group, to form Mirvac Fini, capitalises on over 70 years combined experience in the property industry. Fini Group delivered to Western Australia many highly successful residential projects. One particular example is St James Estate in Northbridge which was a rejuvenation of an inner city suburb into an award winning urban village. Other recent developments include Majestic Quay, Aqua Vista and the forthcoming South Cove in East Perth, and most recently the Panorama building on Adelaide Terrace which is now leading the Perth market for quality and amenity.

The benefits of one renowned developer creating the entire Burswood Lakes development can be summarised as follows :
- Commitment from Mirvac Fini to achieve excellence
- Certainty of outcome
- Integrated design and diversity of product
- High quality of product due to in-house architectural expertise
- Coordinated, staged development
- Extensive experience throughout Australia
- One central point of communication with the Town of Victoria Park Officers and consultant team and other Authorities

The Structure Plan and its Design Guidelines, along with the Amendments to the Precinct Plan and its Development Standards, have been carefully considered so that the integrity of the development would not be diluted through second generation development.

As shown on the Indicative Development Staging Plan (Fig. 32, p.87), Mirvac Fini will develop a significant proportion of the public spaces in the early stages. This includes the main entry road, the Circular Park, the Lake Park and the Central Plaza.  To facilitate this the initial earthworks stages will cover the majority of the development and include the connection of all services including drainage, water, sewer, power, communications and gas where appropriate.

The indicative staging plan also shows how each stage of the development has been designed to be both a 'stand alone' stage whilst allowing integration with all subsequent stages

There is no doubt that Burswood Lakes is Mirvac Fini's flagship development.  As a flagship Mirvac Fini intend Burswood Lakes to set new standards for integrated residential communities in Western Australia. This will be achieved with the extensive backing of the Mirvac Group which has a market value of over $2 billion and AAA rating on the financial markets.  The Town of Victoria Park can be confident that Burswood Lakes will be developed as indicated in this Structure Plan document.

*Aerial view of the Burswood Lakes site, with the Towns of Victoria Park and Belmont in the foreground, Burswood Resort and Casino adjacent, and Perth CBD beyond*

## 4.0 How will Burswood Lakes Benefit the Surrounding Community?

The residents of Burswood Lakes, Victoria Park and the wider metropolitan region of Perth will benefit socially, economically and environmentally from the redevelopment of the former Swan Portland Cement site.  The benefits will grow as each phase of the project is completed, and will last for generations to come.

The social benefits include:

- Allowing more people to live close to the city, helping to slow urban sprawl.
- A range of public open spaces will be provided for residents and community members to enjoy - from intimate pocket parks and formal plazas to large recreational parks.
- The design layout takes advantage of the dramatic views to the Perth CBD, Burswood Park Golf Course and the Swan River.  All residents and visitors will be able to enjoy the views

through the design of large view corridors and viewing platforms throughout the development.

- In order to create an appropriate scale on the site the design locates buildings carefully to provide definition without overwhelming the street. Taller buildings are wrapped with lower level podiums to provide an appropriate transition and human scale to public spaces and streets.
- The tallest buildings are located in the centre of the site to assist pedestrian wayfinding and to create an identifiable heart to the development.
- The majority of streets and public spaces are edged by buildings, creating a safe public realm through passive surveillance.
- High quality materials and careful detailing will ensure that buildings are attractive, long-lasting, and have low maintenance levels.
- The development responds to the changing demographic needs of Western Australia by providing for the increase in one or two person households, couples without children and the baby-boomer age group.
- The majority of residents will be within 800 metres (a ten minute walk) of the Burswood Train Station which will encourage the use of public transport and help reduce car dependency.
- An extensive network of walking and bicycle paths link Burswood Lakes to the regional system, allowing easy access to the Swan River foreshore, Perth CBD, and surrounding suburbs.

Economically the Burswood Lakes development will benefit both the local community of Victoria Park and Perth. Economic benefits will be derived from both direct and indirect employment (approx 958 jobs p.a. for 10 years) and the associated incomes generated (approx $35.63 million p.a.). Both the Local and State Governments will benefit through additional taxes including council rates (approx $1.0 million p.a.), payroll tax ( approx $960,000 p.a.) and stamp duty (approx $30 million). There will be positive economic implications for Victoria Park from the increase in consumer expenditure in the town (approx $89 million p.a.) and there will be ‘spin offs’ to surrounding property owners in the form of increased property values. Victoria Park and Perth will also benefit from considerable infrastructure savings in transport, sewer, water, electricity, telecommunications and social infrastructure such as schools.

For further economic details, refer to the independent Economic Benefits report in Appendix E, prepared by Dr Paul McLeod from the University of Western Australia.

Burswood Lakes is committed to being environmentally responsible by using resources wisely and by making intelligent design choices. Both the site planning and dwelling design will, where possible, follow Ecologically Sustainable Development (ESD) principles, striving to exploit exposure to the northern sun during winter, limit water usage, encourage natural and cross ventilation, and build with environmentally responsible materials. The Mirvac Group's national research and development department is committed to the continued development and assessment of ESD practices. Mirvac Fini will take advantage of this knowledge-base and, within the framework of a commercially viable development, will provide a more-sustainable way of living for the residents and wider community of Burswood Lakes. Refer to Community Benefits Summary document in Appendix D.

## 5.0 Indicative Development Plan

Burswood Lakes has been designed within the controls and guidelines proposed by this document. The proposed development represents a three-dimensional design outcome, which embodies all of the principles and concepts discussed in detail in all sections and appendices of the Structure Plan.

This design for a new community on the Burswood Peninsula and within the Town of Victoria Park will complement the unique nature of the site and will seamlessly integrate with future development on the Superdome site. The following image provides a plan view of the proposed development. Further detail about the plan is contained in the following sections of the document.


*Artists impression of the Burswood Lakes development.*

*An artistic impression of Burswood Lakes in context, with Perth CBD behind*

## 5.1 Burswood Lakes Neighbourhoods

The following details the variety of distinct areas within Burswood Lakes.  Each has different characteristics, but all are integrated into the final vision forming a varied, diverse, cohesive community.

### The Entry Road, Circular Park, and Central Plaza

The wide entry road bounded by two and three storey houses provides an appropriate sense of arrival. Tree and shrub planting at both the road edges and the median strip help establish the character of this important road. The road curves to reveal the Circular Park, the mid-rise apartments to its western edge and the taller buildings beyond. These buildings frame a primary vista of Perth CBD, the golf course and the river. The Circular Park will not only provide great amenity but its circular form, echoed by the tree planting and buildings around it, will create an important focus and destination for this new community. The Central Plaza, again edged by two and three storey apartments and town houses, will provide opportunity for an urban park, with fountains, pools and water features. This public plaza will link the Circular Park to the Lake Park and public open spaces that terrace towards the golf course lakes.

### The Lake Park and Green Links to the Golf Course

The design of the Lake Park will ensure further visual and physical links to the surrounding amenity of the Burswood Peninsula. Visual links are provided via ‘green fingers’ - linear landscaped links that extend east west across the site providing views of the golf course, river and city. These ‘fingers’ are terminated on the western boundaries by lookout points, which provide panoramic views of the surrounding landscape. The size and north-south orientation of the Lake Park make it not only an important destination but also an exit route for a pedestrian journey through the development.

Appropriate mixed use, such as a cafe or small grocery store, will be located both in this area and/or the Central Plaza.  These amenities located in the tranquil parkland setting will provide a focal point for the development and promote a ‘destination’ for residents and public alike.

### Pocket Parks and Green Links

To complement the larger Circular Park and Lake Park there will be smaller pocket parks and areas of open space, which will provide more intimate places. Some of these places will facilitate quiet contemplation; others, movement and a series of spatial experiences.

### The DOLA/MRD Land and the North-East Precinct

Located on opposite sides of the Burswood Link Road these precincts will be suitable for medium density housing. Two- and three-storey terrace houses and lifted apartments - forming five and seven storey medium-rise buildings - will line the Burswood Link Road and provide new opportunities north across the Swan River.

### The South-East Precinct

Forming a southern gateway to the development, this precinct will contain some mixed-use and retail components providing amenity to the residents of this new community. Four and five storey apartments on this site may further complement the eventual development of the Dome site.

### The Eastern Precinct Family Homes

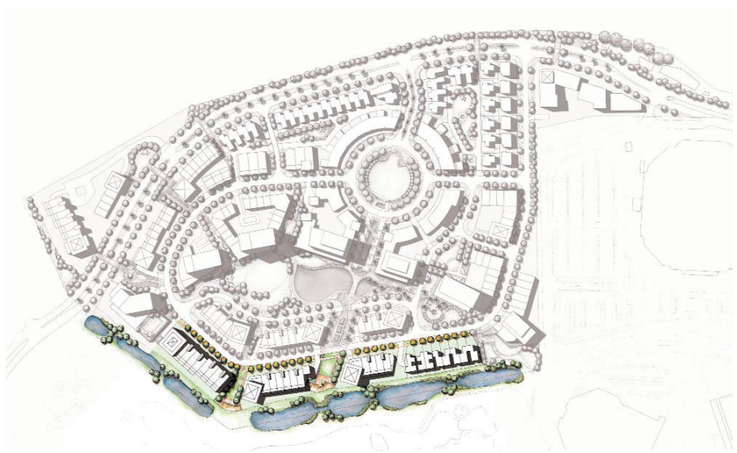
The indicative development plan incorporates two- and three- storey houses on varying size lots within this precinct. These houses are grouped around the Circular Park or pocket parks. There will be a diversity of housing types ranging from townhouse style, zero-lot and detached dwellings.

## Circular Park Apartments

Three- to seven- storey apartment buildings will form a built edge to the western boundary of the Circular Park. Limiting the height of buildings to the eastern edge of the park will ensure the park is in sunshine for most of the day even in winter months. The majority of the Circular Park apartments will overlook the park, ensuring natural surveillance and policing of this important open space.

## Lakeside Apartments

The lakeside apartment complexes are positioned around the Lake Park. These buildings have been strategically placed both in relation to the local environment and the larger regional context of the Burswood Peninsula. Their relationship to the adjoining Casino complex and, at a macro level, to the Perth City skyline is of primary importance.  At between 12 and 21 storeys, these buildings are similar in scale to their nearest neighbour, the Burswood Hotel and Resort.  Each of the taller buildings is located over a two-level car park fronted by two- and three-storey terraces to create podiums which activate and animate the streetscape. The walk-up apartments forming the western edge of the Park Lake also contain five-storey medium-rise buildings, which emphasise street corners and park edges.



## Golf Course Apartments and Houses

Stepped buildings ranging in height from two- to six-storey, define the western edge of the site. The stepped four- and five-storey scale responds to the site contours and will preserve view opportunities for the dwellings on the higher ground near the core of the development. The housing types within this precinct include two- and four-storey walk-up apartments, five- and six-storey medium-rise buildings and two- and three-storey houses. These linear buildings along the golf course are occasionally bisected by vistas out into the golf course.

*View of Lake Park looking south*

# Introduction

## 1.0 Structure Plan Objectives

Under the Town of Victoria Park Town Planning Scheme, a Structure Plan is required to guide development as the new community at Burswood Lakes grows. The objectives of this Structure Plan are:

- **An Evolving Place**
  To create a place for the 21st Century, appropriate to its location, that will evolve through viable stages.

- **Links to the Town of Victoria Park**
  To forge social, commercial and physical links with Burswood Lakes and the community of Victoria Park.

- **Built Form and Response to Setting**
  To create a place that fits within the urban fabric and setting.

- **Connectivity and Transport Orientated Design**
  To create a well-connected place.

- **Importance of Public Place: the Public Realm**
  To create an accessible and useable public realm.

- **Sustainability**
  To create a development that conserves resources, takes advantage of natural amenities, and encourages a diverse residential community that will contribute to the social and cultural life of the Town of Victoria Park. In addition, to make the best use of a valuable urban land resource and contribute to local economic growth.

## 2.0 Structure Plan Documents

This document constitutes the complete set of documents that will guide the development of the land identified in the Town of Victoria Park's Town Planning Scheme No1 Burswood Precinct Plan P2 as Special Use Zone and known as Burswood Lakes. These documents include:

- **Part A - The Structure Plan Rationale**
  The Rationale is the background and supporting documentation that has been prepared to justify the Structure Plan and the Scheme Amendment. This document provides an Indicative Development Plan (Fig. 18, p.67) that identifies the development consortium's intent for the Special Use Zone.

- **Part B - The Structure Plan**
  The Structure Plan details the requirements in the Burswood Precinct Plan P2 that forms part of the Town Planning Scheme. It provides a framework for future subdivision and development.

- **Part C - Precinct Plan Amendment**
  It is necessary to vary some standards in Precinct Plan P2 to allow the development of an urban neighbourhood at Burswood. Part C is the document necessary to initiate that amendment. The amended provisions are set out in the Appendices.

The development proponent for the purpose of the Structure Plan is BL Developments - a joint venture between Burswood Ltd. and Mirvac Fini (WA) Pty Ltd.

## 3.0 Process

The Structure Plan, Precinct Plan Amendment and supporting documentation have been developed through a regular process of consultation with the Town of Victoria Park Officers and consultant team and the Department for Planning and Infrastructure. Regular meetings and workshops have taken place to discuss specific issues and to engage the entire project team.

The consultation process included an initial urban design workshop held at the Town of Victoria Park's offices following a site visit. This workshop outlined background information prepared by the development proponent consultant group and involved the Department for Planning and Infrastructure, the Town of Victoria Park and its consultant team. Key issues were identified and discussed.

The information gathered in this process enabled the design team to formulate the urban design principles of the Structure Plan.

A technical workshop was also held with the Town of Victoria Park officers and its consultant team to ensure the technical, engineering and environmental issues were assessed by the development proponent team to an appropriate level.

Following the technical workshop, a second urban design workshop was held to further discuss issues associated with the Structure Plan.

The first Draft of the Structure Plan document was submitted to the Town of Victoria Park Project Team and Design Review Group on 20 December 2001. A second ‘informal’ lodgement of the document, which addressed comments made by the Council team, was submitted to the Council Project Team on 9 May 2002. This ‘formal’ submission, dated 1 July 2002, addressed all comments raised as a result of the former two submissions.

Subsequent to Council resolution, a 42 day period of public advertising of the Structure Plan and the Scheme Amendment commenced on 15 October 2002, and closed on 26 November 2002.

## 4.0 Key Issues

The key urban design issues that were identified at the first urban design workshop were:
- Form, scale and skyline
- Burswood train station location
- Connectivity and road network
- Relationship of public and private spaces

Key issues identified at the technical workshop were:
- Ground conditions and long-term management of and responsibility for a remediated site
- Management of stormwater and the lake system
- Management of public open spaces
- Road Network and traffic management

Key issues from the second urban design workshop were:
- Building form and height
- Public open space: accessibility and usability

## 5.0 Study Team

Architectural, Town Planning, Engineering, Traffic, Landscaping, Geotechnical, Wind and Environmental assessments have been undertaken by the proponent's consultants. Their respective summaries have been incorporated into 'Part A Structure Plan Rationale' of this document whilst the full consultant reports are provided as separate documents as follows:

| Discipline | Consultant | Document Title / Ref. |
|---|---|---|
| Infrastructure | Sinclair Knight Merz | Infrastructure Report June 2002 |
| Traffic | Sinclair Knight Merz | Traffic Report (Final) May 2002 |
| Traffic | Sinclair Knight Merz | Addendum to Traffic Report Dec. 2002 |
| Geotechnical | Golder Associates | Geotechnical Studies - Burswood Lakes |
| Environmental | ATA Environmental | Environmental Management Exec. Sum |
| Landscape | EPCAD | Landscape Masterplan Report |
| Social Planning | Dr Wendy Sarkissian | Prelim. Soc. Planning & Design Advice |
| Social Planning | Dr Wendy Sarkissian | CPTED Assess. / Bldg. Control Env. |

The team involved in preparing the Structure Plan includes:

| | |
|---|---|
| • Project Management | Mirvac Fini |
| • Architecture and Master Planning | HPA Architects |
| • Town Planning | Hames Sharley |
| • Landscape Architecture | EPCAD |
| • Environmental | ATA Environmental |
| • Structural Engineering | Ove Arup |
| • Infrastructure | Sinclair Knight Merz |
| • Traffic Engineering | Sinclair Knight Merz |
| • Geotechnical | Golder Associates |
| • Surveyor | John Giudice & Assoc. |
| • Wind | Dr. Kenneth T. Kavanagh (UWA) |
| • Legal | Les Stein (Barrister) |
| • Economic | Dr. Paul McLeod (UWA) |
| • Social Planning | Dr. Wendy Sarkissian |

The team involved in assessing the Structure Plan includes:

Town of Victoria Park Officers

- Chris Eaton
- Alex Sheridan
- Rochelle Lavery
- Ryan Victa

Town of Victoria Park Project Team

| | |
|---|---|
| • Project Management | APP Argenta |
| • Town Planning | The Planning Group |
| • Infrastructure | Van Der Meer |
| • Environmental | ENV |
| • Geotechnical | Coffey Geosciences |

Town of Victoria Park Design Review Group

- George Gillan
- Tony Ednie-Brown
- Michael Tooby
- Robert Mulchay

Department for Planning and Infrastructure

- Malcolm Mackay
- Claire Franklin

Department of Land Administration

- Dennis Millan
- Richard Wolski

Main Roads WA

- Dennis Fowles

Burswood International Resort

- John Wilshaw

*Aerial view of Burswood Lakes looking toward Victoria Park and the east hills*

## 6.0 Statement of Intent

Burswood Lakes has been designed to acknowledge the prominence of the Burswood Peninsular as required by the Town of Victoria Park's vision for the Special Use Zone of the Town Planning Scheme. It recognises the site as a unique landmark opportunity.

The Structure Plan and Precinct Plan Amendment will facilitate the development of a high profile, well-integrated community that is in keeping with its location and inherent benefits. Large areas of public open space will be created that will complement the existing landscaped parklands and river surrounds. It will incorporate links to the existing amenities via a well-integrated pedestrian, cycle, road and rail network, which provides good access to both local and regional facilities.

The Structure Plan and Precinct Plan Amendment recognise the importance of the Precinct as a backdrop to the river and views of the Peninsula. The built form of Burswood Lakes will be designed to complement local and regional character and to achieve a high aesthetic standard.

Burswood Lakes has been planned according to Liveable Neighbourhoods principles to create a cutting edge, environmentally-conscious community for Perth.

*Water and open space along Swan foreshore adjacent to Golf Course and Burswood Lakes site*

## Illustrations of Burswood Lakes

The streets and public open spaces in Burswood Lakes are proposed to be pedestrian-friendly and useable. Through a series of perspective sketches, key spaces and views throughout the site were carefully examined. This study helped the design team to determine appropriate building heights and setbacks, potential facade treatments at ground level, important landscaping elements, and to generally achieve a sense of what it might be like to walk through the new community once completed.

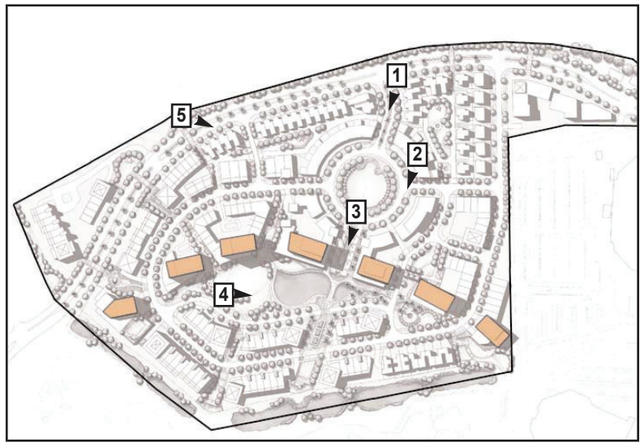
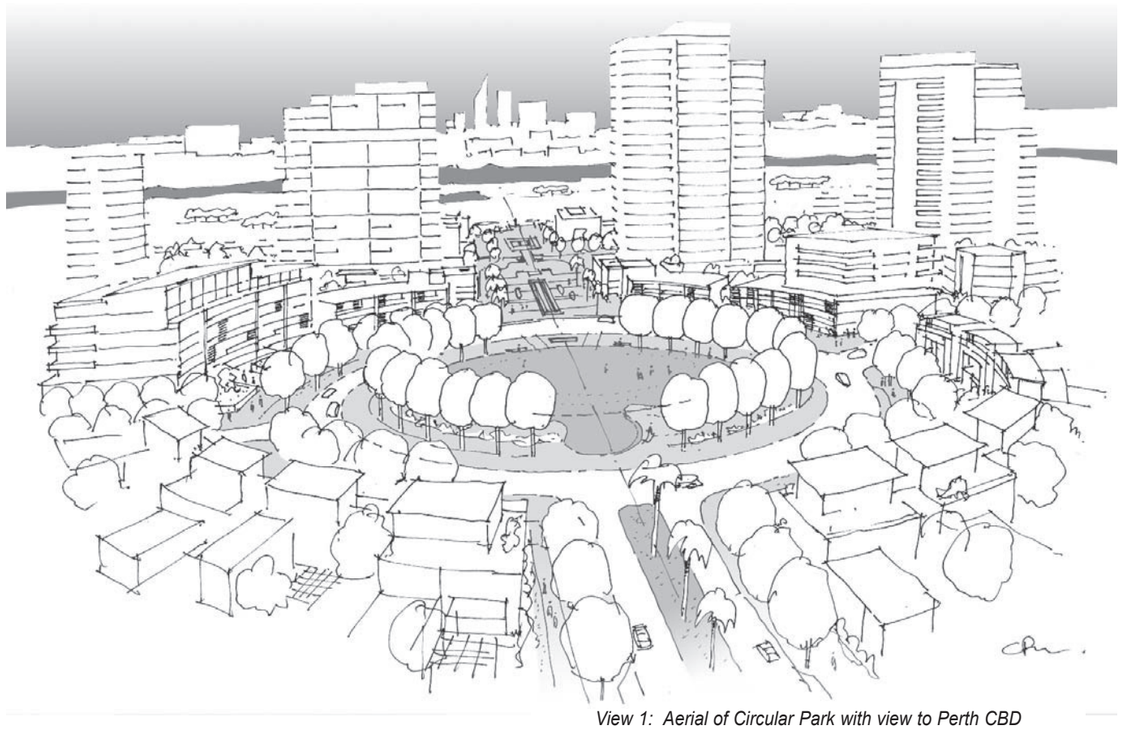
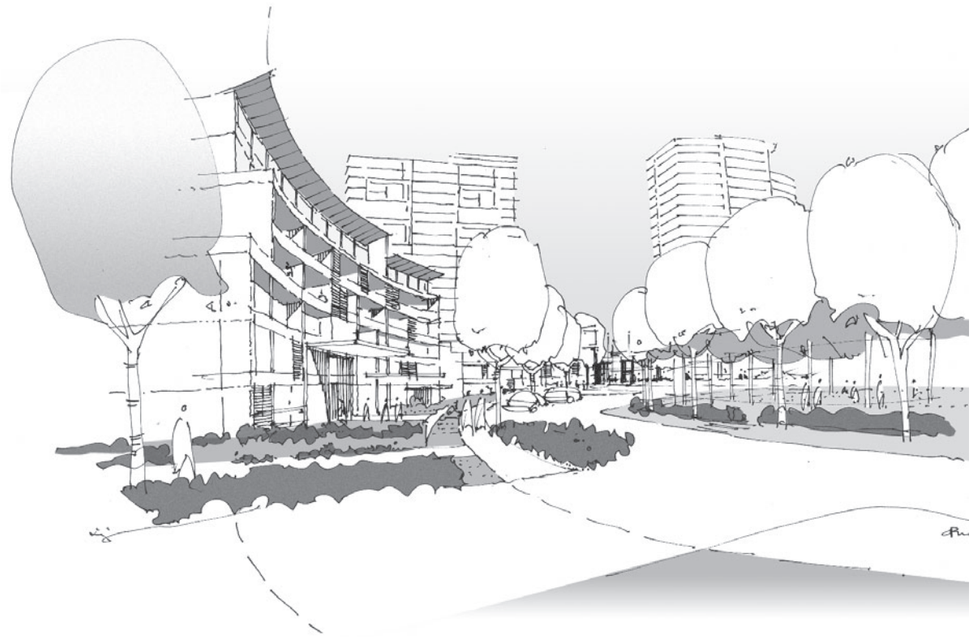



*Diagram A: View locations for Illustrations*



*View 1: Aerial of Circular Park with view to Perth CBD*



*View 2: Ground level view of apartments surrounding the Circular Park*

*View 3: Ground level view from plaza, looking west to Perth CBD*

*View 5: View of Burswood Lakes from Burswood Link Road*

*View 4: View of Lake Park looking south*

*Aerial of Circular Park with view to Perth CBD*

# Part A -
# Structure Plan Rationale

## 1.0 Project Rationale

The document, Towards a Vision of Perth in 2029, a publication of the Future Perth Study, concluded that the future of Perth includes:

> *Having a series of high quality, environmentally sensitive urban villages overlaid on the metropolitan area, centred on transport nodes linked to Perth's central area where walking and cycling is a natural way of moving about. The villages can comprise mixed uses, community facilities and housing choice.*

The placement of a large residential development within the vicinity of the City of Perth is consistent with this concept and, as well, the historical principle of the need to have consolidation of the urban form. The 1987 Planning for the Future of the Perth Metropolitan Region, November 1987, a review of the Corridor Plan, was for

> *the consolidation of existing and future urban development, the facilitation of job creation and employment growth in a new pattern of centres throughout the middle suburbs, high levels of accessibility via both public and private transport …*

This concept that there should be consolidation of urban development was emphasised as one of Metroplan's 10 themes that argued for the primacy of such development and the need for "a tighter urban form."

This reasoning favouring urban consolidation was based on planning concepts to prevent suburban sprawl but, more recently, the practical reasons have become important. The financial justification for closer urban development was set out in Working Paper No. 2 of the Future Perth Study "The Costs of Urban Form." This paper explained that the cost to the community decreases with urban consolidation as opposed to development on the fringe. This is reflected in various documents such as the Discussion Paper for the State Planning Strategy on Transport where it is stated:

> *From a transport perspective there are some advantages in encouraging greater growth in the regional centres outside the Perth region, and the fostering of urban Consolidation within Perth and urban regional centres.*

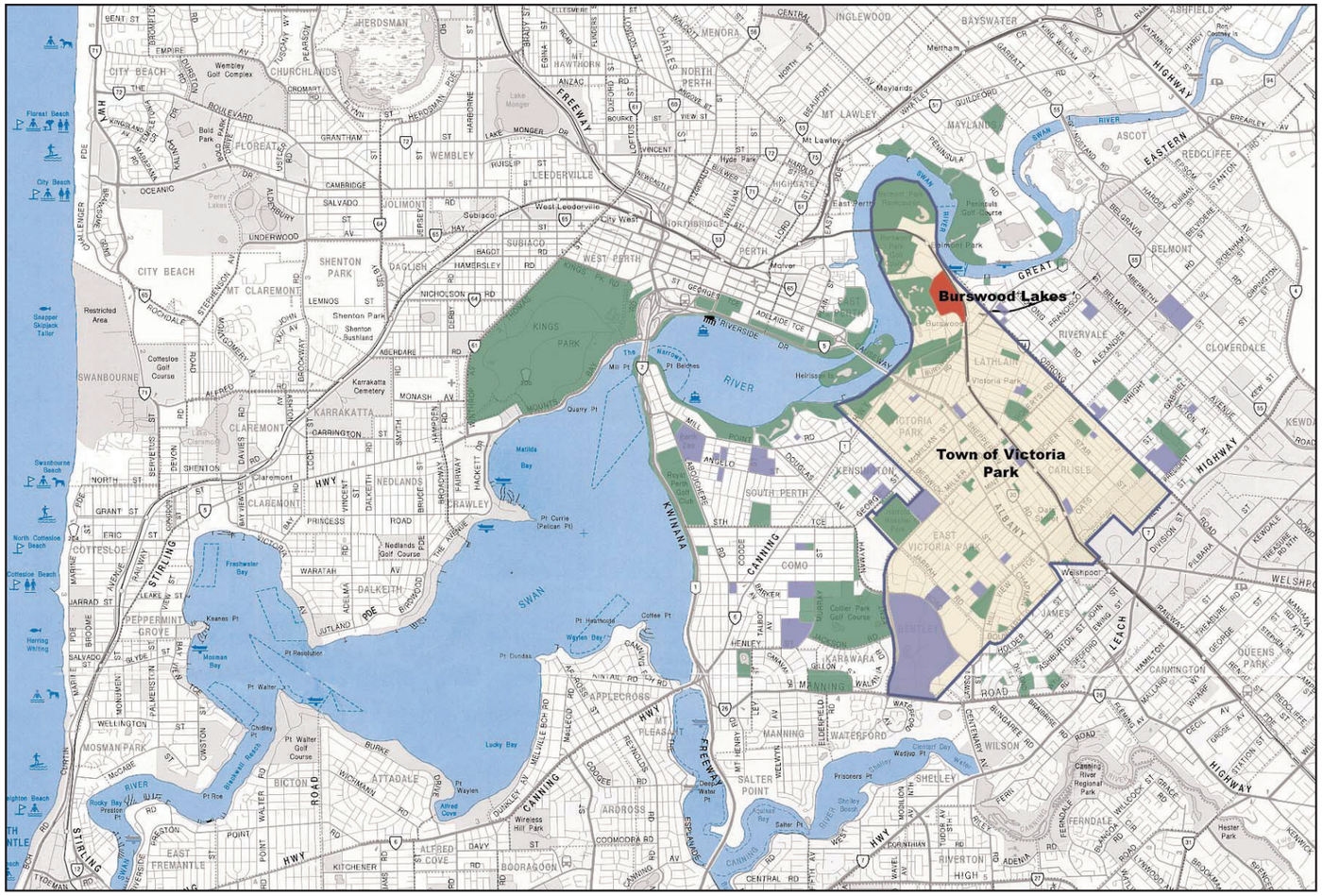



*Diagram B: Site Context*

The concept of urban consolidation is that the Inner Sector areas, including Victoria Park, should be the subject of a tighter urban form of development, where appropriate having regard to the amenity of existing communities.

### Demographics

The need for urban consolidation arises from demographic trends. Using the population figures from the Ministry for Planning (Western Australia Tomorrow Population Report No. 4, October 2000) for Victoria Park, there is an increase forecast of population from 27,000 in 2001 to 33,000 in 2016, rising to 36,300 in 2031.

The median age of population, according to ABS statistics for Victoria Park will be 35 in 2016, suggesting a need for diversified housing. This is confirmed by a trend towards such housing that will see the resident population of the central City of Perth grow from 5,600 in 1996 to 10,100 in 2031. A recent study for the Ministry for Planning: Population Issues: Metropolitan Working Paper No. 5, indicated that traditional housing will continue to be found in the outer suburbs but the inner areas will attract diverse housing for less traditional family units. These units will be for one or two person households that represent 55% of households in the State, couples without children arising from lower fertility rates and the 'baby-boomer' age group, retired individuals and couples resulting from improved life expectancy and other groupings formed by a higher divorce rate.

*Aerial view of the Burswood Peninsula*

The lot release in the Inner Sector (including Victoria Park) according to the Metropolitan Development Program, Land Supply and Demand Outlook Report of January 2002 will be 1,126 lots by 2005/06 although the five year high and low scenarios indicate residential demand will be over 5000 dwellings. These figures appear to be underestimated when the time line is increased as a result of the recent Commission paper: Population Report No. 5, May 2002, "Tomorrow's Dwelling and Labour Force in Western Australia." This report shows, at Table C2, that for Victoria Park, the private dwelling projections are 15,741 for 2016. This represents a dwelling need increase of 21.6% since 1996.

In the calculations of demand, the Metropolitan Development Program included the development of large sites as the means to cover the requirements of this demand. This was necessary because of the recognition in the Metropolitan Development Program Strategic Statement (at p.41) that 'very little zoned land' for residential development will be available in the Inner Sector after 2004/5. The recognition that large undeveloped sites will be important in supply of housing stock is provided in the Commission's Regional Residential Guidelines for the Perth Metropolitan Region. In the Guidelines (at p.5) it is stated:

> *Large sites within an established urban area, such as those resulting from former institutional or industrial development, may also present opportunities for providing a range of dwelling types at higher densities. This is likely to apply especially in the central areas of Perth and Fremantle and also in other areas where a mix of residential uses is compatible. Where large sites exist with spare infrastructure capacity or where it can be provided, the site should be given priority consideration for residential development to maximise the use of that infrastructure potential.*

# 2.0 Burswood Lakes Site

The Burswood Lakes Site provides an exceptional opportunity to demonstrate how a coherent residential community can be developed with a holistic approach. The site is unrivalled in history, location and orientation. It has magnificent views across the Burswood Park Golf Course and the Swan River, and has a direct relationship with Perth CBD, Burswood Resort and the Town of Victoria Park.

The development proponent will embrace this uniqueness. It will create a community that will respond to, and integrate with, its environment, not only to the benefit of its residents but to the community as a whole.

This community will offer an alternative to traditional housing in Perth and will provide for the accommodation needs of a changing demographic. It will take advantage of existing amenities and infrastructure in the Town of Victoria Park without causing adverse effects.

The various elements that make the site unique - its history, topography, orientation, views and relationship with the Town of Victoria Park, the Burswood Resort and the Swan River - establish a framework for the design.

The design has considered the following aspects:

- Location and context
- Planning context
- Site analysis and opportunities
- Access and transport
- Environmental issues
- Infrastructure provision
- Public open space and landscape

# 3.0 Location and Context

Burswood Lakes is located within the Town of Victoria Park approximately 5 kilometres east of the Perth CBD and 2 kilometres from the Victoria Park post office. The site context map (Diagram B, p.23) locates the site within the Perth metropolitan area. It has a net land area of 17.1132 hectares following the creation of the Burswood Link Road.

# 4.0 Ownership

## 4.1 History

The last two centuries have seen significant modification of the Burswood Lakes site and the Burswood Peninsula.
The evolution, cultural and historic significance of the Burswood Peninsula is documented in a number of publications including *Know your Suburb...Burswood*, By Dr Geoff Gallop MP.

Plans dating back to 1888 reveal that the site's topography has changed through both natural and human intervention shown in Diagram O, p.66. The need for a more direct navigable route for boats led to the construction of a canal by civil engineer Henry Reverley who, in 1831, turned the Peninsula into an island. Boats were still using the canal in the 1920's during the construction of the cement works.

Over the last 200 years, much fill and re-shaping of the wetlands has taken place. The last 100 years saw the introduction of industries such as The Red Castle Brewery and James Hardie Industries, and the construction of many buildings by the Swan Portland Cement Company (originally the West Australian Cement Company) for the production of cement-based products. These buildings which included kilns and tall chimneys remained until April 1999.

The site has now been fully remediated. The Department of Environmental Protection, on behalf of the Minister for the Environment, has signed off on the site as suitable for residential redevelopment.

## 4.2 Regional Context

The relationship between Burswood Lakes and its metropolitan context is shown in Diagram B - site context, p.23.

Perth is currently experiencing rapid expansion, sprawling north and south along coastal corridors. Inner city locations that offer opportunities for urban consolidation are valuable resources. Burswood Lakes is one of these locations.

Perth - like many cities across the world - has developed along its main transport arteries. The city's early growth can be charted along the natural and man-made evolution of the river. The completion of the railway in 1893, and more recently the construction of the Graham Farmer Freeway and Windan Bridge with its cycleway in 1999, has dramatically increased the transport connections to the Burswood Peninsula. The possible introduction of ferry stops along the river will also enhance this connectivity.

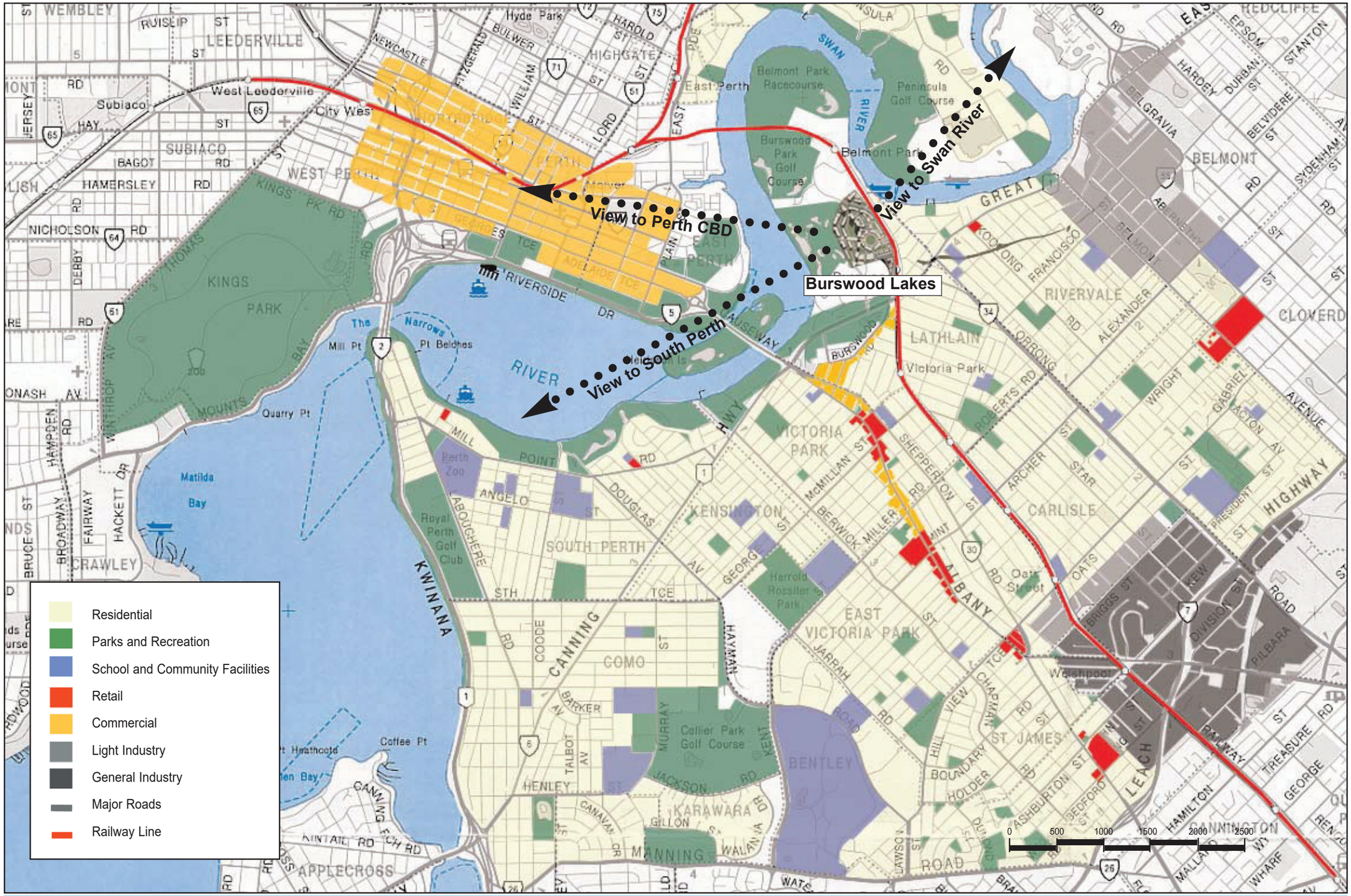



**Figure 1**
Surrounding Uses

The region around Burswood Resort includes established residential areas as well as commercial and industrial areas (see Surrounding Uses, Figure 1, p.25). The surrounding suburbs include:

- Burswood
- Lathlain
- Victoria Park
- Carlisle
- East Victoria Park
- Welshpool
- Rivervale
- Belmont
- St James

Retail uses within the region are identified in the WAPC Statement of Planning Policy No.9 Metropolitan Centres Policy Statement for the Perth Metropolitan Region. These include the following centres:

- Regional Centres
  - Belmont
- District Centres
  - Victoria Park
  - East Victoria Park
  - Bentley
- Neighbourhood / Local Centres
  - Archer Street
  - Lathlain Place
  - Orrong Road / Archer Street
  - Carlisle
  - Tuckett / Oats Street
  - Griffiths Street

There are four major industrial / commercial areas within the regional catchment:

- Welshpool / Carlisle
- Belmont
- Burswood Link Road
- Burswood west of Great Eastern Highway and east of the Railway

The demand for schools has been assessed under the Western Australian Planning Commission - Policy DC 2.4 - October 1998 which states that in determining a broad need for school sites, it is necessary in each particular case to assess that need against existing school sites, established schools, rate and type of development including demographic profiles. The Department of Education requires one Primary School site for between 1500 and 1800 housing units and one Secondary School site for every 4 or 5 primary schools. Therefore the proponent is of the opinion, after taking into account the WAPC requirements, that education is

*Tennis West (State Tennis Centre)*

adequately provided for in the local and regional catchment with the following facilities:

- University
  - Curtin University
  - University of Western Australia
  - Edith Cowan University Mt Lawley
- TAFE
  - Carlisle Campus
  - Mount Lawley Campus
- High Schools
  - Kent Street
  - Regent College
  - Ursula Frayne Catholic College
  - Kewdale Senior High School
  - Divine Mercy Catholic College
  - Mercedes College
  - Trinity College
- Primary Schools
  - Victoria Park Primary School
  - Kensington Primary School
  - Seventh Day Adventist Primary School
  - Perth Montessori School
  - South Kensington School
  - East Victoria Park Primary School
  - Holy Name Primary School
  - Tranby Primary School
  - Lathlain Primary School
  - Millen Primary School
  - Divine Mercy Catholic College

Major Parks and Recreation facilities within the region include:

- Lee Reserve
- Lathlain Park
- Tom Wright Park
- Parnham Park
- Somerset Pool
- Read Park
- Fletcher Park
- Kate Street Reserve
- The Memorial Gardens
- Charles Paterson Park
- McCallum Park
- G O Edwards Park
- Kagoshima Park
- Wilson Park
- Peet Park
- Carlisle Reserve
- Tomato Lake
- John MacMillan Park
- Raphael Park
- Harold Rositer Park
- Fraser Park
- Higgins Park

Several community facilities exist within close proximity to the subject site and, although not publicly owned, they provide a service to the community. These include:

- Town of Victoria Park
- Perth CBD
- Burswood Train Station
- Burswood Peninsula Foreshore
- Burswood Resort, Casino and Theatre
- Burswood Park Golf Course
- State Tennis Centre
- Restaurants and other eating facilities at Burswood Resort
- Belmont Racecourse
- Burswood Water Sports Centre

## 4.3 Local Context

The local context plan (Diagram C, p.27) shows the connections and relationships the site has to surrounding land uses, physical and built features.

The southern part of the Burswood Peninsula is dominated by the Burswood Resort - a group of large scale sculptural buildings. The Burswood Hotel is approximately 17 residential storeys high and is a landmark in the inner city landscape. The Burswood Resort also offers a range of restaurants and entertainment facilities.

The Superdome - proposed to be demolished in the short- to medium-term - is also a building of significant scale and is currently used for large entertainment events.

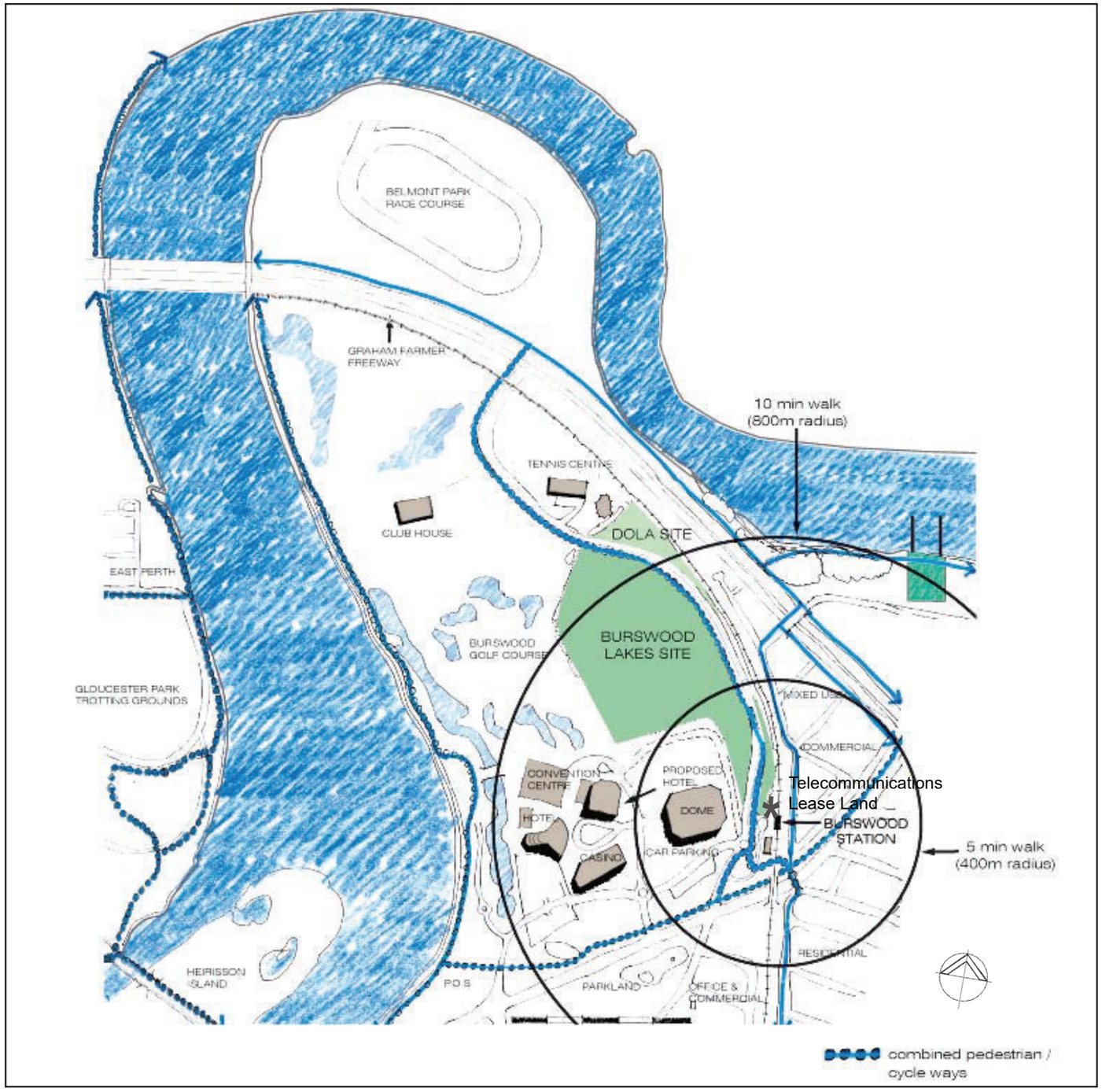



*Diagram C: Local Context and Proximity to Existing Cycleways and Railway Station*

The Burswood Train Station, adjacent to the Superdome, is currently used by Burswood Resort patrons, local workers, and residents of Rivervale.

Car parking for the Burswood Resort, Superdome and Casino is a significant land use in the immediate area. A large amount of this parking is currently at grade.
Further to the south, the Causeway Precinct of Victoria Park provides the existing urban edge to the town.

The Belmont Racecourse, the State Tennis Centre, and the Burswood Golf Clubhouse and Links occupy the northern part of the Peninsula.

To the east, the railway and the Graham Farmer Freeway create a barrier to Rivervale.

The existing local strip centre of Rivervale, located along Great Eastern Highway, is within walking distance of Burswood Lakes. This area includes a service station, convenience store, bakery, pizza shop, pharmacy, lotto centre, post office, newsagency, and the Rivervale Hotel.

Rivervale is a mixture of commercial and residential buildings of varying character and age. This area is likely to undergo some redevelopment in the near future, with the Graham Farmer Freeway providing greatly improved access.

# 5.0 Planning Context

A number of planning documents will influence development of Burswood Lakes as follows.

## 5.1 Statutory Context

The Metropolitan Region Scheme (MRS) is the metropolitan-wide statutory document that governs the location of land use. Burswood Lakes is zoned Urban under the MRS.

The Town of Victoria Park Town Planning Scheme No.1 currently governs development within the Town of Victoria Park. Diagram D (p.28) defines the use zones.

The Burswood Lakes Structure Plan responds to the Town of Victoria Park TPS 1 general objectives as outlined below:

a) *To cater for the diversity of demands, interests and lifestyles by facilitating and encouraging the provision of a wide range of choices in housing, business, employment, education, leisure, transport and access opportunities.*

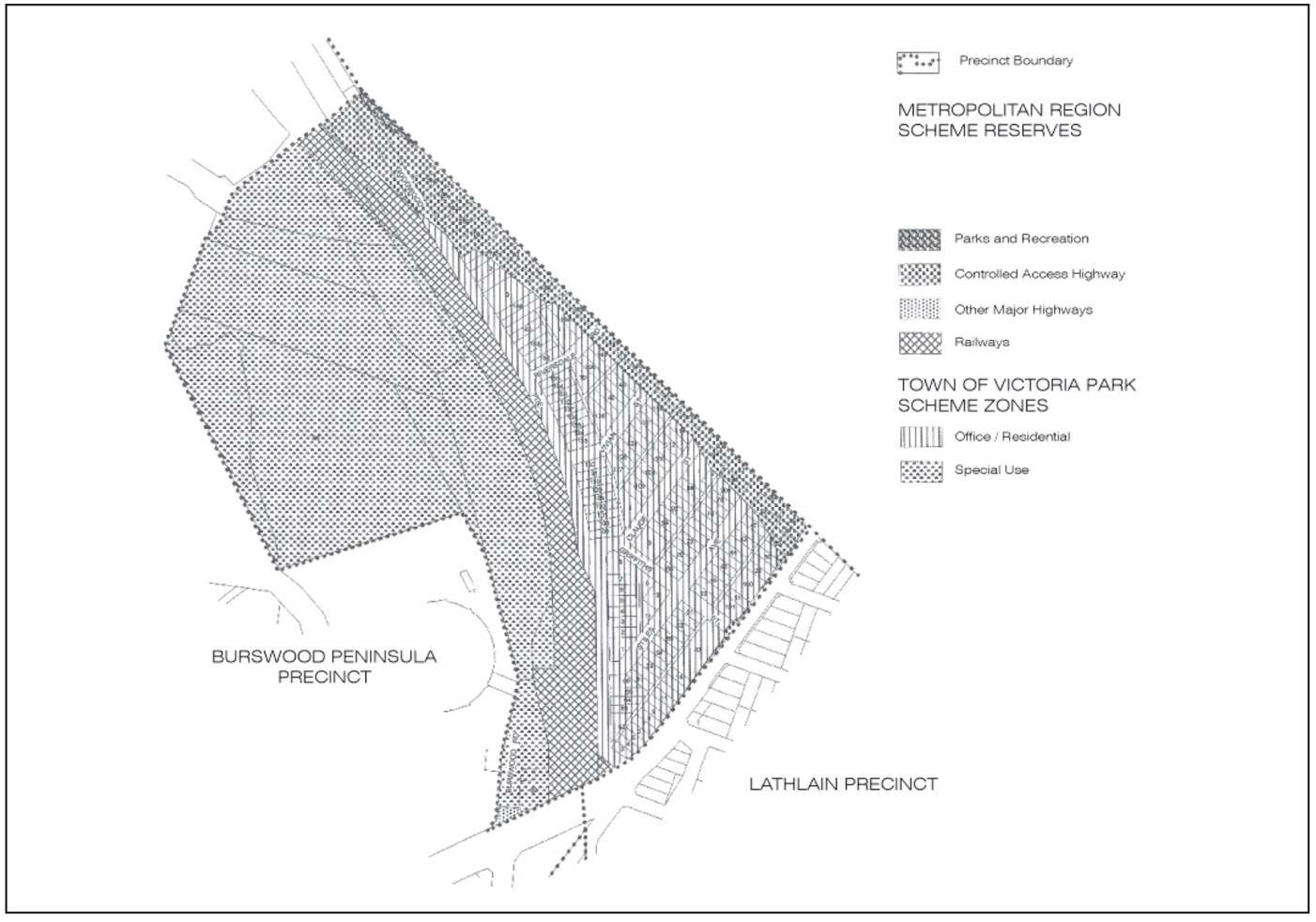



*Diagram D: Burswood Precinct 2 and Special Use Zone*

- By offering a diverse range of housing types to cater for changes in lifestyle that are occurring in near city locations.

*b) To protect and enhance the health, safety and general welfare of the town's inhabitants and the social, physical and cultural environment of the town.*

- By providing a substantial addition to the residential community of Victoria Park while not adversely affecting existing residential areas.

*c) To ensure that the use and development of land is managed in an effective and efficient manner within a flexible framework which*

*(i) recognises the individual character and needs of localities within the Scheme area; and*
*(ii) can respond readily to change*

- By providing a planning framework that is consistent with regional planning objectives and allows for the planned evolution of the site as an urban neighbourhood.

*d) To ensure planning at the local level is consistent with the Metropolitan Region Scheme and wider regional planning strategies and objectives.*

- By providing a planning framework that is consistent with regional planning objectives and allows for the planned evolution of the site as an urban neighbourhood.

*e) To promote the development of a sense of local community and recognise the right of the community to participate in the evolution of localities.*

- By promoting a sense of community through a community development programme.

*f) To promote and safeguard the economic wellbeing and functions of the town*

- By adding to the economic wellbeing of the Town of Victoria Park through additional expenditure by the new residents of Burswood Lakes.

*g) To coordinate and ensure that development is carried out in an efficient and environmentally responsible manner which makes optimum use of the town's growing infrastructure and resources.*

*i) promotes an energy efficient environment; and*
*ii) respects the natural environment*

- By producing environmentally responsible development through careful site micro-climate design and building standards.

*h) To promote and safeguard the cultural heritage of the Town by identifying, conserving and enhancing those places which are of significance to the town's cultural heritage*

*i) encouraging development that is in harmony with the cultural heritage value of an area; and*
*ii) promoting public awareness of the cultural heritage generally.*

- By facilitating community access to significant river areas.
- By recognising the significant history of the Burswood Canal.

The Burswood Lakes Structure Plan responds to the Burswood Precinct Plan Statement of Intent through:

- Provision of an attractive residential community in the northern part of the precinct, which is set in landscaped parkland with good access to the Town of Victoria Park, the city centre and the regional road network. This residential community will complement other uses such as tourist, entertainment and commercial, which will likely be developed in the southern part of the precinct and the Burswood Peninsula Precinct. The residential community will contribute to the economic life of the town which is currently well supplied with commercial and retail development.
- Provision of buildings and landscaping of a high visual standard, which acknowledges the prominence of the Burswood Peninsula and complement a key entry route to the Town of Victoria Park.
- Acknowledgement of the importance of the Precinct as a part

of the Burswood Peninsular and Swan River setting by creating view corridors through the development and design of the development as a landmark element within the wider landscape.
- Provision of a pedestrian and cycle network that links to the Burswood Train Station, Burswood Peninsula Precinct and the regional shared-path network.
- Provision of public open spaces and streets that contribute to public enjoyment of the Peninsula

The provision of standards for the Public Realm Subdivision and Private Development will help to ensure the objectives outlined in the Statement of Intent are achieved.

TPS1 requires the preparation of a Structure Plan for the Special Use Zone prior to redevelopment. The Scheme states:

*Development within the Special Use Zone shall be generally consistent with the provisions of a Structure Plan approved and amended from time to time by the Council and the Western Australian Planning Commission. The Structure Plan should indicate broad land use options for development and subdivision, and provide a policy framework for future subdivision and development. The Structure Plan will form the basis of Council's determination of applications for subdivision and development of land within the Precinct. In considering a Structure Plan for the Special Use Zone, Council shall notify adjoining/nearby landowners and occupiers of the proposed Structure Plan and provide a minimum period of 28 days within which to lodge submissions on the Structure Plan.*

The Structure Plan must include the following information in plan and where appropriate, in written form:

(a) Statement of objectives and explanation of the rationale for the proposal contained in the Structure Plan
(b) Road / pedestrian network showing road reserve and pavement widths, footpaths and provisions for on-street parking and right-of-way / vehicular access ways where appropriate
(c) Proposed "Use Area" classifications of all land within the Special Use Zone with the following range of classifications to apply:
  - Residential R80
  - Tourist / Residential R160
  - Hotel / Tourist
  - Office / Residential R160
  - Mixed-use (maximum of 1.5 hectares of total Precinct)
(d) Indicative lot patterns and lot services
(e) Location of major infrastructure proposed including drainage, sewage and water supply services

*Connecting to the Swan River, visually and physically, was an important design consideration at Burswood Lakes*

(f) Infrastructure and amenities to be provided by the subdivider / developer including public open space, and road pavements, parking, landscaping, footpaths and other facilities within road reserves
(g) The relationship of the land to surrounding facilities, land uses and road / pedestrian network
(h) The way in which subdivision and / or development of the land will recognise the historic Burswood Canal, part of which is still evident within the boundaries of the Special Use Zone

The Burswood Lakes Structure Plan includes all of the information required above. Refer to Part B : Section 1 for summary table.

## 5.2 State Planning Strategy

The State Planning Strategy is a comprehensive list of strategies and actions, policies and plans to guide the development of regional and local areas in Western Australia. It assists both state and local government in long term land use planning for Western Australia.

The five guiding principles of the State Planning Strategy are:

- **Environment & Resources**
  to protect and enhance the key natural and cultural assets of the State and to deliver to all Western Australians a high-quality of life based on sound, environmentally-responsible principles.

- **Community**
  to respond to social changes and facilitate the creation of vibrant, accessible, safe and self-reliant communities.

- **Economy**
  to actively assist in the creation of regional wealth, support the development of new industries and encourage economic activity within the framework of responsible development practices.

- **Infrastructure**
  to facilitate strategic development by ensuring land use, transport and public utilities are mutually supportive.

- **Regional Development**
  to assist the development of regional Western Australia by taking into account special assets and accommodating the individual requirements of each region.

These principles are embodied in the objectives of the Burswood Lakes Structure Plan.

## 5.3 State Planning Policies

The State Planning Framework is a Statement of Planning Policy (No 8) made under S5AA of the *Town Planning and Development Act.* It brings together all existing State and regional plans, policies, strategies and guidelines that apply to land use and development in Western Australia, including:

- Liveable Neighbourhoods (2000, WAPC). This operates as a development control policy or code to facilitate the development of more cohesive, liveable communities. Its aims include, but are not limited to, the following:
  - Providing for an urban structure of walkable neighbourhoods clustering to form towns of compatibly mixed-uses, which reduces car dependence in accessing employment, retail and community facilities
  - Providing for access by way of an interconnected network of streets which facilitate safe, efficient, and pleasant walking, cycling and driving
  - Fostering a sense of community and strong local identity in neighbourhoods and towns
  - Facilitating mixed-use urban development that provides a wide range of living, employment and leisure opportunities - capable of adapting over time as the community changes - that reflects appropriate community standards of health, safety and amenity
  - Providing an innovative approach to urban development for the City in a bid to create 'better neighbourhoods'

The Burswood Lakes Structure Plan has been designed with Liveable Neighbourhoods principles in mind.
The relevant Western Australian Planning Commission (WAPC) Development Control Policies include:

- DC 1.6 Planning to enhance Public Transport, which encourages:
  - Leisure / recreation activity close to railway stations
  - Reduced car parking provision in proximity to railway stations
  - Medium to high density residential (min R40)
  - Shared-paths from stations
  - Separation distance from rail
  - Quality urban design and conservation of local amenities in the station precinct

The resolution of the Burswood Train Station location is consistent with policy DC1.6.

Burswood Lakes offers an appropriate residential development close to public transport.

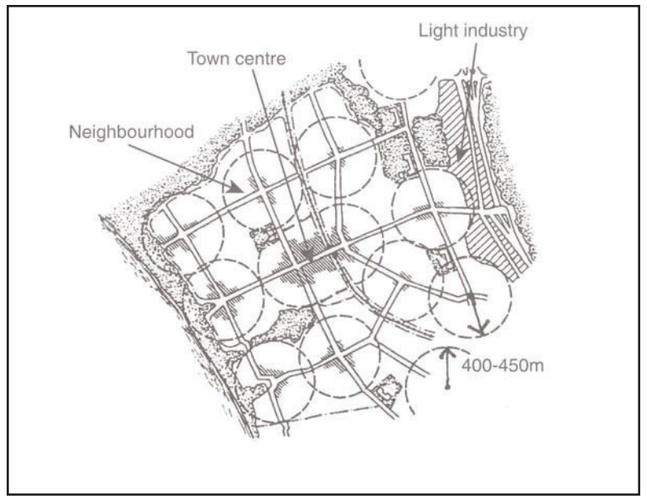
- DC 2.1 Residential Planning Codes
  - The Residential Planning Codes (R Codes) are the current basis for control of residential development in the Town of Victoria Park.
- Draft Residential Design Codes
  - The draft Residential Design Codes, republished in July 2001, were approved by the Commission and gazetted in October 2002.

These new R-Codes introduce a new R Coding of 'R-IC'; the 'IC' being for 'Inner City'. The October 2000 draft drew a distinction between inner city development and central city development. The revision of July 2001, combined both as 'Inner City Housing'. The purpose of this coding is to distinguish a more intense form of urban development from suburban development. Section 4.3 of the new Codes provide that the concept of 'Inner City Housing' is to embrace the central city and

- the immediate fringe of the Central Business District and commercial centres, where residential development competes with commercial development and may predominate.

The preface to the criteria for classification of R-IC states:

- There is a difference between suburban and inner-city housing that springs not merely from the physical conditions of the inner-city areas, but also from the different lifestyle aspirations, attitudes and expectations of those who choose, or are obliged, to live in inner-city areas.




*Burswood Lakes is in line with State goals of creating liveable neighbourhoods*

The criteria used for the characterisation of 'Inner City Housing' is (section 4.3):

- As compared with suburban areas, the inner-city areas tend to be characterised by:
  - higher densities of development;
  - higher land values and (often) rentals;
  - greater diversity of residential development, including hostels or lodging houses,
  - apartments and rental flats;
  - greater diversity of land use generally, including mixed land uses;
  - closer proximity and easy accessibility to a much wider range of cultural, entertainment, public and commercial facilities and services;
  - more diverse, accessible and frequent public transport;
  - often higher levels of traffic and traffic noise;
  - more restricted and (often) expensive car parking for residents and visitors;
  - lesser facilities for school age children; and
  - lesser sporting facilities.

The development proposed in the Structure Plan falls within this category of Inner City Housing. This is made apparent as the principle reason for including such a category was to include residential development of city scale on the immediate fringe' of the central city.

The new R-Codes proposes an R-IC coding that dispenses with a particular R density coding. As to density, the Guidelines state that the prime measures are:

- built form and urban design considerations, rather than density of dwellings, should strongly influence the extent of development.

The method of density control suggested by the proponent is to mark specific maximum dwelling densities for the 25 lot areas. This is because a traditional R Code number is not required by the R-IC coding and, more importantly, is not suitable for specific control of differently used lot areas in a large site in an area close to the central city to be developed by one proponent. The Manual to the current R Codes (p.10) specifically states the inapplicability of R Coding to inner city housing.

"Acceptable Development" for Inner City Housing proposes that development should be in accordance with Table 1, "subject to the provisions of a Local Planning Policy or Special Control Area." In section 2.6 of the new R-Codes, it is stated that:

> *Areas coded for Inner-City Housing may be subject to a range of Local Planning Policies to vary Codes provisions. In these areas it is expected that the implementation of controls will be preceded by areas, or precinct-specific, studies and accompanied by Local Planning Policies to ensure that the particular desired characteristics of an area are promoted.*

One of the R- Code provisions, clause 2.6.2 provides that Local Planning Policies may contain provisions that are more or less stringent than the Codes in the case of R-IC. It is proposed that the amended Precinct Plan be read as if it is a Local Planning Policy to the extent that it varies the Codes.

## 5.4 Local Planning Policy

The Town of Victoria Park has adopted the *Town of Victoria Park Urban Design Study* prepared in 2000 as policy. This includes a vision for the Town, broad urban design objectives and a desired character for the Burswood Precinct.

Key points in the precinct character statement are:

- An opportunity to build upon the image of the Town of Victoria Park
- A very accessible precinct with river and city views
- Creation of a node around the Burswood train station and review of its location
- Review of height controls through the structure plan process and prescribed guidelines for taller buildings
- Car parking contained within built form

- Built form stepped down toward the river
- Views and vistas of the CBD and river defined in the design of public places

The Burswood Lakes Structure Plan responds to the objectives and the Desired Character Statement of the *Town of Victoria Park Urban Design Study* by:

- Providing a range of housing alternatives from single dwellings on small lots to apartments of various sizes and configurations (Objective 1)
- Creating a new community with a well-structured form that will be visible as you enter the Town of Victoria Park along the Graham Farmer Freeway (Objective 2)
- Providing a permeable road layout that connects into the regional network while discouraging through traffic and providing good pedestrian linkages to the Burswood Train Station. (Objective 3)
- Preserving view corridors through the site to offer view sharing particularly from streets and public parks (Objective 4)
- Capitalising on the unique inner urban location with residential development that will complement future uses east of the railway and any uses associated with the Burswood Resort (Objective 5)
- Contributing to improved pedestrian links to the river foreshore and future ferry access and offering a range of public spaces with views to the river (Objective 6)
- Providing a safe residential community linked by shared-paths to other areas of Victoria Park within 800 metres (10 minute walk) of the Burswood Train Station (Objective 7)
- Creating attractive, pedestrian-friendly streetscapes throughout Burswood Lakes (Objective 8)
- Creating an urban neighbourhood with a unique character and a significant residential population, and providing for their daily needs through mixed-use opportunities (Objective 9)
- Providing a range of open spaces within 400 metres of all residences, and linking these spaces with well-landscaped streets and green corridors (Objective 10)
- Providing a safe, well-lit street network, with residences overlooking streets and parks (Objective 11)
- Encouraging residents to use the local Albany Highway commercial area for business and shopping through limited provision of these services in the village (Objective 12)

## 5.5 Casino (Burswood Island) Agreement Act

The *Casino (Burswood Island) Agreement Act 1985* ratified and authorised the implementation of an agreement under section 19 of the *Casino Control Act 1984* between the Minister of the Crown (who was overseeing the administration of that Act at the time) and the public companies - West Australian Trustees Limited and Burswood Management Limited - with respect to the construction and establishment of a casino complex at Burswood Island.
The *Casino Agreement Act* does not apply to the Burswood Lakes site.

## 5.6 Burswood Canal

The *Heritage of Western Australia Act* Memorials H461085 and H461086 cover the former canal located on the western margins of CT 2049/94, comprising diagrams 4896, 1949 and 4858 of Swan Location 35, CT 2049/95, comprising diagram 9163 of Swan Location 35 and CT 2049/92, comprising Lot 3 Portion of Swan Location 35.

The Burswood Canal is recognised in the Burswood Lakes Structure Plan (Figure 19, p.68).

## 5.7 Telecommunications Lease

A telecommunications tower is currently located in the south-eastern corner of the site. The lease - currently in the name of Crown Castle Australia Pty Ltd - is valid for another 12 years to 1 April 2013. BL Developments have confirmed with Crown Castle Pty Ltd. in writing that at that time no further lease will be granted on expiry of the current lease. This is in response to the Town of Victoria Park's Policy on residential development in proximity to telecommunications towers.

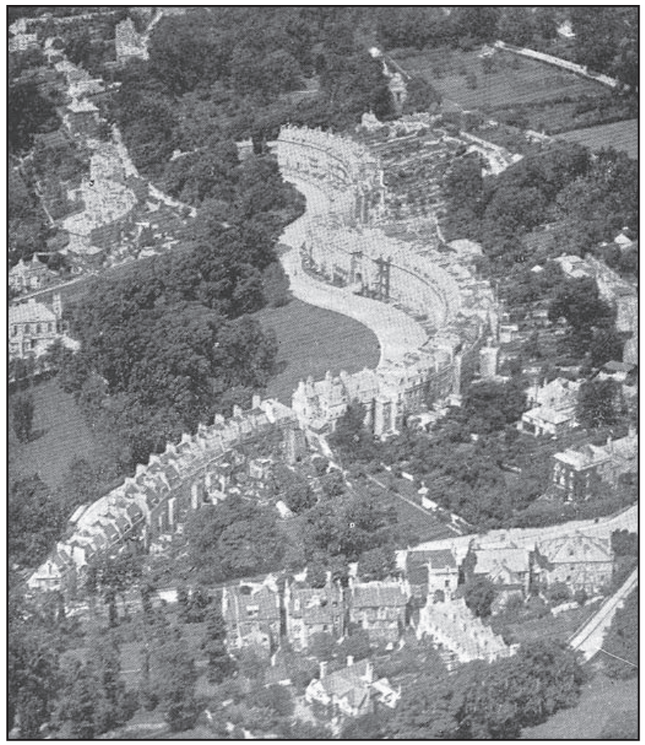
# 6.0 Site Analysis and Opportunities

The Burswood Lakes site is significant in the wider landscape of the Swan River, the Town of Victoria Park and inner-city Perth. Inconspicuous since the dismantling of the Swan Portland Cement Company, the Burswood Lakes site - when completed - will again play an important role in the region. The elevations of buildings and mature landscaping on the site will significantly contribute to the character and skyline along the Swan River.

## 6.1 Topography and Landscape

The remediated site forms a broad low plateau to the eastern boundary with a change of level across the site of nine metres to the western boundary. The main change of level of approximately six metres is along the western perimeter adjacent to the new lakes, which form the interface with the Burswood Park Golf Course.

There is little vegetation on the greater portion of the site apart from a few mature trees on the eastern edge. Vegetation in adjacent areas is a mix of indigenous and exotic species creating a parkland landscape associated with the Burswood Resort and Golf Course. The broader landscape is that of the Swan Coastal Plain and the Swan River.



*An example of undulating building form (England) adjacent to a linear park*

The land form allows for improved view opportunities while the lack of landscaping provides opportunity to create a new character with some reference to the Burswood Resort and Golf Course landscaped character.

## 6.2 Micro-climate and Noise

The railway and the Graham Farmer Freeway to the east both generate a degree of noise within expected inner city parameters. This noise will be considered in the detail design of buildings. The Superdome generates some noise during particular events. However, it is understood by the proponent that Burswood Ltd is examining the future of the Superdome. Refer to Part B 4.12 Commitments by the Development Proponent in the Structure Plan (p92).

The site experiences typical Perth climatic conditions and is exposed to cooling south-westerly breezes across the river and hot, dry easterly winds.

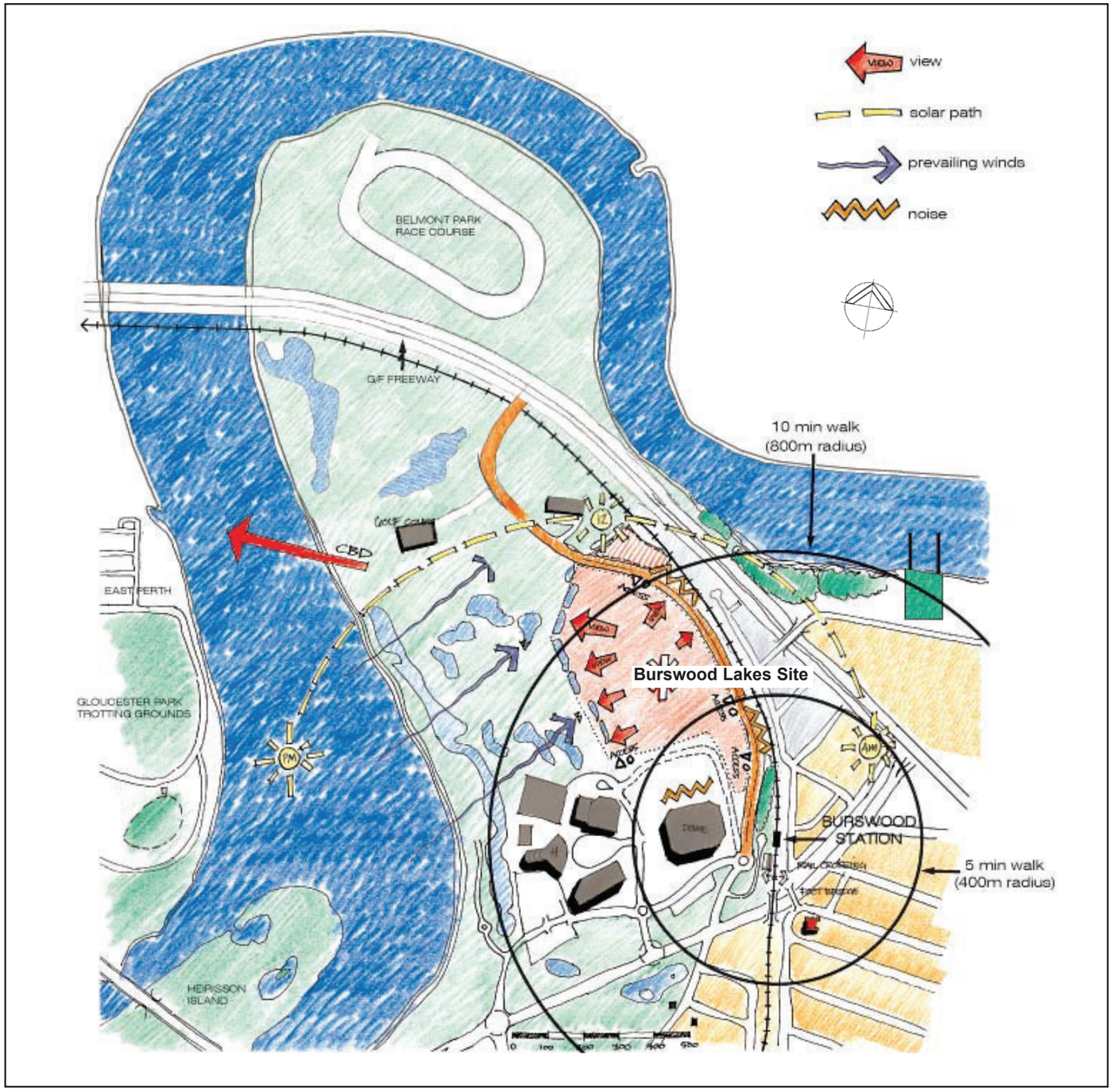



*Diagram E: Site Analysis*

There is opportunity to soften the wind exposure on the site through built form and landscape. Solar and wind impacts of proposed buildings have been addressed in the design through the use of podiums, building orientation on the north-south axis, and generous spacing between the taller buildings.

## 6.3 Views

The site offers panoramic views of the Swan River (both north and west), the Perth CBD and South Perth (Diagram E, left). Corresponding views of the site are available from many vantage points in Victoria Park, the Swan River, and the city.

Burswood Lakes provides for view sharing from within the development for both residents and visitors through the use of extensive view corridors seen in (Diagrams G, H p.43). These view corridors also make the development permeable when viewed from the outside. The dramatic views from other parts of the city add to the landmark character of the site.

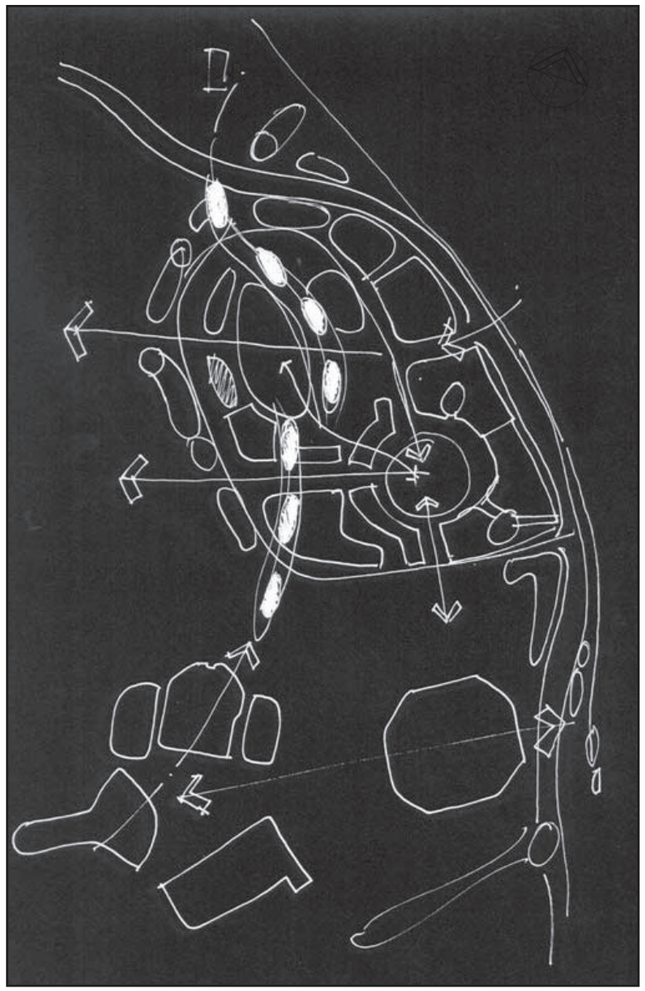
## 6.4 Links and Barriers

The site is currently well-linked to surrounding roads to the north and south but poorly linked to roads in the east.

There is opportunity to improve public access across the Burswood Peninsula. A bridge has recently been constructed at the Burswood Resort to enable improved access to the foreshore. Burswood Lakes pedestrian / cycle network will provide opportunity to link to this. Refer to Part B 4.12 Commitments by the Development Proponent (p.92) in the Structure Plan.

The railway line offers a significant barrier to connectivity in the east, while the Golf Course is a barrier to the River foreshore in the west. If additional rail crossings are constructed (not by the proponent), opportunities exist to connect Burswood Link Road to adjacent Riversdale Road.

Interface with the railway line, Burswood Link Road, Burswood Train Station, the Burswood Park Golf Course and current operation of the Burswood Superdome will be considered at each stage of development.



*Conceptual drawing demonstrating the ribbon of taller buildings winding through the site, and important links to the surroundings*

## 7.0 Liveable Neighbourhoods

The focus of the Liveable Neighbourhood document is to create cohesive communities with higher densities in an urban neighbourhood context. The principal aims of this document are to:

- provide walkable neighbourhoods
- foster a sense of community and strong local identity
- reduce reliance on private motor vehicles
- support public transport
- provide interconnected streets which facilitate safe, efficient and pleasant walking, cycling and driving
- provide a variety of housing types
- provide a comprehensive approach to the design of open space.

The following sections outline how these principles have been incorporated within the design of the Burswood Lakes development.

### 7.1 Proposed Land Use

The land use proposed for Burswood Lakes is predominantly residential incorporated in a variety of densities and dwelling types, including: courtyard homes, detached single family homes, zero-lot-line homes, townhouses, and apartment buildings with one-, two- and three-bedroom units.

The approximate mix of dwelling types is:

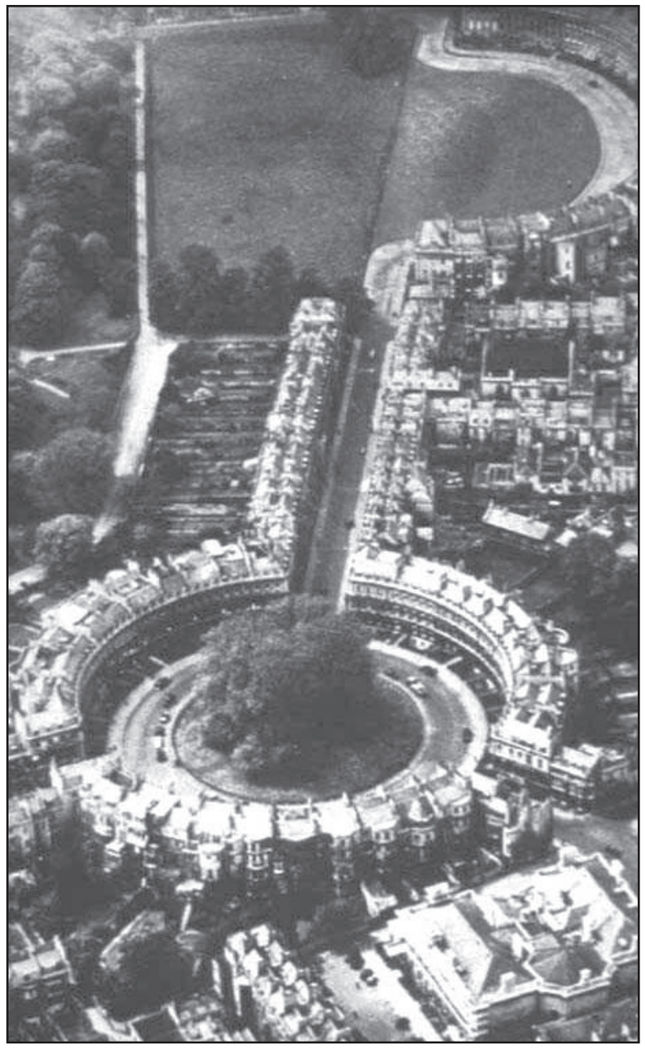
- 17 percent courtyard homes, detached single family homes, zero lot lined homes and townhouses. The lot sizes for these dwellings will range from approximately 200 - 350 square metres.
- 4 percent of one bedroom apartments (approximately 65 square metres).
- 49 percent two bedroom apartments (approximately 100 square metres).
- 30 percent 3 bedroom apartments (approximately 130 square metres).

This dwelling mix can also be represented as follows:

- 10 percent of dwellings are detached single family homes, zero lot lined homes and courtyard homes.
- 7 percent of dwellings are two storey townhouses.
- 9 percent of apartments are in two to three storey apartment buildings.
- 29 percent of apartments are in four to seven storey apartment buildings.
- 45 percent of apartments are in twelve to twenty-one storey apartment buildings.

This indicative dwelling mix addresses and responds to the need for urban consolidation and demographic demand. It is anticipated the completed development will accommodate approximately 3,000 people in 1,200 dwellings. A further 50 dwellings are anticipated on the DOLA/MRD land (lot 26).

This population, which represents a 9-10 per cent increase in the current residential population of the Town of Victoria Park needs to be served by local amenities. Existing amenities in the vicinity of Burswood Lakes (ie within a 10 minute walk (800 m) include a convenience retail centre (of approximately 1000 m²) on Great



*The Circus in Bath, England is similar in size to the proposed Circular Park in Burswood Lakes*

Eastern Highway on the corner of Griffiths Street.

It is intended to complement these existing services by providing opportunity for mixed use within the Burswood Lakes precinct.

The Metropolitan Centres Policy Statement for the Perth Metropolitan Region (Statement of Planning Policy no.9) provides guidelines for the provision of shopping floor space for local centres as 0.53 square metres per capita nla. This equates to a local retail provision guide for Burswood Lakes of 1,325 m² to 1,590 m².

Taking into account that maximum net lettable area of retail floor space for 'shop' within the Special Use Zone is 2,000m², possible mixed uses include :

- Shop (excluding the sale of petrol)
- Office
- Restaurant, Fast Food Outlet
- Consulting room, Day care centre
- Home office/occupation

It is important to note that the principal buildings at Burswood Lakes will incorporate facilities such as swimming pools, gymnasium etc. There are also extensive existing facilities within the adjacent Burswood Resort, the State Tennis Centre and Burswood Park Golf Course all of which are accessible to the general public.

Mixed use elements should be provided at Burswood Lakes at each stage of development. The quantity and type provided will be reviewed by the proponent and the Council as the development progresses to ensure the community at Burswood Lakes is well catered for by appropriate level of essential services and local convenience shopping.

### Site Layout

The Burswood Lakes site, illustrated in the Indicative Development Plan (Fig.18, p.67), has been laid out as a complete residential community in accordance with the Town Planning Scheme and Structure Plan Objectives. These objectives which follow the principles of Liveable Neighbourhoods are :

- Sustainability
- An Evolving Place
- Built Form and Response to Setting
- Links with the Community of Victoria Park
- Connectivity and Transport Orientated Development
- Importance of Public Places

## 7.2 Sustainability

Environmental responsiveness has been addressed through design, orientation, and placement of buildings to limit non-renewable energy use. It is also addressed through site layout which reduces car dependence and encourages walkable neighbourhoods.

Social and cultural cohesiveness is addressed through a wide choice of housing to cater to Perth's changing demographics and to encourage a diverse population which fosters a sense of community. This community and its interaction is promoted further through the design of public open space and connectivity to the local areas of employment, leisure, community and

*An artistic impression of the possible integration of future development on the Superdome and Burswood Resort sites with Burswood Lakes*

communal facilities of the Town of Victoria Park.

Due to the high cost of providing services and facilities to Perth's current model of low density suburban development, it is cost effective to redevelop infill sites such as this that are already serviced by existing infrastructure. Such redevelopment utilises the existing infrastructure to the benefit of both the proposed community and Western Australia as a whole due to efficient resource management. It also provides opportunities for locally based businesses and employment.

## 7.3 An Evolving Place

Burswood Lakes will be developed progressively in stages with the site layout enabling a functional, cohesive development at each individual stage. This can be seen in the Indicative Development Staging Plan shown in Figure 32 (p.87). It is intended to first develop two central public open spaces, the Circular Park and the Lake Park, as well as the Central Plaza, which links the two open areas. The remaining open spaces and 'pocket parks' will be created as the development progresses. Access into the development will be gained from the Burswood Link Road via the primary entry road.

Staging will be flexible and will aim to limit disruption due to construction of later stages, accommodate changing market demand, and to relate to the future redevelopment of the Superdome site. It is intended to develop a mix of dwelling types to ensure diversity of product is maintained.

## 7.4 Built Form and Response to Setting

Burswood Lakes will incorporate a wide range of dwelling types that vary in size and scale. Such a range and mix of product is made possible by the unique location of the site which is unencumbered by the constraints of overlooking, overshadowing or obstructing adjacent views.

The Indicative Development Plan (Figure 18, p.67) and various photo montages shown in (Views 1 - 12, p.38-42) illustrate the proposed layout of Burswood Lakes. It can be seen that a graduated scale of buildings is proposed towards the central area of the site. This increase in scale follows a serpentine linear arrangement on plan, which reflects the course of the Swan River, whilst the taller buildings in the core acknowledge and respond to the existing scale of the Burswood Resort.

Generous spacing between the buildings enhance the openness and permeability of the development and the variation in height allows for greater diversity in built form and architectural expression.

The arrangement of buildings and open space promote a sense of place, equitable sharing of views and vistas, and micro-climatic comfort for the parks and plazas.

Buildings proposed will range from two- and three-storey single houses to taller apartment buildings of 12 to 21 storeys, with a range of lower-level apartment buildings and townhouses making up the balance of the development.

The buildings are carefully spaced to maximise solar gain, protect resident privacy, and limit negative wind effects. The variety of building form and placement allows the parks, a proportion of houses, and many medium-rise apartments and higher-level apartments to share city and river views.

The low- and medium-rise buildings proposed for the western edge respond to the contours of the site and form an appropriate defining built edge to the golf course.

The diverse range of building types and the arrangement of open space provides for a fully integrated development which responds to the unique nature of this site, its context within the Peninsula, and the wider context of the Town of Victoria Park and the City of Perth.

Development Standards will establish design principles of all dwellings. There are also principles of architectural detail that have been established as follows :

- A common architectural 'language' will be used with differing 'accents' and 'dialects'.
- The architecture will respond to the local context and climate and will address solar control and access, privacy, and outdoor amenity.
- Apartments will have, where possible, cross ventilation with sizeable balconies or 'outdoor rooms' and useable courtyards.
- Apartments facing west to the river and the city will have solar control via balconies and sun-shading devices.
- The taller buildings will have lower podium elements which provide human scale and limit wind effects.
- Apartment parking will generally be provided below ground.
- Houses will front streets and parks providing passive surveillance through 'eyes on the street.'

## 7.5 Urban Nodes along the Swan River

Much of Perth's sense of place is derived from its relationship to the Swan River. It is important to continue this relationship with the 'rejuvenation' of former industrial areas along the Swan River. East Perth is a recent example of the successful transformation of a derelict industrial site. Burswood Lakes has an opportunity to play a major part in continuing this rejuvenation by developing this former industrial site and establishing a link to the river foreshore for the Town of Victoria Park.

Crawley, South Perth, West Perth, the Perth CBD, and East Perth (Figure 3, p.37) are all important urban nodes along the Swan River. These nodes form focal points and landmarks within the riverscape and streetscape of Perth. New and old landmarks provide identity to their communities and are necessary to give historic continuity, enabling people to 'read' the city and identify its special characteristics.

To ensure the creation of a 'landmark urban node' at Burswood Lakes, the buildings have been carefully sited and arranged. The taller buildings step down to both the northern and southern boundaries acknowledging their adjoining neighbours and step up towards the centre of the site. This creates a 'height arc' that acknowledges other important higher density nodes along the Swan River (Fig.2, p.36). This height variation (height arc) provides the opportunity for architectural expression within a cohesive overall form and enables the site to become a true landmark for Perth's skyline (Figure 3, p.37).

Burswood Lakes embraces the principle of an 'art of relationship' and, consequently, will not be a series of individual developments vying for front row seats and the view, nor a homogeneous

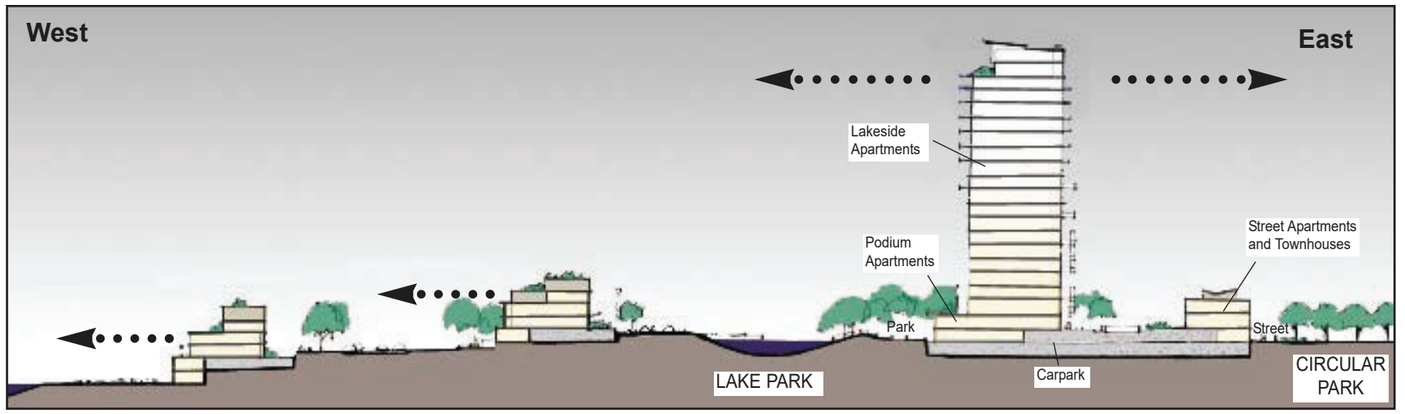



*Diagram F: Building Hierarchy*

ground-hugging mass of buildings. The building height proposed is essential in creating a landmark development with its own identity, particularly given Burswood Lakes' important location and relationship to Perth CBD, South Perth and other important nodes.

The photographic montages (views 1 - 12) on the following pages and (Figure 3, p.37) provide a visual study of the indicative development plan and demonstrate the principles of the 'height arc' and the importance of height and scale to this 'landmark' site. All photomontages have been verified for accuracy by a licensed surveyor (John Giudice and Associates).

## 7.6 The Ribbon of Taller Buildings

The meandering ribbon of apartment buildings through the site echoes the course of the river. Including a number of taller buildings in a development of this scale is essential in providing the following benefits to this new urban neighbourhood:

### Regional Context

- Taller buildings close to the CBD help to limit urban sprawl, reduce demands on new infrastructure, and create a 'dialogue' with the city, reflecting the tall buildings across the Swan River in the Perth CBD and South Perth (Diagram I, p.43 ).
- The horizontal nature of the Peninsula and the hills to the east of Perth will form a harmonic counterpoint to the taller buildings proposed at the heart of the development. Similarly, the horizontal forms of the buildings at the western edge will complement and echo the horizontal nature of the adjacent open space and golf course.
- Urban nodes form built "highlights" in the landscape, assisting in regional wayfinding.

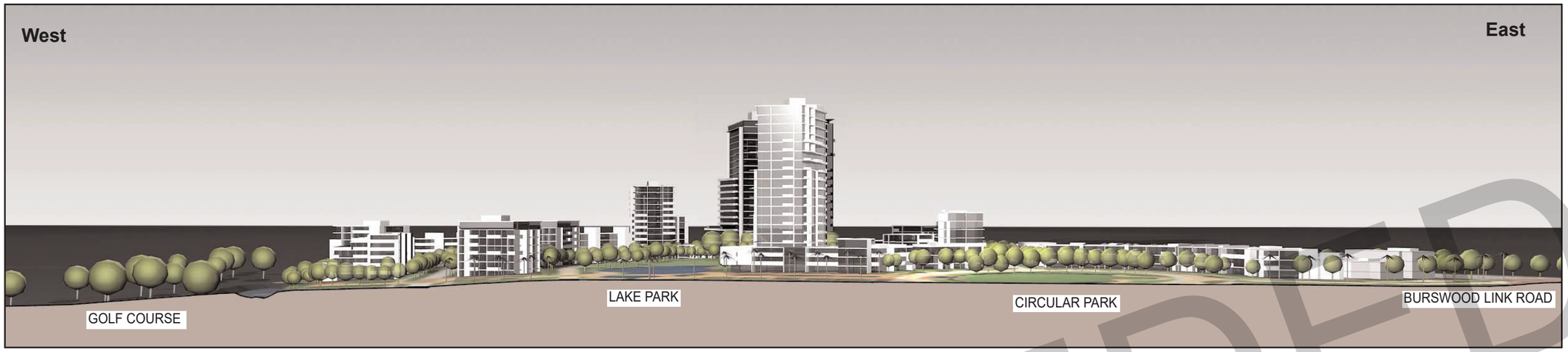
### Local Context

Taller buildings:

- allow more public open space as they can accommodate the same number of dwellings as shorter buildings but with significantly smaller footprints
- 'frame' dramatic view corridors to the city and allow direct physical links between primary open spaces
- define public spaces more clearly. This spatial enclosure assists in establishing a sense of place
- allow more oversight of parks and plazas, creating safer public spaces through passive security
- give residents more access to light, cross-ventilation, and views, and help mitigate possible 'overlooking' problems between units
- contribute to urban character, adding a critical component to a mix of housing needed to attract a diverse resident population
- contribute to reducing overall stormwater run-off. For any given number of units, taller buildings will have less roof area than shorter buildings

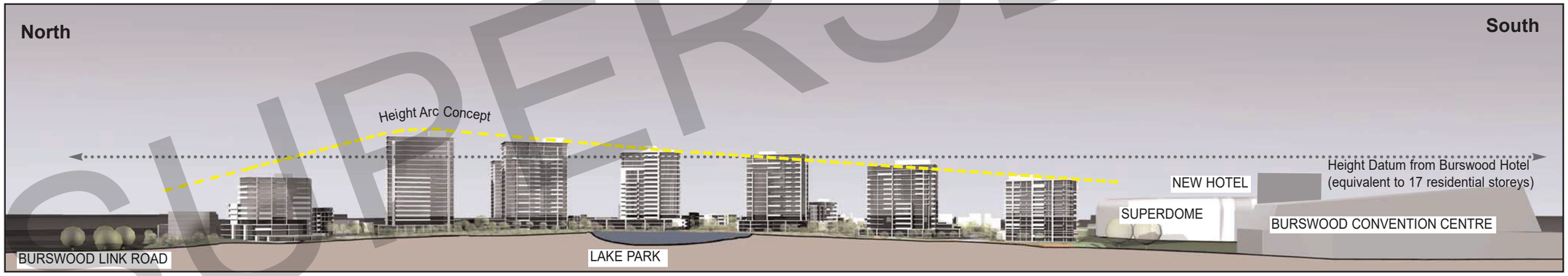
### Further Factors Considered

- Podiums, plinths, and setbacks limit the bulk effects of taller buildings, and articulated, active facades at ground level help to create a comfortable, human scale on the street.
- Generous spacing between taller buildings and the podiums wrapped around their bases will help to avoid wind problems.
- Taller buildings allow more opportunities to create a linked network of streets on the site, which evens out traffic distribution and avoids congestion at any one point.
- Local character is maintained and enhanced by providing buildings in scale with surrounding buildings and a complementary network of open spaces that connects to the existing golf course and Swan River foreshore.



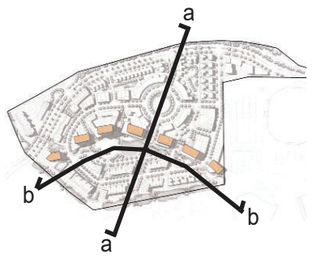

**East - West Section A-A**

0 10 20 30 40 50




**North - South Section through Lake Park B-B**

0 20 40 60 80 100





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Burswood

**Figure 2**
Site Section and Elevation

hpa architects planners interior designers

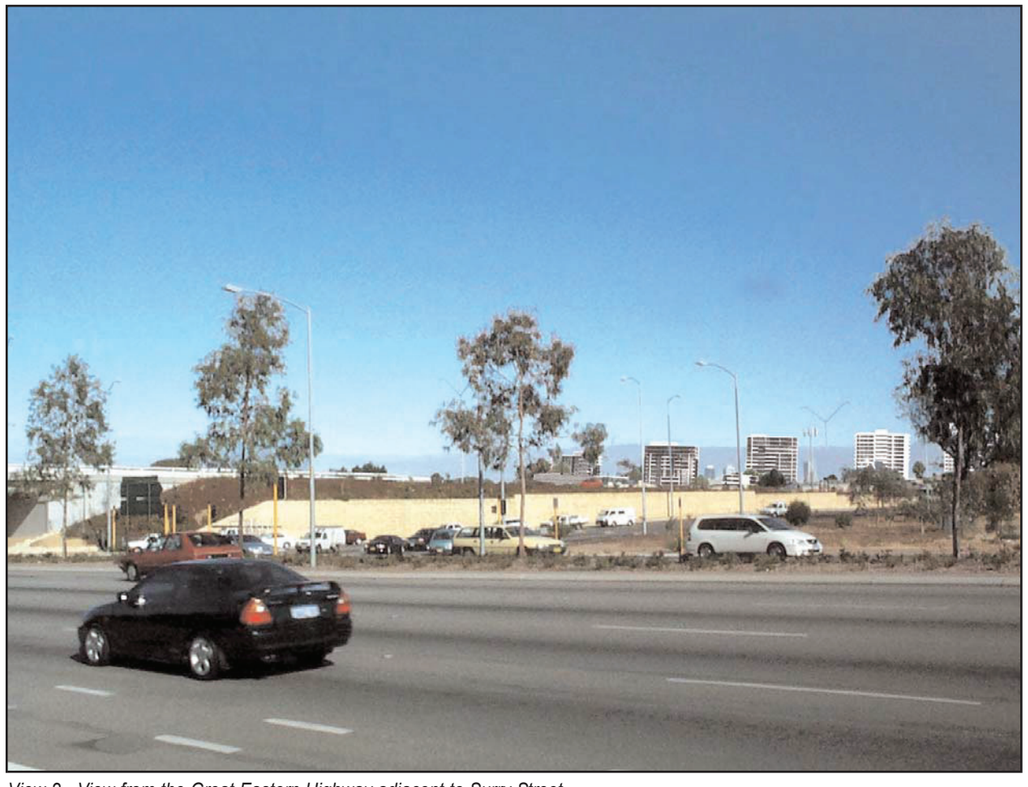
Burswood Lakes Structure Plan

Burswood Lakes


**Figure 3**
Urban Nodes Along the Swan River

# (Views 1-12) locations for Figures 4-8

*View 1 - View from the northern bank of the Swan River adjacent to the WA Police Academy*

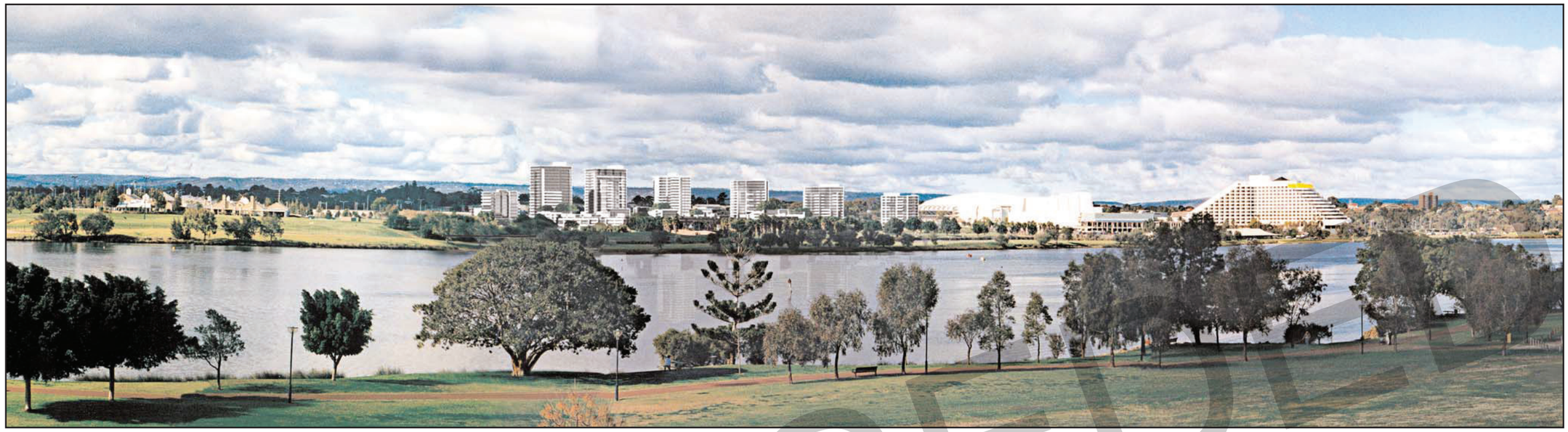


*View 2 - View from the Great Eastern Highway adjacent to Surry Street*

*View 3 - View from the Swan River foreshore*



**Figure 4**
Photo Montages of Burswood Lakes



*View 4 - View west from East Perth junction of Arden and Constitution Street*

*View 5 - Montage view from the Causeway*


*View 6 - View from Great Eastern Highway*



**Figure 5**
Photo Montages of Burswood Lakes

*View 7 - View from Canning Highway.  At this location, Burswood Lakes cannot be seen.*

*View 7a ("ghost" image) - This view demonstrates the "location" of Burswood Lakes in view 7.  However, the development is completely screened by existing buildings and mature trees.*


*View 8 - Approaching Great Eastern Highway*

*View 8a ("ghost" image) - This view demonstrates the "location" of Burswood Lakes in view 8.  However, the development is completely screened by existing buildings and mature trees.*



**Figure 6**
Photo Montages of Burswood Lakes

*View 9 - View northwest from the junction of Shepperton Road and Flint Street, Victoria Park. Burswood Lakes cannot be seen.*

*View 9a ("ghost" image) - This view demonstrates the "location" of Burswood Lakes in view 9. However, the development is completely screened by existing buildings and mature trees.*


*View 10 - View northwest from next to the Red Castle Hotel. Burswood Lakes cannot be seen.*

*View 10a ("ghost" image) - The Superdome, topography, and mature trees all screen Burswood Lakes from view.*

*View 11 - View from near the BBQ area on the banks of the Swan River (in front of Burswood Casino and Resort)*

*View 12 - View from the Burswood Link Road overpass north of the site*

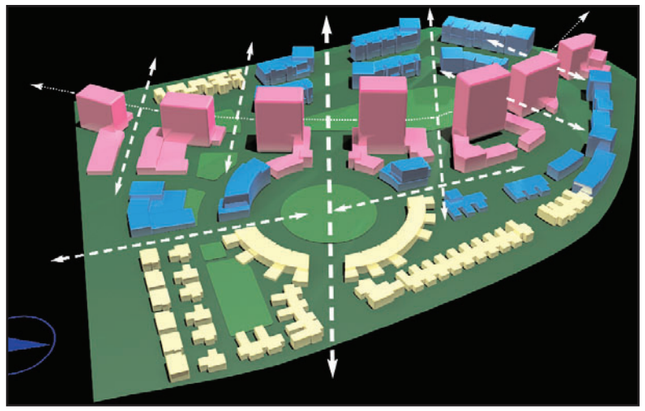


*Diagram G: Vistas and views within the public realm*

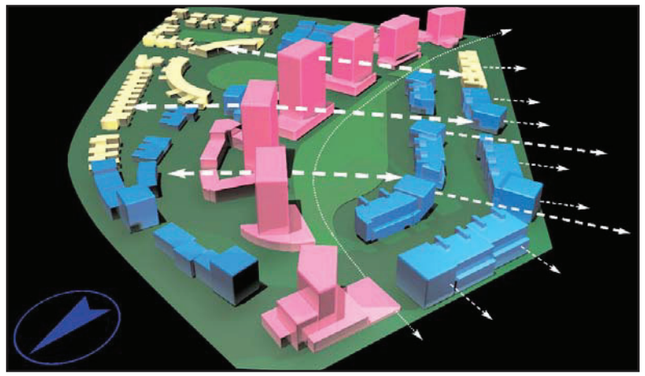


*Diagram H: View sharing between a variety of dwellings*

## 7.7 View Sharing

During the design and development of the Structure Plan, many options regarding the location and form of buildings for the site were considered. The concept of view-sharing was, together with wind, solar access, micro-climate, and local and regional context; an important factor in determining the overall form and location of buildings on the site.

Views and vistas help with orientation and wayfinding, provide amenity, create visual links for the new community, establish a "here and there" order and occasionally surprise. The Indicative Development Plan provides views not only from private apartment balconies and houses but also from parks, streets, footpaths, cycleways, and lookout areas. This is achieved by the integration of view corridors and vistas which permeate the site, particularly in an east-west direction. These view corridors also make the site visually permeable, allowing city views from any future development to the east of the Burswood Lakes site. Diagrams F (p.35), G and H (p.43) demonstrate these principles.

## 7.8 Shadowing

The linear configuration of the taller buildings along a mostly north-south axis limits shading on adjacent lower buildings and open spaces during the middle of the day. They cast shadows onto each other, but only onto secondary elevations, and thus cause few adverse effects on surrounding buildings. The shadow cast by a tall, slender building will move more quickly over any particular area, affecting it for a shorter period of time than a lower, bulky building. The proposed indicative development plan also uses the principle of height contours, stepping down buildings from the centre to the edge of the site. This ensures that the tallest buildings have little impact on adjoining properties (Figure 9, 10, p.44-45).

## 7.9 Relationship to Surrounding Context

The Burswood Lakes site is adjacent to:

- Burswood Resort and Casino
- Burswood Park Golf Course
- Burswood Link Road and the Railway Line
- Burswood Superdome
- Burswood Train Station

and close to:

- State Tennis Centre
- DOLA and MRD sites (lot 26)
- Burswood Precinct East of Goodwood Parade (office/residential zone)
- Graham Farmer Freeway
- Great Eastern Highway
- The Swan River

### Burswood Resort & Casino

The Burswood Resort is currently the major landmark that defines the existing character of the Burswood Precinct. It constitutes a group of large buildings, with heights equivalent to 17 residential storeys. Burswood Lakes is intended to complement the Resort in form and scale, and extend the landmark quality of the existing built form.

### Burswood Park Golf Course

Burswood Park Golf Course offers an excellent landscaped foreground for residential development. An appropriate safety buffer between the golf course and the development will be provided. A series of lakes has been constructed between the golf course and the development for drainage. These lakes provide an excellent visual edge to the development.

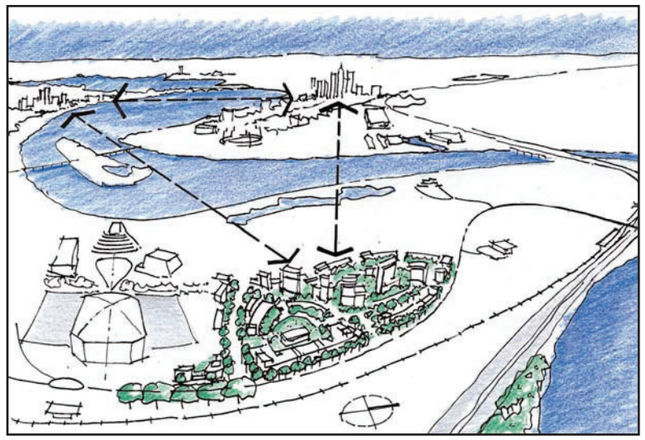


*Diagram I: The scale relationship or "dialogue" between Burswood Lakes and other urban nodes along the Swan River*

### Burswood Canal

The historic Burswood Canal will be recognised in the landscape of public open space on the DOLA/MRD land (lot 26). Refer to Part B 4.12 Commitments by the Development Proponent (p.92).

### Burswood Link Road and the Railway Line

Burswood Link Road is a new access road to the Burswood Precinct from the Graham Farmer Freeway.

The railway line is a considerable barrier. Any opportunity to reduce this barrier, particularly for pedestrians, would improve connectivity in the precinct.

Landscape treatments will be used to soften any road and rail impacts on the site. In addition, buildings to the eastern part of the site will be designed to limit visual and acoustic impacts.

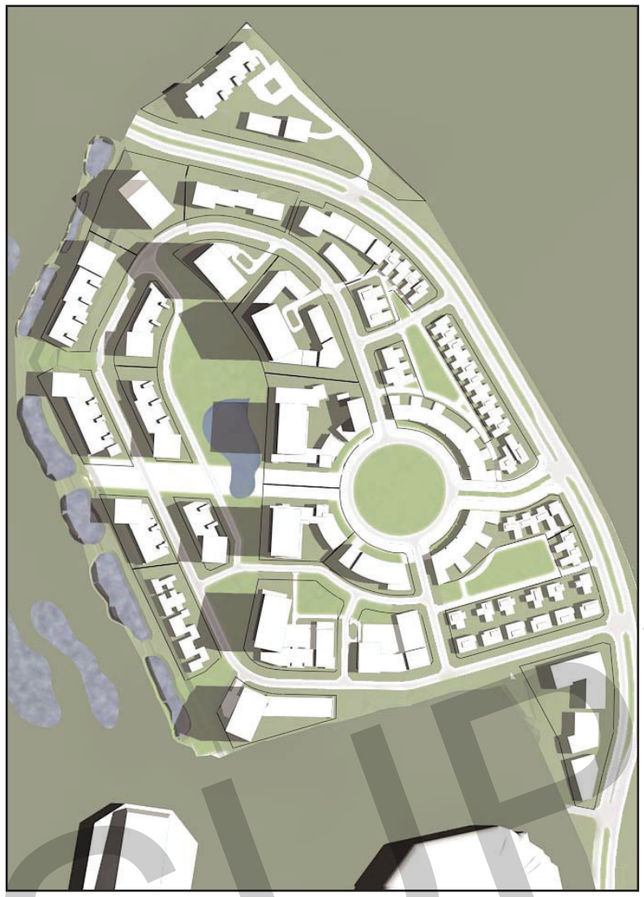
### Burswood Superdome

It is understood by the proponent that Burswood Ltd is examining the future of the Superdome. Refer to Part B 4.12 Commitments by the Development Proponent (p.92) and Part A 11.1(p.60).

### Burswood Train Station

Burswood Train Station provides excellent access to the City and Victoria Park by rail. Currently, the station is relatively isolated and has a limited residential catchment. Development at Burswood Lakes will increase the residential population within an 800-metre walk and begin to create a safer, more pedestrian friendly environment near the station.

## Summer Solstice - December 21st



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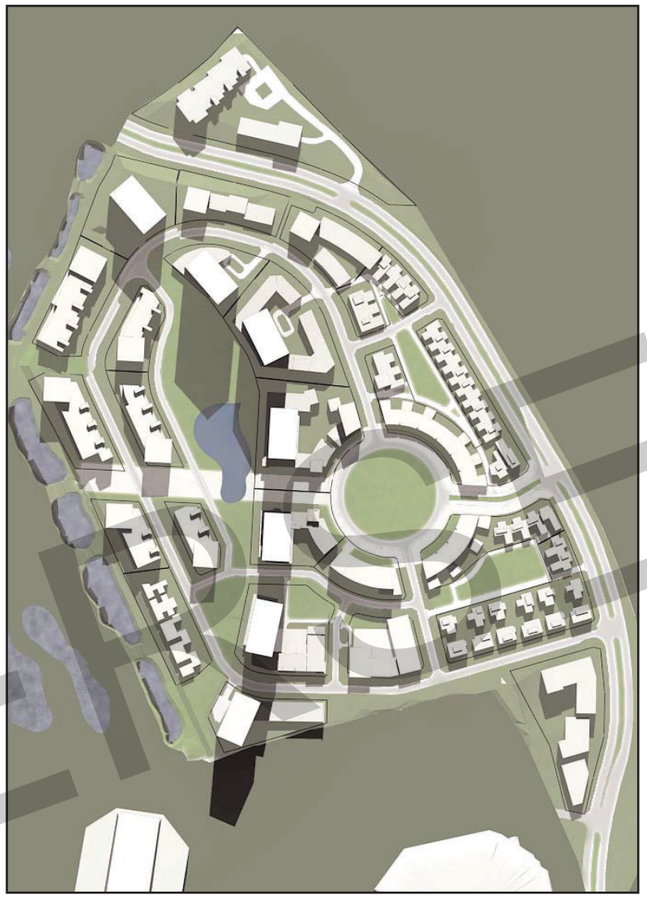
12:00 pm

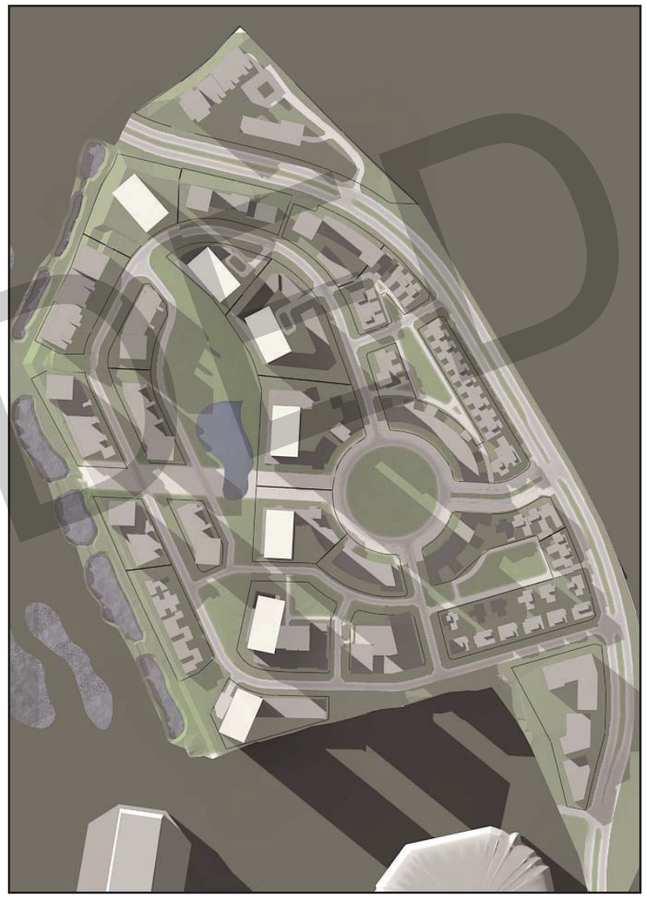
4:00 pm

## Winter Solstice - June 21st

9:00 am



12:00 pm



4:00 pm



**Figure 10**
Winter Shadow Analysis

The location of the station was reviewed during the urban design workshop. The Town of Victoria Park Officers and consultant team and the Department for Planning and Infrastructure confirmed that the station's current location is appropriate because:

- it provides both a destination station for the Burswood Resort and a commuter station for Burswood Lakes residents.
- it is located on a straight section of track as required (if it was moved north or south it would be in a curved section of track).
- not withstanding the last point, if it was located north, a large proportion of the 800m walk radius would fall within the Swan River and it would not be close enough to effectively serve the Burswood Resort.
- it is an appropriate distance from the Belmont event station.

### State Tennis Centre

The State Tennis Centre operates tennis courts throughout the year and attracts crowds of about 1,000 people for the week of the WA Open. The impact of associated traffic on the Burswood Lakes development is considered small due to the distance between vehicle entry points.

### DOLA and MRD Land (lot 26)

These vacant parcels of land, to the north of the Burswood Link Road, have been remediated consistent with the Burswood Lakes site and have been included in the Burswood Lakes Structure Plan.

### Burswood Precinct east of Goodwood Parade

An area of commercial / light-industrial use exists east of the railway line and Goodwood Parade and west of the Graham Farmer Freeway. Buildings within this area vary in age and condition. Redevelopment of this area is expected, given the improved regional road access. Burswood Lakes will act as a strong catalyst for change in this area. Under the Town Planning Scheme, this area is zoned office / residential and could become a mixed-use area with buildings of significant form and scale.

### Graham Farmer Freeway

The Graham Farmer Freeway provides excellent access to the site from the city and beyond. The site is visible from the Freeway, and the Freeway can be seen from the development.

### The Swan River

The Swan River plays an important contextual role at Burswood Lakes. It offers an attractive environment and foreground for views from the development. Opportunities for public access to the river and foreshore have been considered in the design.


*The Burswood Railway Station*

# 8.0 Access and Transport

## 8.1 Existing Road Network on Burswood Peninsula (ref. Traffic Report (Final) May 2002)

The major existing regional and local roads around Burswood Lakes are Graham Farmer Freeway, Great Eastern Highway, Burswood Link Road and Bolton Avenue. The existing average weekday traffic volumes for each of these roads are as follows.

### Table 2 - Existing Traffic Volumes

| Road | Average Weekday Traffic Volume (Vehicle Per Day-VPD) |
|---|---|
| Graham Farmer Freeway | 65,000 (at Windan Bridge) |
| Great Eastern Highway | 46,000 |
| Bolton Avenue | 15,000 |

Traffic volumes on Great Eastern Highway have declined substantially, from 61,000 vehicles per day (vpd) to 46,000 vpd, since the opening of the Graham Farmer Freeway. This has led to improved traffic conditions on Great Eastern Highway, including reduced queues and delays.

Peak traffic volumes at the Burswood Resort Casino are concentrated over very short time periods, especially Friday and Saturday evenings. Special events at the Theatre, Superdome and Convention Centre can generate additional high traffic volumes. These traffic volumes usually occur outside the normal road network peak periods.

The Burswood Link Road is a dual-carriageway recently constructed in a 30 metre road reserve and consists of a 7.5 metre paved lane in each direction with 5.0 metre medians and verges. The road is in the process of being gazetted as a public road under the care and control of the Town of Victoria Park.

A roundabout has been constructed on the Link Road approximately 150 metres north of the Great Eastern Highway. There is 'no right turn' from the Link Road to Great Eastern Highway. It was recently resolved by the Town of Victoria Park council to name the Link Road 'Victoria Park Drive'. It is understood by the Proponent that this name is currently being registered with DOLA.

Other roads on the Peninsula include :

- Glenn Place - a public east-west road under the care and control of the Town of Victoria Park
- The east-west road - east of the existing Bolton Avenue roundabout - is currently a private road under the care and control of the Burswood Park Board. It currently provides access to the car parking areas surrounding the Superdome. Prior to the construction of the Burswood Link Road, this east-west car park link was connected with Great Eastern Highway.
- The east-west link road between the roundabouts (east side of existing Bolton Avenue) has been called the 'Glenn Place extension'.

Refer to Figure 12 (p.49) to locate the aforementioned roads.

## 8.2 Proposed Road Network of Burswood Lakes

### Street Hierarchy

Burswood Lakes is primarily a residential development. Vehicle journeys to work, school and shopping will leave the site via the Great Eastern Highway or the Graham Farmer Freeway in the morning peak period, and arrive back via these roads in the evening peak period. The road network proposed for Burswood Lakes, therefore, establishes direct and easy connections to the regional road network and has no impact on any existing residential development within the immediate area.

Figure 11 (p.47) illustrates the proposed road hierarchy for Burswood Lakes which has been based on the principles of Liveable Neighbourhoods. The road hierarchy takes into consideration the forecast traffic volumes and the function of each road.

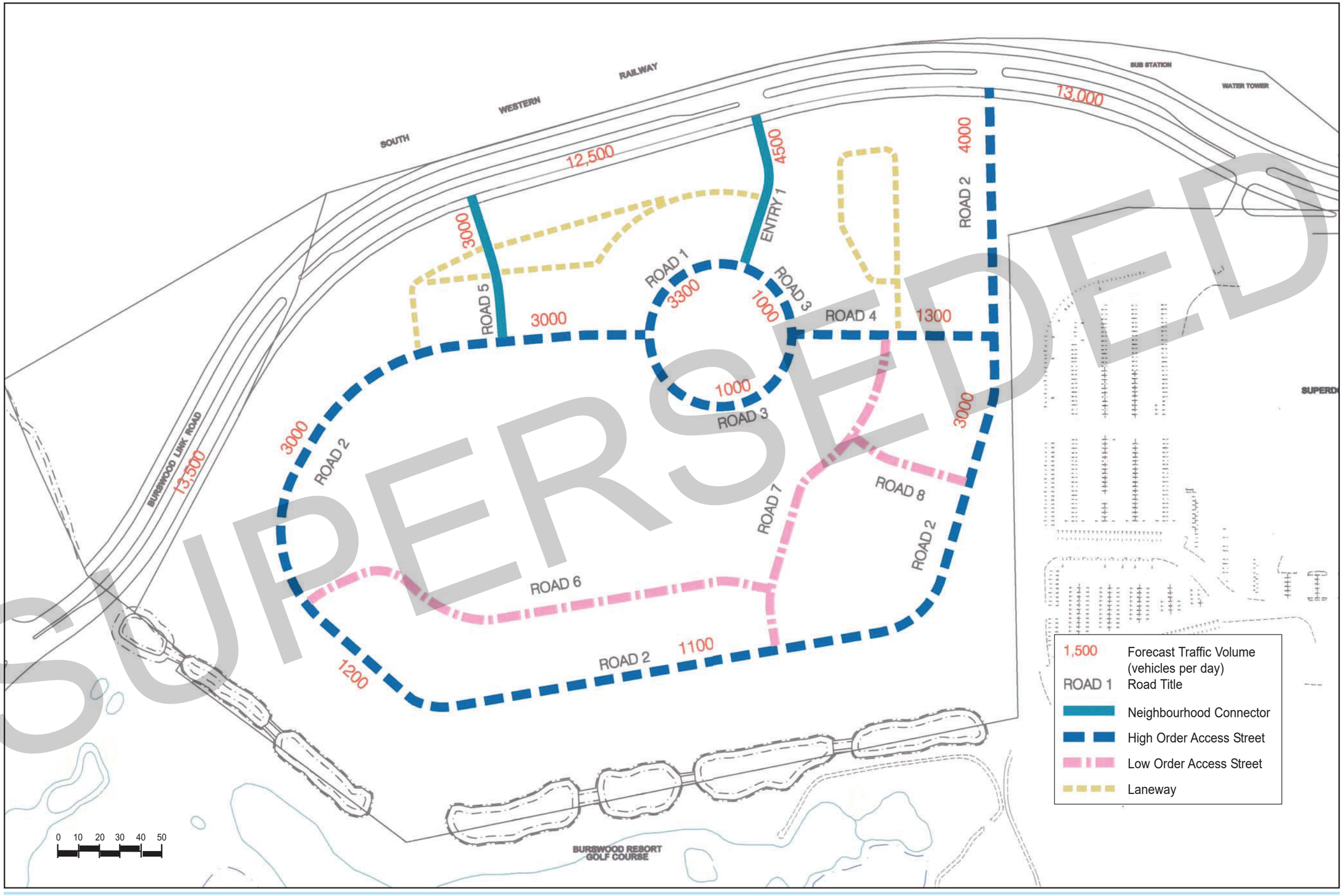



**Figure 11**
Projected Future Traffic Volumes

Figures 13-15 (p.51-53) illustrate several indicative street sections and plans.

Roads within the development have been classified as either:
- Neighbourhood Connector
- Access Streets (with higher order and lower order access streets distinguished)
- Laneways

The Burswood Link Road, which forms the eastern boundary of the development, has been classified as a District Distributor Integrator A. The road and verge widths are appropriate for this road, where the primary function is through traffic movement.

The road identified as 'Entry 1', serves as the main entry into the development and has been classified as a Neighbourhood Connector. Roads of this type link local areas with arterial routes. A 25 metre road reserve has been proposed, which will accommodate one 4 metre lane in each direction, separated by a 4 metre median. This boulevard treatment will provide an attractive streetscape, an appropriate entry statement for the development, and provide sufficient road width for the Neighbourhood Connector function. The 4 metre lanes are wide enough to allow a car to pass a stationary vehicle.

The roads identified as 'Road 1' and 'Road 3' form a ring road around the Circular Park, and intersect with Entry 1. These roads have been classified as higher order Access Streets. Access Streets accommodate shared pedestrian, bike and vehicular movements and provide access to abutting residential land uses. Higher order Access Streets typically carry volumes over 1,000 vpd. A 7 metre pavement within a 20 metre reserve is proposed for Road 1 and Road 3.

The vegetation within the circular park will be appropriate to ensure adequate safe intersection sight distance is maintained. On-street parking will be accommodated within a 2.4 metre indented parking lane on one side of the street (opposite the park).

The road identified as 'Road 2' has been classified as a higher order Access Street. A 7m wide road pavement is proposed, within a 20 metre road reserve. On-street parking will be accommodated within 2.4 metre indented parking lanes on both sides of the road.

The road identified as 'Road 4' has been classified as a higher order Access Street. This road will serve as an entry into the development, and therefore the high order Access Street classification is appropriate. A 7 metre pavement within a 20 metre reserve is proposed. On-street parking will be accommodated within 2.4 metre indented parking lanes on both sides of the road.

The road identified as 'Road 5' has been classified as a Neighbourhood Connector. This road provides a left-in left-out connection to the Burswood Link Road, and serves as an access for the northern area of the development. A 7 metre pavement is proposed within a 16 metre reserve.

The roads identified as 'Road 6', 'Road 7' and 'Road 8' have been classified as lower order Access Streets. For these streets, a 5.5 metre pavement is proposed within a 16 metre reserve. These roads will accommodate on-street parking, with 2.4 metre indented parking lanes proposed for both sides of each road.

The road identified as 'Road 6' will be differentiated from the other lower order Access Streets through the use of pavement materials and flush kerbing. Road 6 will clearly be a lower priority road, and will present a safe and comfortable environment for pedestrians and cyclists and a low speed environment for vehicles. While Road 6 will carry low traffic volumes, the road is required to provide access to the abutting buildings.

The remaining roads are classified as Laneways. For these roads, 6.0 metre pavements within 6.1 metre reserves are proposed. A 6.0 metre pavement will allow a moving car to pass another vehicle, but is too narrow for cars to park opposite each other without blocking the street.

The laneways will provide access to the abutting buildings, and pedestrians, cyclists and vehicles will share the road space. The laneways will be brick-paved, and will all operate as two-way. Internal laneway intersections will all operate under priority control.

Roads 1 and 3 surrounding the Circular Park will have a special pedestrian-oriented character. The road surface will be cobbled or brick paved, and semi-mountable or mountable kerbs will separate the lanes from the pathways. Bollards, planters, parked cars, and landscape elements will be used to define the pedestrian zone, with particular attention paid to linking the Circular Park to the Central Plaza and Lake Park beyond. This special location will create an environment where cars and pedestrians share the road space with equal priority.

Special streetscaping materials will also be used on Roads 6, 7, 8 and Entry Road 1, helping to define these as slower, more pedestrian-oriented streets.

## 8.3 Approach to Traffic Analysis

A detailed traffic analysis of Burswood Lakes and the surrounding area was undertaken by Sinclair Knight Merz. This analysis was performed using the Paramics micro-simulation model. This model is not only a comprehensive analytical tool which utilises all relevant design standards and codes but it also provides a graphical representation of the model. A sample CD of the Paramics analyses is attached at the back of this document. The CD provides a snapshot of the analyses for two scenarios, one with the Superdome present and one without the Superdome. Refer to the following sections for further explanation of these scenarios.

### Superdome Development Scenarios

It is generally understood that the Superdome may be removed in the future and replaced with alternative uses. In order to ensure Burswood Lakes integrates successfully into the Burswood Peninsular, Sinclair Knight Merz produced full detailed traffic analyses on two separate scenarios. The first scenario is for a fully developed Burswood Lakes with the Superdome remaining in place and the second scenario is again for a fully developed Burswood Lakes but this time with the Superdome removed and a combination of commercial and residential uses in its place. Such an approach ensures that the road network proposed for Burswood Lakes is sufficiently robust to enable an appropriate residential lifestyle for both 'With the Superdome' and 'Without the Superdome'.

### Outcome of Traffic Analysis

'With Superdome' Scenario

In the 'With Superdome' scenario (Diagram J, p.50), it will be extremely important to separate, as far as is practicable, the traffic destined for (a) the Superdome car park and other Burswood car parks from (b) the residential environment of the Burswood Lakes development. Potential future conflict is reduced by creating a road network that naturally guides Burswood Resort patrons to and from the car parks.

Existing and planned entrances and exits to Burswood car parks are shown in Diagram J (p.50). Access and egress are focused on entry from the south and exit to the south. This is logical considering that historically the only access to the Resort Complex was from the south.

Diagram J - East West Road Connections illustrates the importance of the Glenn Place extension that will connect the two roundabouts. Its importance is based on:
- accessibility to and from future car parks
- westbound access from the Burswood Link road to Great Eastern Highway


**Figure 12**
Transport Context

0 50 100 150 200 250

Diagram J (right) also illustrates the importance of the two east-west link roads at the northern side of the Superdome. The most northerly is a residential street that will serve the residents of Burswood Lakes; the southerly road is a car park access road. This dual system satisfies the objective of separating Burswood traffic from the residential environment of Burswood Lakes.

'Without Superdome' Scenario

There are many land use options that might be considered for the 'Without Superdome' scenario (Diagram K, right). In developing a road network for these options, a number of critical criteria emerge.

- Will the car park for the Burswood Resort Casino be retained on this site? If so, where will the entrances and exits be to this car parking? The location of entrances and exits will also determine the major traffic flow.
- Will the area be predominantly residential? If so, it should have strong residential links to the Burswood Lakes development and offer an environment conducive to walking and cycling in order to capitalise on the public transport asset - the rail station.
- Will there be commercial/office/retail/recreational development? If so, where will it be located? If at the southern end of the site, from where will car park access come? If between the two sites (southern side of the Burswood Lakes development), would this form a barrier for connectivity?
- How can a strong east-west pedestrian connection best be created between the Burswood Resort Casino and the rail station?
- Irrespective of the land uses that would be developed on the Superdome site, the following traffic requirements would remain:
  - Need for traffic to travel between Glenn Place/Resort Drive and the Burswood Link Road
  - Need for traffic to travel from the Burswood Link Road to Great Eastern Highway west-bound

Diagram K (right) illustrates one land use option for the Superdome site. In this option, residential development is located on the north side of a strong east-west pedestrian spine; commercial / office / recreational / retail development is located on the south side of the pedestrian spine. Undercroft car parking is provided to service the existing Burswood Resort as well as the new development on the Superdome site.

For this option, Diagram K shows the importance of the Glenn Place extension between the two roundabouts to service the traffic demands for the precinct and create a street address for commercial development fronting the existing Burswood Park lands. Diagram K also illustrates how the remaining area could be

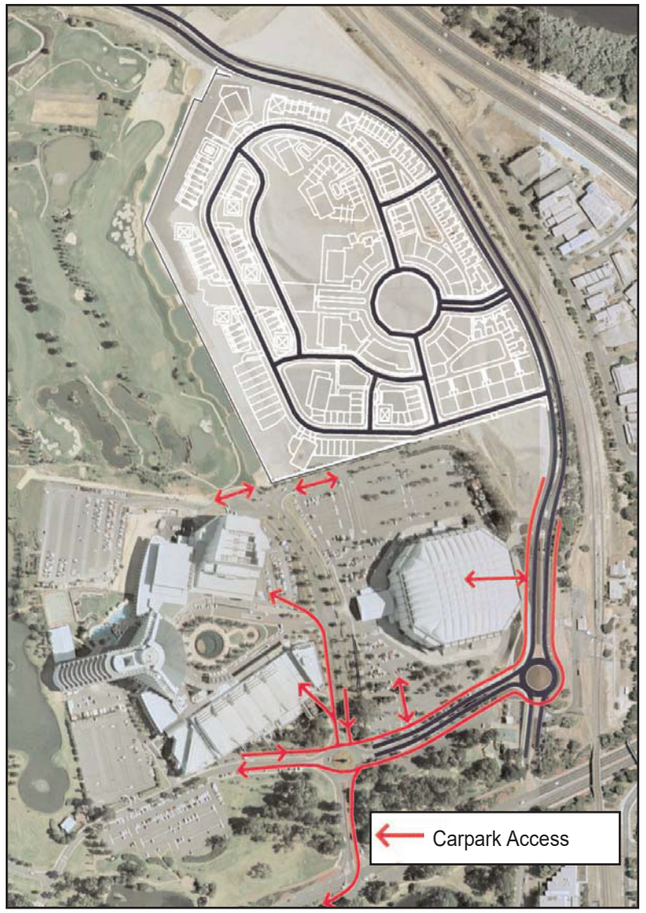



*Diagram J: Burswood Lakes 'with Superdome' Scenario*

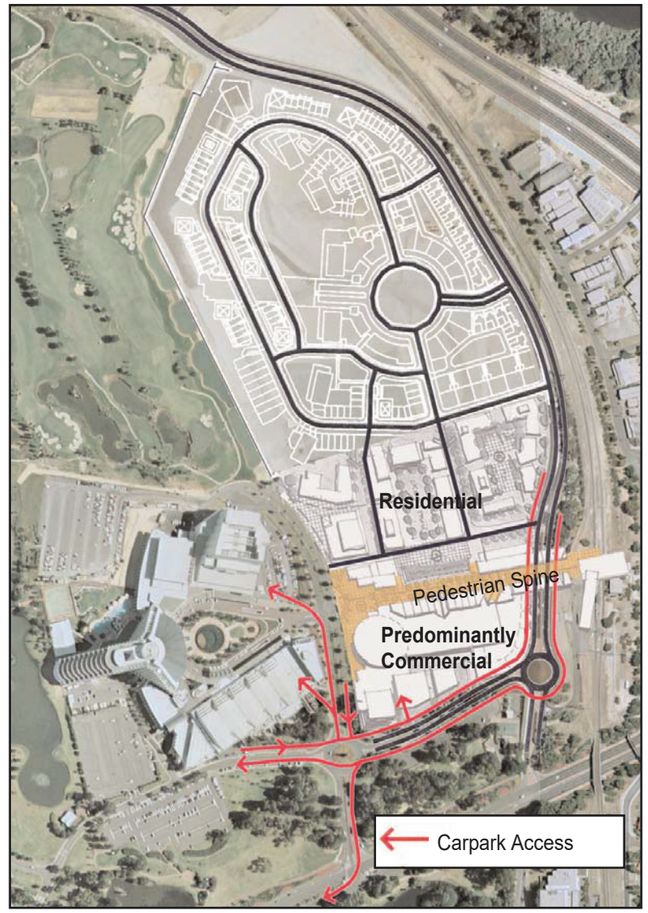



*Diagram K: Burswood Lakes 'without Superdome' Scenario*

kept relatively 'traffic calmed' since it would service predominantly residential development.

While other possible options for land uses might create the need for different road network configurations, the importance of the Glenn Place extension between the roundabouts would not be diminished. It would continue to serve the demand from Glenn Place and the undercroft car parks, and from the Burswood link road to Great Eastern Highway west-bound and it would serve the demand from development to the north - whatever that might be.

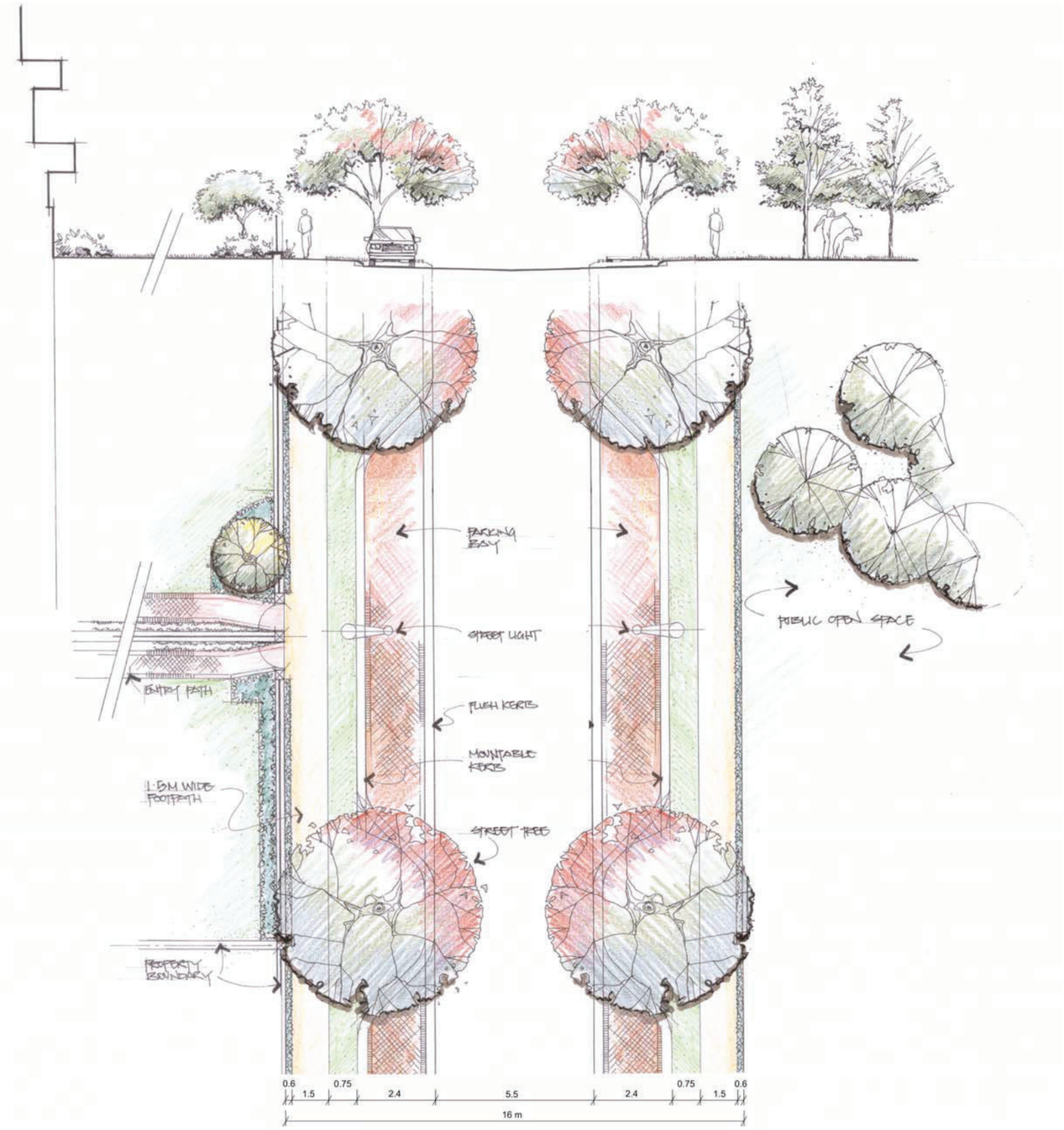
## Conclusions

The daily traffic volumes produced by the Paramics model are shown in Figure 11 Projected Future Traffic Volumes (p.47). These volumes assume the Superdome is retained. Replacing the Superdome with the alternative land uses increases the forecast daily traffic volumes on Burswood Link Road by 2,000 - 2,500 vehicles per day.

The roads within the development are largely unaffected by change in land use on the Superdome site - the exception being the road at the southern boundary of Burswood Lakes. This road will see an increase in forecast daily traffic of between 500 vpd and 2,000 vpd (the greatest increase immediately to the west of Burswood Link Road).

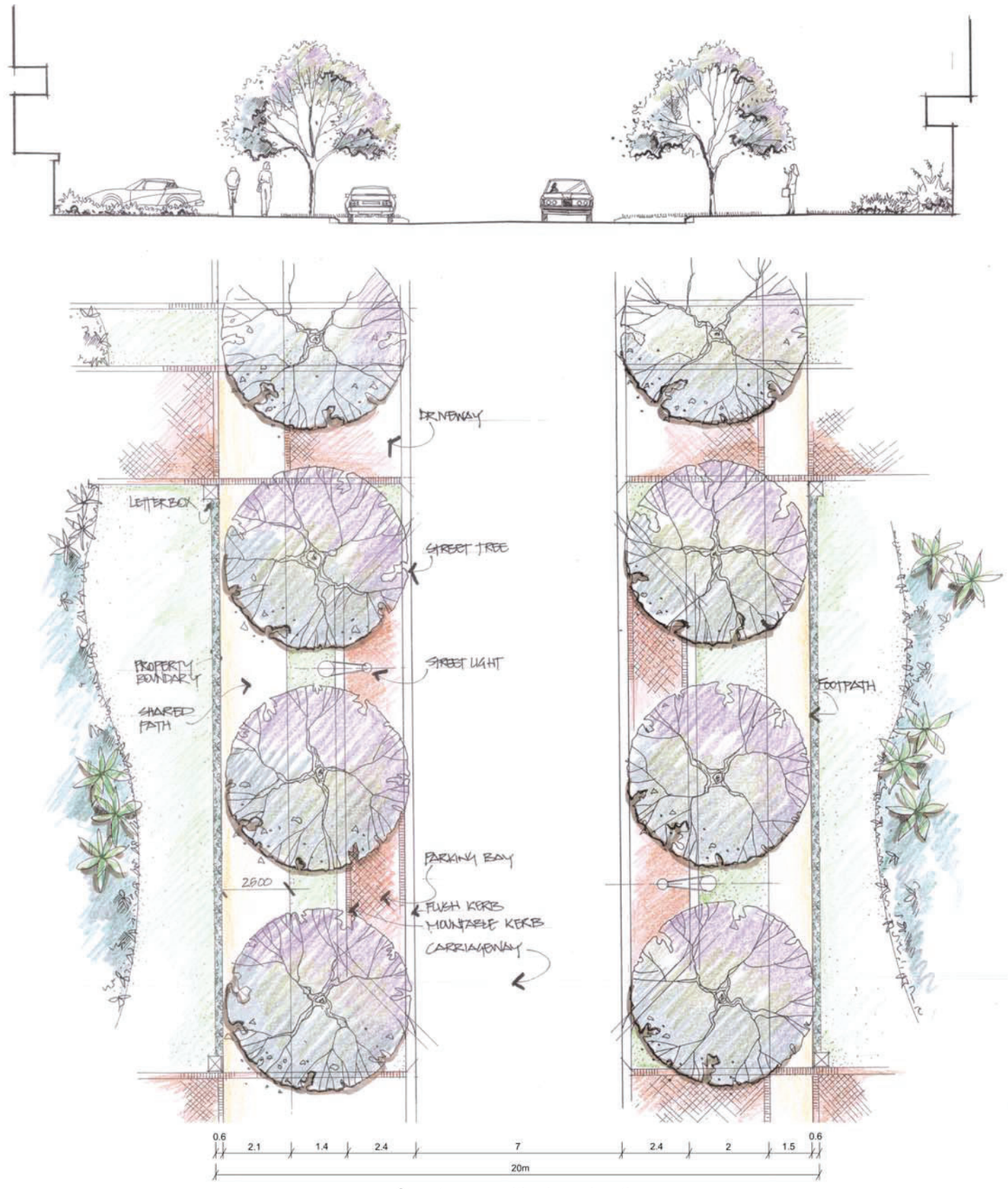
The proposed road network for Burswood Lakes complements and integrates fully with the Burswood Peninsular for both the "With Superdome' and 'Without Superdome' scenarios.

The Glenn Place extension between the two roundabouts is very important in a network sense - with or without the Superdome.




Streetscape adjacent to a park
*16m road reserve*

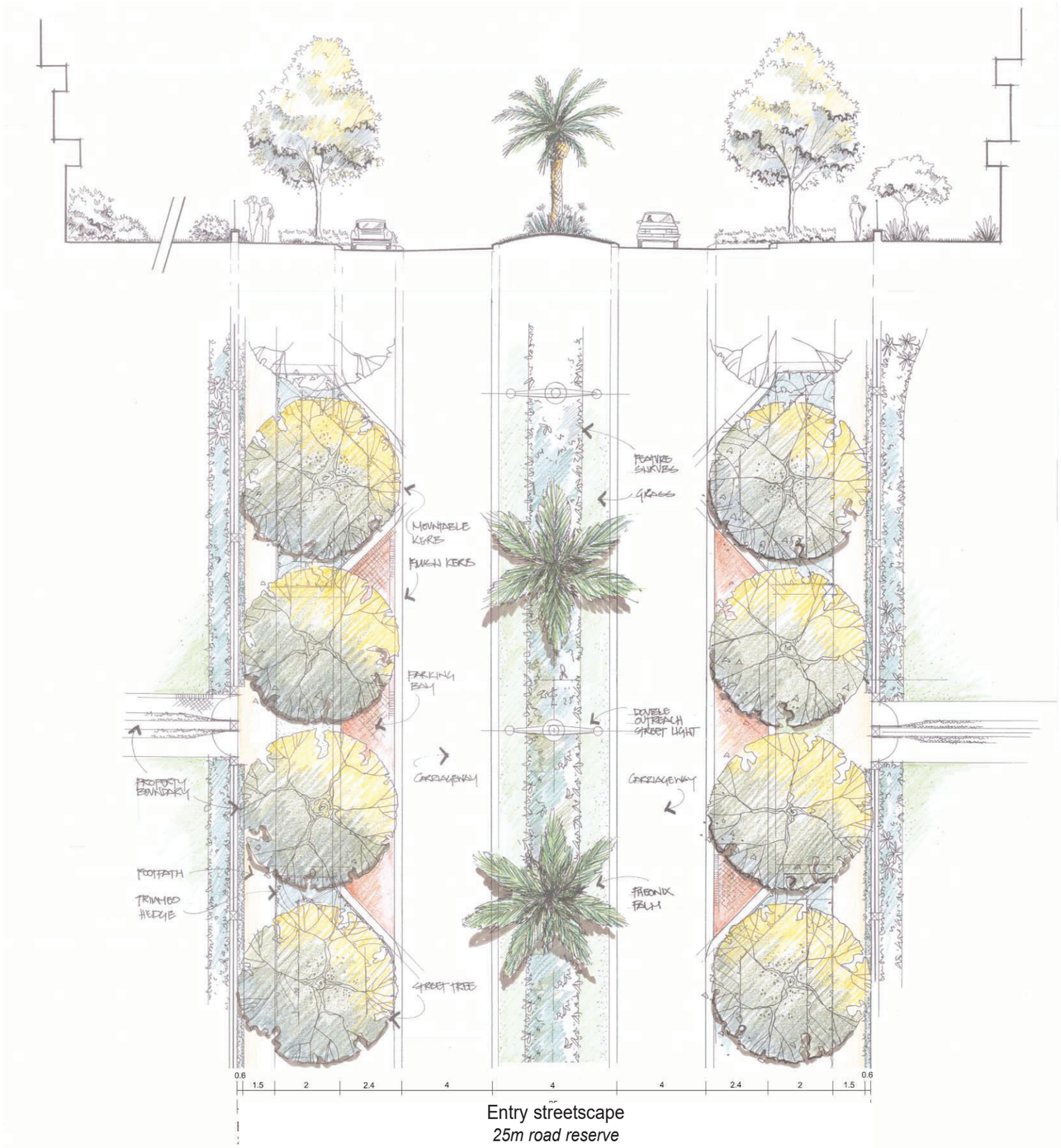
**Figure 13**
Indicative Street Section




Streetscape with shared-path
*20m road reserve*



**Figure 14**
Indicative Street Section




Entry streetscape
*25m road reserve*

**Figure 15**
Indicative Street Section

*Victoria Park Bus Transfer Station*

While in the 'Without Superdome' scenario a road network might be developed that has an additional east - west road further to the north, this would not diminish the importance of the Glenn Place extension. In the 'With Superdome' scenario, the Glenn Place extension is essential for separating the Burswood Resort traffic from the residential environment in Burswood Lakes.

## 8.4 Pedestrian and Cyclist Network

The Burswood Peninsula is well served by the regional shared-path network. There are proposed links to the Swan River across an existing pedestrian bridge in front of the Burswood Resort. The existing shared use path system is shown in the Local Context (Figure 21, p.70) and Site Analysis (Diagram E, p.32).

Paths are proposed for every street and the network extends beyond the road system with paths proposed through the park lands and around the lake (Figure 22, p.71).

All streets, including arterial routes and access streets, are required to have footpaths on both sides. However, where there is no development on one side of the street or where vehicle volumes and speeds are low, footpaths may be omitted from one side of the street. In cases where volumes of less than 300 vpd are forecast, footpaths may be omitted entirely if the road environment is considered safe for all users.
The network of shared-paths will cater to pedestrians, cyclists and the disabled. This network will provide connections to the existing network on the Burswood Peninsula.

The pedestrian and cycle network proposed is shown in Figure 22 (p.71).

## 8.5 Public Transport

The majority of the site is within a 10-minute walking distance (800 metres) of the existing Burswood Train Station on the City-to-Armadale line.

The Urban Design Workshop No. 1 reviewed the location of the Burswood Train Station.

It was resolved that the current location of the station was preferable as it would:

- Provide access to the majority of Burswood Lakes residents within a 10-minute walk (800 metres)
- Provide an opportunity for the Station to develop as a major destination station. Future commercial development on the Superdome site would be in very close proximity of the Burswood Station
- Allow for this destination to develop while maintaining separation and privacy for Burswood Lakes residents

The Burswood Train Station is used extensively by Burswood patrons for major events at the Resort (especially at the Superdome). Patrons are offered free public transport with event tickets. The service operates approximately every 15 minutes from 6am to 7pm, Monday through Saturday. Service outside of these hours runs approximately every 30 minutes.

Currently there are no buses directly serving the Burswood Resort Casino. There are, however, 10 bus routes that run along Great Eastern Highway, providing access to Midland, Perth domestic airport, Belmont and Kalamunda to the east, and the Victoria Park Transfer Station to the west. The Victoria Park Bus Transfer Station is located 1km east of the Burswood Resort Casino. From the Transfer Station, buses travel to Perth City, Canning Highway, Shepperton Road and Albany Highway.

Discussions have been held with bus route planners from Transperth, who have advised that it is unlikely the internal roads within Burswood Lakes will be serviced by buses. Roads have been designed to accommodate the future provision of a bus system if it is required.

The Burswood Tourist Tram travels from Perth CBD and Kings Park and a link bus connects the Burswood Train Station to the Casino.

In October 2000, the report entitled "Additional Ferry Services on the Swan and Canning Rivers" identified the potential for a ferry service to operate between Perth City and the Burswood Peninsula, subject to demand.

*Burswood Link Road adjacent to Burswood Lakes site*

## 8.6 Car Parking

Car parking generated by adjacent uses has the potential to impact the Burswood Lakes site.

Car parking for Burswood Resort has been the subject of significant investigations over the last few years. In the past, parking shortfall has been as issue. A temporary solution has been implemented in which staff parking has been located in a car park on the Burswood Lakes site.

The Town of Victoria Park and Burswood Resort recognise that a more permanent arrangement for car parking is needed. Burswood Resort has access to special event bays at Kagoshima Park and Belmont Park. Shuttle buses operate between this destination and the Resort.

Special events at the Burswood Theatre, Superdome and Convention Centre can have exceptionally high parking demand. A transport management plan is required for events, which encourages train and taxi use. Burswood Ltd. employs parking staff to direct traffic to available parking.

The proponent understands that Burswood Ltd is examining the future use of the existing Superdome and the surrounding carparks. Should the Superdome site be redeveloped preliminary design investigations have shown that there is sufficient area and level change over the site to accommodate both the Burswood Resort's existing and future car parking requirements.

Car parking at Burswood Lakes will be required for residents, visitors and any delivery or service vehicles. The required car

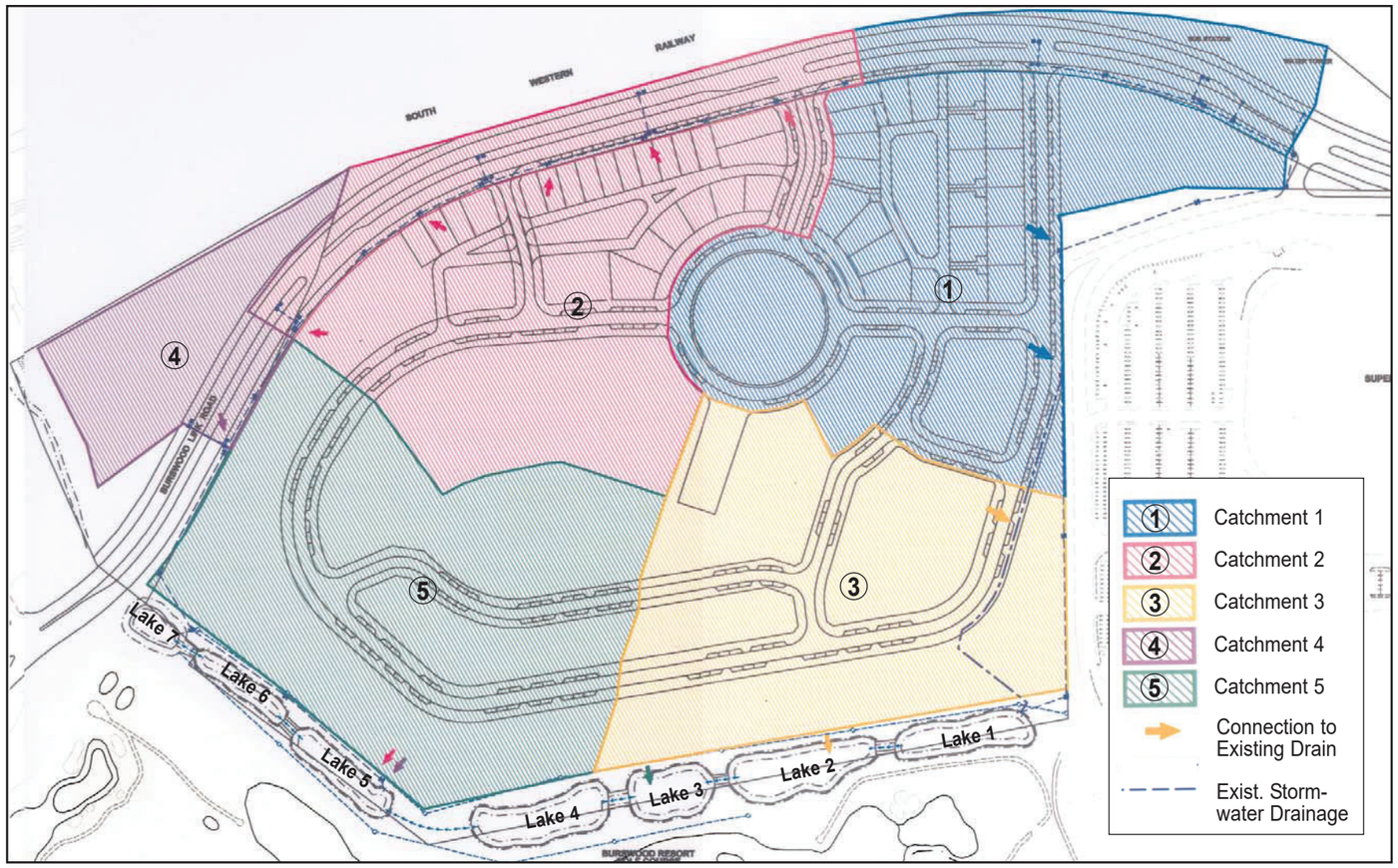



*Diagram L: Drainage and Catchment Strategy*

parking will be contained within the site as stipulated in Part C, Section 5.11 Parking (p.96). These proposed requirements are a proven Mirvac standard which has evolved from 30 years experience in property development.

Parking for residents will be accommodated off-street, while ample on-street visitor and service vehicle parking will be provided. Appropriate parking management will be required to ensure that on-street parking is not used for activities outside the development.

On-street parking will be accommodated in 2.4 metre wide indented parking lanes. Trees will be planted adjacent to the parking lane, which will narrow the appearance of roads and help to control vehicle speeds. A minimum of two car bays will be provided to ensure easy access, adequate lighting levels and surveillance.

# 9.0 Site Development & Infrastructure

(ref. Infrastructure Report June 2002, Geotechnical Studies - Burswood Lakes)

## 9.1 Geotechnical Investigations and Site Works

Geotechnical studies have been carried out for Burswood Lakes. The site has been investigated to depths of as great as 40 metres in places. The results of the studies indicate that a soft estuarine silty clay has been deposited to depths of around 20 metres along the eastern foreshore of the Swan River.

Preliminary geotechnical investigations have indicated settlement can be expected on some areas of the site over the next 30 years due to the nature of the underlying material, and the previous landfill history of the site. The principal settlements will occur in the north-west corner of the site along the western edge of the Lakes, and over the old "Clay Pit Lagoon". Pre-loading of these areas is therefore proposed to accelerate the settlement and mitigate the longer term settlement to manageable levels for both roadworks and services.

The strategy for the timing of filling and pre-loading will result in a division line between deep and shallow footings across the site in the north-south direction.

Deep pile footings will be required over the western portion of the site and will generally need to extend into the dense sand underlying the very stiff clay. The area to the east of the division line (with application of pre-loading) will have settlements such that shallow footings will be suitable. For buildings across the eastern area, individual pad and strip footings may be appropriate.

Additional studies, including settlement monitoring, will be required for a full geotechnical assessment of pre-loading and piling options. These studies will be carried out as the development options become more apparent.

At present the site is covered with between one and two metres of clean sand fill above a geotextile membrane warning barrier. Additional filling is proposed as shown in Figure 16, p.57 Site Design Levels. It is estimated 250,000 $m^3$ of additional clean fill will be brought in to produce the proposed levels. Construction of civil works will include an earthworks strategy that makes provision for the pre-loading area such as the north-west corner and the former Clay Pit Lagoon. An Indicative Development Staging Plan for both building works and civil works is shown in Figure 32 (p.87).

Following remediation, the surface soils on the site can be regarded as free of contaminants to a minimum depth of 1 to 2 metres. As a result - providing construction activities on the site do not penetrate the warning barrier layer that has been placed at the maximum vertical depth of remediation works - future development on the site can be carried out in a normal manner.

## 9.2 Roads and Drainage

Ministerial conditions require all stormwater to be collected and disposed off site. This includes the runoff from all buildings and impervious areas of the site.

As part of the remediation works for the Burswood Lakes site, the existing drainage canal on the western side of the site was modified to form seven lakes as defined in the EMP. Lakes 1 to 6 are clay lined to prevent infiltration while Lake 7 is unlined.

All lakes are interconnected using open channels. Lakes 1, 2 and 6 are weir and level controlled to provide a "first flush" and "extended detention" capability. The lakes have been designed to provide an outlet for all surface drainage from the Burswood Lakes site, the new Burswood Link Road and the adjacent DOLA/MRD site (lot 26). The lake system releases water from Lake 7 into the Swan River.

Sub-soil drainage systems on both sides of the lakes intercept sub-soil drainage and discharge into Lake 7. Lake 7 also accepts sub-soil and stormwater drainage from the Burswood Link Road and the adjacent golf course.

The conceptual design for the future surface water drainage system includes:

- Collection of stormwater from all sealed surfaces
- A piped drainage system to collect and discharge the water into the treatment basins or lakes on the western edge of the site
- Provision of primary pollutant traps to complement the lakes system at strategic locations throughout the development. These "Gross Pollutant Traps" (GPT) will collect rubbish, large particle sediment and hydrocarbons prior to discharge into the lake system
- The ultimate outlet for the surface area drainage system is the Swan River

### Ornamental Lake

Where possible, roof runoff will be collected and piped to the ornamental lake. The lake will be lined and weir controlled to maintain the water level with the overflows discharging into the stormwater system and the lakes.

The proposed drainage and catchment strategy is shown in Diagram L, p.55.

The road network in the area already includes the recently constructed Burswood Link Road which has yet to be gazetted as a public road. Roads for the development will be constructed in accordance with the local authority standards. Details of road and reserve width are set out in Section 8.0.

Road infrastructure - apart from sections of Road 2 located in the north-west corner and the "Clay Pit Lagoon" area - is generally not subject to major differential settlement. Those areas that are effected will be pre-loaded to accelerate the long term settlement and mitigate any differential settlement. For this reason, no major problems are anticipated with the road and drainage infrastructure within the development.

## 9.3 Water Supply

At present there is no water connection to the site. The closest water service is a 200DN diameter main in Bolton Avenue and a 100DN diameter main in Goodwood Parade. Discussions with the Water Corporation have identified that neither of these connections will be adequate to service the ultimate water demand for the site.

To provide water to the site, a new connection will be required from the existing 300DN diameter main on the south side of Great Eastern Highway.

The main will be 250mm in diameter and will connect to the Water Corporation's 300DN diameter main at the intersection of Griffiths Street and Great Eastern Highway. The alignment then follows Griffiths Street and will require an underground rail crossing to connect to the site as shown in Figure 20, p.69 Infrastructure and Amenities Plan. From this point the water supply will be constructed to suit future staging of the development.

## 9.4 Sewerage System

The site is not connected to the Water Corporation's sewer network. Existing sewer infrastructure adjacent to the site is a 225mm diameter sewer on the eastern side of Bolton Avenue as shown in Figure 20 (p.69). The connection point is approximately 70 metres from the south-west corner of the site.

The Water Corporation has advised that there is capacity in the existing 225mm diameter sewer at Bolton Avenue to service the fully developed site. Given the amount of additional fill required to provide the final levels, it is anticipated that a gravity sewer system will be used for internal reticulation. The exception may be units facing the lakes on the western boundary where it is anticipated that each site could require a private pump station to serve lower levels of units around the lakes.

Details of the sewerage system will be finalised during detailed design.

## 9.5 Power Supply

There is currently no power connection to the site. An existing 11/6.3kV LV link to the Old Swan Portland sub-station has been disconnected. Lighting for the Burswood Link Road is provided by a link to the transformer at Tennis West.

Western Power has advised that power for the development will be provided from the networks connected to the Belmont zone substation. This will be facilitated by a new 22kv high voltage cable connection to the site. Internal reticulation of power will be provided by a 22kV ring main, with connection to the 22kV HV service from the Belmont zone sub-station.

It should be noted that Western Power is unequivocal in its confirmation that the power supply for Burswood Lakes is indepedent of any future upgrade of the Rivervale Substation ie Burswood Lakes is not the reason or driver for upgrading the substation.

## 9.6 Communications

The nearest connection to the Telstra network is at Great Eastern Highway. Telstra has advised that this existing service can only be extended to service approximately half of the site. To provide comprehensive communications capability, Telstra proposes to construct a new fibre optic cable from the Victoria Park exchange to a central Telstra exchange on the site.

This exchange, which will need an area of approximately 3.5 metres by 5.5 metres, can either be housed in a dedicated Telstra facility or as part of a building. The exchange will be capable of servicing the total site with high-quality communications.
A separate pipe and pit network will also be constructed as part of the civil works to enable the opportunity for third party telecommunications vendors to supply services to the development.

## 9.7 Gas

At present there is no gas infrastructure to service the site. Alinta Gas has advised that they can service the site using the existing gas line in Bolton Avenue.

The developer will provide a common services trench for the pipe work to be laid by Alinta Gas. The internal reticulation may be extended with an underground connection beneath the rail line to a gas reticulation network in Goodwood Parade.

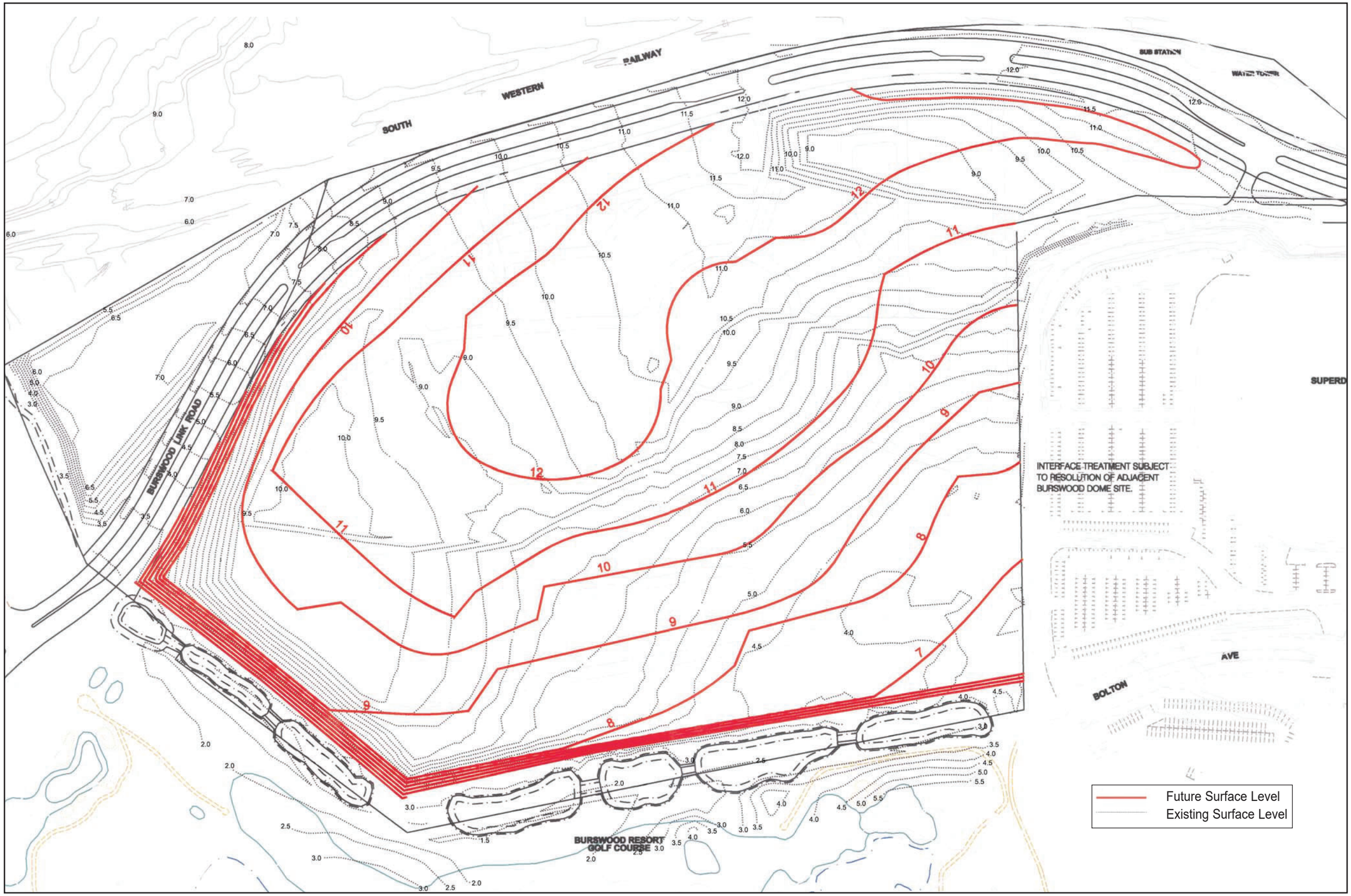



**Figure 16**
Indicative Site Design Levels

# 10.0 Environmental Issues

(ref. Environmental Management Overview)

## 10.1 Remediation of the Site

The Burswood Lakes site has undergone extensive remediation to ameliorate contamination caused by previous industrial activities. The remediation program and prior site investigations have been subject to formal review and conditions set by the Environmental Protection Authority (EPA 1998). Included in the Conditions (as Ministerial Condition 9) was the requirement to produce an Environmental Management Plan (EMP) to ensure that any environmental impacts associated with the remedial activities and subsequent redevelopment of the site are managed appropriately.

On behalf of Burswood Nominees Pty Ltd, Egis Consulting produced an Environmental Management Program (Egis Consulting, 2000) to satisfy this requirement. The Environmental Management Program, containing the appropriate environmental management plans, was finalised in June 2000, implemented by Gregory's Plumbing on behalf of BL Developments and completed in May 2001. Environmental consultants Environmental Management Resources Australia (ERM) assisted Gregory's Plumbing with technical advice, site supervision and documentation.

Formal sign off of the remediation, which states that the site is now suitable for residential development, was given by the Department of Environmental Protection (DEP) on behalf of the Minister for the Environment and Heritage, on 30 August 2001.

## 10.2 Environmental Management Plan

The Environmental Management Program produced by Egis Consulting (2000) focused primarily on the remedial operations with less emphasis on the post-development site activities. In addition, post-development management strategies were produced on the basis of a (now superseded) proposed development plan that included recreational, tourist and residential land use.

A new post-remediation EMP (to replace the current EMP) was approved by the Department of Environmental Protection (DEP) in October 2002. The emphasis of this post remediation EMP is to produce construction and post-development management strategies that - while still complying with Ministerial Conditions - are more closely suited to the style of development proposed in the Structure Plan.

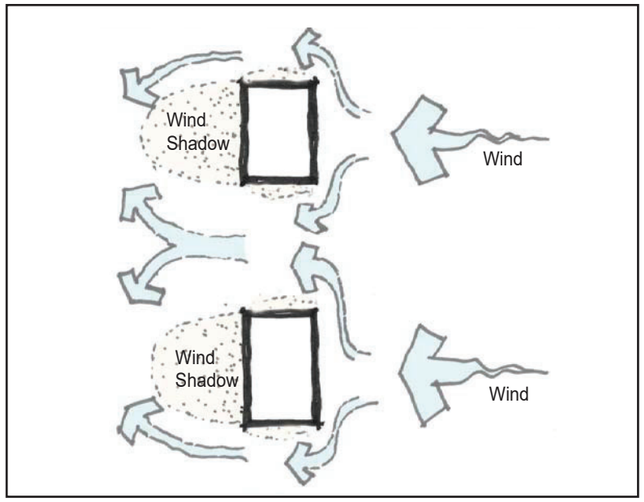



*Diagram M: Plan showing how wind moves horizontally around buildings*

## 10.3 Micro-climate

Micro-climate issues include noise, solar access, and wind.

### Noise

Burswood Ltd have made a commitment to the proponent that the Superdome, which currently generates a degree of noise during large events, will no longer be used for purposes that create noise, generate light and traffic as of 31st December 2004. This commitment will be effected through a restrictive covenant on the Superdome site, to the benefit of the Burswood Lakes residents.

### Wind

Dr. Kenneth Kavanagh of the University of Western Australia has undertaken an initial review of the proposed development. He prepared the following wind report (refer to Diagram M, N above).

<u>The General Wind Climate</u>

- The Burswood Lakes Development is generally open, with a predominance of low-rise (two- to four-story) buildings.
- The site is exposed to winds from all directions, but the northern and southern exposures are generally unimportant in Perth's wind climate.
- At low wind speeds, Perth is subjected to a large number of easterly winds. These winds are hot and dry, and the associated wind chill factor can be beneficial.
- At low speeds, the westerly winds are generally cooler and more humid, raising issues of long-term comfort due to wind chill.

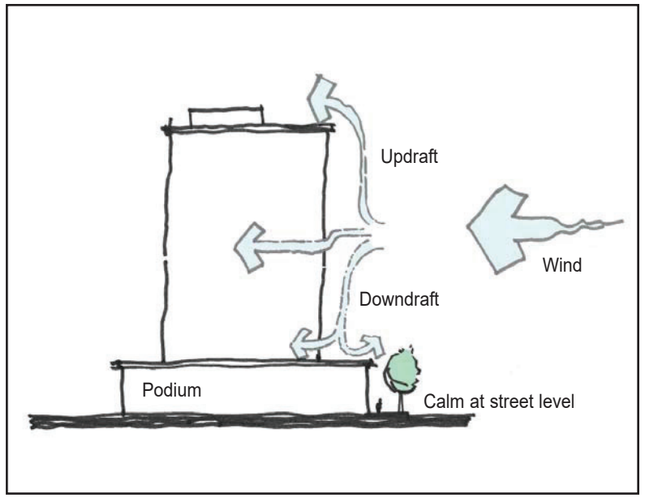



*Diagram N: Elevation showing how wind moves vertically around buildings*

- At high wind speeds, Perth winds are almost exclusively from the westerly directions, and these are associated with rain and with storm fronts. For open areas, these winds are less important, since people are not likely to occupy open spaces during major storms.

<u>The Concept of Comfort in Wind Affected Areas</u>

- The predominant consideration of human comfort is the effect of wind chill on people in exposed areas.
- Long term occupancy of open areas is associated with sitting and eating (cafes, picnic areas, and plazas).
- Short term occupancy is associated with transient activities (walking, sightseeing, window shopping).
- Open areas in Burswood Lakes are typical of most Perth park sites. Long term activities tend to be comfortable on all but one day per week due to the predominance of the dry easterly winds.
- Short term activities in open areas (such as sport) are affected on about a monthly interval, with the passage of storm fronts or strong sea breezes.
- Open areas are generally vulnerable to unacceptable conditions on a several month to a yearly basis, with the arrival of strong storm fronts.

<u>Shielding Due to Buildings</u>

- All buildings provide protection from the wind on their leeward and side faces.
- The extent of the protection provided by buildings is governed by the building's characteristic dimension.

- Low-rise development has a characteristic dimension of height, and protection is limited to within one or two building heights behind the building and less than one building height on the sides.
- Public open space in Burswood Lakes is not likely to be shielded by the planned low-rise development simply due to its distance from the development.
- Shielding is again provided in the lee of buildings for approximately one or two building widths. Side wall protection is limited to approximately 20 per cent of the building width.
- While the appropriate distance between buildings depends on many factors other than wind, generally the further they are apart, the less the effect of wind. The layout of the tall buildings at Burswood Lakes and the separations between them appear adequate.

Increases in Wind Speed and Its Effect on the Pedestrian Level

- Buildings that provide shielding also create local zones of increased wind speed.
- The zone of increased wind is usually very narrow, with the highest wind speeds adjacent to the building and with a fairly rapid reduction of wind speed with lateral distance.
- To the sides of buildings, the zone of increased wind speed is approximately 10 -15 per cent of the building dimension. Farther out from that zone, winds are largely unaffected.
- Pedestrian level winds can be protected by low-rise development at the base of the high-rise development. Lateral winds are forced over the top of the low-rise buildings (or set-backs), protecting the pedestrian levels.
- The extent of the increased wind zone in the direction of the prevailing wind is dependent on the building dimension in the wind direction. In Burswood Lakes, this building dimension is small, and the extent of the wind affected zone will be less than two building depths.

Local Effects and Protection

- Tall buildings can be exposed to downwash winds on the front face of the building.
- Downwash winds are most pronounced on very wide, flat fronted buildings.
- The taller buildings at Burswood Lakes are narrow enough to minimise the effects of significant downwash.
- Downwash can be deflected by a podium level or low-rise development in front of the tower. Five to ten metres of podium is sufficient to block the downwash from the pedestrian level.
- Winds deflected laterally by the building can be uncomfortable for balcony areas if the balconies are continuous and open. Vertical partitions along the open balconies can eliminate this problem.

Public Spaces

- Outside seating areas should take advantage of the side wind-shadows that occur between the tall buildings at Burswood Lakes. This side-shadow is equivalent to 1/10th the width of the windward façade, and is most pronounced near the windward corner.
- The Circular Park area is sufficiently far from the high rise development to be unaffected by either the sheltering effect or the localised increases in wind speed
- Lake Park is of sufficient size as to encounter a variety of wind conditions within it. Wind conditions near the western edge will be improved because of the proximity to sheltering buildings, while much of the park area will be largely unaffected by the development.
- While the hardscaped central pedestrian plaza leading from Lake Park to Circular Park forms a view corridor to the Perth CBD to the west, it is possible that this area could be somewhat exposed on days of strong westerly winds. Certain steps in the detailed design of that space could be taken to ameliorate the situation. For example, if a café with outside seating were desirable in this location, glass partitions or low-landscaping could be added to shield patrons from occasional breezes.

Overall Changes in Wind Condition

- Wind conditions will vary depending on where you are on the site
- The overall building configuration (as shown) will produce a neutral or better result, from a wind perspective, than currently exists on the site
- The high rise buildings will provide sheltering from the westerly winds to about 50% of the site area immediately behind the buildings
- Approximately 10-20% of the site area would be more windy due to the presence of buildings
- Another 10-20% of the site area will neither increase nor decrease its amount of wind

## Solar Access

Solar access on the site has been assessed through shadow analysis at both the summer and winter solstices. This analysis indicates that the linear layout of the taller buildings with a large open space to each side of the building spine provide for areas of sun within open space at all times and limits overshadowing at mid-day in mid-winter.

The shadow analysis diagrams are included in Figures 9 and 10 (p. 44-45) and further shadow analysis is required at development application.

The combined wind and solar impacts will be used in the detail design of spaces between the taller buildings to ensure pedestrian comfort through suitable landscape and built form treatments.

# 11.0 Public Open Space

(ref. Landscape Masterplan Report)

## 11.1 Public Open Space (including Burswood Canal)

The many public open spaces at Burswood Lakes will be the community meeting places and therefore the core component of the new urban neighbourhood. Over 11.7 per cent of the site is proposed as Public Open Space (based on the total of all POS and 50% of the area of the lake) and is shown in Figure 31 (p.86). These public parks will provide local amenity. An additional 3% of the site will be publically accessible landscaped areas.

Together with the larger primary parks there will be smaller pocket parks and areas of open space that will provide more intimate places.

To the western edge of the site, a series of view corridors break the developed edge and provide visual links to the golf course, the Swan River and the Perth CBD beyond.

To reflect its importance, public open space is structured as central parkland with links to secondary spaces and the surrounding environment. The large central Lake Park and Circular Park provide areas for passive and active recreation. These areas contain informal open grasslands that can be used as 'kick-about areas' or picnic grounds. The parks and linking linear public spaces offer circuit walks as well as direct pedestrian access across the community and to key off-site destinations.

The design includes viewing platforms that provide opportunities to see beyond the development over the golf course to the river and city.

Shade trees and water features are key landscape elements. Both provide cool environments for enjoying outdoor summer activities. Barbecues and picnic facilities offer residents added amenity. A variety of public spaces is proposed at Burswood Lakes, from pocket parks with intimate seating areas and incidental play spaces to broad lawns and plazas. This variety of public open space reflects the needs of the diverse resident mix expected in the new community.

The public open spaces are designed to encourage day and night pedestrian use. Lighting will be installed both for security and aesthetics.

Security will also be provided by passive surveillance from surrounding streets and buildings. Placement of shrubs and ground level structures will take into account views and limit hidden spaces.

Public spaces are designed to be visually stimulating. At ground level, vistas are created to the city, golf course and river. Spaces and plantings are designed to visually entice the user from one area to another.

The views and vistas are heralded by changes in tree species, with palms placed at strategic locations. The restricted use of specimen palms links the landscape to the character established in the adjacent park lands and roads within the Burswood Peninsula. The overall landscape will be formed by a mix of both exotic and indigenous species selected to suit site conditions. This mix will create a rich parkland setting that will offer year-round colour, shade where required and winter solar access.

The perimeter lakes on the western boundary dominate the interface of the development with the golf course. These lakes are not included in public open space as they have a drainage function and are not publicly accessible. It is intended that this zone is planted with primarily endemic species and littoral planting. Where the lake system extends through to the old Burswood Canal, planting will be complementary to the perimeter lakes character. A corridor of locally indigenous trees, shrubs and dampland littoral plants will define the old route of the canal.

Located adjacent the north west corner of the site is an area where the former Burswood Canal used to pass through the Peninsula. The canal, which has been disused for some time, was infilled and piped by Burswood Ltd as part of the remediation of the DOLA land during 2001. This occurred with the approval of the Heritage Council of Western Australia.

Burswood Ltd is currently in discussion with the Heritage Council of Western Australia as to creating a Heritage Agreement for the canal. It is the intention that this agreement will include recognition of the canal by way of an interpretive sign to be located on site in an area of public open space. Although details of the sign are still being finalised at the time of writing, it is likely that the sign will be consistent with other similar signs found in Western Australia, and will explain the significance of the canal.

## 11.2 Soil Conditions

The site has been remediated with a minimum depth of soil of 1 to 2 metres above the protective membrane. The proposed design levels will increase these depths to an average of 3 metres of clean fill and up to 6m in places. This will provide ample planting depth for selected trees and shrubs. Plants will access nutrients in the topsoil layer and only sinker roots could be expected to penetrate the geotextile membrane. These would be strangled by the fabric and snap in the event that a tree is blown over, ensuring that the integrity of the remediation is maintained.

Earthworks will be required to contour the site and form the central lake and park. All landscape earthworks will occur at least 500mm above the membrane (refer to Indicative Site Design Levels - Figure 16, p.57).

## 11.3 Streetscape

The objectives of the streetscape approach are to:

- provide a safe pedestrian and vehicle environment
- reinforce neighbourhood character
- be complementary to built form
- create a valued street aesthetic

The streetscape at Burswood Lakes will provide a suite of elements and plant species that will characterise the new community and present sufficient variation to define neighbourhoods and smaller community areas.

The street layout presents a variety of experiences, including the boulevard entry road, the Circular Park, neighbourhood streets, short mews and courts. Street tree planting will play an important role in defining the character of these streets. The streetscape will utilise a combination of tree species specifically selected for the public realm that are also found in private gardens.

The streetscape will be comprehensively designed from building face to building face, spanning both public and private realms. Distinction between the two realms will be made with changes of level, paving material, hedges and low fencing.

The street tree species will aid in orientation by being specific to each street type. For example, the Entry Boulevard will be lined with large palms, and the neighbourhood streets planted with a single unifying species. Access places, courts and the crescent will all have location-specific tree species.

Paving materials will also be used to create neighbourhood character. Unit paving will be used in specific areas of the site. Selection of paving materials shall consider long term maintenance and replacement issues. Material patterning and colour will highlight junctions, priorities and types of street. Pedestrian crossing locations will contain traffic calming devices and will include tactile paving. These crossings will create strong visual links where parkland and important pedestrian routes cross

roadways. Street furniture will consist of light columns, benches, tree guards, bollards, bins and signage. These elements will be robust, low maintenance, quality fixtures that complement built form. Figures 13-15 (p.51-53) show several indicative street sections.

## 11.4 Treatment of Undeveloped Sites

The project will be developed in a number of stages for both civil and building works. Civil works stages will create a number of building sites that will provide the opportunity for a staged building construction program. An indicative staging plan for both civil and building works is shown in Figure 32 (p.87).

Staging will be planned to ensure that Burswood Lakes is developed in a cohesive manner that will enable completed dwellings and residents to co-exist with buildings under construction. This is one of the major benefits of Burswood Lakes being constructed by one proponent.

Land awaiting development will be subject to measures that ensure the development:

- is not unsightly and intrusive
- is not subject to wind erosion
- does not have unauthorised recreational uses such as trail biking or dumping of unwanted materials

Strategies to address the above will include:

- On-going site security
- Interim fencing, where necessary
- Surface stabilisation, where necessary, by grass seeding and / or mulching
- Screening key locations with hoardings, temporary art works and poster illustrations of the development
- Interim land uses, where practical, such as a site plant nursery, turf farm, etc.
- Temporary landscape treatments for specific locations

## 11.5 Irrigation

All public open space areas will be irrigated from an existing licensed bore located in the south-eastern corner of the site. The water supply is suitable for irrigation purposes, producing 11.33 litres/second at 500 kPa with a relatively high iron content (5ppm).

To avoid iron staining and long term maintenance problems of sprinklers, chemical treatment or an iron filter will be used to reduce iron content. It is intended to draw water from the main feature lake for irrigation.

In addition to the feature lake, the bore will be retained as a top-up water source for the nutrient-stripping lakes. Irrigation of private spaces will be via scheme water from individual supply. Nutrient runoff into adjacent sites will not occur from landscaped areas. Use of nitrogen and phosphorus-based fertilisers will be minimised and limited to slow release types only. Any excess nutrients transported by runoff will be intercepted by the central lake, which acts as a settling / stripping device with an overflow into the series of seven artificial lakes adjacent to the site (also used as nutrient stripping lakes.)

*The Causeway viewed from the Burswood foreshore.*

The design will incorporate large areas of grass and accessible areas of shrubs. The reticulation system will be constructed to Council standards. All materials will be sourced from local suppliers and will be suitable for public areas. The design will ensure easy access to all areas for maintenance vehicles (ie. movers, sweepers, small vehicles etc.).

## 11.6 Landscape Management

The landscape is designed to create an environment that meets the overall development objectives and is modest in its maintenance requirements.

The landscape environment that is proposed will be designed in detail to optimise the value of maintenance operations. The level of maintenance and management is projected to be commensurate with the level of use expected from 1250 homes.

It is expected that the open space framework will provide a quality amenity for the population. The management requirements of this asset will change over time as the landscape matures and as the population increases. To ensure that maintenance operations are as practical as possible, the following strategies will be adopted in the detailed resolution of the landscape design.

Plant Selection: Plant selection will favour those species and cultures known to be pest resistant, non invasive, long lived, tolerant of the site conditions and not routinely affected by disease or fungi.

Turf Management: Grass areas will be designed to facilitate ease of mowing utilising normal turf equipment. Areas of projected heavy wear will be paved or subject to deterrent fencing or level changes. Grass areas will generally be located and planned to provide 'single operation' mowing i.e. lack of corners, no steep gradients and access ramps to level changes.

Herbaceous Management: The use of herbaceous species and sub shrubs will be kept to a minimum. Wherever used, replacement shrubs or groundcovers will be installed prior to handover to the local authority.

Irrigation Management: The irrigation systems will be fully automated, designed to meet councils adoption requirements, shrub beds will be mulched to reduce water evaporation of the soil.

Weed Control: Primary weed control will be achieved through chemical sanitation of the growing medium prior to, at, or immediately following planting. Chemical control will involve the application of propriety glyphosate and simasine mixes or the application of Chlorthiamid and Dichlobenil.

Subsequent regular weed removal will be achieved through physical, chemical and thermal control within the maintenance contracts. Shrub beds will be mulched to suppress weed growth and seed invasion. It is expected that effective weed control will also be achieved through the maturing shrub and groundcovers closing canopy.

Tree Management: Species and stock sizes will be selected for ease of long term maintenance. Where appropriate root barriers will be installed where conflicts with paving and services can be anticipated.

Initially, all landscape works will be subject to maintenance under the implementation contract, establishment period and defects liability period provisions. Subsequently, an annual maintenance contract will be let with an assessment of requirements made prior to the time of renewal and at normal inspections carried out during the maintenance contract period.

The proponent will maintain the public open space prior to handover to the Town of Victoria Park. Handover will be by agreement, with parties acknowledging the standard of maintenance to be achieved.

**Table 3 - Landscape Maintenance Schedule**

| | Maintenance Tasks | Annual Remedial Tasks | Removal/ Thinning Projections | Lifecycle Replcmt. Project. |
|---|---|---|---|---|
| Trees | ● | ● | ● | |
| Shrubs | ● | ● | | ● |
| Grass | ● | ● | | |
| Paving | ● | | | ● |
| Decking | ● | | | ● |
| BBQ's | ● | | | |
| Street Furniture | ● | ● | | ● |
| Water Features | ● | ● | | |
| Aerators & Pumps | ● | | | ● |
| Irrigation | ● | | | ● |

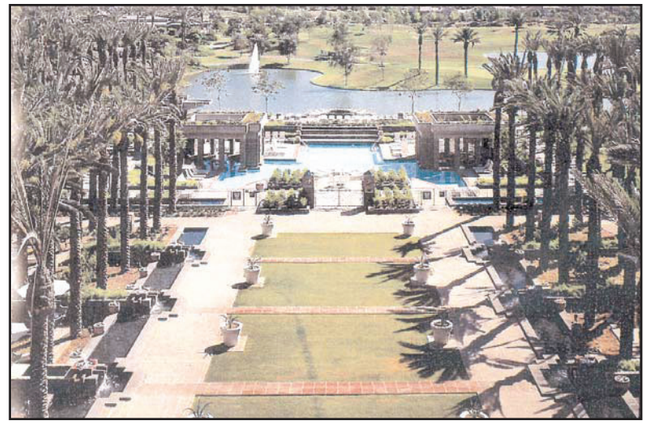
A schedule of Public Open Space elements is listed in Table 3 (above) as an outline of what will be covered in landscape maintenance work specifications.

## 11.7 Open Space and Landscape

The generous public open space is a core element in the design of the Burswood Lakes community (Figure 17, p.63) & (Figure 31, p.86). It primarily consists of 2 large parks - the Circular Park and the more linear Lake Park - which provide a foreground to the central spine of buildings.

Together with the larger primary parks, there will be smaller pocket parks and areas of open space which will provide more intimate places. Some areas will include defined viewing platforms providing the opportunity to see beyond the development over the golf course to the river and city. Others will be intimate pocket parks of a more contemplative nature, inviting one to look, feel, and sense each part of the design at close range.

The spaces are designed for both active and passive recreation with passive security and maintenance as important criteria. Some areas of open space will facilitate and encourage sitting and pause. Others, such as the linear plaza (which extends from the Circular Park towards the CBD and the western edge of the



*This photo portrays a visual impression / likeness of areas 18/20 shown on figure 17 (Scottsdale, Arizona, USA)*

site) provide for movement and a series of spatial experiences. Plazas with fountains and seating, some with cafes and active edges, will complete the range and variety of public realm spaces within the proposed development.

View corridors through the site also visually link open spaces and offer vistas of the river and the CBD beyond. These are enhanced through appropriate planting and landscape treatments. The public open space at Burswood Lakes provides local amenity as well as connections to regional open space.


**Figure 17**
Indicative Landscape Plan

*Ground level view of apartments surrounding the Circular Park*

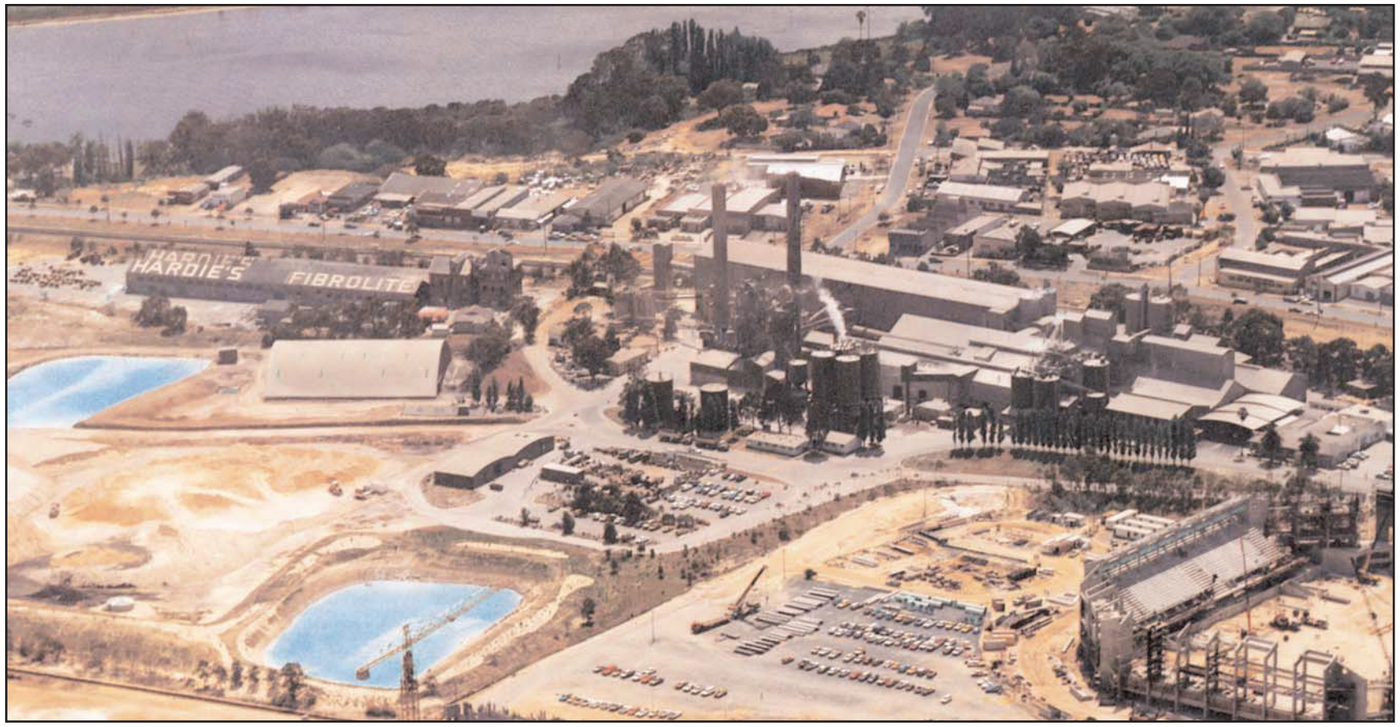
# Part B -
# Structure Plan

## 1.0 Document Purpose and Structure

The Burswood Lakes Structure Plan, Town Planning Scheme Amendment and supporting documents have been prepared in accordance with the requirements of the Special Use Zone in the Town of Victoria Park's Town Planning Scheme No.1 Burswood Precinct Plan P2. The document also satisfies the requirements of the Western Australian Planning Commission's (WAPC) Liveable Neighbourhoods Community Design Code.

### Table 1 - Information Contained within the Structure Plan

| TPS Requirements | References |
|---|---|
| a) Statement of objectives and explanation of the rationale for the proposal contained in the Structure Plan. | 3.1 - Structure Plan Objectives |
| b) Road / pedestrian network showing road reserve and pavement widths, footpaths, and provisions for on-street parking and right-of-way / vehicular accessways where appropriate. | Fig.20 - Infrastructure and Amenities Plan<br>4.1 - Road Network<br>4.2 - Cycle and Pedestrian Network<br>4.7 - Street Design<br>Fig.18 - Indicative Development Plan |
| c) Proposed 'Use Area' classifications of all land within the Special Use Zone to which the following range of classifications will apply:<br>• Residential R80<br>• Tourist / Residential R160<br>• Hotel / Tourist<br>• Office / Residential R160<br>• mixed-use (maximum of 1.5ha of total Precinct) | Fig.19 - Structure Plan<br>4.3 - Permitted Uses<br>4.4 - Dwelling Numbers |
| d) Indicative lot patterns and sizes. | Fig.19 - Structure Plan<br>4.5 - Lot Patterns and Sizes<br>Fig.18 - Indicative Development Plan<br>Fig.23 - Indicative Subdivision Plan |
| e) Location of major infrastructure proposed including drainage, sewage, and water supply services. | Fig.19 - Structure Plan<br>Fig.20 - Infrastructure and Amenities Plan<br>4.6 - Infrastructure and Amenities |
| f) Infrastructure and amenities to be provided by the subdivider / developer, including public open space and road pavements, parking, landscaping, footpaths, and other facilities within the road reserve. | Fig.20 - Infrastructure and Amenities Plan<br>4.6 - Infrastructure and Amenities<br>4.7 - Street Design<br>4.8 - Public Open Space and Landscape<br>4.12 - Commitments by Proponents<br>Fig.18 - Indicative Development Plan<br>Fig.31 - Indicative Public Realm |
| g) The relationship of the land to surrounding facilities, land uses, and road / pedestrian network. | Fig.21 - Local Context Plan<br>Diagram C - Local Context and Proximity to Cycleways<br>Fig.22 - Proposed Cycle and Pedestrian Routes<br>3.1 - Structure Plan Objectives<br>4.1 - Road Network<br>4.2 - Cycle and Pedestrian Network |
| h) The way in which subdivision and / or development of the land will recognise the historical Burswood Canal park, which is still evident within the boundaries of the Special Use Zone. | Fig.19 - Structure Plan<br>4.9 & 4.12 - Recognition of the Burswood Canal<br>Fig.18 - Indicative Development Plan |




*Industrial buildings with tall chimneys previously occupied the Burswood site (pre-1986)*

The Structure Plan includes the site known as the 'DOLA/MRD site' (lot 26) to the east of the Burswood Link Road and other areas within the Special Use Zone.

## 2.0 Structure Plan Requirements under the Town Planning Scheme

Table 1 (left) sets out the location of the required information in the Structure Plan.

In order to effectively implement the Structure Plan, it is necessary for certain standards in the Precinct Plan P2 of the Town Planning Scheme to be amended. Part B explains the nature of those Amendments. The actual Amendments can be found in the Appendices.

It is proposed that the Council adopt a specific Planning Policy under the Town Planning Scheme for the Burswood Precinct. The Policy is contained in the Appendices and should be read with this Structure Plan.

### 2.1 Structure Plan

The Structure Plan illustration (Figure 19, p.68) shows:

- the general layout of Burswood Lakes
- indicative lot patterns and sizes (d)
- recognition of the Burswood Canal (h)
- proposed uses (c)
- proposed dwelling numbers
- maximum building heights (metres and storeys)
- maximum plot ratios

### 2.2 Infrastructure and Amenities Plan

The Infrastructure and Amenities Plan (Figure 20, p.69) shows:

- locations of major infrastructure proposed including drainage, sewerage and water supply services (e)
- infrastructure and amenities to be provided by the subdivision including public open space, road pavements and footpaths (f)

### 2.3 Local Context Plan

The Local Context Plan (Figure 21, p.70) shows:

- the relationships of the land to surrounding facilities, land use and road / pedestrian network (g)

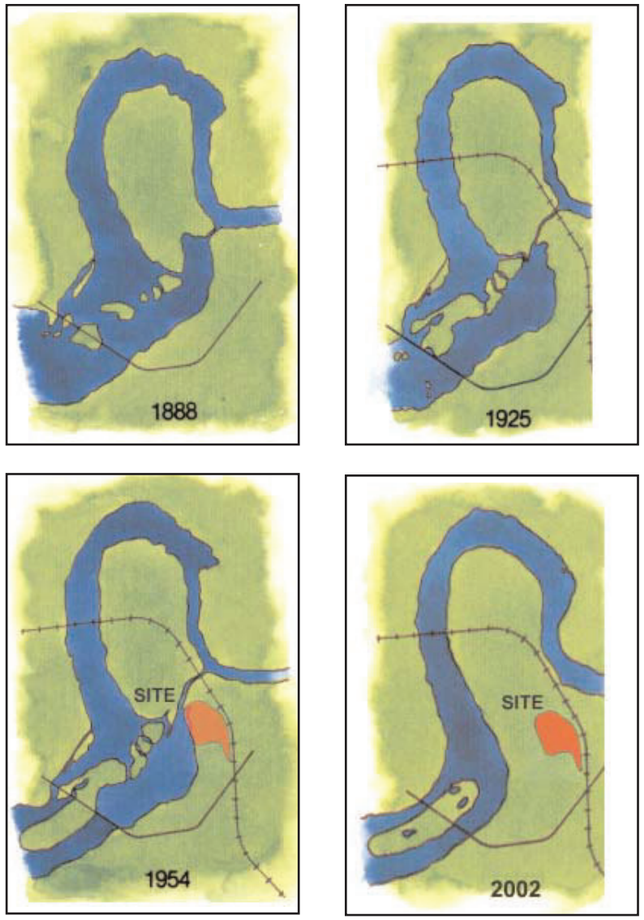



*Diagram O: Evolution of the Burswood Peninsula*

## 2.4 Proposed Cycle and Pedestrian Routes

The Proposed Routes for Cyclists, Pedestrians, and Indicative Bus Routes (Figure 22, p.71) shows:

- road and pedestrian / cycle, and bus network on the site (g)

## 2.5 Indicative Subdivision Plan

The Indicative Subdivision Plan (Figure 23, p.72) shows:

- lot patterns and sizes (d) and public open space provision

# 3.0 Structure Plan Objectives

The Burswood Lakes Structure Plan seeks to address objectives based on:

- An Evolving Place
- Links to the Town of Victoria Park
- Built Form and Response to Setting
- Connectivity and Transport Orientated Development
- Importance of Public Places: The Public Realm
- Sustainability - Environmental, Social and Cultural and Economic

## 3.1 An Evolving Place

**Objective:**

*To create a place for the 21st century, appropriate to its location, that will evolve through viable stages*

**Response:**

Burswood Lakes has an evolving history that has culminated in the reconfigured site and topography of today. Diagram O (left) illustrates the evolution of the Peninsula. The site has long been isolated, part of neither the urban nor suburban fabric. It is now appropriate for the site to further evolve and develop into a substantial new residential community.

Burswood Lakes will increase the diversity and size of the residential population of the Town of Victoria Park by providing a new selection of housing types at higher densities that are close to transport, amenities and employment.

A range of other uses including retail, residential, entertainment and commercial may be developed closer to the Burswood Train Station in the future on the Burswood Superdome site to complete a mixed-use inner urban neighbourhood at Burswood. This development would be subject to a separate structure plan.

The site's location on the Burswood Peninsula requires site specific development standards that vary from those used in the Town of Victoria Park.

Development will be staged. Each stage will be wholly self-reliant, with adequate infrastructure, access, open space and amenity. All stages have been designed to integrate with following stages, allowing seamless second generation development. While staging will be influenced by market demand, infrastructure requirements and the construction process, the early phases will include a significant proportion of the development's public open spaces and landscaping areas.

## 3.2 Links with the Community of Victoria Park

**Objective:**

*To forge social, commercial and physical links with Burswood Lakes and the community of Victoria Park.*

**Response:**

### A. Social Links

Schools

For families with school-age children, schools often form the centre of family life. Schools create many opportunities for social interaction, both among children and among parents. Events like teacher-parent evenings, school plays, school barbecues, etc. offer chances for families to get to know each other. While Burswood Lakes will cater to a diverse set of residents, a proportion of them are likely to have children. These families may well use the local schools to help them make social links with other families in the Town of Victoria Park.

Sports

Sports, pursued formally or informally, can often help new residents make social links with the surrounding community. Many opportunities exist for residents of Burswood Lakes to join local sports clubs, including walking clubs, sailing clubs, rowing clubs, bicycle clubs, lawn bowling clubs, and many others. In addition, informal jogging or bicycling groups exist, and social connections can often be made by going down to the local park with a frisbee or a basketball. Burswood Lakes' proximity to the Swan River foreshore and its own large parks should help to foster this kind of social interaction.

Shopping

Residents of Burswood Lakes will take advantage of the proximity to the shopping opportunities that exist in Victoria Park; in particular, the retail main street along Albany Highway. Because of the local nature of many of the shops, residents may, after repeated patronage, get to know some of the shop owners - if not intimately at least casually. These kind of encounters help to foster a sense of connection between where one lives and the surrounding neighbourhood, and will make residents of Burswood Lakes feel part of the town's community.

Community Organisations

Many community organisations exist in the Town of Victoria Park. These organisations include charities, interest groups, mother's groups, hobby organisations, political groups, and many others. Community minded residents of Burswood Lakes may well join some of these associations, contributing their ideas and time to community endeavours. This mechanism is another way that




**Figure 18**
Indicative Development Plan

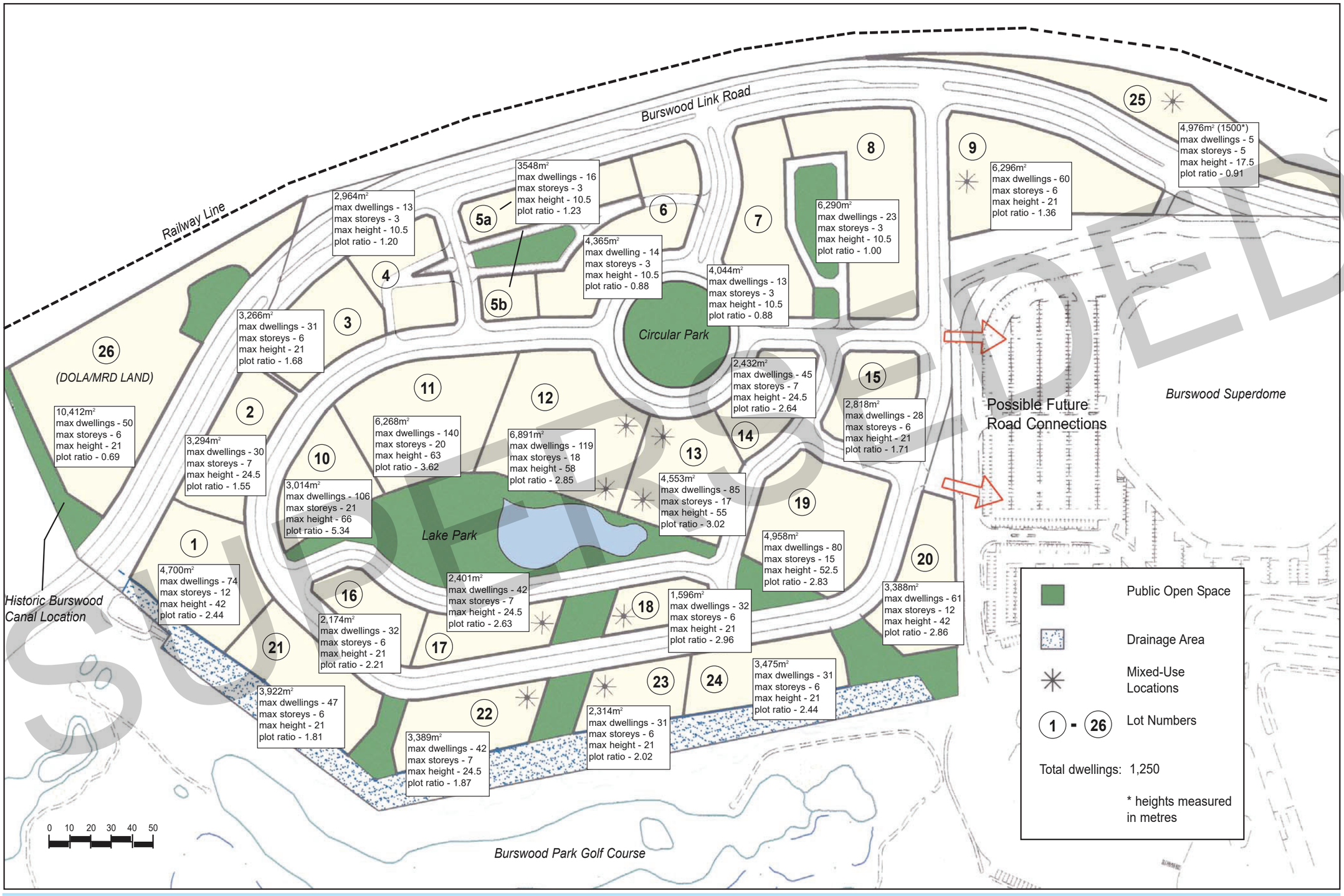







**Figure 19**
Structure Plan

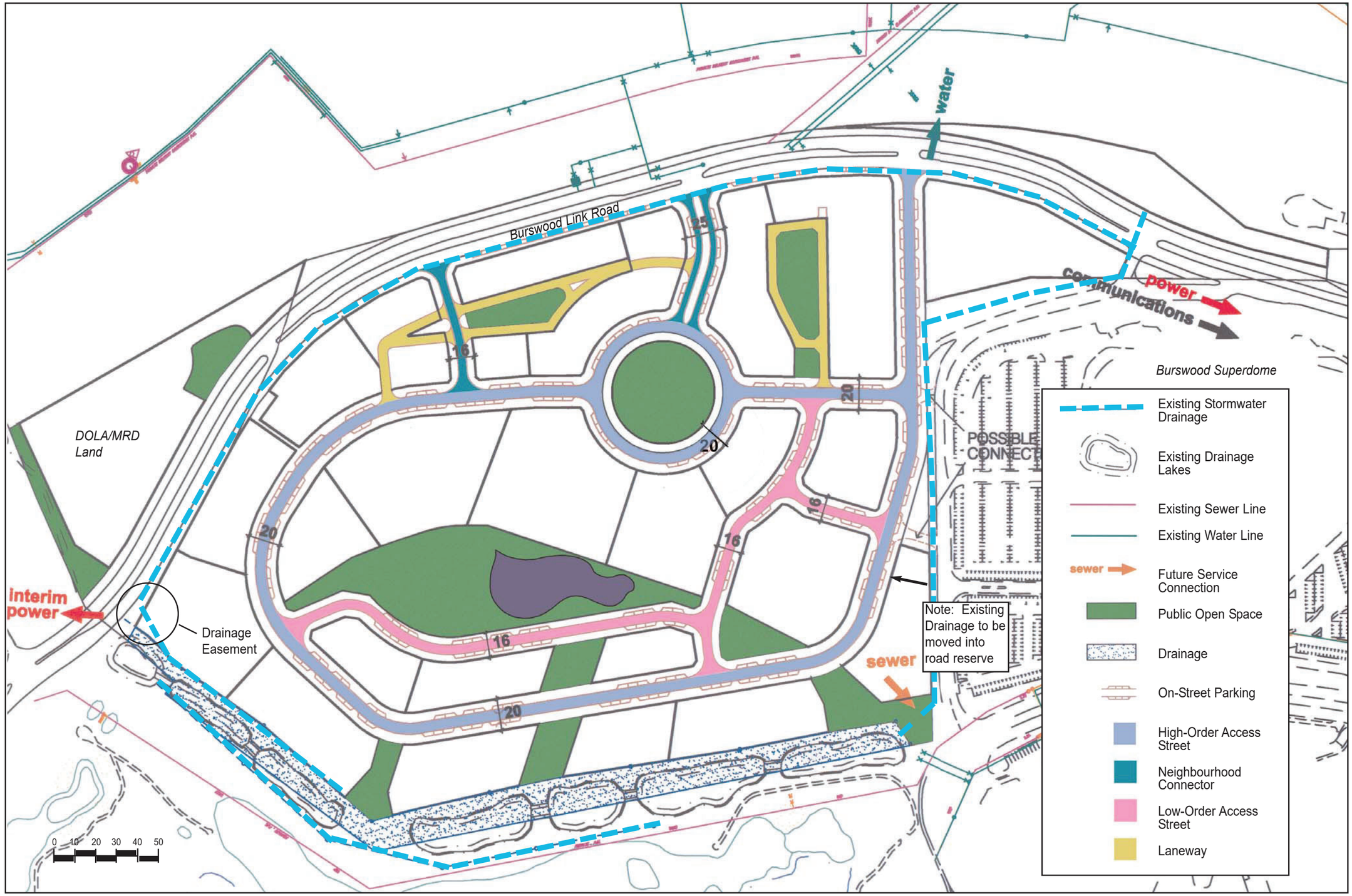



**Figure 20**
Infrastructure and Amenities Plan

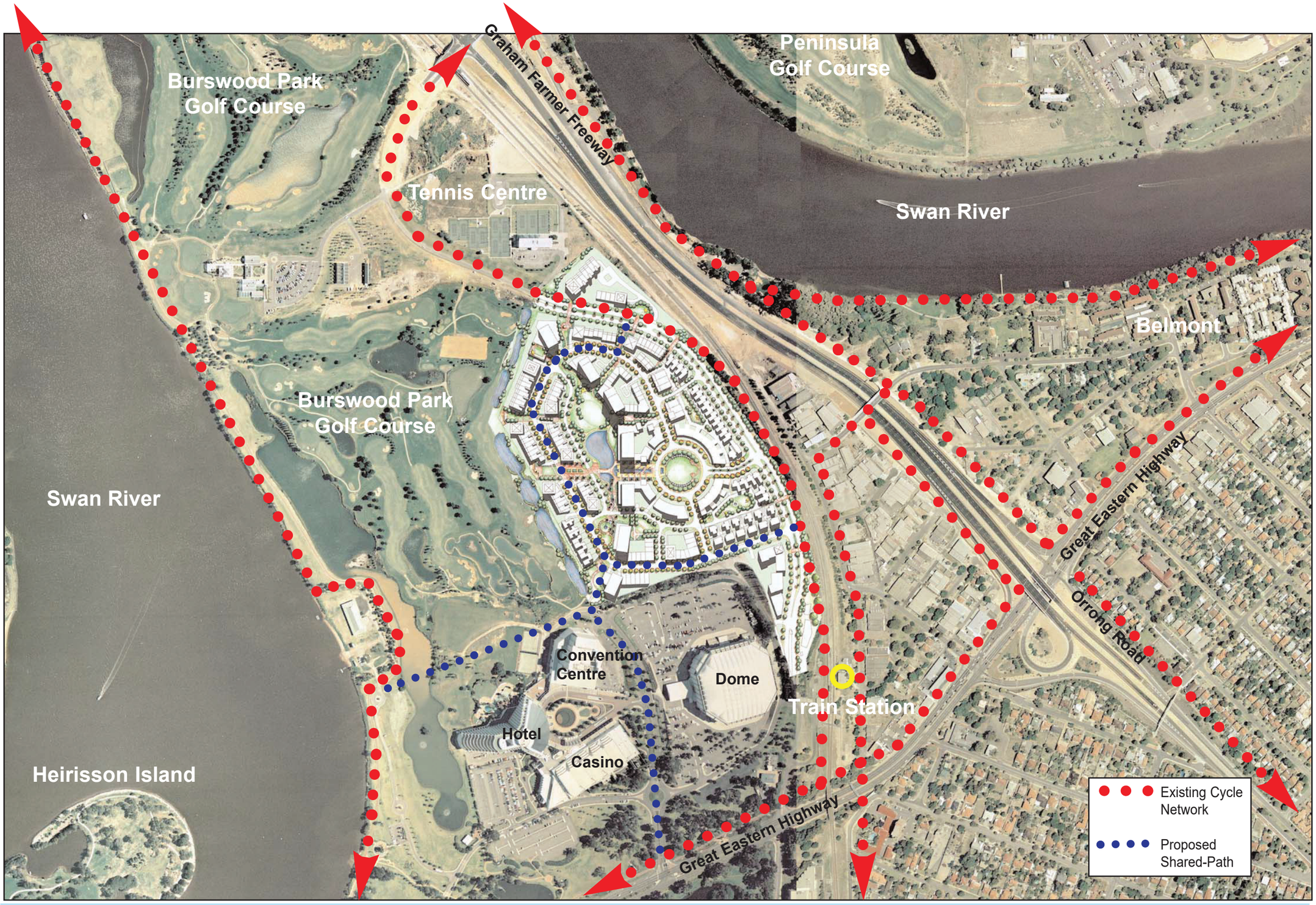





**Figure 21**
Local Context Plan

0 50 100 150 200 250

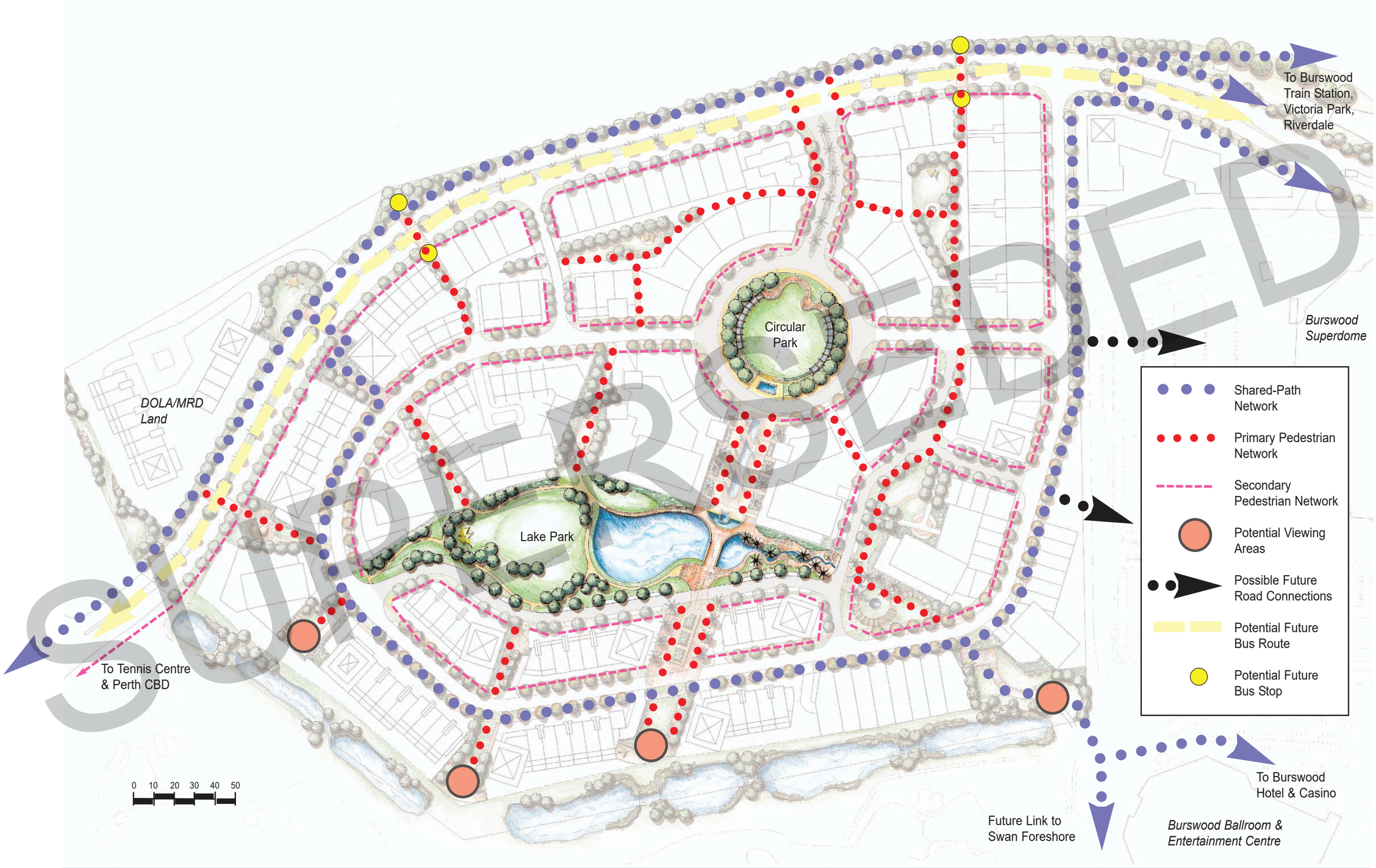





**Figure 22**
Proposed Routes for Cyclists and Pedestrians, and Indicative Bus Route

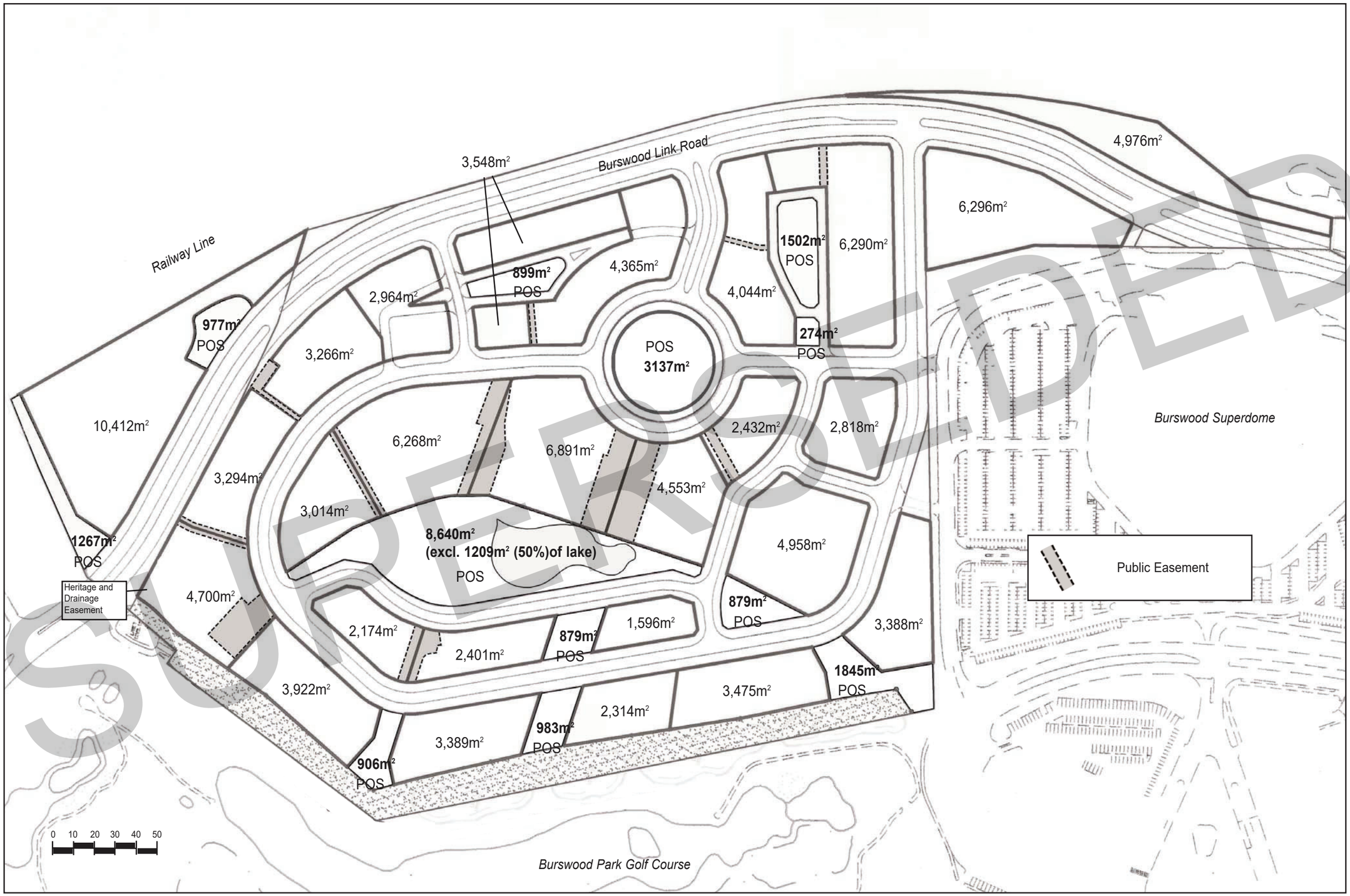







**Figure 23**
Indicative Subdivision Plan

Burswood Lakes residents will be able to make social connections, and contribute to the Town of Victoria Park.

Public Events

Another mechanism that Burswood Lakes residents will use to feel a part of the Town of Victoria Park is by hosting and participating in community events. Every year the town puts on public and community events. Participating in, or even better organising, these events, in the town or in Burswood Lakes, could be a way for residents to begin to feel connected to the Town of Victoria Park.

Community Development

A community development program will be put in place to ensure that Burswood Lakes evolves in all aspects of community building. The importance of a vibrant and interactive community life is essential in the development of all communities throughout Western Australia.

The understanding of communities, the ability to develop strategies based on the unique character of an estate and the track record of implementing the development of the community fabric, through a range of processes, forms part of the credentials of Mirvac Fini.

Other recent residential developments with similar programmes to that proposed for Burswood Lakes include Mindarie Keys and Bridgewater, Seascapes, Meadow Springs in Mandurah. In particular, Mindarie Keys won the "Best Community in Australia" award in 1999 based on the Community Development Programme implemented by Mirvac Fini.

The objectives of community development are to:

- Develop a strong sense of community amongst residents
- Ensure that the major elements of an interactive and supportive community are established.
- Develop and project an image based on the community.
- Ensure that new residents are welcomed and integrated into the community.
- Ensure that the appropriate infrastructure is provided to support the community.

To realise these objectives at Burswood Lakes, the following strategies will be implemented.

*New Residents Welcome Pack*

A welcome pack and welcoming evenings for new residents are excellent methods for introducing residents into their community. The packs give them all the pertinent information and the welcoming evenings held quarterly, introduce them to their neighbours.


*Diagram P: Potential pedestrian connection across the train tracks*

*Community Development Officer*

The Community Development Officer position, which will be paid by the proponent, exists to develop a close working relationship between community bodies, local organisations, local Members of Parliament and local government authorities. This helps to ensure communication between residents, developer and community groups is working to develop the community lifestyle.

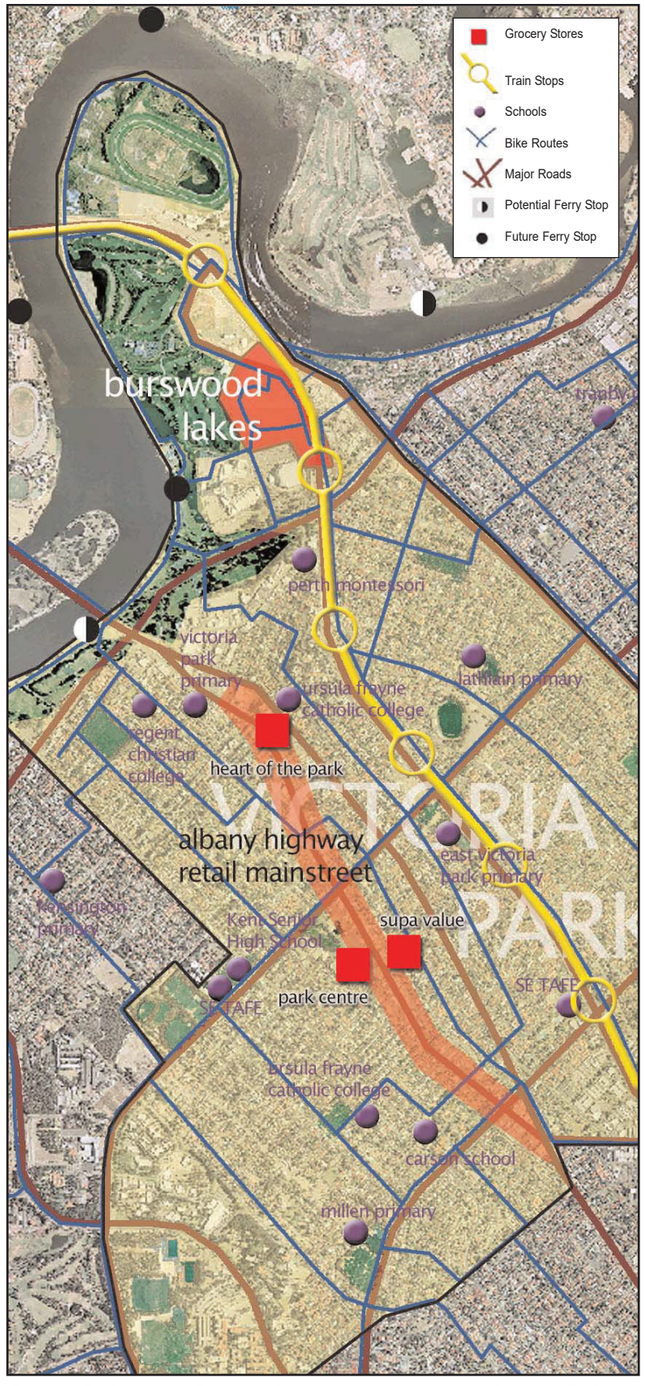



*Diagram Q: Links with Burswood Lakes and the community of Victoria Park*

Some of the projects that a Community Development Officer facilitates are :

- Starting a residents' association
- Integrating groups into the broader community
- Empowering the residents to continue to operate once the developer has gone
- Organise events and activities
- Organise meetings and be the first point of contact on many day to day matters

*Events and Activities*

It is important to provide events and activities that are relevant to Burswood Lakes. These could range from festivals, sunset concerts, children's holiday and weekend programs, walking groups, coffee mornings, the formation of clubs and societies, street working bees, gardening workshops, home handyman workshops, planning dinner parties, investment seminars, wine appreciation evenings, Easter egg hunts, fun days, seniors mini "Have-A-Go" days and much more.

Through the use of 'how to' manuals, development of appropriate community groups are to be facilitated to ensure that the events and activities are self-sustaining into the future.

A program of events and activities would be tailored for Burswood Lakes and be implemented by the Community Development Officer on site.

*Residents' Association*

It is important to work with the residents to develop a range of appropriate clubs and societies and work with them to ensure their longevity. An all-encompassing residents association will be beneficial to both communities if established.

*Newsletter*

The provision of a regular, quarterly newsletter is essential in ensuring that accurate information is being circulated in the community, the appropriate image for Burswood Lakes is being projected and that community happenings are being promoted and reported upon.

*Trades Directory*

A trades directory will be established on which local trades, in Victoria Park, can place their contact details . Experience on other Mirvac Fini projects has proved the trades directory to be an excellent community builder. Burswood Lakes residents will tend to contact services, whether they be a plumber, electrician, accountant or lawyer etc, from companies or individuals listed on the directory. This not only promotes local business but helps integrate the community.

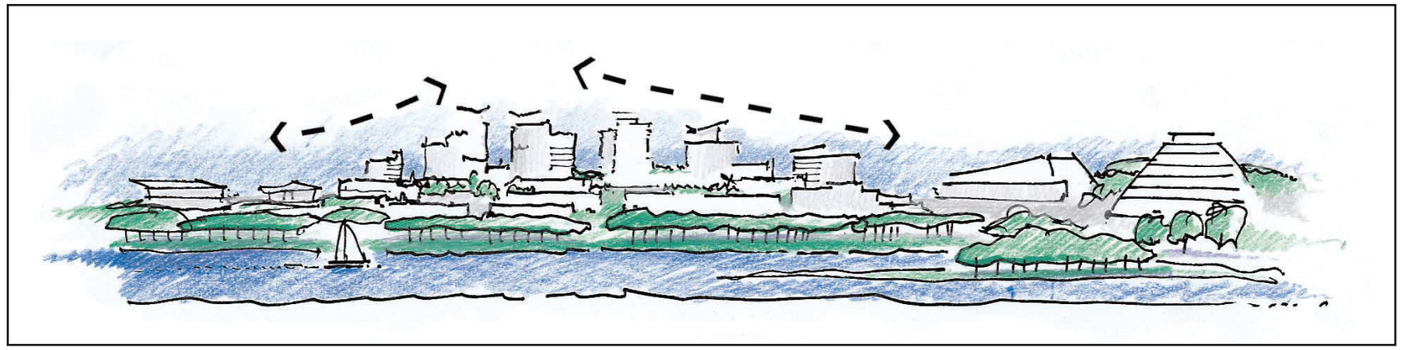


*Diagram R: The built form principle*

## B. Commercial Links

Shopping

Many commercial links exist between the Town of Victoria Park and the Burswood Lakes development. In particular, the town presents the closest shopping opportunities for new residents. Along the Albany Highway / Shepperton Road corridor alone there are a number of supermarkets. Residents are likely to do a large proportion of their grocery shopping in one of these stores.

The retail main street along Albany Highway offers residents a wide range of restaurants, cafes, video stores, hardware stores, clothing shops, and many other products. In addition, it offers a leisurely environment that caters to recreational shopping. Many locals stroll along the 'strip' on a lazy Sunday morning, enjoying the local ambience and flavour and perhaps taking in a latte along the way. It is likely that the new residents of Burswood Lakes will take advantage of this thriving retail area, injecting significant amounts of money into the local economy.

Jobs

As Burswood Lakes residents begin to patronise local businesses, shopkeepers will have to take on more staff to keep up with demand. This will cause local unemployment to drop in the town. In addition, over 300 jobs are expected to be created in the construction industry as a direct result of the project. The spin-off effects from the construction of the project are expected to create more than 600 additional jobs, helping to further boost the local economy.

## C. Physical Links

Diagram Q (p.73) indicates the many physical links between Burswood Lakes and the Town of Victoria Park. These links include the following.

Roads

Several major roads provide excellent connections between Burswood Lakes and the Town of Victoria Park. In a NE-SW direction, Canning Highway / Great Eastern Highway provides access from the site. In a NW-SE direction, Orrong Road, Shepparton Road, and Albany Highway provide the most direct routes south through the town.

Rail

The Burswood Train Station is only a few minutes walk from the Burswood Lakes site. This allows residents to walk to the station, board the train, and ride south to one of the four stops within Victoria Park. Each of the stops is only a few minutes walk from the commercial areas along Shepparton Road and Albany Highway. All Victoria Park residents taking the train into Perth CBD ride past the Burswood Lakes site, making it one of their last impressions before crossing the river. With the Swan River as the boundary, the buildings at Burswood Lakes become a psychological marker for the edge of Victoria Park.

Bus

The provision of integrated public transport for the Burswood Lakes site is highly desirable. Although Transperth has advised that there are no intentions at this stage to route buses within the development, the Burswood Link Road and the local neighbourhood connector(s) have been designed to accommodate buses in the future. Future bus stops have been provisionally indicated along the Burswood Link Road. Continued liaison by the proponent and the Town with Transperth is encouraged to secure future bus servicing for the Burswood Lakes development at an early stage of development.

Bicycle

Many bicycle routes connect Burswood Lakes with the Town of Victoria Park. In particular, routes along the Swan River form a

convenient way to move NE-SW, while routes along Orrong Road, the train line, and along Hubert Street allow convenient NW-SE movement. A complete network of routes allows bicycle riders to reach all the important destinations within the entire town.

Walking

A multitude of walking trails link the Burswood Lakes site with the rest of Victoria Park. Many of the local streets have pathways along them, offering safe and convenient pedestrian access from the site. Several pedestrian crossings allow Burswood Lakes residents to cross over the Great Eastern Highway, making walks south into the town convenient and safe.

## 3.3 Built Form and Response to Setting

### Objective:

*To create a place that fits with the urban fabric and setting*

### Response:

Burswood Lakes will become a significant urban node within the city and river landscapes. A dialogue will be established with the Perth CBD, South Perth and East Perth areas, creating a new landmark for the Town of Victoria Park on the skyline.

Built form will respond to the scale of the Burswood Resort and provide a counterpoint to the open setting of the golf course and river foreshore.

Burswood Lakes will be unique in that it is conceived and built as a single composition with an overall structure in form and character. Diagram R (p.74) reflects this built form concept for the site.

Diversity of built form within a controlled structure will provide a range of housing types, thereby encouraging a diverse community. Burswood Lakes will not be a series of individual developments vying for "front row seats" and views, nor a homogeneous mass of buildings with no variation in bulk and scale.

A wide range of buildings heights from 2 to 21 storeys offers an opportunity to create this overall structure at a scale appropriate to this important location.

The taller buildings will be arranged to create a serpentine central spine on the site, taking advantage of the views of the river and the CBD. In addition, these and other buildings will respond to the northern view. These taller buildings are spaced to limit wind effects and oriented to limit overshadowing.

To the east of the central spine, buildings will be arranged around

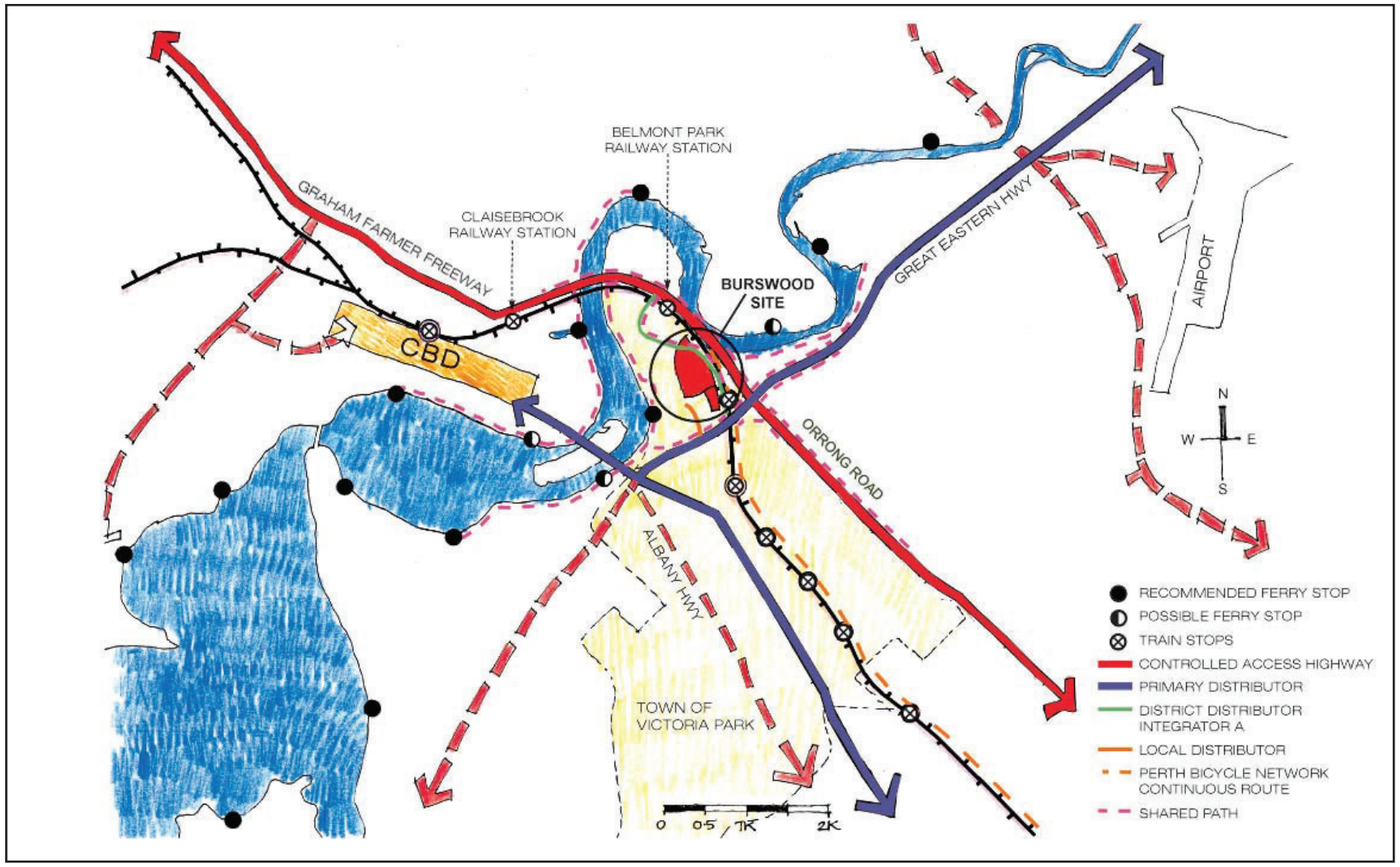



*Diagram S: Regional Access Plan*

a circular park creating a strong focal point to this area.

To the west of the spine, open space will give a foreground effect to the taller buildings, while medium- to low-rise buildings will step down to the golf course.
The taller buildings at Burswood Lakes enable a greater provision of public open space to be created which will contribute to the unique setting of the Peninsula, while the buildings themselves provide the landmark scale demanded by the setting.

**Requirement for Plot Ratio**

The West Australian Planning Commission (WAPC) requested that plot ratios be defined for each of the 26 lots.

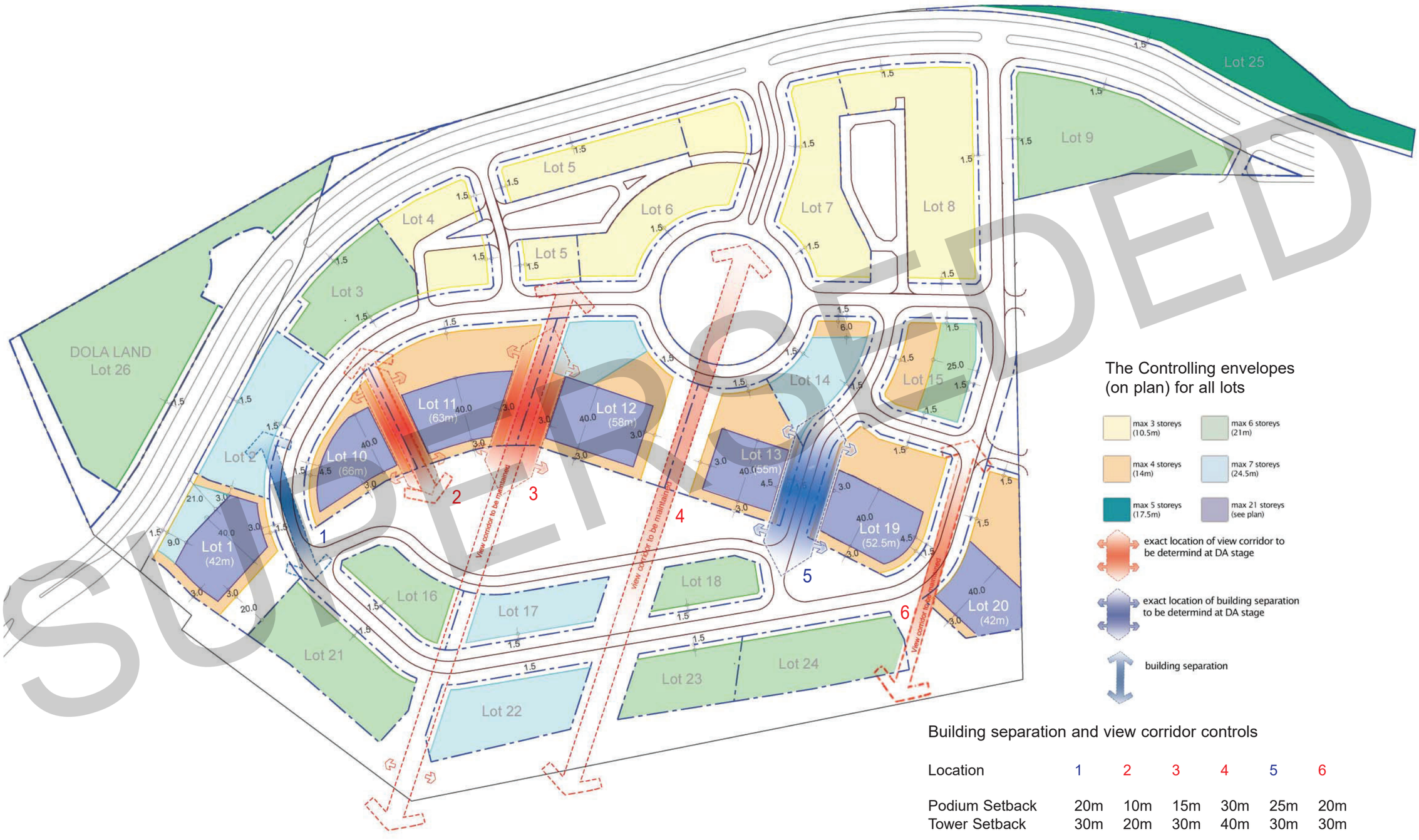
Plot ratio is defined by the Residential Design Codes of West Australia (Oct. '02) as:

*The ratio of the gross total of the areas of all floors of buildings on a site to the area of land within the site boundaries. For this purpose, such areas shall include the area of any walls but not include the areas of lift shafts, stairs or stair landings common to two or more dwellings, machinery, air conditioning and equipment rooms, non-habitable space that is wholly below natural ground level, areas used exclusively for the parking of wheeled vehicles at or below natural ground level, lobbies or amenities common to more than one dwelling, or balconies or verandahs open on at least two sides.*

**Calculation of Plot Ratio**

The indicative lot sizes, and the total dwelling numbers (1250) in Burswood Lakes and the DOLA/MRD land (lot 26) have been prescribed in this Structure Plan. By making assumptions about the size and mix of dwellings, a model has been constructed that calculates the required plot ratio for each building.

The assumed sizes of dwellings are based on an assessment of




Building separation and view corridor controls

| Location | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Podium Setback | 20m | 10m | 15m | 30m | 25m | 20m |
| Tower Setback | 30m | 20m | 30m | 40m | 30m | 30m |





**Figure 24**
Building Control Envelopes

local market demand. These approxmate sizes (nett) are: 1 bedroom apartment (65m$^2$), 2 bedroom apartment (100m$^2$), 3 bedroom apartment (130m$^2$), podium townhouse (180m$^2$), housing (220m$^2$).

To convert these dwelling sizes to an area that can be used in the calculation of plot ratio a percentage must be added to account for the inclusion of Party and External walls, as is required by the R code definition of Plot Ratio. The percentage has been calculated by typical floor plate analysis to be 8%.

In planning a typical floor plate it is not always possible or appropriate to make every apartment the size exactly as outlined above. For instance changes can result from either design constraints or market demand. To account for such changes in apartment sizes a percentage must be added to overall area. This percentage has been calculated at 15%.

Over the course of many residential developments across Australia the Mirvac Group has endeavoured to provide a range of product that corresponds to the needs of its customers. This range is most easily expressed as a proportion of 2 bedroom to 3 bedroom apartments (by far the most common sizes) and is commonly referred to as "The Mix". Most "Mixes" range from around 60:40 to 40:60. For the Plot Ratio calculation at Burswood Lakes a middle ground of a 50:50 "Mix" has been assumed.

When combining the aforementioned parameters the plot ratio on each lot can be calculated. Refer to the Plot Ratio matrix on Page 83 for a breakdown of these calculations.

As a tool for influencing built form, plot ratio is imprecise. Within a particular plot ratio (in the absence of other controls), owners can build a tall thin building or a short squat building. Limiting the total floor area does not necessarily ensure view sharing opportunities, provide human-scale at the street, limit overshadowing of adjacent properties or public spaces, mitigate high wind areas, or ensure appropriate form. Therefore, in addition to plot ratio, this Structure Plan contains building control envelopes as outlined below.

**Building Control Envelopes**

Building control envelopes provide a degree of certainty over the built outcome. This is achieved by providing general control over the built form, mass and location for every lot within the Structure Plan. These controls are in accordance with and in addition to those referred to elsewhere in this document ie plot ratio, maximum height.

Building control envelopes divide the site into areas based on the allowed heights in the Structure Plan. These height limits range from 3 to 21 storeys and they can be grouped into 6 categories: max 3 storeys, max 4 storeys, max 5 storeys, max 6 storeys, max 7 storeys, and taller buildings max 21 storeys, defined in plan by different colours.
A general 1.5m setback also applies to all buildings from roadways and a series of setbacks define the distances between the taller buildings and their podiums. These setbacks ensure the provision of "View Corridors" between the taller buildings, whilst a minimum 3m setback between podium and tower elements ensure “human scale” at street level.

The concept of taller buildings along the eastern edge of the Lake Park has been a key aspect of the urban design concept. To complete the definition of the building control envelopes for the taller buildings, a maximum east-west dimension of 40m has been established, which allows some flexibility in tower location whilst confining them to the western edge of their lots.

These standards combine to form a method of planning control that is much more detailed, and more effective, than plot ratio alone. Because Burswood Lakes is being developed as an integrated site, planning issues have been holistically addressed in the Structure Plan.

The three-dimensional images on pages 78 to 82 depict the building control envelopes for the site, individually and together. Inside the building control envelopes are grey boxes that represent the massing allowed under the proposed plot ratios. These building masses take into account the plot ratio plus an 11% factor to account for common lobbies, building core and vertical circulation (which is not counted in the plot ratio calculation). The mass shown accounts for all percentage increases described above. Balconies are not shown. In no case could a building be built to the maximum extents of the control envelope, as the plot ratio is always considerably less than the total volume contained within the control envelope.

**Airport Height Controls**

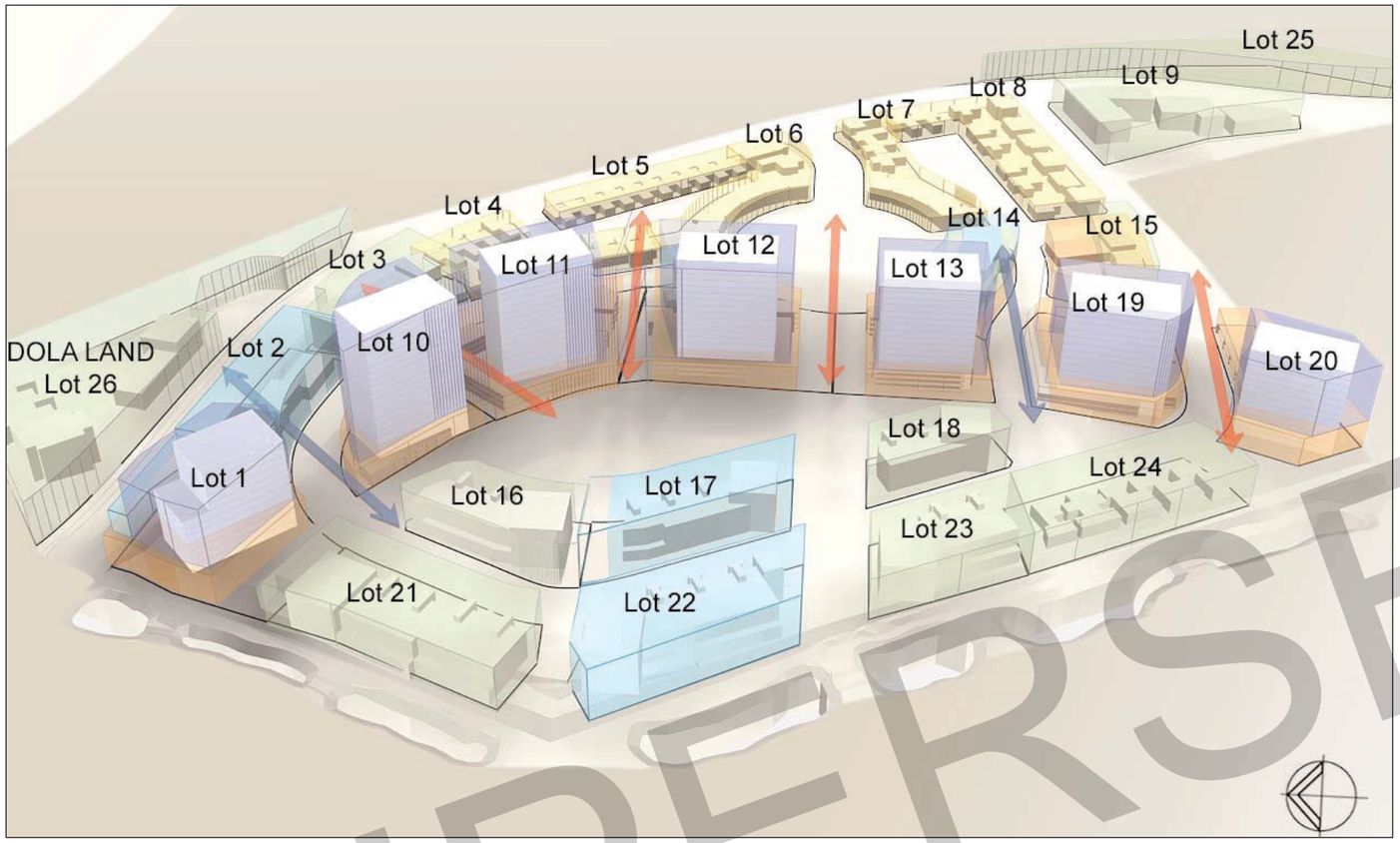
Discussions with the Westralia Airports Corporation (WAC) at Perth Airport during the public advertising period revealed a further constraint on the configuration of the proposed taller buildings at Burswood Lakes. A set of surfaces, defined relative to sea level, control the allowed building height throughout the entire Perth region. These controls are called 'Procedures for Air Navigational Services - Aircraft Operations Surfaces' (PANS-OPS).

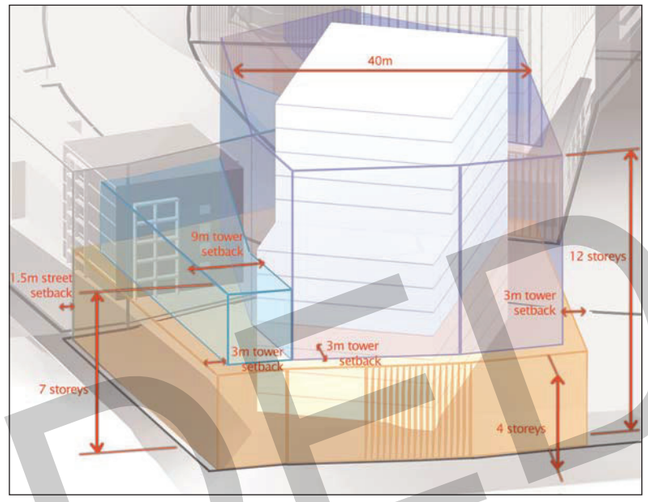
To establish a series of maximum height limits for the taller buildings that comply with the PANS-OPS controls, the following assumptions and calculations apply for lots 1, 19, and 20. The total number of storeys multiplied by an average floor to floor height of at least 3.0m plus an additional 6.15m (calculated as 1.5m maximum height of ground floor slab above design level (Fig 16 p.57), an additional 1.4m for transfer slabs plus transfer zones plus 3.25m for plant and lift overruns). For lots 10, 11, 12, and 13 the total number of storeys multiplied by an average floor to floor height of at least 2.850m plus an additional 6.15m (calculated as 1.5m maximum height of ground floor slab above design level (Fig 16 p.57), an additional 1.4m for transfer slabs plus transfer zones plus 3.25m for plant and lift overruns).

**Social Planning Analysis**

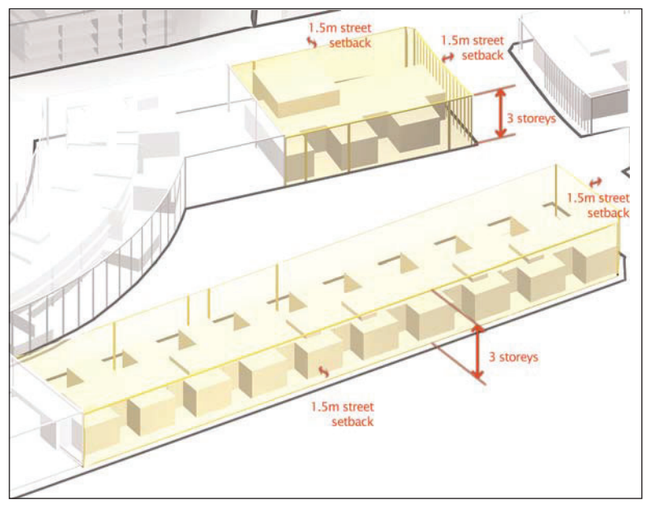
Social planner Dr. Wendy Sarkissian undertook a CPTED Analysis (Crime Prevention Through Environmental Design) of the Burswood Lakes building control envelopes. Her conclusion was that "the building envelopes for the Burswood Lakes site has revealed that the work to this stage has been done to a high level of professionalism and the building envelopes do not, in themselves, pose safety or security risks." A full copy of the report is enclosed in the Appendices document.

In the next stage of development, precise site-planning and design parameters will be created to address more detailed design issues such as targeted lighting, design of intersections and corners of buildings, selection of landscaping materials, etc. These detailed CPTED guidelines will be complemented by guidelines for housing design, public open space, accessibility for people with a disability and older people, children's play and use of the site by young people.

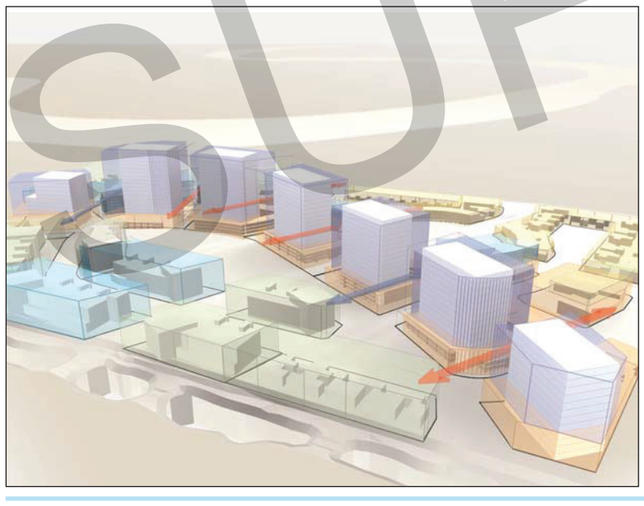


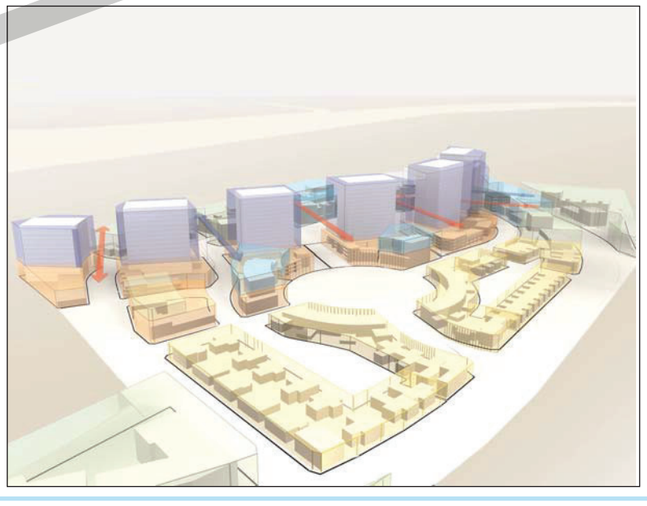




LOT 1




LOT 5









MIRVAC fini

Burswood

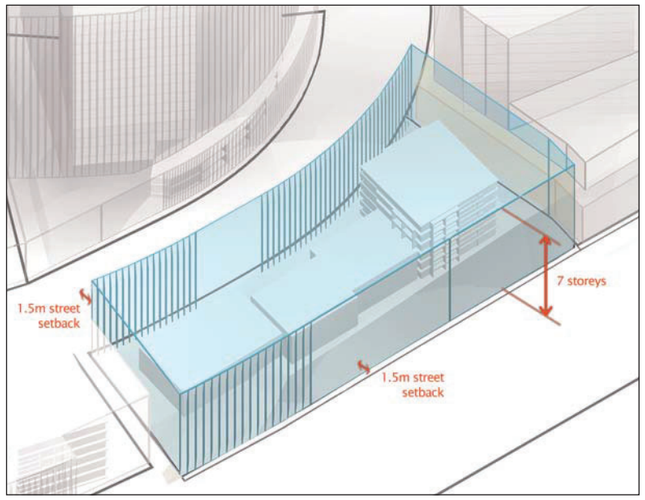
**Figure 25**
Building Control Envelopes

max 3 storeys | max 5 storeys | max 7 storeys
max 4 storeys | max 6 storeys | max 21 storeys

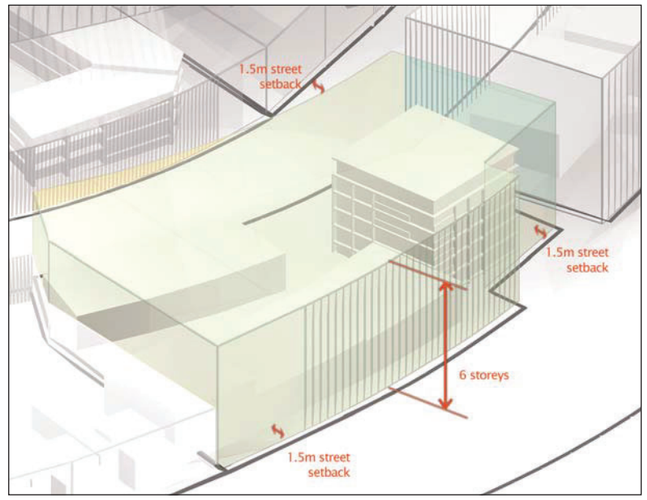
hpa architects planners interior designers

Burswood Lakes Structure Plan

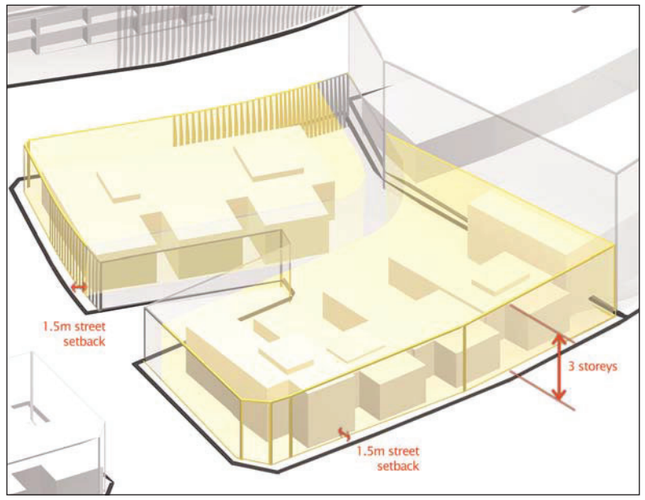
Burswood Lakes



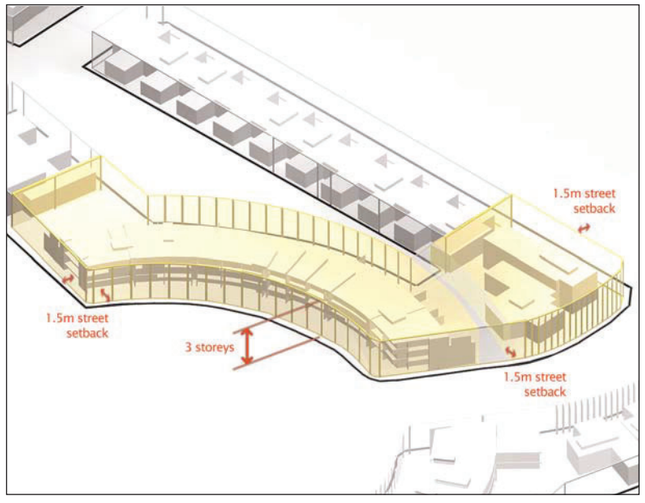

LOT 2




LOT 3




LOT 4

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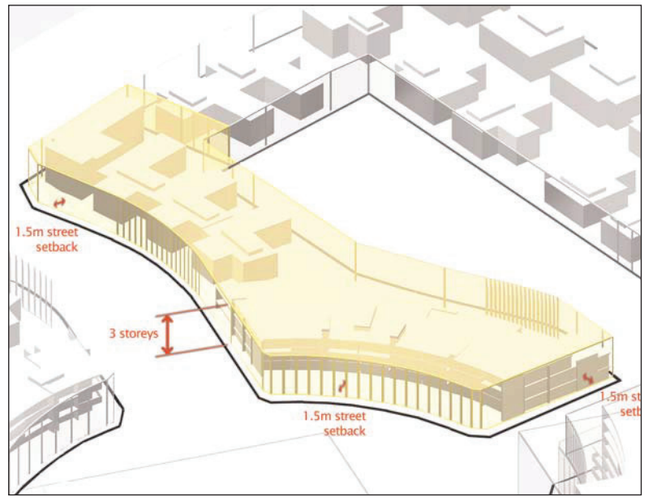
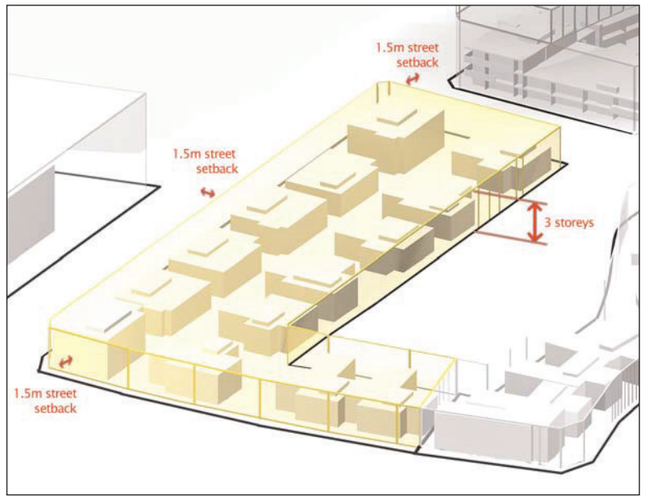


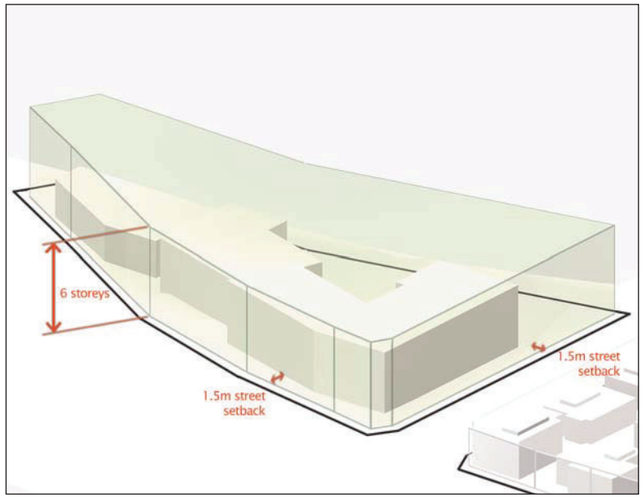

LOT 7



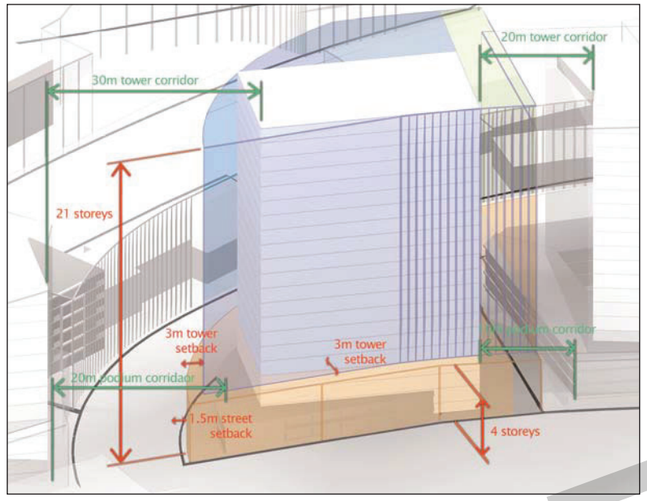

LOT 8

**Figure 26**
Building Control Envelopes

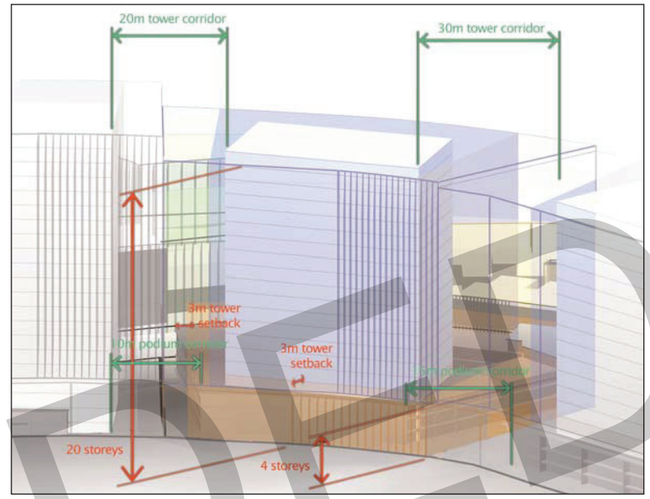
max 3 storeys | max 4 storeys | max 5 storeys | max 6 storeys | max 7 storeys | max 21 storeys



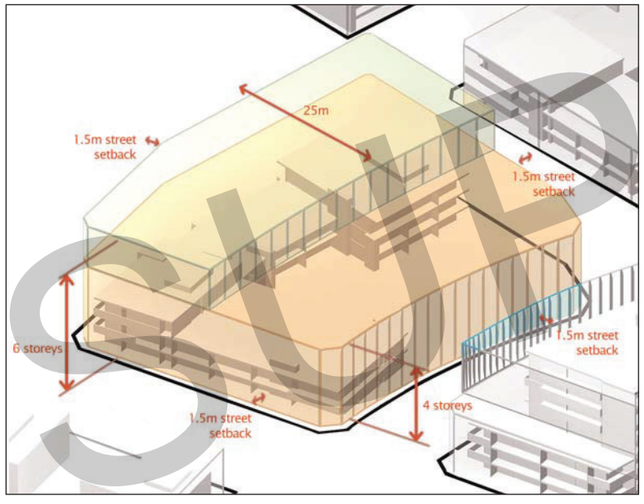

LOT 9




LOT 10




LOT 11

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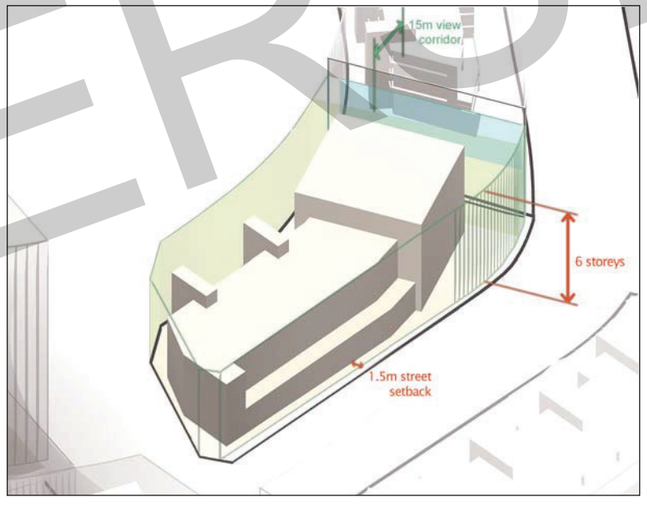


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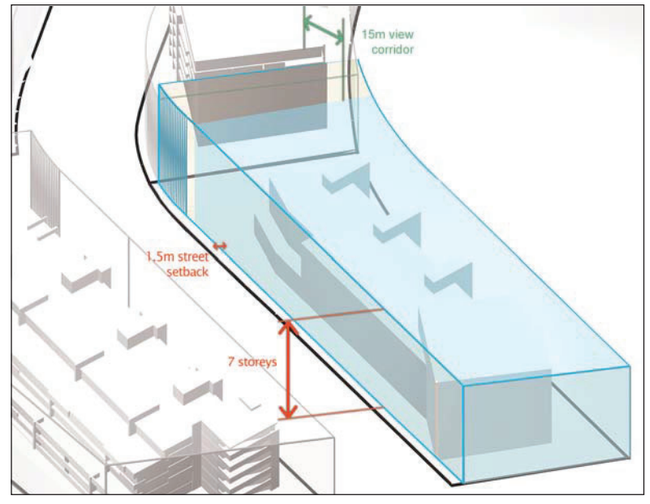


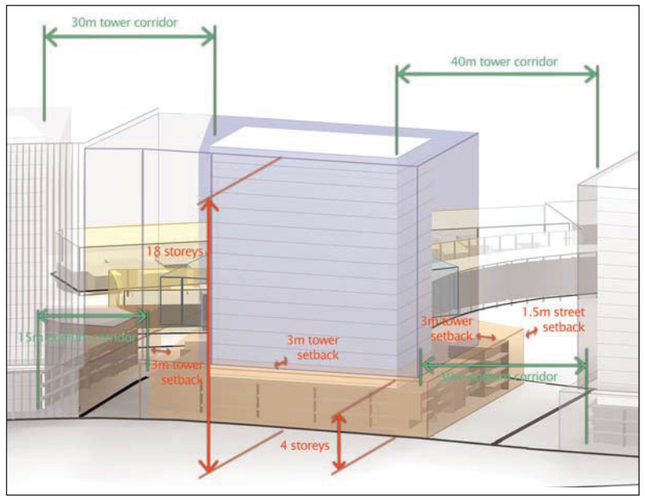

LOT 17





**Figure 27**
Building Control Envelopes

max 3 storeys | max 4 storeys | max 5 storeys | max 6 storeys | max 7 storeys | max 21 storeys

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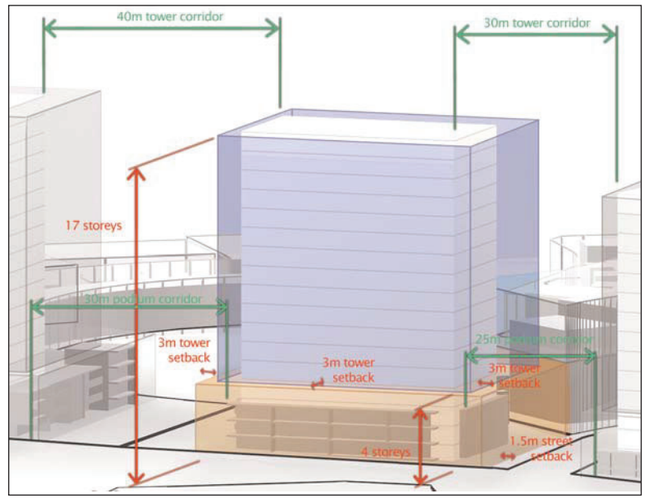


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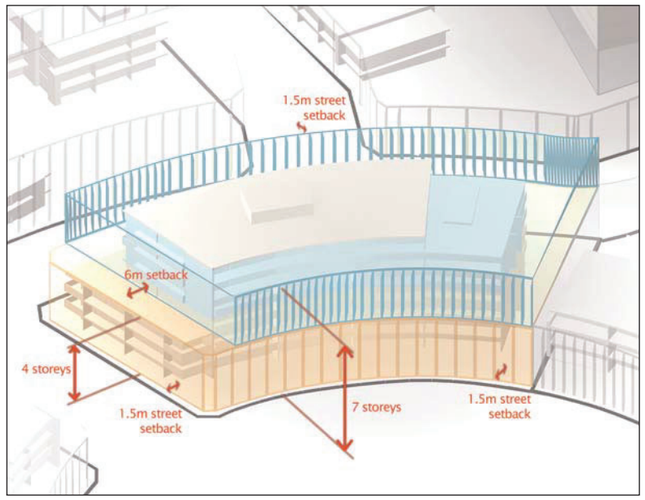


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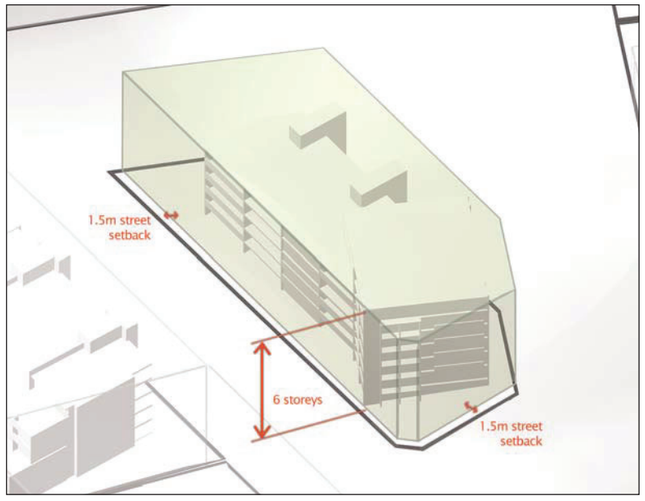


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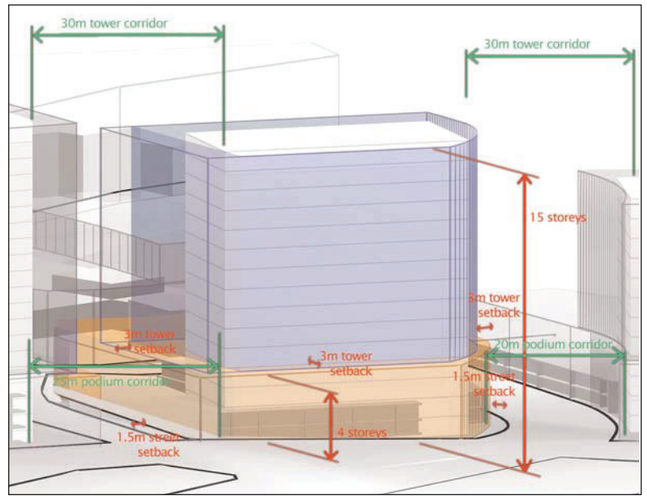


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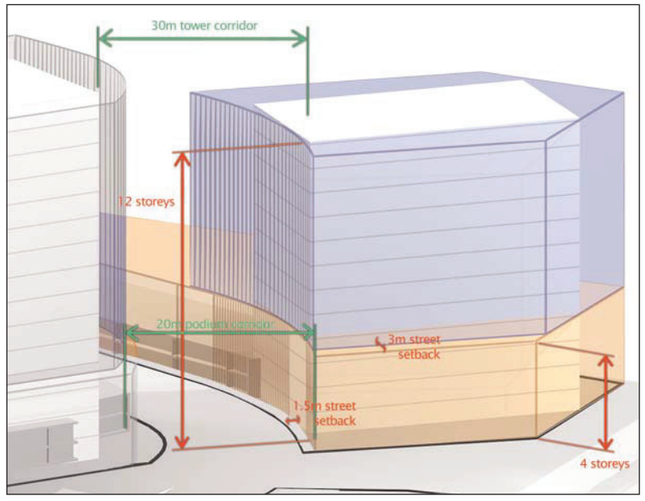
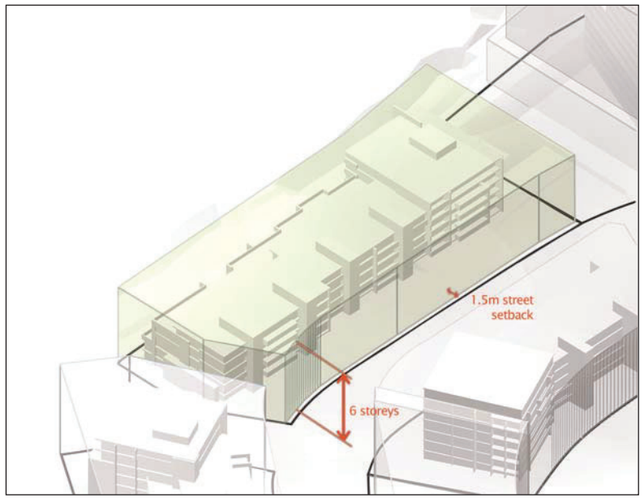



LOT 20

**Figure 28**
Building Control Envelopes

max 3 storeys | max 4 storeys | max 5 storeys | max 6 storeys | max 7 storeys | max 21 storeys

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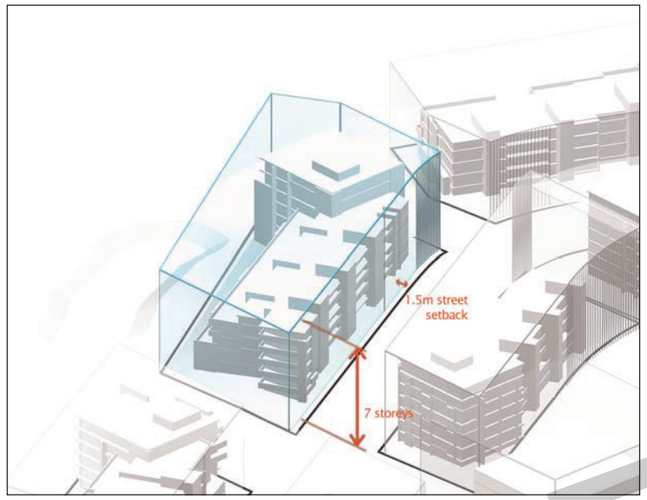


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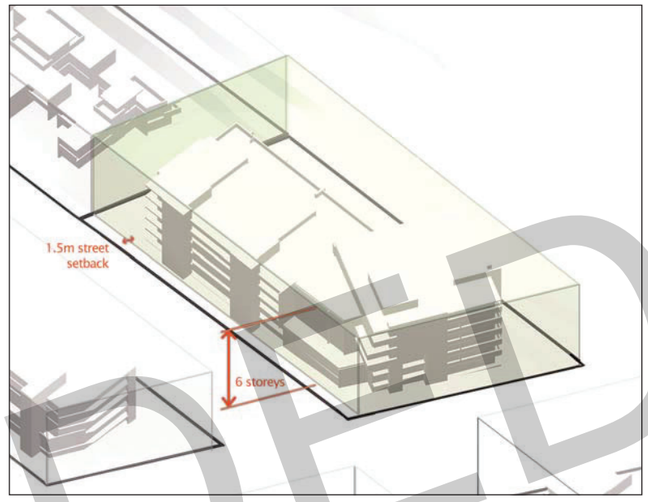


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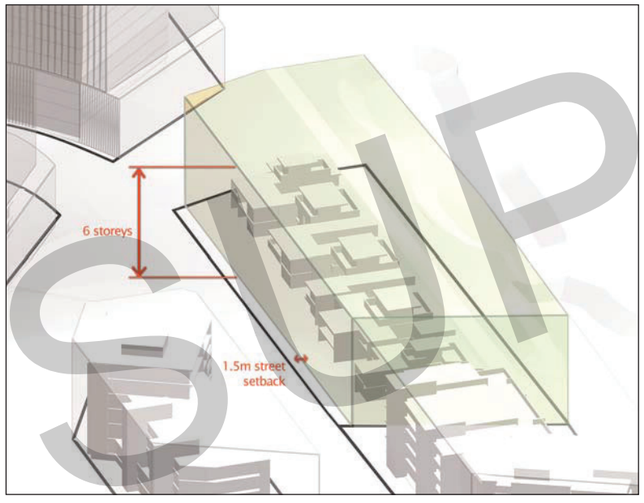


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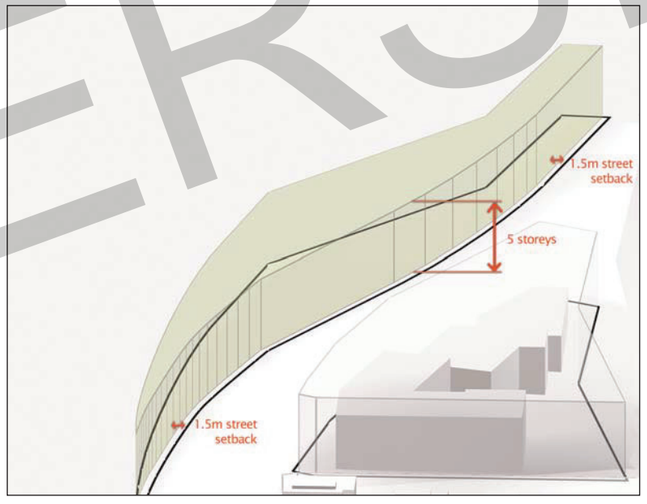
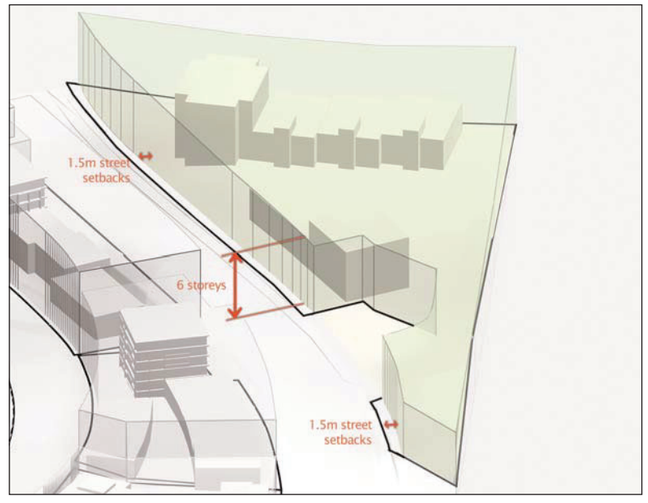



LOT 25




DOLA / MRD LAND (LOT 26)





**Figure 29**
Building Control Envelopes

max 3 storeys
max 4 storeys
max 5 storeys
max 6 storeys
max 7 storeys
max 21 storeys

## BURSWOOD LAKES PLOT RATIO CALCULATIONS

ASSUMPTIONS :

2 BED APARTMENT : 100sqm
3 BED APARTMENT : 130sqm
TOWNHOUSES : 180sqm
HOUSING : 220sqm
50% 2 Bed & 50% 3 Bed in Towers

* - notional residential portion of lot 25 (1500m²)
** - plot ratio on whole of lot 25 is 0.27 on 4976m²
*** - dwelling mix per lot is indicative only

| | | | | | | | | MATHEMATICAL MODELLING | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 50:50+15% | | | | |
| LOT NUMBER | LOT AREAS | TOTAL DWELLINGS | 2 & 3 BED APARTMENTS *** | TOWN HOUSES *** | HOUSING *** | NETT AREA | PLOT RATIO AREA | PLOT RATIO AREA + 15% | PLOT RATIO | AVERAGE SITE AREA PER DWELLING | MINIMUM SITE AREA PER DWELLING |
| 1 | 4,700 | 74 | 63 | 11 | 0 | 9,225 | 9,963 | 11,457 | 2.44 | 60 | 60 |
| 2 | 3,294 | 30 | 20 | 10 | 0 | 4,100 | 4,428 | 5,092 | 1.55 | 105 | 105 |
| 3 | 3,266 | 31 | 18 | 13 | 0 | 4,410 | 4,763 | 5,477 | 1.68 | 105 | 105 |
| 4 | 2,964 | 13 | 0 | 0 | 13 | 2,860 | 3,089 | 3,552 | 1.20 | 225 | 110 |
| 5 | 3,548 | 16 | 0 | 0 | 16 | 3,520 | 3,802 | 4,372 | 1.23 | 220 | 110 |
| 6 | 4,365 | 14 | 0 | 0 | 14 | 3,080 | 3,326 | 3,825 | 0.88 | 310 | 110 |
| 7 | 4,044 | 13 | 0 | 0 | 13 | 2,860 | 3,089 | 3,552 | 0.88 | 310 | 110 |
| 8 | 6,290 | 23 | 0 | 0 | 23 | 5,060 | 5,465 | 6,285 | 1.00 | 270 | 110 |
| 9 | 6,296 | 60 | 60 | 0 | 0 | 6,900 | 7,452 | 8,570 | 1.36 | 100 | 100 |
| 10 | 3,014 | 106 | 94 | 12 | 0 | 12,970 | 14,008 | 16,109 | 5.34 | 25 | 25 |
| 11 | 6,268 | 140 | 107 | 33 | 0 | 18,245 | 19,705 | 22,660 | 3.62 | 40 | 40 |
| 12 | 6,891 | 119 | 86 | 33 | 0 | 15,830 | 17,096 | 19,661 | 2.85 | 55 | 55 |
| 13 | 4,553 | 85 | 65 | 20 | 0 | 11,075 | 11,961 | 13,755 | 3.02 | 50 | 50 |
| 14 | 2,432 | 45 | 45 | 0 | 0 | 5,175 | 5,589 | 6,427 | 2.64 | 50 | 50 |
| 15 | 2,818 | 28 | 18 | 10 | 0 | 3,870 | 4,180 | 4,807 | 1.71 | 100 | 100 |
| 16 | 2,174 | 32 | 29 | 3 | 0 | 3,875 | 4,185 | 4,813 | 2.21 | 65 | 65 |
| 17 | 2,401 | 42 | 38 | 4 | 0 | 5,090 | 5,497 | 6,322 | 2.63 | 55 | 55 |
| 18 | 1,596 | 32 | 30 | 2 | 0 | 3,810 | 4,115 | 4,732 | 2.96 | 45 | 45 |
| 19 | 4,958 | 80 | 48 | 32 | 0 | 11,280 | 12,182 | 14,010 | 2.83 | 60 | 60 |
| 20 | 3,388 | 61 | 49 | 12 | 0 | 7,795 | 8,419 | 9,681 | 2.86 | 55 | 55 |
| 21 | 3,922 | 47 | 42 | 5 | 0 | 5,730 | 6,188 | 7,117 | 1.81 | 80 | 80 |
| 22 | 3,389 | 42 | 38 | 4 | 0 | 5,090 | 5,497 | 6,322 | 1.87 | 80 | 80 |
| 23 | 2,314 | 31 | 28 | 3 | 0 | 3,760 | 4,061 | 4,670 | 2.02 | 70 | 70 |
| 24 | 3,475 | 31 | 0 | 0 | 31 | 6,820 | 7,366 | 8,470 | 2.44 | 110 | 110 |
| 25 | 1,500* | 5 | 0 | 0 | 5 | 1,100 | 1,188 | 1,366 | 0.91** | 300 | 110 |
| 26(DOLA / MRD) | 10,412 | 50 | 50 | 0 | 0 | 5,750 | 6,210 | 7,142 | 0.69 | 205 | 110 |

TOTAL DWELLINGS: 1250

AVERAGE PLOT RATIO (NET): **2.02**

TOTAL SITE AREA: (INCL DOLA / MRD LAND) 183,136

TOTAL SITE PLOT RATIO (GROSS AREA INCLUDING ROADS AND P.O.S) **1.15**



**Figure 30**
Burswood Lakes Plot Ratio Calculations

## 3.4 Connectivity and Transport Orientated Design

**Objective:**
*To create a well-connected place*

**Response:**
Burswood Lakes has excellent regional and local access. The site is well-connected to the regional road and shared-path network.

Destinations that are linked through the road and shared-path network include:

- Town of Victoria Park
- Perth CBD
- Burswood Train Station
- Burswood Peninsula Foreshore
- Burswood Resort, Casino and Theatre
- Burswood Park Golf Course
- State Tennis Centre
- Restaurants and other eating facilities at Burswood Resort
- Belmont Racecourse
- Burswood Water Sports Centre
- East Perth
- South Perth

Pedestrian, cycle and vehicular traffic will be integrated in a safe manner. Foot and shared-use paths will connect the streets and public open spaces on and around the site.

The community development program will offer recreational cycling and walking, taking advantage of access to the foreshore and wider region.

The majority of dwellings and the public open space at Burswood Lakes will be located within 800 metres (walking distance) of Burswood Train Station. Access through the site has been designed to ensure maximum connectivity to the station and allow future bus service. The location of the train station provides access to the greatest number of residents. The current location allows the station to develop as a destination station in conjunction with future development on the Superdome site and the Burswood Resort, while maintaining access, privacy and safety for residents at Burswood Lakes. Proximity to the Burswood Train Station offers an opportunity for reduced car usage.

*Diagram T: Artistic impression of the Burswood Lakes Indicative Development Plan*

## 3.5 Importance of Public Places: the Public Realm

**Objective:**
*To create an accessible and useable public realm*

**Response:**
Burswood Lakes has been planned with an integrated and equitable approach to the public realm. A generous amount of public open space (11.7% of the site) has been provided. An additional 3% of the site will be landscaped and publicly accessible areas on private lots. Public open space and streets are viewed as interlinked public places that allow a pedestrian journey through an area that has not previously been accessible. The streets and open spaces will complement the open landscape of the Swan River foreshore. They will be intimate and protected, attractive, lively and safe.


*The pedestrian realm can be activated by al fresco cafes and restaurants.*

The streets will be well-landscaped and slowed with traffic calming devices. Buildings will form edges to the public realm, adding human scale and "eyes on the street."

A balance of active and passive open spaces will ensure a range of quality experiences for residents and visitors alike. Active uses may include 'kick-about areas', a café, children's playgrounds, picnic areas and possibly boules / petanque lawns. Some spaces in both the public and private realm are viewing areas, where one can stop, take a breath and enjoy the vista. These areas have been designed with their individual micro-climates in mind.

Care has been taken in the relative placement of open space and taller buildings, with open space located to give immediate access to the greatest number of residents.

## 3.6 Sustainability

Burswood Lakes is planned on design principles that encompass environmental, social, cultural and economic aspects of a desirable outcome.

### Objective

*To create a climactically responsive place*

### Response:

Buildings will be designed to promote a healthy living environment and to respect appropriate environmental principles relating to orientation, construction materials and techniques. Examples of how this could be achieved in practice include providing:

- generously sized balconies for apartments
- water-limiting appliances
- cross-ventilation of units, where possible
- north-facing glazing, where possible

Landscaping will be designed to ameliorate wind impact and limit water usage. Water features in the landscape will provide micro-climate benefits.

Taller buildings will be positioned to limit overshadowing of public and private space. Lower elements around taller buildings will be designed to ameliorate wind effects. The combined effects of wind and shadow will be assessed in the design of open space and active uses at ground level.

### Objective:

To encourage a diverse residential community that will contribute to the social and cultural life of the Town of Victoria Park

### Response:

Burswood Lakes will become a vibrant place with pedestrian-friendly streets and large areas of public open space that are accessible to all residents and to the wider community. The design of open space will encourage both active and passive recreation.

A range of dwelling size, type and built form will attract a diverse population, bringing life to this former industrial site. Future residents of Burswood Lakes are likely to include singles, working couples without children, families, empty-nesters, and retirees. While households may vary in family-size and age, they will share an affinity for urban living that offers them easy access to all the amenities of central Perth.

A community development program will address issues such as integrating with the existing Town of Victoria Park community, increasing recreation opportunities, and promoting safety at Burswood Lakes. The Town of Victoria Park will provide easy access to shopping and recreation for Burswood Lakes residents.

### Objective:

To make best use of a valuable urban land resource and contribute to local economic growth

### Response:

Burswood Lakes is a valuable inner-urban land resource. The proposed development takes advantage of this resource by providing a significant residential population in an area well-served by existing infrastructure, and commercial, tourist and community facilities.
Burswood Lakes has been planned as a staged commercially-viable development, which will allow the community to grow in a progressive manner. It is anticipated that the project will provide approximately 327 construction jobs per annum over the life of the development.
The residential population will also contribute to the economic growth of the Town of Victoria Park through employment and support of businesses and services.

# 4.0 Public Realm and Subdivision Standards

This section forms part of the requirements for the Structure Plan (TPS Precinct Plan Requirements b, c, d, e, f and h) and contains principles and guidelines related to the various elements that constitute the public realm.

These are:
- Road network (b)
- Cycle and pedestrian network (b)
- Infrastructure and amenities (e)
- Street design (f)
- Public open space and landscape (f)
- Recognition of the Burswood Canal (h)
- Environmental conditions
- Commitments by the proponent

In addition, standards that relate to subdivision are included:
- Permitted uses (c)
- Dwelling numbers (c)
- Lot patterns and sizes (d)

These standards should be read in conjunction with the Structure Plan (Figure 19, p.68) and the Infrastructure Amenities Plan (Figure 20, p.69).

## 4.1 Road Network (B)

### Principles

The road network should:
- Provide safe and efficient access to all users
- Connect to the surrounding road network
- Provide residential amenity

### Guidelines

The proposed road network is shown on the Infrastructure and Amenities Plan (Figure 20, p.69).
- Roads should be designed for a specific purpose, character, and level of use, and should minimise negative impacts on development.

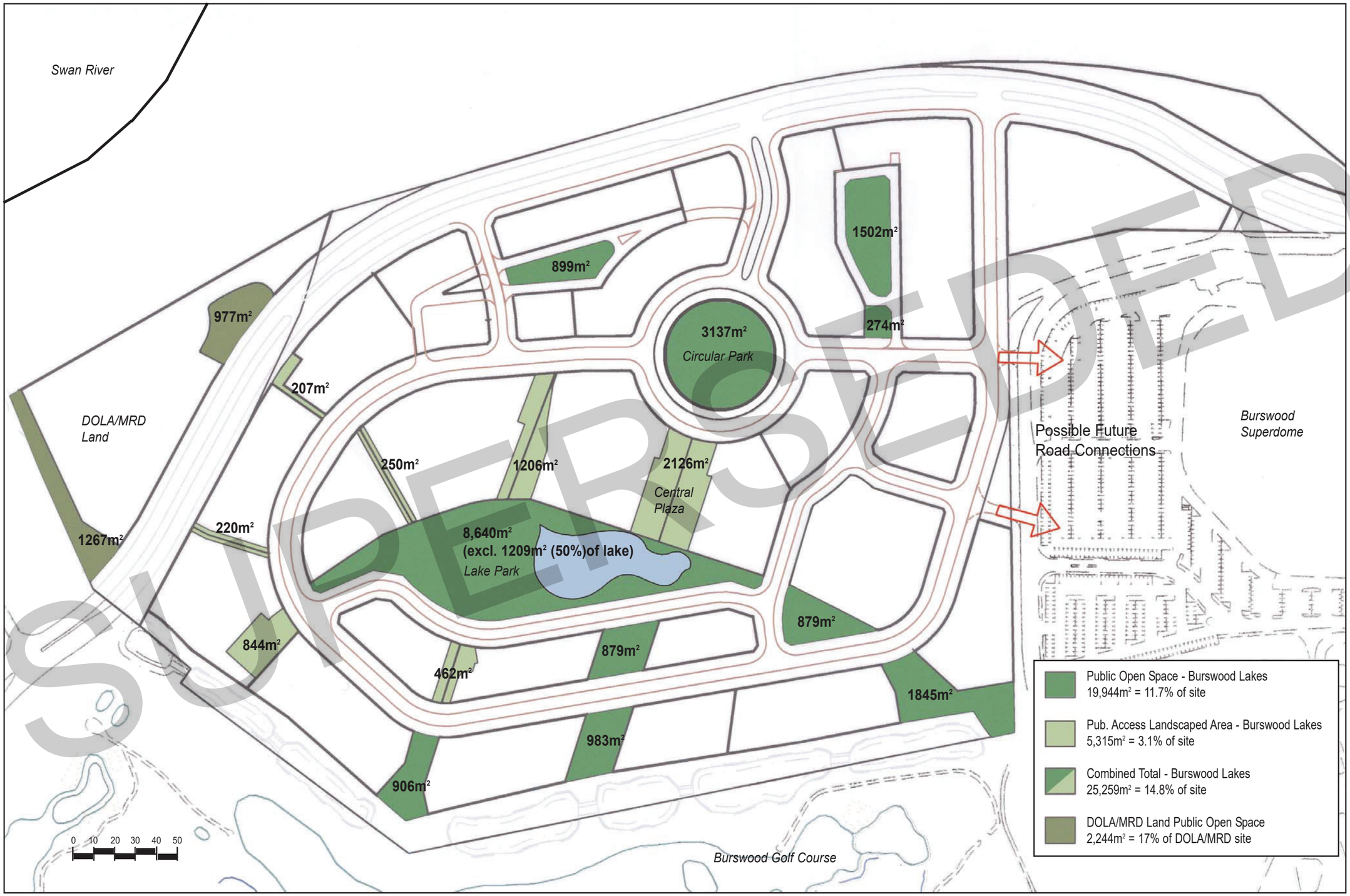







**Figure 31**
Indicative Public Realm

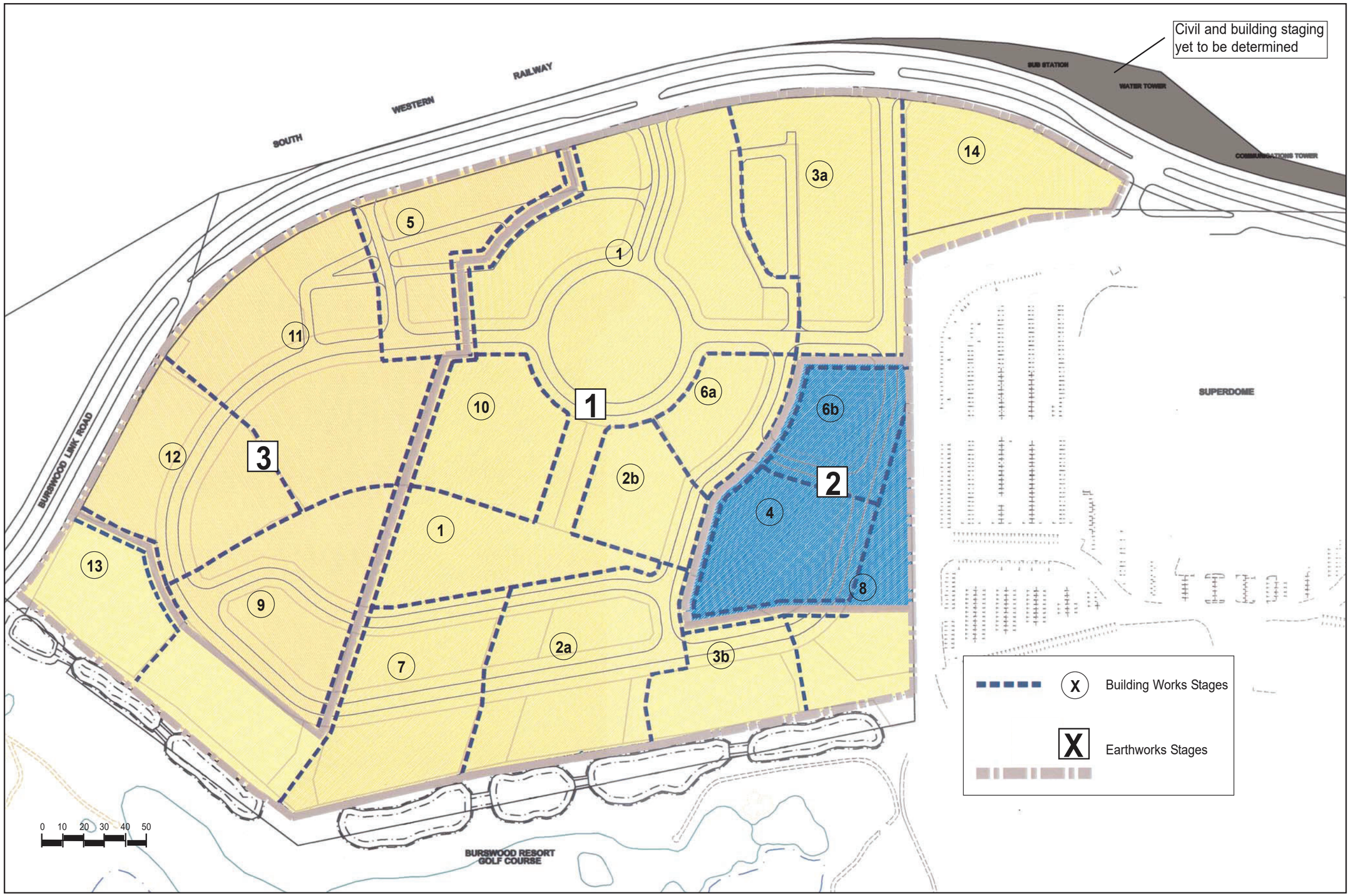



**Figure 32**
Indicative Development Staging Plan

- Planning to ensure that future bus service can be provided along Burswood Link Road and the local neighbourhood connector(s) with good pedestrian links within the development.
- A workable road network should be provided at all stages of development.
- The road network should be permeable, easy-to-understand and clearly sign-posted.
- The road network should discourage through-traffic with traffic calming devices and streetscape character, while still remaining permeable.

## 4.2 Cycle and Pedestrian Network (B)

### Principles

The cycle and pedestrian network should:

- Encourage walking and cycling in and through Burswood Lakes by providing a permeable and accessible foot and shared-path network.
- Connect to the regional shared-path network including the Swan River foreshore and to the Great Eastern Highway.
- Provide cycle and pedestrian links to Burswood Train Station.
- Provide linkages between open spaces around the site.

### Guidelines

The proposed shared-path and pedestrian network is shown on the Proposed Routes for Cyclists and Pedestrian, and Indicative Bus Routes diagram (Figure 22, p.71).

- Most residences should be within 800 metres (or a 10-minute walk) from Burswood Train Station.
- At all stages of development, where possible residents should be provided with adequate cycle and pedestrian access.
- Paths should be a variety of widths, establishing a hierarchy, ranging from wide shared-paths to narrow, informal pathways.
- Some paths should form direct pedestrian / cycle links with external amenities - particularly the Burswood Train Station - while others should meander through a variety of open spaces.
- Widths and gradients of shared-paths and footpaths should be in accordance with Town of Victoria Park requirements, universal access codes and Bikewest guidelines.

## 4.3 Permitted Uses (C)

### Principles

Development should:

- Ensure the best use of this valuable inner urban land resource through the creation of a significant urban neighbourhood with well integrated and compatible land uses providing a high level amenity and service to its community.
- Provide predominantly residential uses with compatible mixed use development.
- Provide essential services and local convenience shopping for residents, at each stage of development with a commitment by the proponent to provide a ‘corner shop’ of a minimum 300m$^2$ nla at a time no later that the completion of 300 dwellings in the initial stage of the development.

### TPS Controls

- Permitted uses "P" within the Special Use Zone include:
  - Single house
  - Group dwelling
  - Aged or dependent persons dwelling
  - Multiple dwelling
  - Home office
- Discretionary uses "AA" within the Special Use Zone include:
  - Shop (excluding the sale of petrol)
  - Office
  - Restaurant
  - Consulting room, Day care centre
  - Fast food outlet, Restaurant
  - Serviced apartment
  - Home occupation
- Indicative locations of proposed mixed uses (discretionary uses) are depicted on the Structure Plan and prospective purchasers should be notified of these proposed mixed use locations at the subdivision and /or development stage.
- The maximum net lettable area of retail floor space for 'shop' within the Special Use Zone shall not exceed 2,000m$^2$.

### Design Guidelines

- A range of dwelling types and sizes should be developed to provide for a diverse population.
- Proposed home occupation and home office uses should consider and provide for public access and car parking appropriate to the type of use. It should also take into account for and preserve the residential amenity of the locality.
- Appropriate mixed-uses should incorporate local convenience retail, service and local employment opportunities.
- Where mixed-uses are incorporated into residential buildings, care should be taken to preserve residential amenity and character.
- Mixed-uses should be located to give good public access (both pedestrian and vehicle) and should front directly onto public open space or onto active street frontages with passing pedestrian and /or vehicular traffic.
- Micro-climate (wind and solar) should be considered in the location and design of mixed-use facilities.
- Mixed-uses should be located on major pedestrian routes to increase access, safety and activity.
- Car parking, service areas, plant and equipment for mixed-uses should be provided in a manner appropriate to the residential setting.
- The mixed uses will be encouraged to locate at those locations shown on the SP.

## 4.4 Dwelling Numbers (C)

### Principles

Development should:

- Create a higher-density residential urban neighbourhood
- Locate the maximum number of dwellings close to public open space and amenity
- Balance the number of dwellings with housing choice, ensuring the provision of a wide range of spacious, flexible dwellings to accommodate many different kinds of households.

### TPS Controls

- The total maximum dwelling numbers permitted in the Special Use Zone shall not exceed 1,250.
- The maximum dwelling numbers for each lot shall be in accordance with the Structure Plan (Figure 19, p.68).

## 4.5 Lot Patterns and Sizes (D)

### Principles

Development should:

- Create lots guided by Liveable Neighbourhoods principles
- Create lots to enable climactically responsive dwellings
- Orientate lots with the aim of creating active, safe streets and public places

### Design Guidelines

- Lots should generally be in accordance with the indicative subdivision depicted on the Indicative Subdivision Plan (Figure 23, p.72).
- Lot orientation should take advantage of views and vistas throughout the development.
- Lot orientation should, where possible, enable solar access to principal living areas.
- Lots should enable all single dwellings and common entrances to apartment buildings to have a direct street address.
- Lot ground levels should be set to limit retaining walls and provide for a consistent streetscape (per Town of Victoria Park Design Guidelines).
- Lots fronting Burswood Link Road must have rear access for vehicles.
- Lots should enable dwellings to front public open space.

*Award-winning Newington Apartments (Sydney), designed by HPA Architects*

## 4.6 Infrastructure and Amenities (E)

### Principles

Development should:

- Ensure efficient provision of public utilities at all stages of development
- Integrate infrastructure elements into the urban design of public spaces, limiting their visual and spatial impact
- Provide adequate servicing and amenity for public spaces

### Design Guidelines

Major infrastructure should generally be provided as indicated on the Infrastructure and Amenities Plan (Figure 20, p.69).

## 4.7 Street Design (F)

### Principles

Street Design should:

- Consider streets as an integral part of the public realm
- Promote safety on streets through lighting, landscape, on-street parking and active urban form
- Promote pedestrian and cycle priority
- Provide access for emergency and service vehicles
- Develop a common streetscape theme with neighbourhood character differences expressed through changes in plant species, materials and detail

### Design Guidelines

- Road reserves, pavement widths, footpath widths, shared-paths, on-street parking and rights-of-way should generally be in accordance with the Infrastructure and Amenities Plan (Figure 20, p.69).
- Streetscape treatment should accentuate landmark locations and street intersections.
- Street landscape should reinforce desired traffic speed and behaviour.
- Street widths, detailing, and surface materials should correspond with their location in the road hierarchy, projected traffic volumes, and proximity to pedestrian-priority zones.
- Kerb radii should be kept to a minimum to slow traffic.
- On-street parking should be maximised to provide visitor amenity and traffic calming.
- Crossovers should be limited to maximise kerb-side parking and street tree planting.
- Street trees should be planted at regular intervals. Species should be selected to provide shade, seasonal interest, street character and aid orientation around the site.
- Landscape should not limit sight lines for pedestrians, cyclists and vehicle drivers.
- Changes in surface material should be used to define pedestrian crossing points.
- Lighting for all streets and defined pedestrian routes should be designed to promote pedestrian safety.
- The visual impact of above-ground utilities should be limited.

## 4.8 Public Open Space and Landscape (F)

### Principles

Development should:

- Provide usable, accessible, well-landscaped and appropriate public open space
- Ensure access to public open space for both residents and the wider community
- Provide public open spaces that vary in size and character and provide opportunity for both active and passive recreation
- Enhance view opportunities from vantage points around the site.
- Provide public open space to a minimum of 10 per cent of gross subdivisible area. This public open space is to be developed with earthworks, grassing and planting, irrigation and a maintenance commitment for a minimum of two summers.

### Design Guidelines

- Public open space should be designed generally in accordance with the approved Structure Plan (Figure 19, p.68) and the Infrastructure and Amenities Plan (Figure 20, p.69).
- Public open space should be provided proportionately at each stage of development.
- Stormwater drainage provision should be integrated with public open space, where possible.
- Micro-climate, especially solar and wind impact, should be considered in the design of open space. There should be shady, sunny, and sheltered places.
- Public spaces should have visual supervision by residents and be well-lit, particularly along primary pedestrian routes.
- Heavy screen-planting that provides visual barriers and hidden spaces should be avoided. Shrubs should be kept lower than 1.2 metres to provide good visibility into public spaces.
- Public open space should be easily and efficiently maintained using appropriate landscape practices. The design should allow for the transition of maintenance at the time of the handover to the Town of Victoria Park.
- Public open spaces should be clearly delineated from private spaces using changes in level or materials, fencing, hedging or other landscape elements.
- The view corridors throughout the site should be preserved and enhanced through landscape design and planting. Viewing platforms should be constructed at appropriate levels.
- Public open space should be well-connected to roads, dual-use paths and footpaths. Paths should traverse open space in a manner that does not limit the use of the space.
- Public open space irrigation should be designed to minimise water usage.
- The use of water-saving techniques such as low profile sprinklers, rain gauges and drip irrigation should be considered to minimise water usage and maximise efficiency.
- Plant species should be selected as part of an overall theme while establishing individuality in each space.
- The hard landscape palette should reflect an overall theme, yet still highlight elements of importance or significance in different parts of the site. Materials should be robust and durable.
- Park and street furniture should have a consistent theme throughout the development, with changes reflecting focal points and feature locations. Furniture selection should consider long-term maintenance.
- The Central Plaza should be hard-paved and urban in character. The Square is at a high-point of the site allowing views over the lake and beyond to the city.
- The Lake Park should be comprised of lawns, a lake, waterfall, and paved water feature. The grassed areas should provide space for passive recreation and barbecues, with shade trees and informal shrub planting. The lake should be directly beneath the village square and bridged to provide access.
- The Circular Park should comprise a large area of grass, slightly sunken and flanked on two sides by semi-mature trees and a shade structure, such as a contemporary arbor. Curved walls, steps and seating should be used to create the sunken area and provide a safe place for passive recreation. The

road around the park should be slowed and made pedestrian-friendly through a combination of design elements - brick or cobbles on the road surface, semi-mountable or flush kerbs, bollards to protect pedestrians, parallel parking along the outside edge of the street, etc.

- A series of smaller public open spaces (“pocket parks”) should be created within the site as 'local' places of interest and 'nodes' along the pedestrian green corridors through the site. These parks should comprise grassed areas, tree and shrub plantings, barbecues and seating. Some may have shade structures such as pergolas or arbors, or small water features.
- The perimeter lake reserve is located between the development and the Burswood Park Golf Course. This reserve consists of a series of linked lakes providing interception for all future urban run-off. The lakes will be landscaped with endemic trees, shrubs and wetland planting. A cleared zone of five metres will be provided for maintenance vehicle access. Public access will be restricted by a physical barrier such as a change in level or fencing.
- The Burswood Canal should be recognised with interpretive signage and landscaped with a corridor of locally indigenous trees, shrubs and dampland littoral plants defining the route of the canal.

## 4.9 Recognition of the Burswood Canal (H)

### Principles

Development should:

- Recognise the historic significance of the Burswood Canal within the Structure Plan area

### Design Guidelines

The location of the Burswood Canal is indicated on the Structure Plan (Figure 19, p.68).

- Interpretive signage should be provided in public areas associated with the Canal.
- Reference to the Canal should be made in the landscape design.
- Burswood Ltd confirm that it is their intention to enter into a Heritage Agreement with the Heritage Council of Western Australia with respect to the recognition of the former canal by way of an interpretive sign located on site. Refer to Part A 11.1 (p.60) of the Structure Plan for further details.

## 4.10 Environmental Conditions

### Principles

Development should:

- Comply with the conditions outlined in EPA Bulletin 879
- Comply with the Post - Remediation Development Environmental Management Plan as approved by EPA

*The drainage lakes that form the west boundary of the site*

## 4.11 Ecologically Sustainable Development Strategy (ESD)

### Introduction

The purpose of this strategy is to establish ESD benchmarks for Burswood Lakes. It will be used as a checklist at each Development Application to ensure that, as Burswood Lakes develops, appropriate ESD principles are considered. This strategy will evolve over time, as new technologies become apparent. Not all of the standards noted below will be possible to implement on all stages but this strategy indicates the intent of the Proponent.

This strategy will be implemented throughout the development from planning, design and construction and ultimately handover to purchasers. During the design process, the proponent and the Town of Victoria Park officers and Design Review Group will assess the project against the strategy. During construction this strategy will be implemented by the Proponent under the Department of Environment, Water and Catchment Protection (DEWCP) approved Environmental Management Plan which all personnel and sub-contractors will be required to adhere to. All purchasers will be made aware as to the ESD aspects of their home.

### Environmental Objectives

An integrated design process is to be undertaken for all phases of the development. This integrated design process will ensure that ESD principles are incorporated from broad scale master planning down to individual building details. The design controls contained in this code and elsewhere are to ensure the following outcomes:

- Reduction in CO2 emissions compared to similar developments
- Reduction in household energy demand
- Reduction in water use
- Reduction in use of natural (scarce) resources
- Minimisation of waste
- Selection of materials/equipment to minimise environmental impacts over the life of the material/equipment

**1. Energy**

Principles

- Reduction in household energy demand
- Reduction in the amount of embodied energy in the materials used on the site

Design Standards

- Where possible, orientate indoor and outdoor living areas to the north to maximise solar exposure.
- North facing windows and horizontal protection are preferred to ensure the shading of glazing when midday sun angle is 65° or more. Shading devices for north facing windows shall provide sun penetration when the midday sun angle is 34° or less.
- Use careful site planning to minimise the overshadowing of open space and of north-facing windows of adjacent buildings.
- Incorporate best practices in energy efficient design
- High mass materials are to be used, where possible. Concrete slab on ground is to be used where topography allows. Elsewhere, precast or suspended concrete floors should be used on ground floor areas.
- Where practicable and appropriate, floors to informal living areas to be finished in materials that maximise solar heat absorption in winter.
- Incorporate cross ventilation where possible.
- Where practicable and appropriate, skylights or ventilators are to be installed to increase natural ventilation and enhance natural lighting. Where possible stair wells will create a stack effect to enhance natural ventilation and remove warm summer air from upper floors.
- Roof spaces are to be ventilated
- Control sun access in summer through the use of louvres, balcony overhang, eaves, pergolas and sun shading to reduce the reliance on mechanical systems for temperature control.
- Trees and shrubs are to be selected and positioned to maximise solar penetration in winter and minimise it in summer (deciduous plants on the north side of outdoor spaces). Positioning of planting is to assist in the enhancement of cool summer breezes and the protection from hot summer and cold winter winds.
- All windows and doors are to be weatherstripped to minimise infiltration and exfiltration.
- Avoid thermal bridges and, if they are necessary, these should be of low conductance materials.
- Where practicable, external spaces are to be allowed for clothes drying within each lot.
- Only essential lighting to operate 24 hours a day. All other common area lighting on timelocks, push buttons or motion detectors, where possible.
- Evaluate the long term efficiency and associated energy and maintenance costs when selecting internal and external lighting.
- Evaluate external lighting with respect to security and amenity
- Evaluate reverse cycle air conditioning systems with day and night switching to reduce energy use.
- In carparks, ventilation systems to be controlled by a co-monitoring system to reduce energy use.
- Carpark lighting systems to be controlled by occupancy sensors. To increase efficiency of lighting, paint ceiling in light colours to increase reflectivity.
- When selecting appliances, evaluate those that minimise energy consumption.
- In building energy management systems, include controllers to maximise the efficiency of high energy use equipment.
- Investigate the use of centralised hot water systems or, where appropriate, solar boosted gas hot water systems - incorporating electronic ignition rather than a pilot light to reduce energy consumption.

**2. Materials**

Principles

- Life cycle analysis to be used as part of the building material selection process.
- Where practicable incorporate the use of recycled materials or components in which recycled materials have been used.
- Where practicable minimise the emission of toxic chemicals in the manufacture, use, and end-life disposal of materials.
- Where practicable minimise the use of materials with adverse environmental effects.

Design Standards

- Material selection must take into account the life cycle effect of their manufacture, use and disposal to minimise the effect on the environment. The following environmental factors shall be considered in such analysis - through the entire life cycle, from manufacture to final disposal:
  - Energy use
  - Carbon dioxide emission
  - Toxicity content
  - Rare and non-renewable material content
  - Potential for end of life reuse or recycle
  - Reuse or recycled material content
  - Transport and distribution requirements
  - Thermal comfort
  - Maintenance
  - Durability
  - Cost

**3. Water**

Principles

- Minimise water use where practicable.

Design Standards

- Plant species that are drought resistant or will require minimal watering once established, where appropriate.
- Apply water-conserving landscape practices where practicable, including soil amendments, mulch, irrigation zoning, limited turf areas, planting in relation to micro-climate, water scheduling and selection of plants with water needs that match site rainfall and drainage conditions.
- Install and use drip feed irrigation systems with automatic rain shut off and mulching.
- Create favourable microclimate conditions for recreation use and plant growth.
- Landscape designs should include plants species with low nutrient and water demands and that have natural resistance to pests and diseases to minimise the need for chemical intervention.
- Use weed-free growing medium at planting and mulch to minimise weed infestation and water loss.
- Install dual flush toilets in all dwellings.
- Evaluate water use efficiency in the selection of appliances.
- Water efficient tapware will be provided to reduce overall water consumption.
- Where practicable use stormwater for landscape irrigation.
- Ensure all hydraulic systems are balanced to maintain correct flow rates and reduce water consumption.

**4. Environmental Quality**

Principles

- Reduce the emission of toxic chemicals
- Reduce CO2 emissions compared to conventional developments
- Provide a benchmark in the environmental management of noise and light emission during the construction process
- Rehabilitation and improvement of the existing site environment

Design Standards

• During construction:
  - o Manage air quality to DEP standards
  - o Implement DEP noise control mechanisms
- Landscape plant species used in the public domain are to include local indigenous species.
- Native ground covers and grasses are to be used in lieu of turf, where practicable.
- Pesticides are to be used only where no other non-toxic alternative exists.
- No chlorofluorocarbons (CFCs) to be used in any appliances.
- Provide 'owners manuals' to new residents and management that outlines the ESD features of Burswood Lakes and the dwelling in which they live. This is to show residents and managers how their behaviour can further limit energy use, water consumption, and waste.

**5. Waste**

Principles

- During construction, reduce hard and soft waste going to landfill where practicable.
- Endeavour to reduce total per capita residential waste going to landfill by encouraging recycling

Design Standards

• Design and construction team are to coordinate to encourage initiatives for resource saving and waste minimisation.
- Where space exists, waste bins are to be stored in a dedicated service area within the lot boundary of each house.
- In multi-unit developments, a central garbage room is to be included to incorporate adequate bins for recycle waste, green and food waste, and general waste for disposal.
- Promote prefabrication off site.
- Purchase materials with minimal packaging, where possible.
- Carry out detailed construction documentation.
- Design to suit standard size materials to reduce construction waste.

**6. Biodiversity**

Principles

- Enhance the natural ecosystems of the site and surrounding Peninsula through habitat provision increases as part of the Landscape Strategy.
- Protect the natural and evolving ecosystems through proactive on-going management

Design Standards

- Comply with the environmental quality design standards.
- Retain existing trees, where appropriate.
- Planting layout and species selection to be based on the following:
  - o Encourage and reinforce local fauna and flora corridors
  - o Maximise microclimates in and around dwelling lots and open space areas where practicable
  - o Take into account local soil and climatic conditions
  - o Minimise water use where practicable
- Use approved and recognised plantation timbers.

**7. Transportation**

Principles

- Reduce private car use and encourage the use of public transport, bicycle and pedestrian movement
- Transport systems to be integrated into local and regional bus, rail, and road systems
- Develop a comprehensive, accessible, and direct pathway and road system that links all parts of Burswood Lakes.

Design Standards

- Secure bicycle storage facilities are to be erected within multi-unit buildings.
- Comply with the requirements of Liveable Neighbourhoods in regard to the provision of accessible pathways and cycleways.
- Provide safe and convenient pedestrian and bicycle paths - paying particular attention to the connection to the Burswood train station.
- Develop an interconnected grid of streets to provide a variety of routes to any one destination - thus encouraging walking and biking.
- Plan the street hierarchy to facilitate efficient public transport routes.
- Locate higher density development close to or on public transport routes.

## 4.12 Commitments by the Development Proponent and / or Burswood Ltd.

The development proponent and / or Burswood Ltd will make the following commitments:

- The proponent will develop all roads, public open space and landscaped areas within Burswood Lakes.
- The proponent will provide a convenience retail facility for the development. The provision of which will be at a time no later than the completion of 300 dwelling units. The location of this facility will evolve as the development progresses, but will be limited to those areas identified as 'Potential Mixed Use Location' on the Structure Plan.
- The Proponent will manage and maintain all roads, public open space and landscaped areas within Burswood Lakes until the Proponent has completed the development of lots 1 to 25 as shown on the indicative Structure Plan. At that time it is the intention of the Proponent that the aforementioned roads, public open space and landscaped areas will be handed over into the ownership and control of Town of Victoria Park. Agreements to facilitate this handover will be established in consultation with the Town of Victoria Park.
- The perimeter drainage lake system will be maintained for the duration of the development by the proponent and by Burswood Ltd, or another third party (other than the Town of Victoria Park) such as the Burswood Park Board, thereafter in perpetuity (this was confirmed in writing by Burswood Ltd. to TVP on 14 March 2001).
- Burswood Ltd confirm that pedestrian public access will be permitted along a designated dual-use path from the south-western corner of the Burswood Lakes site across land owned by Burswood Ltd toward the Swan River foreshore (this was confirmed in writing to TVP on 17 April 2002). Burswood Ltd will enter into a legal agreement with the Town of Victoria Park to guarantee future pedestrian public access across existing land comprising the Burswood Resort, prior to Town of Victoria Park's approval of the final structure plan.
- Burswood Ltd have constructed a temporary staff carpark on the southern end of the Swan Site. Burswood Ltd have entered into a deed with the Town of Victoria Park that outlines the conditions upon which the carpark can remain in place. The principal condition is that the car park is to be removed by December 2004.
- The proponent will comply with agreements with the Town of Victoria Park regarding areas of private open space that provide public access. These will include legal controls for public access in perpetuity such as easements and maintenance standards.
- A telecommunications tower is currently located in the south eastern corner of the site. The lease, currently in the name of Crown Castle Australia Pty Ltd., has another 12 years until it is extinguished (on 1 April 2013). The proponent confirms that at that time, on expiry of the current lease, no further lease will be granted. This is in response to the Town of Victoria Park's Policy on telecommunications towers.
- The proponent understands that Burswood Ltd is examining the future use of the existing Superdome. One option may be to redevelop the site into an alternative mixed-use development. Pending a final resolution of the future use of the Superdome site, Burswood Ltd - who are a joint venture partner with Mirvac Fini on the Burswood Lakes development (ie "the proponent") - have agreed contractually with Mirvac Fini that from 31 December 2004 the Superdome will not be used in any way - such as music concerts or motor vehicle events - that would have a detrimental effect on the adjacent Burswood Lakes with respect to noise, light or traffic. To this effect, Burswood Ltd are proposing to have a restrictive covenant registered on the title of the Superdome that will burden the Superdome site to the benefit of the Burswood Lakes residents.

- The Proponent confirms that the storm water drainage currently located in the south east corner of the site will be relocated to be within the Burswood Lakes boundary and to appropriate alignments ie either within easements parallel to determined boundaries or within dedicated road reserves.
- The Proponent will prepare, and obtain Council approval of, a Landscape Strategy and Masterplan for the development prior to the submission of any applications for subdivision or development. The Landscape Strategy will include establishment of the final location, orientation etc with respect to shadowing of the proposed ornamental lake. The Landscape Strategy is a written document which will govern the selection of materials and colours for the open space system. It should cover such items as paving , lighting, irrigation, furniture, signage and planting. It will set standards, identify styles, and in some cases nominate specific product ranges. It should also contain a maintenance schedule.
- The Masterplan, as its name suggests, is a drawn indicative plan for the whole development, showing all major pedestrian routes and spaces, and all open space. It is by nature a guide, as it is not possible to identify building shapes and access points in advance of the detailed design. It would be adjusted at the completion of each stage of development to reflect the detailed design of that stage.
- The Proponent will prepare a progressive detailed wind assessment as part of each development application.

assessment and Council determination.
i) Details of the proposed infrastructure and services strategy for the total project.
ii) A Landscape Strategy and Masterplan for the total project including the interpretation and treatment of the Historic Burswood Canal.

As part of the submission of any development application, the implementation process will require the following information to be submitted :
i) Details as to how the provisions of the Ecologically Sustainable Development (ESD) Strategy are reflected in the development application.
ii) How the provisions of the Landscape Strategy and Masterplan are reflected in the application.
iii) Submission of a detailed wind assessment, shadow analysis, assessment against the defined building envelope and all other details to address the Design Guidelines as part of the development application.
As part of the submission of any subdivision application the implementation process will require the submission of the details of the proposed infrastructure and services for that stage of the project.

- <u>Implementation Process</u>
  The following Implementation Process will follow the approval of the Structure Plan and Scheme Amendment in addition to any statutory processes to be followed :

  Analysis and advice to be provided by a Social Planning Consultant during design development of the project including undertaking a Crime Prevention through Environmental Design (CPTED) analysis of site planning, building design and design and treatment of public spaces and review of the proposed Community Development Program.

  As part of the approval process of the first application for subdivision submitted, the owner (BL Developments Pty Ltd) enter into a legal agreement with the Town obligating BL Developments Pty Ltd to register easements to allow public access over privately owned land in the locations depicted on the Structure Plan. The legal agreement to provide for the registration of an absolute caveat on the affected lots.

  Prior to the submission of the first application for subdivision and/or development approval the implementation process will require the following information to be submitted for

*View of Burswood Lakes from Burswood Link Road*

# Part C - Scheme Report for Precinct Plan P2 Amendment and Policy Manual

## *Sect. 1: Amendment to Precinct Plan P2*

## 1.0 Scope of Amendment

This Amendment applies only to the 'Special Use Zone' in the Precinct Plan.

## 2.0 Requirement for Amendment

The Structure Plan proposes development that varies from the standards in the Precinct Plan P2 for the Burswood Precinct. It is therefore appropriate to request Council to initiate an amendment to Precinct Plan P2 to accommodate the Structure Plan.

## 3.0 Effect of Amendment

The amendments to the Precinct Plan will have the following effects:

- The Special Use Zone will be used for Residential purposes in accordance with the Residential Planning Codes, with a limited range of other uses.
- A Special Control Area will be created over the Special Use Zone for environmental control.
- The Use Table is amended to conform with the change in the Use Area.
- The R Coding for the Residential Uses in the Precinct Plan is deleted and replaced by an 'R-IC' Coding with a more detailed measure of density using the maximum dwelling density for each superlot.
- Table 1 of the R-Codes is amended to accord with the proposal.
- The Development Standards for the Use Area in the Precinct Plan are amended to comply with the proposed Structure Plan

## 4.0 Amendment Documents

The Precinct Plan is a Scheme Document that forms part of The Town of Victoria Park Town Planning Scheme No. 1. By clause 47, amendment of a Scheme Document must be in accordance with the procedures applying to a town planning scheme amendment in section 7 of the Town Planning and Development Act 1928.
The requirement of the Town Planning Regulations is that an amendment consists of a Scheme Report and a Scheme Text.

Accordingly, the Amended Precinct Plan P2 consists of two parts:

- Part C, Section 1 is the Scheme Report
- The Scheme Document Text is located in the Appendices.

## 5.0 Details of Amendments

### 5.1 Content

For each proposed Amendment there will be:

- 'Explanation': the reason for the Amendment
- 'Amendment Proposed': the nature of the Amendment; the actual amendment provisions are in the Appendices

### 5.2 Amendment to 'Statement of Intent'

#### Explanation

It is the purpose of the Structure Plan to provide for a predominantly residential area west of the railway. Accordingly, the Statement of Intent must be amended to reflect what is proposed.

#### Amendment Proposed

Amendment to the Statement of Intent to reflect the development proposed in the Structure Plan.

### 5.3 Local Planning Policy

#### Explanation

The proponent seeks to comply with the Residential Design codes gazetted in October 2002.

The Residential Design Codes now provide an R code designation of 'R-IC' that is appropriate for this form of intense residential development. Under the Codes, the development standards of these Codes may be varied by a Local Planning Policy. It is proposed that this Amendment be treated as if it is a Local Planning Policy.

#### Amendment Proposed

To indicate that the Precinct Plan shall be read as if it was a Local Planning Policy.

### 5.4 Special Control Area

#### Explanation

The land, the subject of development, has been remediated pursuant to a Statement to Implement a Proposal under the Environmental Protection Act 1986.

The Model Scheme Text, introduced by the Town Planning Regulations 1999, include provision for the creation in a scheme of a Special Control Area that is designed for areas that require special consideration. The Special Control Area provides Council with an additional set of development controls.

#### Amendment Proposed

Introduction of a Special Control Area to include, as relevant considerations, the Asbestos Environmental Management Plan, the Cement Kiln Dust Environmental Management Plan, and the requirement to provide a geotechnical assessment as part of all development applications.

Integration of the Special Control Area with the Statement to Implement a Proposal by including the requirements for excavation into the Precinct Plan.

### 5.5 Use Area Classification

#### Explanation

Precinct Plan P2 requires that a Structure Plan be prepared setting out the proposed 'Use Area' classifications from the range of uses therein listed: Residential R80, Tourist/Residential R160, Hotel/Tourist, Office/Residential, and Mixed Use. For Residential land, it proposes that all development be in accordance with the R Codes.

The Structure Plan proposes that all land within the Special Use

Zone will be classified for Residential use as 'R-IC' under the R Codes, with discretionary mixed uses.

### Amendment Proposed
Amendment to the Precinct Plan to reflect that the R Coding for the Special Use Zone is 'R-IC'.

## 5.6 Use Classes
### Explanation
The predominant form of use and development will be for Residential purposes. Some Mixed Uses are required for the daily needs of residents at each stage of development but the decision as to which uses are appropriate should remain in the discretion of Council.

### Amendment Proposed
Deletion of the 'Use Area' Table. Replacement of that Table with a new Use Table.

## 5.7 Development Standards
### Explanation
The Development Standards in the Precinct Plan relate to use classes that are to be deleted.

### Amendment Proposed
Deletion of all development standards in the current Precinct Plan and the introduction of new development standards for the R-IC Coding.

## 5.8 Amendment to Table 1 of the R Codes
### Explanation
Table 1 provides for the general site requirements for R-IC development. The Structure Plan meets the objectives of the R-IC Coding but varies in some respects from the requirements in Table 1.

As to dwelling density, the Structure Plan proposes that a maximum dwelling number be set for each superlot. This requires a variation to Table 1. As well, a maximum number for the entire site is provided.

The only other variations to Table 1 are to vary the plot ratio and minimum site area per dwelling for multiple dwellings and, as well, the percentage of open space for the single dwellings and group housing proposed.

### Amendment Proposed
A new Table 1 that contains the variations to that Table.
That the Structure Plan designated the maximum dwelling number for each identified superlot within the R-IC Coding.

Addition of a provision that, in any event, the total maximum dwelling numbers permitted in the Special Use Zone shall not exceed 1,250.

## 5.9 Building Height and Building Envelope Definition
### Explanation
All development must adopt a form and scale that reflects its contribution to this integrated urban development. This requires locating taller buildings towards the centre of the site, and stepping down in building height and form towards the edges. The taller buildings must respond to the landmark quality of the Burswood Resort and, at the same time, their impact on the streets and open spaces must be controlled. This design objective is to be accomplished by creating view corridors across the site that are derived from building envelopes.

### Amendment Proposed
Creation of building envelopes by establishing heights and perimeters of all buildings.

Variation to the Plot Ratio requirements in Table 1 of the R Codes and minimum site area per dwelling.

Variation to the R Code provisions for heights and showing the maximum building heights, expressed in metres measured from natural ground level, as well as storeys (excluding plant, lift overruns, and architectural features) measured from the street level for each lot.

## 5.10 Setbacks
### Explanation
The residences are designed as an integrated urban development. This design promotes activity, safety and a comfortable micro-climate on streets and in public places by the creation of a cohesive and easily-understandable streetscape that gives a sense of enclosure and scale. The setbacks serve these goals.

The Structure Plan complies with the required setbacks from the Primary Street as set out in Table 1 of the R Codes, but, in some instances, may vary from side and rear setback requirements.

Side and rear setbacks will be based on performance criteria set out in the Town of Victoria Park's 'Design Guidelines for Developments over Three Storeys'.

To preserve view corridors, it is necessary to define the minimum distance between multiple storey dwellings.

### Amendment Proposed
Addition of a provision that sets out the minimum distance between multiple storey buildings at podium level - levels 1-4 and the minimum distance between higher levels - levels 5-21.

## 5.11 Parking
### Explanation
The design of the Special Use Zone must provide integrated vehicle access that is direct, easy to find, and safe. As well, the development requires adequate provision of parking for residents and visitors. These proposed residential car parking requirements are a proven Mirvac standard which has evolved from 30 years experience in property development. For the provision of parking for non residential uses the proponent will adopt those standards outlined in the Town of Victoria Park's Parking and Access Policy.

It should be noted that the Precinct has good access to public transport which from experience will reduce the residents reliance on private motor vehicles over time.

The R Codes provide that for single dwellings, grouped housing and multiple dwellings in an R-IC area, 1 space per dwelling is required. The Structure Plan complies with this standard but it is repeated in the Amendment for clarity.

### Amendment Proposed
Variation of Element 3 of the R Codes for the following standards:
- Courtyard homes, detached single family homes, zero-lot-lined homes and townhouses - minimum of 2 bays per dwelling
- 1 Bedroom apartment - minimum of 1 bay per dwelling
- 2 Bedroom apartment - minimum of 1.5 bays per dwelling
- 3 Bedroom apartment - minimum of 2 bays per dwelling
- Visitor parking : 10% of required bays that may include, where appropriate, on street parking.

## 5.12 Open Space
### Explanation
The Structure Plan complies with the Open Space requirements in Table 1 of the R Codes for the R-IC Coding for multiple dwellings.

As single and grouped housing will be part of an integrated

development, the Open Space requirement of the percentage of the lot for open space is not applicable. It is necessary, however, to guarantee that a minimum open space is maintained.

**Amendment Proposed**
Variation of R Code provisions for a single dwelling and grouped housing as follows:
- Minimum of 16m2 of private outdoor space.

## 5.13 Landscaping

**Explanation**
Landscaping of residential spaces should contribute to the overall character of Burswood Lakes as well as to the safety and comfort of residents. As an aspect of an integrated urban development, landscaping should create a climactically and contextually responsive landscape that limits water usage.

**Amendment Proposed**
Addition of a provision that all applications for planning approval for grouped or multiple dwellings shall be accompanied by a landscape plan that details plant types, landscape treatments, and an on-going maintenance programme for these areas including automatic reticulation.

## 5.14 Overshadowing

**Explanation**
Building design should respect appropriate environmentally sustainable design principles in orientation, construction materials, techniques and landscape.

**Amendment Proposed**
Addition of a provision that all applications for planning approval for grouped and multiple dwellings shall be accompanied by a shadow analysis diagram indicating where shadows will be cast from the development -and their impact on adjoining properties - for the following dates and times:
- 9.00am, midday and 4.00pm on the summer solstice (21 December)
- 9.00am, midday and 4.00pm on the winter solstice (21 June)

Addition of a provision that all applications for planning approval for multiple dwellings shall be accompanied by a wind impact statement for the proposed development.

## 5.15 Appeal Provisions

**Explanation**
There are no appeal provisions for the Structure Plan.

**Amendment Proposed**
Inclusion of Appeal Provisions for structure plans proposed by the Western Australian Planning Commission and adopted by Council at its meeting of 28 May 2002.

# *Section 2: Addition to Policy Manual*

## 1.0 Scope of Amendment

This Amendment is for the addition of a new section in the Town of Victoria Park Policy Manual to provide design guidelines for the development of Burswood Lakes. It is to cover:
- General Design Guidelines for the Structure Plan
- Guidelines for all forms of development.

## 2.0 Name of Policy

The new Policy should be called:
- Design Guidelines for Burswood Lakes

## 3.0 Requirement for Amendment

The Structure Plan, when approved will be a framework for future subdivision and development. Precinct Plan P2 for the Burswood Precinct will contain the development standards. It is necessary to provide for development guidelines to set out the fundamental design guidelines that will provide for the objectives set out in the Policy.

## 4.0 Related Policies

The generic principles of design in this Policy will apply to the Structure Plan generally and to all development within Burswood Lakes. In the event of any inconsistency between this Policy and the Design Guidelines for Developments with Buildings Above 3 Storeys, the provisions of the Design Guidelines for Developments with Buildings Over 3 Storeys have precedence.

## 5.0 Amendment Documents

A Policy is a Scheme Document that forms part of the Town of Victoria Park Town Planning Scheme No. 1. By clause 46 and clause 47, amendment of a Policy must be in accordance with the procedures applying to a town planning scheme amendment in section 7 of the Town Planning and Development Act 1928.

The requirement of the Town Planning Regulations is that an amendment consists of a Scheme Report and a Scheme Text.

Accordingly, the proposed Policy consists of two parts:
- Part C, Section 2 is the Scheme Report
- The Scheme Document is located in the Appendices

## 6.0 Details of New Policy

### 6.1 Form of New Policy

As with the Design Guidelines for Developments with Buildings Above 3 Storeys, each area of relevance will have an "Intent" and then "Performance Criteria" against which the intent can be assessed. Where possible, the accepted wording of the Design Guidelines for Developments with Buildings Above 3 Storeys has been used. The intent of each Design Guideline is outlined below.

### 6.2 Site Planning

Intent:
*To achieve a coherent site layout that provides a pleasant, attractive, manageable, resource-efficient and sustainable environment while also making a positive contribution to adjoining properties and the overall precinct.*

### 6.3 Streetscape

Intent:
*To provide attractive streetscapes that reinforce the functions and amenity of a street, and are sensitive to the built form, urban landscape and environmental conditions of the locality.*

### 6.4 Building Appearance and Neighbourhood Character

Intent:
*To ensure that building appearance is attractive and is in keeping with any desirable current or future urban character of the area.*

### 6.5 Private Open Space

Intent:
*To provide private open space for each dwelling that is clearly defined, useable open space that meets user requirements for security, access, outdoor activities and visual amenity.*

### 6.6 Communal Open Space and Publicly

## Accessible Space

Intent:

*To provide communal open space and publicly accessible space where appropriate, that is generous, clearly defined and useable, and helps to create a pleasant, safe and attractive environment.*

## 6.7 Resource Efficiency

Intent:

*To adhere to the principles of ecologically sustainable development by incorporating features which limit the use of fossil fuels and natural resources and reduce greenhouse gas emissions over the life of the development.*

## 6.8 Safety and Security

Intent:

*To provide personal and property security for occupants and visitors and enhance actual and perceived safety.*

## 6.9 Privacy

Intent:

*To site and design buildings to meet projected user requirements for visual and acoustic privacy, and to provide appropriate visual and acoustic privacy for nearby residents in their dwellings and private open space.*

## 6.10 On-site Parking and Access

Intent:

*To ensure appropriate provision of secure and accessible on-site parking and access for occupants and visitors.*

## 6.11 Site Facilities

Intent:

*To ensure that site facilities are conveniently accessed by occupants, and are visually attractive, blend in with the development and street character, and require minimal maintenance.*

# Appendix Two

## Amendment No. 1 To The Burswood Lakes Structure Plan (2017)


mirvac

ROWE GROUP DESIGN

Hames Sharley

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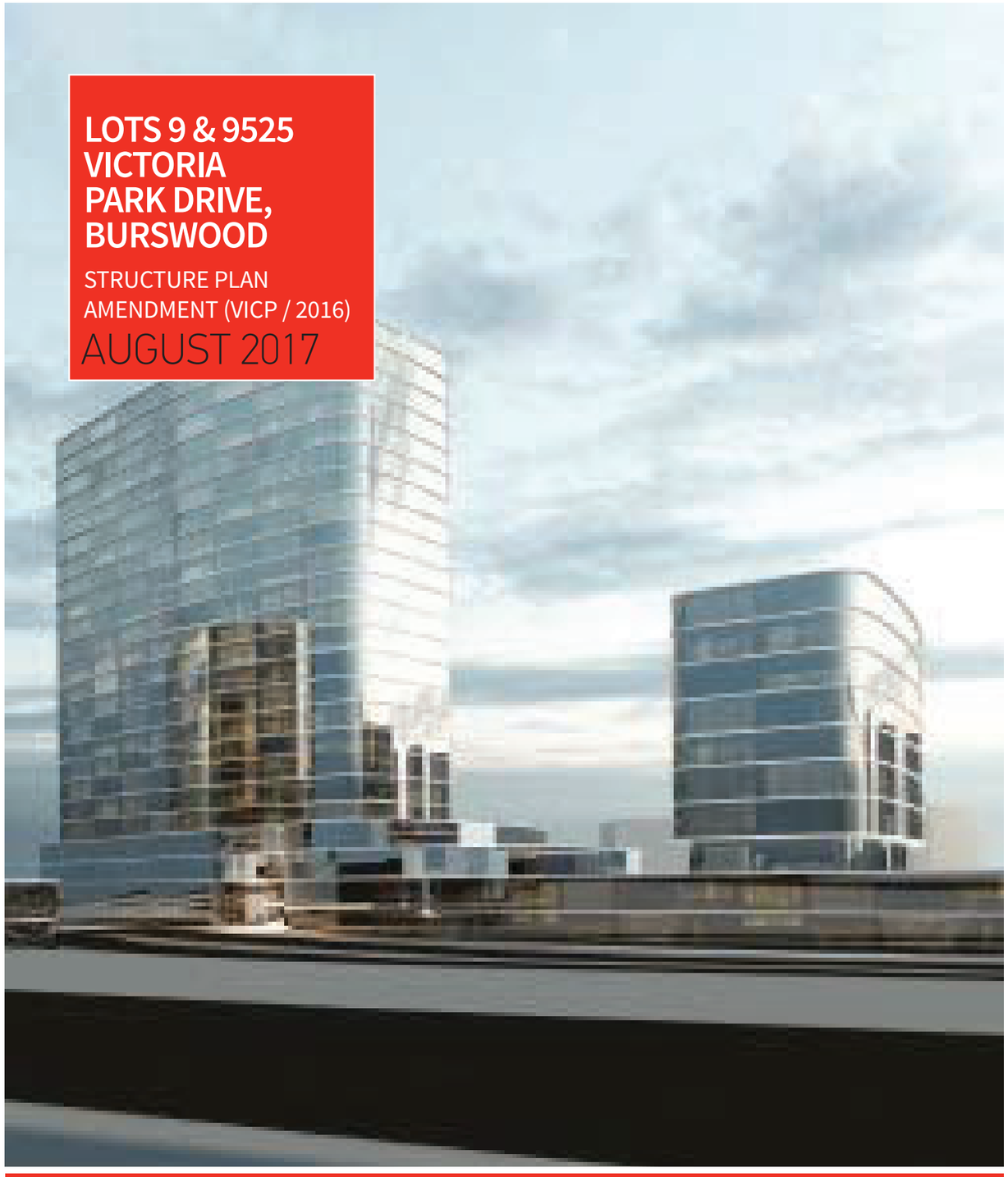

# LOTS 9 & 9525 VICTORIA PARK DRIVE, BURSWOOD

STRUCTURE PLAN AMENDMENT (VICP / 2016)

AUGUST 2017

tpg PLACE MATCH

## Document Control

| Document ID: PG Planning/PG 2015/715-630 Burswood, Lots 9 & 9525 Vic Park Dve LSP Amendment/7 Final Documents/1 Lodged/715-630 July Update - MS.indd | | | | | | |
|---|---|---|---|---|---|---|
| Issue | Date | Status | Prepared by | | Approved by | |
| | | | Name | Initials | Name | Initials |
| 1 | 28.01.16 | | Mike Kevill | | Murray Casselton | |
| 2 | 15.02.16 | Draft | Mike Kevill | | Murray Casselton | |
| 3 | 29.07.16 | Final | Mike Kevill | | Murray Casselton | |
| 3 | 02.06.17 | Final | Mike Kevill | | Murray Casselton | |
| 4 | 27.07.17 | Final | Mike Kevill | | Murray Casselton | |
| 5 | 22.08.17 | Final | Murray Casselton | | David Caddy | |



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# Contents





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# ENDORSEMENT PAGE

This structure plan amendment is prepared under the provisions of the Town of Victoria Park

Town Planning Scheme No. 1

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE

WESTERN AUSTRALIAN PLANNING COMMISSION ON:

_____

[DATE]

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

_____

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

_____ Witness

_____ Date

_____ Date of Expiry



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# Executive Summary

This structure plan amendment request (Structure Plan amendment) has been prepared by TPG Town Planning, Urban Design and Heritage (TPG) on behalf of EG Funds Management Pty Ltd (EG Funds), and seeks an amendment to the operational Burswood Lakes Structure Plan (the Structure Plan) for Lots 9 & 9525 Victoria Park Drive, Burswood (the subject sites).

The Burswood Lakes Precinct is a highly prominent location within the Perth Metropolitan Region where it forms a frame edge to the city and along with other precincts of the Burswood Peninsula contains a number of entertainment and sporting functions. The subject sites are strategically located having excellent public transport access, strong vehicle linkages, within close proximity of the Perth CBD, the Crown Perth entertainment precinct and the new Perth Stadium, which is currently under construction.

This structure plan amendment aligns with the overall strategic intent for the area, and ties into the planning framework over the site including the Burswood Peninsula District Structure Plan (Burswood Peninsula DSP), the Town of Victoria Park (the Town) Town Planning Scheme No 1 and local planning policies.

This proposed Structure Plan amendment has been written in accordance with the Western Australian Planning Commission (WAPC) guidelines for the format, preparation and lodgement of structure plans under the Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations).

The format of this Structure Plan amendment has been designed to append and add to the existing Structure Plan. Given the age and format of the existing 2002 Structure Plan, this format was chosen to keep the proposed amendment and level of detail herein more in line with the current Regulations and have a focus on the subject sites. Provided within Part One, section 7.0.1- Amended Figures is a suite of updated figures to reflect the proposed Structure Plan amendment, and these figures supersede the plans contained within the original Structure Plan document.

## Summary Table

| Item | Data |
|---|---|
| Total Area Covered by Structure Plan | 1.1454ha |
| Area of | Ha / Lot Yield |
| Residential | 1.1454ha |
| Retail | 2,200m$^2$ |
| Total Lot Yield | Existing lots |
| Estimated no. of dwellings | 353 dwellings, 208 serviced apartments. |
| Estimated site density | 308 dwellings per hectare (489 including serviced apartments). |
| Estimated Population | N/A |
| No. of high schools | N/A |
| No. of primary schools | N/A |
| Estimated commercial floorspace | 1,600m$^2$ of retail floor space |
| Estimated open space area | As per Structure Plan |
| Estimated percentage of natural area. | As per Structure Plan |

# Part One: Implementation

## 1. Structure Plan Amendment Area

This structure plan amendment relates to both Lot 9 and Lot 9525 Victoria Park Drive, Burswood (the subject site). Both lots are considered simultaneously on the basis of their common ownership, close relationship, clear opportunities for compatible built form and use and the high level of potential integration between the two sites. The subject sites are also commonly referred to as a distinct 'neighbourhood' within the Structure Plan. In terms of broad context, the subject sites are in close proximity to the Burswood Train Station, being immediately north east of the Crown Perth entertainment precinct and in close proximity to the Great Eastern Highway within the suburb of Burswood.

## 2. Operation

This structure plan amendment to the endorsed Burswood Lakes Structure Plan 2003 (as amended) comes into effect on the date of approval by the WAPC.

## 3. Staging

As the Burswood Lakes Structure Plan has been operational for a number of years and approaching completion, all necessary major infrastructure and roads are already in existence within the structure plan area. Additional servicing and capacity needs will be addressed at development stage as outlined in detail in the servicing section of this report. Future development will be subject to separate development approvals.

## 4. Development Requirements - Structure Plan Amendment

The structure plan amendment allows for the development of three towers - two residential towers on Lot 9 and one Hotel I Serviced Apartments apartment tower on Lot 9525 with associated parking, servicing areas, access and integration with external sites as well as a limited number of small retail tenancies to service the resident and Serviced Apartments population.

The proposed amendment to the Structure Plan as it relates to the subject sites will create high quality developments that are well integrated with the adjacent development and train station. Development provisions are detailed below. Detail that is not amended by these provisions remains consistent with the existing Burswood Lakes Structure Plan.

### 4.0.1 Land Use and General Development

Land uses on the subject sites are as per the planning framework as detailed within the Burswood Precinct plan.

### 4.0.2 Built Form

The proposed built form on the subject sites is to:

- Ensure a high degree of engagement with the public realm while protecting the privacy of future residents.
- Provide for a greater diversity of housing, including short-stay apartments in close proximity to conveniently located commercial, retail and entertainment facilities all within close proximity to public transport services.
- Incorporate high quality and publicly accessible landscaped open spaces, and activated internal connections.
- Address constraints associated with potential noise and vibration impacts from the railway line.
- Create an integrated and functional interface with the PTA owned land (Lot 50) and pedestrian linkages to Burswood Station.
- Be designed to make highest and best use of the subject sites.
- Lend support and add to the viability of public transport services, as well as increase passive surveillance and activation over the rail station through CPTED design principles.
- Ensure that the height and density is well designed and located appropriately within the subject sites so as to reduce the impact of the development at street level as much as is practical.

### 4.0.3 Plot Ratio

The plot ratio amendments for the subject sites are as follows:

- Lot 9 being amended from the current statutory provision of 1.36:1 to 4.00:1, and
- Lot 9525 being amended from 0.91:1 (0.27 over the entire site) to 2.3:1 over the entire site.

### 4.0.4 Maximum Number of Dwellings

The 'maximum number of dwellings' amendments for the subject sites are as follows:

- Lot 9 being amended from 60 dwellings to 353 dwellings, comprising of 340 apartments and 13 townhouse style dwellings; and
- Lot 9525 being amended from five dwellings to 208 Hotel / Serviced Apartments in lieu of permanent residential accommodation.

### 4.0.5 Variation to Building Height Limits and to Maximum Number of Storeys

The 'maximum building height' amendments for the subject sites are as follows:

- Lot 9 being amended from 21 metres to 75 metres, with a maximum of 24 storeys; and
- Lot 9525 being amended from 17.5 metres to 51 metres with a corresponding maximum number of storeys amended to 16.

Building heights are also subject to limitations under the Airports Act 1996 and Airports (Protection of Airspace) Regulations 1996 administered by Perth Airport and the Commonwealth Department of Infrastructure and Regional Development.

### 4.0.6 Vehicle Access

The following vehicle access points are provided to the subject sites:

- Lot 9 - Primary full movement vehicle access is to be from Bow River Crescent, with a potential secondary minor access from Victoria Park Drive.
- Lot 9525 - Vehicle access is to be from Victoria Park Drive.
- Detailed access arrangements for these sites will be determined as part of future development proposals. Modifications to the arrangements as set out above can be considered where supported by suitable traffic assessment.

### 4.0.7 Retail Floor Area

Retail development on the subject site is intended to provide for some specialty retail and the daily needs of the residents.

The following requirements relate to retail floorspace provision on the subject sites:

- A maximum of 2,400m$^2$ of retail NLA to be provided on the subject sites; and
- A maximum single tenancy size of 400m$^2$ retail NLA.

### 4.0.8 Other Development Controls

In addition to the provisions listed above the development of the subject sites must have regard for the existing planning and policy framework of the Town, including development policies including but not limited to:

- Local Planning Policy 4.12 Design Guidelines For Development With Buildings Above 3 - Storeys; and
- Planning Policy 3.15 Design Guidelines for Burswood Lakes

Future development will also have regard to the following Guidelines:

- State Planning Policy 5.4 Road and Rail Transport Noise and Freight Consideration in Land Use

Planning and WAPC Implementation Guidelines for State Planning Policy 5.4

- WAPC Designing Out Crime Planning Guidelines
- PTA Guidelines for Working in and Around the PTA Rail Reserve.

# 5. Local Development Plans

No local development plans have been provided or will be required as the level of detail contained within this Structure Plan amendment, read in conjunction with the Structure Plan itself and the Burswood Peninsula DSP, provide sufficient detail to guide the assessment of the development concepts while not prejudicing future development.

# 6. Other Requirements

## 6.0.1 Infrastructure and Servicing

The servicing investigations have been undertaken to establish the availability of the existing services infrastructure in the area and their capacity to service the proposed development. Where the existing infrastructure have been identified as potentially insufficient to meet development demands, infrastructure extensions and upgrades have been identified:

- The Water Corporation has advised that the existing wastewater reticulation network is capable of servicing the proposed development and expect this capacity to be available for the next five to ten years.
- The water pressure potentially requires that each building should allow suitable pumps and tanks for domestic water supply and fire fighting purposes.
- Lot 9 would potentially require one authority owned switchgear and two authority owned 1000kVA transformers to reticulate the distribution system throughout the proposed lot.
- Lot 9525 will potentially require one switchgear and one 1000kVA transformer.
- The existing point of electricity supply will potentially need to be removed

All above servicing requirements are based on preliminary analysis only and are subject to future investigation. Servicing upgrades relating to the subject sites that are identified in future studies are to be constructed at the cost of the developer.

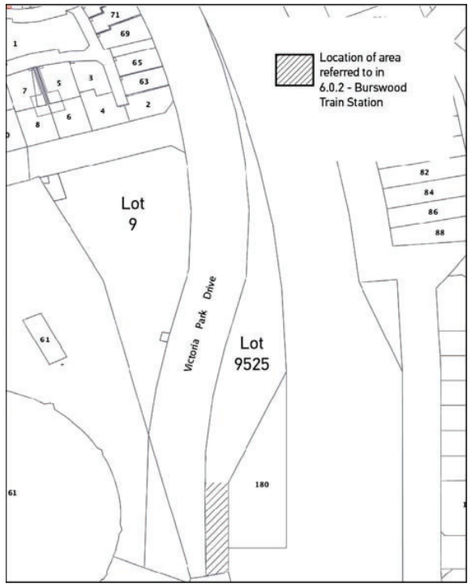
## 6.0.2 Burswood train station

The southern end of Lot 9525, as shown in Figure 1A, is required for the future redevelopment of the Burswood train station.

This area of land is required to remain undeveloped and available for the future station redevelopment, including potential for underground access, until such time as future land requirements for the station have been determined by the state government.

Prior to construction of development on Lot 9525, the area of this lot required for access and/or development of the station is expected to be ceded to the Crown by subdivision, or by alternate agreement.

Figure 1A - Area Required for Future Redevelopment of Burswood Train Station






# 7. Additional Information

## 7.0.1 Amended Figures

Figures 2, 5-10, 18, 19, 24, 25, 27, 29 and 31 to existing Burswood Lakes Structure Plan are amended in accordance with Table 1A below:

Table 1A - Amended Structure Plan Figures

| Figure No. | Replaced Figure Name |
|---|---|
| 2 | Proposed Site Section And Elevation |
| 5 | Updated Photo Montages |
| 6 | Updated Photo Montages |
| 7 | Updated Photo Montages |
| 8 | Updated Photo Montages |
| 9 | Proposed Summer Shadow Analysis |
| 10 | Proposed Winter Shadow Analysis |
| 18 | Proposed Indicative Development Plan |
| 19 | Structure Plan |
| 24 | Updated Building Control Envelopes |
| 25 | Updated Building Control Envelopes |
| 27 | Updated Building Control Envelopes |
| 29 | Updated Building Control Envelopes |
| 31 | Updated Indicative Public Realm |

## 7.0.2 Other Considerations

The following additional information will be provided at development or subdivision as specified in Table 2A below:

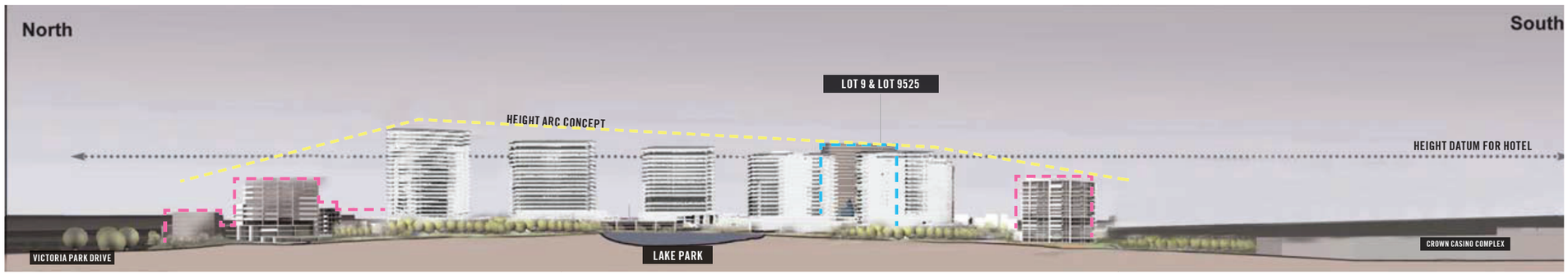
Table 2A - Additional Information Required at Development or Subdivision Stage

| Additional Information | Approval Stage | Consultation Required |
|---|---|---|
| Design details | Development | Yes - PTA and other stakeholders |
| Permanent public access, to facilitate the future development of a train station forecourt | Subdivision/ Development of Lot 9525 | No |
| Noise and vibration impact mitigation | Development | No |
| Crime Prevention through Environmental Design principles | Development of Lot 9525 | Yes - PTA |

## FIGURE 2: PROPOSED SITE SECTION AND ELEVATION


EAST - WEST SECTION A-A

0 20 40 60 80 100




NORTH - SOUTH SECTION THROUGH LAKE PARK B-B

0 20 40 60 80 100



*Proposed Site Section And Elevation*

# FIGURE 5: UPDATED PHOTO MONTAGES


VIEW 4: VIEW WEST FROM EAST PERTH JUNCTION OF ARDEN AND CONSTITUTION STREET


VIEW 5: MONTAGE VIEW FROM THE CAUSEWAY


VIEW 6: VIEW FROM GREAT EASTERN HIGHWAY

## FIGURE 6: UPDATED PHOTO MONTAGES

VIEW 7: VIEW FROM CANNING HIGHWAY. AT THIS LOCATION, BURSWOOD LAKES CANNOT BE SEEN.


VIEW 8: APPROACHING GREAT EASTERN HIGHWAY

VIEW 7A: ("GHOST" IMAGE) - THIS VIEW DEMONSTRATES THE 'LOCATION' OF BURSWOOD LAKES IN VIEW 7. HOWEVER, THE DEVELOPMENT IS SCREENED BY EXISTING BUILDINGS AND MATURE TREES.

VIEW 8A: ("GHOST" IMAGE) - THIS VIEW DEMONSTRATES THE 'LOCATION' OF BURSWOOD LAKES IN VIEW 8. HOWEVER, THE DEVELOPMENT IS SCREENED BY EXISTING BUILDINGS AND MATURE TREES.

## FIGURE 7: UPDATED PHOTO MONTAGES

VIEW 9: VIEW NORTHWEST FROM THE JUNCTION OF SHEPPERTON ROAD AND FLINT STREET, VICTORIA PARK. BURSWOOD LAKES CANNOT BE SEEN.

VIEW 10: VIEW NORTHWEST FROM NEXT TO ORIGINAL SITE OF THE OLD RED CASTLE HOTEL

VIEW 9A: ("GHOST" IMAGE) - THIS VIEW DEMONSTRATES THE 'LOCATION' OF BURSWOOD LAKES IN VIEW 9. HOWEVER, THE DEVELOPMENT IS SCREENED BY EXISTING BUILDINGS AND MATURE TREES.

VIEW 10A: ("GHOST" IMAGE) - THE TOPOGRAPHY AND MATURE TREES ALL SCREEN BURSWOOD LAKES FROM VIEW.

## FIGURE 8: UPDATED PHOTO MONTAGES


VIEW 11: VIEW FROM NEAR THE BBQ AREA ON THE BANKS OF THE SWAN RIVER (IN FRONT OF CROWN CASINO COMPLEX)


VIEW 12: VIEW FROM VICTORIA PARK DRIVE OVERPASS NORTH OF THE SITE



*Updated Photo Montages*

## FIGURE 9: PROPOSED SUMMER SHADOW ANALYSIS

### SUMMER SOLSTICE - DECEMBER 21ST

9:00AM

12:00PM

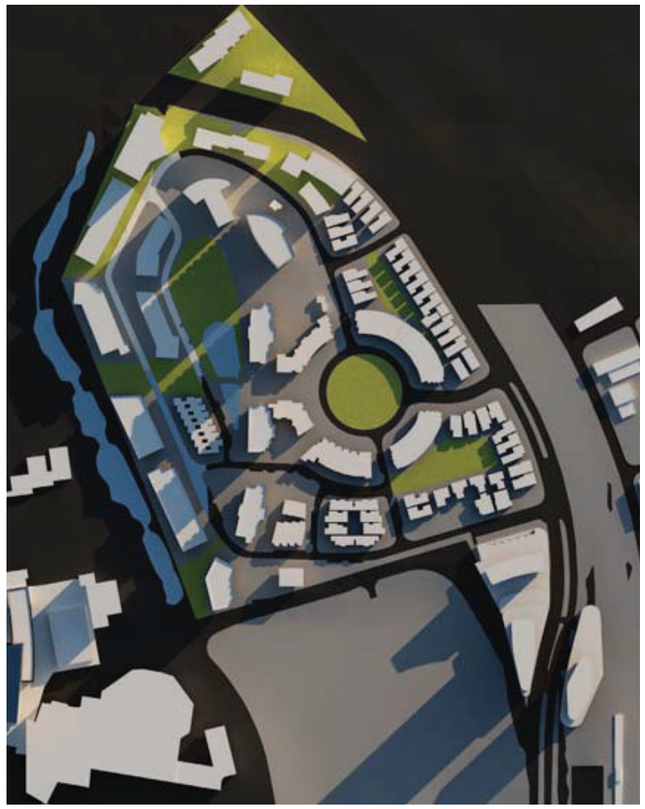
4:00PM



*Proposed Summer Shadow Analysis*

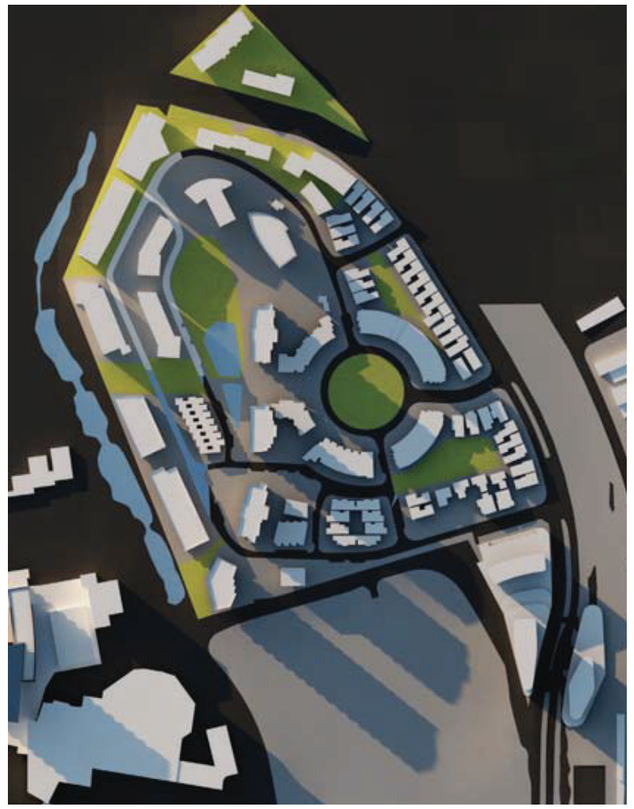
## FIGURE 10: PROPOSED WINTER SHADOW ANALYSIS

### SUMMER SOLSTICE - JUNE 21ST



9:00AM

12:00PM



4:00PM



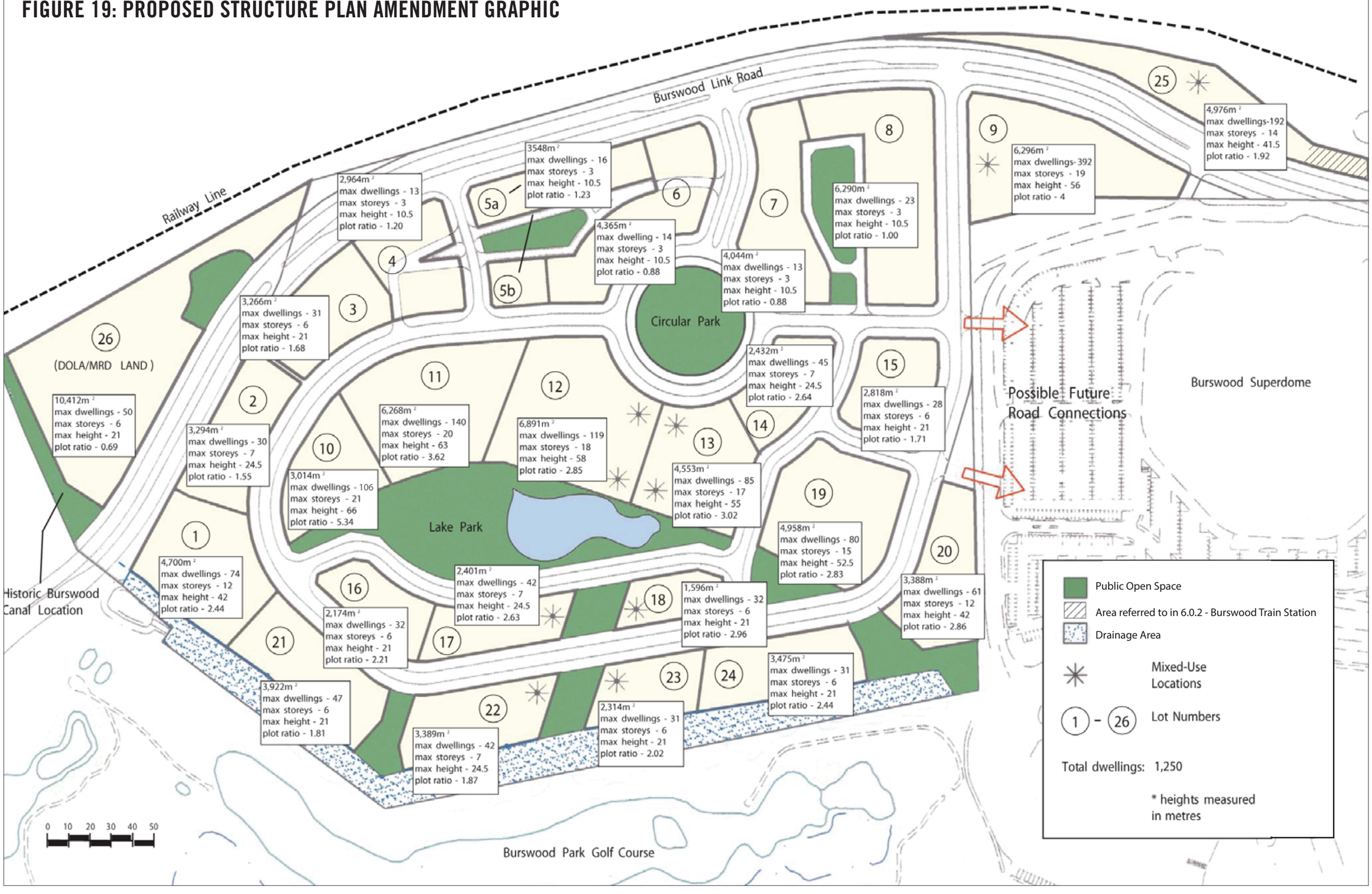
*Proposed Winter Shadow Analysis*

## FIGURE 18: PROPOSED INDICATIVE DEVELOPMENT PLAN



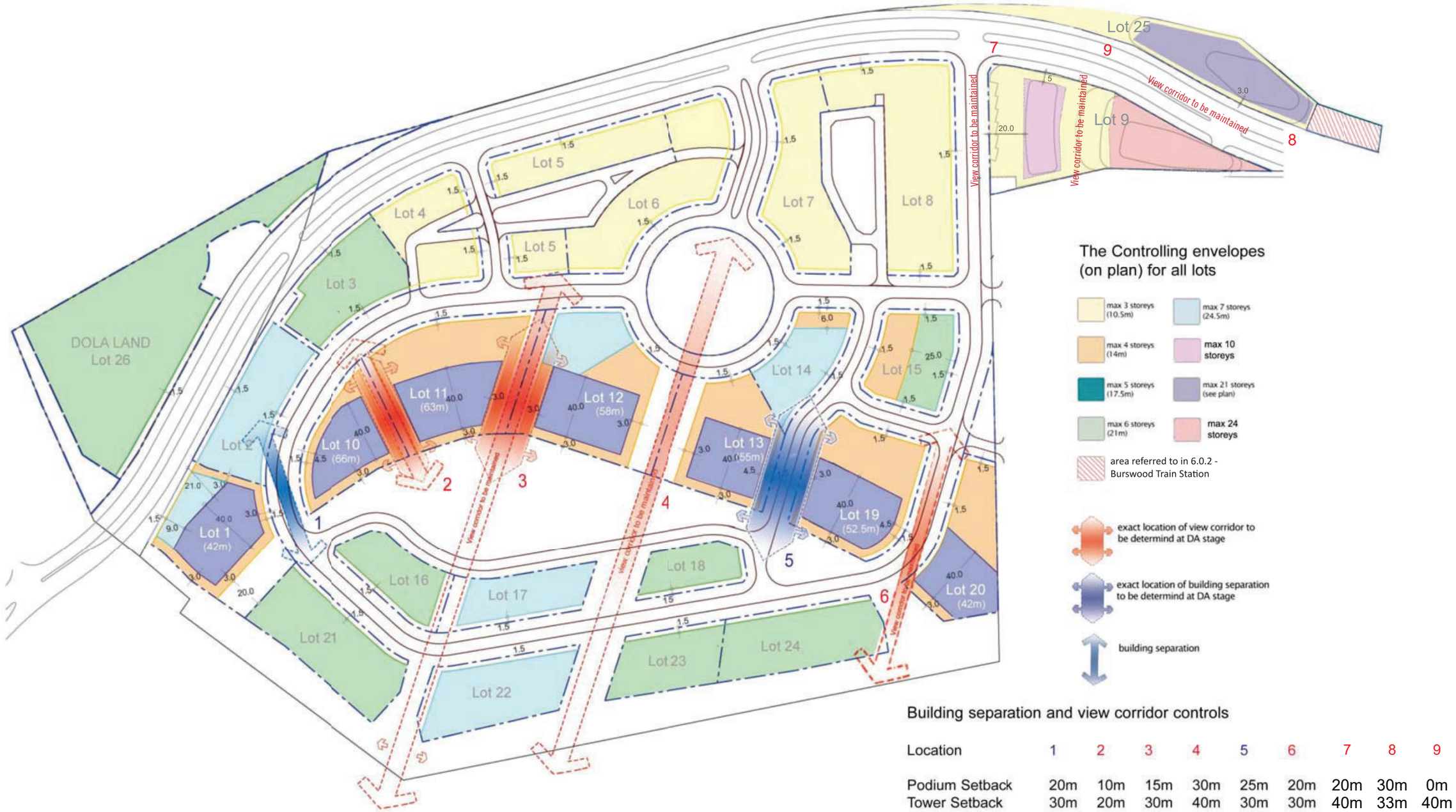

*Proposed Indicative Development Plan*

## FIGURE 19: PROPOSED STRUCTURE PLAN AMENDMENT GRAPHIC




*Proposed Structure Plan Amendment Graphic*

## FIGURE 24: UPDATED BUILDING CONTROL ENVELOPES



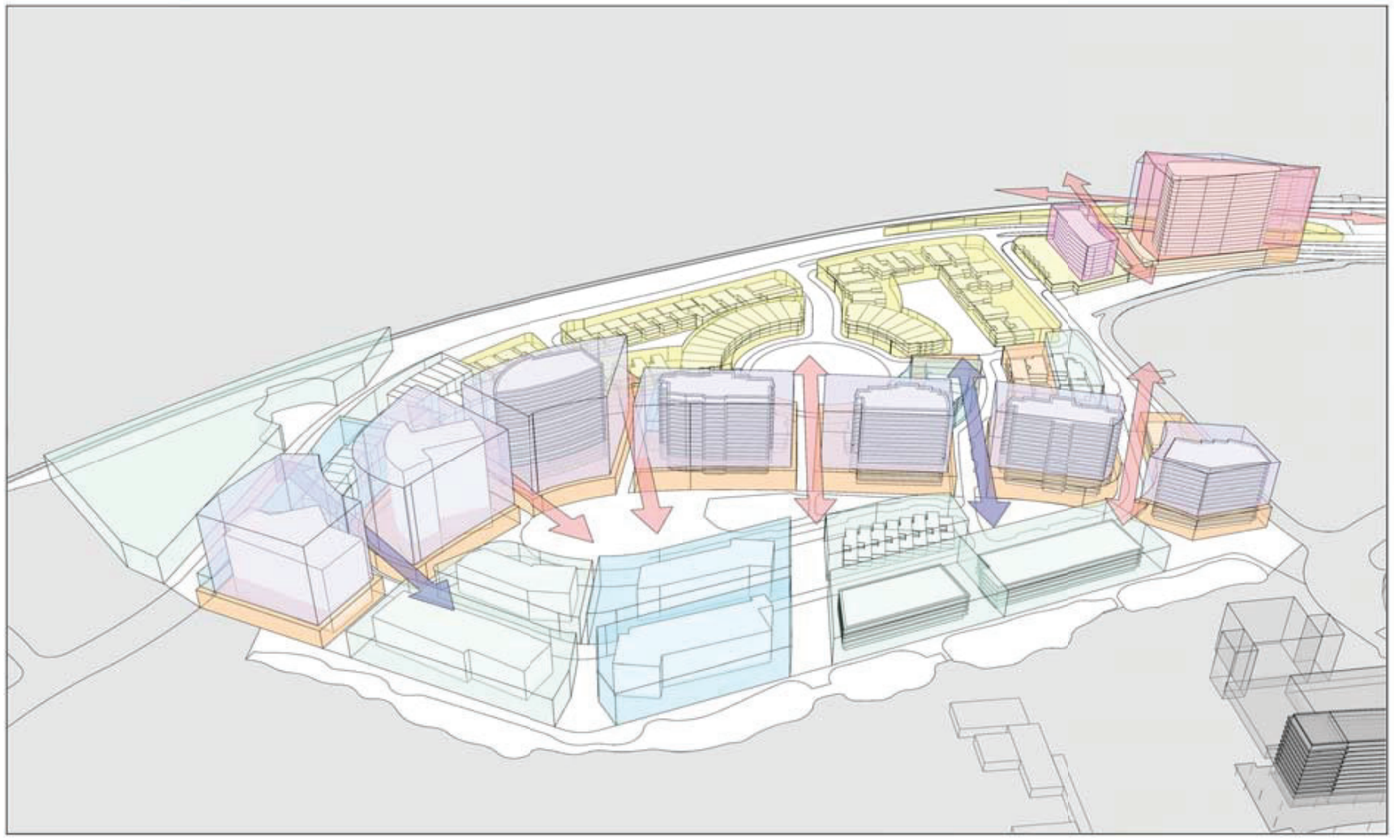

Building separation and view corridor controls

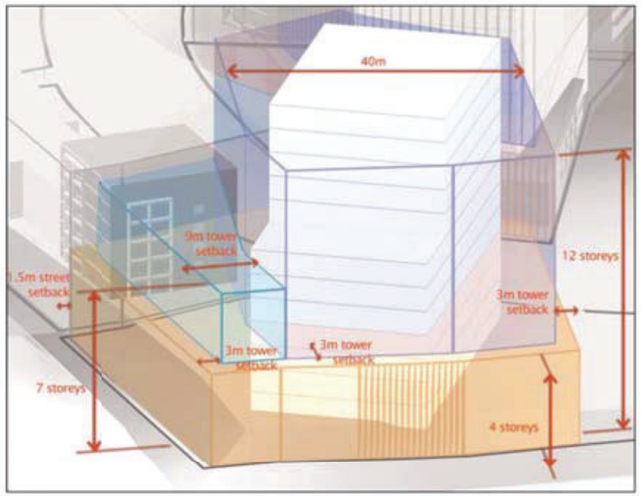
| Location | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Podium Setback | 20m | 10m | 15m | 30m | 25m | 20m | 20m | 30m | 0m |
| Tower Setback | 30m | 20m | 30m | 40m | 30m | 30m | 40m | 33m | 40m |



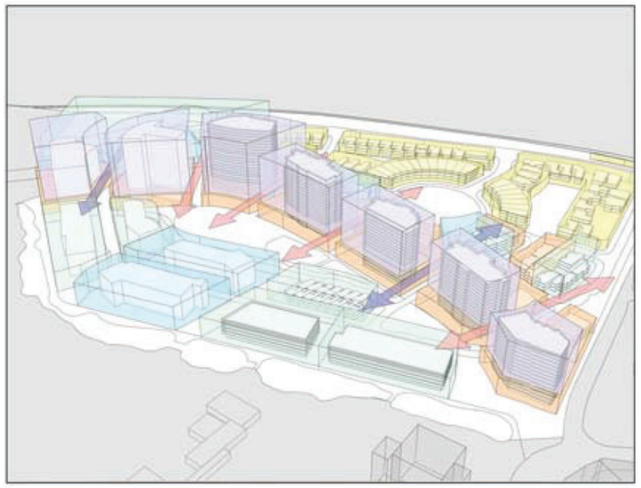
*Updated Building Control Envelopes*

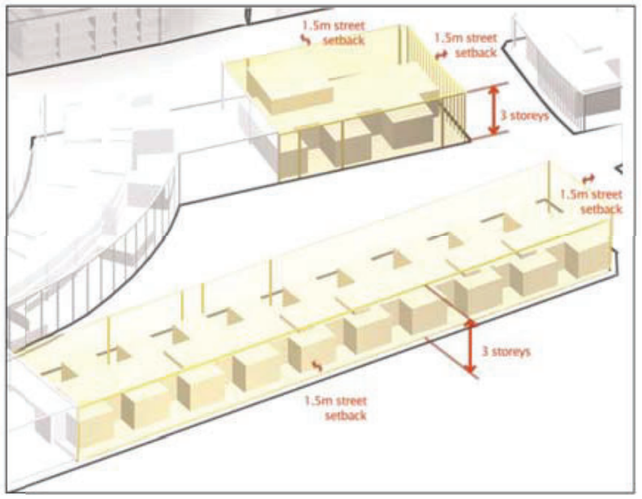
## FIGURE 25: UPDATED BUILDING CONTROL ENVELOPES






LOT 1





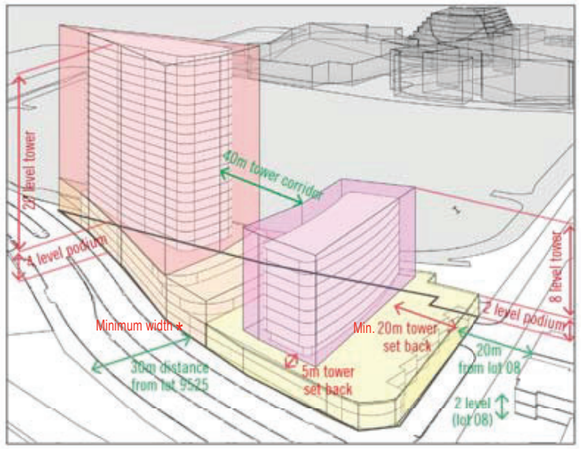

LOT 5

max 3 storeys | max 5 storeys | max 7 storeys | max 21 storeys
max 4 storeys | max 6 storeys | max 10 storeys | max 24 storeys

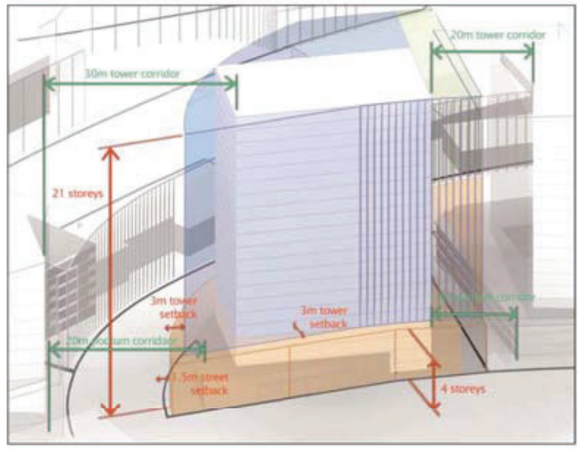


*Updated Building Control Envelopes*

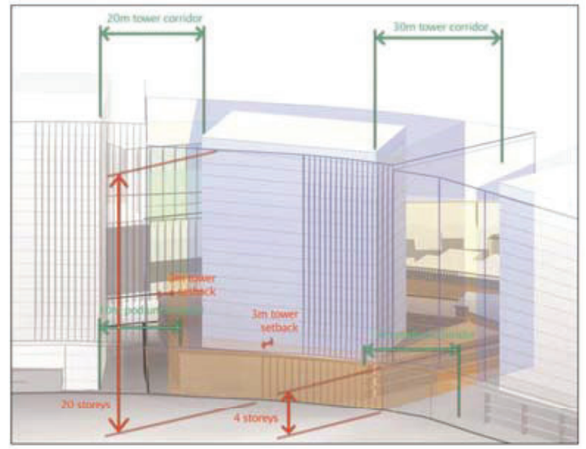
## FIGURE 27: UPDATED BUILDING CONTROL ENVELOPES



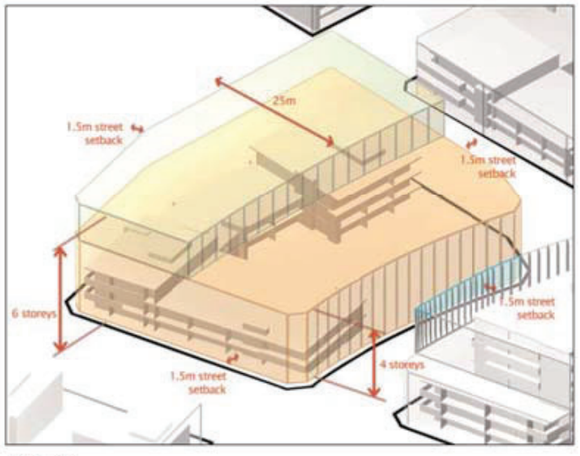

LOT 9 * Pedestrian access to be minimum width of 8m



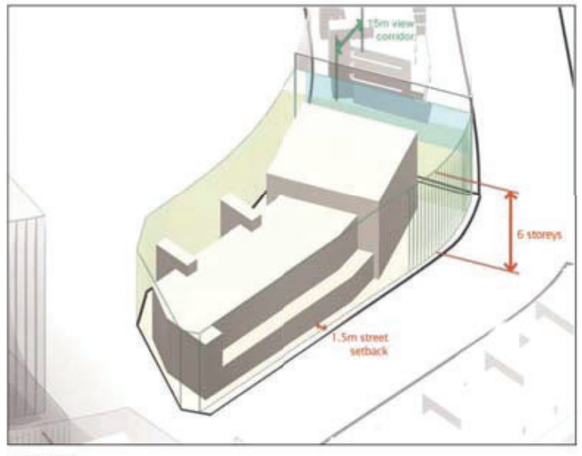

LOT 10



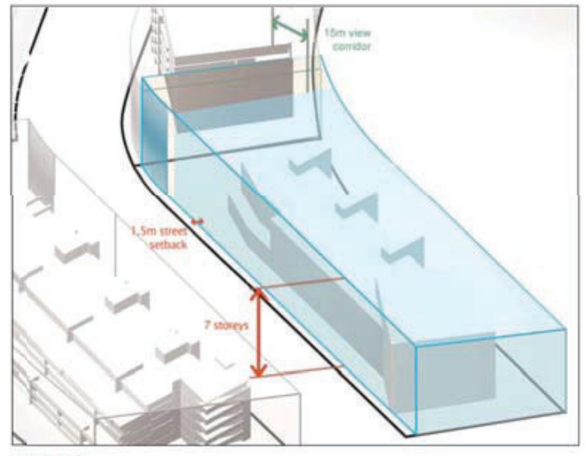

LOT 11




LOT 15




LOT 16



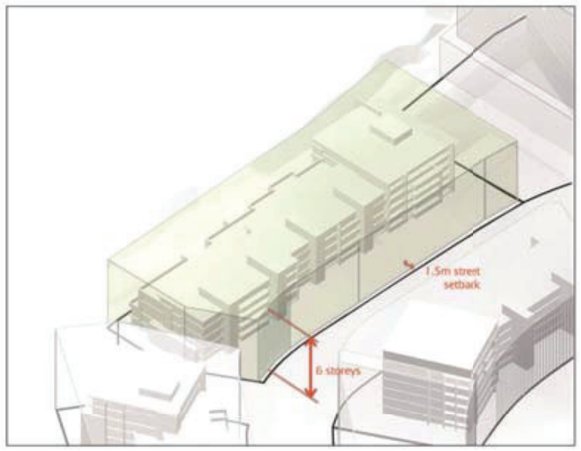

LOT 17

max 3 storeys | max 5 storeys | max 7 storeys | max 21 storeys
max 4 storeys | max 6 storeys | max 10 storeys | max 24 storeys

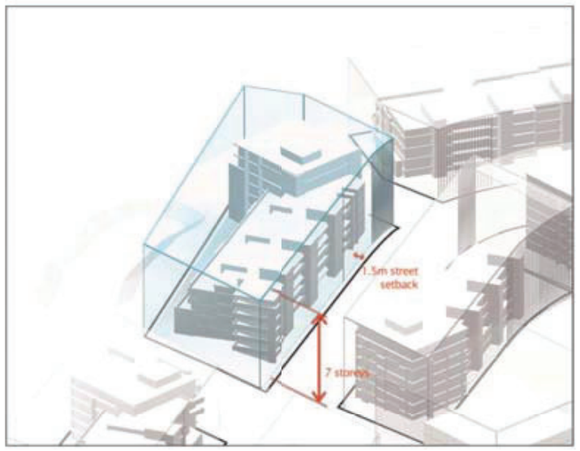


*Updated Building Control Envelopes*

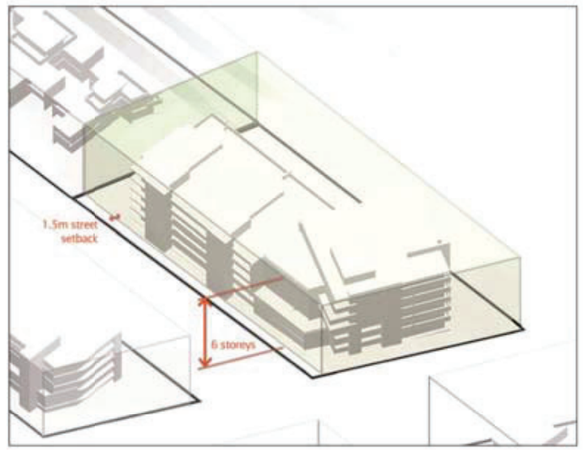
## FIGURE 29: UPDATED BUILDING CONTROL ENVELOPES



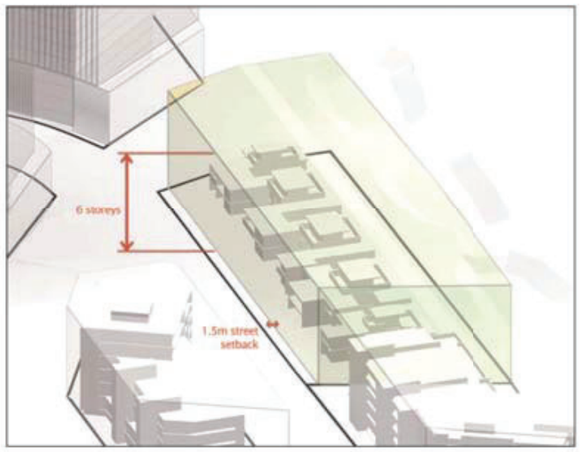

LOT 21



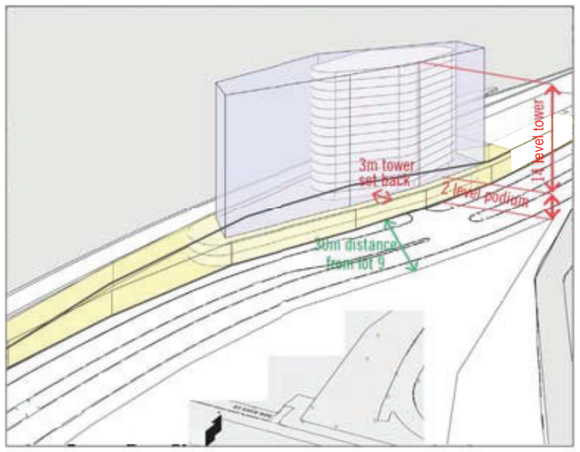

LOT 22



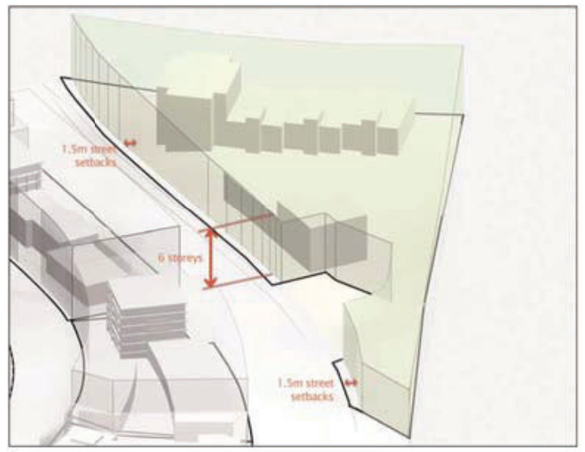

LOT 23




LOT 24




LOT 25




DOLA / MRD LAND (LOT 26)

max 3 storeys | max 5 storeys | max 7 storeys | max 21 storeys
max 4 storeys | max 6 storeys | max 10 storeys | max 24 storeys

**ELENBERG FRASER**



*Updated Building Control Envelopes*

## FIGURE 31 - INDICATIVE PUBLIC REALM


*Updated Indicative Public Realm*

# Part Two: Explanatory Report

## Preamble

The purpose of Part Two of this report is to provide the planning background and explanatory information used to prepare the Structure Plan amendment and inform the controls detailed in Part One. The following information is directly relevant and is deemed to be more than sufficient to support the Structure Plan amendment for the subject sites and provide further information to assist decision-making.  The format of this Structure Plan amendment has been designed to append and add to the existing Structure Plan, and has been drafted as a balance between the provisions of the operational Structure Plan and the Regulation provisions. Given the age and format of the Structure Plan, this format was chosen to keep the proposed amendment and level of detail herein more in line with the current Regulations with a direct focus on the subject sites.

In addition to the above, as part of the preliminary stages of the consideration of this Structure Plan amendment feedback was sought from the Town's Design Advisory Committee (DRC), who provided valuable feedback which has been incorporated into the final framework of the Structure Plan amendment.

The structure plan amendments allows for the development of three towers - two residential towers on Lot 9 and one Hotel I Serviced Apartments apartment tower on Lot 9525 with associated parking, servicing areas, access and integration with external sites as well as a limited number of small retail tenancies to service the resident and Serviced Apartments population.

The Structure Plan amendment request ultimately requires approval from the WAPC, with reference to any comments and recommended modifications made by the Town who will assess the Structure Plan amendment request and conduct the required public consultation processes. In making a decision on the proposal the WAPC will need to consider its planning and strategic merits and if the requested amendments to the Structure Plan will prejudice progressive development of the area in the context of the current planning framework and history of the site.

The following amendments to the Structure Plan are requested to Lots 9 and 9525:

- Amendments to plot ratio provisions.
- Amendments to maximum number of dwellings provisions.
- Amendments to land use, building height limits, maximum number of storeys, the inclusion of some minor retail land use floorspace and indicative built form controls.

Detail that is not amended by these provisions remains consistent with the existing operational Structure Plan.

Figure 19 depicts the structure plan amendment request in graphical terms consistent with the existing graphics in the Burswood Lakes Structure Plan.

The Structure Plan amendment provisions have been developed based on specific development concepts for the subject sites that have been evolved in accordance with the planning framework, the previous work done on the site, the project architects Elenberg Fraser, the DoP, the Public Transport Authority (PTA) and other sub consultants as required.

The Structure Plan amendment provisions have also been the subject of detailed feedback from the Town's Design Review Committee who made a number of recommendations which have been incorporated into the final framework.

Specific regard has been had to ensuring that any future development of the subject sites integrates with the PTA proposals for the rail station, and the integration of the sites into the precinct wide planning that has been undertaken separately.



The purpose of this Structure Plan amendment report is to address relevant development standards and to also demonstrate why the structure plan variations as requested will not prejudice the progressive development of the area and will assist in realising the objectives and built form envisaged by the Burswood DSP and State level planning instruments that promote Transit Oriented Development (TOD) and urban activation.

## Planning background

### Introduction and Planning History

The purpose of this section is to provide a summary of current strategic planning policy and historical planning activity relating to the subject sites and wider Burswood Peninsula.

### Burswood Lakes Structure Plan

The Burswood Lakes Structure Plan (Structure Plan) and associated precinct plan amendment were prepared in 2002 in order to guide future development of the Burswood Precinct (the former Swan Portland Cement site) in an orderly manner. The Structure Plan introduced corresponding amendments to the Town's Burswood Precinct Plan P2 (the Precinct Plan) in order to implement the outcomes depicted in the Structure Plan.

The current controls that were implemented through the structure planning process altered the requirements within Table 1 of the Residential Design Codes (R-Codes) and introduced density controls through maximum dwelling numbers, in addition to the use of the R-IC performance standards of the R-Codes.

The intent of the alterations was to provide for a more open and creative framework within which to facilitate development that would accommodate a rising inner city population. It was considered at the time of creation of the structure plan that from 1996 to 2031 there would be projected growth of 4,500 persons in the Central Perth area and a total of 10,100 residents. This formed the basis for the density controls. It is noted that this is not considered to be an accurate reflection of current or projected housing demand.

### Burswood Peninsula District Structure Plan

Following on from the Burswood Station Precinct Development Review process undertaken in 2005, there was recognition by the Town of Victoria Park (the Town), the Department of Planning (DoP), the Public Transport Authority (PTA) and the other key stakeholders in the area that a substantive review needed to be undertaken of the future strategic planning for the entire Burswood Peninsula, inclusive of the area to the north of Great Eastern Highway, extending north to the Swan River, including the Belmont Racecourse and areas east of the railway line and Graham Farmer Freeway. The Burswood Peninsula District Structure Plan (Burswood Peninsula DSP) was created in order to recognise the key inner city location of the Burswood Peninsula and to facilitate the objectives of key State and local planning policies.

The project is to look at opportunities to take maximum advantage of transport and infrastructure provision within these areas to promote sustainability and to provide high quality community and private places for the benefit of residents and the wider community.

The draft Burswood Peninsula DSP, although not intended to be a statutory instrument, establishes the overarching principles and settings within which the further structure planning activities (and indeed structure plan amendments such as this) can be progressed. Due to the complexity of issues involved and significant State investment in the area, the Burswood Peninsula DSP was a planning exercise undertaken collaboratively between by the DoP and the Town in consultation with a large number of stakeholders and service agencies. This Structure Plan amendment request as proposed has been prepared in the context of this document, and is considered to completely align with the scale, intent and strategic direction of the Burswood Peninsula as envisioned within the Burswood Peninsula DSP.

## The Subject Sites - Structure Plan Amendment History

A previous Structure Plan amendment request was lodged with the Town in 2009, and whilst it received support from the DoP the Town refused to approve the application on 24 November 2009. The Applicant subsequently applied to the State Administrative Tribunal (the SAT) for review of the Town's decision.

The Minister for Planning, Culture and the Arts (the Minister) directed the President of the SAT to refer the application for determination pursuant to section 246(2)(a) of the Planning and Development Act 2005 (WA) (the Act) due to the significance of the subject sites. The reasons for determining that the application was refused have been summarised and tabulated below, along with commentary against the reasons noting how the planning framework and context have progressed significantly since the decision by the Minister, and should now be approved.

### Ministerial Determination – Summary and Commentary

The ministerial decision in broad summary came down to one main issue, as follows:

> *(a) Whether approval of the Variation would be premature having regard to:*
>
> *(i) the commencement but non-completion of the structure planning and investigations identified as necessary by the Review and, more particularly, by the draft Framework; and*
>
> *(ii) the planning and investigations underlying the Variation request, including work done for earlier planning documents.*

In addressing the above point, the ultimate decision of the Minister was that the application to vary the Structure Plan was premature in the context of ongoing planning investigations in progress with the Department of Planning and the Town, also in the context of other high profile planning decisions such as the location of the new Perth Stadium and Crown Towers were underway which had the potential to influence the planning and development form of the area.

At the time, the proponent presented the following key arguments which remain relevant to the current proposed Structure Plan amendment:

- Development of the subject land consistently with the constraints currently imposed by the Structure Plan would result in a sub-optimal development.
- The Structure Plan amendment is consistent with relevant regional planning documents, the Review and the draft Framework, particularly in relation to the encouragement of transit oriented developments, and would lead to several desirable outcomes.
- The Structure Plan, the Review, the draft Framework and the Structure Plan amendment request collectively provide an adequate and sufficient overview and consideration of the matters required to be contained and addressed in a structure plan, pursuant to clause 29 of TPS 1.
- The Structure Plan amendment provides the detail required for a structure plan, including in relation to development standards and controls and the effect of development authorised by the Variation on the progressive development of the locality, so that:
  - the Structure Plan amendment will provide the necessary guidance and certainty in respect of the development to occur on the subject land;
  - approval of the Structure Plan amendment would not prejudice progressive development of the locality; and
  - the process under TPS 1 and the Precinct Plan for amending the Structure Plan in accordance with the Structure Plan amendment is appropriate.
- The Precinct Plan expressly contemplates amendments and alterations to, and significant departures from, the Structure Plan.
- The subject sites are distinguishable from other land in the locality in a way which favours its development in advance of other land in the vicinity and prior to the completion of the structure planning and investigations identified by the Review and the draft Framework because:
  - The current planning framework allows for significant alterations to the Structure Plan;
  - The subject sites are in close proximity to the Station;
  - The subject sites have a unique locational relationship with the central area of developed land in the Structure Plan Area;
  - The subject sites comprise a relatively isolated development node because it is located adjacent to:
    - The Burswood Lakes development but separated from it by Bow River Crescent and the Burswood Entertainment Centre by the (former) Burswood Dome site, in respect of Lot 9 and on the western side of Victoria Park Drive; and the Station site and the Perth to Armadale railway line in respect of Lot 9525 and on the eastern side of Victoria Park Drive;
- There is already an established road network servicing the subject land and the immediate locality that is unlikely to be changed by the diversion, or otherwise, of those roads;
- It does not impact on the connectivity and access points between the development sites; and
- The WAPC and the DoP support approval of the Structure Plan amendment.

The Minister in his decision to refuse the previous Structure Plan amendment request noted that some elements such as the traffic analysis were too focussed on the subject site, and that whole of precinct effects were unable to be assessed in the context of surrounding and future development. Cognisant of these concerns, the proponent has addressed precinct wide implications of the structure plan amendments proposed within this report. In addition, the key considerations from the Ministerial decision have been addressed in Table 1 overleaf.

Table 1 - Response to Key Considerations from Ministerial Decision

| Key Considerations of Ministerial Decision | Comment |
|---|---|
| (a) Whether systematic observance of planning procedures and steps is consistent with orderly and proper planning. | The proposed Structure Plan amendment is consistent with the principles of orderly and proper planning – this Structure Plan amendment request has been prepared in accordance with the Regulations, it relates to an operational structure plan and is completely aligned with all State level policies both specifically for the Burswood Peninsula and in more general terms for planning considerations such as maximising the efficiency of developable land while not compromising amenity, and the provision of residential density in close proximity to established public transport nodes. |
| (b) Whether the strategic planning issues for the relevant area have been resolved. | The strategic planning issues for the relevant area to the subject sites have been resolved through the Burswood Peninsula DSP and the resolution of 'big ticket' items such as the decision on the location of the new Perth Stadium and associated infrastructure commitments that provide certainty for major infrastructure assets. Issues that relate to other areas within the Burswood Peninsula such as the areas to the east of the railway line are not considered to be directly relevant to the subject site, given its physical separation and unique characteristics. |
| (c) Whether approval of the Structure Plan amendment is presently consistent with orderly and proper planning. | As noted above, the proposed Structure Plan amendment is 'presently' consistent with the principles orderly and proper planning – this scheme amendment request has been prepared in accordance with the current Regulations, it relates to a current operational structure plan and is completely aligned with all current state level policies both specifically for the Burswood Peninsula and in more general terms. The proposed Structure Plan amendment addresses current planning considerations such as maximizing the efficiency of developable land while not compromising amenity, and the provision of residential density in close proximity to established public transport nodes. |
| (d) Whether I, acting in the public interest, should approve significant variations to the Structure Plan which were the subject of heavy public objections, before the public has had the opportunity to consider and comment upon the draft Framework. | Public comment has been sought, compiled and responded to at the district level strategic planning which was the subject of extensive consultation and lengthy comment periods. Further advertising and consultation will form part of both this structure plan amendment process and any development application that follows. |
| (e) Given that the approval of the Variation at this time would facilitate the early approval and carrying out of the developments proposed by the Applicant, whether the present condition of the Station is appropriate to accommodate that development. | Traffic consultants Flyt have analysed the usage of the station and the related capacity of trains moving to and from the station and have concluded that there is capacity within the train network to accommodate additional passengers from the proposed structure plan amendment. Whilst the PTA have advised that there are no specific station upgrades proposed for the station, the proximity of a large number of residents adjacent to the station will contribute to surveillance and activation of the station, which will maximise the efficiency of the infrastructure and reduce anti social behaviour.<br><br>In addition the access to and from the station to the west will be totally reconfigured subject to study and approval, with a number of access options available through the site to facilitate connection and permeability through to the Crown complex and other residential areas of the Burswood Peninsula. The increased patronage accessing the train station as a direct result of this structure plan amendment will add to the justification for the PTA redeveloping the station sooner (if deemed necessary) to service better the increased catchment utilising the station. |
| (f) Whether approval of the Variation … is consistent with the achievement of transit orientated design objectives. | The development of high density residential development directly adjacent to an existing train station is entirely consistent with the objectives and theory of transit oriented design and planning principles. The concentration of residents and Serviced Apartments patrons, combined with limited parking will encourage the use of public transport – which will also comprise the easiest method of accessing the largest employment generator in the vicinity – the Perth CBD. |
| (g) Whether there is justification in the public interest to fast track the Applicant's development intentions by approving significant variations to the Structure Plan before strategic planning issues in the area have been resolved. | The strategic planning issues raised before as they relate to the subject sites have largely been resolved. The subject sites form a discrete component – one of the last undeveloped pockets of an operational structure plan and the proposed structure plan amendment will bring the existing structure plan into line with the Burswood Peninsula DSP and the residential density aspirations contained within. |
| (h) Whether approval of the Variation at this time is premature. | The approval of the Structure Plan amendment is no longer premature. The new Perth Stadium is nearing completion, planning for the Belmont Park development is nearly complete, The Springs residential development is well underway and the district level planning for the whole peninsula has been completed. This proposal is entirely in harmony both with the surrounding contextual development and also the strategic intent of the district level planning. The issues which made the previous application premature have been resolved and the proposed Structure Plan amendment represents the clear application of orderly and proper planning principles. |



In summary, the key issues of the Ministerial Decision have been addressed with:

- the necessary traffic and urban services analysis have been undertaken;
- planning processes have been far advanced and a high degree of certainty over the development form in the Peninsula has been locked in; and
- large facility and infrastructure commitments have been confirmed and are under construction.

Accordingly, this structure plan amendment can be considered to be orderly and proper planning and thus approved by the WAPC in their capacity as the decision maker for structure plan amendments under the Regulations.

## Structure Plan Amendment Land Description

The Structure Plan amendment applies to land which originally comprised 26 superlots, including super lots 9 and 25, Those two superlots are now described as Lots 9 and 9525 on Deposited Plan 53689 and comprise the Applicant's land ("the subject sites"). Lot 9 has an area of 6,441 square metres and is located on the western side of Victoria Park Drive. It has a street frontage to Bow River Crescent on its northern boundary and is adjoined to the west by the former Burswood Dome site.

Lot 9525 has an area of 5,013 square metres and is located on the eastern side of Victoria Park Drive. It abuts the Perth to Armadale railway line on its eastern boundary and the Burswood Railway Station ("the Station") is located directly to its south.

## Location and Context

Located at the edge of the Town of Victoria Park, the Burswood Peninsula is a development precinct with excellent exposure to the Perth CBD, the Burswood Train Station, the Swan River, Graham Farmer Freeway and the Great Eastern Highway. The community facilities existing within close proximity to the subject sites are summarized below:

- Burswood Train Station.
- Burswood Peninsula foreshore.
- Crown Entertainment Complex (Casino, Convention Centre and Hotels).
- Burswood Park Golf Course.
- State Tennis Centre (Tennis West).
- Restaurants and other eating facilities at the Crown Entertainment Complex.
- Belmont Racecourse.
- Burswood Water Sports Centre.
- The new Perth Stadium (under construction).

Both the train line and Crown Perth entertainment precinct are sources of noise, which can be addressed and have been considered in the design of the development concepts. There are significant other development sites within the Burswood Peninsula area, including the following:

- The Springs development located to the north-east of the Graham Farmer Freeway, which contain a large number of developments either recently completed or under construction with very high densities ranging from Residential R100 to Residential R160.
- Belmont Racecourse, which is a significant landholding on the peninsula, and is currently used for recreational purposes. The development of this strategic site has been under consideration for some time, and it is understood that a current concept is in the final stages of planning that allows for significant residential and other forms of development.

The Burswood Peninsula and Springs development once fully built out are anticipated to add another 20,000 new residents to the area.

### Regional Context

The subject sites are located on the Burswood Peninsula within the Town of Victoria Park, approximately three kilometres east of the Perth CBD and two kilometres from the Victoria Park Town Centre. The subject sites are located in the suburb of Burswood, being surrounded by the suburbs of Lathlain, Victoria Park, Carlisle and East Victoria Park.

A regional centre is located nearby at Belmont in addition to the district centres of Victoria Park, East Victoria Park and Bentley. Neighbourhood centres in proximity include those in Archer Street, Lathlain Place, Orrong Road/Archer Street, Carlisle and Tuckett/Oats Street. East of the Burswood train station is 'The Springs' residential development consisting of high density residential development with small scale neighbourhood centre.

In addition, the existing local strip centre of Rivervale, located along Great Eastern Highway is within walking distance of the subject sites and includes a service station, convenience store, bakery, pizza shop, pharmacy, lotto centre, post office, newsagency and the Empire Hotel. The subject sites have very convenient access to a range of amenities and services within walking distance, or through short trips by private vehicle, bus or train to access higher order goods at the Belmont Regional Centre or Perth CBD.

There are four major industrial/commercial areas within the Regional catchment that provide significant employment opportunities, including the areas of Welshpool/Carlisle, Belmont, the Burswood Road Commercial Area and an area east of the subject sites located between Goodwood Parade and the Graham Farmer Freeway.

*Refer to Figure 1 - Location Plan*

*Refer to Figure 2 - Site Plan*

*Refer to Figure 3 - Aerial Plan*

# Planning Framework

## Zoning and Reservations

### Metropolitan Region Scheme

The subject sites are zoned 'Urban' under the provisions of the Metropolitan Region Scheme (MRS), which identifies land for a variety of urban purposes including commercial and residential development. On this basis, the development concepts would be consistent with the MRS zoning of the sites.

No MRS reservations apply to the subject sites.

*Refer to Figure 5 - Metropolitan Region Scheme Zoning*

### Town of Victoria Park Town Planning Scheme No.1

The subject sites are zoned 'Special Use – Burswood Precinct P2' under the provisions of the Town of Victoria Park Town Planning Scheme No.1 (TPS1). The related Precinct Plan guides the development of the subject sites and forms part of TPS1.

*Refer to Figure 6 – Town Planning Scheme No. 1 Zoning Plan*

It is acknowledged that the development concepts for the subject sites would exceed the residential densities, building height and plot ratio controls prescribed under the Precinct Plan and Structure Plan.

The actual variations that would be required to the provisions of TPS1, the Precinct Plan and the Structure Plan are set out in detail below with corresponding justifications provided.

### Burswood Lakes Precinct Plan P2

The Precinct Plan provides that development within the Special Use Zone is 'to be generally consistent with the provisions of the adopted structure plan, amended from time to time by the Council and Western Australian Planning Commission'. The Precinct Plan includes the variations introduced by the Structure Plan as described in Section 1, Part C of the Structure Plan.

The Precinct Plan includes the following intent and requirements to be met by development proposals:

- Development should acknowledge the prominence of the Burswood Peninsula, with buildings and landscaping of a high visual standard being required.
- Development near the Crown Entertainment Complex should acknowledge the proximity of the complex, the setting of the Precinct as a backdrop to the Swan River and views of the Peninsula from various vantage points.
- New development will contribute to the development of a well-integrated pedestrian network through site layout and building design.
- Public places should be enhanced so that they contribute to a pleasant environment in the precinct.
- The Burswood Precinct should be redeveloped primarily for residential uses with integrated mixed use development west of the railway.

The development concepts for the subject sites are demonstrated to be able to meet the intent and requirements of the Precinct Plan as detailed above, as they propose high quality development with appropriate built form and land uses that reflect the prominence of the location and the unique characteristics of the subject site.



**Land Use**

The use class table within the Precinct Plan indicates that Multiple Dwellings are a "P" permitted use. Shop, Office, Fast Food Outlet and Restaurant are "AA" uses, being subject to advertising and approval at the discretion of Council.

Hotel and Serviced Apartment uses are specifically referenced in the land use table of the Precinct Plan as not being permitted, and under these circumstances it is acknowledged that an amendment to the Precinct Plan and the local planning scheme and will be required should a hotel or serviced apartment use be proposed as part of future development.

The development concepts include some retail floor area, with potentially some other smaller scale entertainment uses complementary to the functions of the site. It is noted that in respect to the development concepts for the subject sites, all suggested uses are permissible with the consent of Council with the exception of the Serviced Apartments uses as noted above.

**Special Control Area**

The subject sites are included within a special control area under the Precinct Plan and are described as the Burswood Lakes Environmental and Geotechnical Special Control Area ('ENV'). The Precinct Plan indicates that development in these areas should take into account the state of remediation. The Precinct Plan notes that development applications are required to provide a geotechnical assessment appropriate for any proposed development, and although not a development application a geotechnical assessment over the subject sites has been previously conducted which notes that the subject sites are considered suitable for development.

**Variation to the Precinct Plan**

The Precinct Plan states that:

> *Development within the Special Use Zone shall be generally consistent with the provisions of a Structure Plan approved and amended from time to time by the Council and the Western Australian Planning Commission. The approved Structure Plan will form the basis of Councils determination of applications for subdivision and development of land within the Precinct.*

The Precinct Plan provides the opportunity for non-complying development to be assessed and considered for approval where a proposal is not in keeping with the development standards of the Precinct Plan, TPS1 or a planning policy.

The Precinct Plan also provides that development, including residential and mixed use, shall be in accordance with the "Design Guidelines for Burswood Lakes" as included in the TPS1 policy manual, which includes performance criteria reflecting the R-IC performance standards of the R-Codes. The R-Codes have been updated sine the adoption of the Precinct Plan, and which state that Residential development in land zoned 'R-IC' is to be assessed under the provisions of 'R-AC3'.

Figure 1. Location Plan

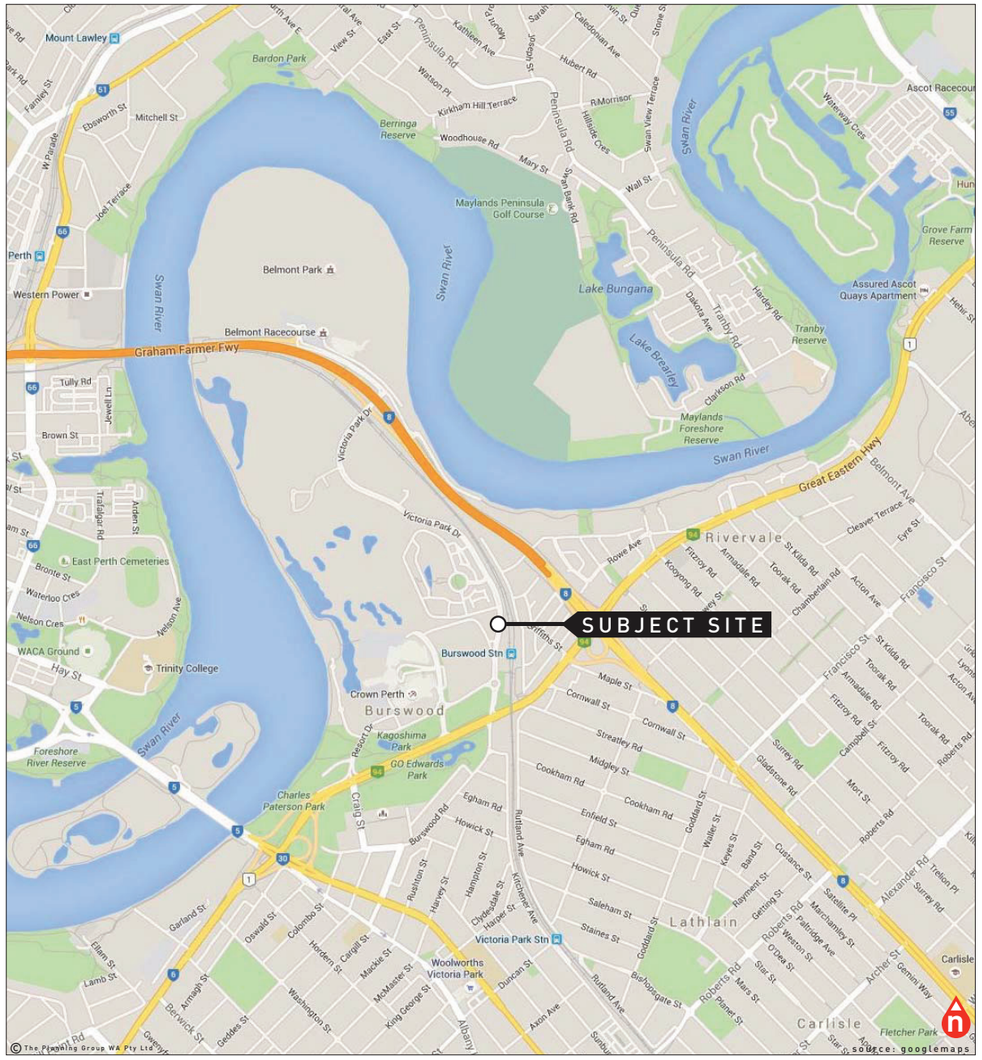



Figure 2. Site Plan

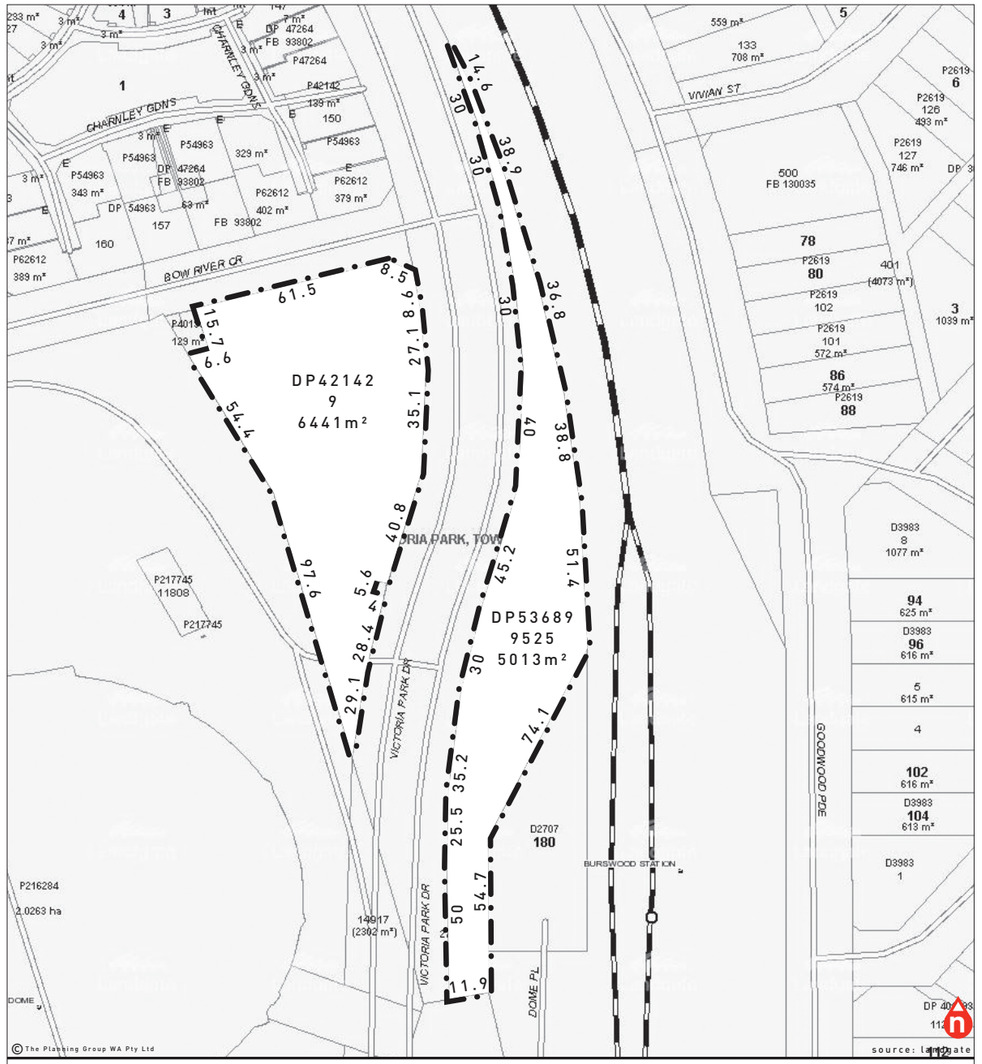
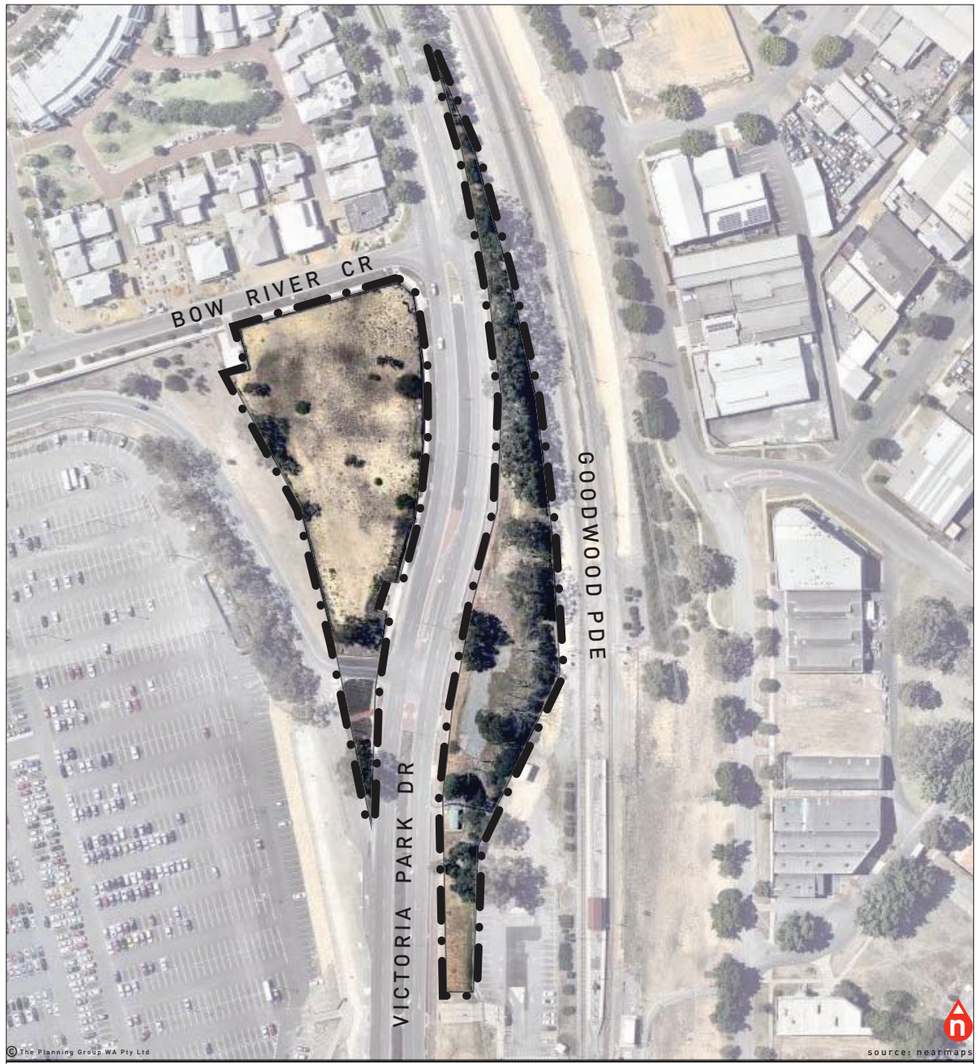
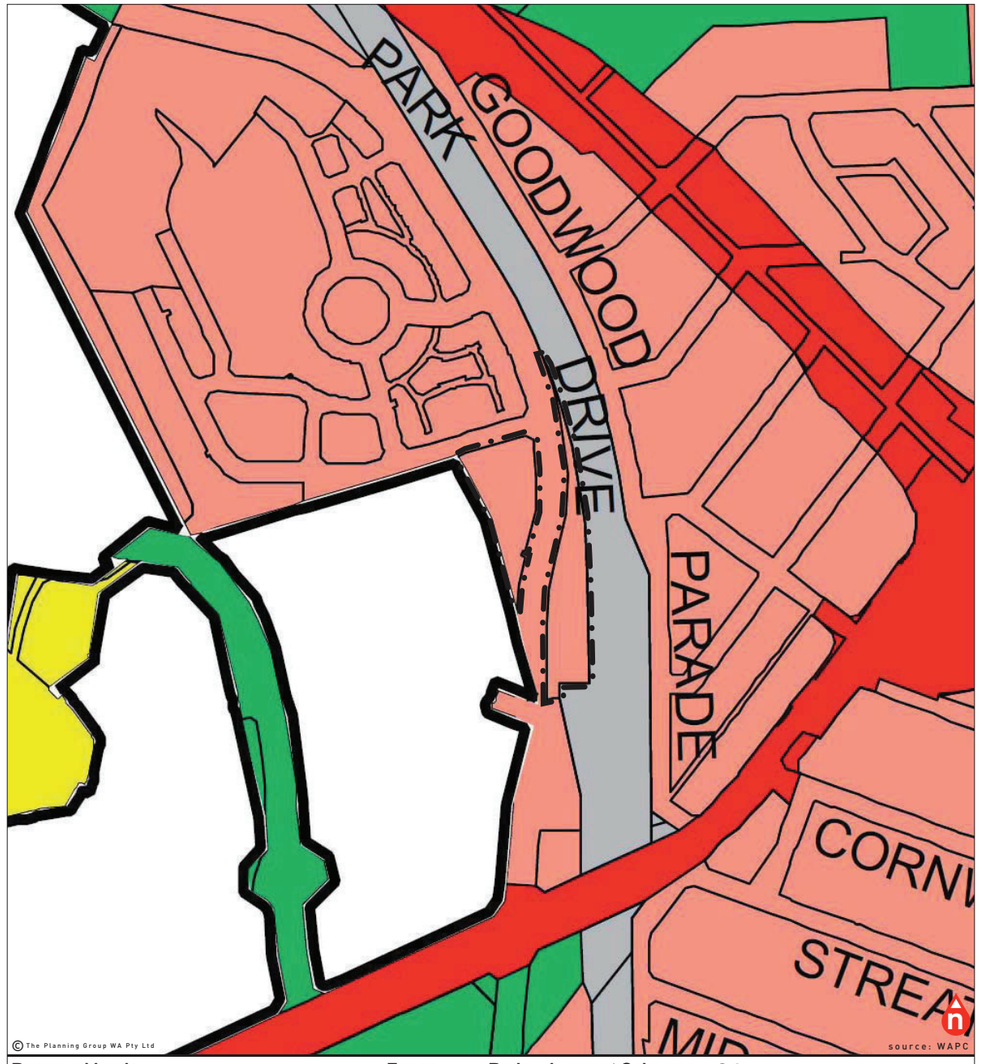


Figure 3. Aerial Plan




subject site

Figure 4. Metropolitan Region Scheme Zoning



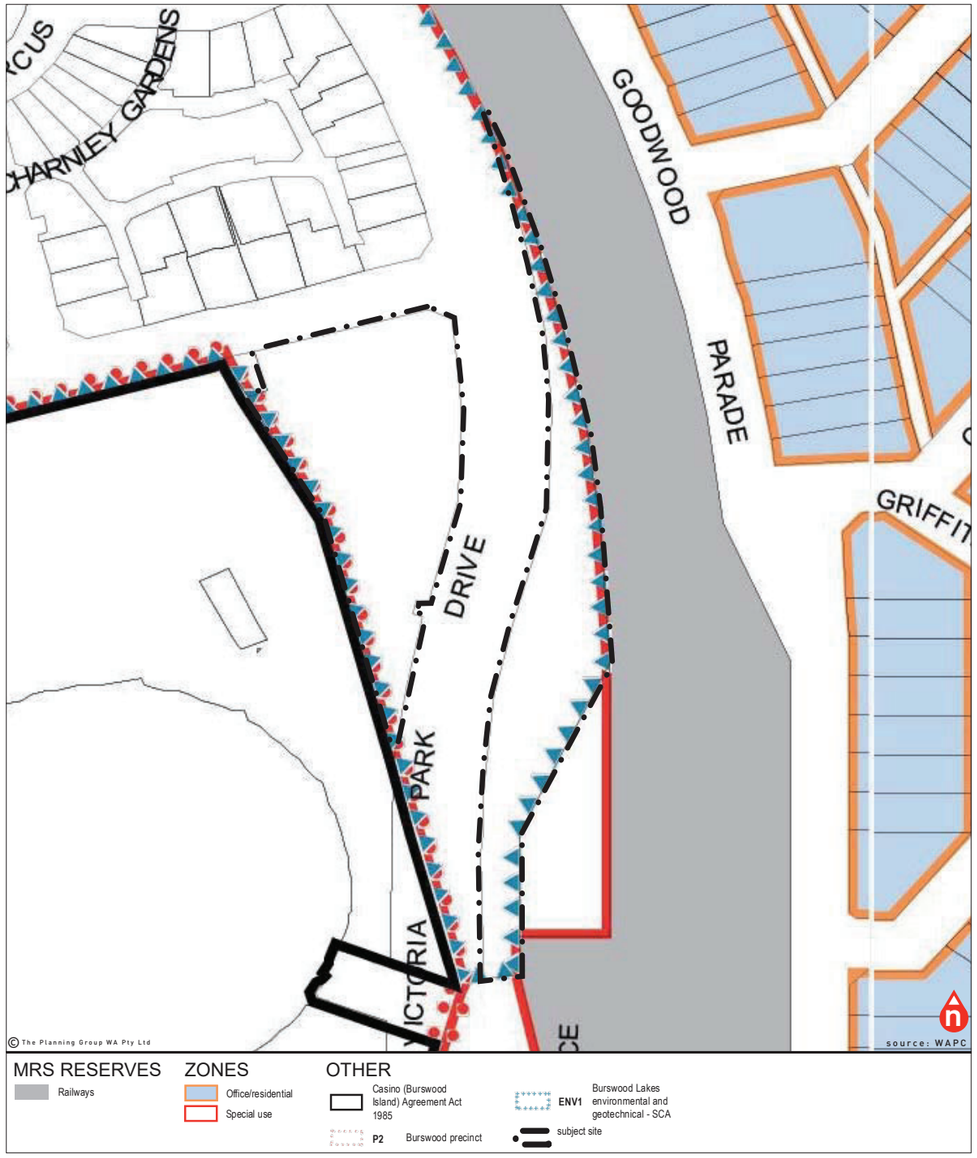

**Reserved lands**
- parks & recreation
- railway
- public purposes
- primary regional roads

**Zones**
- urban

**Redevelopment Schemes**
- redevelopment scheme

**Other**
- subject site

Figure 5. Town Planning Scheme No. 1 Zoning Plan




## Plot Ratio

The Precinct Plan indicates that development of Lot 9 may include residential development having a maximum plot ratio of 1.36:1. The Precinct Plan indicates that development of Lot 9525 may include residential development having a maximum plot ratio of 0.27 for the site in its entirety or 0.91 for the notional 1,500m$^2$ of the site that is suitable for development.

The combined development concepts for both Lot 9 and Lot 9525 have a plot ratio of 3.28:1.

The definition of floor area contained within the Precinct Plan has been utilised to calculate the residential plot ratio area for the subject sites. The total floor area for the purpose of calculating plot ratio for the subject sites is 37,226m$^2$. This gives a plot ratio of 3.25:1 (37,226m$^2$/11,454m$^2$), being in excess of the prescribed plot ratio for the combined subject sites.

In terms of individual lots, the development concept for Lot 9525 based on a plot ratio area of 9,363m$^2$ is 2.3:1. In respect to Lot 9, based on a plot ratio area of 25,780m$^2$ the development concept has a plot ratio of 4.00:1 which are in excess of the current plot ratio noted in the Structure Plan and Precinct Plan.

Justification relating to the plot ratios within the development concepts is later in this structure plan amendment request.

## Building Height

For Lot 9, building height is limited to six storeys and 21 metres under the Precinct Plan. The development concept that supports the proposed Structure Plan amendment for Lot 9 includes two residential apartment buildings being 10 and 24 storeys in height each inclusive of a two storey / four storey podium respectively. The heights of the towers would approximately be 33.0m and 75.0m (or approximately 24m and 60m above the podium level) respectively.

The taller buildings would be surrounded at the street level by lower rise buildings and podiums, which would establish an appropriate human scale and transition to public spaces and streets in the surrounding areas and avoid overwhelming the street. Key to this aim is the creation of 'townhouse' type units on Lot 9 which will reflect the built form and bulk of the adjacent existing residential.

For Lot 9525, building height is limited to five storeys and 17.5 metres under the Precinct Plan. The development concept supports the proposed Structure Plan amendment for Lot 9525 which includes a Hotel / Serviced Apartments apartment building of 16 levels inclusive of a 3 level podium to a maximum height of approximately 48m from Victoria Park Drive or 36m above podium height.

## Density

The minimum site area able to be allocated for development on Lot 9 is 100m$^2$ per dwelling under the Precinct Plan. The development concept for Lot 9 includes 146 one bedroom multiple dwellings having an average site area of 44-52m$^2$, 182 two bedroom multiple dwellings having an average site area of 62-79m$^2$ and 12 three bedroom multiple dwellings having an average site area of 70-75m$^2$. In addition to these apartments there are 13 townhouses proposed with an average area of 120m$^2$. All of the proposed dwellings (with the exception of the townhouses) would have a site area below the minimum 100m$^2$ site area requirement and the total number of dwellings would exceed the limit of 60 dwellings prescribed under the Structure Plan.

The minimum site area able to be allocated for development on Lot 9525 is 110m$^2$ per dwelling under the Precinct Plan. The majority of dwellings have a site area below the minimum 110m$^2$ site area requirement prescribed under the Structure Plan, due to the nature of short term accommodation.

The level of development within the development concepts for the subject sites is considered to be orderly with regard to current State Planning Polices and strategies; however it is at variance with both the Structure Plan and Precinct Plan adopted under TPS1.

## Car Parking

Under the development concept for Lot 9 the total number of car parking bays that would be provided is 371 car parking bays, or 1.05 bays per residential unit. Parking bays would be distributed over the basement level and concealed behind podium levels.

Under the development concept for Lot 9525, 112 bays have been provided for the Hotel and the retail components to both lots. This reduced level of parking supports the underlying premise of the development having good proximity to public transport facilities, encouraging non private vehicle mode share and reducing overall traffic impact on the surrounding street network.

An assessment of the development concept car parking provisions and a comparison with other recently approved developments within the area is provided within the Flyt traffic and transport assessment located at Appendix 2. Note that these car parking levels have been provided to demonstrate feasibility of the built form envelopes, and detailed car parking considerations will form a part of future development applications.

**Burswood Train Station Integration**

The portion of Lot 9525 as noted in Part 1 is required to remain undeveloped and available for the future station redevelopment, including potential for underground access, until such time as future land requirements for the station have been determined by the state government. As the development on the peninsula progresses in line with the approved District Structure Plan, the train station may require expansion and reconfiguration to service the evolving population. A key consideration will be the integration of the station with the surrounding built form fabric, and it is expected that the landowner will liaise with the State Government at the time of development application to ensure that the objectives of the various agencies are addressed.

# Burswood Peninsula District Structure Plan (DSP)

The Burswood Peninsula DSP was finalised in March of 2015, with the long term vision of creating:

*an attractive, vibrant and sustainable urban setting, with a diverse mix of housing, recreation, entertainment, tourism and employment opportunities. The area will have direct access to the city's regional road network, be serviced by high quality public transport, and include the following key elements:*

- high density, contemporary urban neighbourhoods create*d at Belmont Park, Burswood Station and The Springs;*
- *an expanded tourism and entertainment precinct at Crown Perth, including the proposed new six-star Crown Towers Hotel;*
- *a major sporting stadium with access to upgraded public transport facilities and an expanded pedestrian network;*
- *a significant area of new parkland that provides opportunities for passive and active recreation, and adds to the existing network of parks managed by the Burswood Park Board;*
- *new centres of living, employment, retail and hospitality within the walkable catchments of Belmont Park and Burswood railway stations; and*
- *an extended riverine parkland along the shore of the Swan River conn*ected by a high quality network of pedestrian and cycle pathways.

The purpose of the Burswood Peninsula DSP is to *'provide a strategic framework to guide the development of these key projects in the short term, and support the planning, assessment, coordination and implementation of longer term development across the Peninsula'.*

The subject sites are located within the Burswood Station West precinct of the Burswood Peninsula DSP, with the neighbourhood vision of being a *'comprehensive redevelopment of the land formerly occupied by the Burswood Dome and surrounding carpark, Burswood Station West is envisaged as a mixed residential, commercial and entertainment precinct that stitches together The Peninsula and the Crown Entertainment Complex with an upgraded Burswood station'.*

The proposed Structure Plan amendments clearly meet the objectives of this neighbourhood vision, as well as providing the framework that will allow the development of a 'mix of medium to high density residential, office, retail and entertainment within the station's walkable catchment' in line with the aspirations for development listed under Part 5 of the Burswood Peninsula DSP.

Based on the provisions within the Burswood Peninsula DSP, it can be clearly demonstrated that the proposed Structure Plan amendments will not prejudice the future holistic structure planning for the Burswood Station West Precinct (the timing of which is unknown but unlikely to be in the short to medium term). Due to the consistency with the Burswood Peninsula DSP, relative isolation of the subject sites to the remainder of the precinct and advanced stages of development for the remainder of the Structure Plan area, the urban context is well understood. The ability to demonstrate the potential for a significantly improved interface with the Burswood station and surrounds is possible through associated amenity, CPTED and activation benefits.



# Local Structure Plan

## Burswood Lakes Structure Plan

The Structure Plan is the approved structure plan that applies to and sets development standards for the subject sites. These development standards have been incorporated into the Precinct Plan via a town planning scheme amendment.

The Structure Plan specifically identified the development potential of the subject sites as follows:

- Lot 9 has a permitted maximum of 60 dwellings, a maximum of six storeys, building height of 21 metres and plot ratio of 1.36:1. A 1.5 metre setback from the two roads to which the subject sites has frontage is also required.
- Lot 9525 has a  permitted maximum of five dwellings, a maximum of five storeys, building height of 17.5 metres and plot ratio of 0.91 over 1,500m$^2$ (0.27 over the entire site). A 1.5 metre setback from the road to which the subject sites has frontage is also required.

The Precinct Plan and Structure Plan reference variations to the development standards in the R-IC development standards of the Residential Design Codes 2008 (R-Codes). The R-Codes have since been updated and no longer include the 'R-IC' density coding, which has been replaced by the R-AC3 codings applicable to activity centres. Notwithstanding, the Precinct Plan and Structure Plan propose to vary to the provisions of the R-Codes as follows:

- Amendment to the density criteria in Table 1 of the R-Codes with the setting of a maximum dwelling number.
- In the case of Lot 9 the plot ratio requirements for R-IC (now R-AC3) development in Table 1 of the R-Codes.
- Amendments to the R-Code plot ratio provisions.
- Variation to Element 3 of the R-Codes providing alternative car parking standards.
- Variation to building height requirements of the R-Codes.

## Amendments to Development Standards

The requested amendments to existing planning controls that would be required to facilitate the development concepts are depicted in the following Tables 2 and 3 and can be summarised as follows:

- Variation to the plot ratio provisions of the Precinct Plan and Structure Plan.
- Variation to the minimum site area standards for residential development prescribed in the Precinct Plan.
- Variation to the minimum car parking standards prescribed in the Precinct Plan.
- Variation to the building height limits prescribed under the Precinct Plan and Structure Plan.

Table 2 - Lot 9 Planning Control Amendments

| Lot 9 | Current Provisions | Development Concept |
|---|---|---|
| Total Site Area | 6,441m$^2$ | - |
| Current Zoning | Special Use Zone | - |
| Plot Ratio | 1.36:1 | 4.00:1 |
| Plot Ratio Area | 8,760m$^2$ | 25,774 m$^2$ |
| Maximum Storeys | 6 storeys | 24 storeys |
| Maximum Building Height | 21 metres | 75 metres |
| Minimum Site Area per Dwelling | 100m$^2$ | Ranges from 44m$^2$ to 120m$^2$ |
| Total Car Bays | 355.33 | 371 bays |

Table 3 - Lot 9525 Planning Control Amendments

| Lot 9525 | Current Provisions | Development Concept |
|---|---|---|
| Total Site Area | 5,013m$^2$ | - |
| Current Zoning | Special Use Zone | - |
| Plot Ratio | 0.91 on 1,500m$^2$ (Notional residential portion)<br>0.27 over entire site | 2.3:1 (entire site) |
| Plot Ratio Area | 1,365m$^2$ | 11,452m$^2$ |
| Max. storeys | 5 storeys | 16 storeys |
| Max. Building Height | 17.5 metres | 51 metres |
| Min. site area per dwelling | 110m$^2$ | NA Hotel Use |
| Total Car Bays | 298 bays | 109 bays provided |

## Justification for Amendments to Development Standards

The level of development as encompassed within the development concepts for the subject sites is considered to be appropriate with regard to current State level planning policy and strategies; however would be at variance with both the Precinct Plan and Structure Plan as set out above.

In this instance, the variations as encompassed within the development concepts for the subject sites are demonstrated to be appropriate and justified, in light of the following considerations:

- The development concepts would result in a residential population of a level that would complement and activate other uses such as tourist, entertainment, commercial development and public transport within the Burswood Peninsula. This type of new community would contribute to the economic life of not only the Burswood Peninsula but to the broader area and surrounds including the Victoria Park Town Centre and nearby neighbourhood centres.
- The level of development within the development concepts is in keeping with the intent of relevant State Government Planning Policy and would represent orderly and proper planning for the locality.
- The development concepts provide for high quality buildings and landscaping design that acknowledges the strategic prominence of the subject sites within the Burswood Peninsula. Architectural design features incorporated within the development concepts, in conjunction with high quality public realm treatments would establish a positive relationship for the creation of a high quality urban environment, of benefit to both residents and visitors alike.
- Street and lower level interface of the development concepts will provides passive and active surveillance and activation to the street edge.
- The Burswood Peninsula is well served by regional shared path networks. These networks of paths cater to pedestrians and cyclists providing efficient, legible and safe alternative modes of transport. The development concepts will link into these networks. This promotes health benefits and reductions in car dependency.
- A number of buildings in the constructed portions of the Burswood Lakes development have not been developed to the full extent of the approved structure plan provisions. Accordingly, the development provisions specified in this structure plan amendment will provide an opportunity for the Burswood Peninsula to achieve the required population targets envisaged by the original structure planning process within the planned tolerances of road and infrastructure networks. This will act as a catalyst for urban revitalisation and activation.
- The densities as provided within the development concepts satisfy the intent of State planning policy by providing a greater range of housing types and density, satisfying demand for alternative types of housing in light of changing demographics (smaller households, changing culture of being in CBD proximity etc.) in the Perth Metropolitan Region and will add to the range of affordable housing opportunities.
- The provision of high-density apartment housing reduces the ecological footprint of buildings and communities, providing enhanced opportunities for density, diversity and an efficient urban environment. This clustering of people provides for improved efficiency in infrastructure servicing, resources and community facilities, and is a well established Planning Principal.
- The development concepts would contribute to the vitality, amenity, comfort and safety of the public realm and create an improved streetscape. A clear distinction between public and private spaces is provided for whilst active street frontages would contribute to a vibrant and engaging urban environment.
- Currently the Burswood Train Station is relatively isolated and has only a limited residential catchment, with associated issues with anti social activity and crime. The development concepts would be located to provide greater population within a comfortable walk to the train station as well as a residential population overlooking and activating the station areas. This would provide for increased patronage, vitality and a safer pedestrian friendly environment in keeping with the desired outcomes for the Burswood Precinct.
- Occupiers and users of the developments would experience a high level of amenity both within the public realm and by virtue of the high quality architecturally design of the proposed development concepts. The level of density and building height would not adversely impact on the occupiers and users of the development, nor the community at any significant scale.
- The development concepts would not inhibit the development of surrounding lots or adversely impact on the form of future development in the locality, through variation to the current building height and density provisions within the Precinct Plan. This is demonstrated by the well located siting of subject sites in the context of surrounding uses. This is further demonstrated in the development concept shadow analysis. Specific consideration has been given to ensuring that views would be maintained from sites located around the subject sites.
- The future residential community as allowed for within the development concepts would have the benefit of being located in proximity to established services and key infrastructure including adjacent public transport services, employment nodes, recreation areas, entertainment facilities including the new Perth Stadium as well as regional retail facilities in close proximity.
- The development concepts are in keeping with the intent of the Precinct Plan in that they would boast a high level of amenity for occupants in terms of dwelling design, public realm treatment, views, open space and proximity to a range of employment and services.
- The height of the development concepts would be complementary to the scale of visible and approved development in the Burswood Peninsular, Perth CBD and East Perth. Dwellings would have the benefit of commanding significant views to the Swan River and Perth CBD but would have minimal impact on the views of surrounding residents.
- The proposed development framework will allow the towers to be created with a consistent low impact street frontage and set back built form to existing Bow River Crescent residents. A ‘sight line’ approach has been taken where the northern tower has been height limited to lessen the perceived bulk for the adjacent residents.
- The development concepts would contribute to a safe and accessible movement network for pedestrians, cyclists and people using public transport at the adjacent Burswood Train Station. A key consideration of the framework is the integration of planning networks through the subject lots, and the linkages between the subject lots and the built form envisaged by the DSP.

Significant revisions to the framework took place as a result of detailed feedback from the Town’s DRC, with modifications to the built form parameters of the plan - therefore in conclusion the level of development as depicted within the development concepts for the subject sites that can be facilitated through the proposed Structure Plan amendment is considered to represent orderly and proper planning for the locality, and most importantly satisfies the objectives of applicable State and local planning policy.

# Local Planning Policy

### Local Planning Policy 4.12 Design Guidelines For Development With Buildings Above 3 - Storeys.

The Town’s Local Planning Policy, Design Guidelines for Developments with Buildings Above 3 Storeys sets the planning and design framework for development incorporating buildings above three storeys or 11.5 metres in height.

The design guidelines seek high quality designs that respond sensitively to their context and respect current and/or future desired character of the area. A performance approach is adopted under the policy, with emphasis on requiring the design to ‘perform’ by satisfying desired outcomes rather than by meeting a fixed set of standards, that may not reflect particular site circumstances.

The approach differs from the traditional prescriptive approach, providing opportunities for flexibility and innovation.

The primary aim of the design guidelines is to facilitate appropriate design responses, where pressure exists for more intensive development within the Town of Victoria Park. To achieve this, the design guidelines seek to:

- Optimise the development potential of properties in appropriate locations as recommended in the Town’s Urban Design Study.
- Optimise the attractiveness of the Town for quality residential, commercial and mixed use development.
- Contribute to business and economic activity by creating new opportunities for a broader range of businesses to locate in Victoria Park through facilitating larger and higher quality office accommodation integrated with residential and retail development.
- Create new opportunities for diverse residential types and lifestyles close to excellent public transport facilities.
- Achieve buildings that respond appropriately to the Town’s statements of desired future character for any given area, whether these statements call for enhancement of existing character and/or recognition of the heritage of an area, or for the transition to a different character.
- Create appropriately scaled and designed buildings, which contribute to the Town and are sensitive to existing built form.

- Maintain and enhance the spatial qualities and social amenity of the streets, open spaces and parks in the Town.
- Contribute to enlivening the street life of the Town through enhancing the viability of quality retail, restaurants and cafes.
- Promote alternative means of transport through easy access and linkages to the adjacent train station and through to other precincts.

The development concepts for the subject sites are in keeping with and support the objectives of Planning Policy 4.12. The policy includes 10 design elements, which include the following:

1. Site Planning
2. Streetscape
3. Building Appearance and Neighbourhood Character
4. Private Open Space
5. Communal Open Space and Publicly Accessible paces
6. Resource Efficiency
7. Safety and Security
8. Privacy
9. On-site Parking and Access
10. Site Facilities

The detailed provisions for each of the Design Elements are the same as those included in the Town's Planning Policy 3.15 - Design Guidelines for Burswood Lakes. The proposed Structure Plan amendment addresses the above requirements at a structure planning level, with detailed design considerations to be addressed as part of future development application processes.

## Planning Policy 3.15 Design Guidelines for Burswood Lakes

The Town's Planning Policy 3.15 – 'Design Guidelines for Burswood Lakes' set the planning and design framework for all development within land zoned 'Special Use' under the Precinct Plan, and applies to all forms of development including residential and mixed use developments.

The design guidelines seek high quality design that responds sensitively to local context and the current and/or future desired character of the area. A performance approach is included in the design guidelines, where the emphasis is upon requiring the proposal to perform by satisfying desired outcomes rather than by meeting a fixed set of standards.

The design guidelines include the following elements, which are to be addressed in the design of development within the Burswood Lakes Precinct. They are the same as those included in the Local Planning Policy 4.12 mentioned above. The architectural concepts prepared by Elenberg Fraser Architects indicatively shows how these elements might be addressed for the subject sites, noting that detailed development plans will form part of any future development application for the subject sites.

Key elements of the development review included a mixed-use commercial, higher density residential and tourist development, a rail station upgrade and a new town centre. While creating a new urban focal point for this precinct, the development's presence to the north links into the neighbourhood created by the existing residential developments of the Burswood Peninsula Precinct. The developments concepts for the subject sites would play an important role in linking the residential Burswood Lakes development, with future potential developments adjacent to or located on the previous Burswood Dome site and those associated with the PTA land with the Burswood Railway Station.

The design approach to the development concepts represents a hierarchy of scale and massing that reflects the diversity of the urban fabric in this locality.

### Resource Efficiency

The intent of this element is to adhere to the principles of ecologically sustainable development by incorporating features which limit the use of fossil fuels and natural resources and reduce greenhouse gas emissions over the life of the development and to encourage and maximise public transport patronage within the 800 metres walkable catchment of the Burswood Train Station. The subject sites abut or are approximately 100m from the Burswood Train Station. The co-location of density is a catalyst for introducing amenity, security and a community feel.

### Safety and Security

The intent of this element is to provide personal and property security for occupants and visitors and enhance actual and perceived safety.



The development concepts have been designed so as to ensure that passive surveillance is possible through the observation of apartments on the adjacent streets as well as over podium spaces. In addition the street side and pedestrian thoroughfare activation would establish a significant level of activity related to pedestrian traffic going to and from the railway station as well as the proposed restaurant, foyers and convenience stores on Lot 9525 and through to Lot 9. The development concepts provides for a high level of street side lighting, clear vistas and a clear vehicular environment. Townhouses situated along the street as well as the apartments in the towers would have secure entrances through foyer spaces accessed off generous activated pedestrian spaces. Access to the podiums would also be secure, including access to all parking spaces. Conversely this urban fabric will also create an inviting feel to the pedestrian at a street level enahanced by through block connectivity to other precincts.

### Privacy

The intent of this element is to site and design buildings to meet projected user requirements for visual and acoustic privacy for nearby residents in their dwellings and private open space.

The design of the apartments within the development concept for Lot 9 has been cognisant of overlooking and privacy both internally and to existing and potential future developments on nearby and adjoining sites. The entrance foyers and circulation cores have been established in relation to different grouping of apartments around the site allowing for both security and privacy. Access to these cores would also be available from the podium and basement parking.

The design of the Hotel / Serviced Apartments within the development concept for Lot 9525 has been cognisant of overlooking and privacy both internally and to existing and potential future developments on nearby and adjoining sites. The entrance foyers and circulation cores have been established to allow for both security and privacy. Access to these cores would also be available from the podium and basement parking. A separate foyer would also be provided for the office tenancies, separating residential and commercial functions.

### Onsite Parking And Access

The intent of this element is to ensure appropriate provision of secure and accessible on-site parking and access for occupants and visitors. The development concepts for both sites incorporate adequate car parking bays generally within basement and podium levels as described previously.

### Access and Interface to Burswood Train Station

Initial analysis established a need and opportunity for a significant route from the Burswood Lakes development and the Crown Entertainment Complex to the railway station. In response to this analysis the project architects Elenberg Fraser have developed a number of options and forms that these linkages might take. Whilst the detail is a matter for future development applications that will respond to the Burswood Station in any form, the architectural concepts demonstrate how the requirements for clear, legible and universal access can be easily accommodated within the subject sites, as part of a Development Application.

One key element of the site access is the integrated 'through site' linkage depicted on Lot 9. This linkage serves a number of purposes - it will provide a sheltered pedestrian route through the site, it will create a retail edge and focal point and it will create an activated zone from which lobby access will be taken for the residential towers above.

Recent discussions with the PTA have guided the design of the development concepts and its future positive relationship with the Burswood Station. Though however the PTA noted that there were no short term plans to upgrade the Burswood Station in any significant capacity. The proponent is confident of achieving a positive outcome through design and collaboration with the PTA, the DoP and other stakeholders. The proposed development concepts and structure plan amendment allow the flexibility to respond to changes in the station form into the future if required. As noted previously the increased patronage of the station delivered through the proposed Structure Plan amendment will likely lead to a more rapid redevelopment of the station itself catalysed by the increased usage.

## Planning Policy 5.1 - Car Parking and Access

The Local Planning Policy 5.1 - Car Parking and Access (Parking and Access Policy), provides that car parking for residential purposes is to be provided in keeping with the relevant standards of the R-Codes. Car parking provision is addressed under the Transport, Transport and Movement Section of this report. An alternative parking rate to that specified under the Precinct Plan is utilized for the development concept for Lot 9525 and is justified in order to encourage public transport uptake.

The Parking and Access Policy provides guidance relating to access arrangements, the requirements for which are satisfied as follows:

- The number of entry points to both Lot 9 and 9525 would be limited. Vehicular access to Lot 9525 will be via a crossover with full movement access onto Victoria Park Drive, and for Lot 9 a primary access has been provided onto Victoria Park Drive, with the potential for a scondary limited access onto Bow River Crescent. The crossover locations have be located so as to limit potential traffic hazard, disruption to dual use paths and possible nearby future developments.
- Traffic circulation and manoeuvring spaces within parking areas have been designed so that vehicles are able to enter and leave in a forward direction and are able to queue, if necessary, within the parking area and not on the street.
- Circulation within the parking areas for both sites would be separated from pedestrian and cyclist paths. Driver sight lines would not be obstructed by signs, fencing or any other obstacles.
- Car parking design as provided for in the development concepts would be in keeping with the design standards of the Parking and Access Policy, as well as the relevant Australian Standards where appropriate.

*Refer to the Traffic, Transport and Movement section below for additional information.*

# State Level Planning Policy

## Statement of Planning Policy No. 3 – Urban Growth and Settlement

State Planning Policy 3 - Urban Growth and Settlement (SPP3) provides high-level objectives relating to the desired pattern of urban development in the State. SPP 3 provides the following objectives being of particular relevance to the development concepts for the subject sites, including:

- To build on existing communities having established local and regional economies, concentrating investment in the improvement of services and infrastructure and enhancing the quality of life in those communities.
- To manage the growth and development of urban areas in response to the social and economic needs of the community in recognition of relevant climatic, environmental, heritage and community values and constraints.
- To promote the development of a sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and convenient access to employment and services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.

The current pattern of metropolitan development has produced car-dependent communities that experience a significant lag in the timing of infrastructure, service provision and the establishment of employment opportunities in activity centres. It is well established that this is detrimental to economy and health.

The development concepts for the subject sites would present an opportunity to provide alternative housing options where future residents would benefit greatly from the range of employment, services, shopping, entertainment and sustainable transport opportunities in the locality. The development concepts would have the added benefit of reducing future burden on the regional transport network, limit growth in carbon emissions and minimise reliance on private vehicles to access the majority of employment, goods and services required by future residents and occupants.

## Statement of Planning Policy 3.1 – Residential Design Codes (2015)

The Burswood Precinct Plan P2 provides that the development of the subject sites should be in keeping with the provisions of the R-IC development standards of the Residential Design Codes (R-Codes), with the exception of any variations made by the Precinct Plan. The R-IC provisions of the R-Codes have subsequently been replaced with R-AC3 provisions.

Specific provisions of the R-IC (R-AC3) standards include performance criteria to be satisfied by the development with respect to specified design elements including the following:

- Housing Density and Built Form (varied under the Burswood Lakes Precinct Plan).
- Streetscape.
- Boundary Setbacks.
- Open Space.
- Site Levels.
- Height and Bulk.
- Privacy.
- Design for Solar Access.
- Vehicle Access and Car Parking (varied under the Burswood Lakes Precinct Plan).
- Incidental Development.

The Design Guidelines for Burswood Lakes incorporate criteria that reflect these performance criteria of the R-Codes in a more elaborate form. Local planning policy also provides residential design and car parking and access criteria.

## Development Control Policy 1.6 - Planning to Support Transit Oriented Development

This policy seeks to maximise the benefits of an effective and well used public transit system to the existing and future community by promoting planning and development outcomes that will support and sustain public transport use only possible with sufficient patronage and scale. This will achieve the more effective integration of land use and public transport infrastructure.

Key objectives and statements identified in the policy of most relevance to the subject sites include:

- Residential development and other forms of appropriate higher density development such as Serviced Apartments accommodation should be encouraged close to transit facilities, to help in creating a sense of place that makes a Transit Oriented Development (TOD) precinct more than just a place where transit is available, giving places an individual identity within the urban fabric.
- Higher density development and Serviced Apartments accommodation place greater numbers of occupants and residents close to transit services, increasing the potential for those occupants and residents to look to transit as a travel option, with a corresponding increase in patronage.
- Streetscapes should include features that will help to promote walking by improving the general level of amenity along pedestrian routes to and from the transit facility. Climate moderation in the form of verandas, canopies and arcades, and landscaping, will help to increase the level of comfort for pedestrians and the likelihood that people will see walking to the transit stop as an attractive option. Well-lit pedestrian routes and waiting areas are also essential for convenience and safety.

The development concepts for the subject sites would directly support the objectives and intent of Development Control Policy 1.6 as detailed below:

- The development concepts would provide for a greater density and diversity of residential dwelling types and Serviced Apartments accommodation located within very close proximity of the Burswood Train Station. This would have a two fold benefit in that it would generate a demand for the use of the existing transit infrastructure and services and make it easier to plan and efficiently operate public transport services, and in turn the occupants and residents benefit from their proximity and accessibility to excellent public transport.
- DC Policy 1.6 states that “within existing developed areas, there are clear opportunities to intensify existing activities and to promote new uses that will make better use of transit facilities and services.” The subject sites have outstanding access to the Burswood Train Station and bus services along Great Eastern Highway. It is considered that the development concepts would present an outstanding opportunity to provide for higher density development on sites that are currently undeveloped and greatly detract from the amenity of the greater Burswood area.
- The development concepts would provide for improved amenity along Victoria Park Drive, which provides an important pedestrian route for people to access the Burswood Train Station. This would in turn provide for increased surveillance and activity along this route, which would promote walking by improving the general amenity of this area. The development concepts would provide for increased activity and vitality within an area that currently has only very limited opportunities for passive surveillance.



## Directions 2031 and Beyond (Directions 2031) and the Central Metropolitan Perth Sub-regional Strategy (Sub-regional Strategy)

Directions 2031 and Beyond (Directions 2031) estimates that the population of the Perth Metropolitan Region will have grown to 2.2 million within the next 20 years. To mitigate some of the negative impacts of continued urban expansion (urban sprawl), Directions 2031 has set a target to accommodate 47 percent of that new growth as infill development within existing urban areas. The State Government recently released the Central Metropolitan Perth Sub-regional Strategy which sets out eight strategic priorities to achieve Directions 2031 targets. The Sub-regional Strategy covers 19 central metropolitan local government areas and estimates that the sub-region is capable of accommodating an additional 205,000 people in 121,000 new homes. This assumes an average of 1.7 people per household and a reduction in dwelling size from the current Western Australian average of 244 square metres.

Rather than adopting a blanket approach to increased population and housing densities, Directions 2031 and the Sub-regional Strategy have targeted growth in key activity centres and activity corridors. The proposed Structure Plan amendments facilitate infil development in established district already supported with road networks, public transport and established infrastructure.

### Population and Housing

The Sub-regional Strategy has identified Burswood Peninsula as one of the key “Planned Urban Growth Areas” within the sub-region, estimating that the area has the capacity to support 5,400 dwellings housing over 9,000 residents. Since the release of the Sub-regional Strategy, more detailed planning of the Burswood Peninsula as noted within the Burswood Peninsula DSP has confirmed that the area has even greater potential to accommodate up to 12,500 dwellings and a population of approximately 20,000 residents is now considered appropriate.

This additional capacity is considered achievable due to:

- the proximity of the area to high order road and rail infrastructure
- the accessibility to the Perth city centre
- the Swan River and substantial public parklands; and
- the ability to achieve higher residential densities without impacting on existing lower density neighbourhoods.

The development forms allowed by the proposed Structure Plan amendments will assist in meeting these revised development targets in a high quality transit oriented precinct.

## Traffic, Transport and Movement Assessment

Consultant transport engineers Flyt have prepared a traffic impact statement to access and provide support for the development concepts for the subject sites. The statement has been prepared in consultation with relevant State and local government agencies, including Main Roads WA and the Town. The assessment work is based on the extensive experience of Flyt with transport analysis in the Burswood Peninsula, and the work has been has been prepared largely in accordance with the Western Australian Planning Commission(WAPC) Transport Assessment Guidelines for Developments (August 2006) Volume 4 – Individual Developments. In broad terms, the assessment aims to establish the traffic generation of the development concepts, to assess the operations of the crossovers for each potential development on Victoria Park Drive, and to identify, if required, any traffic management measures, which may be necessary on the immediately adjacent road network.

The traffic assessment undertaken concludes that the access arrangements for the development concepts are appropriate and raise no issues of concern.

The outcomes and recommendations of the assessment are summarised below:

- The traffic generated from these sites reflects only 5% of the traffic generated from this area of the PACE model in the forecast year of 2031. In the context of that extensive forecast year modelling exercise, the attribution of impact to the land use proposed for these sites is minimal;
- The proposed development has a residential car parking provision rate that is much lower than any other recent major residential development or structure plan in this area already approved by JDAP decision or the Town of Victoria Park. This

will directly result in reduced private vehicle usage and promote greater use of public transport and walking/cycling modes;

- All local intersections and access points function to a high degree during forecast 2018 AM and PM peak periods assessed;
- The proximity of the site being directly adjacent to the Burswood Train Station will encourage non private vehicle trips to be made;
- There is a range of frequent bus services running along Great Eastern Highway that provide access to destinations around the Perth Metropolitan Region via the Causeway East Interchange;
- There are excellent cycling and pedestrian facilities adjacent to the site which will provide for cycling and walking trips;
- Improvements and alterations to the local street network will be progressively introduced by State and Local Agencies resulting in a higher level of access for vehicle and public transport trips; and
- Provision of detailed design elements for the site, including integration with the existing Burswood Station infrastructure, would be subject to subsequent development approval processes.

Importantly, the reporting concludes that the 'impacts of the proposed development on the Structure Plan area and the adjoining transport network are minimal. Moreover, the reduced residential parking levels proposed and the proximity to the Burswood Station will result in fewer vehicle trips being generated in comparison to existing or proposed developments within the Burswood Peninsula location'.

*Refer Appendix 2 – Traffic Impact Assessment (Flyt)*

## Retail Component

A number of smaller retail tenancies are proposed in the development concepts for the site, primarily to service the needs of the residential and Hotel / Serviced Apartments population. Whilst there is no intention to provide a supermarket scale retail development, there is demonstrated demand for smaller convenience and specialty retail which will provide for the daily needs of the local residential population. The proposed retail component offers a number of advantages:

- it will activate and provide passive surveillance to the pedestrian linkages, and in particular the 'through block' connection to Lot 9.
- it will remedy an existing identified deficiency within the Structure Plan area whereby the daily and specialist retail needs of the local population are not being met within a walkable catchment; and
- The retail will complement the passing pedestrian flow from the Crown complex to the station.

## Infrastructure coordination and servicing

Wood & Grieve Engineers were commissioned to provide an Engineering Servicing Report (ESR) to assist with this structure plan amendment. The contents of the ESR report are based on the indicative building yields and development usage for lots 9 and 9525 Victoria Park Drive Burswood.

The servicing investigations have been undertaken to establish the availability of the existing services infrastructure in the area and their capacity to service the proposed development. Where the existing infrastructure have been identified as potentially insufficient to meet development demands, infrastructure extensions and upgrades have been identified. The following advice is based on discussions with the Town of Victoria Park and the service authorities operating in the area. The following commentary has been extracted from the ESR document.

### Water

#### Existing Infrastructure

The existing water supply infrastructure near Lots 9 and 9525 consists of a 150mm diameter water reticulation main running north of Lot 9 in Bow River Crescent and within Victoria Park Drive between lots 9 and 9525.

#### Supply Requirements

The Water Corporation has advised that supply of water to Lots 9 and 9525 can be made via a direct connection to the existing 150mm diameter water reticulation main in Victoria Park Drive. It is anticipated that the water pressure in the Water Corporation mains are unlikely to be of sufficient pressure to satisfactorily provide water to any of the buildings. The ESR recommends that each building should allow suitable pumps and tanks for domestic water supply and fire fighting purposes.



### Wastewater

#### Existing Infrastructure

Lot 9 currently has a connection to 225mm diameter uPVC gravity wastewater reticulation main within Bow River Crescent. Lot 9525 has a connection to 225mm diameter uPVC gravity wastewater reticulation main within Victoria Park Drive. A plan showing the existing wastewater infrastructure is provided in Appendix 1 (Wood and Grieve Servicing Report).

#### Connection Requirements

The Water Corporation has advised that the existing wastewater reticulation network is capable of servicing the proposed development and expect this capacity to be available for the next five to ten years. Following the Water Corporations recent review of the Burswood Peninsula they are intending to reinforce the existing wastewater network with new pump stations as development in the area intensifies.

The Water Corporation require all three buildings are required to have separate connections to the 225mm diameter uPVC wastewater reticulation main.

### Power

#### Existing Infrastructure

An analysis of Western Power's existing infrastructure (refer Appendix 1 of Wood and Grieve Servicing Report) has been conducted in order to determine the existing power supply configuration surrounding the development. The existing Western Power network surrounding Lot 9 consists of existing 22kV underground cable that runs along the western side of Victoria Park Drive, supplying an existing switchgear. The existing parcel of land does not appear to have an existing Western Power point of connection however there is a pillar in Lot 164 adjacent Lot 9's north west corner along Bow River crescent.

Lot 9525 has 22kV high voltage underground cables running through the lot as well as 22kV high voltage cable running adjacent to the lot on the eastern side of Victoria Park Drive. This lot appears to have a current Western Power point of supply. The 22kV feeders originate from the Rivervale Zone substation on Streatley Road, Rivervale roughly 500m away. Street lighting is installed along Victoria Park Drive via double outreach poles down the median strip.

#### Initial Conceptual Solutions

Based on the current maximum yield within the development concepts, we have estimated the maximum demand load to be in the order of 2.72MVA which is based on the standard Western Power ADMD (after diversity maximum demand) load allocation for the region.

On this basis Lot 9 would require one authority owned switchgear and two authority owned 1000kVA transformers to reticulate the distribution system throughout the proposed lot. Lot 9525 will require one switchgear and one 1000kVA transformer. The existing point of supply will also need to be removed.

It should be noted that due to the dynamic nature of Western Power's network, infrastructure requirements and connection points referred above may differ when applications are placed in the future. The ESR recommends that a feasibility study be conducted closer to the date of proposed load uptake to determine if the existing network has the capacity to take on the development load. The charges and time frames for a feasibility study are determined on a case by case basis however a fixed price agreement will be made prior to any design work commencing. The proponent acknowledges these servicing requirements and further studies and analysis are anticipated.

## Developer Contribution Arrangements

Liaison with the Town and the DoP indicated that Developer Contributions would be a matter that would be considered as part of any Structure Plan amendment process. The applicant is of the view that the original development of the Burswood Lakes Structure Plan incorporated the creation of roads and common infrastructure to service all of the lots that form part of the greater Structure Plan area. As such it is considered that the development of the precinct has already included/anticipated significant developer contributions, which have been reflected in the purchasing price of the lots in the private transfer to the current owner.

In any event, a developer contribution scheme over the subject sites would require the resolution of broader contextual issues on the Peninsula, and would be an extremely complicated document to produce and ensure that it remains equitable to both future and existing or approved development.

Given the above and the fact that there is no developer contribution scheme currently in operation or under development by the Town for this area, it is considered that no developer contribution would be appropriate for development on this site.

# Geotechnical Conditions

Golder Associates undertook a preliminary geotechnical investigation and preliminary acid sulphate soils investigation for the subject sites as part of the previous structure plan amendment application in 2008, with the aim to obtain sufficient geotechnical and acid sulphate soil information to establish that the site conditions would be suitable for the residential and any more detailed studies (if required) can be completed at development application stage.

The outcomes of the investigations are summarised below and the full reporting can be provided upon request.

## Geology

The area is underlain by two geological units. These are described as:

- Sand – pale and olive yellow, medium to coarse grained, subangular to subrounded quartz, trace feldspar, moderately sorted and of residual origin.
- Clay – moderate to dark grey, soft, saturated, prominent, 0.2 m thick with oyster shell bed near surface being of alluvial origin.

## Subsurface Conditions

The subsurface conditions of the subject sites are as follows.

### Lot 9

- Fill: Sand (SP), – generally medium dense to dense but very dense in zones, find to coarse grained, dry into moist, brown yellow and black, silty in part, containing minor gravel and cobbles, typically extending from the surface to depths of 2.0 to 3.75 metres; overlying
- Sand - medium dense becoming dense to very dense with depth, fine to coarse grained, moist extending to depths ranging from 14.0 to 17.0 metres; overlying
- Clay/Sandy Clay – stiff to very stiff occurring in lens up to approximately 1.5 metres thick between the depths of 14 to 16.8 metres; overlying
- Sand - very dense, present to depths of up to 20.0 metres; overlying
- Clayey Sand/Sand - generally medium dense but loose in zones, probably cemented, present to the maximum investigated depth of 31.2 m.

### Lot 9525

- Fill: Gravelly Sand (SP) Sandy Gravel (GP), – generally medium dense to dense but very dense in zones, find to coarse grained, dry into moist, brown yellow and black, silty in part, containing minor building rubble and cobbles including some pavement materials, typically extending from the surface to depths of 0.5 to 1.2 metres; overlying
- Sand - medium dense becoming dense to very dense with depth, fine to coarse grained, moist extending to depths ranging from 14.0 to 15.5 metres; overlying
- Clay/Sandy Clay – stiff to very stiff occurring in lens up to approximately 1.0 metre thick between the depths of 14 to 17.8 metres; overlying
- Sand - very dense, present to depths of up to 20.0 metres; overlying
- Clayey Sand/Sand - generally medium dense but loose in zones, probably cemented, present to the maximum investigated depth of 25.2m.

## Groundwater

The Perth Groundwater Atlas (1997) shows the maximum groundwater level varies from about RL 2.5 metres AHD. This is within about 8.5 to 10.5 metres below the current ground surface on the subject sites.

Groundwater was encountered in three of the ten holes left after extraction of the CPT probe at depths ranging from 8.4 to 9.7 metres. These depths correspond to approximate elevations of RL 2.6 metres AHD and RL 1.3 metres AHD. Groundwater was not intersected in the boreholes to the depth drilled on 7.5 metres.

## Acid Sulphate Soils

Field screening test results from the preliminary Acid Sulphate Soils (ASS) assessment indicated a low probability of Potential Acid Sulphate Soils (PASS) being present across the subject sites. Laboratory testing confirmed that neither Actual Acid Sulphate Soils (AASS) or PASS were present within the soil samples analysed during the preliminary investigation. Isolated pockets of potential non-sulfidic acidity were detected in near surface soils, however these materials have pH in the order of 9.4 to 11.7 and contain significant buffering capacity and therefore lime treatment of these soils would not be considered to be required.



## Geotechnical Conclusions

As a result of the investigations no constraints to development of the subject sites were identified. Specific conclusions are provided below:

- Based on the results of the investigation it is considered that the likely building loads could be supported on a system of shallow pad and strip footings or a shallow raft footing or a combination of both types of footings. The most appropriate type of footing to use would depend on the columns spacing and the load applied.
- It is not expected that deep piled footings would be required to support the loads unless highly concentrated loads over and above what is normally associated with the types of structures as suggested apply.
- Excavation should be readily achieved using conventional earthmoving equipment. Given the expected depth of excavation, temporary and permanent retaining structures would be required to retain the basement excavations.
- Given the relatively uniform conditions encountered during the investigations, the risk of encountering acid sulfate soils during future site development would be considered to be low. On this basis, further ASS investigation would not be considered to be warranted and an ASS Management Plan would not be considered to be required to support future development.

# Accoustic Report

Gabriels Environmental Design undertook a preliminary accoustic and vibration investigation and analysis for the subject sites. The analysis concluded that in terms of the control of environmental noise intrusion, it is evident that acoustic glazing will be required to the various facades dependent on the type of occupancy, the size of window, and orientation of the window to the road and rail line.

In terms of Vibration Control: Lot 9525 is located close to the Rail line and preliminary measurements indicate that vibration control will be required in this building. Lot 9 is located at greater distance from the rail line and therefore the preliminary vibration measurements indicate that vibration control is not as important on this site.

Detailed noise and vibration measurements will need to be carried out early in the Development Approval stage of the project to inform the design in terms of acoustic and vibration requirements.

The requirements of the Building Code of Australia are set out in the report contained at Appendix 4, and the analysis notes that the outcomes can be acheived can be achieved using a wide variety of construction systems and are not an imediment to development.

# Technical Studies Appendices Index

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# Appendix 1 - Flyt Traffic Analysis

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# Appendix 2 - Servicing Report

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# Appendix 3 - Acoustic Report

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# Appendix Three

## Traffic Modelling Statement


mirvac

ROWE GROUP DESIGN

Hames Sharley

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| | |
|---|---|
| **Technical Note** | SIDRA Intersection Modelling Victoria Park Drive |
| **Project** | Revised Burswood Lakes Structure Plan |
| **Date Issued** | 5 April 2022 |

## EXECUTIVE SUMMARY

A detailed assessment of the movement network surrounding the Burswood Lakes Structure Plan area was undertaken as part of the development of the Burswood Peninsula District Structure Plan (BPDSP), which was published in March 2015. Traffic modelling assessed the capacity of the road network to accommodate land use changes proposed under the BPDSP, and interventions (new roads, road widening, modification to traffic light signal phasing) were proposed to ensure the road network could accommodate the increased development planned within the Burswood Peninsula. The traffic modelling assumed a total yield of 1,250 dwellings for the Burswood Lakes Structure Plan area.

In 2017 the WAPC approved an amendment to the Burswood Lakes Structure Plan covering Lots 9 and 9525 (25) Victoria Park Drive. The amendment increased the density of potential developments within Lots 9 and 9525 by a total of 496 dwellings. Traffic modelling undertaken for the BPDSP was updated to reflect the increased dwelling yields. The modelling concluded that traffic generated by the increased dwelling yields could be accommodated within the existing road network.

As part of the review of the Burswood Lakes Structure Plan, Flyt have undertaken further traffic modelling to assess the local impacts of the proposed increased residential dwelling yields on Mirvac's undeveloped lots. This has involved SIDRA Network modelling of Victoria Park Drive and the three local road intersections (Bow River Crescent, The Circus and Vasse Rise) and an assessment of the mid-block capacity of the local roads within the Burswood Lakes Structure Plan area.

The forecast daily traffic volumes on local roads within the Burswood Lakes Structure Plan area which resulted from this modelling are all lower than the original forecasts from 2002 (which used a trip rate of 10 vehicle trips per dwelling). The trip rates used in this assessment have been verified against the existing trip generating behaviour of the Burswood Lakes Structure Plan area, based on traffic counts (from November 2021) and the known number of dwellings (as at September 2021).

The traffic modelling determined that the existing road network is able accommodate the traffic volumes associated with full build out of the undeveloped lots.

Flyt also considered road safety by assessing the intersection and midblock crash history of local roads and intersections. The reviewed crash data did not indicate any road safety issues within the local road network or the surrounding higher order roads.





## 1. INTRODUCTION

Flyt have prepared this report to document the traffic modelling undertaken in support of the increased residential yields as proposed in the revised Burswood Lakes Structure Plan.

Flyt have considerable experience in modelling traffic within the Burswood Peninsula, having prepared the transport report relating to the last amendment to the Structure Plan on behalf of EG Funds. In addition to that project, Flyt completed the Burswood Peninsula District Structure Plan (BPDSP) assessment on behalf of the WAPC, were State Advisors for the Perth Stadium project and have been advising both the Burswood Park Board and Crown on transport issues over the past four years.

## 2. METHODOLOGY

Flyt's approach to assess the traffic impact of the increased residential yields as proposed in the Structure Plan amendment is two-fold:

1. an expanded weekday peak hour SIDRA Network model (to cover the local road intersections with Victoria Park Drive and some of the major internal intersections), and
2. a mid-block capacity assessment (to assess the capacity of the local road network).

Flyt will also address road safety by assessing the intersection and midblock crash history (from Main Roads).

The modelling examines existing weekday peak hour conditions and also the development scenario with full build out of the remaining undeveloped lots.

The impact of future residential and mixed use development at Belmont Park, Burswood Station West, Burswood Station East, and other possible development sites (Burswood Park Board parklands and State Tennis Centre) will be taken into account by increased traffic volumes along Victoria Park Drive (with these volumes derived from Rom24). As the Peninsula urban neighborhood has no local through roads, future residential and mixed use development of surrounding areas will not lead to any increase in local road traffic.

While the BPDSP Peninsula is nearby to significant traffic generators, such as the Crown Entertainment Complex (casino, convention centre and hotels) and Optus Stadium, the peak periods for these land uses are usually well outside of residential traffic peak periods. To manage traffic and parking on event days at Optus Stadium, Victoria Park Drive is closed to all but local traffic. Residents of the Peninsula urban neighbourhood are permitted to travel on Victoria Park Drive and access the Peninsula via The Circus. For these reasons the modelling has not considered the impact of events at Optus Stadium and the peak periods for Crown Entertainment Complex.

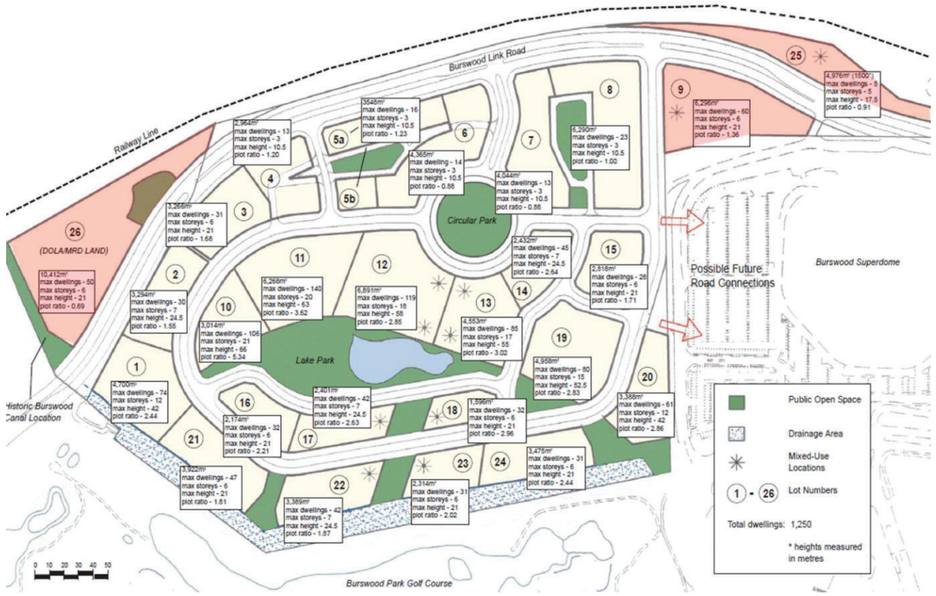
# 3. BACKGROUND

## 3.1 Burswood Lakes Structure Plan

The Burswood Lakes Structure Plan was adopted by the Town of Victoria Park in 2002 and approved by the WAPC in 2003 to guide the creation of a new urban neighborhood, now known as The Peninsula. The Structure Plan is reproduced as Figure 1 and comprised a total of 1,250 dwellings, which is, as of November 2021, almost 70% complete. The Structure Plan also included the following Lots:

- Lot 9 – maximum of 60 dwellings;
- Lot 25 (9525)– maximum of 5 dwellings; and
- Lot 26 (DOLA/MRWA land) – maximum of 50 dwellings (now a bus layover for Optus Stadium event bus services).

*Figure 1 Burswood Lakes Structure Plan local (source: WAPC)*




Microsimulation traffic modelling of the local road network and surrounding area was undertaken by SKM in support of the original Burswood Lakes Structure Plan. The modelling considered alternate uses for the land immediately to the south of the Structure Plan area which was at that time occupied by the Burswood Superdome.

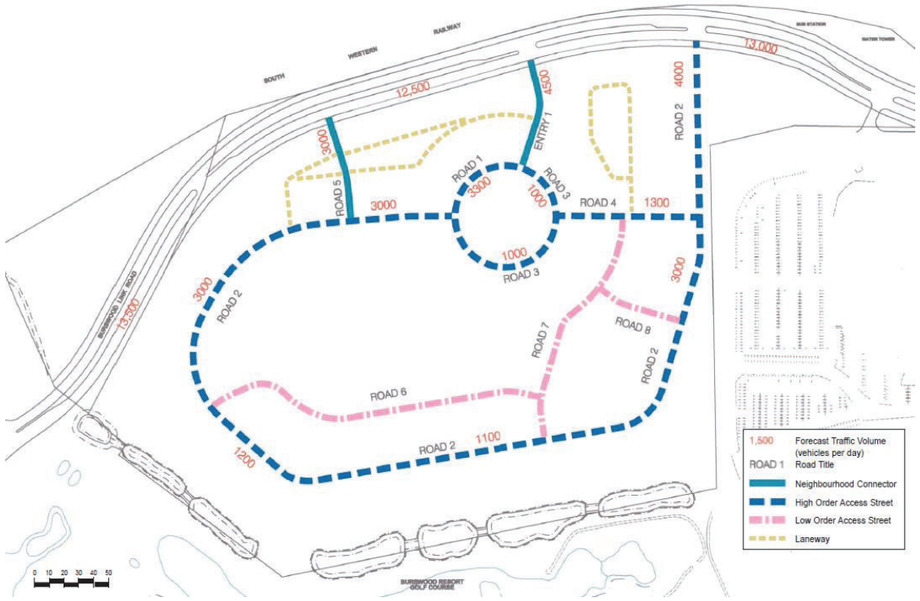
Daily forecast traffic volumes arising from the initial transport modelling are reproduced in Figure 2. These volumes were for the scenario where the Burswood Superdome was retained. The daily trip rate used to generate these trips can be calculated as 10 trips per vehicle per day, which in 2021 is considered a significant





overestimate for a predominantly residential development of this nature and in this location. Trip rates are discussed further in section 5.1

*Figure 2 Burswood Lakes Structure Plan local road traffic forecasts (source: WAPC)*

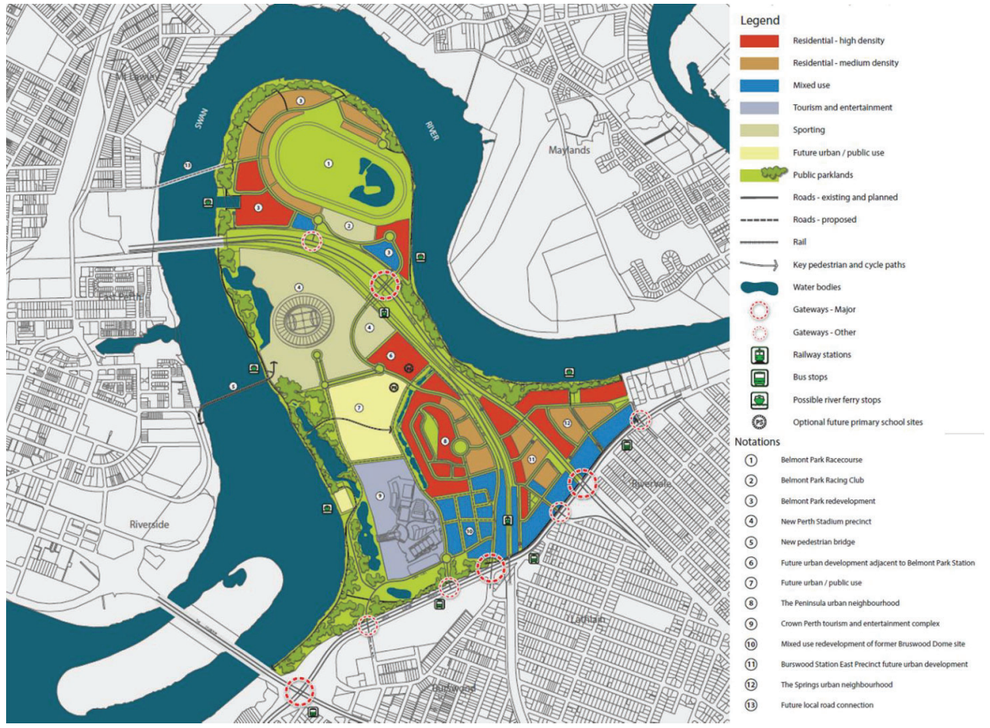



## 3.2 Burswood Peninsula District Structure Plan

The BPDSP was published in March 2015, with the long term vision to create an attractive, vibrant, and sustainable urban setting, with a diverse mix of housing, recreation, entertainment, tourism, and employment opportunities.

The BPDSP is reproduced as Figure 3. The Burswood Lakes Structure Plan area is wholly contained within the BPDSP boundary.

*Figure 3 Burswood Peninsula DSP (source: WAPC)*




A detailed assessment of the movement network surrounding the Burswood Lakes Structure Plan area was undertaken as part of the development of the BPDSP. The movement network considered in the assessment included roads (regional and local), rail, footpaths, shared paths, and river ferries.

The capacity of the road network was assessed in the context of the land use changes proposed under the BPDSP, and interventions (new roads, road widening, modification to traffic light signal phasing) were proposed to ensure the road network could accommodate the increased development planned within the Burswood Peninsula.

The proposed road network interventions included:

- the introduction of a distributed local road network (including the extension of Camfield Drive and Bolton Avenue) to service the western side of the peninsula and improve access to the new Perth Stadium, Stadium South precinct, and Crown Perth;
- the modification of signalised intersections at Glenn Place/Craig Street/Great Eastern Highway and Victoria Park Drive/Burswood Road/Great Eastern Highway;
- upgrade of the Victoria Park Drive bridge connection over Graham Farmer Freeway to increase its capacity;





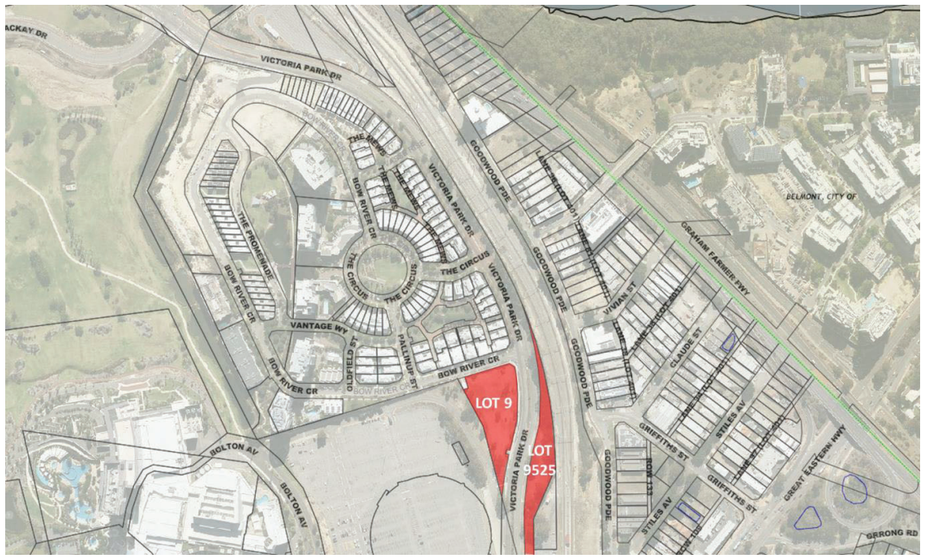
- the introduction of a new local road network to service the Belmont Park redevelopment, and the upgrade of associated connections to the regional road network;
- a proposed new local road bridge across the Swan River, connecting the new Belmont Park precinct with Summers Street in East Perth; and
- the introduction of a grade separated road connection from Goodwood Parade to Victoria Park Drive, to improve access between neighbourhoods on the east and west sides of the Peninsula.

The regional road network surrounding the Burswood Lakes Structure Plan area has been rigorously assessed and found able to accommodate the increased development planned within the Burswood Peninsula.

## 3.3 Structure Plan Amendment (EG Funds Sites)

In 2017 the WAPC approved an amendment to the Burswood Lakes Structure Plan covering Lots 9 and 9525 (25) Victoria Park Drive. These lots are to the south of the existing Peninsula urban neighbourhood, as shown in Figure 4. Lot 9525 is particularly constrained, located between Victoria Park Drive and the rail reserve.

*Figure 4 Lots 9 and 9525 (25) Victoria Park Drive (source: Town of Victoria Park)*




The amendment increased the density of potential developments within Lots 9 and 9525 by a total of 496 dwellings, as shown in Table 1.

*Table 1 Change to lot yield from 2017 Structure Plan Amendment (source: WAPC)*

| Lot | Original Dwelling Yield | Amended Dwelling Yield | Additional Yield |
|---|---|---|---|
| 9 | 60 | 353 | +293 |
| 9525 | 5 | 208 | +203 |
| Total | 65 | 561 | +496 |

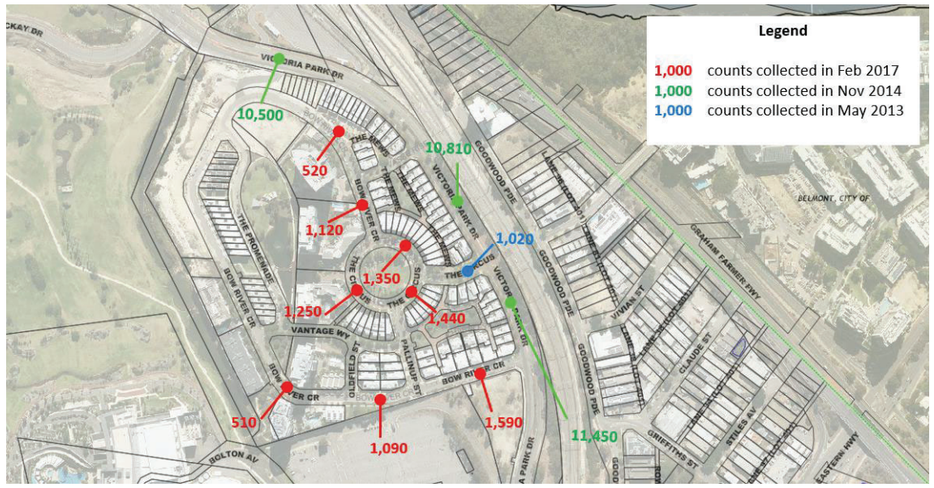
Traffic modelling undertaken for the BPDSP was updated to reflect the increased dwelling yields. The modelling concluded that traffic generated by the increased dwelling yields could be accommodated within the existing road network.

The traffic analysis completed for the Structure Plan amendment identified the most appropriate locations for vehicle access for each site. For Lot 9 access this was found to be via Bow River Crescent while Victoria Park Drive is the only option for vehicle access to Lot 9525.

## 4. EXISTING TRAFFIC CONDITIONS

The most recent daily traffic counts, collected by the Town of Victoria Park, are summarised in Figure 5.

*Figure 5 Most recent daily traffic volumes (source: Town of Vic Park)*




As part of this study, Flyt undertook peak hour video survey turning counts at the following intersections, also shown in Figure 6 :

- Victoria Park Drive with Vasse Rise;
- Victoria Park Drive with The Circus;
- Victoria Park Drive with Bow River Crescent;
- Bow River Crescent with Pallinup Street;
- Bow River Crescent with Vantage Way;
- Bow River Crescent with Vasse Rise; and
- Vantage Way with The Promenade.

Turning counts were taken in the morning between 7:45am and 9:00am and in the afternoon between 4:45pm and 6:00pm. These time periods were determined as the busiest from SCATS counts of the signalised intersection between Victoria Park Drive and Roger MacKay Drive. The observed peak hour turn movements for the intersections with Victoria Park Drive are summarised in Table 2, Table 3, and Table 4.





*Figure 6 Locations of peak hour video traffic counts*

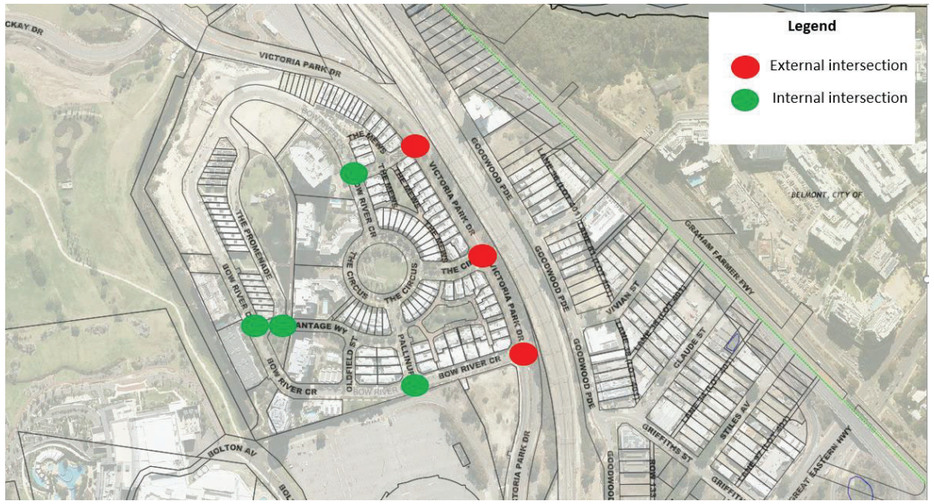



*Table 2 Victoria Park Drive / Bow River Crescent existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Victoria Park Dr north | | Bow River Crescent | | Victoria Park Dr south | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (8-9am) | 353 | 7 | 50 | 74 | 32 | 192 |
| PM peak (5-6pm) | 462 | 35 | 16 | 42 | 58 | 328 |

*Table 3 Victoria Park Drive / The Circus existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Victoria Park Dr north | | The Circus | | Victoria Park Dr south | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (8-9am) | 311 | 18 | 14 | 49 | 5 | 217 |
| PM peak (5-6pm) | 472 | 34 | 8 | 25 | 17 | 325 |

*Table 4 Victoria Park Drive / Vasse Rise existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Victoria Park Dr north | Vasse Rise | Victoria Park Dr south | |
|---|---|---|---|---|
| | Through | Left | Left | Through |
| AM Peak (8-9am) | 329 | 33 | 10 | 231 |
| PM peak (5-6pm) | 468 | 14 | 35 | 298 |

Based on the observed turning traffic volumes, the proportion of trips to and from the Burswood Lakes Structure Plan area to/from the north and south, for each peak period, is summarised as follows:

- AM Peak hour
  - From development site
    - To north 44%
    - To south 56%
  - To development site
    - From north 35%
    - From south 65%
- PM Peak hour
  - From development site
    - To north 36%
    - To south 64%
  - To development site
    - From north 38%
    - From south 62%

The observed peak hour turn movements for the internal intersections are summarised in Table 5, Table 6, Table 7 and Table 8.

*Table 5 Bow River Crescent / Pallinup Street existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Bow River Crescent east | | Pallinup Street north | | Bow River Crescent west | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 29 | 10 | 31 | 2 | 3 | 93 |
| PM peak (4:45-5:45pm) | 70 | 26 | 20 | 2 | 1 | 33 |

*Table 6 Bow River Crescent / Vantage Way existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Bow River Crescent south | | Vantage Street east | | Bow River Crescent north | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 10 | 4 | 18 | 4 | 3 | 45 |
| PM peak (4:45-5:45pm) | 27 | 8 | 9 | 3 | 1 | 14 |

*Table 7 Bow River Crescent / Vasse Rise existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Bow River Crescent south | | Vasse Rise east | | Bow River Crescent north | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 9 | 15 | 6 | 4 | 13 | 21 |
| PM peak (4:45-5:45pm) | 15 | 8 | 9 | 18 | 5 | 9 |





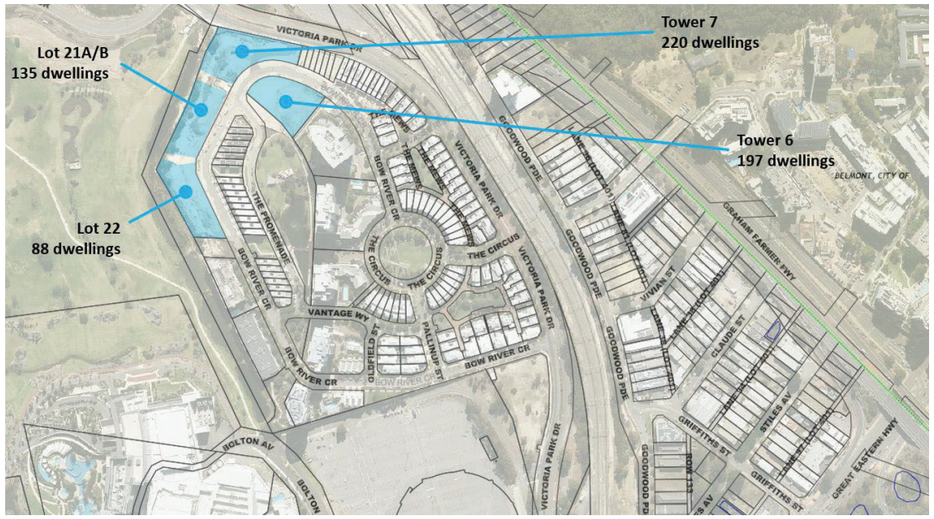
*Table 8 Vantage Way / The Promenade existing peak hour turning traffic volumes (November 2021)*

| Peak Hour | Vantage Street east | | The Promenade Street north | | Vantage Street west | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 12 | 2 | 12 | 6 | 2 | 5 |
| PM peak (4:45-5:45pm) | 9 | 2 | 1 | 3 | 6 | 3 |

## 5. STRUCTURE PLAN AMENDMENT

The proposed dwelling yields for the remaining undeveloped lots have been revised, as shown in Figure 7. This includes development at Lot 22 which has secured DA approval, but which has not been constructed. To determine the traffic impact of the Structure Plan amendment the potential traffic generation of the undeveloped lots (including the two EG Funds sites) will have to be estimated.

*Figure 7 Proposed yields of remaining undeveloped lots*




### 5.1 Trip Generation

Peak hour traffic forecasts have been developed for the following sites and approximate yields:

- Tower 6 197 dwellings
- Tower 7 220 dwellings
- Lot 22 88 dwellings
- Lot 21A/B 135 dwellings
- EG funds Lot 9 353 dwellings
- EG funds Lot 25 208 dwellings

Trips rates for Tower 6, Tower 7 and the two EG funds sites have been based on the rates used by Arup in their 2018 Transport Impact Statement prepared in support of the Tower 6 development (0.36 trips per dwelling in the AM peak and 0.45 trips per dwelling in the PM peak hour).

Trip rates for Lots 21A and 21B have been based on the rates used by Flyt in the Traffic Impact Statement in support of the development on Lot 22 (0.4 trips per dwelling in each of the peak hours).

The estimated peak hour trip generation for each of the sites is outlined in Table 9.

*Table 9 Estimated peak hour traffic generation of undeveloped sites*

| Site | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Lot 22 | 9 | 26 | 22 | 13 |
| Lot 21A/B | 14 | 40 | 33 | 19 |
| Tower 6 | 8 | 70 | 78 | 20 |
| Tower 7 | 8 | 70 | 78 | 20 |
| EG funds Lot 9 | 13 | 113 | 125 | 32 |
| EG funds Lot 25 | 7 | 67 | 74 | 19 |
| **Total** | **59** | **386** | **410** | **123** |

The proposed trips rates have been compared against the existing trip generating behaviour of the Burswood Lakes Structure Plan area. All the existing development is accessed via the intersections of Victoria Park Drive with Bow River Crescent, The Circus and Vasse Rise. The actual peak hour trip rates are derived by summing the peak hour turning movements at the intersections (the traffic surveys undertaken in November 2021 as displayed in in Tables 2, 3 and 4) and dividing the total by the number of dwellings that have been constructed or have secured development approval (up to September 2021, so this does not include the 88-unit development at Lot 22 which was approved in September 2021 and is not yet constructed). The Town of Victoria Park, in the Responsible Authority Report for the proposed development at Lot 22 Bow River Crescent, indicated that there were at that time 852 dwellings in the structure plan area.

Table 10 below shows the derivation of the actual AM and PM peak hour trip rates for the existing dwellings within the Burswood Lakes Structure Plan area.

*Table 10 Derivation of peak hour trip rates of existing development with Burswood Lakes Structure Plan area*

| | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|
| | In | Out | Total | In | Out | Total |
| Intersection Trips | 72 | 210 | 282 | 179 | 105 | 284 |
| Trip Rate (Trips / 852) | 0.08 | 0.25 | 0.33 | 0.21 | 0.12 | 0.33 |
| % in/out | 25.5% | 74.5% | 100% | 63% | 37% | 100% |





The existing development within the Burswood Lakes Structure Plan area is found to generate 0.33 trips per dwelling for both the AM and PM peak hour. This actual trip rate is lower than the trip rates proposed in this assessment. The proposed trip rates are therefore considered robust, as they will overestimate peak hour traffic generation.

## 5.2 Trip Distribution

The forecasts trips were distributed according to the observed proportion of trips to and from Victoria Park Drive north and south for each of the peak periods. The forecast trip distribution is summarised in Table 11

*Table 11 Estimated peak hour trip distribution of undeveloped sites*

| Site | AM Peak | | | | PM Peak | | | |
|---|---|---|---|---|---|---|---|---|
| | In | | Out | | In | | Out | |
| | N | S | N | S | N | S | N | S |
| Lot 22 | 3 | 6 | 11 | 15 | 8 | 14 | 5 | 8 |
| Lot 21A/B | 5 | 9 | 17 | 23 | 13 | 20 | 7 | 12 |
| Tower 6 | 3 | 5 | 31 | 39 | 30 | 48 | 7 | 13 |
| Tower 7 | 3 | 5 | 31 | 39 | 30 | 48 | 7 | 13 |
| EG funds Lot 9 | 5 | 8 | 50 | 63 | 48 | 77 | 12 | 20 |
| EG funds Lot 25 | 2 | 5 | 30 | 37 | 29 | 45 | 7 | 12 |
| **Total** | **21** | **38** | **170** | **216** | **158** | **252** | **45** | **78** |

## 5.3 Forecast Growth of Victoria Park Drive

The impact of future residential and mixed use development at Belmont Park, Burswood Station West, Burswood Station East, and other possible development sites (Burswood Park Board parklands and State Tennis Centre) has been considered by increased traffic volumes along Victoria Park Drive. As the Peninsula urban neighborhood has no local through roads, future residential and mixed use development of surrounding areas will not lead to any increase in local road traffic, only an increase along Victoria Park Drive.

ROM24 forecasts of Victoria Park Drive for 2021 and 2031 have been reviewed. The growth rates between these forecasts and the absolute difference in these numbers have both been used to determine the extent of the increase in Victoria Park Drive traffic volumes to be applied in this modelling exercise. The growth rates need to be applied with some care, as the 2021 ROM24 forecasts significantly overestimate existing northbound volumes, and underestimate existing southbound volumes. ROM24 daily traffic volumes along Victoria Park Drive are forecast to increase by as much as 8,000 vpd between 2021 and 2031.

For the purposes of this modelling exercise, peak hour volumes on Victoria Park Drive have been assumed to increase by 800 vehicles per hour, 400 vehicles per hour in each direction of travel. This is equivalent to an increase of 8,000 vehicles per day (vpd).

It is acknowledged that an increase in through traffic along Victoria Park Drive may impact existing residents of the Burswood Lakes Structure Plan area, however this increase is completely independent of the proposed increased residential dwelling yields on Mirvac's undeveloped lots. This increase is due to future residential and mixed use development at Belmont Park, Burswood Station West, Burswood Station East, and other possible development sites (Burswood Park Board parklands and State Tennis Centre).

## 5.4 Forecast Traffic Volumes

The resultant forecast turning movements at the 3 intersections with Victoria Park Drive are summarised in Tables 12, 13 and 14.

*Table 12 Victoria Park Drive / Bow River Crescent forecast peak hour turning traffic volumes (full build out)*

| Peak Hour | Victoria Park Dr north | | Bow River Cres | | Victoria Park Dr south | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 854 (+501) | 15 (+8) | 100 (+50) | 152 (+78) | 46 (+14) | 641 (+449) |
| PM peak (4:45-5:45pm) | 929 (+467) | 91 (+56) | 33 (+17) | 70 (+28) | 135 (+77) | 851 (+523) |

*Table 13 Victoria Park Drive / The Circus forecast peak hour turning traffic volumes (full build out)*

| Peak Hour | Victoria Park Dr north | | The Circus | | Victoria Park Dr south | |
|---|---|---|---|---|---|---|
| | Through | Right | Left | Right | Left | Through |
| AM Peak (7:45-8:45am) | 721 (+410) | 29 (+11) | 14 | 150 (+101) | 10 (+5) | 711 (+494) |
| PM peak (4:45-5:45pm) | 957 (+485) | 107 (+73) | 8 | 63 (+38) | 89 (+72) | 793 (+468) |

*Table 14 Victoria Park Drive / Vasse Rise forecast peak hour turning traffic volumes (full build out)*

| Peak Hour | Victoria Park Dr north | Vasse Rise | Victoria Park Dr south | |
|---|---|---|---|---|
| | Through | Left | Left | Through |
| AM Peak (7:45-8:45am) | 750 (+421) | 123 (+90) | 24 (+14) | 711 (+480) |
| PM peak (4:45-5:45pm) | 1,026 (+558) | 35 (+21) | 79 (+44) | 722 (+424) |

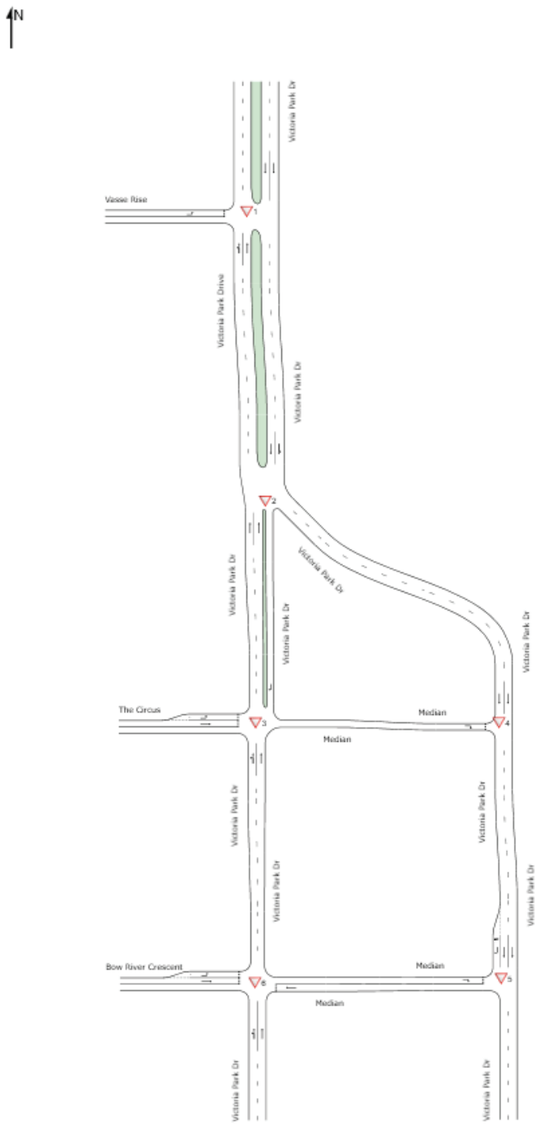




# 6. SIDRA NETWORK MODELLING

A SIDRA Network model has been built for the 800m section of Victoria Park Drive between Dome Place and immediately to the south of Roger MacKay Drive. The layout of the model is shown in Figure 8. It should be noted that the model will not look like the road network, as it is necessary to model a two staged right turn (as occurs at The Circus and Bow River Crescent) as two separate intersections.

*Figure 8 Sidra Network layout for Victoria Park Drive intersections*



The model has been populated with the relevant speed limits, intersection controls, lane widths, turning lane lengths and forecast turning volumes.

## 6.1 Model Output

A visual representation of the SIDRA Network predicted level of service is shown in Figure 9. This shows that despite the increase in Victoria Park Drive traffic volumes of 400 vehicles per hour in each direction, the existing road network is able accommodate the traffic volumes associated with full build out of the undeveloped lots.

*Figure 9 Sidra Network Level of Service output for Victoria Park Drive intersections*






The model output shows that road network will largely operate at a level of service A, with the right turn from The Circus predicted to be the worst performing segment of the road network in both peak periods, operating at a level of service C. The right turn from Bow River Crescent is predicted to operate at a level of service B in each peak period, and the right turn into The Circus is predicted to operate at a level of service B in the PM peak.

This is consistent with modelling undertaken by Arup in their 2018 Transport Impact Statement prepared in support of the Tower 6 development, where they concluded Victoria Park Drive has sufficient capacity to accommodate traffic volumes associated with ultimate development of Burswood Lakes. Arup's analysis concluded the right turn from The Circus into Victoria Park Drive would be the worst performing element of the road network, however it would operate within acceptable limits.

Expansion of the Crown complex, and the opening of Optus Stadium and the adjacent Camfield have increased traffic within the Burswood Peninsula and along Victoria Park Drive. However, these entertainment venues generate their greatest traffic volumes outside of regular road network AM and PM peak periods.

# 7. MID BLOCK CAPACITY ASSESSMENT

Mid-block road capacity is the capacity of a road between intersections where traffic flow is not interrupted by turning or decelerating vehicles. Road capacity can be expressed as a ratio of actual traffic volume to road capacity, known as the volume to capacity ratio (VCR), and by a level of service (LOS) designation between A and F. The relationship between VCR, LOS, and a description of typical traffic flow for each service level is shown in Table 15.

*Table 15 Level of Service definition for mid-block traffic (source: Highway Capacity Manual)*

| LOS | Definition | Range of VCR |
|---|---|---|
| A | Free flow conditions, drivers are free to choose their speed subject to speed limit and road conditions. | 0 - 0.34 |
| B | Conditions of stable flow, little or no limit restrictions to speed and manoeuvrability. | 0.35 - 0.50 |
| C | Conditions of stable flow, with increased restrictions on speed and ability to manoeuvre through lanes. | 0.51 - 0.74 |
| D | Conditions approach unstable flow. Freedom to manoeuvre within the traffic stream is much more limited and driver comfort levels decrease. | 0.75 - 0.89 |
| E | Conditions approach capacity, unstable flow with manoeuvrability severely limited. | 0.90 - 0.99 |
| F | Forced flow conditions, very low speed. Excessive congestion. | >1 |

The hourly capacity of a road depends on factors including the number of lanes, lane width, condition and width of shoulder and median treatment and the presence of heavy vehicles and grades.

The base capacity of a single traffic lane is 1,800 passenger cars per hour, with adjustment factors to account for lane widths and lateral clearances either side of the lane. Assuming a lateral clearance of 0m, the adjustment factors for various lane widths are shown in Table 16.

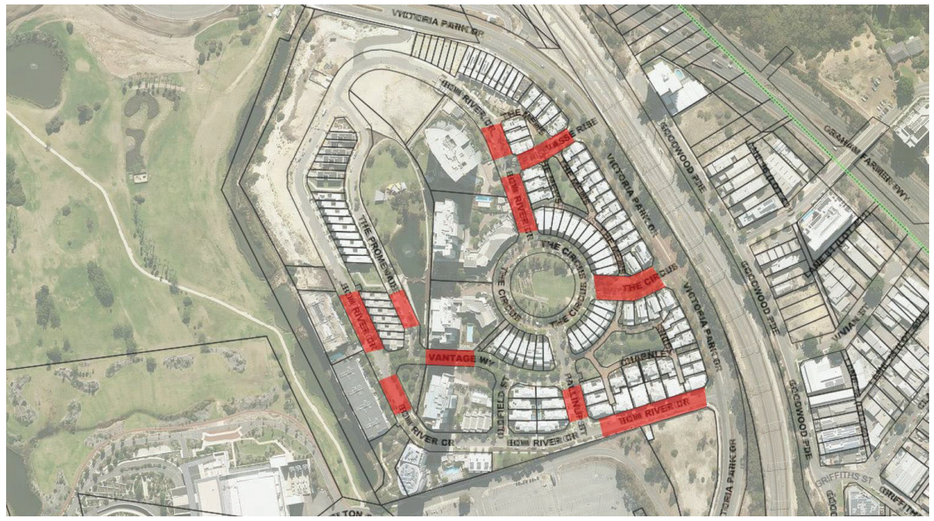
*Table 16 Lane capacity adjustment factors (source: Austroads Guide to Traffic Management Part 3)*

| **Lane Width** | 3.7m | 3.2m | 2.7m |
|---|---|---|---|
| **Adjustment Factor** | 0.65 | 0.60 | 0.5 |

Assuming a heavy vehicle proportion of 5%, the heavy vehicle adjustment factor to be applied within the Structure Plan (with level grades) area is 0.95. A higher heavy vehicle proportion of 10% would yield a heavy vehicle adjustment factor of 0.9.

The locations of the mid-block assessments within the Structure Plan area are shown in Figure 10. Mid-block capacity will be assessed for existing traffic volumes and for forecast volumes at ultimate development of the Structure Plan area.

*Figure 10 Locations of mid-block capacity assessment*




The calculation of theoretical capacity of the selected roads is shown in Table 17.

*Table 17 Calculation of mid-block capacity*

| **Road** | **Section** | **Width (m)** | **Theoretical Capacity (veh per hr)** |
|---|---|---|---|
| Bow River Crescent | Pallinup St to Victoria Park Dr | 7 | 1,069 |
| | South of Vantage Way | | |
| | North of Vantage Way | | |
| | Vasse Rise to The Circus | | |
| | North of Vasse Rise | | |





| **Road** | **Section** | **Width (m)** | **Theoretical Capacity (veh per hr)** |
|---|---|---|---|
| The Circus | West of Victoria Park Drive | 4 (one-way) | 1,112 |
| Vasse Rise | West of Victoria Park Drive | 5.5 | 1,026 |
| Pallinup Street | North of Bow River Crescent | 7 | 1,069 |
| Vantage Way | East of The Promenade | 5.5 | 1,026 |
| The Promenade | North od Vantage Way | 5.5 | 1,026 |

The existing mid-block capacity of the selected local roads is assessed in Table 18. The volume to capacity ratio (VCR) is a measure of the congestion along a section of road. A value of 0.9 is considered at capacity. The section of Bow River Crescent immediately west of Victoria Park Drive currently has the highest VCR of the entire local road network, with a value of 0.116, while Vantage Way and The Promenade have the lowest VCR values.

*Table 18 Mid-block capacity assessment with existing traffic volumes (November 2021)*

| **Road** | **Section** | **Max Hourly Volume (one-way)** | | **VCR (worst hr)** |
|---|---|---|---|---|
| | | **AM Peak** | **PM Peak** | |
| Bow River Crescent | Pallinup St to Victoria Park Dr | 120 | 90 | 0.116 |
| | South of Vantage Way | 60 | 40 | 0.059 |
| | North of Vantage Way | 50 | 30 | 0.044 |
| | Vasse Rise to The Circus | 30 | 20 | 0.025 |
| | North of Vasse Rise | 30 | 30 | 0.032 |
| The Circus | West of Victoria Park Drive | 60 | 50 | 0.057 |
| Vasse Rise | West of Victoria Park Drive | 30 | 40 | 0.034 |
| Pallinup Street | North of Bow River Crescent | 30 | 30 | 0.031 |
| Vantage Way | East of The Promenade | 20 | 10 | 0.017 |
| The Promenade | North od Vantage Way | 20 | 10 | 0.018 |

The forecast mid-block capacity of selected local roads with the addition of the traffic generated by the build out of undeveloped lots (including the two EG Funds sites) is assessed in Table 19. The section of Bow River Crescent immediately west of Victoria Park Drive will maintain the highest forecast VCR of the entire local road network, increasing from a current value of 0.116 to 0.236, while Vantage Way and The Promenade will continue to have the lowest VCR values.

Pallinup Street (north of Bow River Crescent), Vantage Way (east of the Promenade) and The Promenade (north of Vantage Way) are not expected to see an increase in traffic volumes associated with the full build out therefore their VCR values will not increase above existing levels.

*Table 19 Mid-block capacity assessment at full build out*

| Road | Section | Max Hourly Volume (one-way) | | VCR (worst hr) |
|---|---|---|---|---|
| | | AM Peak | PM Peak | |
| Bow River Crescent | Pallinup St to Victoria Park Dr | 250 | 240 | 0.236 |
| | South of Vantage Way | 80 | 60 | 0.073 |
| | North of Vantage Way | 60 | 50 | 0.058 |
| | Vasse Rise to The Circus | 130 | 170 | 0.157 |
| | North of Vasse Rise | 220 | 180 | 0.211 |
| The Circus | West of Victoria Park Drive | 160 | 180 | 0.161 |
| Vasse Rise | West of Victoria Park Drive | 120 | 80 | 0.120 |
| Pallinup Street | North of Bow River Crescent | 30 | 30 | 0.031 |
| Vantage Way | East of The Promenade | 20 | 10 | 0.017 |
| The Promenade | North od Vantage Way | 20 | 10 | 0.018 |

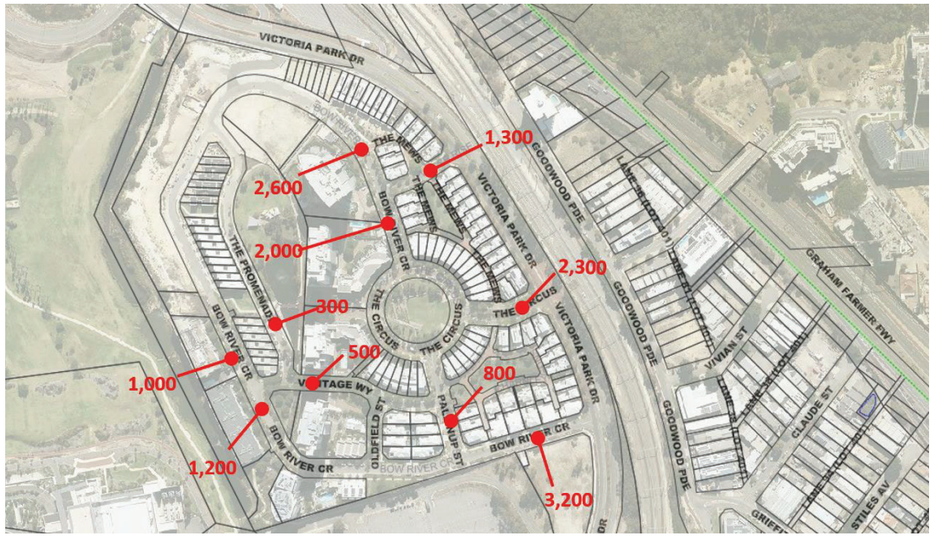
The forecast daily traffic volumes that could result from full build out of the undeveloped lots are shown in Figure 11. The revised forecast daily traffic volumes are all lower than the original forecasts, which were reproduced as Figure 2 and based on modelling undertaken in 2002.

One reason the revised forecasts are lower than the original forecasts, despite the dwelling yield increasing, is that the daily trip rate used as part of the 2002 modelling was 10 trips per vehicle per day. This is considered a significant overestimate for a predominantly residential development of this nature and in this location. The daily trip rates used in the revised modelling were based on surveys of existing medium and high density residential developments.





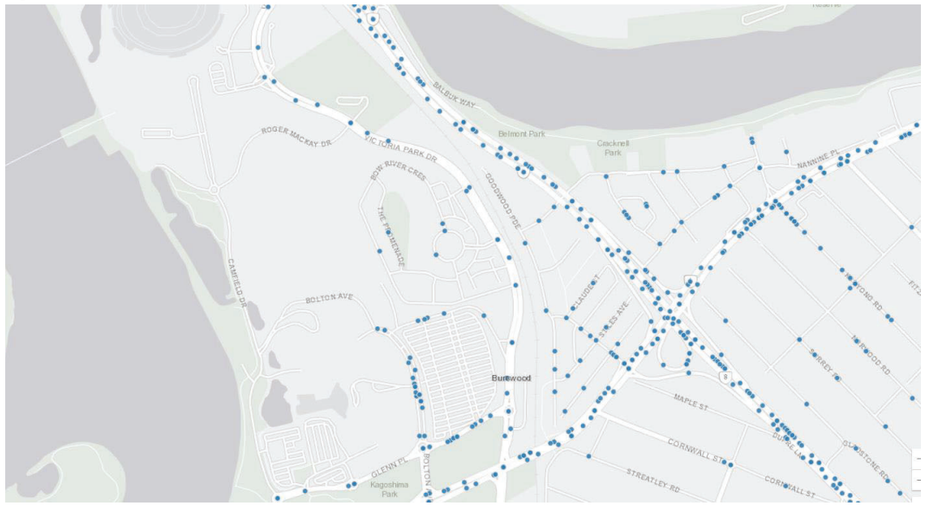
*Figure 11 Burswood Lakes Structure Plan updated local road traffic forecasts*




## 8. ROAD SAFETY

Intersection and mid-block crash history for the roads surrounding the Structure Plan area were obtained from Main Roads WA. The location of road crashes in the vicinity of the development site is shown in Figure 12. This data is for the five-year period ending November 11th, 2020.

*Figure 12 Location of road crashes (Source: Main Roads WA)*



## 8.1 Intersection Crashes

In the five-year period there were 4 reported crashes at the intersection of Victoria Park Drive with Roger MacKay Drive and the State Tennis Centre access. Of the 4 crashes; 2 were right angle type (where vehicles approach from adjacent approaches of the intersection), 1 was a rear end type (where a vehicle collides with the rear of another vehicle) and 1 was a hit object type involving a motorcycle. Three of the crashes resulted in property damage only, the crash involving the motorcycle was a fatality.

In the same time period, there were 3 reported crashes at the intersection of Victoria Park Drive with The Circus, all of the right angle type (where vehicles approach from adjacent approaches of the intersection). One crash resulted in at least one person requiring medical treatment. There was 1 reported crash at the intersection of Bow River Crescent with Victoria Park Drive. This crash was of the type right turn through (where a vehicle turns right in front of an oncoming vehicle) and resulted in minor property damage. There were 6 crashes at the intersection of Victoria Park Drive and Dome Place; 2 right angle type, 2 rear end and 2 unknowns. All Dome Place crashes resulting in property damage only.

There was a single reported intersection crash within the Structure Plan area internal road network, at the intersection of Bow River Crescent with The Circus.

## 8.2 Mid-block Crashes

In the five-year period there were 5 mid-block crashes along Victoria Park Drive between Roger MacKay Drive and Dome Place.

In the same time period, there were 4 reported mid-block crashes within internal Structure Plan roads; 2 along Bow River Crescent (at SLKs 0.48 and 0.98), and one each along The Promenade and The Circus. Three of the 4 crashes involved parking manoeuvres.

## 8.3 Crash History Summary

The reviewed crash data does not indicate any road safety issues within the local road network or the surrounding higher order roads.

## 8.4 Bow River Crescent

Existing residents of the Burswood Lakes Structure Plan area have raised concerns about the safety of the intersection of Bow River Crescent with Victoria Park Drive. These concerns are not reflected in the reported crash data, with this intersection having less crashes than Victoria Park Drive and The Circus, despite carrying higher traffic volumes.

Bow River Crescent immediately to the west of Victoria Park Drive is currently carrying less than 2,000 vehicles per day (vpd), which is well within the volume threshold of an Access Street. With the development of Lot 9 and the other undeveloped lots the volume on this section of Bow River Crescent is forecast to increase





to 3,200 vpd, which just exceeds the lower bounds of a Local Distributor. Traffic volumes along Bow River Crescent to the west of Pallinup Street will remain well under 3,000 vpd.

There has been one reported crash at the intersection of Victoria Park Drive with Bow River Crescent in the last 5 years. This does not indicate a road safety issue; however, it is acknowledged that the development of Lot 9 will cause an intensification in traffic movements through this intersection. It is recommended that vehicle access to Lot 9 from Bow River Crescent be located as far as possible from the intersection with Victoria Park Drive.