ROWE GROUP

SORRENTO ACTIVITY CENTRE PLAN

LOTS 2, 148, 149, AND 153 WEST COAST DRIVE, LOT 154 RALEIGH ROAD AND LOTS 146 AND 147 PADBURY CIRCLE, SORRENTO

OUR REF: 7875 21/08/2018

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3	7875_16aug01R_rd.docx	R. Dial	G. Rowe	03/11/2016
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RECORD OF ENDORSEMENT

This Activity Centre Plan is prepared under the provisions of the *City of Joondalup District Planning Scheme No. 2*.

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

.....18 September 2018.....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

.....11 October 2018 ..... Date

.....18 September 2028..... Date of Expiry

TABLE OF AMENDMENTS

AMENDMENT NO.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC

EXECUTIVE SUMMARY

This Activity Centre Plan has been prepared for the Sorrento Local Centre, being Lots 2, 148, 149 and 153 West Coast Drive, Lot 154 Raleigh Road and Lots 146 and 147 Padbury Circle, Sorrento. The Sorrento Local Centre is located approximately 15 kilometres north west of the Perth Central Area and approximately 10 kilometres south west of the Joondalup City Centre and is generally bound by The Plaza and Padbury Circle to the north, Raleigh Road to the south, West Coast Drive to the west and existing residential and vacant land to the east.

The centre currently comprises disparate built form and presently accommodates a service station, restaurant, offices, cafe, retail and an existing dwelling. The Activity Centre Plan will provide for the framework to guide the future redevelopment of the site, with built form permitted to maximum building heights varying from three (3), four (4) and five (5) of development across various points of the site. The redevelopment of the site will also see the existing rear accessway maintained in an upgraded format to provide access and circulation through the site for vehicles, cyclists and pedestrians.

The purpose of the Activity Centre Plan is to facilitate the redevelopment of the centre for mix of commercial and residential purposes, aligning the centre more closely with the principles and objectives of the Western Australian Planning Commission's *State Planning Policy 4.2 – Activity Centre for Perth and Peel*. Development within the Activity Centre Plan area will be consistent with the "Commercial" and "Residential" zones of the *City of Joondalup District Planning Scheme No. 2*, with land uses including, but not limited to:

- Restaurants / Cafes;
- Offices;
- Shops; and
- Multiple Dwellings.

This Activity Centre Plan reflects the outcomes of the *City of Joondalup Local Commercial Strategy* and *Local Housing Strategy* and has been prepared in consultation with the City of Joondalup and Department of Planning.

STRUCTURE PLAN SUMMARY

ITEM	DATA		SECTION NUMBER REFERENCED IN PART 2 OF REPORT
Total area covered by the Structure Plan	0.6387 hectares		1.2.2
Area of each land use proposed: Residential Industrial Commercial	 0.6387 hectares 0 hectares 0.6387 hectares	 7 lots 7 dwellings 0 lots 7 lots	4.1
Total estimated lot yield	7 lots		4.2
Estimated number of dwellings	77 dwellings		4.2
Estimated residential site density	118 dwellings per site hectare		4.2
Estimated population	205 people		4.2
Number of high schools	0 high schools		4.9
Number of primary schools	0 primary schools		4.9
Estimated commercial floor space	1,475m^2 net lettable area		4.10
Estimated area and percentage of public open space given over to: - Regional open space - District open space - Neighbourhood parks - Local parks	0 hectares, 0 parks		N/A
Estimate percentage of natural area	0 hectares, 0 parks		

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

CONTENTS

FIGURES

ATTACHMENTS

TECHNICAL APPENDICES

APPENDIX NUMBER	DOCUMENT TITLE	NATURE OF DOCUMENT	REFERRAL/APPROVAL AGENCY	APPROVAL STATUS AND MODIFICATIONS
1	Certificates of Title	Information	N/A	
2	Transport Impact Assessment	Technical	City of Joondalup	

PART ONE

IMPLEMENTATION

ROWE GROUP

1. ACTIVITY CENTRE PLAN AREA

This Activity Centre Plan shall apply to Lots 2, 148, 149 and 153 West Coast Drive, Lot 154 Raleigh Road and Lots 146 and 147 Padbury Circle, Sorrento being the land contained within the inner edge of the line denoting the Activity Centre Plan boundary on the Activity Centre Plan map (Plan 1).

2. OPERATION

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

3. INTERPRETATIONS AND RELATIONSHIP WITH THE SCHEME

Unless otherwise specified in this part, the words and expressions used in this Activity Centre Plan shall have the respective meanings given to them in the *City of Joondalup District Planning Scheme No. 2* (the 'Scheme') including any amendments gazetted thereto.

The Activity Centre Plan map ('Plan 1') outlines land use, zones and reserves applicable within the Activity Centre Plan area. The Activity Centre Plan outlines land use zones and reserves applicable within the structure plan area in accordance with the zones and reserves listed in the Local Planning Scheme

4. SUBDIVISION & DEVELOPMENT REQUIREMENTS

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

4.1 LAND USE PERMISSIBILITY

4.1.1 Land use permissibility within the Activity Centre Plan area shall be in accordance with the corresponding zone or reserve under the Scheme.

4.1.2 In addition to the land use permissibility within the" Commercial" zone of the Scheme, a "Multiple Dwelling" is considered a 'P' (Permitted) use.

4.2 SUBDIVISION

Subdivision applications to the WAPC shall demonstrate that the subdivision would not prejudice the built form outcomes of this Activity Centre Plan.

4.3 RESIDENTIAL ZONE

4.3.1 Dwelling Target

a) To provide approximately 77 dwellings within the Activity Centre Plan area.

4.3.2 Density

a) The residential density that applies to the Activity Centre Plan is R80 as depicted on the density plan (Plan 1 refers).

4.4 COMMERCIAL ZONE

4.4.1 Active uses such as restaurants, cafes and retail shops must be provided at the ground floor level of development.

4.4.2 Residential land uses shall not be permitted at the ground floor level for lots within the Commercial zone.

4.4.3 The retail floor space Net Lettable Area ('NLA') for the Activity Centre Plan is to be in accordance with the maximum 'recommended threshold' NLA available under the relevant Council Policy, Strategy or other planning control.

4.4.4 NLA beyond the recommended threshold may be approved where a proposal (for greater NLA) is supported by a Retail Sustainability Assessment Report and where the requirements of State Planning Policy 4.2 Activity Centres for Perth and Peel are met to the satisfaction of the City of Joondalup.

4.4.5 The recommended NLA threshold shall be distributed across the Activity Centre Plan area on a pro-rata land area basis per Table 1 with the exception of Lot 146 on which commercial/retail land use is prohibited.

Table 1: Distribution of 'As of Right' NLA

LOT NUMBER	AREA (M^2)	% OF TOTAL LAND AREA/NLA	SHARE OF 'RECOMMENDED THRESHOLD' NLA PER RELEVANT PLANNING CONTROL
147	703m^2	12.69%	12.69%
148	759m^2	13.70%	13.70%
149	792m^2	14.30%	14.30%
2	1685m^2	30.41%	30.41%
153	707m^2	12.76%	12.76%
154	894m^2	16.14%	16.14%
TOTAL	**5,540m^2**	**100.00%**	**100.00%**

4.4.6 If a lot does not utilise its full NLA allocation per Table 1, the residual allocation may be utilised by other lots within the Activity Centre Plan area at the agreement of the relevant landowners.

5. BUILT FORM REQUIREMENTS

Development within the Activity Centre Plan area shall be in accordance with the following provisions and Plans 1 and 2 of this Activity Centre Plan. Where the Activity Centre Plan does not vary or specify a development requirement, development shall be in accordance with the WAPC's *Residential Design Codes of WA* (the 'R-Codes').

5.1 PLOT RATIO

No maximum plot ratio applies to the Activity Centre Plan area.

5.2 BUILDING HEIGHT

5.2.1 The provisions of the City of Joondalup Height of Non-Residential Buildings Local Planning Policy do not apply to the Activity Centre Plan area with the following provisions being applicable with regard to building height. A minimum building height of 10.6m (3 storeys) measured from natural ground level and a maximum building height of 17.0m (5 storeys) applies to the following lots

- Lot 148 The Plaza;
- Lot 149 West Coast Drive; and
- Lot 2 West Coast Drive.

The fifth storey element is to be focused around The Plaza and western frontage and detailed through the development application process.

5.2.2 A maximum building height of 13.5m (4 storeys) from natural ground level applies to the following lots;

- Lots 147 Padbury Circle;
- 153 West Coast Drive; and
- 154 Raleigh Road.

5.2.3 A maximum building height of 10.6m (3 storeys) measured from natural ground level applies to Lot 146 Padbury Circle.

5.3 STREET SETBACKS

5.3.1 The minimum street setback in the Commercial zone is nil and the maximum street setback is 2.0 metres. Minor variations to this are permitted for building entries and architectural articulation.

5.3.2 A minimum street setback of 2.0m shall be provided to all lots within the Residential zone.

5.4 LOT BOUNDARY SETBACKS

5.4.1 Unless otherwise stipulated under Clauses 5.4.2 – 5.4.5, all boundary setbacks are to be in accordance with the R-Codes.

5.4.2 A 8.0m wide view corridor shall be provided between Lot 2 and Lot 153 which is to comprise a 4.0m side boundary setback above the 3rd storey of development to the north-western boundary of Lot 153 and a 4.0m side boundary setback shall be provided above the 3rd storey of development to the south-western boundary of Lot 2.

5.4.3 Side boundary setbacks between Lot 146 Padbury Circle and Lot 145 Drakes Walk shall be in accordance with the R-Codes.

5.4.4 A 3.0m rear setback shall be provided above the 3rd storey of development to Lots 153, 154 and 2.

5.4.5 The side boundary setback between Lot 154 and Lot 155 Raleigh Road shall be 9.0m, comprising a 6.0m access easement and a 3.0m landscaping strip.

5.5 BUILT FORM

5.5.1 Building Design

a) A continuous awning shall be provided along the street frontage with the exception of Lot 146 Padbury Circle.

b) All awnings and colonnades shall have a minimum clearance of 2.75 metres above ground level and a minimum depth of 2.0 metres.

c) Colonnades may be provided to a maximum depth of 2.5m.

d) A minimum of 60% of the total length of the building facade at the ground floor level is to be clear glazing.

e) Development on Lot 154 Raleigh Road is to address building bulk and privacy impacts on Lot 155 through the design and architecture of the building at development application stage having particular regard to side walls facing Lot 155.

5.5.2 Materials and Finishes

a) Buildings must be constructed of high quality materials including but not limited to stone, concrete, brick, timber and glass. Materials should be durable and suited to a coastal location.

b) Buildings must incorporate appropriate design features to enhance appearance, create visual interest and reduce blank walls, including a combination of the following:

- Varied colours, textures, finishes and materials;
- Varied roof forms and design;
- Balconies and balustrades;
- Windows, screens and sun shading devices;

- Design features that respond to the natural environment and architecture characteristic of the area.

c) Architectural character and visual interest is to be provided to all sides of buildings that are viewed from the public realm. This can be achieved with articulation, colour and/or materials (including glazing).

d) Blank walls fronting the street are not permitted.

e) Corner buildings are to be designed to address both street frontages with equal importance.

5.6 STREET AND PUBLIC REALM INTERFACE

5.6.1 Street Interface

a) Developments are to activate the street frontages and create a safe urban environment in accordance with the Crime Prevention Through Environmental Design ('CPTED') principles.

b) Adjacent verge and footpath areas to be upgrade to a high quality and to facilitate space activation.

c) Development addressing primary streets to provide a minimum of 80% activated frontage at street level.

d) Development addressing secondary streets to provide a minimum of 50% activated frontage at street level.

e) An "active frontage" is defined as follows:

Active frontage – a ground floor space where there is visual engagement between those in the street and those on the ground floors of buildings.

5.6.3 Building Entrances

a) All entrances to the buildings must be easily identifiable.

b) The main entrance must be easily accessible from the primary street.

5.7 LANDSCAPING AND PRIVATE OPEN SPACE

5.7.1 Landscaping

a) Where fronting streets, landscaped areas are to be integrated with the streetscape including the use of consistent materials and planting and accommodate pedestrian movement, alfresco and seating areas in a shaded environment where appropriate.

b) Durability of landscape elements, paving materials and street furniture shall be of high quality, and easy to maintain to the satisfaction of the City.

c) Landscaped areas shall be designed for high water efficiency through use of 'waterwise' planting and preferably use species native to the area, or which reinforce existing landscape character of nearby parks and reserves.

d) Landscaping is to include trees and plants native to the area or which reinforce existing landscape character of nearby parks and reserves.

5.8 PARKING AND ACCESS

5.8.1 Car Parking Provision

a) Residential car parking including visitor car parking is to be provided in accordance with the R-Codes.

b) Non-residential car parking is to be provided at a rate of 1 on-site bay per 20sqm of net lettable area ('NLA').

5.8.2 General Parking Location

a) Car parking should generally be contained within the building envelope or sleeved behind the development and shall be screened from view from the public realm.

b) Shared parking arrangements shall generally be permitted between the following lots:

i) Lots 146 – 148;

ii) Lot 149 and Lot 2; and

iii) Lot 153 and 154.

5.8.3 On-street Parking

a) The existing car parking bays within the road reserve of The Plaza abutting Lots 149 and 148 may only be credited to the subject lots and count toward the overall parking provision if access to these parking bays is maintained. However, it is the City's preference that these bays are removed, and all car parking bays are provided on site in accordance with the stated parking standard.

5.8.4 Bicycle Parking

a) For non-residential development, secure bicycle parking is to be provided at a rate of 5% of all parking bays provided (per development site) for non-residential development with a minimum of two (2) spaces to be provided.

b) Visitor bicycle parking for non-residential development is to be provided at a rate of 1 space per 500m² of NLA (per development site) with a minimum of two (2) spaces being provided per development site. Visitor bicycle parking is to be located within close proximity to the main entrances of buildings and accessible for public use.

5.8.5 End of Trip Facilities

a) End of Trip Facilities per development site are to be provided at a rate of one (1) unisex accessible toilet and shower for the first 10 secure non-residential bicycle parking bays or part thereof and one (1) secure locker for each bicycle parking bay (may be provided in conjunction with staff locker requirements).

b) Separate male and female end of trip facilities need only be provided should the total number of bicycle bays exceed 10 bays.

c) End of trip facilities may also be utilised for commercial employee change rooms.

5.8.6 Vehicular Access

a) Vehicular access shall be limited to the three access points as shown on Plan 2.

b) A minimum 6m wide public access easement is to be provided to connect Raleigh Road to Padbury Circle generally in accordance with the alignment depicted on Plan 1 and Plan 2.

5.9 UTILITIES AND FACILITIES

5.9.1 Location

a) The location of plant service equipment and lift overruns should not be visible from the adjoining street or public realm.

b) Service access / yards screened from view from the street or public realm must be provided to cater for the loading and unloading of goods and waste collection.

5.10 RESIDENTIAL DESIGN CODE VARIATIONS

This Activity Centre Plan amends/replaces the following deemed to comply provisions of the R-Codes. All design elements of the R-Codes not addressed by these variations are applicable in accordance with the R-Codes

Table 2: R-Code Variations

"DEEMED-TO-COMPLY" R-CODE PROVISION	AMEND / REPLACE	ACTIVITY CENTRE PLAN "DEEMED-TO-COMPLY" PROVISION
6.1.1 C1 – Plot Ratio	Replace	No maximum plot ratio applies to the Activity Centre Plan area.
6.1.2 C2 – Building Height	Replace	Building height within the Activity Centre Plan area must be in accordance with the following: ◢ A minimum building height of 10.6m (3 storeys) and a maximum building height of 17.0m (5 storeys) shall apply to Lot 148 The Plaza, and Lot 149 and Lot 2 West Coast Drive. ◢ A maximum building height of 13.5m (4 storeys) shall apply to Lots 147 Padbury Circle, 153 West Coast Drive and 154 Raleigh Road. ◢ A maximum building height of 10.6m (3 storeys) shall apply to Lot 146 Padbury Circle.
6.1.3 C3.1 – Street Setbacks	Replace	Street setbacks within the Activity Centre Plan area must be in accordance with the following: ◢ The minimum street setback in the Commercial zone is nil and the maximum street setback is 2.0 metres. ◢ The minimum street setback in the Residential zone is 2.0 metres.
6.1.4 C4.2 – Lot Boundary Setbacks	Amend	Lot boundary setbacks within the Activity Centre Plan area are to be in accordance with the following: ◢ A 4.0m side boundary setback shall be provided above the 3rd storey of development to the north-western boundary of Lot 153 and a 4.0m side boundary setback shall be provided above the 3rd storey of development to the south-western boundary of Lot 2.

		◢ Side boundary setbacks between Lot 154 Raleigh Road and Lot 155 Raleigh Road shall be in accordance with the R-Codes. ◢ A 3.0m rear setback shall be provided above the 3rd storey of development to Lots 153, 154 and 2. ◢ The side boundary setback between Lot 154 and Lot 155 Raleigh Road shall be 9.0m, comprising a 6.0m access easement and a 3.0m landscaping strip.
6.1.4 C4.3 – Lot Boundary Setbacks	Amend	Maximum height of walls built to the boundary within the Activity Centre Plan must be in accordance with the following: ◢ 11.5m maximum wall height. ◢ 10.0m average wall height.
6.1.5 C5 – Open Space	Replace	No minimum percentage of open space is applicable to the Activity Centre Plan area.
6.3.2 C.2i – Landscaping	Amend	Where fronting streets, landscaped areas are to be integrated with the streetscape including the use of consistent materials and planting and accommodate pedestrian movement, alfresco and seating areas in a relaxed shaded environment where appropriate.

6. OTHER REQUIREMENTS

6.1 INFRASTRUCTURE UPGRADES

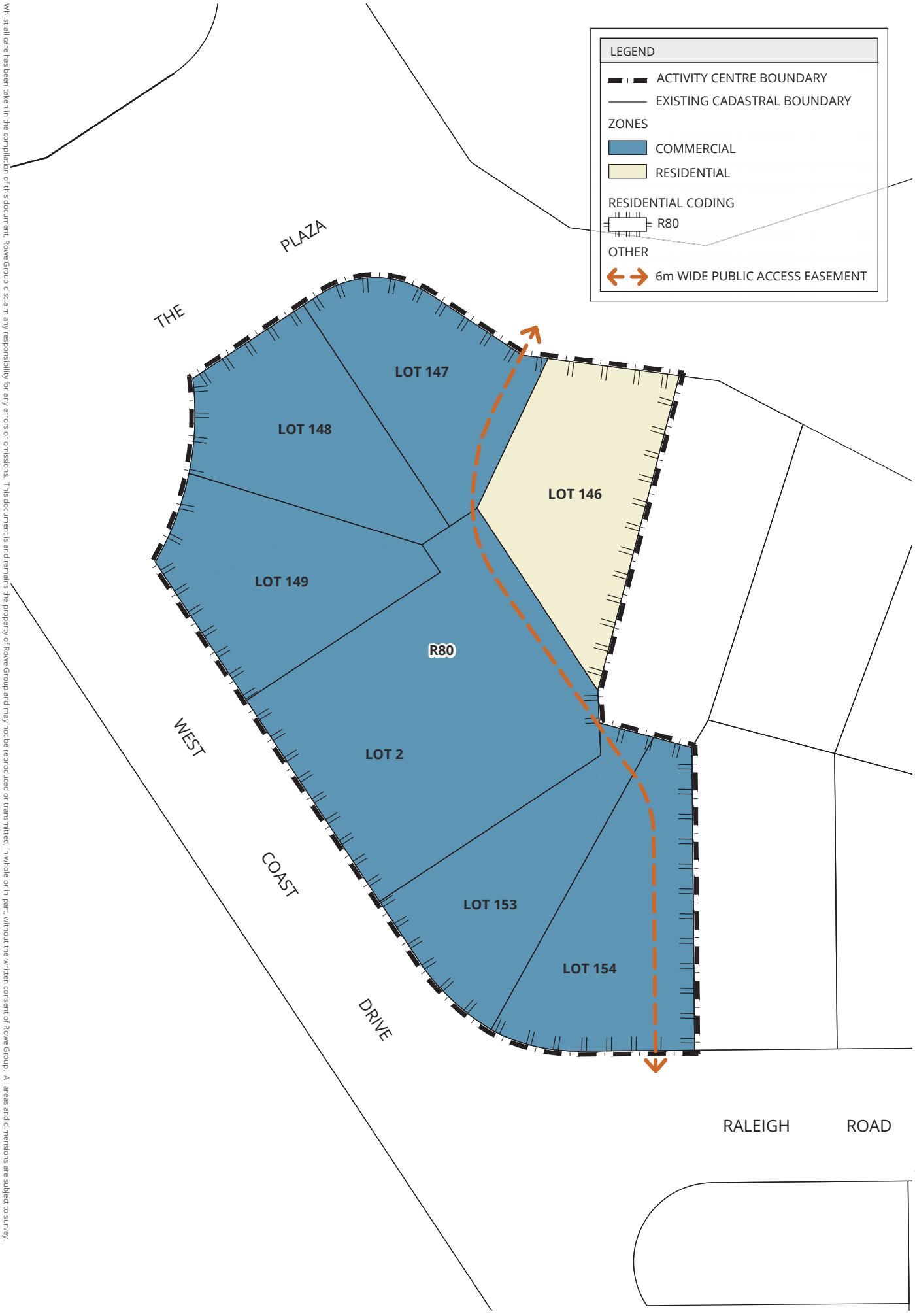
Infrastructure upgrades to support the ultimate development of the activity centre are to be undertaken in accordance with the recommendations of the Transport Assessment dated 15 February 2017.

A separate Transport Assessment shall accompany any subsequent development application to determine the extent of infrastructure upgrades that are required to support the proposal (as applicable).

7. ADDITIONAL INFORMATION

Prior to the lodgement of subdivision applications to the WAPC or development application with the City of Joondalup, the following plans are to be prepared, as applicable, to the satisfaction of the relevant authority and provided with the application for subdivision or development application:

ADDITIONAL INFORMATION	APPROVAL STAGE	CONSULTATION REQUIRED
Contamination Assessment, applicable to Lot 153 West Coast Drive and Lot 154 Raleigh Road only (the 'BP' site).	Prior to subdivision / development.	Department of Water and Environmental Regulation.
Retail Needs Assessment and/or Retail Sustainability Report, as applicable	Prior to subdivision / development (if required).	City of Joondalup.
Transport Assessment	Prior to subdivision / development.	City of Joondalup.
CPTED Assessment	Prior to development.	City of Joondalup.



N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.08.21

7875_PLAN1_20180821_Sorrento_Plaza · DRAWN: W. CLEMENTS · DATE CREATED: 2018.08.21 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE ·

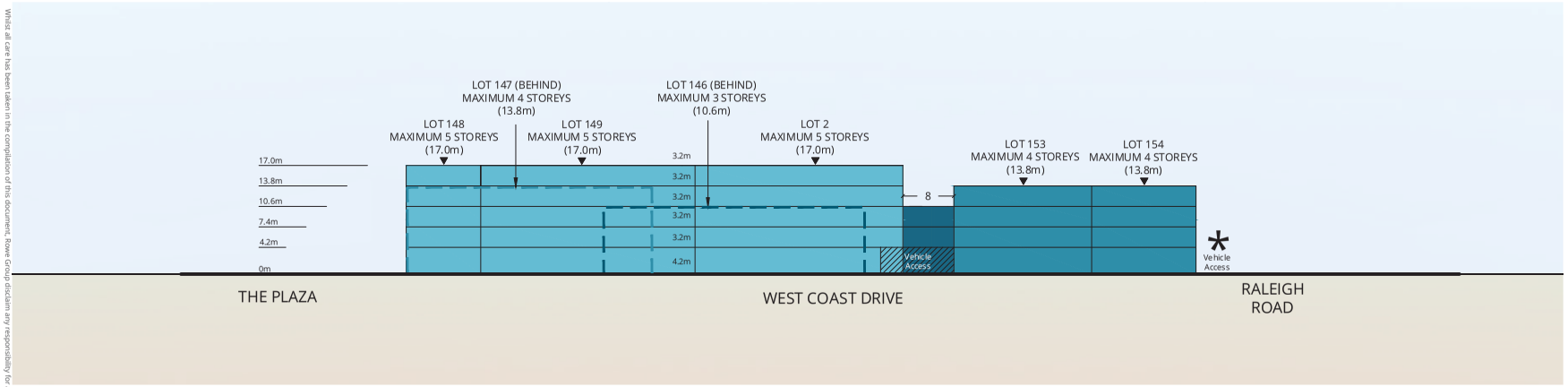
0 18.75 m

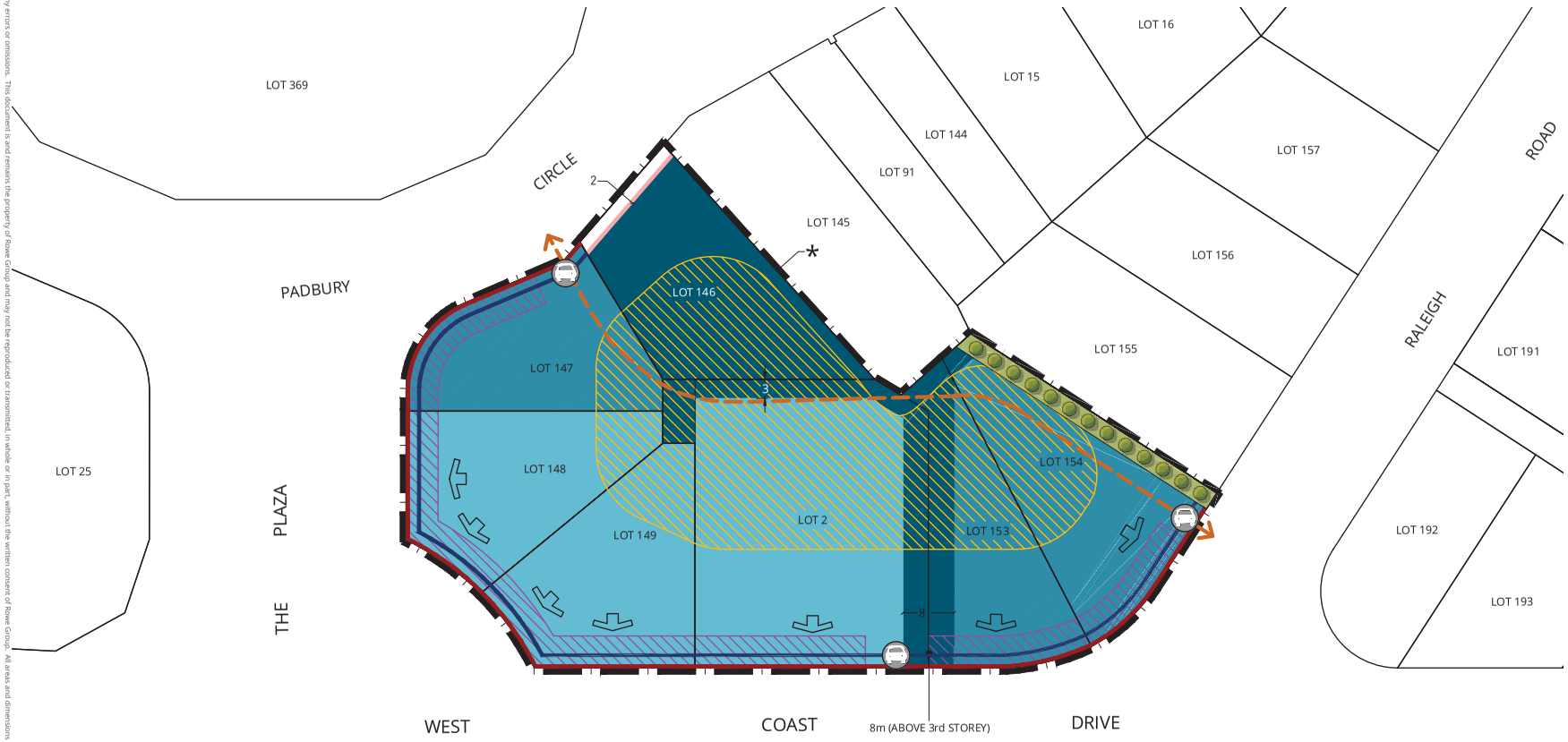
SCALE @ A4: 1:750

N

PLAN 1

ACTIVITY CENTRE PLAN





LEGEND

- ACTIVITY CENTRE PLAN BOUNDARY
- CADASTRAL BOUNDARY

BUILDING HEIGHTS

- MAXIMUM 3 STOREYS
- MAXIMUM 4 STOREYS
- MAXIMUM 5 STOREYS

OTHER

- 6m WIDE PUBLIC ACCESS EASEMENT
- ACTIVE EDGE
- INDICATIVE PARKING LOCATIONS (SLEEVED WITHIN BUILDING)
- ACCESS LOCATION
- DIRECTION OF PRIMARY BUILDING ORIENTATION
- 3m WIDE LANDSCAPE STRIP

NOTE 1: CAR PARKING TO BE CONTAINED WITHIN THE BUILDING ENVELOPE AND GENERALLY SCREENED FROM THE PUBLIC REALM.

NOTE 2: DEVELOPMENT MAY OCCUR OVER THE REAR LANEWAY SUBJECT TO MINIMUM CLEARANCE HEIGHTS BEING ACHIEVED.

STREET SETBACKS

- MINIMUM NIL SETBACK
- MAXIMUM 2m SETBACK
- MINIMUM 2m SETBACK

BOUNDARY SETBACKS

- * BOUNDARY SETBACKS TO BE AS PER THE R-CODES

NOTE 3: A MINIMUM BUILDING HEIGHT OF 3 STOREYS APPLIES TO ALL LOTS EXCEPT LOT 146.

NOTE 4: A MINIMUM NIL AND MAXIMUM 2m FRONT (STREET) SETBACK APPLIES TO ALL LOTS EXCEPT LOT 146.

N:\TOWN PLANNING\7000-7999\7875\DRAFTING\DA-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.08.21

7875_PLAN2_20180821_Sorrento Plaza (Applicant Built for Proposal) · DRAWN: W. CLEMENTS · DATE CREATED: 2018.08.21 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE

0 18.75 m

SCALE @ A3: 1:750

PLAN 2

BUILT FORM CONTROLS

PART TWO

EXPLANATORY SECTION

ROWE GROUP

1. PLANNING BACKGROUND

1.1 INTRODUCTION AND PURPOSE

This Activity Centre Plan has been prepared by Rowe Group on behalf of the Sorrento Plaza Partnership as a precursor to subdivision and / or development.

The purpose and objectives of this Activity Centre Plan are described as follows:

- To provide a framework for the coordinated redevelopment of Sorrento Local Centre and provide guidance as to the suitability of land uses within the centre;
- To diversify land use within the centre to include, in particular, residential land uses to better align with the requirements of the Western Australian Planning Commission's *State Planning Policy 4.2 – Activity Centres for Perth and Peel*;
- To secure development outcomes and an overall function as a centre in accordance with the outcomes of the City of Joondalup's *Local Commercial Strategy* and the Western Australian Planning Commission's *State Planning Policy 4.2 – Activity Centres for Perth and Peel*;
- To ensure development outcomes take advantage of the centre's location and setting while achieving an effective relationship to the street and responding to climate conditions;
- To consolidate parking and access arrangements across the site as far as practically possible;
- To allow for the full function and development of the land in accordance with the strategic planning framework while minimising impacts on surrounding landowners; and
- To provide procedural certainty, clarity of outcome and process efficiency for proponent and decision maker alike.

The Activity Centre Plan will guide future land use and development within the Sorrento Local Centre. The purpose of Part 2 of the Activity Centre Plan is to provide an explanation for the Part 1 provisions.

1.2 LAND DESCRIPTION

1.2.1 LOCATION

The Activity Centre Plan relates to Lots 2, 148, 149 and 153 West Coast Drive, Lot 154 Raleigh Road and Lots 146 and 147 Padbury Circle, Sorrento. The land is bound by West Coast Drive, Raleigh Road, Padbury Circle and The Plaza.

The site is located approximately 1km southeast of Sorrento Quay, approximately 15km northwest of the Perth Central Area and approximately 10km southwest of the Joondalup City Centre.

Refer Figure 1 – Regional Location and Figure 2 – Local Location.

N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018 JUNE FIGURES - WILLIAM CLEMENTS - 2018.06.18

7875_FIG01A_20180613_Sorrento Plaza (Regional) · DRAWN: **W. CLEMENTS** · DATE CREATED: **2018.06.13** · PROJECTION: **MGA50** GDA94 ·

0 5000 m

SCALE @ A4: 1:200,000

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FIGURE 1

REGIONAL LOCATION PLAN

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N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.06.18

7875_FIG02A_20180613_Sorrento Plaza (Local) - DRAWN: W. CLEMENTS - DATE CREATED: 2018.06.13 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE -

0 500 m

SCALE @ A4: 1:20,000

N

FIGURE 2

LOCALITY PLAN

1.2.2 AREA AND LAND USE

The subject site comprises an area of approximately 6,387m^2 and is currently accessed by West Coast Drive, The Plaza and Raleigh Road.

The site presently accommodates a service station, restaurant, offices, cafe and retail uses as well as an existing dwelling. It is anticipated that over time, the existing uses on the site will cease operations and be redeveloped into a mix of commercial and residential type uses.

Refer to Figure 3 – Site Plan

1.2.3 LEGAL DESCRIPTION AND OWNERSHIP

The subject site comprises seven (7) freehold titles, being:

LOT NUMBER	LANDOWNER	DIAGRAM/PLAN	VOLUME/FOLIO
146	Equation Pty Ltd	5180	1635/086
147	Equation Pty Ltd	5180	1704/776
148	Equation Pty Ltd	Lot 1 on Strata Plan 11641 Lot 2 on Strata Plan 11641	1704/774 1704/775
149	Peter John Peard	5180	1704/777
2	Shannonbrae Pty Ltd, Rodney Michael O'Mara, Mary Anne O'Mara, Pauline Kaye Wilson	71129	1901/444
153	BP Australia Ltd	8313	2044/194
154	BP Australia	5180	2044/195

Table 3: Lot Details

It is noted a number of existing easements are registered over the lots which comprise the centre. The easements are detailed in Table 3 below:

LOT NUMBER	REGISTERED EASEMENT / CAVEAT	RIGHT
146	Nil	
147	D71424E C467656	Carriageway over part of lot 148. City of Joondalup Caveatable interest
148	D71425E C467656	Carriageway over part of lot 147 & 149 City of Joondalup Caveatable interest
149	D71424E L573006 C467656	Carriageway over part of lot 148 City of Joondalup have a right of carriageway over part of Lot 149 City of Joondalup Caveatable interest

Table 4: Summary of Easements

Whilst the historical origin of the easements is not known, it is recognised the easements are in place to facilitate a continuous access through the rear of the site which crosses through certain properties. The easements also serve part function for access to car parking and drainage areas. Prior to the easements being formally lodged over the titles, the parking and access arrangement across the centre had evolved organically, over time by way of the existing layout of the centre.

Notwithstanding the mix of formal and non-formal agreements in place across the centre, if left unchanged the agreements that do prevail will impact on and inhibit lots from being developed in accordance with the proposed Activity Centre Plan.

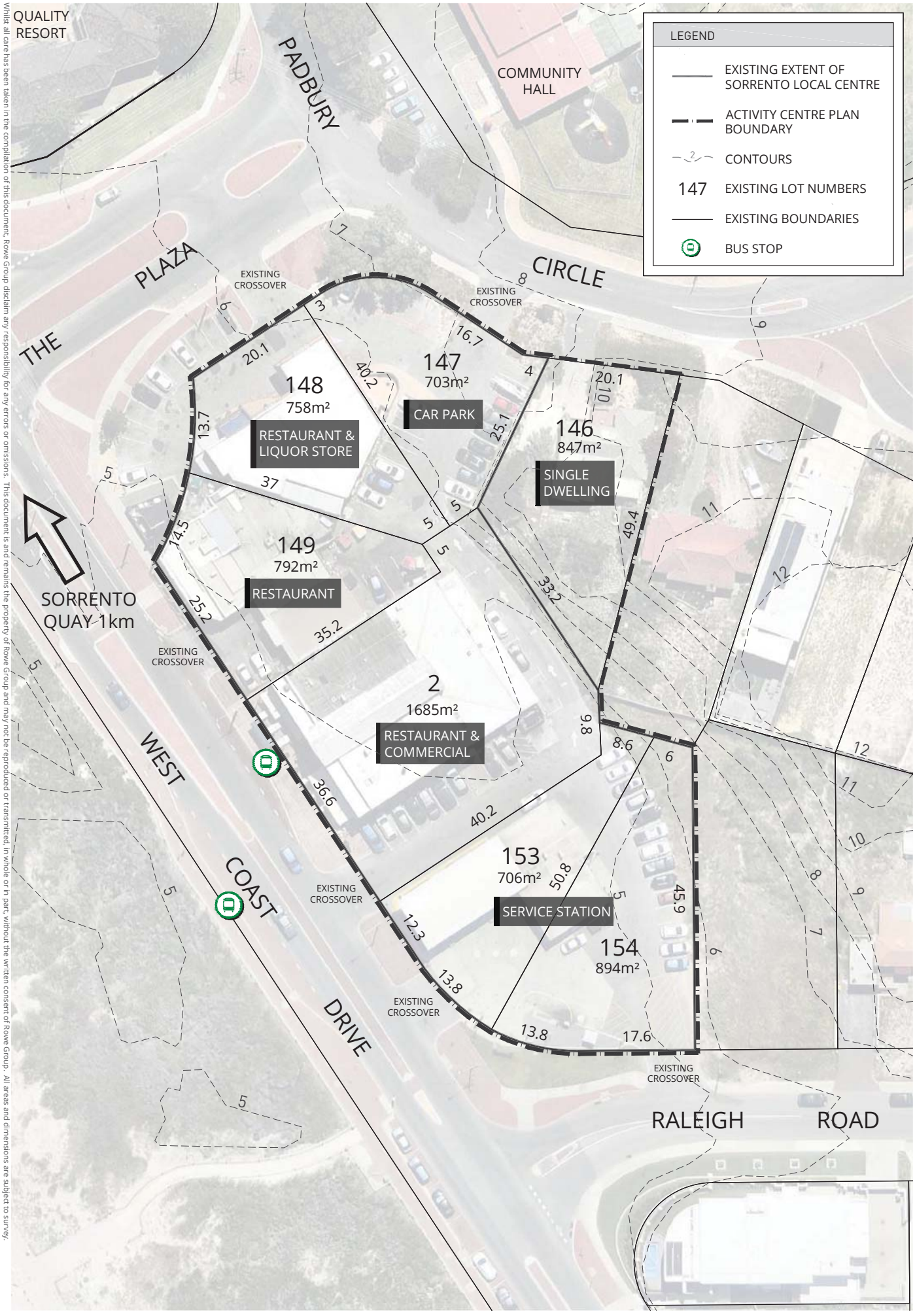
Importantly, as described above, given the 'back-to-back' nature of these access agreements with the landowner's tenants, compounded with the complicated way in which these agreements have been amended over the last 30 years, enabling all landowners to be in a position to modify these agreements is difficult, though integral to, the unimpeded development of the local centre.

Given this, the landowners have worked collaboratively to progress the Activity Centre Plan in a way that will maximise their ability to modify and/or ideally extinguish the existing complicated and restrictive site access agreements such that the existing easements which do not impact on the future development of the centre.

At the time of lodging this Activity Centre Plan there has not been sufficient design development undertaken by each landowner to determine the detail of how each of the existing access agreements are to be best modified. It is considered however, that this exercise would be best undertaken during the pre-Development Application lodgement stage and will be detailed within each respective Development Application.

Refer Figure 4 – Land Ownership

Refer to Appendix 1 – Certificates of Title



N:\TOWN PLANNING\7000-7999\7875\DRAFTING\VA-CAD\2018-JUNE FIGURES - WILLIAM CLEMENTS - 2018.06.18

7875_FIG03A_20180613_Sorrento Plaza (Site) - DRAWN: W. CLEMENTS - DATE CREATED: 2018.06.13 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE -

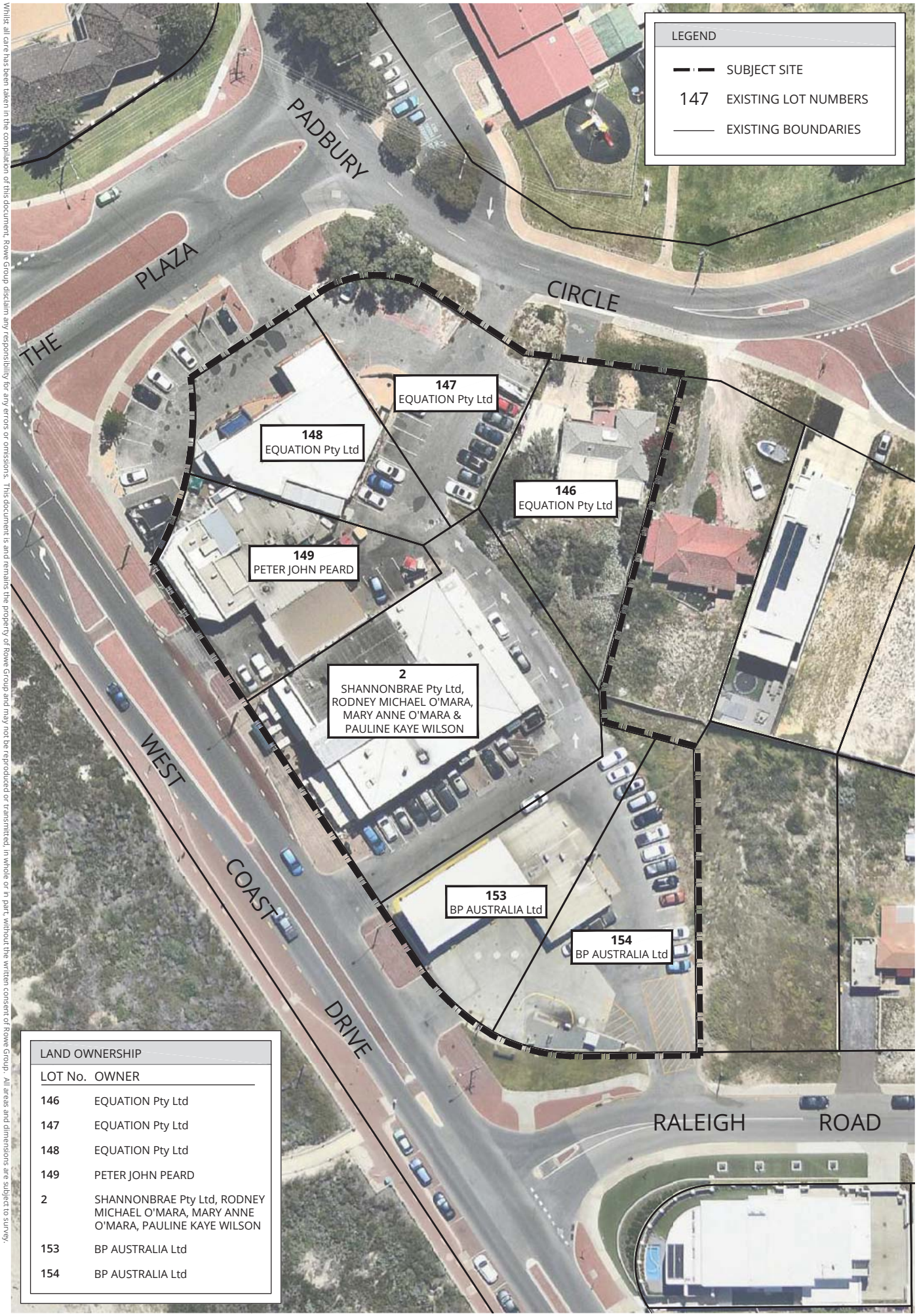
0 18.75 m

SCALE @ A4: 1:750

N

FIGURE 3

SITE PLAN



LAND OWNERSHIP	
LOT No.	OWNER
146	EQUATION Pty Ltd
147	EQUATION Pty Ltd
148	EQUATION Pty Ltd
149	PETER JOHN PEARD
2	SHANNONBRAE Pty Ltd, RODNEY MICHAEL O'MARA, MARY ANNE O'MARA, PAULINE KAYE WILSON
153	BP AUSTRALIA Ltd
154	BP AUSTRALIA Ltd

N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.06.18

7875_FIG04A_20180613_Sorrento Plaza (Land Ownership) · DRAWN: **W. CLEMENTS** · DATE CREATED: **2018.06.13** · PROJECTION: **MGA50** GDA94 · CADASTRE: LANDGATE ·

0 18.75 m

SCALE @ A4: 1:750

N

FIGURE 4
LAND OWNERSHIP

2. PLANNING FRAMEWORK

2.1.1 ZONING AND RESERVATIONS

The subject site is zoned 'Urban' under the Metropolitan Region Scheme (MRS) and 'Commercial' under the City of Joondalup District Planning Scheme No. 2 (DPS 2), with the exception of Lots 146 and 147 which are zoned 'Residential'.

All lots subject to the Activity Centre Plan are proposed to be rezoned 'Centre' zone under separate amendments to DPS2.

2.2 PLANNING STRATEGIES

2.2.1 DIRECTIONS 2031 AND BEYOND

Directions 2031 and Beyond provides a broad strategic framework defining the overall visions for the Perth and Peel Regions for the next 20 years. It sets out the planning framework for delivery of housing, infrastructure and services to accommodate future projected population growth within both regions. A key element of the overall visions identified by *Directions 2031* is the consolidation of existing urbanised areas to ensure the efficient use of land and infrastructure.

Directions 2031 sets a target of 47% of new dwellings to be provided as infill development. To achieve this, *Directions 2031* aims to apply higher densities to areas in and around retail and employment centres, in proximity to services. Specifically, the *Directions 2031* targets a total of 167,400 new dwellings in the northwest sub-region of which 12,700 dwellings are to be provided in the form of infill development within the City of Joondalup. Facilitating residential development in the Centre where presently there is only a single dwelling (refer to Part 1 for the minimum dwelling target) is consistent with achieving these aims of Directions 2031.

The Activity Centre Plan will also facilitate the construction of a significant number of multiple dwellings which offer adaptable living opportunities for existing residents within the area wishing to down-size and minimise distance from the amenities associated with the Centre and its coastal setting. The resultant apartments will offer a ranges of housing choices at various price points within the market which provide for an alternative option to an area which predominantly consists of single houses.

As well as housing, Directions 2031 contains an employment self-sufficiency target of 60%. The refurbishment of Sorrento Local Centre as facilitated by the Activity Centre Plan will assist in the creation of local employment opportunities through the variety of business that will locate within the Centre. This will assist in achieving employment self-sufficiency targets and the other, broader benefits identified by Directions 2031 as outlined above.

The proposed Activity Centre Plan is therefore considered to comply with the provisions and guidelines of *Directions 2031*.

2.2.2 CITY OF JOONDALUP LOCAL COMMERCIAL STRATEGY

The *City of Joondalup Local Commercial Strategy* identifies the Sorrento Local Centre as a Local Centre with a recommended threshold of 1,500m^2 retail floor space.

The Activity Centre Plan proposes a maximum net lettable area (NLA) of 1,475m^2 which has been based on the expected future development composition of the centre. The following provides an indicative breakdown of the distribution of floor space and land use within the centre:

LAND USE	TOTAL NET LETTABLE AREA	PERCENTAGE OF TOTAL NET LETTABLE AREA (%)
Cafe / Restaurant	715m^2	50%
Retail	500m^2	30%
Liquor Store	260m^2	20%
Total	**1,475m^2**	**100%**

Table 5: Breakdown of Net Lettable Area

2.2.3 LOCAL HOUSING STRATEGY

The City of Joondalup's *Local Housing Strategy* (LHS) has been adopted by both the City of Joondalup and the Western Australian Planning Commission. Implementation of the LHS was a specific action arising from *Directions 2031*.

The key recommendation of the LHS of relevance to Sorrento Local Centre was 'Recommendation 5', which related to increasing the applicable residential density code within land zoned 'Commercial', 'Business' and 'Mixed Use'. This has subsequently been achieved and implemented through Clauses 4.3.1 and 4.3.2 of DPS 2, as follows:

> *4.3.2 Unless a density code is specified on the R-Code Map, for lots with a land area of less than 1000m^2 within the Commercial, Business or Mixed-Use zone on the Scheme Map the applicable density code is R40.*
>
> *4.3.3 Unless a density code is specified on the R-Code Map, for lots with a land area of 1000m^2 or more within the Commercial, Business or Mixed-Use zone on the Scheme Map the applicable density code is R80.*

In regard to the above, the Centre includes a variety of landholdings of which some are below 1,000m^2 and some of which are greater than 1,000m^2. The Centre also has a primary and lengthy frontage to West Coast Drive which serves a prominent road opposite an attractive and well used recreation area, being the Sorrento Beach. In this context it is important to achieve integrated and consistent built form outcomes across the Centre. As such, the Activity Centre Plan allocates a single density code of R80 to the entire Centre, to accompany development provisions that require a compatible built form across the various holdings.

2.3 POLICIES

2.3.1 STATE PLANNING POLICY 4.2 - ACTIVITY CENTRES FOR PERTH AND PEEL

The objective of *State Planning Policy 4.2 – Activity Centres for Perth and Peel* ('SPP 4.2') is to specify broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in the Perth and Peel regions.

As the Activity Centre Plan proposes a shop-retail floor space of under 1,500m^2 NLA, the Sorrento Local Centre is identified under the provisions of SPP 4.2 as being a 'Neighbourhood' or 'Local' Centre which are defined under SPP 4.2 as:

> *Neighbourhood centres are important local community focal points that help to provide for the main daily to weekly household shopping and community needs. They are also a focus for medium density housing. There are also many smaller local centres such as delicatessens and convenience stores that provide for the day-to-day needs of local communities.*
>
> *Neighbourhood and local centres play an important role in providing walkable access to services and facilities for communities. These centres should be recognised in local planning strategies, and also in structure plans for new urban areas.*

The existing Centre caters for the day-to-day needs of local residents through the existing liquor store and service station. Similarly, smaller scale food and beverage operators and services with a focus on a local catchment are also present within the Centre. The Centre however, does not presently contain any medium to high density residential uses to support the existing commercial uses. The Activity Centre Plan seeks to provide for the framework for the development of high density residential uses within the Centre in conjunction with a range of commercial uses.

The Sorrento Local Centre is also identified under the City of Joondalup *Local Housing Strategy* and *Local Commercial Strategy*. Consistent with Directions 2031, this Activity Centre Plan seeks to implement the outcomes of both Strategies.

Table 3 of SPP 4.2 summarises the various functions, characteristics and performance targets for Local Centres. A measurement of the Sorrento Local Centre against these indicators is provided at Table 6 along with a description of how this Activity Centre Plan addresses any deficiency.

The Activity Centre Plan has been prepared in accordance with the structure plan requirements of SPP 4.2.

STATE PLANNING POLICY 4.2 – ACTIVITY CENTRES FOR PERTH AND PEEL

TABLE 6: RECONCILLIATION AGAINST SPP 4.2

CENTRE ELEMENT	TYPICAL CHARACTERISTIC	CURRENT CONDITION	ACTIVITY CENTRE PLAN RESPONSE
Main role / function	Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.	The centre provides local convenience shopping via a liquor store and service station (that sells a small range of day-to-day items). Smaller scale food, beverage and services with a focus on the local catchment are also present.	Through its built form requirements and the guidance as to the suitability of land uses within the Activity Centre Plan area, the centre will provide for a continued and varied range of local convenience shopping and services.
Transport connectivity and accessibility	Stopping / transfer point for bus network.	Bus stops are located immediately in front of the Centre providing for north and south movement.	Increased residential land use within the centre will promote bus patronage.
Typical Retail types	Supermarkets, personal services, convenience shops	No supermarkets are present but convenience retail and lower order personal services are.	A full range of uses consistent with the role of a local centre will be facilitated however they will be contained within an improved built form that relates better to local context and setting, including the street.
Typical Office Development	Local Professional Services	Local professional services are present within the centre.	As above.
Future indicative service population (trade) area	Approximately 2,000 -15,000 (about 1km)	The catchment of the centre is compromised by virtue of its location on the coast. Within the catchment mapped at Figure 2 there are approximately 1,400 dwellings. With an average household size of 2.73 (source: City of Joondalup) the catchment population would be approximately 3,822 persons.	A renewed centre will help to capture passing trade associated with the beach located opposite, thereby supporting centre businesses. The addition of residences to the centre will increase the catchment population to sustain centre businesses.
Walkable Catchment for residential density target	200m	The catchment is compromised by virtue of the coastal area. There are approximately 85 dwellings within 200m of the site. The total onshore catchment area is approximately 12.13ha.	Passing trade from the beach and coastal path may partially compensate for the absence of catchment to coastal areas.
Residential density target per gross hectare	Minimum – 15 Desirable - 25	The present residential density is approximately 6.95 per gross hectare. It should be noted that there is only one dwelling within the Centre itself.	Any provision for dwellings will be an improvement to the current density. Part 1 of this report identifies a minimum target density consistent with SPP 4.2.

2.3.2 STATE PLANNING POLICY 2.6 – STATE COASTAL PLANNING POLICY

State Planning Policy 2.6 – State Coastal Planning Policy ('SPP 2.6) aims to provide guidance for decision-making within the coastal zone. The provisions of SPP 2.6 are applicable to the Activity Centre Plan given the Centre is located within 300m of the shoreline.

It should be noted that the Policy does not specify a maximum height limit for development in the coastal zone, instead indicating that such controls should be specified as part of controls outlined in a local planning scheme and/or structure plan, in order to achieve outcomes which respond to the desired character, built form and amenity of the locality. The Policy essentially notes that building height should be determined on case by case basis, based on the merits of each individual proposal.

SPP 2.6 identifies a range of planning criteria for determining appropriate height as well as ensuring development is complementary to the coastal zone. The Activity Centre Plan addresses the objectives of SPP 2.6 as follows:

- While there is an absence of a specific visual theme in strategic planning for the Sorrento locality, the centre is designated as a 'Local Centre' under which SPP 4.2 which promotes a residential density of up to R80. Density of this type along with the built form typically associated with a 'Local Centre' infers a greater level of height than presently exists.
- The centre site is generally flat in nature and sits lower than land behind it, to the east. To the immediate north west of the site is an amphitheatre like effect of a local park around which residential development rises sharply on steep, undulating terrain. Such terrain has generated larger houses utilising innovative design that seeks to capture views, breezes and light. Development in the centre will be similarly innovative and seek to capture views, light and maximise opportunities for ventilation. However, because of the land sitting lower than much of its surrounds, it can do so in a manner that sits comfortably within its contextual setting. In addition, the built form upon Lot 146 will be limited to three storeys in height allowing for a gradual rise from the two storeys with loft maximums in the nearby residential area rising to the West Coast Drive frontage.
- The shadow diagram at Figure 5 confirms that the built form massing facilitated by this Activity Centre Plan would not detrimentally impact on the foreshore or nearby lots through overshadowing.
- The land is to be rezoned 'Centre' and ultimately designated as 'Commercial' under the Activity Centre Plan. It is clearly set apart from surrounding residential land and forms a distinct, local node on the coast.
- Any future development will be located on stable, compacted land separated from the beach by a dunal system, coastal vegetation and infrastructure such as fencing, a dual use path and a road. As such the development site is not considered to be vulnerable to impacts from coastal erosion.
- Coastal hazard is minimised by the centre's separation from the beach by way of a road and pathway.

On this basis it is considered the Activity Centre Plan proposal satisfies the objectives of SPP 2.6 and will not have any undue impacts on the adjoining coastal zone.

2.3.3 HEIGHT OF NON-RESIDENTIAL BUILDINGS LOCAL PLANNING POLICY

The City of Joondalup adopted the *Height of Non-Residential Buildings Local Planning Policy* (the 'Policy') in December 2015. The Policy supersedes the City's previous *Height of Buildings within the Coastal Area (Non-Residential) Policy*.

The Policy identifies the Sorrento Local Centre as a "non-residential coastal site" which stipulates that building height limits shall be in accordance with Table 3 – Category B of the R-Codes with the following exceptions:

> *Minor and incidental development which does not increase the height of existing buildings;*
>
> *Greater height that has been approved as part of a structure plan, activity centre plan or local development plan, taking into account:*
>
> *a. existing built form, topography and landscape character of the surrounding area;*
>
> *b. building siting and design;*
>
> *c. bulk and scale of buildings and the potential to unreasonably overshadow adjoining properties or the foreshore;*
>
> *d. visual permeability of the foreshore and ocean from nearby residential areas, roads and public spaces;*
>
> *e. whether the development is sympathetic to the desired character, built form and amenity of the surrounding area.*

The Activity Centre Plan proposes a range of building heights which are intended to supersede the maximum building height provisions of the City's Policy. The "as of right" building height provisions of the Policy would otherwise limit development to a maximum of two storeys which is inconsistent with *State Planning Policy 4.2 – Activity Centres for Perth and Peel* (SPP 4.2). SPP 4.2 promotes a residential density of up to R80 for local centres which cannot be realised under the existing building height provisions.

Limiting building height of development within the centre to two storeys will essentially negate any possibility of providing residential land uses as a potential use within the centre as demonstrated by the complete absence of residential land use within the centre at present. Maximising the amount of residential land use that may accommodate medium to high density development within a planned coastal node is consistent with the infill targets of *Directions 2031 and Beyond* as well as the density targets of SPP4.2.

In addition, *State Planning Policy 2.6 – Coastal Policy* (SPP 2.6) no longer contains a height limit for coastal development. Instead SPP 2.6 now seeks heights to be determined on merits or performance basis.

Community expectation of a greater level of development within the centre has been further generated by the adoption of the *City of Joondalup Local Housing Strategy* and subsequent amendments to the *City of Joondalup District Planning Scheme No. 2* which has implemented density codes of R40 and R80 depending on lot size within the centre. It is therefore considered that this Activity Centre Plan is the appropriate mechanism to vary the building height provisions of the Policy as detailed further within this report.

3. SITE CONDITIONS AND CONSTRAINTS

3.1 BIODIVERSITY AND NATURAL AREA ASSETS

There are no environmental features within the boundaries of the centre which are of environmental significance or pose a constraint to development.

It is noted the provisions of the *City of Joondalup Local Planning Policy – Environmentally Sustainable Design* applies to all residential, commercial and mixed-use development within the City. The Policy requires all new buildings to incorporate sustainability-based features including passive solar design. Such features will be reviewed and incorporated within the development at the Development Application Stage.

3.2 LANDFORM AND SOILS

The subject site is relatively flat at the interface with West Coast Drive, with site rising towards Padbury Circle. The site slopes from approximately 5.0 metres Australian Height Datum (AHD) at West Coast Drive up to 10.0 metres AHD to the north, adjacent to Padbury Circle.

It is noted that the subject site sits lower than the surrounding locality, with the topography rises sharply to the north-east of the Centre, beyond nearby Geneff Park.

3.2.1 CONTAMINATION

A search of the Department of Environmental Regulation's (DER) Contaminated Sites Database does not indicate the presence of contamination within the site.

It is noted however, that an existing Service Station occupies the corner of West Coast Drive and Raleigh Road. As part of the redevelopment of the site, it will be required to examine the service station site for potential contamination and, if necessary, remediate the site at developer cost prior to development.

3.3 HERITAGE

3.3.1 ABORIGINAL HERITAGE

A search of the Department of Aboriginal Affairs Aboriginal Heritage Inquiry System did not identify any sites of cultural significance for the subject site.

3.3.2 EUROPEAN HERITAGE

A search of the State Heritage Office database and the Australian Heritage Database indicate there are no registered heritage sites within or in close proximity to the subject site.

3.4 BUSHFIRE HAZARD

The subject site is not designated as being 'bush fire prone' in accordance with the Department of Fire and Emergency Service's Map of Bush Fire Prone Areas. The requirements of the WAPC's *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* therefore do not apply to the subject site.

3.5 COAST AND FORESHORES

The centre is located in close proximity to the Sorrento Beach which is located to the west of the site and is separated by West Coast Drive.

Redevelopment of the centre represents infill development within an established urban area. Further, the centre is physically separated from the beach by the West Coast Drive road reserve, a dual use path, fencing and existing vegetation. Development facilitated by the Activity Centre Plan is therefore not anticipated to impact on, or be impacted by, the beach environment. This is inclusive of shadow impact which, as per Figure 5, is shown to be at a reasonable level, particularly in summer when beach activity is at its peak.

3.6 CONTEXT AND OTHER LAND USE CONSTRAINTS AND OPPORTUNITIES

3.6.1 REGIONAL CONTEXT

The centre's regional context is mapped at Figure 1. The closest Strategic Metropolitan Centre is the Joondalup City Centre, with the Perth Central Area being located at a similar distance. Therefore, there is potentially equal pull between these higher order centres for associated shopping, services and employment.

The Whitfords City Secondary Centre is located approximately 4km to the north-west, with the Sorrento Quay District Centre being located approximately one kilometre away from the subject site. Regular shopping and service needs are likely to be met within a relatively small distance from the centre.

The coastline upon which the centre sits within is a regional asset attracting visitors beyond the centre's regular 200m catchment. As such, any food, beverage and entertainment uses located within the centre are likely to benefit from a greater level of customer and passing trade than a centre located further inland. It is also noted that the State Government has recently agreed to fund, in part, a shark barrier at Sorrento Beach which is expected to draw more interest to an already popular coastal location.

In accordance with the requirements of SPP 4.2, the centre's strengths, weaknesses, opportunities and constraints, in a regional context, is outlined below in Table 6.

STRENGTHS	WEAKNESSES
- Coastal location brings passing trade and customers beyond the local catchment. - Well linked to other Centres by a variety of modes.	- The Centre is insufficiently developed to fully capitalise on its strengths/opportunities - Absence of residential population.
OPPORTUNITIES	**CONSTRAINTS**
- Scope for refurbishment to better capitalise on the Centre's strengths and address its weaknesses.	- Capacity for refurbishment potentially limited by expectations of the surrounding, established catchment.

Table 6: SWOT Analysis of the Centre

3.6.2 LOCAL CONTEXT

The centre currently comprises a residential dwelling, a restaurant, cafe, liquor store, office, Pilates studio and a service station.

The majority of the centre's 200m walkable catchment and the wider 1km catchment has been historically developed, predominantly for single residential development in the form of large family homes. This is reflective of the coastal location of the centre, its proximity to schools, open space and nearby District and Secondary Centres.

According to the City's *Local Housing Strategy* there are a greater percentage of persons aged between the age of 10 - 29 years and 40 - 60 years within the City of Joondalup than the metropolitan average, reflecting the large number of families in the City. Some 42.5% of households in Joondalup are couples with children compared to 32% across the wider metropolitan area.

In accordance with recent ABS data, couples without children are the second most common household type in the City at 27%, with lone person households also significant in the City's municipality at 16%. This is reflective of a declining household size across the City which is consistent with the type of housing product proposed to be created under the Activity Centre Plan.

The *Local Housing Strategy* notes that:

> *'The current housing structure of the City does not provide ... flexibility. Additionally, given the rate at which the population in the City of Joondalup will continue to age, a proactive approach to increase the availability of alternatives to single houses on large blocks for this household type will need to be taken.'*

This supports the need for a greater level of housing choice and alternatives to single residential dwellings on green title blocks over time. The Activity Centre Plan looks to address this by way of providing for the framework for the centre to incorporate a number of Multiple Dwellings in conjunction with commercial type uses.

3.6.3 LOT 146 AND 147 PADBURY CIRCLE

Lot 147 Padbury Circle has been included within the Activity Centre Plan at the request of the City in reflection of the current use and development of the property and its function and relationship to the wider centre. In addition, Lot 146 Padbury Circle has been included within the Activity Centre Plan to round off the centre and assist with achieving density targets as well as representing the logical development of the site over time.

The inclusion of Lot 146 within the proposed Activity Centre Plan area is the result of a unique set of circumstances that will improve the amenity of the completed development. The inclusion of Lot 146 will also allow the landowners to develop the lots independently from the remainder of the centre by way of providing for an alternate access point off Padbury Circle, if required, allowing for the Activity Centre Plan to be implemented over time.

The inclusion of Lot 146 Padbury Circle within the Activity Centre Plan boundary is considered to benefit the centre by way of the following:

- There is an existing leasing agreement which relies on the current access agreements over Lots 147, 148 and 149 which will run for at least 12 more years, which makes developing the subject site (and Lots 147, 148 and 149 in particular) extremely difficult unless the agreements are modified. A staged development is required in order for the vision of the Activity Centre Plan to be realised and the inclusion of Lot 146 is required in order to facilitate the staged development of the site in accordance with the leasing agreement.
- Lots 146, 147 and 148 are under the same landownership which presents opportunities in terms of the provision of servicing and infrastructure to the site and staging of development.
- It is acknowledged that Lot 146 will provide an area of transition between the existing residential properties to the east as well as the more intense development of the commercial centre facing West Coast Drive and The Plaza. As a result, the Activity Centre Plan purposefully proposes limiting the height of the development within Lot 146 to 3 storeys.
- This will allow for the height and density to transition from the existing residential area (which can be approved and developed 'as of right' at two storeys plus a loft) to 3 storeys which then steps up in height and intensity to the landmark corner of the site. This will assist in preserving views and providing for an area of transition rather than an abrupt change from single residential development to a 3 storey-plus development next door.
- Providing multiple dwelling residential development upon Lots 146 and 147 will provide for an improved interface with Geneff Park, enhancing opportunities for passive surveillance.
- The inclusion of Lot 146 will not result in the introduction of any additional crossovers to the Activity Centre Plan area and will actually result in the removal of the existing access point / crossover to Lot 146.

- This would result in the logical rounding off of the boundaries of the centre. The proposed Activity Centre Plan will result in the land being utilised for its highest and best use (i.e. no additional commercial element is proposed, instead the introduction of the required residential element provides diversity within this strategic site).
- It is not considered that the inclusion of Lot 146 would create a precedent for other residential landowners, in view of the unique reasons provided above as well as the fact that inclusion of other properties would result in the addition of crossovers and access points to Padbury Circle and would draw traffic into the existing residential areas. The inclusion of Lot 146 will result in traffic and parking being directed further away from the existing residential precinct.

4. LAND USE AND SUBDIVISION REQUIREMENTS

4.1 LAND USE

The Activity Centre Plan sets out land use and residential densities contemplated within the centre. The centre is proposed to comprise a suite of commercial uses consistent with 'Commercial' zoning of the *City of Joondalup District Planning Scheme No. 2* with further direction as to the suitability of uses provided for within Part 1 of this report. The centre is also proposed to comprise residential development at the R80 density code.

Given the small scale of the Centre, there are no separate character areas defined or proposed by this Activity Centre Plan. Instead, the Centre is considered as a single, integrated character area. Provisions have been built into Part 1 of the Activity Centre Plan in this regard to ensure a compatible and consistent built form is provided, notwithstanding that there may be various development timeframes across each of the lots.

As identified previously in this report, the Centre presently contains only one (1) residential dwelling and the existing commercial built form is unable to accommodate any future conversion to residential. The Activity Centre Plan proposes to address this land use deficiency by providing for a suite of compatible uses in conjunction with robust built form.

It is noted that there is no minimum land use diversity target for Local Centres under SPP 4.2.

4.2 RESIDENTIAL

A residential density of R80 has been provided for over the Activity Centre Plan area in accordance with SPP 4.2. The centre is anticipated to create approximately an additional 77 dwellings resulting in approximately 118 dwellings per site hectare (based on desktop calculations only and subject to detailed design).

An assessment of the walkable catchment shown at Figure 2 confirms there are approximately 85 existing dwellings within the 12.23ha (onshore) 200m walkable catchment of the centre. This equates to a residential density of 6.95 compared to the minimum density per gross hectare of 15 and the preferred density of 25 (per gross hectare) identified by SPP 4.2. This results in a dwelling shortfall of approximately 100 homes within the centre catchment which are required to meet the minimum target density, with approximately 220 homes required to meet the preferred target. As noted above, the Activity Centre Plan will assist in meeting the density targets of SPP 4.2 by delivering approximately 77 dwellings (subject to detailed design) to the catchment area.

The Centre catchment currently contains a number of lots which are approximately 1,000m^2 in area and are potentially capable of supporting further subdivision at the R20 density code. It is noted that the majority of housing stock comprises relatively new and relatively large homes and therefore the capacity for further subdivision within the walkable catchment is somewhat limited in the short to medium term. Therefore, in order to draw closer to the performance targets of SPP 4.2 with respect to dwelling density, it is important to allow for residential development within the centre itself where currently there is none. It is also appropriate to allow for a density within the centre that maximises residential development as the centre represents the best opportunity to bring the catchment closer to SPP 4.2 targets within a reasonable timeframe.

4.3 MOVEMENT NETWORKS

A Transport Assessment has been prepared by Cardno to support the Activity Centre Plan. The Transport Assessment details both the existing and proposed movement networks surrounding the subject site. A copy of the Transport Assessment is provided at Appendix 2.

4.4 EXISTING ROAD NETWORK

4.4.1 WEST COAST DRIVE

West Coast Drive is classified as a Distributor B under the Main Roads Functional Hierarchy and is constructed as a two-lane median-divided carriageway. West Coast Drive connects to The Plaza to the north-west of the site and to Hepburn Avenue approximately 1.2km to the north-west of the site.

4.4.2 THE PLAZA

The Plaza is classified as an Access Road under the Main Roads Functional Hierarchy and is constructed as a two-lane median divided carriageway. The Plaza connects West Coast Drive to Padbury Circle in the north-east of the proposed centre. Parallel indented parking is currently provided on both sides of The Plaza, adjacent to the subject site.

4.4.3 RALEIGH ROAD

Raleigh Road is classified as an Access Road under the Main Roads Functional Hierarchy and is constructed as a two-lane undivided carriageway. Raleigh Road connects West Coast Drive to the south-west of the proposed centre.

4.4.4 PADBURY CIRCLE

Padbury Circle is classified as an Access Road under the Main Roads Functional Hierarchy and is constructed as a two-lane undivided carriageway. Padbury Circle connects to The Plaza to the north-east of the proposed centre.

4.5 PROPOSED MOVEMENT NETWORK

4.5.1 ROAD NETWORK

The Transport Assessment identified that modifications to the existing road network may be required as a result of the proposed development, when viewed in conjunction with the existing traffic flows within the area. Such modifications may include intersection threshold treatments, speed limit reductions, a boulevard road treatment, modifications to intersection form and other landscaping measures which would be further refined through detailed design at the Development Application stage.

The wide road reserve at The Plaza provides opportunity for a range of changes to reduce traffic speeds and improve the pedestrian and cycling experience, such as on-street parking which is provisionally supported by the City. Further discussions with the City of Joondalup with regard to the final design outcome of both West Coast Drive and The Plaza will be undertaken as detailed design across the site progresses as part of future applications over the site.

4.5.2 INTERSECTION CONTROLS

With regard to modified intersection controls to be further investigated as detailed design unfolds across the site at the subdivision / development stage, options include converting the existing priority intersection to a roundabout form or widening the West Coast Drive median to allow for staged right-turn egress for northbound movements.

The Transport Assessment has reviewed the intersection of West Coast Drive and The Plaza with and without the addition of development traffic from the site. The results of the analysis show that all of the approaches apart from the right turn movement out of The Plaza to West Coast Drive have sufficient capacity to accommodate the traffic demand during the Thursday and Saturday peak hour period under both of the "with development" scenarios.

Notwithstanding, Cardno undertook further investigation of the intersection of the West Coast Drive and The Plaza intersection to address the low level of service for this movement. The options included:

1. Modifying the West Coast Drive and The Plaza intersection to convert the existing high-speed give-way slip lane to a standard left-turn pocket and provision of left and right turning lanes at the Plaza Approach;
2. Modifying the West Coast Drive and The Plaza intersection to convert the existing priority intersection to a roundabout form.

The results of Option 1 concluded that the proposed layout will improve the operation of the intersection in both scenarios (with and without development) by reducing the delay time for the right turn out of The Plaza. The Transport Assessment notes that whilst the movement will still operate with a LOS F, it will operate with a low 95% average back of queue and an acceptable delay for The Plaza and therefore requires no further changes to the proposed layout.

The results of Option 2 shows that traffic operation would be significantly improved for The Plaza with a minor impact on traffic along West Coast Drive. Cardno conclude that the roundabout solution therefore addresses the operational aspects of the intersection well, however the roundabout design has some intrinsic issues that make it a less suitable option in this location.

Considering that impact on drivers and sustainable transport modes and understanding the City's desire to improve pedestrian and cycling legibility in this area, the Transport Assessment prepared by Cardno recommends retention of the existing priority infrastructure, but with improvement to ensure the ongoing function of the West Coast Drive and The Plaza intersection. Such improvements to the intersection may be undertaken as a future condition of development approval.

4.5.2.1 VEHICULAR ACCESS

The intent of the Activity Centre Plan in terms of vehicular access points is to rationalise existing access points and ultimately reduce the number of access points to the site by removing vehicular access to The Plaza.

The Transport Report analyses two different access scenarios for the proposed Centre, one of which provides for no other access to West Coast Drive except from the access to the service station and the other which allows an additional access point along West Coast Drive to service Lot 2. This access strategy is consistent with the proposed development of the Centre given that it is likely that the future build-out of the Centre will occur in stages and may occur in any order. As such, it is important that each development site can operate in the context of the existing development.

There is currently an existing circulation path that runs along the northern boundary of the site. It is noted that it is the City of Joondalup's preference to retain this access way in an upgraded form. This circulation path has evolved over time and currently operates in a one-way manner, from south to north. Theoretically, this circulation path allows drivers to circulate to find parking without leaving the Centre The proposed below grade parking, located at the terminal points of the existing circulation path, supports the existing visitor behaviour by providing parking at the same locations as the current scenario.

Intersection assessment of the boundary road network suggests that The Plaza is best able to cater for this traffic demand through to 2031, while still retaining the opportunity to reduce vehicle speeds and promote a 'Shared Space' should the City wish to pursue this design.

The Transport Assessment further notes that the separation of the car parking access points will require measures to ensure parking legibility, including both signage to inform visitors of available bays, and passive measures to promote use. Passive design features which assist in on-site circulation include:

- Kerbs and medians;
- Parking bay arrangement; and
- Structural elements.

Each of these passive effects will be leveraged to ensure visitors to the Centre are able to access available parking as required, without requiring connectivity across lot boundaries. It is also noted that specific parking wayfinding signage may be used to direct visitors to below grade parking. These measures would be required in any event, as the usage of the undercroft and basement car parking is highly dependent on the public's knowledge of its availability. This can be achieved by establishing excellent pedestrian infrastructure connecting the parking access points, development entrances and external network.

It is expected that the below grade parking will be attractive for destination trips to the Centre, rather than to fulfil casual parking requirements for visitors to the adjacent beachfront. The Transport Assessment notes the abundance of publicly accessible parking to the north of the site should assist with existing parking constraints, while still being available for patrons of restaurants and evening retail demand.

The traffic assessment found that a rear access lane is required to provide access from Raleigh Road to the north to Padbury Circle to the south, which would improve performance of the intersection of Raleigh Road and West Coast Drive. The access would also provide for service vehicles to service commercial tenancies from the rear of the site and reduce crossovers onto West Coast Drive. An informal access currently exists in this location however this is not subject to any formal tenure arrangements. The findings of the traffic report therefore conclude that an internal rear access lane be provided and identified as a public access easement on the Activity Centre Plan map.

4.6 PARKING

The Activity Centre Plan proposes a car parking ratio which is consistent with that of the R-Codes and DPS 2.

An assessment against the car R-Codes and DPS 2 will be undertaken as part of any future Development Application over the site.

4.7 PUBLIC TRANSPORT

The subject site is currently serviced by Bus Service Route 423, a high frequency public transport route which runs between Warwick Station and Stirling Station and provides a connection to the centre. The service can be accessed from bus stops located on West Coast Drive immediately adjacent to the centre, as well as from bus stops located in Padbury Circle, Hocking Parade and Hood Terrace.

It is noted that whilst the Public Transport Authority would not support to relocation of the bus stop to enable the provision of greater levels of alfresco dining, the Authority would support the embayment being filled, given it is non-compliant with the minimum bus embayment width. This would also serve as a means to slow down vehicular traffic along West Coast Drive which is also another outcome contemplated by the Activity Centre Plan to enhance the pedestrian experience.

4.8 PEDESTRIAN AND CYCLE NETWORKS

The existing pedestrian/cycle network surrounding the site provides direct accessibility from the centre to the surrounding residential areas. A shared path is located within the eastern verge of West Coast Drive, to the north of the subject site, with a high-quality shared path running along West Coast Drive for use mainly by recreational cyclists and pedestrians. On-street cycling infrastructure is provided along West Coast Drive to the north of The Plaza in the form of sealed shoulders, linking into the sealed shoulders along Hepburn Avenue.

The existing shared path network provides a legible north-south route, connecting the centre to Warwick Station via Beach Road and to Greenwood Station via Hepburn Avenue.

Padbury Circle and The Plaza provide a comfortable walking environment with a 1.5m footpath network. The existing wide median island provides refuge for pedestrians and cyclists crossing The Plaza.

A new shared path has been proposed for the eastern side of West Coast Drive, from Hepburn Avenue to The Plaza as part of the recommendations of the Bike Plan 2016-2021.The construction of a new shared path will require modifications along this corridor.

Modifications to The Plaza would also assist in reducing crossing distances and creating an environment more conducive to pedestrian mobility. Such modifications would be explored in greater detail with the City of Joondalup, as detailed design across the site progresses.

It is also noted that a safe route to Sacred Heart College, located to the north of the site, is provided by way of the shared path and footpaths along West Coast Drive, Padbury Circle and The Plaza.

4.9 EDUCATION FACILITIES

The Activity Centre Plan does not propose the creation of any new school sites.

The existing education facilities within the Sorrento locality will adequately cater for the needs of the future residents. The site is within close proximity to a number of local schools including Sorrento Primary School, Marmion Primary School, Duncraig Primary School and Hillarys Primary School. Secondary school education facilities are also located within close proximity to the site with Duncraig Senior High School, Carine Senior High School and Greenwood College all being located nearby.

4.10 ACTIVITY CENTRES AND EMPLOYMENT

4.10.1 EMPLOYMENT

Based on current land use patterns it is expected that the Activity Centre Plan will generate employment in the sectors of retail, food and beverage, local offices and local services. Due to the local nature of the centre and the services it offers, along with its location which falls within a walkable catchment dominated by family homes, it is expected that the centre will provide for employment opportunities for those living within a short distance of the centre.

It is noted that the centre is afforded with strong connections to other higher order centres through the dual use path, bus and vehicular routes which will also provide for employment opportunities for residents beyond the centre.

Employment generated by the centre is anticipated to represent a relatively small but genuine contribution to meeting employment self-sufficiency targets within the north west metropolitan corridor.

4.10.2 RETAIL

A Retail Needs Sustainability Assessment has not been carried out as part of the Activity Centre Plan by reason that centres across the City have already been assessed under the *City of Joondalup Local Commercial Strategy*, which identifies a recommended threshold of 1,500m^2 for the Sorrento Local Centre. Any retail floorspace proposed above the recommended threshold must be accompanied by a Retail Sustainable Assessment.

Part 1 of this report has been constructed to provide certainty to proponents and landowners while providing for maximum flexibility in the event of recommended net lettable area thresholds (imposed by Council policies, strategies or Scheme provisions) changing over time.

In accordance with the provisions of SPP 4.2, the built form elements of Part 1 of this Activity Centre Plan seek to maximize benefits to pedestrians by locating retail land uses along the street at a minimal setback and with high levels of articulation and activation.

The maximum net lettable area included in Part 1 is to be distributed across the Activity Centre Plan area on a pro-rata land area basis as a means to achieve a fair apportionment and to ensure that those lots developed first do not monopolise the majority of allowable floor space.

4.11 BUILT FORM

4.11.1 URBAN STRUCTURE AND BUILT FORM

The Sorrento Local Centre currently comprises built form which is disparate in nature and does not promote street activation or engage with the public realm. The Activity Centre Plan, through the Part 1 provisions, is intended to address the following issues:

- A number of existing buildings and uses within the centre have a poor interface with the street and are largely dominated by cars. For example, car parks are located at the street interface rather than being sleeved behind built form. Further, it is noted that the existing service station has a limited street presence within the centre. A refurbished centre should have a strong street presence which includes minimal setbacks and a high level of interaction and activation to the public realm.
- The current commercial buildings are not capable of supporting residential development.
- The service station is a single use building and as such, provisions are required to ensure that any future development is robust enough to support change in use over time.
- The centre's character is diluted by its current composition of a variety of unrelated building forms. Consistency and compatibility of built form is sought while providing for various development timeframes, independence and innovation.
- The centre's buildings contain few climate responsive design elements to provide for, by way of example, shading to the street and of internal spaces. Part 1 requires new development to include an awning on all commercial/retail street facing frontages.

The Activity Centre Plan does not identify building envelopes per se, instead controlling development massing through maximum building heights, parking and setback controls. Maximum setbacks, in combination with street edge treatment controls, facilitate an effective interface to the street. Car parking must also not be visible from the street (instead sleeved behind buildings). With regard to the overall built form, a maximum height of 5 storeys is applicable along the western frontage and at the interface with The Plaza, with the building height being "tiered" towards the eastern boundaries of the Activity Centre area. A "view corridor" of 8m in width has been provided between Lot 2 and Lot 153, with the purposes of the view corridor to allow light and air penetration into the development sites and to provide for view corridors for the existing residential area to the east of the site.

Maximum plot ratio controls have been removed as part of the Activity Centre Plan. Instead, agreed built form controls provide for the suitable framework to secure an appropriate bulk and scale within which it is open to the developer to determine an appropriate blend of combination of floor space allocation.

4.11.2 BUILDING HEIGHTS

The Activity Centre Plan proposes to vary the maximum building height requirements permitted under the City of Joondalup's *Height of Non-Residential Building Local Planning Policy*. The heights proposed within Part 1 of this report are considered to better reflect the development outcomes contemplated by the *Perth and Peel @ 3.5million*, *Directions 2031* and SPP 4.2.

A minimum building height of 3 storeys has been provided for to promote active ground floor uses such as retail and restaurants/cafe with a combination of office and residential being located on the upper floors. It is critical to ensure some level of residential development is provided for within the centre to better align the centre with the principles and objectives of SPP 4.2.

In terms of the maximum building heights contemplated by the Activity Centre Plan, it is noted that the proposed heights sit comfortably within the land's locational context. Applying an "on merits" approach to building height is consistent with the process for determining building height in accordance with SPP 2.6. The series of cross sections shown at Figures 11 - 14 illustrate how the development may unfold in context of the maximum building heights proposed and how it would appear from various vantage points across the locality. As the centre sits lower than its surrounds and the land around the centre both rises sharply and is steeply undulating in places, it is considered that 5 storeys can be accommodated along the western frontage and The Plaza without unduly impacting upon viewscapes from the wider locality to the coast.

Consideration has also been given to the two eastern interfaces of the Activity Centre Plan area with the building height appropriately "tapering off" or being "tiered" adjacent to these boundaries to provide for a more sympathetic and compatible design response to the site.

Further, in this regard it is noted that the undulating and established nature of the area means that residents, visitors, pedestrians and others experience an interrupted view westward to the coast. That is, the horizon is obscured by various typical urban elements including tall trees, walls, roofs, antennae, street poles and street signs. In light of this, while the development will be visible from the public realm, it will be so viewed in a manner which is *consistent* with its setting.

It is also important to distinguish between development that is *visible* as opposed to development that is *obscuring*. With the terrain of the locality and the orientation and scale of much of the development in the area, the 5-storey maximum building height may be accommodated without unduly interrupting views from outer lying land to the coast. This is reinforced by the cross sections and images presented at Figures 11 – 14.

The cross sections and images at Figures 11 - 14 are premised on building mass and are not intended to reflect the aesthetic detail of the building including with respect to articulation, colours and materials. Instead, these figures illustrate the scale of the building in context of the locality. Indicative artist impressions of the articulated nature of the ultimate building form have been included at Figures 6 through 9 by way of illustration of how the development may unfold.

With respect to land located immediately behind, or to the east of the Centre, topographical differences will facilitate views from immediately adjacent land, towards the coast. View corridors

have been provided to maintain some westerly coastal views from adjacent land while views would remain available southwards to Scarborough and northwards to Sorrento. Lots immediately behind the development are either vacant or seemingly prime for redevelopment.

Future built form on these lots land may be designed and oriented to maximise access to views in the context of the Centre.

Access to an uninterrupted westerly view for a small number of landowners must be considered in the context of the broader prevailing planning framework and community expectations of development attached to that framework.

As has been previously established in this report:

- The centre has a unique coastal setting and both SPP 2.6 and SPP 4.2 compel the centre proponents to maximise the centre's response to that setting by, promoting usage, activating the public realm, providing solar access and establishing character.
- SPP 4.2 sets out minimum and average residential density targets for which centres are to achieve. The existing centre and its catchment are well below the minimum density target for a Local Centre. As discussed, the centre itself is the best opportunity to achieve a greater number of dwellings in a relatively new and built out locality. The proposed Activity Centre Plan reflects the need to inject additional dwellings into the locality and with a contained impact.
- SPP 4.2, *Directions 2031* and the City's *Local Housing Strategy* all promote housing diversity. The centre's catchment is dominated by single dwellings and some family-sized grouped dwellings. The centre is an opportunity to provide for a meaningful number of multiple dwellings or apartments within the centre and locality in general, thereby adding to housing diversity and choice.
- *Directions 2031* requires a substantial amount of new housing growth to be located in existing areas via infill development. The redevelopment of the centre will contribute to meeting this requirement.
- In response to *Directions 2031*, the City's *Local Housing Strategy* was adopted and DPS2 now applies a density code of R80 to commercial lots over 1,000m2 in area. This report has confirmed it is appropriate to apply the R80 density code to the entire site to ensure compatibility of built form across the centre. In any case, lots may be amalgamated thereby artificially reaching the 1,000m2 threshold and securing a density code of R80 as of right. With approximately 100 dwellings required to meet SPP 4.2's minimum performance targets, a higher density code, such as R80, is required to deliver the required number of dwellings. An effective number of dwellings in context of SPP 4.2 simply cannot be achieved in a development of a lesser height.

In terms of impacts from overshadowing, the Shadow Diagrams presented at Figure 5 illustrate that an appropriate level of sun access is afforded to the public realm, even through the winter months when visitations to the beach are minimal. In any case, any future development would overshadow the road reserve and dunal areas, neither of which are areas in which people would normally be expected to congregate and dwell. It is noted that no adjacent development is unduly compromised by shadow impacts.

In summary, the built form proposed is entirely consistent with the WAPC's strategic planning framework. Further, the built form controls within Part 1 of this Activity Centre Plan ensure that when viewed from close proximity, the building will make a positive contribution to its setting, whilst also blending in seamlessly with the locality when viewed from a distance.

Refer Figure 5 – Shadow Diagrams and Figures 6 – 9 – Cross Sections.

MAXIMUM SUN SHADING - SUMMER

MORNING - 9AM

MIDDAY - 12PM

AFTERNOON - 3PM

MAXIMUM SUN SHADING - AUTUMN

MORNING - 9AM

MIDDAY - 12PM

AFTERNOON - 3PM

MAXIMUM SUN SHADING - WINTER

MAXIMUM SUN SHADING - SPRING

N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.06.18

7875_FIG05A_20180613_Sorrento Plaza (Shadow Diagram) - DRAWN: W. CLEMENTS - DATE CREATED: 2018.06.13 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE -

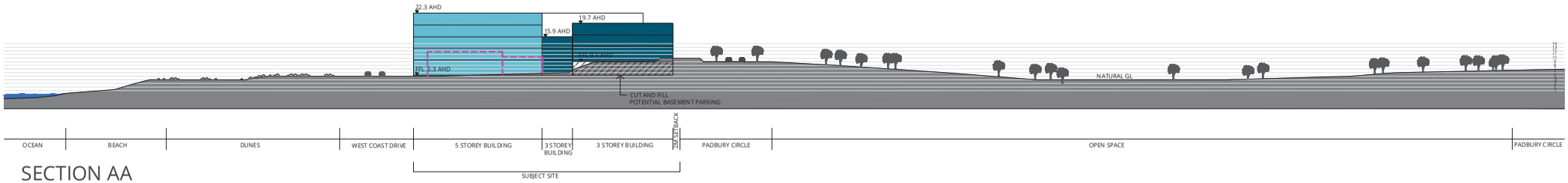
0 62.5 m

SCALE @ A3: 1:2500

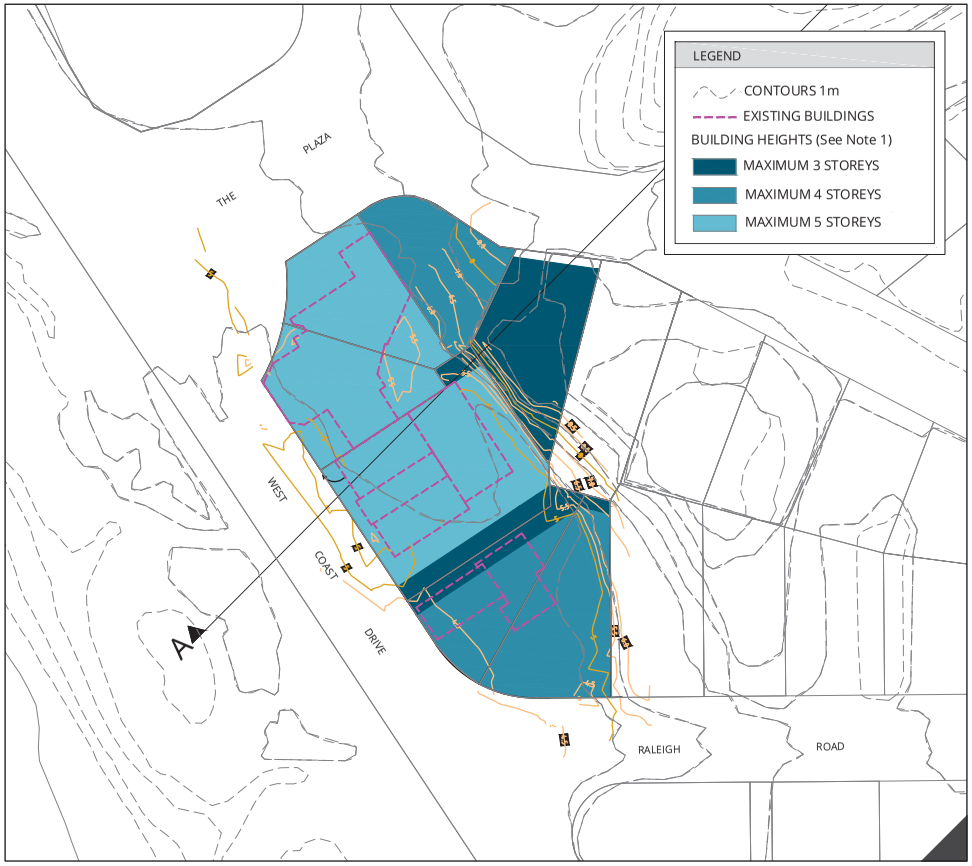
N

FIGURE 5

SHADOW DIAGRAM



SECTION AA



BUILDING HEIGHTS PLAN - INDICATIVE BUILT FORM OUTCOME

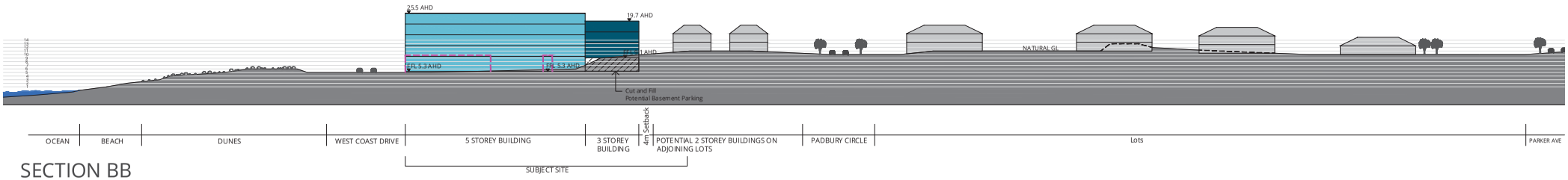
NOTE 1: THE BULK AND SCALE DEPICTED IN THIS SECTION IS FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE CONSTRUED AS THE ACTUAL BUILDING ENVELOPE.

LOCATION PLAN

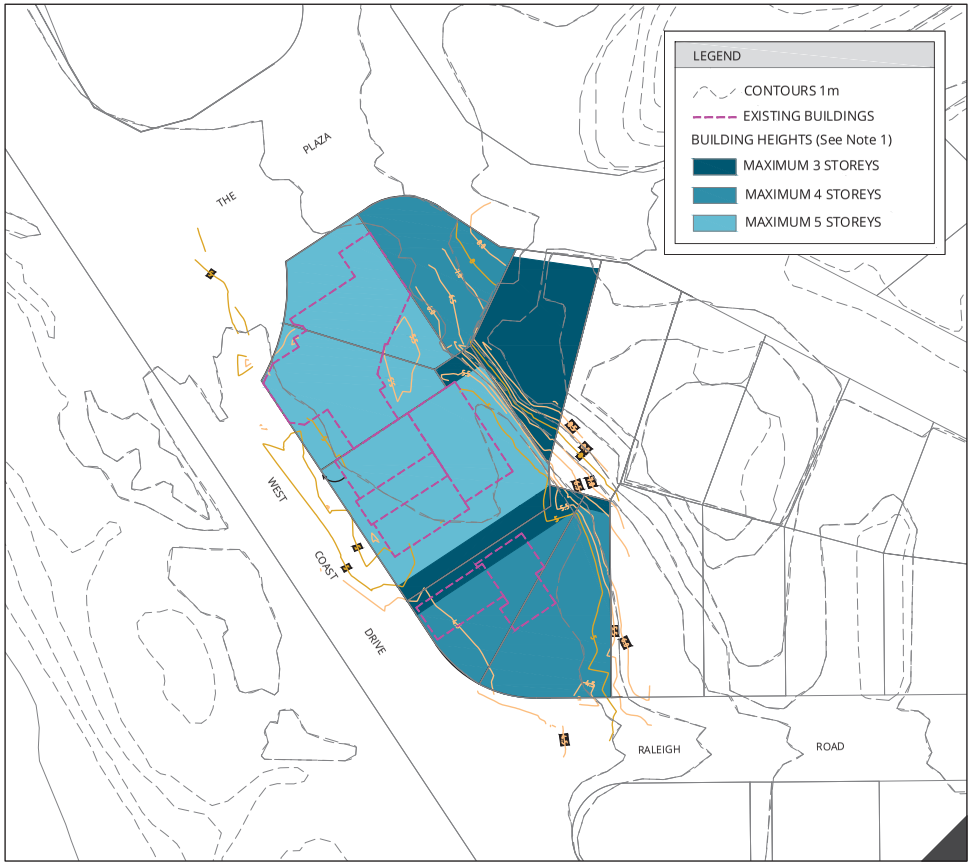
N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018 JUNE FIGURES - WILLIAM CLEMENTS - 2018.08.17

7875_FIG118_20180817_Sorrento Plaza (Cross Sections) · DRAWN: W. CLEMENTS · DATE CREATED: 2018.08.17 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE

FIGURE 6
CROSS SECTION A-A



SECTION BB



BUILDING HEIGHTS PLAN - INDICATIVE BUILT FORM OUTCOME

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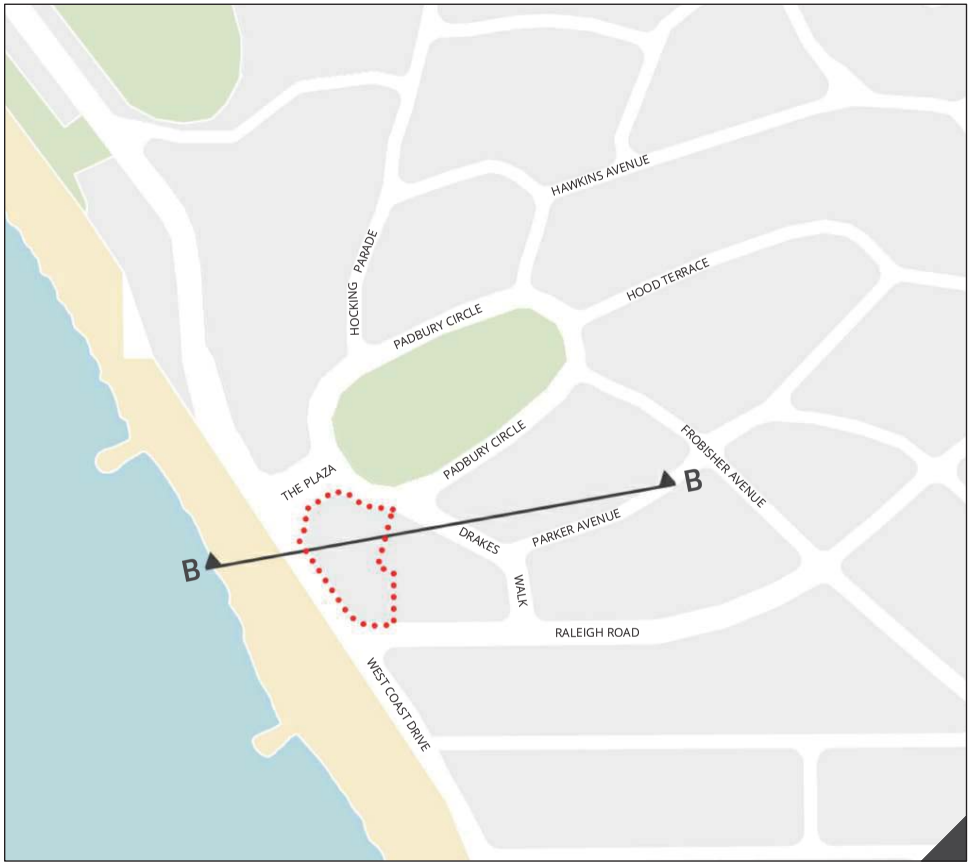
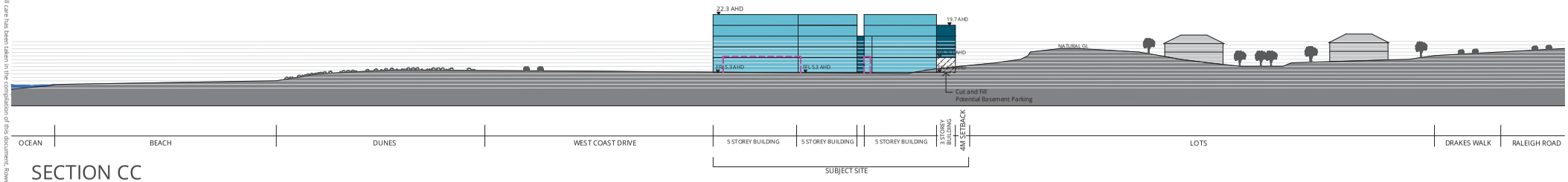


LOCATION PLAN

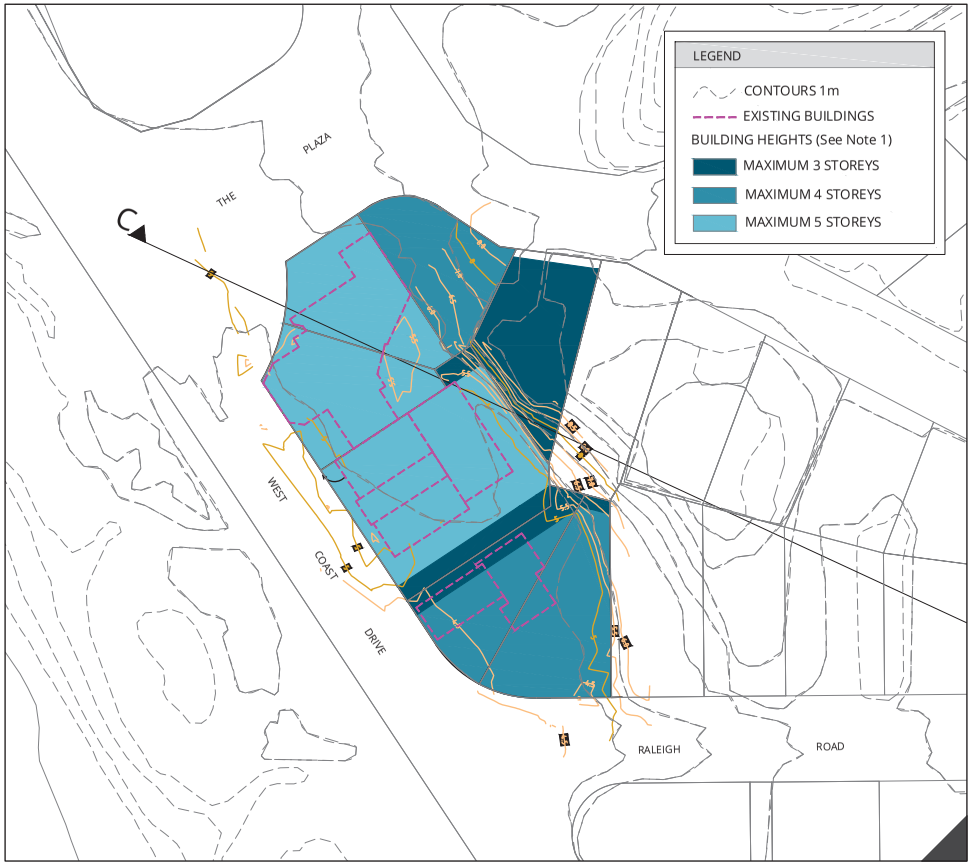
N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE\FIGURES - WILLIAM CLEMENTS - 2018.08.17

7875_FIG118_20180817_Sorrento Plaza (Cross Sections) · DRAWN: W. CLEMENTS · DATE CREATED: 2018.08.17 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE

FIGURE 7
CROSS SECTION B-B



SECTION CC



BUILDING HEIGHTS PLAN - INDICATIVE BUILT FORM OUTCOME

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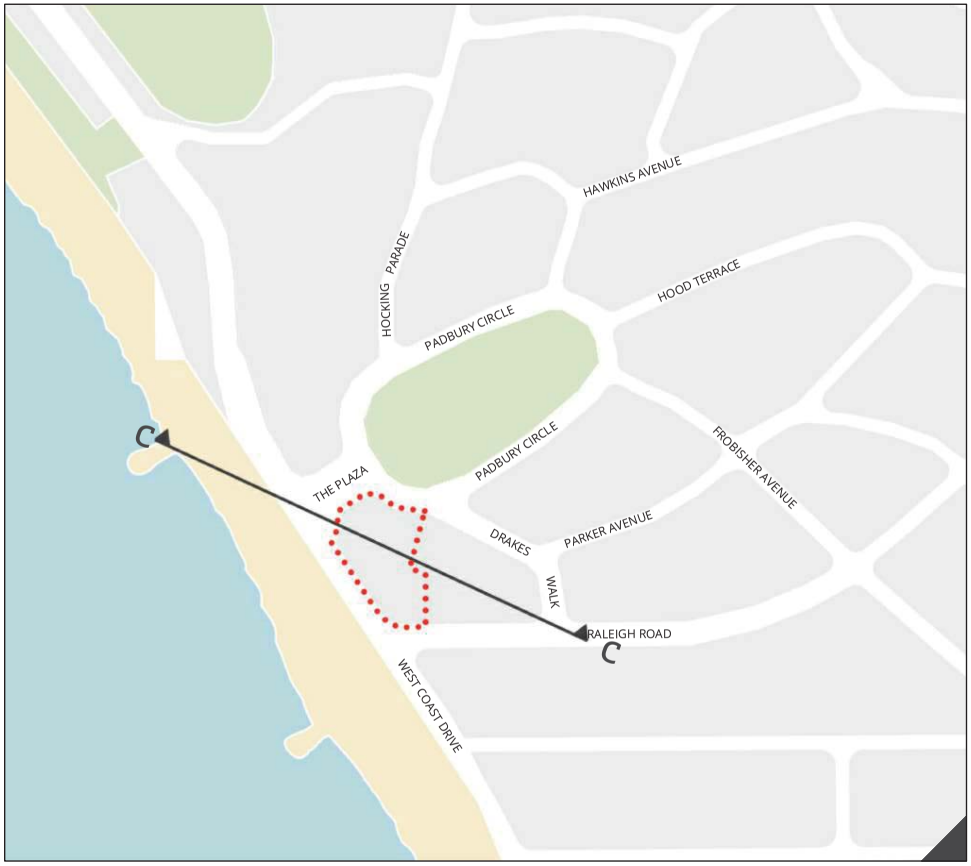
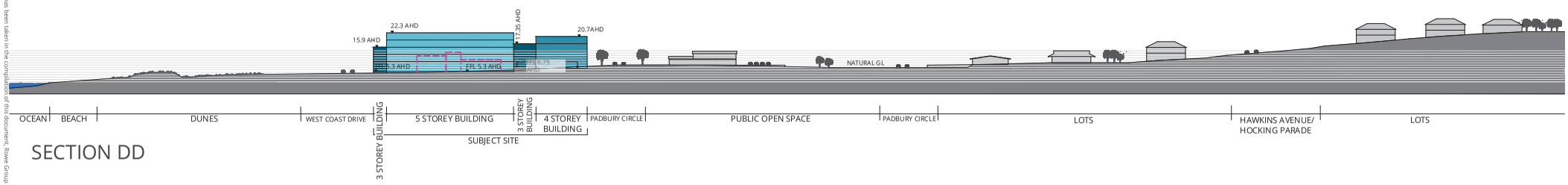


LOCATION PLAN

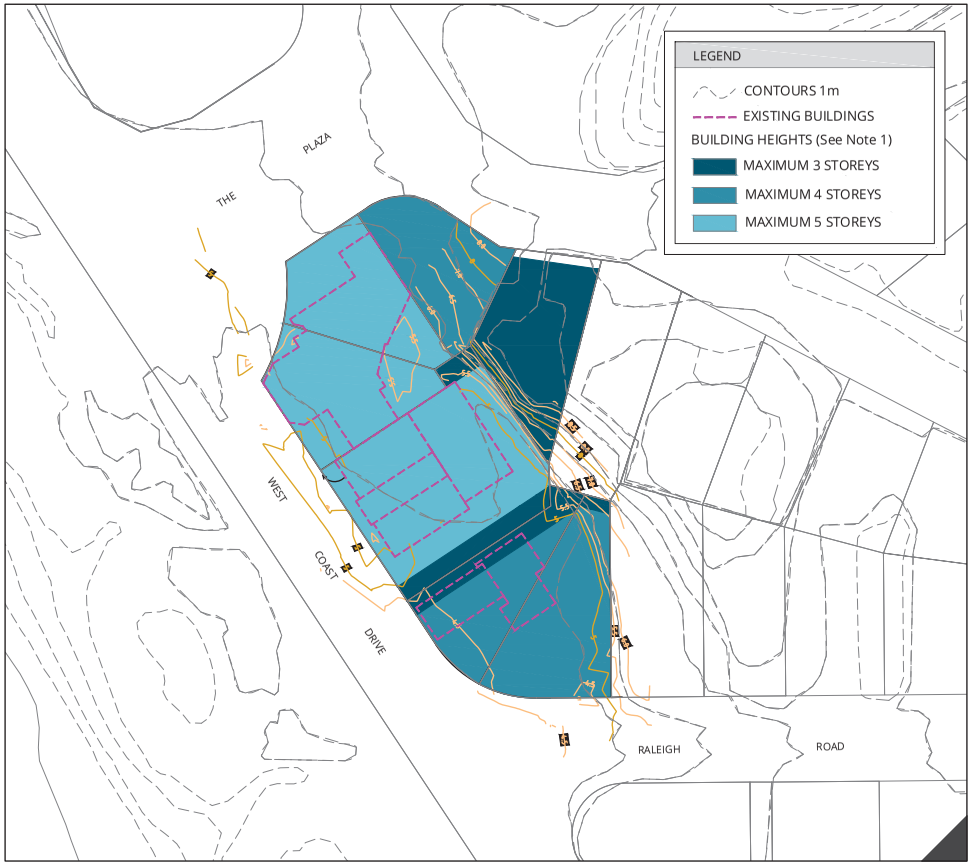
N:\TOWN PLANNING\7000-7999\7875\DRAFTING\A-CAD\2018\JUNE FIGURES - WILLIAM CLEMENTS - 2018.08.17

7875_FIG118_20180817_Sorrento Plaza (Cross Sections) - DRAWN: W. CLEMENTS - DATE CREATED: 2018.08.17 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE

FIGURE 8
CROSS SECTION C-C



SECTION DD



BUILDING HEIGHTS PLAN - INDICATIVE BUILT FORM OUTCOME

NOTE 1: THE BULK AND SCALE DEPICTED IN THIS SECTION IS FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE CONSTRUED AS THE ACTUAL BUILDING ENVELOPE.

LOCATION PLAN

N:\TOWN PLANNING\7000-7999\7875\GRAFTING\A-CAD\2018-JUNE FIGURES - WILLIAM CLEMENTS - 2018.08.17

7875_FIG118_20180817_Sorrento Plaza (Cross Sections) - DRAWN: W. CLEMENTS - DATE CREATED: 2018.08.17 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE

FIGURE 9
CROSS SECTION D-D

4.11.3 STREET INTERFACE

The Activity Centre Plan seeks to apply a number of built form controls to ensure an active and desirable street interface is provided. In this regard, provisions have been included within Part 1 of this Activity Centre Plan which relate to:

- Provision of an awning at the building edge to provide shade protection to pedestrians and those waiting at the nearby bus stop (with the exception of Lot 146, which will be further setback and residential in nature);
- Minimising boundary setbacks to provide for greater opportunities for alfresco dining and active type uses;
- A high proportion of glazing to promote activation and passive surveillance;
- Discouraging residential land uses at the ground floor;
- Requiring car parking to be sleeved behind or within buildings where practicable;
- Minimum first floor ceiling height to promote adaptive re-use; and
- Orientation of buildings to the street.

Figure 10 provides an indication as to the type of built form outcomes which are contemplated by the Part 1 provisions.

The removal of the bus embayment would provide for greater opportunities to provide for alfresco dining along West Coast Drive which would further enhance the public realm. Further discussions are required with the City of Joondalup regarding the relocation or filling of the bus embayment.

Refer Figure 10 – Street Interface

4.11.4 PUBLIC INTERFACE

Development on Lots 146 and147 will be orientated towards Geneff Park in order to maximise opportunities for passive surveillance over the public realm. The remainder of the built form will generally be orientated towards the coast.

The architectural merit of the future buildings along with, in general, a functioning Local Centre will create a local landmark adding to the legibility of the area. The activated and sheltered street front will improve pedestrian amenity along pathways within proximity of the centre.

Active street frontages with a high level of glazing will, along with residential apartments overlooking the street, promote passive surveillance over the public realm, including the adjacent bus stop. This in turn, promotes usage of the public realm as well as pedestrian activity and public transport use.

4.11.5 RESOURCE CONSERVATION

The City of Joondalup's *Environmentally Sustainable Design Policy*, applies to all new commercial and mixed use buildings. The Policy requires new development to include an adequate level of sustainable design, form and operation with respect to energy, water and materials and waste. This Activity Centre Plan does not propose to duplicate existing controls and therefore, no further sustainability related provisions have been included within Part 1.








FIGURE 10

DESIRED STREET INTERFACE

5. IMPLEMENTATION

5.1 COLLABORATION

The Activity Centre Plan has also been preceded by discussions between the landowners with a view to presenting a consistent, workable and unified position to the decision maker.

It is noted since the *Planning and Development (Local Planning Schemes) Regulations 2015* came into effect in October 2015, that an Activity Centre Plan may be prepared if:

(a) a State Planning Policy requires an activity centre structure plan to be prepared for the area; or

(b) The Commission considers that an activity centre plan for the area is required for the purposes of orderly and proper planning.

The Western Australian Planning Commission agreed to the preparation of an Activity Centre Plan for the Sorrento Local Centre by way of its correspondence dated 8 July 2016.

5.2 STAGING AND MONITORING

The Activity Centre Plan provides for the option for the site to be developed in stages by providing for the independent development of lots whilst facilitating a consistent and compatible design outcome across the Centre.

The various conditions identified at Part 1 to be imposed at Development Approval stage are the mechanism by which the built form outcomes will be implemented.

5.3 DEVELOPER CONTRIBUTION ARRANGEMENTS

There is no requirement to make contribution to community infrastructure stemming from the proposal and no common cost items to be shared between the land owners when developing the site.

ATTACHMENT 1

CERTIFICATES OF TITLE

ROWE GROUP

WESTERN AUSTRALIA

REGISTER NUMBER	
154/P5180	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	**N/A**

RECORD OF CERTIFICATE OF TITLE

VOLUME **2044** FOLIO **195**

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 154 ON PLAN 5180

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BP AUSTRALIA LTD OF BP HOUSE, 1 ALBERT ROAD, MELBOURNE, VICTORIA
(A F898179) REGISTERED 8 JUNE 1995

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EXCEPT AND RESERVING METALS, MINERALS, GEMS AND MINERAL OIL SPECIFIED IN TRANSFER 6081/1929.
2. *L583904 MEMORIAL. CONTAMINATED SITES ACT 2003 REGISTERED 23.3.2011.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2044-195 (154/P5180).
PREVIOUS TITLE: 1012-875, 1729-315.
PROPERTY STREET ADDRESS: 1 RALEIGH RD, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

WESTERN AUSTRALIA

REGISTER NUMBER	
153/D8313	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	**N/A**

RECORD OF CERTIFICATE OF TITLE

VOLUME **2044** FOLIO **194**

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 153 ON DIAGRAM 8313

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BP AUSTRALIA LTD OF BP HOUSE, 1 ALBERT ROAD, MELBOURNE, VICTORIA
(A F898179) REGISTERED 8 JUNE 1995

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EXCEPT AND RESERVING METALS, MINERALS, GEMS AND MINERAL OIL SPECIFIED IN TRANSFER 6081/1929.
2. *L583904 MEMORIAL. CONTAMINATED SITES ACT 2003 REGISTERED 23.3.2011.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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SKETCH OF LAND: 2044-194 (153/D8313).
PREVIOUS TITLE: 1012-875, 1668-193.
PROPERTY STREET ADDRESS: 126 WEST COAST DR, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

REGISTER NUMBER	
2/D71129	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
3	1/10/2004

WESTERN AUSTRALIA

RECORD OF CERTIFICATE OF TITLE

VOLUME 1901 FOLIO 444

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 2 ON DIAGRAM 71129

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

STONEHAWK PTY LTD OF "OPTIMA BUILDING", LEVEL 3, 133 HASLER ROAD, OSBORNE PARK
IN 1/6 SHARE
SHANNONBRAE PTY LTD OF "OPTIMA BUILDING", LEVEL 3, 133 HASLER ROAD, OSBORNE PARK
IN 1/6 SHARE
RODNEY MICHAEL O'MARA
MARY ANNE O'MARA
BOTH OF 136 HASLER ROAD, OSBORNE PARK
AS JOINT TENANTS IN 2/6 SHARE
PAULINE KAYE WILSON OF 136 HASLER ROAD, OSBORNE PARK
IN 2/6 SHARE
AS TENANTS IN COMMON

(T J010304) REGISTERED 3 SEPTEMBER 2004

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EXCEPT AND RESERVING METALS, MINERALS, GEMS AND MINERAL OIL SPECIFIED IN TRANSFER 6081/1929.
2. *E486238 CAVEAT BY ALLAN HUNTER YOUNGER, JULIE ANNE YOUNGER AS TO PORTION ONLY. LODGED 12.11.1990.
3. *E487905 CAVEAT BY BP AUSTRALIA LTD AS TO PORTION ONLY. LODGED 14.11.1990.
4. *F712434 CAVEAT BY BL ENTERPRISES PTY LTD LODGED 26.10.1994.
5. *G235825 CAVEAT BY CHI WA WONG, KWAN YING FUNG LODGED 23.7.1996.
6. *G568941 CAVEAT BY RICCARDO LETTA, MARY JENNIFER DEMARTE AS TO PORTION ONLY. LODGED 29.8.1997.
7. *M084766 MORTGAGE TO AUSTRALIA & NEW ZEALAND BANKING GROUP LTD REGISTERED 25.10.2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

END OF PAGE 1 - CONTINUED OVER

STATEMENTS:

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SKETCH OF LAND:	D71129.
PREVIOUS TITLE:	1012-875, 1751-60.
PROPERTY STREET ADDRESS:	130 WEST COAST DR, SORRENTO.
LOCAL GOVERNMENT AREA:	CITY OF JOONDALUP.

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING M084766

WESTERN AUSTRALIA

REGISTER NUMBER	
149/P5180	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
3	**11/5/2011**

RECORD OF CERTIFICATE OF TITLE

VOLUME **1704** FOLIO **777**

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 149 ON PLAN 5180

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

PETER JOHN PEARD OF SUITE 1, D1, 32 ENDEAVOUR ROAD, HILLARYS
(T L945292) REGISTERED 25 MAY 2012

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EXCEPT AND RESERVING METALS, MINERALS, GEMS AND MINERAL OIL SPECIFIED IN TRANSFER 6081/1929.
2. D071424 EASEMENT BENEFIT SEE SKETCH ON VOL 1704 FOL 777. REGISTERED 3.9.1985.
   J215843 EASEMENT PARTIALLY SURRENDERED AS TO THE PORTION DELINEATED ON DEPOSITED PLAN 41461 ONLY REGISTERED 16.3.2005.
3. *C467656 CAVEAT BY SHIRE OF WANNEROO LODGED 10.12.1982.
4. D071425 EASEMENT BURDEN SEE SKETCH ON VOL 1704 FOL 777. REGISTERED 3.9.1985.
5. L573006 EASEMENT TO CITY OF JOONDALUP FOR PUBLIC ACCESS PURPOSES. SEE SKETCH ON DEPOSITED PLAN 66499. REGISTERED 10.3.2011.
6. *L945293 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 25.5.2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
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----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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SKETCH OF LAND: 1704-777 (149/P5180).
PREVIOUS TITLE: 1625-597.
PROPERTY STREET ADDRESS: 134 WEST COAST DR, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING L945293

REGISTER NUMBER	
147/P5180	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
1	12/5/2005

WESTERN AUSTRALIA

RECORD OF CERTIFICATE OF TITLE

VOLUME 1704 FOLIO 776

UNDER THE TRANSFER OF LAND ACT 1893

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REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 147 ON PLAN 5180

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

EQUATION PTY LTD OF 44 VENTNOR AVENUE, WEST PERTH
(A D095443) REGISTERED 3 SEPTEMBER 1985

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EXCEPT AND RESERVING METALS, MINERALS, GEMS AND MINERAL OIL SPECIFIED IN TRANSFER 6081/1929.
2. D071424 EASEMENT BENEFIT SEE SKETCH ON VOL 1704 FOL 776. REGISTERED 3.9.1985.
   J215843 EASEMENT PARTIALLY SURRENDERED AS TO THE PORTION DELINEATED ON DEPOSITED PLAN 41461 ONLY REGISTERED 16.3.2005.
3. *C467656 CAVEAT BY SHIRE OF WANNEROO LODGED 10.12.1982.
4. D071425 EASEMENT BURDEN SEE SKETCH ON VOL 1704 FOL 776. REGISTERED 3.9.1985.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
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----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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SKETCH OF LAND: 1704-776 (147/P5180).
PREVIOUS TITLE: 1095-724.
PROPERTY STREET ADDRESS: 2 PADBURY CIR, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

WESTERN AUSTRALIA

REGISTER NUMBER	
2/SP11641	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

RECORD OF CERTIFICATE OF TITLE

VOLUME 1704 FOLIO 775

UNDER THE TRANSFER OF LAND ACT 1893 AND THE

STRATA TITLES ACT 1985

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REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 2 ON STRATA PLAN 11641
TOGETHER WITH A SHARE IN ANY COMMON PROPERTY AS SET OUT ON THE STRATA PLAN

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

EQUATION PTY LTD OF SHOP 1, 136 WEST COAST DRIVE, SORRENTO
(T E238949) REGISTERED 21 NOVEMBER 1989

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. INTERESTS NOTIFIED ON THE STRATA PLAN AND ANY AMENDMENTS TO LOTS OR COMMON PROPERTY NOTIFIED THEREON BY VIRTUE OF THE PROVISIONS OF THE STRATA TITLES ACT NO.33 OF 1985 AS AMENDED.
2. *G995835 CAVEAT BY PATRICIA ANN PEARSON LODGED 7.1.1999.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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SKETCH OF LAND: SP11641.
PREVIOUS TITLE: SP11641.
PROPERTY STREET ADDRESS: 2/136 WEST COAST DR, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

WESTERN AUSTRALIA

REGISTER NUMBER	
1/SP11641	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

RECORD OF CERTIFICATE OF TITLE

VOLUME 1704 FOLIO 774

UNDER THE TRANSFER OF LAND ACT 1893 AND THE

STRATA TITLES ACT 1985

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REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 1 ON STRATA PLAN 11641
TOGETHER WITH A SHARE IN ANY COMMON PROPERTY AS SET OUT ON THE STRATA PLAN

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

EQUATION PTY LTD OF 44 VENTNOR AVENUE, WEST PERTH
(A D055786) REGISTERED 3 SEPTEMBER 1985

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. INTERESTS NOTIFIED ON THE STRATA PLAN AND ANY AMENDMENTS TO LOTS OR COMMON PROPERTY NOTIFIED THEREON BY VIRTUE OF THE PROVISIONS OF THE STRATA TITLES ACT NO.33 OF 1985 AS AMENDED.
2. *L858996 CAVEAT BY WOOLWORTHS LTD LODGED 16.2.2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

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SKETCH OF LAND: SP11641.
PREVIOUS TITLE: SP11641.
PROPERTY STREET ADDRESS: 1/136 WEST COAST DR, SORRENTO.
LOCAL GOVERNMENT AREA: CITY OF JOONDALUP.

ATTACHMENT 2

TRANSPORT ASSESSMENT

ROWE GROUP

Sorrento Activity Centre

Transport Assessment

CEP02396

Prepared for
Alcock Brown-Neaves Group

14 October 2016

Cardno
Shaping the Future

Contact Information

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Transport Engineer

Approved By: Jacob Martin
Senior Transport Planner

Document Information

Prepared for	Alcock Brown-Neaves Group
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Date Approved:	14 October 2016

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Version	Effective Date	Description of Revision	Prepared by:	Reviewed by:
A	June 2015	For Issue	Mina Bayat Mokhtari	Jacob Martin
B	October 2016	Final Report	Edmond Hoang	Jacob Martin

Table of Contents

Appendices

Tables

Figures

1 Introduction

Cardno has been commissioned by the ABN Group to prepare a Transport Impact Assessment for the proposed Sorrento Activity Centre (the Centre), near the intersection of The Plaza and West Coast Drive, Sorrento.

The proposed Centre consists of up to 1,475 sq.m of mixed use development consisting of Café, Liquor Store, Retail, and Restaurant land uses, in addition to as many as 77 residential units.

The proposed plan is provided in **Appendix A**.

This report has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Assessment Guidelines for Developments: Volume 2 – Structure Plans.* Specifically, this report aims to outline the transport aspects of the proposed redevelopment, with a focus on traffic access, circulation, and safety.

Discussion regarding pedestrian, cycle and public transport considerations are also provided.

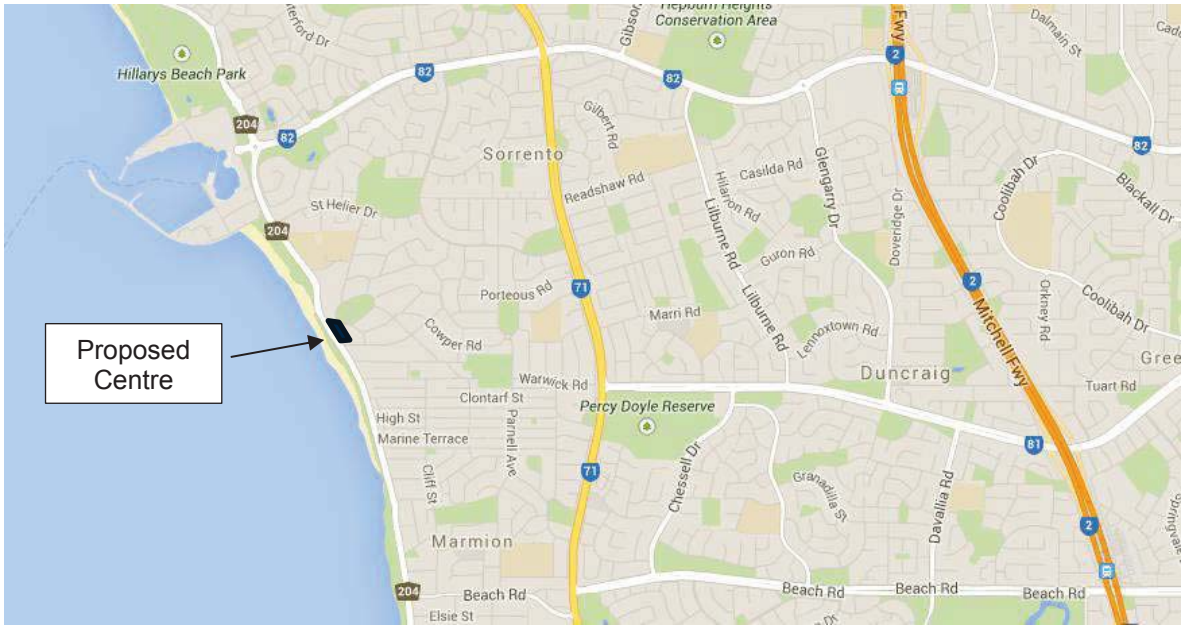
2 The Centre

2.1 Regional Context

The Centre is located in the locality of Sorrento which is approximately 17 km north west of Perth CBD, The site is bounded by West Coast Drive to the west, The Plaza to the north, Raleigh Road to the south, Padbury Circle to the north east and residential development and vacant land to the east.

The location of the proposed centre is illustrated in the context of the wider road network in **Figure 2-1**.

Figure 2-1 Location of the proposed centre

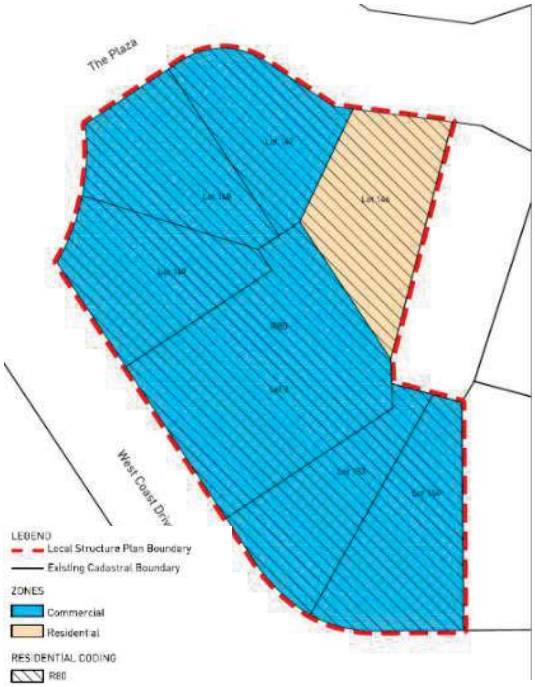


Source: Nearmap, March 2015

2.2 Proposed Land uses

An indicative outline of the Centre is shown in **Figure 2-2** .

Figure 2-2 Sorrento Activity Centre Structure Plan Map



The Centre incorporates:

- Lot 146, 147 and 148: 2 tenancies comprising 600 m^2 (340 m^2 café/retail and 260 m^2 liquor store) and including 28 residential dwellings
- Lot 2 and Lot 149: 3 tenancies comprising 500 m^2 (retail) and including 29 residential dwellings
- Lot 153 and 154: Currently there is a service station located across these two lots; the proposed plan may either retain this land use or redevelop into 375 m^2 of Restaurant use and 20 Residential dwellings

  For the purpose of quantitative assessment, the worst-case of these two land uses has been used; in this way the assessment remains conservative regardless of the outcome.

Total Centre development: 77 Residential dwellings. Note that retaining the service station will reduce the number of residential dwelling to 56

2.3 Major Attractors/Generators

The proposed Café, Liquor Store, Retail, and Restaurant located within the Centre are the major trip generators for the adjacent residential area and the surrounding catchment.

Sacred Heart College and Sorrento Surf Club are the major trip attractors for the residential land uses in the nearby area.

3 Existing Situation

3.1 Existing Land Uses within the Centre

The existing site includes land uses as shown in **Table 3-1** with associated car parking.

Table 3-1 Land Uses within the existing site

Land Use	No. of Lots	Total Area (Net Leasable Area) s.qm
Restaurant	1	719
Office	1	177
Fitness Studio	1	114
BWS	1	200
Total		1210

As shown in **Figure 3-1** the City of Joondalup *District Planning Scheme No. 2 (August 2013)* the existing site location is primarily zoned as Commercial, with Lot 146 being zoned Residential.

Figure 3-1 Land uses adjacent to the Centre

Source: City of Joondalup website

An aerial view of the site location with the existing development is shown in **Figure 3-2**.

Figure 3-2 Aerial image of the Centre Location

Source: Nearmap (accessed 14 May 2015)

The proposed development will involve the demolition of the existing buildings and rearrangement of car parking.

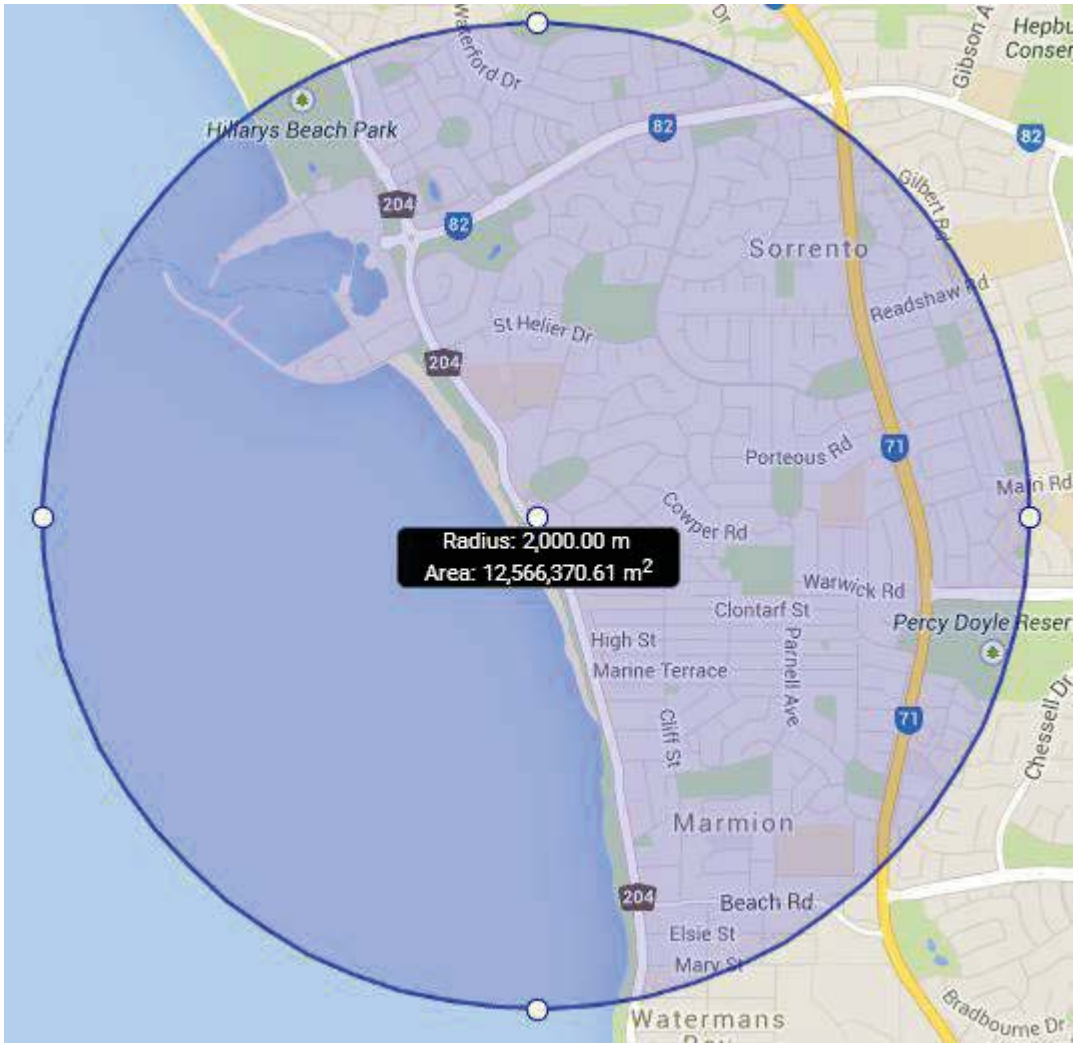
3.2 Existing Land Uses Surrounding the Proposed Centre

Developed land in the vicinity of the Centre is primarily zoned as residential, as shown in **Figure 3-1**.

3.3 Existing Road Network Surrounding the Proposed Centre

The existing road network surrounding the proposed centre is shown in **Figure 3-3**. The roads located in the close vicinity of the proposed centre consist of The Plaza, West Coast Drive, Raleigh Road, and Padbury Circle.

Figure 3-3 2km radius from the Centre



Source: Nearmap 2014

Road classifications are defined in the Main Roads Functional Hierarchy as follows:

> ***Primary Distributors**: These provide for major regional and inter-regional traffic movement and carry large Volumes of generally fast moving traffic. Some are strategic freight routes and all are National or State roads. They are managed by Main Roads.*

> ***District Distributor A**: These carry traffic between industrial, commercial and residential areas and generally connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property. They are managed by Local Government.*

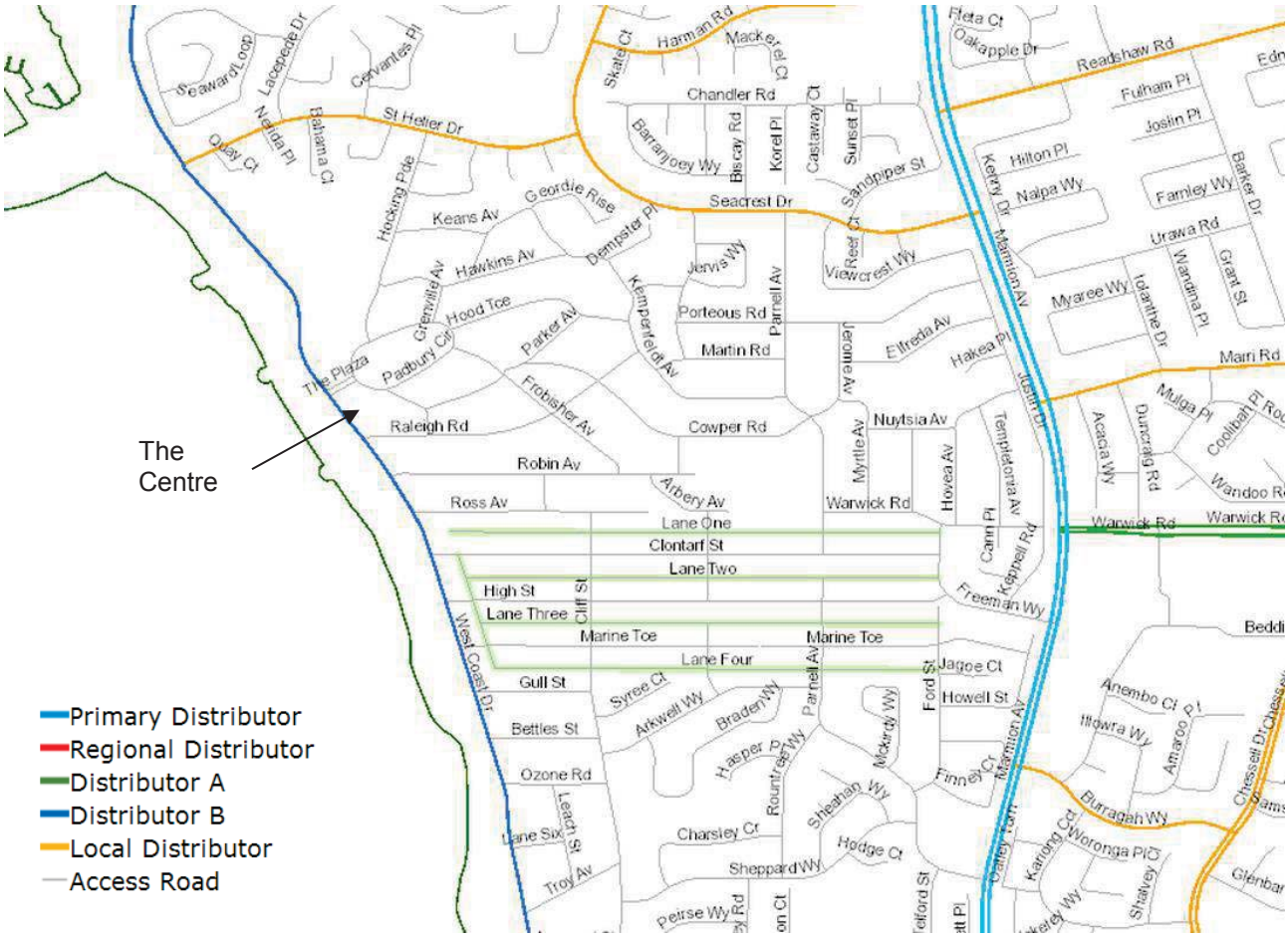
> ***District Distributor B**: Perform a similar function to District Distributor A but with reduced capacity due to flow restrictions from access to and roadside parking alongside adjoining property. These are often older roads with a traffic demand in excess of that originally intended. District Distributor A and B roads run between Land-use cells and generally not through them, forming a grid which would ideally space them around 1.5 Kilometres apart. They are managed by Local Government.*

> ***Local Distributors**: Carry traffic within a cell and link District Distributors at the boundary to access roads. The route of the Local Distributor discourages through traffic so that the cell formed by the grid of District Distributors only carries traffic belonging to or serving the area. These roads should accommodate buses but discourage trucks. They are managed by Local government.*

> ***Access Roads**: Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly. They are managed by Local government.*

Figure 3-4 shows the Main Roads Functional Hierarchy for the roads surrounding the LSP.

Figure 3-4 Extract from Main Roads Functional Hierarchy



Source: Main Roads Mapping Information Centre (accessed April 2015)

Main Roads Functional Hierarchy

> **West Coast Drive,** located on the western boundary of the site, consists of a two-lane median-divided carriageway. West Coast Drive connects to The Plaza to the north-west of the site. This road is classified as "Distributor B" under the Main Roads Functional Hierarchy (MRFH) with a posted speed limit of 50 km/h. West Coast Drive connects to Hepburn Avenue approximately 1.2km to the north-west of the site. Hepburn Avenue provides the primary link between the LSP and main Perth business centres. Morley Drive also connects to Beechboro Road approximately 1.5km to the south-west of the site. Beechboro Road is classified as "Distributor A" under Main Roads Western Australia (MRWA) Road Information Mapping system. On-street parking is banned along both sides in the vicinity of the Centre.

> **The Plaza,** located on the northern boundary of the site, consists of a two-lane median-divided carriageway. The Plaza connects West Coast Drive to Padbury Circle to the north-east of the proposed centre. This road is classified as "Access Road" under Main Roads Functional Hierarchy (MRFH) with a posted speed limit of 50 km/h. Parallel indented parking is provided on both sides adjacent to the Centre.

> **Raleigh Road,** located on the southern boundary of the site, consists of a two-lane undivided carriageway. Raleigh Road connects to West Coast Drive to the south-west of the proposed centre. This road is classified as "Access Road" under Main Roads Functional Hierarchy (MRFH) with a posted speed limit of 50 km/h. On-street parking is banned along both sides in the vicinity of the Centre.

> **Padbury Circle,** located on the eastern boundary of the site, consists of a two-lane undivided carriageway. Padbury Circle connects to the Plaza to the north-east of proposed centre. This road is classified as “Access Road” under Main Roads Functional Hierarchy (MRFH) with a posted speed limit of 50 km/h. On-street parking is banned along both sides in the vicinity of the proposed Centre.

3.4 Existing Road Network Performance

Existing weekday traffic volumes were obtained from the available traffic counts for existing road sections in the vicinity of the proposed centre and are summarised in **Table 3-2**.

Table 3-2 Existing Weekday Traffic Volumes on Roads Surrounding the LSP

	Weekday Traffic Volumes (Two – Way)		
Location	Daily	Weekday Peak	Saturday Peak
West Coast Drive	14,700	1,370	1,300
Raleigh Road	920	80	60
The Plaza	2,140	150	160

3.5 Existing Pedestrian/Cycle Networks Surrounding the Centre

Existing pedestrian/cycle networks can be identified from the Department of Transport’s *TravelSmart Cycling and Walking Map* shown in **Figure 3-5**.

There is a shared path within the eastern verge of West Coast Drive to the north of the Centre and a high quality shared path that runs along West Coast Drive for use mainly by recreational cyclists and pedestrians.

On-street cycling infrastructure is provided along West Coast Drive to the north of The Plaza in the form of sealed shoulders, linking into the sealed shoulders along Hepburn Road.

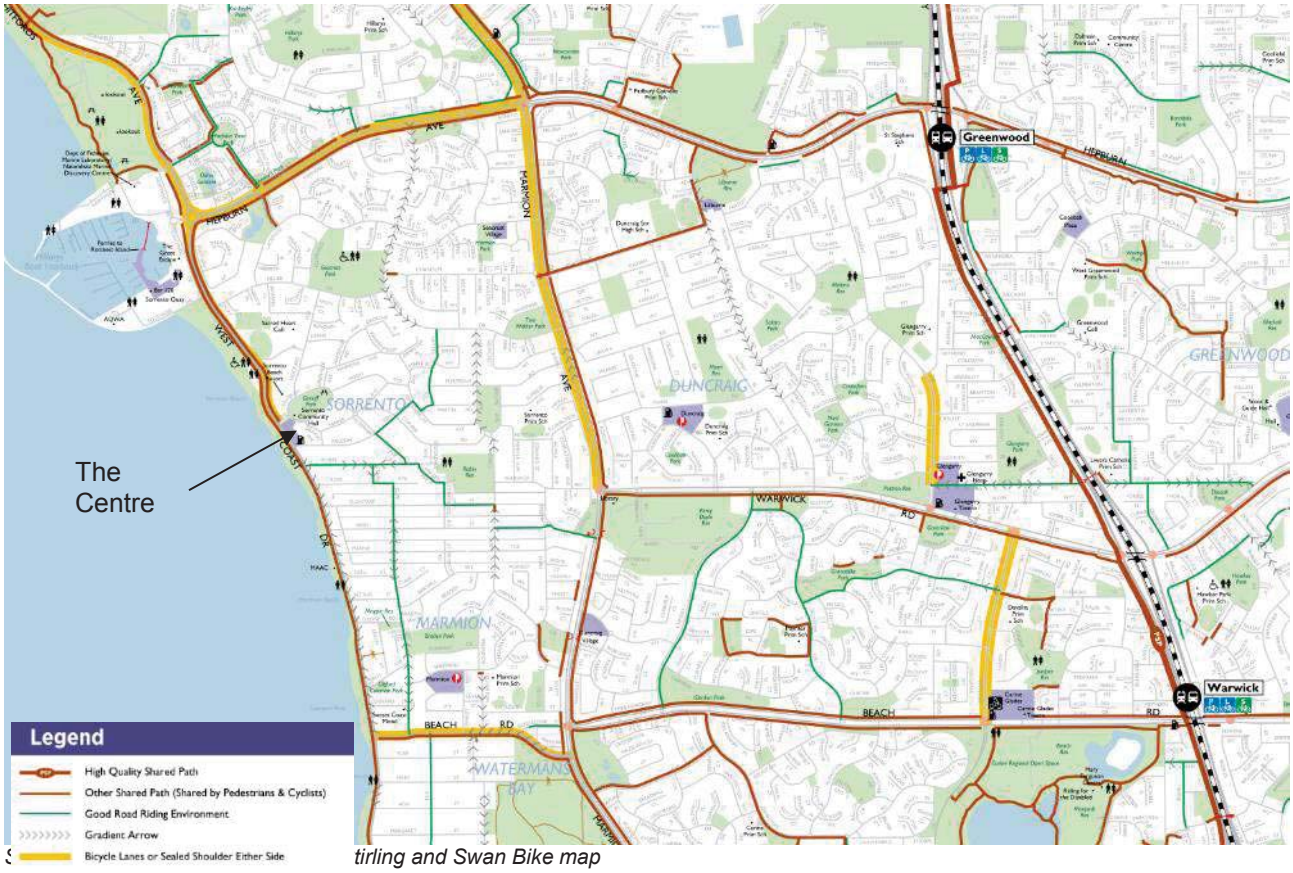
The existing shared path network provides a legible north-south route, connecting the Centre to Warwick Station via Beach Road and to Greenwood Station via Hepburn Road. It is noted that this route requires cyclists to cross Marmion Avenue.

Padbury Circle and The Plaza provide a comfortable walking environment within a 1.5m wide footpath network. The existing wide median island provides refuge for pedestrians and cyclists crossing The Plaza, though the environment is somewhat bare and crossing distances are relatively long.

At the western side of the Centre, there is a median island that provides access to the bus stop on the western side of the West Coast Drive.

The existing pedestrian/cycle network provides direct accessibility from the Centre to the surround residential areas. However there is no shared path infrastructure linking the Centre to Sacred Heart College or the residential area to the east. Outside of peak school times, traffic in this vicinity is low and the roads are considered to be suitable for mixed-traffic cycling.

Figure 3-5 Existing pedestrian/cycle network surrounding the Centre



tirling and Swan Bike map

3.6 Existing Public Transport Facilities Surrounding the Centre

Existing bus services can be identified in the network map from the Public Transport Authority, see Figure **3-6**.

The 423 bus service runs between Warwick Station and Stirling Station and provides connection to the Centre. This service can be accessed from bus stops located on West Coast Drive immediately adjacent to the Centre, as well as from bus stops located in Padbury Circle, Hocking Parade, and Hood Terrace.

The 423 bus runs approximately every 15 minutes during the morning and afternoon peak times, and every 30 minutes through the day.

Figure 3-6 Existing public transport facilities surrounding the Centre

Source: City of Joondalup – Local TravelSmart Guide

4 Changes to External Transport Network

4.1 Road Network

Discussions with the City identified a desire to modify the West Coast Drive environment in this area (between the Sorrento Activity Centre and the MAAC Club) to reduce traffic speeds and improve the pedestrian and cycling experience. Changes could include intersection threshold treatments, speed limit reductions, a boulevard road treatment, modifications to intersection form and other landscaping measures.

The wide road reserve at The Plaza provides opportunity for a range of changes to reduce traffic speeds and improve the pedestrian and cycling experience. The City is understood to be amenable to changes that would improve this precinct, which could include reducing or eliminating the median island and reforming The Plaza along a new centreline with a narrower road form. On-street parking is provisionally supported by the City.

There are no known plans to apply any changes to the other roads surrounding the Centre.

4.2 Intersection Controls

There are preliminary plans to investigate the function and safety of the intersection of West Coast Drive/The Plaza to improve traffic function during peak periods (predominantly the PM school peak). Options include converting the existing priority intersection to a roundabout form or widening the West Coast Drive median to allow for staged right-turn egress for northbound movements.

Cardno have undertaken an assessment of the proposed future scenario under the intersection configurations, with results shown in **Section 7.5**.

4.3 Pedestrian /Cycle Networks and Crossing Facilities

A new shared path has been proposed for the eastern side of West Coast Drive, from Hepburn Avenue to The Plaza as part of the recommendations of the Joondalup Bike Plan (2009). This will require modifications along this corridor.

Modifications to The Plaza would also assist in reducing crossing distances and creating an environment more conducive to pedestrian mobility. More significant changes to The Plaza, which could include creating a 'Shared Zone' for The Plaza, would greatly improve pedestrian function. These changes could only be made in the context of wider changes to the network, and the impacts of this change would need to be carefully considered.

4.4 Public Transport Services

Existing bus services in this area are described in **Section** 3.6 of this report.

No changes are currently proposed to the existing public transport routes in the vicinity of the site.

It has been proposed that the bus bay embayment along the frontage of West Coast Road be modified to on-street stopping or relocated north of The Plaza, with the aim of creating a pedestrian friendly environment. Currently, the location of the bus shelter abuts the alfresco dinning furniture of the nearby restaurants which impedes pedestrian movement. The removal of the bus embayment would maximise opportunities for alfresco dining and enhance the area's social and economic function.

4.5 Access Arrangements

This report analyses two different access scenarios for the proposed Centre, as described below. Both of these access scenarios have been assessed for the worst-case traffic function. That is, assuming the retention of the existing service station.

Scenario 1, shown in **Figure 4-1**:

> Access A - Access to Padbury Circle via full-movements priority T-intersection

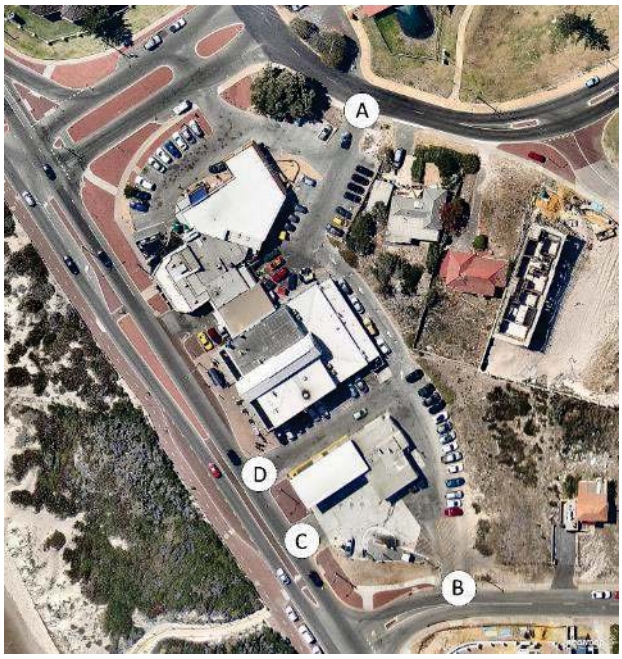
> Access B - Access to Raleigh Road via full-movements priority T-intersection

> Access C - Access to the service station

> Access D - Access to West Coast Drive via a full-movements priority T-intersection

> The direct access crossover to The Plaza and dedicated service vehicle access crossover to West Coast Drive are proposed to be closed in this scenario.

Figure 4-1 Access locations for the Centre – Scenario 1



Scenario 2, shown in Figure **4-2.**

> Access A - Access to Padbury Circle via a full-movements priority T-intersection

> Access B - Access to Raleigh Road via a full-movements priority T-intersection

> Access C - Access to the service station

> Access D - Closed

> The direct access crossover to The Plaza and dedicated service vehicle access crossover to West Coast Drive are proposed to be closed in this scenario.

Figure 4-2 Access locations for the Centre – Scenario 2

5 Vehicle Parking Provision

5.1 Land Use Assumptions

Parking analysis has been completed for the centre incorporating real-world data, industry benchmarks, effects of size and shared parking.

As stated earlier in **Section 2.2** two different options of land uses will be considered for the proposed centre. The difference between the two options is whether the existing service station will be replaced with more residential dwellings and restaurant land uses. As there is no requirement to provide additional parking spaces for the service station, for the purpose of parking analysis *the option without the service station has been evaluated.*

Therefore, for the purpose of parking assessment, the proposed centre has been considered to consist of the following non-residential land uses:

> Café/retail: 340sq.m

> Liquor store: 260sq.m

> Retail tenancies: 500sq.m

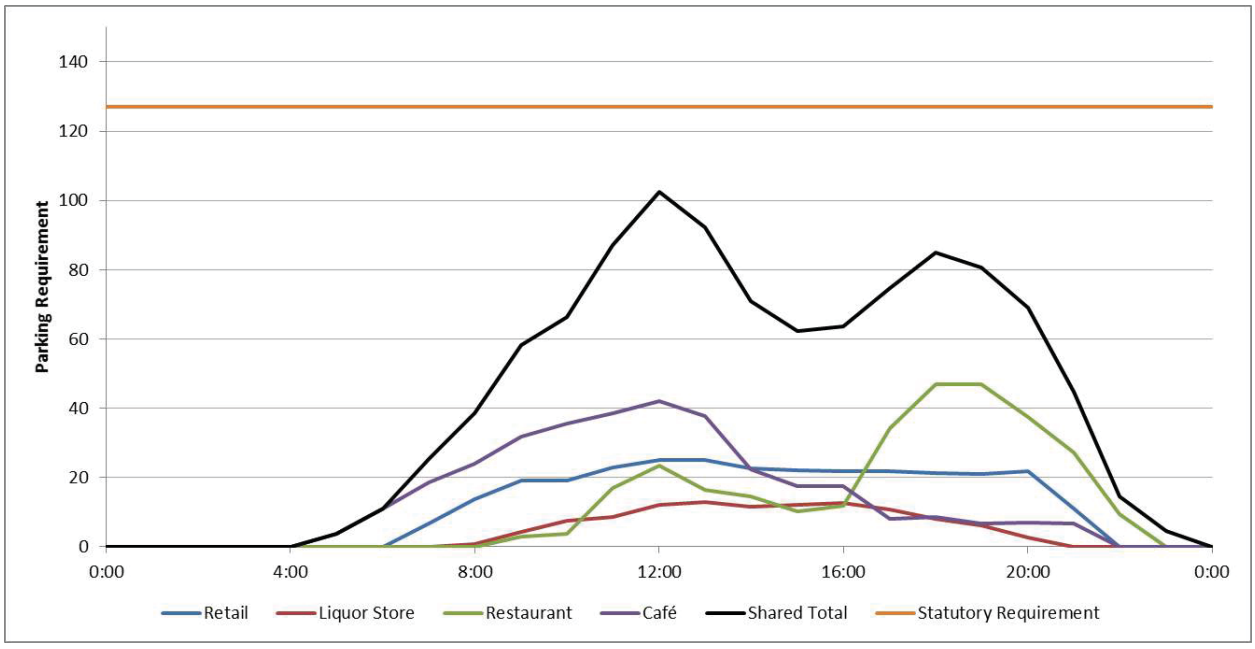
> Restaurant: 375sq.m

5.2 Daily Parking Profile

The following distribution describes the demand profile across a typical day, applied to the individual land-use components of the proposed centre.

The results indicated that as a result of mixed-use synergies, the peak requirement for parking on-site would occur at approximately 12:00 on a weekday and would consist of 103 bays, a reduction of 19% over the statutory requirement.

Figure 5-1 Daily shared parking profile for the Centre land uses



Therefore, as a result of shared parking across the site, combined with the different demand profiles of the various constituent land uses, the overall requirement for car parking can be significantly reduced compared to their individual, isolated requirements.

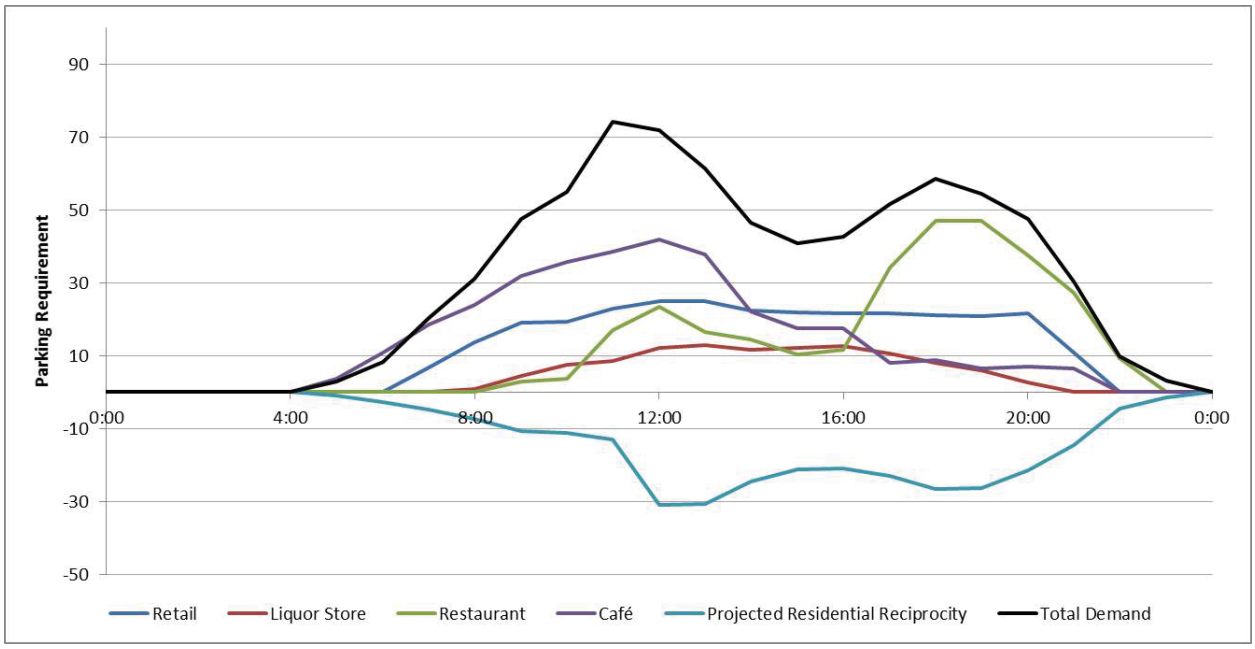
This parking quantum would be appropriate for a mixed use site without a residential component and well removed from other land uses. However, the Centre includes a number of on-site residential units, and is

located in the context of an existing residential catchment. These local residents are very likely to walk into the Centre, rather than drive, significantly reducing the number of car parking bays necessary to service the proposed centre.

Cardno has built a world-leading parking model expressly designed to calculate the impact of the local trip catchment on parking demand. Additional details of the methodology and calculation can be provided as required.

Based on the proposed land uses within the proposed centre, including 77 apartments to be constructed on-site and an additional 167 dwellings located within a reasonable (400m) walking catchment of the site, it is expected that a maximum of 30 parking bays would reasonably be released at the midday peak; 17 of these have been calculated to be associated with the restaurant uses in addition to 13 associated with the proposed retail. However, the maximum anticipated demand for non-residential parking is actually 74 bays, as shown on the following curve, with peak demand expected at 11am.

Figure 5-2 Daily shared and reciprocal parking profile for the Centre land uses



Therefore, the resulting supply requirement for parking within the Centre area has been determined at **74 bays**, representing a combined parking supply rate for the site of 1 bay per 20sq.m NLA and consistent with the statutory requirements of the City in this precinct.

6 Integration with the Surrounding Area

6.1 Surrounding Attractors/Generators

The proposed Café, Liquor Store, Retail, and Restaurant located within the Centre are the major trip generators for the adjacent residential area and the surrounding catchment.

Sacred Heart College and Sorrento Surf Club are the major trip attractors for the residential dwellings within the area.

6.2 Proposed Changes to Surrounding Land Uses

The area surrounding the site is largely built out. Currently, no significant changes are expected for the surrounding land uses; however there is a Development Application currently under review that would impact the operation and function of the Sacred Heart College.

7 Analysis of Transport Networks

7.1 Assessment Years and Time period

The following models have been analysed as part of this assessment:

- 2031 without development; and
- 2031 with development for both first and second scenarios.

Following industry practices for evaluation of intersection performance, the existing Thursday PM peak hour and Saturday peak hour were chosen as the assessment time periods.

7.2 Site Traffic Generation

Total traffic generated by the existing land uses is calculated by using the trip generation rates that were sourced from the Institute of Transportation Engineers (ITE) "Trip Generation Manual" (7th Edition) and Cardno previous studies in WA and QLD to identify reasonable rates for comparison. Summaries of the trip generation rates are shown in **Table 7-1**.

Table 7-1 ITE Trip Generation Rates

Land Use	ITE Land Use Code	Trip Generation Rates	
		Thursday Peak Hour	Saturday Peak Hour
Restaurant	High -Turnover Restaurant (932)	20.24 per 100 sq.m	21.53 per 100 sq.m
Office	General Office	1.6 Per 100 sq.m	0.44 Per 100 sq.m
Fitness Studio	Health / Fitness Club	4.37 per 100 sq.m	4.37 per 100 sq.m
Liquor Store*	-	34.8 per 100 sq.m	34.8 per 100 sq.m
Service Station	Service Station with Market	13.57 per fuelling position	13.57 per fuelling position

**values for Liquor Store have been obtained from Cardno previous studies in WA and QLD*

The existing traffic data pertaining to the local road network shows that the Thursday peak hour can be considered to be between 15:00 to 16:00 (reflecting the high demand for school traffic to Sacred Heart College and other schools in the area). The Saturday peak hour is considered to be from 12:00 to 13:00.

The trip generation rates for the proposed Centre land uses were sourced from the Institute of Transportation Engineers (ITE) "*Trip Generation Manual"* (7th Edition) and Cardno previous studies in WA and QLD to identify reasonable rates for comparison. Summaries of the trip generation rates are shown in Table **7-3**.

As stated earlier in **Section 2.2**, the status of the service station is unknown. However, a calculation of overall peak trip generation (**Table 7-2**) shows that the redevelopment of the service station into Restaurant and Residential land uses is likely to have minimal effect on the total trips generated by the site.

Table 7-2 Total Trip generation Based on Retaining Service Station

	Thursday Peak hour	
	With service station	Without service station
Total Trips	**427**	403

However, for the purpose of this assessment the service station is assumed to remain, representing the worst case scenario.

Table 7-3 ITE Trip Generation Rates for proposed Land Uses

Land Use	ITE Land Use Code	Trip Generation Rates	
		Thursday Peak Hour	Saturday Peak Hour
Residential	Mid-Rise Apartments (223)	0.44 per dwelling	0.34 per dwelling
Cafe	High -Turnover Restaurant (932)	20.24 per 100 sq.m	21.53 per 100 sq.m
Liquor Store	-	34.8 Per 100 sq.m	34.8 Per 100 sq.m
Retail	Supermarket (850)	12.94 per 100 sq.m	11.58 per 100 sq.m
Restaurant	High -Turnover Restaurant (932)	20.24 per 100 sq.m	21.53 per 100 sq.m

Additionally, the trip direction proportions of the land use type are as shown in **Table 7-4**. The Thursday and Saturday peak hour directional proportions for both Land uses have been calculated according to ITE.

Table 7-4 ITE Direction Proportion rates

Land Use	Thursday Peak Hour		Saturday Peak Hour	
	IN	OUT	IN	OUT
Residential	59%	41%	59%	41%
Cafe	55%	45%	58%	42%
Liquor Store	51%	49%	51%	49%
Retail	53%	47%	50%	50%
Service station	50%	50%	50%	50%

Table **7-5** shows the number of trips estimated to be generated by the proposed development after the application of above trip and direction rates.

Table 7-5 Summary of Traffic Generated by the proposed centre

Land Use	Generation Unit	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Residential	56 dwellings	20	14	12	9
Cafe	170 seats	77	63	87	63
Liquor Store	260 sq.m	46	44	46	44
Retail	500 sq.m	34	30	29	29
Service station	8 pumps	54	54	54	54
Total		**211**	**205**	**228**	**199**

7.3 Trip Distribution

Trip distribution considers movements of the generated trips to and from the surrounding road network. For the purpose of this assessment, the distribution of the proposed development has been disaggregated by land use as described below:

7.3.1 Residential:

For the purpose of this report the distribution of the proposed residential development traffic has been determined based on the trip purposes as described below.

Residential trips are distributed based on three basic trip purposes that generally take place during the weekday PM peak hour:

- Home based work
- Home based education
- Home based other

Trip purpose splits between these categories were checked against recent best-practice travel surveys and found to be consistent, with distribution as follows:

- Home based work – 28%
- Home based education – 24%
- Home based other – 48%

A different trip assignment has been used for each of these categories as described below:

Home based work:

ABS census data for 2011 was used to choose the top 10 employment areas (by local government) for the people who currently live in Sorrento and therefore the home based work trip generated by the proposed development was apportioned according to the location of the major employment areas.

Following this, trips were generally assigned to each access according to the distribution of units on-site and then to the road network based on an assessment of shortest path length (by time).

Home based education:

It is assumed that these trips will be toward Sacred Heart College and other public schools to the north of the proposed centre. It is expected that there will be some trips to other school destinations, but that the overall effect will be minimal.

Home based other:

Home based 'other' trips were assumed to be shopping and recreational trips to the Surf Club and Hillary's Boat Harbour as the major recreational centres in the surrounding area. The proposed Centre includes additional retail/entertainment land uses that may result in an overall reduction in trips in the surrounding area, but this effect has not been considered to ensure that the assessment remains sufficiently conservative.

It is noted that the home based other trips for weekdays are considered to be equal to the total trips generated by the residential dwellings during Saturday peak. That is, there is no work or educational attraction built into the distribution assessment. This assumption is unlikely to have a significant impact on trip distribution or assignment during the midday Saturday peak.

7.3.2 Non- Residential:

The existing site is expected to have a similar function to the non-residential land uses of the Centre. Therefore, the generated traffic for the future scenario has been assigned to the surrounding road network based on existing background traffic information.

7.4 Total Traffic Flows

The following outlines the methodology adopted for development of the background traffic volumes on the surrounding road network.

Existing traffic flows have been identified from traffic count data obtained from City of Joondalup and MRWA short term traffic counts. These volumes represent the most recent traffic counts undertaken in the region.

Then total number of trips involved with existing development were extracted from the background traffic. Afterwards the background without development traffic is growth as described below.

An annual growth rate was calculated based on recent population trends obtained from the City of Joondalup *Local Planning Strategy*. As provided in this document over the ten year period 2001-2011 there was a growth rate of about 15% in the population of the City of Joondalup. Also based on the population forecasting by the City of Joondalup the population of the City will remain relatively stable over the next twenty year period 2011-2031 with a projected growth rate of nearly 1% per annum.

The above rate was used to calculate the background weekday traffic volume on the roads surrounding the proposed development for the 2031 scenarios. Background and 'With Development' volumes are summarised in **Table 7-6** and **Table 7-7**.

Table 7-6 2031 background weekday traffic flows

Location	Weekday Traffic Volumes (Two- Way)		
	Daily	Thursday Peak	Saturday Peak
West Coast Drive	10,000	1,010	1,135
Raleigh Road	370	37	33
The Plaza	1,500	147	124

Table 7-7 2031 with development weekday traffic flows (Scenario 1)

Location	Weekday Traffic Volumes (Two- Way)		
	Daily	Thursday Peak	Saturday Peak
West Coast Drive	11,000	1,082	1,224
Raleigh Road	700	70	64
The Plaza	1,870	187	162

Table 7-8 2031 with development weekday traffic flows (Scenario 2)

Location	Weekday Traffic Volumes (Two- Way)		
	Daily	Thursday Peak	Saturday Peak
West Coast Drive	11,000	1,091	1,234
Raleigh Road	1,000	100	89
The Plaza	2,180	218	202

Liveable Neighbourhoods guidelines for traffic volumes and road function for the roads surrounding the LSP is summarised in **Table 7-9**.

It is noted that *Liveable Neighbourhoods* aims to provide for efficient and safe regional and local traffic movement while integrating and designing facilities to prioritise pedestrian movement. The street type and functions according to LN guidelines typically do no match up with the current road network. It is not intended to be a traffic engineering manual but does aim to provide a guide to principles for designing integrated networks and street design and construction. The proposed street types aim to accommodate and facilitate cyclists by providing either bike lanes or shared paths.

Table 7-9 Liveable Neighbourhoods guidelines

	Street Type	Capacity
West Coast Drive	Primary Distributor	17,500
Raleigh Road	Access Street	3,000
The Plaza	Access Street	3,000

Therefore, as shown in **Table 7-7** to **Table 7-9**, the existing cross section of the roads are expected to be sufficient to accommodate the projected demand through to the 2031 horizon.

Figure 7-1 to **Figure 7-4** show the expected turning movements at the Centre access points for the 'With Development' Scenario.

Figure 7-1 2031 Thursday Peak design traffic flows – Access Scenario 1

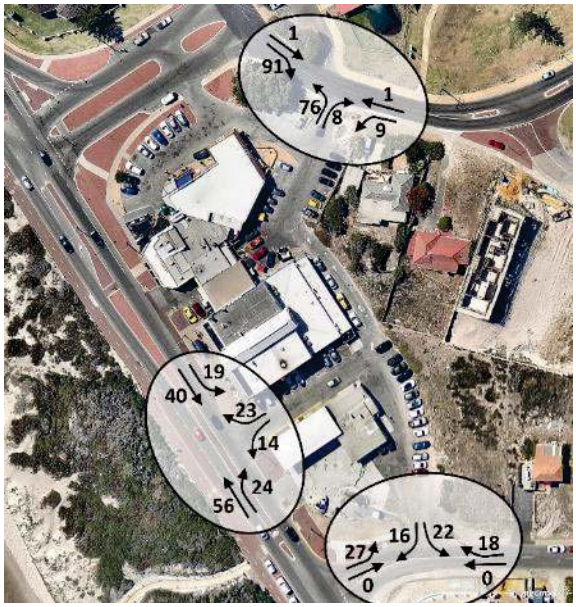


Figure 7-2 2031 Saturday Peak design traffic flows – Access Scenario 1

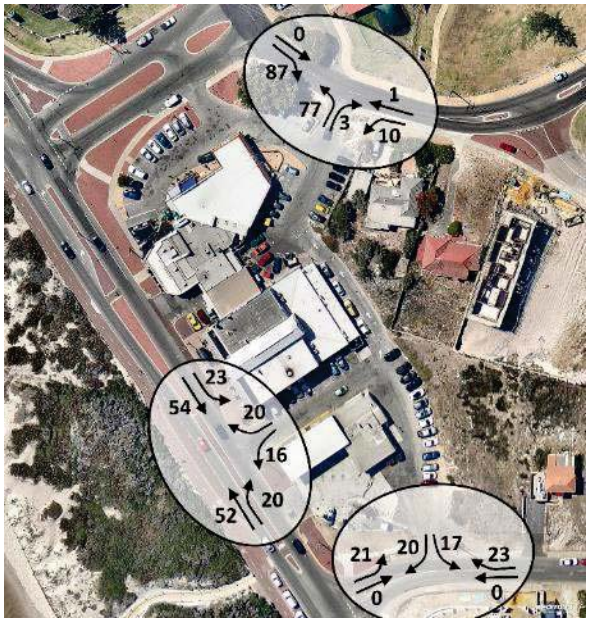


Figure 7-3 2031 Thursday Peak design traffic flows – Access Scenario 2

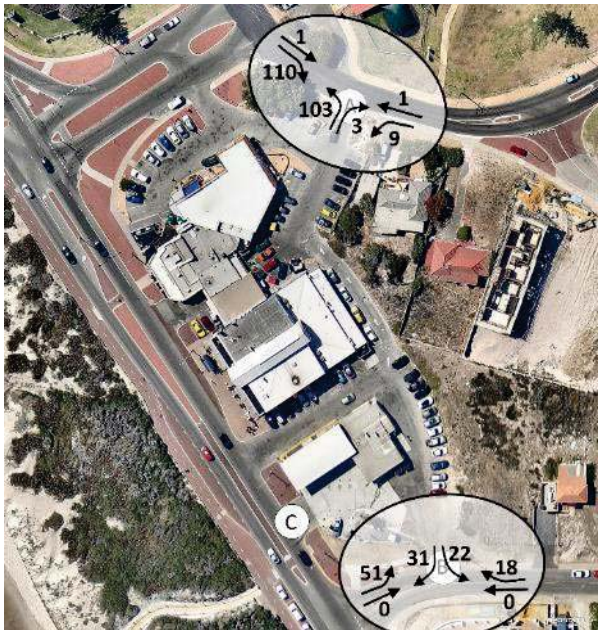
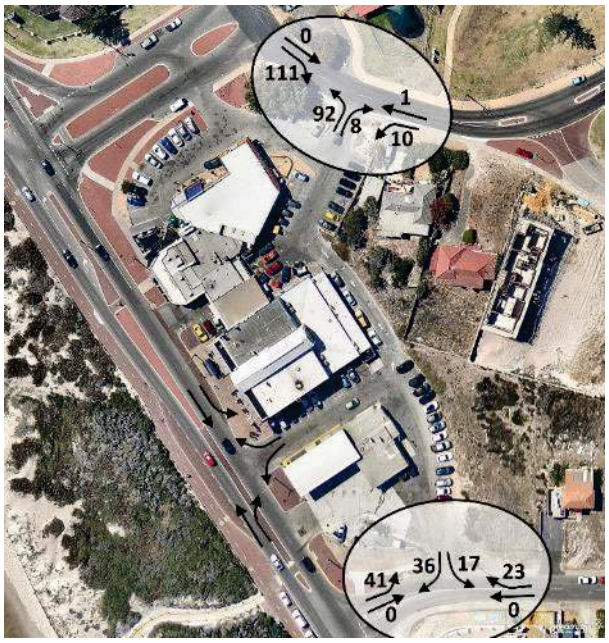


Figure 7-4 2031 Saturday Peak design traffic flows – Access Scenario 2



7.5 Intersection Operation Analysis and Method of Control

SIDRA analysis was undertaken at the following intersections to estimate the impact of the development generated traffic on the surrounding transport network:

- West Coast Drive/Raleigh Road
- West Coast Drive/The Plaza

SIDRA outputs for each approach are presented in the form of Degree of Saturation (DOS), Average Delay, Level of Service (LOS) and 95th Percentile Queue. These characteristics are defined as follows:

Degree of Saturation (DOS): is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity. The theoretical intersection capacity is exceeded for an un-signalized intersection where DOS > 0.80;

95% Queue: is the statistical estimate of the queue length below which 95% of all observed queues would be expected;

Average Delay: is the average of all travel time delays for vehicles through the intersection. An unsignalised intersection can be considered to be operated at capacity where the average delay exceeds 40 seconds for any movement; and

Level of Service (LOS): is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. The different levels of service can generally be described as shown in **Table 7-10.**

Table 7-10 Level of Service (LOS) Performance Criteria

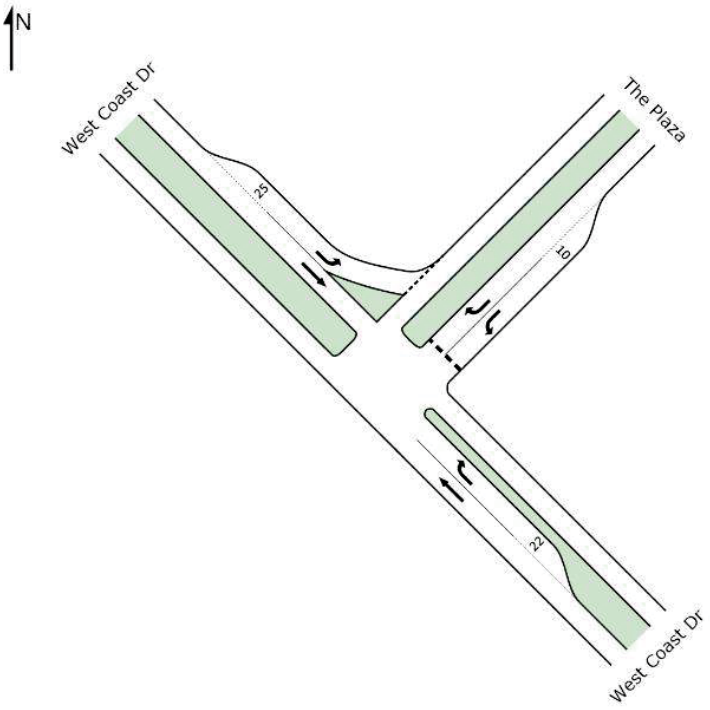
LOS	Description	Signalised Intersection	Unsignalised Intersection
A	Free-flow operations (best condition)	≤10 sec	≤10 sec
B	Reasonable free-flow operations	10-20 sec	10-15 sec
C	At or near free-flow operations	20-35 sec	15-25 sec
D	Decreasing free-flow levels	35-55 sec	5-35 sec
E	Operations at capacity	55-80 sec	35-50 sec
F	A breakdown in vehicular flow (worst condition)	≥80 sec	≥50 sec

7.5.2 West Coast Drive/The Plaza Intersection Assessment

The following presents the results of the analysis of the West Coast Drive / Raleigh Road intersection for the existing background traffic scenario, with and without the addition of development traffic from the site.

Figure 7-5 is the SIDRA layout representation of the intersection at this location

Figure 7-5 Existing Layout of the West Coast Drive / The Plaza priority Control Intersection



The results from the SIDRA analysis for both scenarios (with and without the proposed development) are summarised in **Table 7-11** and **Table 7-12** for Thursday and Saturday peak hour periods, respectively.

Table 7-11 West Coast Drive / The Plaza Intersection Operation – with and without development (Thursday Peak hour)

Intersection Approach		2031 without Development				2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.31	0	A	0	0.33	0	A	0	0.33	0	A	0
	R	0.01	12	B	0	0.306	12	B	2	0.06	14	B	2
The Plaza (NE)	L	0.04	9	A	1	0.07	9	A	1	0.07	9	A	1
	R	0.19	30	D	4	0.38	44	E	10	0.57	53	E	15
West Coast Drive (NW)	L	0.07	6	A	0	0.10	6	A	2	0.12	6	A	2
	T	0.21	0	A	0	0.24	0	A	0	0.23	0	A	0
All vehicles		0.31	1	NA	4	0.38	2.5	NA	10	0.54	3	NA	15

Table 7-12 West Coast Drive / The Plaza Intersection Operation – with and without development (Saturday Peak Hour)

Intersection Approach		2031 without Development				2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.35	0	A	0	0.36	0	A	0	0.37	0	A	0
	R	0.01	24	C	0	0.09	29	D	2	0.10	27	D	2
The Plaza (NE)	L	0.06	14	B	1	0.11	15	S	2	0.11	15	C	2
	R	0.49	115	F	11	1.00	333	F	43	1.03	283	F	61
West Coast Drive (NW)	L	0.04	6	A	1	0.07	6	A	1	0.11	6	A	2
	T	0.46	0	A	0	0.49	0	A	0	0.48	0	A	0
All vehicles		0.49	2	NA	11	1.0	9	NA	43	1.03	10	NA	61

As indicated in **Table 7-11** and **Table 7-12,** with the current intersection configuration, all the approaches apart from the right turn movement out of The Plaza to West Coast Drive have sufficient capacity to accommodate the traffic demand during the Thursday and Saturday peak hour period under the both 'With Development' scenarios with the exception of the right-turn out of The Plaza.

To address the low level of service for this movement two mitigation arrangements have been investigated.

Improved Priority Options

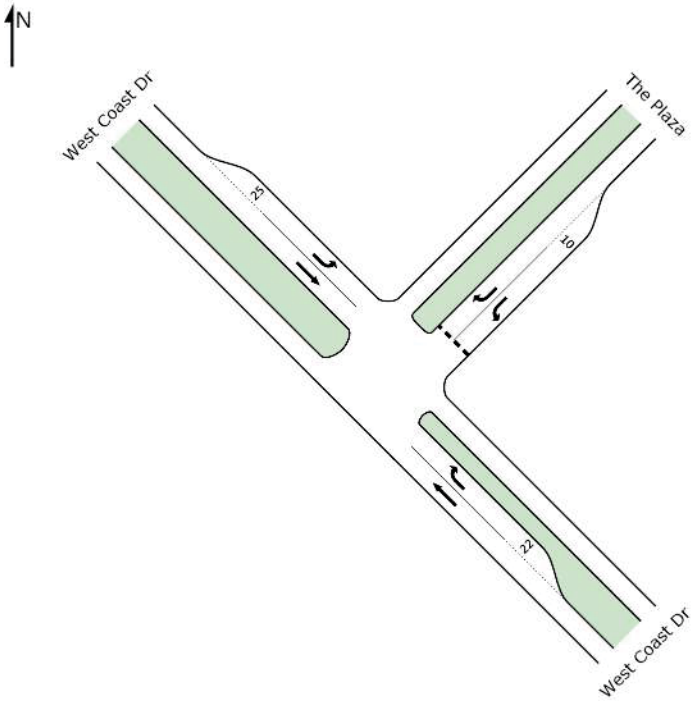
A potential layout is shown for the West Coast Drive/ The Plaza Intersection (see **Figure 7-6** below). It is noted that this design does not show any changes to the form or cross-section of The Plaza. However, any changes to this cross section, including on-street parking or the creation of a pedestrian 'Shared Zone' are not expected to significantly impact the function of the intersection itself.

Aspects of this design expected to be retained include the conversion of the existing high-speed give-way slip lane to a standard left-turn pocket and provision of left- and right-turning lanes at The Plaza approach.

Figure 7-6 Mitigated West Coast Drive / The Plaza intersection with 6m wide central median

Figure 7-7 is the SIDRA layout representation of the intersection at this location.

Figure 7-7 West Coast Drive / The Plaza SIDRA representation with 6m wide central median



The results from the SIDRA analysis for both scenarios (with and without the proposed development) are summarised in **Table 7-11** and **Table 7-12** for AM and PM peak hour periods, respectively.

Table 7-13 West Coast Drive / The Plaza Intersection Operation – with Development (Thursday Peak hour)

Intersection Approach		2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.33	0	A	0	0.33	0	A	0
	R	0.03	9	A	0	0.03	9	A	0
The Plaza (NE)	L	0.07	9	A	1	0.07	9	A	1
	R	0.15	27	D	2	0.21	27	D	3
West Coast Drive (NW)	L	0.05	6	A	0	0.06	6	A	0
	T	0.24	0	A	0	0.23	0	A	0
All vehicles		0.33	2	NA	3	0.33	2	NA	3

Table 7-14 West Coast Drive / The Plaza Intersection Operation – with and without development (Saturday Peak Hour)

Intersection Approach		2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.37	0	A	0	0.37	0	A	0
	R	0.03	12	B	0	0.03	12	B	0
The Plaza (NE)	L	0.11	15	C	2	0.11	15	C	2
	R	0.32	55	F	4	0.45	59	F	6
West Coast Drive (NW)	L	0.03	6	A	0	0.05	6	A	0
	T	0.49	0	A	0	0.48	0	A	0
All vehicles		0.49	2	NA	4	0.48	3	NA	6

As shown in **Table 7-13** and **Table 7-14**, above the proposed layout will improve the operation of the intersection in both scenarios by reducing the delay time for the right turn out of The Plaza. Although this movement will still operate with a LOS F, it will operate with a low 95% average back of queue and an acceptable delay (considering the nature of peak traffic demands) for The Plaza and therefore requires no further changes to the proposed layout.

Roundabout Option

An alternative option for this intersection has been tested to convert the existing priority intersection to a roundabout form. SIDRA analysis of this intersection shows that traffic operations would be significantly improved for The Plaza with a minor impact on traffic along West Coast Drive.

This solution therefore addresses the operational aspects of the intersection well. However, the roundabout design has some intrinsic issues that make it a less suitable option in this location. The considerations include:

> The importance of the West Coast Drive Recreational Shared Path means that the roundabout would need to be shifted away from the road centreline. This would likely create a situation in which northbound though vehicles would experience little or no deflection, resulting in unacceptable speeds for this

movement. Substantial modification to West Coast Drive would be required to reduce the speed of approaching traffic.

> The Mainroads WA-approved Austroads roundabout is designed to maximise traffic function by minimising overall delay. In this situation that means that left-turning movements into The Plaza can be completed at a relatively high speed. This is not conducive to the safe pedestrian environment that the City wishes to achieve in the long-run.

> Currently, sealed shoulders along West Coast Drive provide priority for on-road cyclists continuing past The Plaza. A roundabout would necessarily remove this infrastructure and would increase the risk for cyclists.

> The extensive changes required to support a roundabout in this location would be substantially more expensive than the relatively modest improvements necessary to allow staged right-turn movements. In addition, the space consumed by the roundabout is likely to reduce the functional space created by modifying the cross-section of The Plaza

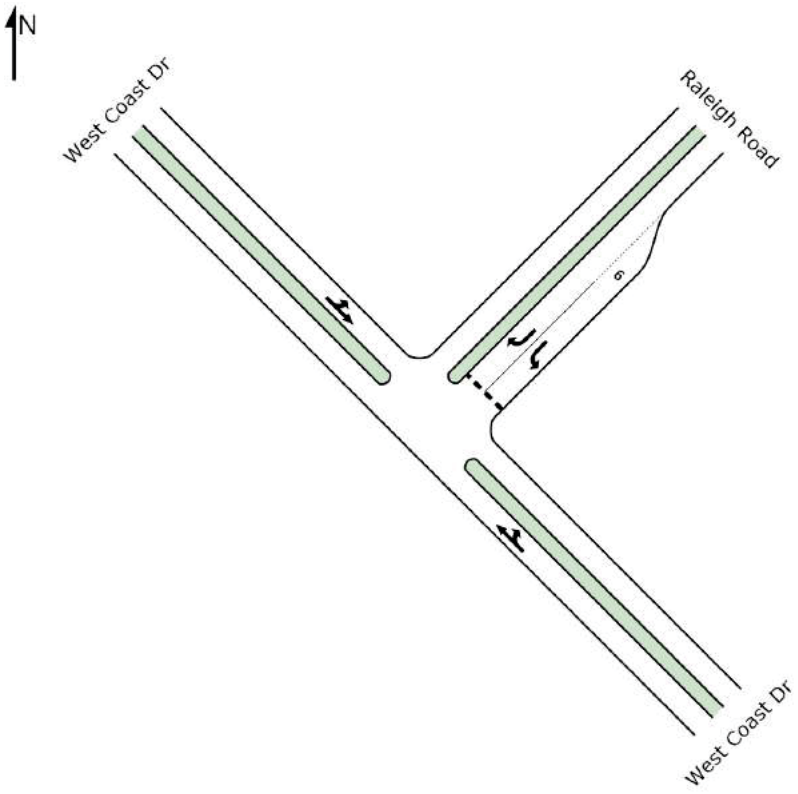
Considering the impact on drivers and sustainable transport modes, and understanding the City's desire to improve pedestrian and cycling legibility in this area, Cardno recommends retention of the existing priority infrastructure, but with improvements to ensure the ongoing function of the West Coast Drive/The Plaza intersection.

7.5.3 West Coast Drive/ Raleigh Road

The following presents the results of the analysis of the West Coast Drive/ Raleigh Road intersection for the existing background traffic scenario, with and without the addition of development traffic from the site.

Figure 7-8 is the SIDRA layout representation of the intersection at this location. On-site investigations show that the recent reconfiguration of the West Coast Drive central median permits vehicles to stage for right-turn inbound movements without constraining northbound through vehicles.

Figure 7-8 Indicative Layout for the West Coast Drive/ Raleigh Road priority Control Intersection



The results from the SIDRA analysis for both scenarios (with and without the proposed development) are summarised in Table **7-15** and **Table 7-16** for Weekday and Saturday peak hour periods, respectively.

Table 7-15 West Coast Drive/Raleigh Road Intersection Operation – with and without development (Thursday Peak hour)

Intersection Approach		2031 without Development				2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.31	0	A	0	0.35	0	A	0	0.34	0	A	0
	R	0.01	13	B	0	0.11	14	B	0	0.22	14	B	0
Raleigh Road (NE)	L	0.00	11	B	0	0.02	11	B	0	0.07	11	B	0
	R	0.00	29	D	0	0.08	38	E	2	0.08	37	E	2
West Coast Drive (NW)	L	0.22	8	A	0	0.25	8	A	0	0.24	8	A	0
	T	0.22	0	A	0	0.25	0	A	0	0.24	0	A	0
All vehicles		0.32	0	NA	0	0.40	0	NA	2	0.43	1	NA	2

Table 7-16 West Coast Drive /Raleigh Road Intersection Operation – with and without development (Saturday Peak Hour)

Intersection Approach		2031 without Development				2031 with Development Scenario 1				2031 with Development Scenario 2			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
West Coast Drive (SE)	T	0.35	0	A	0	0.38	0	A	0	0.37	0	A	20
	R	0.01	26	D	0	0.08	30	D	0	0.32	35	E	0
Raleigh Road (NE)	L	0.00	17	C	0	0.05	20	C	0	0.14	20	C	2
	R	0.02	80	F	0	0.67	131	F	7	0.69	129	F	7
West Coast Drive (NW)	L	0.47	8	A	0	0.50	8	A	0	0.49	8	A	0
	T	0.47	0	A	0	0.50	0	A	0	0.49	0	A	0
All vehicles		0.47	0	NA	139	0.67	1	NA	7	0.69	2	NA	7

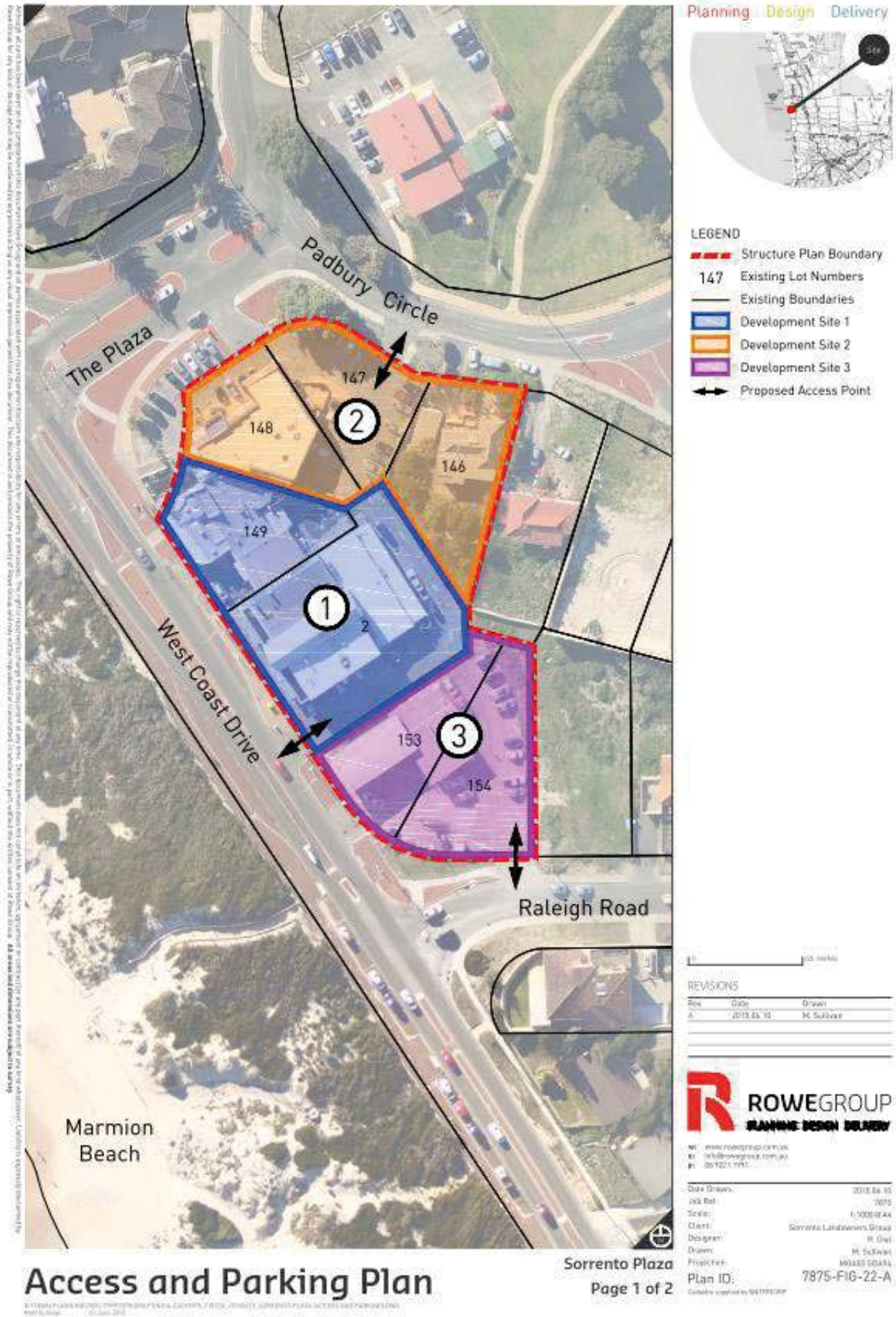
As indicated in **Table 7-15** and Table **7-16 ,** the current intersection configuration has sufficient capacity to accommodate the traffic demand during the Thursday and Saturday peak hour period under the 'With Development' scenario. It is noted that the right-turn egress from Raleigh Road operates at a relatively poor level of service. However, given the low numbers of vehicles undertaking this movement even during the peak periods, the overall impact is considered to be negligible. Therefore, no modifications to this intersection are considered necessary to support the proposed development.

7.6 Access Strategy

The access arrangement for the Centre is described in **Section 4.5** and presented graphically in **Figure 7-9** below. The Centre intends to ultimately reduce the current number of access points by eliminating the access to The Plaza.

As described earlier, two scenarios have been evaluated for the proposed centre. In one of the scenarios, apart from the access to the service station, no other access has been provided along West Coast Drive. This scenario resulted in minor differences compared to the other scenario with the access along West Coast Drive.

Figure 7-9 Access Strategy Layout



The above access strategy is consistent with the proposed development of the Centre. Given that it is likely that the future build-out of the Centre will occur in stages, and in any order, it is important that each development site can operate in the context of the existing development.

For this reason, the Structure Plan proposed for visitor parking to be shared across the Centre, but for access to each site separate. That is, circulation between the different sites will be achievable only via the boundary road network.

It is understood that there is an existing circulation path that runs along the northern boundary of the site. This circulation path operates in a one-way manner from south to north. Theoretically this circulation path allows drivers to circulate to find parking without leaving the Centre. However, the majority of parking is provided adjacent to The Plaza, and this proportion is likely to increase following modification of that road reserve. The proposed below-grade parking, located at the terminal points of the existing circulation path, supports the existing visitor behaviour by providing parking at the same locations as the current scenario.

By supplying the majority of visible parking at The Plaza, this area becomes the primary entrance for the Centre. Intersection assessment of the boundary road network suggests that The Plaza is best able to cater for this traffic demand through to 2031, while still retaining the opportunity to reduce vehicle speeds and promote a 'Shared Space' should the City wish to pursue this design. Recent examples of Bay View Terrace in Claremont have proven the viability of this form of design.

Separation of the car parking access points will require measures to ensure parking legibility, including both signage to inform visitors of available bays, and passive measures to promote use. Passive design features which assist in on-site circulation include:

> Kerbs and medians – the use of kerbs and medians provide an effective form of road delineation to indicate the internal site circulation and can be used to prevent of enforce specific movements. The addition of regulatory signage reinforces these movement arrangements.

> Parking bay arrangement – the direction of angled and parallel parking bays provide a visual indicator on movement directions. e.g. 45 degree parking bays along a narrow laneway indicate one-way movement.

> Structural elements – the building structure itself provides passive wayfinding through both visual and physical means. e.g. the "see through effect" where a structure effectively "hides" the intersection and appears as a straight road from the driver perspective.

Each of these passive effects will be leveraged to ensure visitors to the Centre are able to access available parking as required, without requiring connectivity across constituent Lot boundaries. Specific parking wayfinding signage can be used to direct visitors to below-grade parking.

These measures would be required in any event, as the usage of undercroft and basement car parking is highly dependent on the public's knowledge of its availability. This can be achieved by establishing excellent pedestrian infrastructure connecting the parking access points, development entrances and external network. It is expected that the below-grade parking will be attractive for destination trips to the Centre, rather than to fulfil casual parking requirements for visitors to the adjacent beachfront. However, the abundance of publicly accessible parking to the north of the site should assist with existing parking constraints, while still being available for patrons of restaurants and evening retail demand.

7.7 Safe Walk/Cycle to school assessment

As noted in the **Section 6.1** of the report, Sacred Heart College is located to the north of the site and within 800m walking catchment form the proposed centre.

The safe route to this school is provided by the shared path and footpaths along West Coast Drive, Padbury Circle, and The Plaza.

7.8 Pedestrian/Cycle Network

The proposed network of pedestrian/cycle Network is described in **Section 4.3** of this transport assessment. This network of paths will provide suitable accessibility and connectivity for pedestrians and cyclists.

The WAPC Transport Assessment Guidelines for Developments (2006) provides guidance on the levels of traffic volumes that are likely to affect the ability for pedestrians to cross various types of road. Based on that

guidance an undivided two-lane road should be acceptable for pedestrians crossing traffic volumes up to 1,100vph and a two-lane road with a median island the threshold is 2,800vph.

None of the roads in the close vicinity of the Centre is expected to carry future traffic flows above these levels.

7.9 Access to Public Transport

There are a few bus stops within 400m catchment of the Centre. The closest bus stop to the centre is located on West Coast Drive immediately in front of the Centre.

8 Conclusion

This Traffic Assessment outlines the transport aspects of the proposed structure plan for the Sorrento Activity Centre focusing on traffic operations, car parking supply and access function.

This report has been prepared in accordance with the WAPC *Transport Assessment Guidelines: Volume 2 – Structure Plans (2006).*

The following conclusions have been made in regards to the Centre:

The proposed Centre incorporates:

- Lot 146, 147 and 148: 2 tenancies comprising 600 m^2 (340 m^2 café/retail and 260 m^2 liquor store) including 28 residential dwellings
- Lot 2 and Lot 149: 3 tenancies comprising 500 m^2 (retail) including 29 residential dwellings
- Lot 153 and 154: Currently there is a service station located across these two lots; the proposed plan may either retain this land use or redevelop into 375 m^2 of Restaurant use and 20 Residential dwellings

  For the purpose of quantitative assessment, the worst-case of these two land uses has been used; in this way the assessment remains conservative regardless of the outcome.

Total Centre development: 77 Residential dwellings. Note that retaining the service station will reduce the number of residential dwelling to 56

SIDRA analysis of the existing and proposed intersections surrounding the Centre for 2031 scenarios indicates that:

- The surrounding road network will provide sufficient capacity to carry the daily traffic volumes expected on the network. The additional traffic will have a minor effect on the existing operation of these roads and all roads will continue to function below their practical capacity.
- Local intersection improvements to the West Coast Drive/The Plaza intersection including widening of the central median to allow staged right-turn egress from The Plaza would be highly beneficial for the local traffic function, and would be sufficient to accommodate the projected traffic demand through to a 2031 time horizon. Conversion of this intersection to a roundabout form would improve the traffic situation, but at the expense of pedestrian and cycling amenity and cost.
- The intersection of West Coast Drive/Raleigh Road is likely to operate at an acceptable level for all movements with the exception of the right-turn out. However, given the extremely low volumes of traffic undertaking this movement, and the available alternative routes, the anticipated operation is considered to be acceptable.