PLANNING POLICY NO.3.2.8

November 2014

Development Policy Plan

Campus Sector

www.rockingham.wa.gov.au

city of Rockingham

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This Development Policy Plan was adopted by the Council in November 2014 prior to the announcement by Murdoch University that it was relocating its Undergraduate Degree courses to its South Street Campus. References to the Rockingham Murdoch University Campus are still valid as the facility may continue to deliver an educational focus.

1. Introduction

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1.1 BACKGROUND

The Campus Sector is one of a number of defined development Sectors within the planning envelope of the endorsed Centre Plan for the Rockingham Strategic Metropolitan Centre.

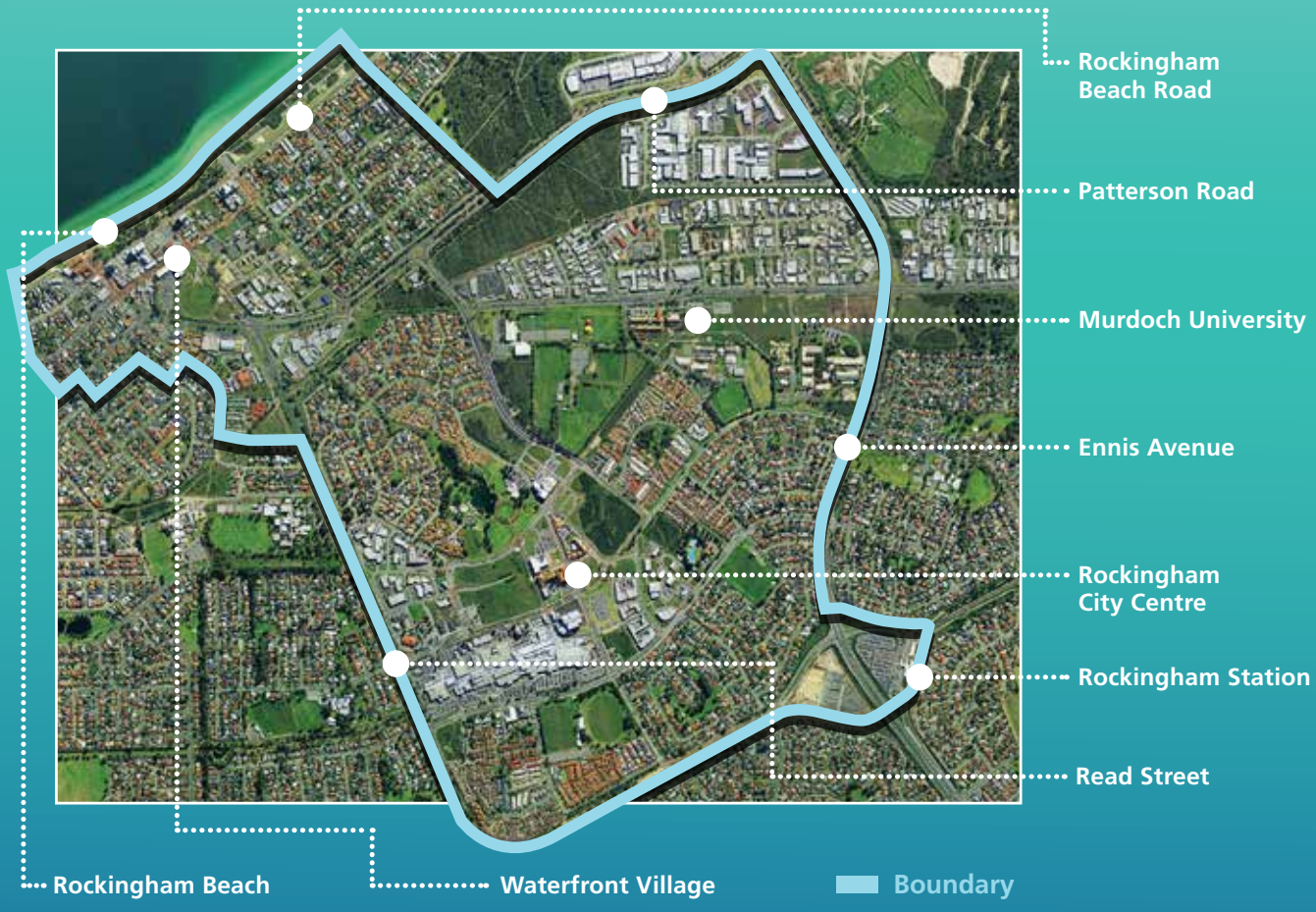
This Planning Policy provides a more detailed planning vision and policy framework for the Sector. A logical policy area boundary has been defined within which the land use and townscape characteristics of individual precincts are described and illustrated.

1.2 CENTRE PLAN STATUS - STRATEGIC METROPOLITAN CENTRE

Under its Statement of Planning Policy 4.2 (Activity Centres for Perth and Peel), the Western Australian Planning Commission (WAPC) requires the City of Rockingham to prepare and maintain an endorsed Activity Centre Structure Plan (Centre Plan) to guide the development of public and private property within the Rockingham Strategic Metropolitan Centre.

The City commissioned a review of its endorsed 1995 Centre Plan with the goal of producing a new Centre Plan that would cover the full extent of the area to be serviced by the Rockingham City Centre Transit System (RCCTS). The scope of the Centre Plan project covers an area of almost 600 hectares between the Rockingham Train Station and Rockingham Beach and includes the area covered by the existing Central City Area zone in the Metropolitan Region Scheme. The location of the Centre Plan is shown in Figure 1.1.

Figure 1.1 Rockingham Strategic Metropolitan Centre Boundary



Stage 1 of the Centre Plan Review was advertised for public comment in December 2007. It laid down an overall Concept Plan that addressed the priority issues of: a better connected access and movement network; and a land use pattern based on contemporary 'Main Street' and 'Transit Oriented Development' principles. A Framework Plan translated the Concept Plan into a general arrangement of legible street blocks, built form and public space.

The overall Centre Plan area was divided into 11 Sectors (refer to Figure 1.2) as follows:-

- City Centre
- Waterfront Village
- Smart Village (South)
- Smart Village (North)
- Northern Gateway
- Campus
- Eastern
- Leeuwin
- Northern Waterfront
- Southern Gateway
- Rockingham Station

In February 2008, following a review of stakeholder and public submissions, the Council endorsed the long term planning framework and transport network recommendations for the Strategic Metropolitan Centre, as proposed in the Stage 1 Report.

Stage 2 of the Centre Plan Review updated the 1995 Development Policy Plan (DPP) for the City Centre Sector, with a revised Indicative Development Plan and related Precinct Policies and Guidelines. The Council endorsed the Stage 2 Final Reports at its ordinary Meeting held on the 22nd September 2009.

On the 10th November 2009, the WAPC Statutory Planning Committee considered the Stage 2 Final Reports on the Review of the Rockingham Strategic Metropolitan Centre and resolved to endorse the documents as an appropriate Centre Plan to guide future planning and development.

Since 2009, the City of Rockingham has been working to complete Development Policy Plans for each of the remaining Centre Plan Sectors.

Figure 1.2 Rockingham Strategic Metropolitan Centre Sector Plan

1.3 NEED FOR A DEVELOPMENT POLICY PLAN FOR THE CAMPUS SECTOR

The Campus Sector of the Rockingham Strategic Metropolitan Centre comprises adjoining sites of the Challenger Institute of Technology (CIoT) (formerly Challenger TAFE), the Rockingham campus of Murdoch University and Kolbe Catholic College. The Rockingham Campus Community Library is situated on the Murdoch site and the joint facility is shared between students and the community.

General view of Campus Sector at the eastern gateway to the Rockingham Centre prior to expansion of Challenger Institute of Technology

The Sector covers an area of approximately 35 hectares at the eastern gateway to the Strategic Metropolitan Centre. This prominent location has become more important to the perception and identity of the overall Activity Centre now that Dixon Road is connected to the Freeway via the Kulija Road link. The Dixon Road frontage to the Sector is approximately 1 kilometre long and the 4 lane dual carriageway has undergone a major upgrade in recognition of its role as a vital piece of road and place-making infrastructure.

When the City and its consultant team were reviewing the overall Centre Plan in 2009 it was recognised that the earlier aspirations for growth of the Murdoch University campus were unlikely to be realised in full.

It was therefore proposed that Crown Land (which was originally proposed for the Murdoch University Campus), vested in the City of Rockingham and which formerly accommodated a district recreation centre to the west of the existing campus, would be better allocated to mixed use, transit oriented development along the planned route of the central transit system. Such development would lay down a permeable grid of streets, with street oriented buildings and a mix of commercial, residential and institutional building typologies. This would allow a strategic parcel of land along the route of the transit system to be appropriately zoned, serviced and released to the market for development.

Consistent with tertiary education campuses that have been integrated into town and city centres elsewhere, it was envisaged that if the demand ever arose, some university tenancies and possible student accommodation could be housed within the framework of the adjoining mixed use urban village.

Murdoch University was consulted on this revised land use strategy and contributed a concept plan showing a modest expansion of 2 and 3 storey buildings within a rationalised campus boundary that would allow for the development of a separate but connected urban village to the west of a re-aligned Dowling Street.

Structure planning proceeded over the entire Centre Plan area with this understanding and the advertised Centre Plan attracted a supporting submission from the University.

More detailed planning and urban design work was needed at the Sector level to show how the proposed structural modifications to the road network from the Centre Plan can be implemented to improve access, provide an orderly basis for campus development and to provide a settled framework for enduring landscape development.

This Campus Sector DPP also shows how the existing campus infrastructure of buildings, car parks and public spaces can interface with the mixed use, street oriented development strategy that underpins the City's adopted DPP for the adjoining Smart Village.

The City's Town Planning Scheme No.2 has been amended to include appropriate 'Primary Centre' zonings on a Sector by Sector basis, in conjunction with the preparation and public advertising of Development Policy Plans for each Sector. In effect, the Development Policy Plan has informed and supported the Scheme Amendment process and vice-versa.

Foundation of Murdoch University Regional Campus established a strong architectural profile for the Sector which needs to be matched in future development

Murdoch University and shared community Library buildings

2. Strategic Metropolitan Centre Planning Framework

2. Strategic Metropolitan Centre Planning Framework

2.1 VISION FOR THE STRATEGIC METROPOLITAN CENTRE

The following vision has been endorsed in the Centre Plan for the Rockingham Strategic Metropolitan Centre:-

> *"The vision is for a modern, distinctly coastal centre offering a wide range of mixed uses including retail, commercial, office, civic, residential, education and recreation within an accessible and highly inter-connected, urban-scaled townscape, comprising a major activity centre and related urban villages based on 'Main Street' principles"*

This Vision builds on the principles of the regional planning framework described in 'Network City' (2004), 'Directions 2031 and beyond' (August 2010) and 'Statement of Planning Policy 4.2 – Activity Centres for Perth and Peel' (August 2010), and also the objectives and concepts of the 1995 Rockingham City Centre DPP. It has a wider scope to encompass higher education campuses and urban villages along the route of the RCCTS through to Rockingham Beach.

Development in the Rockingham Strategic Metropolitan Centre will be defined and characterised by:-

- Medium to high density development based on activated, 'Main Street' principles.
- A configuration of generally contiguous streetfront buildings and a mix of uses that generate high levels of pedestrian activity and a sense of vitality.
- A street-based transit system, with closely spaced stops.
- A permeable network of streets, laneways, arcades and public spaces that provide high quality linkages, particularly for pedestrians, to Centre activities from transit stops, street and off-street car parking and from the surrounding walkable catchment.
- An identifiable City Centre hub to provide major CBD functions.
- Connected urban villages between the City Centre and Rockingham Beach along the route of the transit system. The new urban villages will make provision for mixed and consolidated education (university), technology, commercial and medium to high density residential development, based on sustainable planning principles and design criteria.

2.2 PLANNING AND DEVELOPMENT PRINCIPLES

The following planning and development principles apply across the Strategic Metropolitan Centre:

2.2.1 Built Form & Urban Design

Principles:-

- Develop in accordance with 'Main Street' design principles.
- Incorporate a diversity of activities and human scale in streetfront development.
- Develop local areas in accordance with specific precinct design and development guidelines and controls.
- Locate and configure buildings to address the street and progressively facilitate continuous and contained streetscapes which provide interest and interaction between buildings and pedestrians at street level.
- Make public buildings and spaces universally accessible.
- Design buildings and public spaces that contribute to a comfortable pedestrian environment, providing opportunities for weather protection, including shelter from prevailing strong wind conditions.
- Minimise any detrimental impacts on neighbouring properties.
- Encourage a gradual stepping up of the built form at the interface of low and high rise development.

2.2.2 Access & Parking

Principles:-

- Make walking the most important mode of transport within the Campus Sector. Streets, public places and adjacent development should be designed to provide a safe, secure, stimulating and pleasant walking environment.
- Link the major regional and sub-regional road system to the Campus Sector by a range of direct and legible street connections.
- Ensure that the Campus Sector street network provides multiple choices of routes for pedestrians, cyclists and vehicles.
- Integrate the street-based central transit system to link the Rockingham Beach, City Centre and Rockingham railway station together.
- Ensure that appropriate land uses are located within walking distance of the transit route.
- Adopt an integrated urban design and traffic management approach within the Campus Sector to deliver a low speed traffic environment and a high level of interest and amenity.
- Manage provision of adequate parking facilities and encourage integration of car parking with adjoining sites which are convenient, safe and sustainable.

2.2.2 Access & Parking cont.

- Locate parking areas to minimise adverse impacts on the streetscape.
- Control new development so that access ways and parking facilities do not visually dominate the public realm or create obstructions to the pedestrian environment and minimise potential pedestrian/vehicle conflicts.
- Avoid semi-basement car parking solutions where they would impact negatively on the ground level activation of adjoining streets.

2.2.3 Public Domain

Principles:-

- Integrate different precincts through the use of a simple and consistent palette of vegetation, paving, signage and street furniture.
- Design new development so as to contribute to the quality of the public domain and the framing and activation of the public space network.
- Provide for well-designed and integrated toilet facilities, seating, lighting and public art within the public domain.

2.2.4 Land Uses

Principles:-

- Ensure that new uses support and enhance the role of the Strategic Metropolitan Centre as the primary 'Main Street' activity centre in the South West Perth Region.
- Reinforce the 'Main Street' model for the Centre by giving priority to active street-oriented land uses.
- Encourage land uses and developments that employ and attract high numbers of people.
- Avoid land uses and developments that generate high volumes of cars and trucks and have low employment intensities.
- Enhance the activity appeal of the Campus Sector to both local and regional visitors.
- Encourage new development to provide options for future flexibility and changes in land use.

2.2.5 Safety & Security

Principles:-

- Design buildings to provide a safe environment for all users, contribute positively to the enhancement of public safety, and minimise the need for intrusive surveillance technologies.
- Incorporate unobtrusive security measures into building design that is in keeping with the building's architectural style and materials.
- Design public spaces to facilitate safe pedestrian use and create a sense of public ownership.

2.2.6 Sustainability

Principles:-

- Ensure timely and efficient provision of physical and social infrastructure to enable the Centre to service its strategic functions.
- Promote environmentally sustainable practices, including resource efficiency (energy, water, waste, air quality, material selection), at all stages of development – planning, subdivision design, building construction and maintenance.
- Provide sufficient land for employment opportunities and to support local and regional economic growth.
- Expand sustainable and efficient transport options while creating opportunities to reduce single occupancy vehicle trips.
- Ensure timely provision of services and facilities that are equitable, durable, accessible, of a high-quality and that promote community well-being and health.
- Protect the air and water quality of the centre.

2.3 CONCEPT PLAN

An overall Concept Plan for the Strategic Metropolitan Centre was developed in conjunction with the preparation of an access and movement network (refer to Figure 2.1).

The Plan makes provision for improved road connectivity and a more legible road network with particular emphasis given to improved north-south connectivity. Moreover, the Plan makes the local transit system the focus of an intensified corridor of mixed use development between the City Centre, education campuses and the beachfront.

The foundation of the Plan is the ongoing development of land within the existing City Centre Zone, with the expectation that development will consolidate around the commercial and civic core of the City, with progressive expansion along streetfronts, to the north.

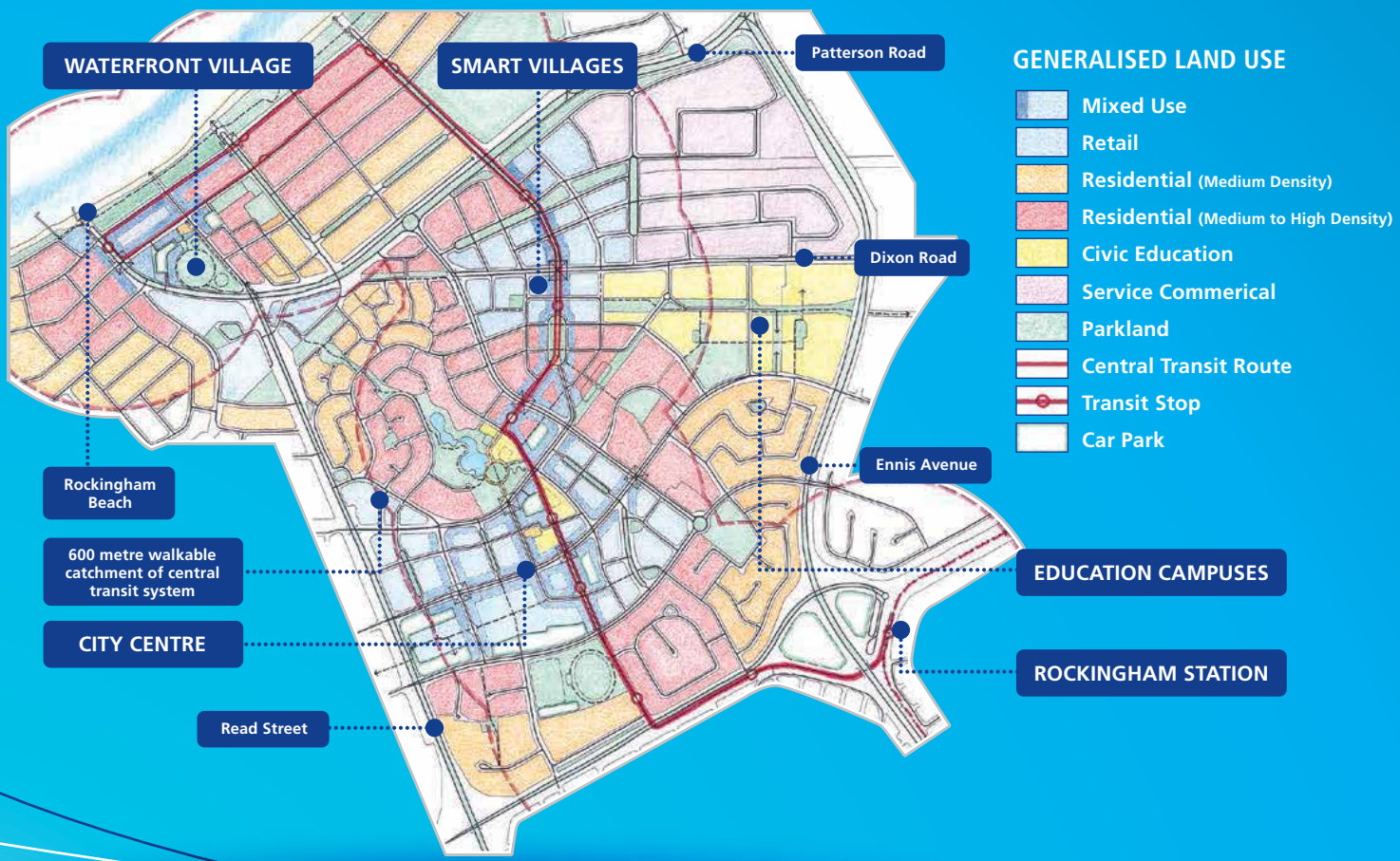
Between the designated City Centre and the Waterfront Village, there are opportunities to develop two new activity centres north and south of Dixon Road, along the route of the local transit system. The land south of Dixon Road presents an opportunity to integrate the western end of the Murdoch University campus with other mixed uses (including residential) in a consolidated, 'Main Street' configuration.

Between Dixon Road and Patterson Road, an opportunity exists to extend the 'Main Street', activity corridor to directly connect with Victoria Street and the Rockingham Waterfront.

Further expansion of the Waterfront Village is envisaged, particularly to the west of Patterson Road. An intensification of residential development to the east of the Waterfront Village would follow the coastal route of the transit system.

Figure 1.2 divides the Strategic Metropolitan Centre into Sectors and overlays them on the Concept Plan base to provide a convenient means of describing and further detailing the strategy. While the boundaries are indicative, they are generally consistent with the boundaries of existing zones, Policy areas and Precincts within the Town Planning Scheme.

Figure 2.1 Rockingham Strategic Metropolitan Centre Concept Plan



2.4 FRAMEWORK PLAN

A Framework Plan (refer to Figure 2.2) was prepared over the Strategic Metropolitan Centre to illustrate a generalised arrangement of built form, movement networks and public and private spaces consistent with the strategic arrangement of functions illustrated in the Concept Plan.

The Plan is also consistent with the potential for Transit Oriented Development (TOD) described in Section 2.5 and builds on the adopted access and movement network described in Section 2.6. The Framework Plan illustrates a long term (i.e. greater than 10 years) view of development and redevelopment potential. While the Plan shows possible new road links over privately owned property, it is acknowledged that such improvements would be subject to the agreement and co-operation of affected property owners.

The Framework Plan provides a platform for more detailed conceptual planning, urban design and planning policy within each of the Centre Plan Sectors.

Consistent with the scope of the Centre Plan, the Framework Plan focuses its detail on areas where there is the greatest potential and/or priority for integrated development or redevelopment in the near term, including land in the City Centre, in the Waterfront Village and along the route of the City Centre Transit System.

Outside of the more detailed parts of the Plan, existing residential and service commercial areas have been simply shaded in yellow and purple tones consistent with the strategic intent of the Concept Plan. These areas are likely to undergo change on a site-by-site basis over an extended period. Separate Sector Development Policy Plans and relevant guidelines will guide development in each of these areas.

Figure 2.2 Rockingham Strategic Metropolitan Centre Framework Plan

2.5 TRANSIT ORIENTED DEVELOPMENT

2.5.1 Background

The RCCTS connects the Rockingham Train Station with the City Centre, education campuses and the beachfront. The route of the street-based transit system is developed initially in shuttle-bus mode with the understanding that it will be upgraded to an electric streetcar or light rail operation once a more supportive level of development has been achieved along the route.

The City of Rockingham is committed to achieving the vision of a fixed route, streetcar transit system as the focus of a corridor of high intensity, mixed use development between the train station and the beachfront.

Accordingly, the review of the Centre Plan was commissioned on the understanding that it would demonstrate the application of sustainable development principles with a particular emphasis on TOD.

2.5.2 TOD Policy Background

It is important to understand the TOD policy background to the Centre Plan.

Network City (2004)

The Network City document set out a strategic foundation for TOD implementation in the Perth region.

Strategy 1.1 sought to foster land use and transport integration to form a Network City, by:-

> *"Encouraging mixed use development in activity centres, including higher density residential developments and employment generators, especially where centres are well served by public transport and have high amenity, walkable catchments."*

In a key action to support the strategy, Network City proposed demonstration projects in Activity Centres to promote TOD, mixed use and higher density residential projects, and to demonstrate best practice in design and implementation. The Rockingham Activity Centre between the Rockingham Train Station and the foreshore was one of several locations nominated for a major TOD demonstration project.

Directions 2031 and beyond (August 2010)

Directions 2031 superseded Network City and is the WAPC's highest level strategic planning framework document for the growth of Perth to accommodate a population of 3.5million by 2031. The document sets out a regional planning framework that seeks to:-

- reduce the overall need to travel;
- support the use of public transport, cycling and walking for access to services, facilities and employment; and
- promote a more energy efficient urban form.

Directions 2031 supports a compact and environmentally sustainable city, which promotes, amongst other things, the importance of planning and designing activity centres around the TOD principles to encourage public transport, walking and cycling as an alternative to private car use.

Statement of Planning Policy 4.2 – Activity Centres for Perth and Peel (August 2010)

The main purpose of SPP 4.2 is to specify broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres. The Policy deals with the distribution, function, land-use and urban design criteria of activity centres, and with co-ordinating their land use and infrastructure planning.

Relevant TOD Policy objectives include:-

- the integration of activity centres with public transport.
- increase the density and diversity of housing in and around activity centres.
- ensure that development patterns for activity centres support high frequency public transport.
- maximise access to activity centres by public transport.

Development Control Policy DC 1.6 – Planning to Support Transit Use and Transit Oriented Development

The amended Development Control Policy 1.6 was adopted by the WAPC in 2005 to reflect the Government's vision for a sustainable future as outlined in the Network City and the State Sustainability Strategy.

The Policy notes that:-

> *"As the public transport system is further refined and extended, there will be emerging opportunities for new development that is focused upon, and maximizes the benefits derived from significant new public investments in transit infrastructure."*

The Policy has direct application to the planning and development of property along the route of the RCCTS.

Policy measures include:-

- Transit-supportive development patterns
- Land use to support transit
- The public domain in transit oriented precincts
- Transit supportive design
- Integrating transit infrastructure
- Precinct planning

2.5.3 TOD Catchment

The TOD catchment encompasses land within a walkable distance of the transit system. At Rockingham the catchment follows the route of the City Centre Transit System between the train station and the beachfront. It is approximately 600 metres wide (each side) along the transit route (to service a future tram or streetcar system).

2.5.4 Land Use Distribution and Development Intensity – Relevance to Campus Sector

The following land use assumptions were generated in conjunction with the draft Concept Plan, the modelling of transport network options and the selection of a preferred transport network.

A mix of active, high intensity uses are appropriate for land within the walkable catchment of the transit route. The intensity and mix of uses should reflect local characteristics along the activity corridor.

The City Centre and the Waterfront Village are established Activity Centres which are planned to accommodate the bulk of retail, office, hospitality and higher density residential development. The 2009 Centre Plan allows for a more balanced distribution of activity-generating uses along the transit corridor where there are significant opportunities for sustainable TOD.

Retail floorspace has been notionally allocated as follows:-

- City Centre 85,000m^2
- Waterfront Village 18,000m^2
- Smart Villages 12,000m^2

Office floorspace has been notionally allocated as follows:-

- City Centre 60,000m^2
- Waterfront Village 8,000m^2
- Smart Villages 32,000m^2

The majority of office floorspace allocated to the Smart Villages should be situated in a mixed use, 'Main Street' environment close to the transit spine and its intersection with Dixon Road.

Residential land use is typically a major component of mixed use TOD. Given that the Waterfront Village project has demonstrated a demand for high amenity, urban-scaled, residential development, it has been assumed that medium to high density residential development will be a major driver of the TOD process. It has the capacity to shape and populate the desired activity corridor.

Within the defined TOD catchment, existing residential densities match the suburban norm of Rockingham with the exception of pockets of higher density along the Rockingham beachfront (200+ dwellings per hectare along Rockingham Beach Road and up to 100 dwellings per hectare in the adjoining Waterfront Village) and in clusters of group housing around the City Centre (typically 50 dwellings per hectare).

The advent of the TOD concept along the transit corridor provides the planning and amenity context for an orderly arrangement and distribution of medium to higher density residential development.

Since the late 1980's there has been an international consensus among researchers and transit operators that the gross average residential density threshold for light rail transit is approximately 50 persons per hectare. More recently, planners have also recognised that a greater intensity and massing of development is needed to create the urban context for successful TOD.

TOD's at Subiaco are being planned to achieve an average residential density of 120 dwellings per hectare with a net yield of 60 to 200 dwellings per hectare on defined blocks. Similar TOD densities are being implemented in Government fostered development projects at Leighton, Cockburn Central and Murdoch.

In the case of the Rockingham TOD, residential densities could range between 60 and 200+ dwellings per hectare (as is currently being developed in parts of the Waterfront Village).

It has been assumed that car parking generated by various land uses and activities will be self-contained within the relevant traffic zones to avoid an over-concentration in any one Sector.

2.5.5 Urban Design and Built Form

While the overall TOD concept is for a consolidated, generally contiguous corridor of development along the transit route, it is essential that TOD at Rockingham has a varied and geographically appropriate character that offers multiple choices in lifestyle and convenience.

TOD with a commercial content will range from the expanded shopping centre that will be sleeved to connect with streetfront tenancies and an adjacent entertainment complex, through to individual mixed use developments on freehold sites.

A variety of residential dwelling types and tenures will be encouraged, including traditional streetfront townhouses, contemporary row houses, mews housing, low rise apartment blocks and medium to high-rise multiple apartments with a lifestyle focus ranging in height from three to ten or more storeys, subject to precinct-specific guidelines. Drawing on recent good practice, a range of urban-scaled dwelling sizes will also be encouraged (and possibly mandated) to ensure that a wide spectrum of household types and levels of affordability can be accommodated.

Particular emphasis will be given to shaping the form of development along the edge of the transit route and around transit stops. In particular, there is a need for design measures to optimise the safety and amenity of stops along the route, including achieving adequate levels of activation and passive surveillance from adjoining properties.

2.6 ADOPTED ACCESS AND MOVEMENT NETWORK

The City has adopted a preferred movement network. Particular attention has been given to the TOD potential of the Strategic Metropolitan Centre and traffic modelling outputs which indicate that there is more than sufficient street capacity on the proposed fine grained network within the centre.

2.6.1 Street Types

A number of different street types are commonly found in city centres, mixed use urban villages and on access streets to, through and around these centres.

Street types relevant to the development of the Strategic Metropolitan Centre include:-

Major Traffic Routes - the main traffic carrying roads in the area. They include Ennis Avenue, Patterson Road, Dixon Road, Read Street and Rae Road. They are dual carriageways designed to carry high volumes of traffic and do not penetrate the City Centre or adjoining mixed use town or village centres.

Transit Street and Transit Priority Streets - custom designed to provide priority for public transport along major transit routes and avoid undue delay to public transport services. Transit priority is proposed along significant sections of the RCCTS route. The design varies to meet local design constraints. Access for other traffic is permitted within the street reservation, but this is not always the case. They are designed to provide for safe, convenient pedestrian movement.

City and Town Centre Streets - pedestrian movement and circulation is very important on these streets. Design permits two-way traffic movement but at a slow speed to provide for safe pedestrian movement. Kerbside parking is normally permitted. A central median is sometimes provided to improve the streetscape, but is not mandatory.

Green Parking Streets - to be constructed around the periphery of the City Centre and on sections of Patterson Road near the foreshore. Their function is to assist with the provision of public parking whilst allowing the street to function normally for both pedestrian and vehicular access. Right angle median and parallel kerbside parking is normally permitted. An example of this type of street exists along part of Patterson Road near the foreshore. Streets of this type are quite common in areas of Melbourne (e.g. Carlton).

Connector Streets - provided outside the major activity nodes to link areas within and adjacent to the City Centre. They can pass through areas with different land uses (eg residential, business or education). Indented kerbside parking and appropriately designed pedestrian crossing areas would normally be incorporated into the design.

Access Streets - found outside of the highly trafficked areas of city, town and village centres. The primary purpose of these streets is to provide access to properties for motorists, pedestrians and cyclists. In light industrial and commercial areas (and in residential areas on an infrequent basis) they also cater for delivery vehicles.

Pedestrian Malls/Accessways - provide essential pedestrian connectivity in areas where the street network is not well-connected. An internal network of pedestrian malls exists within the Rockingham shopping centre. A major purpose of such pedestrian malls is to provide a sheltered and controlled retail environment. Beyond the private domain of the shopping centre, pedestrian laneways and pathways through public space connect a wide array of mixed uses.

2.6.2 The Adopted Network

The adopted access and movement network is illustrated in Figure 2.3. It includes a wide range of street types which enable different functions to be undertaken in different areas in and around the Strategic Metropolitan Centre.

The network has been developed around the modified route of the street based public transport system, connecting the City Centre to Rockingham Beach. Key aspects of the network include:-

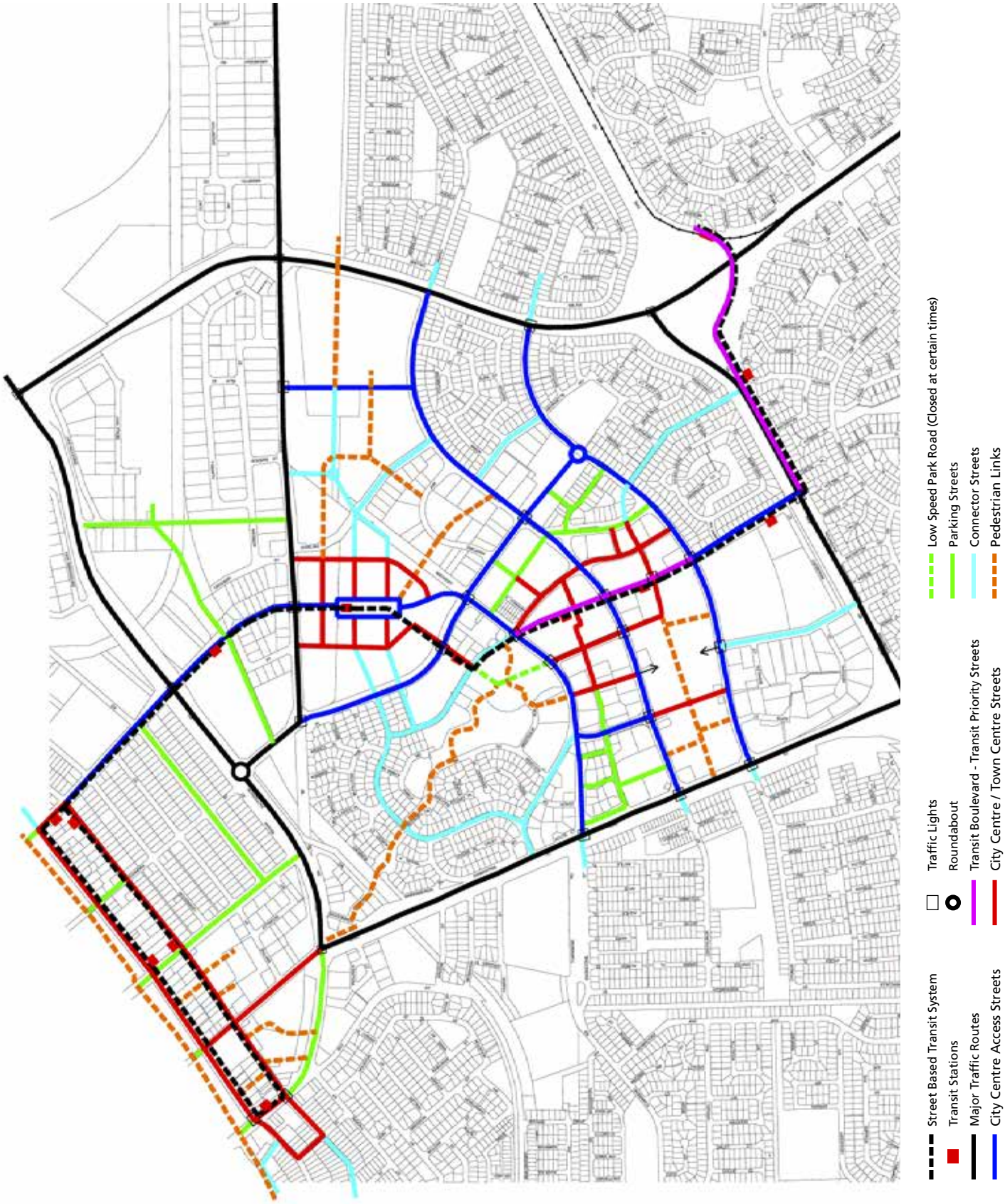
- The street network provides well connected linkages through the proposed Smart Villages between the City Centre and the Rockingham foreshore.
- The street network in the City Centre and in the proposed Smart Villages is fine grained and highly connected, providing a high degree of robustness and flexibility for future planning.

2.6.3 Traffic Modelling and Traffic Predictions

One of the key findings from the traffic modelling was:-

- Long term estimated traffic volumes on the surrounding arterial road network (Ennis Avenue, Read Street and Patterson Road) are high. This is due to an impermeable street network on approach to the Rockingham Metropolitan Centre, especially from the south. Traffic volumes on the fine grained street network within the Metropolitan Centre are fairly low.

Figure 2.3 Adopted Movement Network



2.6.4 Public Transport Network Planning

There are three main elements to public transport network planning in Rockingham:-

- The principal custom designed street based public transport system (the RCCTS), linking the train station with the City Centre, Smart Villages, adjoining education campuses and the Rockingham foreshore. This is the major linking element through the City Centre supporting the proposed transit oriented development.
- The Rockingham/Fremantle principal transit service. This high frequency service would either enter Rockingham through the educational Campus Sector and travel through the City Centre, terminating at the railway station, or enter the city through the railway station, terminating in the education Campus Sector (near the CIoT).
- Services from the south entering the City Centre via Read Street and Central Promenade. These services could proceed through the City Centre to the train station. Some peak hour services could travel in a more direct route via Read Street and Rae Road to the train station.

The potential public transport network is shown in Figure 2.4.

2.6.5 Parking Policy and Principles

In city, town centres and TOD's, it is important that a balance is achieved between meeting the access and parking needs for vehicles and the movement needs of pedestrians in the context of overall urban design.

The distribution of car parking in the Campus Sector should be based on the following principles:-

- Where possible provide public parking in preference to private parking.
- Maximise the amount of on-street, short term parking, subject to traffic and pedestrian safety, and other urban design considerations.

Figure 2.4 Proposed Principal Public Transport Routes

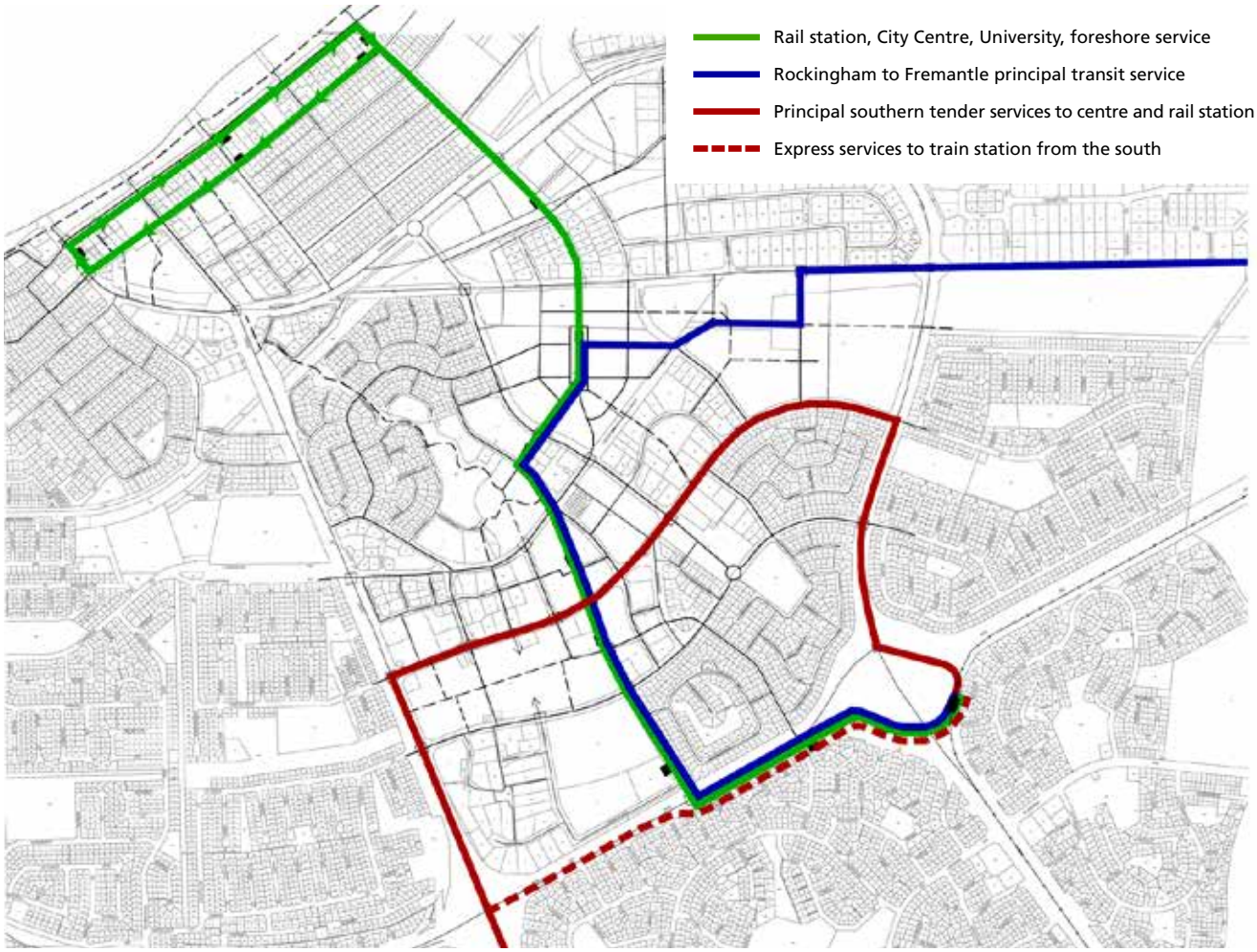


Figure 2.5 Walkable Catchment – Central Transit System

Figure 2.5 shows the walking catchment around the proposed stops along the principal street based public transport system, linking the railway station, the City Centre, the Campus Sector and the foreshore. The outer line is based on a 750 metre walking distance (depicted by a 600 metre radius) applicable to a streetcar or very high frequency bus service. The inner shaded area depicts a walking catchment within the City Centre and adjacent Smart Villages for retail and entertainment uses within a vibrant, mixed use centre. This is based on a 500 metre walking distance (depicted by a 400 metre radius).

Walking catchment for residential and medium intensity mixed use along the route of the principal street based public transport system

Core area suitable for higher intensity mixed use within an expanded centre

Proposed principal transit route: railway station, City Centre, education campus sector, foreshore service.

Figure 2.6 Combined Public Transport Services

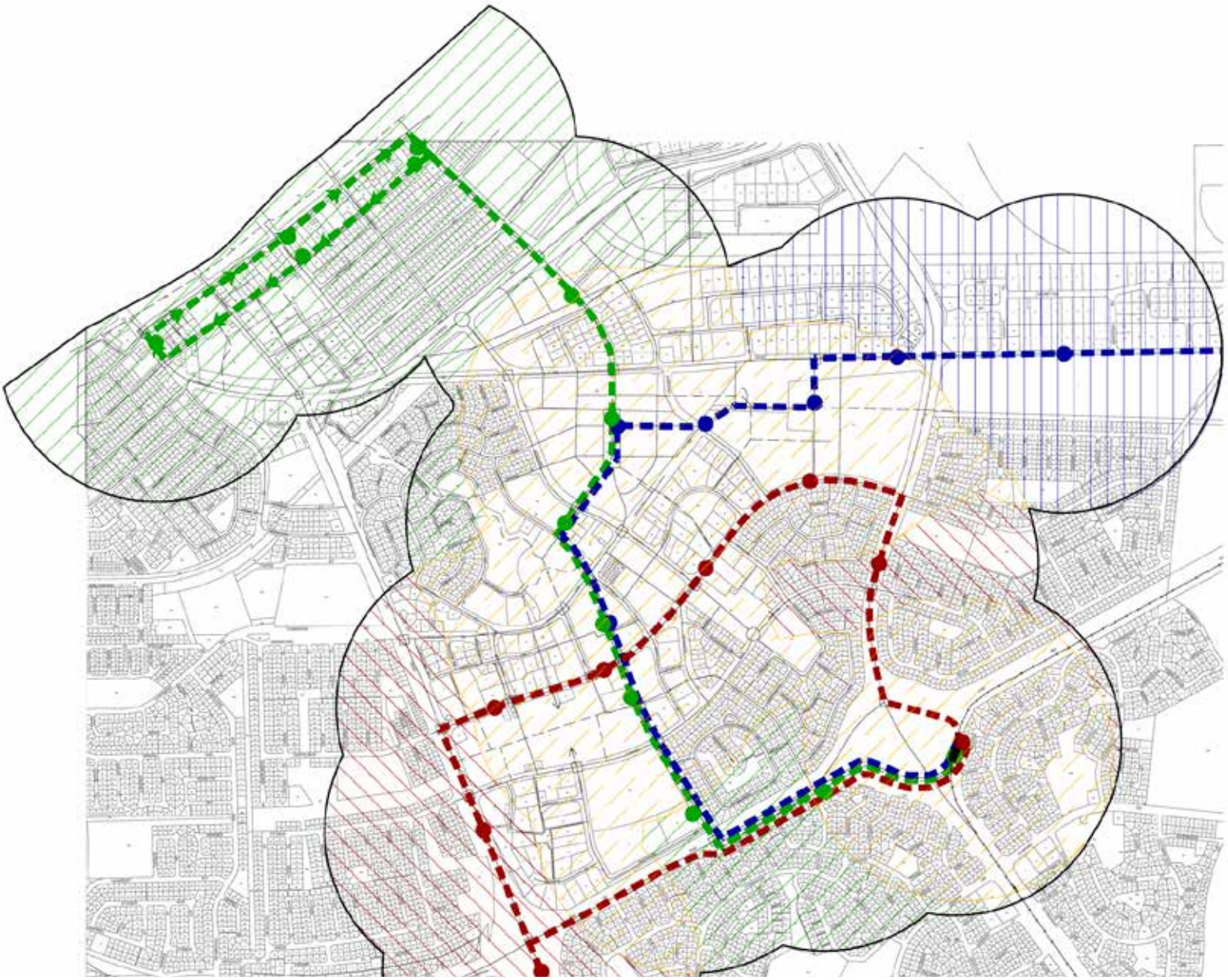


Figure 2.6 shows the walking catchment for the proposed combined major transit services for Rockingham. It can be seen that the Strategic Metropolitan Centre will be very well served by high frequency transit. This level of coverage by high frequency services means that Rockingham could be described as a 'Transit City' rather than a city with transit.

- Walking catchment for principal street based rail station to foreshore services
- Walking catchment for Rockingham to Fremantle principal transit service
- Walking catchment for combined bus services from the south
- Combined major transit walking catchment
- Proposed principal transit route: railway station, City Centre, education campus sector, foreshore service.
- Principal southern tender services to centre and railway station.
- Rockingham to Fremantle principal transit.

2.7 ENDORSED PLANNING GUIDELINES FOR THE CAMPUS SECTOR

Section 10.6 in Volume 1 of the Western Australian Planning Commission endorsed Centre Plan sets out broad Sector Planning Guidelines within which more detailed planning of the Campus Sector should be undertaken in accordance with the adopted Planning Framework for the Strategic Metropolitan Centre.

The following text is an extract from the Centre Plan:-

Desired Future Character

The adjoining campuses of TAFE (Challenger Institute of Technology), Murdoch University and Kolbe College are located between Ennis Avenue, Dixon Road and Simpson Avenue. The western end of the joint campuses falls within the walkable catchment of the transit route and would directly interface with the proposed Smart Village TOD on the southern side of Dixon Road. There will also be opportunities for TAFE (CIoT) and university tenancies to locate within the adjoining Smart Villages.

Preferred Uses

- Educational
- Civic
- Commercial
- Interconnecting, high quality parklands

Elements

- Maintain and enhance high quality development in each of the individual campus operations.
- Ensure that individual campuses are developed in a complementary fashion to share resources where feasible and to present a generally integrated townscape character.
- Generally intensify development from east to west along Dixon Road consistent with proximity to the more urban scaled CBD of the Strategic Metropolitan Centre. This should also be reflected in the urban design of the campuses with the more industrial architecture of the CIoT being set in landscaped grounds and the university campus integrated with the urban street grid of the adjoining Smart Village.
- Give particular attention to the landscape treatment of Ennis Avenue, Dixon Road and Simpson Avenue entry points where planting, lighting and signage should convey a clear sense of arrival at the edge of a major urban centre.
- Ensure that all new development is planned in accordance with adopted sustainability principles and designed in detail to meet any applicable sustainability Key Performance Indicators endorsed by the City of Rockingham.

3. Characteristics of the Campus Sector

3. CHARACTERISTICS OF THE CAMPUS SECTOR

3.1 LAND TENURE AND SITE RATIONALISATION

Figure 3.1 overlays cadastral boundaries and land tenure information on an aerial photo basemap.

The Campus Sector incorporates various Crown Reserves vested in the Minister for Education and Training and the City of Rockingham, remnant unmade road reserve and the site of the existing Kolbe College which is owned by the Catholic Church.

It was envisaged that following the completion of the Stage 1 Campus of Murdoch University, at the corner of Dixon Road and Dowling Street, further expansion to the west of Dowling Street would occur on Crown Reserves 33805 and 20226. Both of these Crown Reserves are currently vested in the City of Rockingham. It was also understood that development of Lot 101 to the east by the CIoT would include facilities which would be share between the CIoT and University. This was consistent with the government promoted concept for a joint campus that would share facilities and infrastructure where possible (Refer to Regional Campus Masterplan, Forbes and Fitzhardinge, 1995) (refer to Figure 3.2).

The 2009 Centre Plan defined a more realistic and more compact site area for ongoing development of the joint campus in association with changes to the local road network.

Proposed changes to the road network include:

- The extension of Crocker Street southwards from Dixon Road to intersect with a westward re-alignment of Dowling Street - this will define the western edge of the rationalised joint campus landholding.
- A north/south road link connecting Dixon Road and Simpson Avenue, with an alignment straddling the boundary between the CIoT and Kolbe College sites.
- An east-west local road link connecting the proposed north/south road link with the re-aligned Dowling Street.

Figure 3.1 Land Tenure

3.2 EXISTING LAND USE & DEVELOPMENT PATTERN

Figure 3.2 is a July 2012 aerial photo showing the existing land use and development pattern.

The terrain across the Sector is generally flat and has been cleared of original vegetation.

Land use on the developed portions of the Sector is closely tied to the education functions and development status of the Murdoch University, CIoT and Kolbe College campuses.

The CIoT was the first of the 3 campuses to be developed with a cluster of single storey classrooms, teaching workshops and allied accommodation arranged in a rectilinear manner around sheltered courtyards in the south eastern corner of the Sector.

The existing buildings follow a strict north-south orientation and are well setback from the nearest road reserves of Ennis Avenue and Simpson Avenue. The northern portion of the CIoT site through to Dixon Road was generally vacant (with the exception of two bitumen car parks) until work began in 2012 on a major expansion and redevelopment of the campus.

Through a staged development programme, the new campus buildings are being constructed westwards along the Dixon Road frontage of the site. A new north-south link road will provide the primary access point for pedestrians and vehicles.

Until recently, the Murdoch University and shared community library buildings, car parks and courtyards represented the only active land uses along the southern side of Dixon Road. Much of the land to the east through to the consolidating CIoT campus remains vacant.

In the south west corner of the Sector, Kolbe Catholic College has substantially completed its development. The majority of the site is occupied by academic buildings, sports fields and hard courts. The completed buildings are all single storey structures with pitched roofs.

View of Murdoch University Regional Campus from Dixon Road

Figure 3.2 Existing Land Use and Development Pattern

1 Kolbe Catholic College has recently undergone a major expansion with additional buildings, and upgraded landscape. Inadequate road network constrains access, fragments playing fields.

2 Challenger Institute of Technology (formerly TAFE) site undergoing staged , transformational development to accommodate 11 new buildings, associated car parks, reconfigured vehicle access and landscaping

3 Internal north/south road link connecting Dixon Road to Simpson Avenue has been cut to limit traffic through campus.

4 Individual campuses rely on perimeter road system for vehicle access, with only a single, unshaded pedestrian path connecting TAFE to Murdoch campus and shared library. Wide perimeter streets lack contemporary streetscape amenity

5 Murdoch University campus has not been significantly expanded since its original Stage 1 development.

Existing Dowling Street alignment constrains orderly integration of campus with adjoining Smart Village.

Isolated pedestrian path between Challenger Institute of Technology and Murdoch University campus

View of Kolbe Catholic College looking eastwards from Dowling Street

4. Catalysts for Change

4. Catalysts for Change

4.1 REVIEW OF CAMPUS SECTOR PLANNING ASSUMPTIONS

Much has changed since the Masterplan for the development of the Rockingham Regional Campus was completed in February 1995. At the time, planning and architectural design of the first stage of development of the Rockingham Campus of Murdoch University was the driver for the preparation of a plan for the integrated development of a joint campus with CIoT.

An ambitious plan was conceived for a Regional Campus covering almost 78 hectares of land stretching over a distance of more than 1.5km. By the year 2020, it was anticipated that the combined student population would have grown to over 6700 from the 1995 TAFE enrolment of 1910 students.

From the outset, the adopted planning strategy was to co-locate the campuses and to share resources and infrastructure. This strategy was broadened to include relevant community resources and infrastructure, including Crown (recreation) Reserves vested in the City of Rockingham and a new Library.

The relationship between Murdoch University and the CIoT was for the two organisations to remain as autonomous institutions providing mutual support through the joint use of facilities including:

- Library
- Teaching and learning areas
- Communication links
- Infrastructure services, such as roads and car parks
- Student amenities and services

Participation by local government and community-based organisations in the activities and use of campus facilities was an acknowledged objective of campus development. For its part, the City of Rockingham offered to relocate its Dixon Road district sporting complex away from the area to free up land for the ultimate, westward expansion of the university.

Campus operations were to be managed to promote a mix of uses which could include student accommodation technology facilities, commercial and recreational activities, as well as its core educational activities.

As the regional campus site would become a major component of the Rockingham Strategic Metropolitan Centre, the City of Rockingham formulated a set of planning objectives covering issues such as townscape integration, access and built form. Notably, the City was keen for the joint campus to embody a development configuration consistent with traditional university towns that integrate education campuses with the street grid, land uses and townscape fabric of central areas. Consistent with this objective, the City also requested that traffic management within the joint campus should be achieved by assigning movement priorities rather than completely segregating vehicles and pedestrians.

Notwithstanding City of Rockingham expectations, the 1995 Regional Campus Masterplan featured a wide segregation of pedestrian and vehicle traffic, with an east-west pedestrian greenway acting as the primary integrating element between individual campuses.

View westwards along original 'greenway' alignment. Pedestrian access between Challenger Institute of Technology and Kolbe College

The first stage of development of the university campus and a new Regional Library was planned to occur on Crown land 500 metres to the west of the existing CIoT, with the expectation that ongoing, infill development along the greenway would physically unify the campuses.

In the intervening years, there has been no further expansion of the university and no infill development between the campuses since Stage 1 development of the university was completed in 1996. Moreover, it is doubtful that the greenway element could ever have delivered a sustainable physical integration of the campuses.

In the course of preparing a new Centre Plan to guide the overall development of the Strategic Metropolitan Centre, the City of Rockingham and its project team recognised that the Regional Campus had not grown as anticipated and that there was little likelihood that the university would ever grow to the extent where land to the west of proposed southern extension of Crocker Street should continue to be assigned for possible future campus development. The preferred alignment for the next stage of development of the City Centre Transit System would run through the heart of this now vacated land (former sporting fields) and the City was keen to ensure that the Centre Plan facilitated transit supportive development along the route.

The Centre Plan makes provision for high density, mixed use development in a new Smart Village Sector to the west of Crocker Street. Additional road links were proposed in the vicinity of the Murdoch University, CIoT and Kolbe College campuses.

The Centre Plan defines the boundaries of a more realistically scaled Campus Sector to the east of Crocker Street. If the need arises, campus related development could be accommodated in the adjoining mixed use Smart Village.

Murdoch University looking west towards the adjoining Smart Village and the coast

4.2 IMPLEMENTATION OF THE CENTRE PLAN ROAD NETWORK

The endorsed 2009 Centre Plan set out an overall planning structure including important changes to the Strategic Metropolitan Centre road network to improve access and connectivity.

The Centre Plan recognised that access from the north and east to the City Centre is illegible and indirect. Figure 2.3 illustrates the Adopted Movement Network from the Centre Plan, with additional access and connector roads proposed over land south of Dixon Road, including:

- Connector streets through the proposed southern Smart Village to Chalgrove Avenue. These streets would be linked by a number of east-west streets which would provide a fine grained network of streets in the Smart Village and good connections to the University and CIoT to the east, and to Goddard Street and the residential area to the west of Goddard Street.
- A north-south link from Dixon Road to Simpson Avenue along the boundary between the CIoT site and Kolbe College. This link would provide a number of functions, including integrated access to CIoT, Murdoch University and, potentially Kolbe College, as well as improved access from Dixon Road into the eastern end of the Strategic Metropolitan Centre via Simpson Avenue.
- An east-west connector road linking the new north-south access road with Dowling Street. This link, in combination with the new north-south access road would enable the Fremantle to Rockingham transitway buses to more directly service the educational Campus Sector (refer to Figure 2.4, Proposed Principal Public Transport Routes).

The translation of road network proposals from the broad framework of the Centre Plan into practical development plans for the Sector has taken into consideration the need to consolidate the individual campuses and to prevent undesirable vehicle/pedestrian conflicts.

Notably, the Centre Plan proposed a 125 metre long north-south road link to the immediate east of the existing campus/community library. This link has been deleted from further consideration because it would unnecessarily fragment campus development and would negatively impact on pedestrian safety and amenity. The proposed north-south road links at Crocker Street and between the CIoT and Kolbe College are considered adequate to meet the connectivity objectives of the Centre Plan.

Figure 4.1 illustrates how the broad framework of road proposals from the Centre Plan has been refined at a local level to assist with the orderly consolidation of campus development.

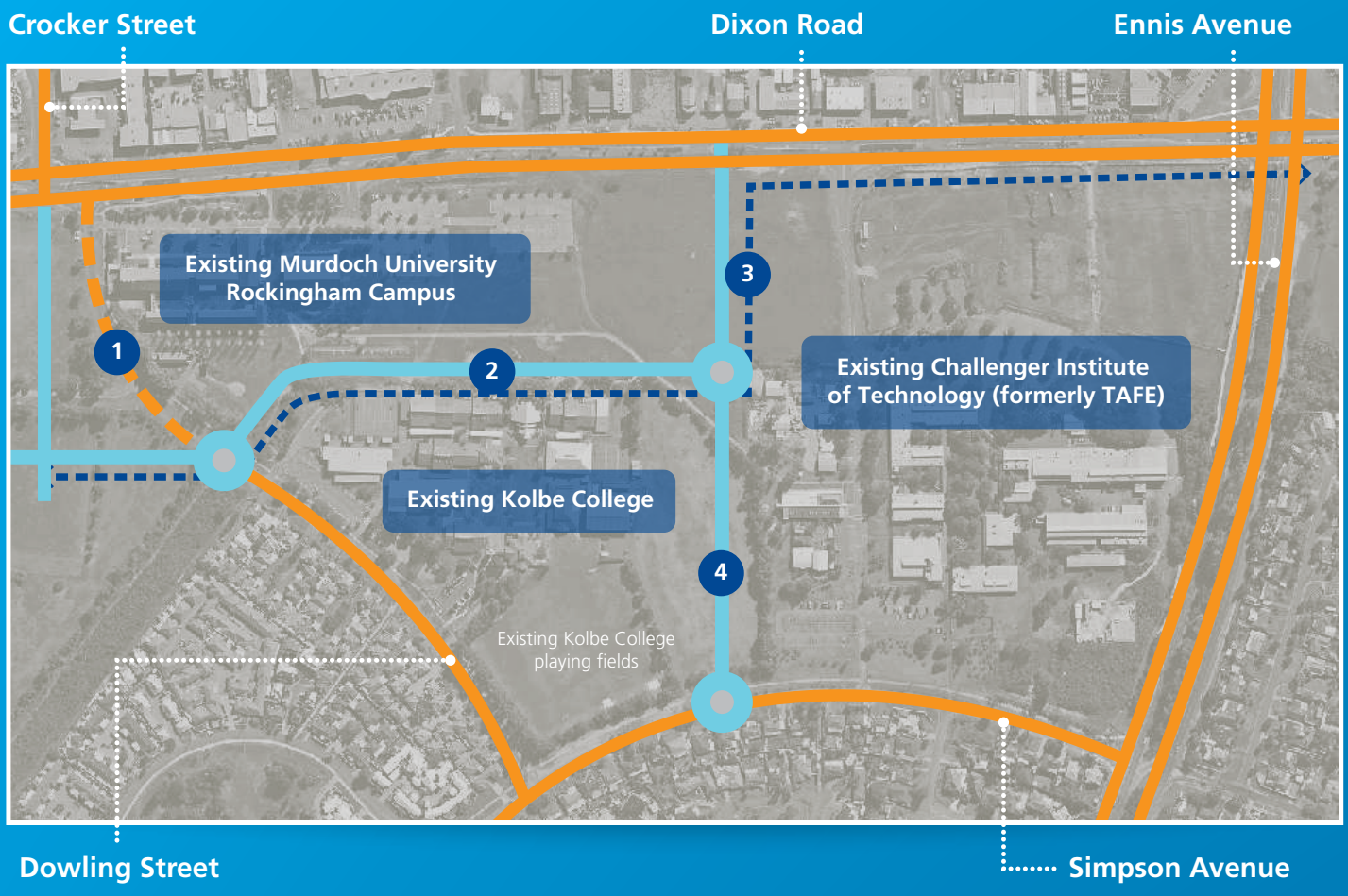
Crocker Street would be extended southwards to form the interface between the proposed Smart Village and consolidated Campus Sector.

The proposed east-west road link will define the interface between the Murdoch University, CIoT and Kolbe College campuses. Shaded pedestrian paths down both sides of the road pavement, indented kerbside car parking and raised pedestrian crossings will result in a low speed, high amenity movement corridor and townscape interface between the three campuses. This east-west activity spine will effectively replace the linking functions of the east-west greenway element from the 1995 Regional Campus Masterplan.

The additions to the road network will improve access and connectivity in the Centre, facilitate increased levels of passive surveillance over campus activities and pedestrian movements and will provide an integrating townscape foundation for the staged development of the campuses. These changes are consistent with the City's originally stated townscape objectives for the joint campus.

Figure 4.2 illustrates how access and movement within and between the individual campuses can be integrated with the construction of the new north-south and east-west link roads to achieve an appropriate balance between mixed and segregated pedestrian and vehicular traffic.

Figure 4.1 Modified Public Roads Network & Related Campus Boundaries



1 Close northern section of Dowling Street, with relevant section of road reserve incorporated into rationalised Murdoch University campus landholding

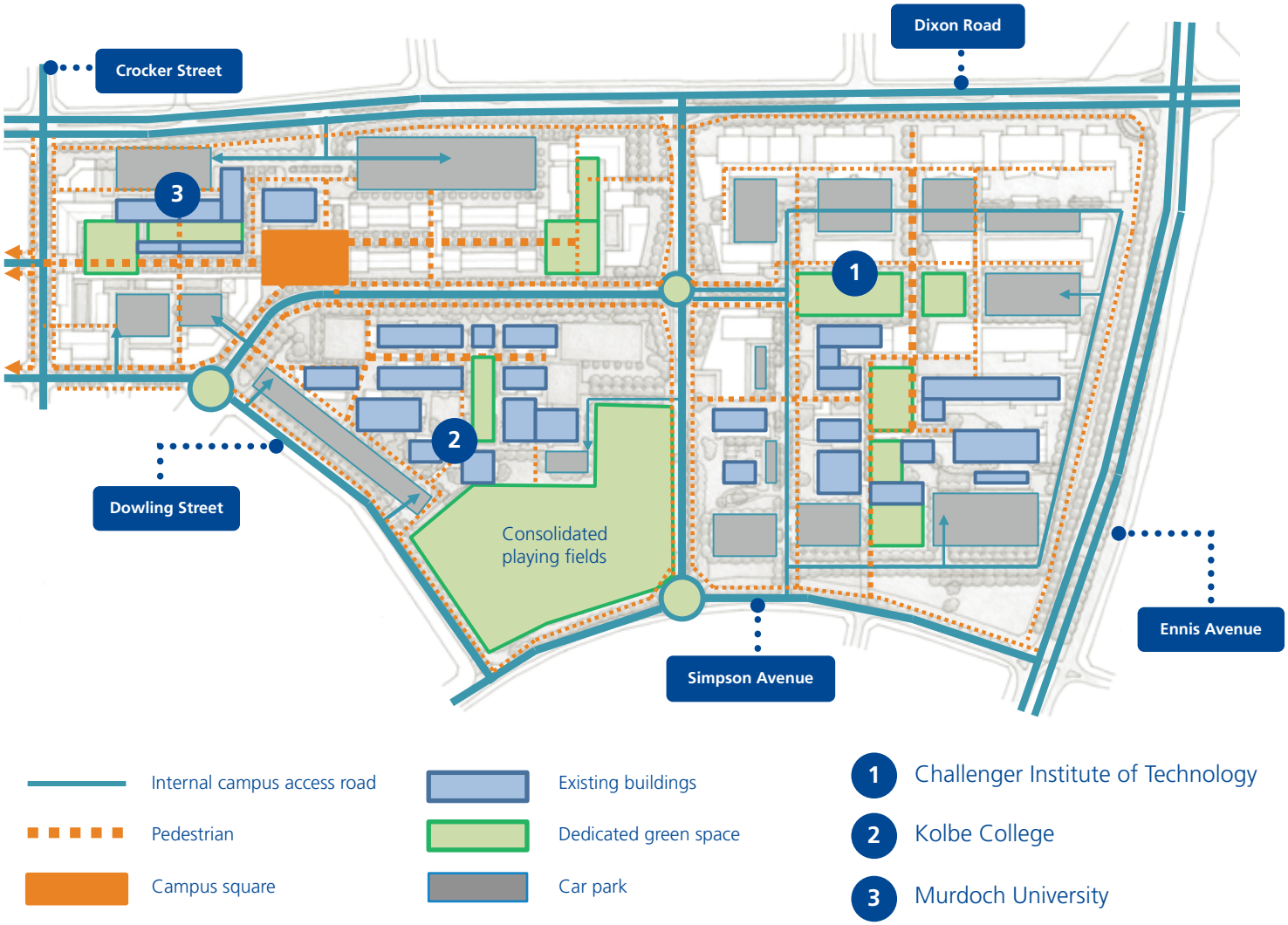
2 New east-west connector road as per Centre Plan road network

3 Route Fremantle – Rockingham transitway buses (the 920 service) along new link roads to more directly service all three campuses as per Centre Plan

4 New east-west connector road as per Centre Plan road network

New Links
Existing Roads
Bus Route

Figure 4.2 Integrated Pedestrian & Vehicle/Cycle Network



4.3 DEVELOPMENT INTENTIONS OF STAKEHOLDERS

Within the Sector, each of the three educational institutions has been the subject of varying levels of separate masterplanning and development over the last 10 years.

CIoT and Kolbe College have completed updated campus masterplans. The CIoT masterplan covers land to the east of the proposed new north-south road. While no masterplanning has been completed for CIoT land to the west of the proposed north-south road, the City understands that all of the remaining portion of the land holding will be required for future CIoT development.

Kolbe College has subsequently implemented a staged expansion and reconfiguration, of its campus although parts of the long term masterplan have yet to be completed.

The CIoT is proceeding with the staged implementation of its development plan. Significantly, the first two stages of the proceeding CIoT development have brought a contiguous, 280 metre long building edge to the southern boundary of Dixon Road. At the completion of Stage 5 of the development plan, the building edge to Dixon Road will extend for over 370 metres from the corner of Ennis Avenue through to a new north-south road link which will connect Dixon Road with Simpson Avenue.

The location and alignment of this proposed new north-south road link is generally consistent with the adopted road network in the City's overall Centre Plan.

By comparison, the Murdoch University campus has had little additional development since its initial establishment as a campus in 1995. The original expectation that further staged development would see the campus expand to the east to directly interface with the CIoT, and to the west through to Goddard Street and the edge of the City Centre has not materialised.

The Murdoch University Regional Campus is already accommodating other education providers and related research organisations such as the National Centre of Excellence in Desalination

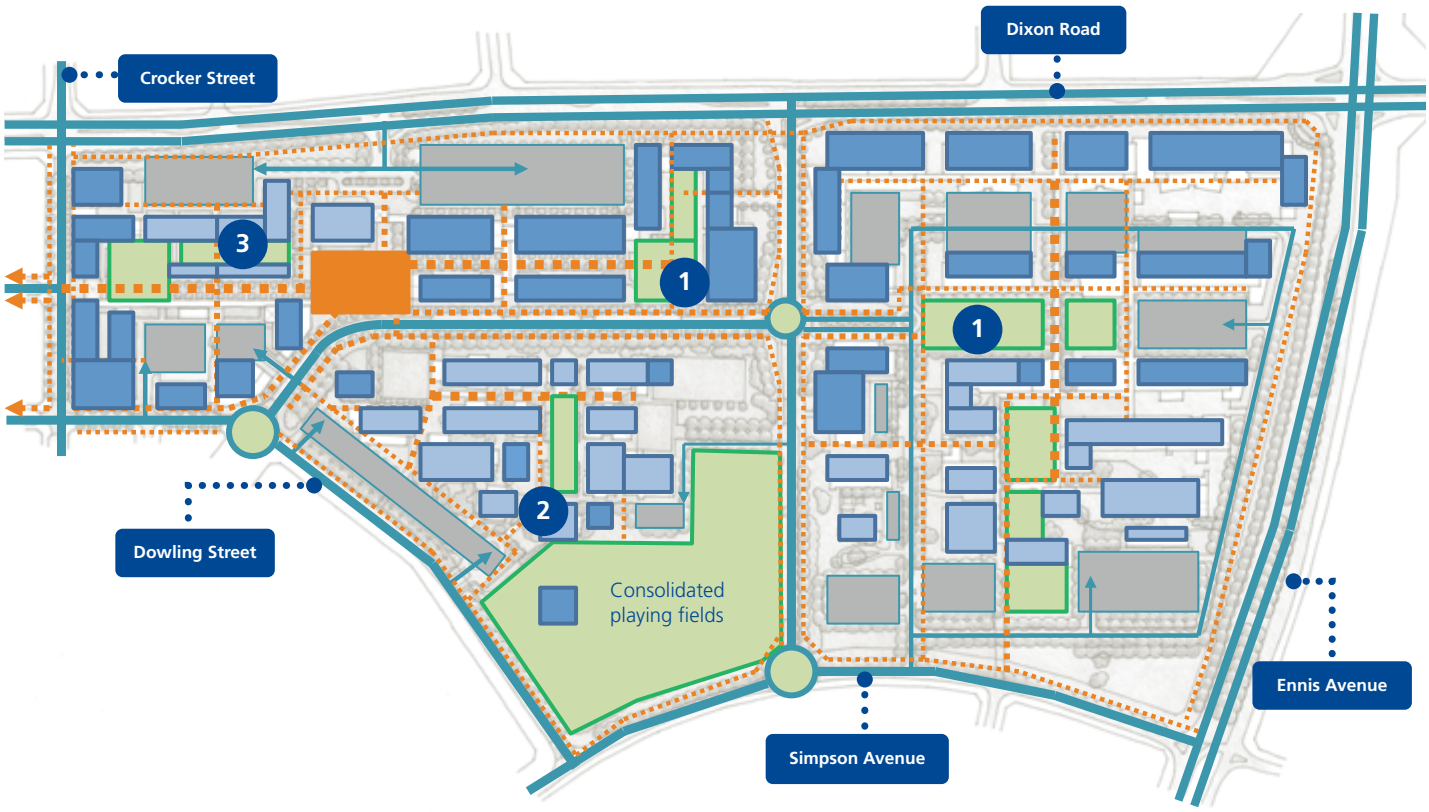
Further, some of the academic functions have been relocated to the main South Street Campus, with alternative tenancies such as the National Centre of Excellence in Desalination and Montessori School currently filling the voids.

As referred to in Section 1.3, Murdoch University was consulted during the formulation of the 2009 Centre Plan and contributed a concept plan showing a possible modest expansion of 2 and 3 storey buildings within a rationalised campus boundary that would allow for the development of a separate but connected urban village to the west of a re-aligned Dowling Street.

Figure 4.3 illustrates in a diagrammatic fashion a notional distribution of existing and possible future campus buildings around the refined access and movement network for the Sector.

Challenger Institute of Technology – Building Technologies Training Facility

Figure 4.3 Notional Building Infill



5. Campus Sector Indicative Development Plan

5. Campus Sector Indicative Development Plan

5.1 THE INDICATIVE DEVELOPMENT PLAN

The Campus Sector Indicative Development Plan (IDP) (refer to Figure 5.1), illustrates a more detailed interpretation of the planning framework described and illustrated in Section 2.

The relevant section of the road network illustrated in the overall Centre Plan (refer to Figures 2.2 and 2.3) has been refined to facilitate improved north/south and east/west access, connectivity and legibility. New access roads will provide a low speed traffic environment that caters for vehicles and pedestrians, with pedestrian priority built into the road design at key crossings. A new east west road link with shaded, high amenity pedestrian paths down both sides will replace the isolated 500 metre long pedestrian path that currently tenuously connects the CIoT with the shared community library and Murdoch University campuses.

The original 1995 Regional Campus Masterplan made provision for the development of a Campus Square on land to the south of the existing library. The updated Campus Sector IDP shows how the development of such a square could be integrated with the construction of the proposed east-west road to provide a key public space, pedestrian link and point of integration between the University, CIoT and Kolbe College campuses.

The IDP incorporates proposals for the staged redevelopment of the Rockingham Campus of the CIoT, including:

- A new north-south road link connecting Dixon Road with Simpson Avenue
- At least 13 new buildings, 5 of which will be sited adjacent to Dixon Road
- Refurbishment of existing campus buildings
- An internal loop road which services all buildings and car parks
- Expanded and reconfigured car parks
- A dual carriageway entrance leading from a roundabout junction on the proposed north/south road link

The construction of the new north-south road link will provide better vehicle access to Kolbe College - particularly to vehicle traffic from Ennis Avenue and Dixon Road. The new road will also allow for the relocation of an access driveway that currently services the eastern side of the school from Simpson Avenue. This relocation will remove a traffic hazard and allow for the consolidation of existing playing fields.

The known Kolbe College campus masterplan makes provision for further development including a new gymnasium to the south of the existing administration building and additional academic accommodation to the east of the chapel. New hard courts are proposed for land in the north eastern corner of the site and an existing driveway from Simpson Avenue would be removed to allow for the consolidation of playing fields.

Additional hard courts could be constructed in the north east corner of the reconfigured Kolbe College site, subject to the acquisition of that portion of land from the Department of Training.

Significantly, the Kolbe College masterplan assumed that the road reserve for the proposed north-south road link would be entirely accommodated within the adjoining CIoT property, rather than being equally distributed either side of the common boundary, as proposed in the CIoT masterplan and as illustrated in the Campus Sector IDP.

As a consequence, the Campus Sector IDP illustrates the City's preferred location and alignment of the proposed north-south road but does not show the full extent of future development envisaged in the Kolbe College masterplan. While the City supports the further development of Kolbe College as notionally illustrated in Figure 4.3, the DPP recognises that parts of the Kolbe College masterplan may need to be reviewed by the College and its architects to satisfactorily accommodate future buildings and facilities within the rationalised site boundaries that are illustrated in the IDP.

The IDP shows how the Murdoch University campus could be expanded to the west to interface with a re-aligned Dowling Street and with the activated street grid of the proposed mixed use Smart Village.

Pedestrian path connecting the CIoT, Community library and Murdoch University campuses

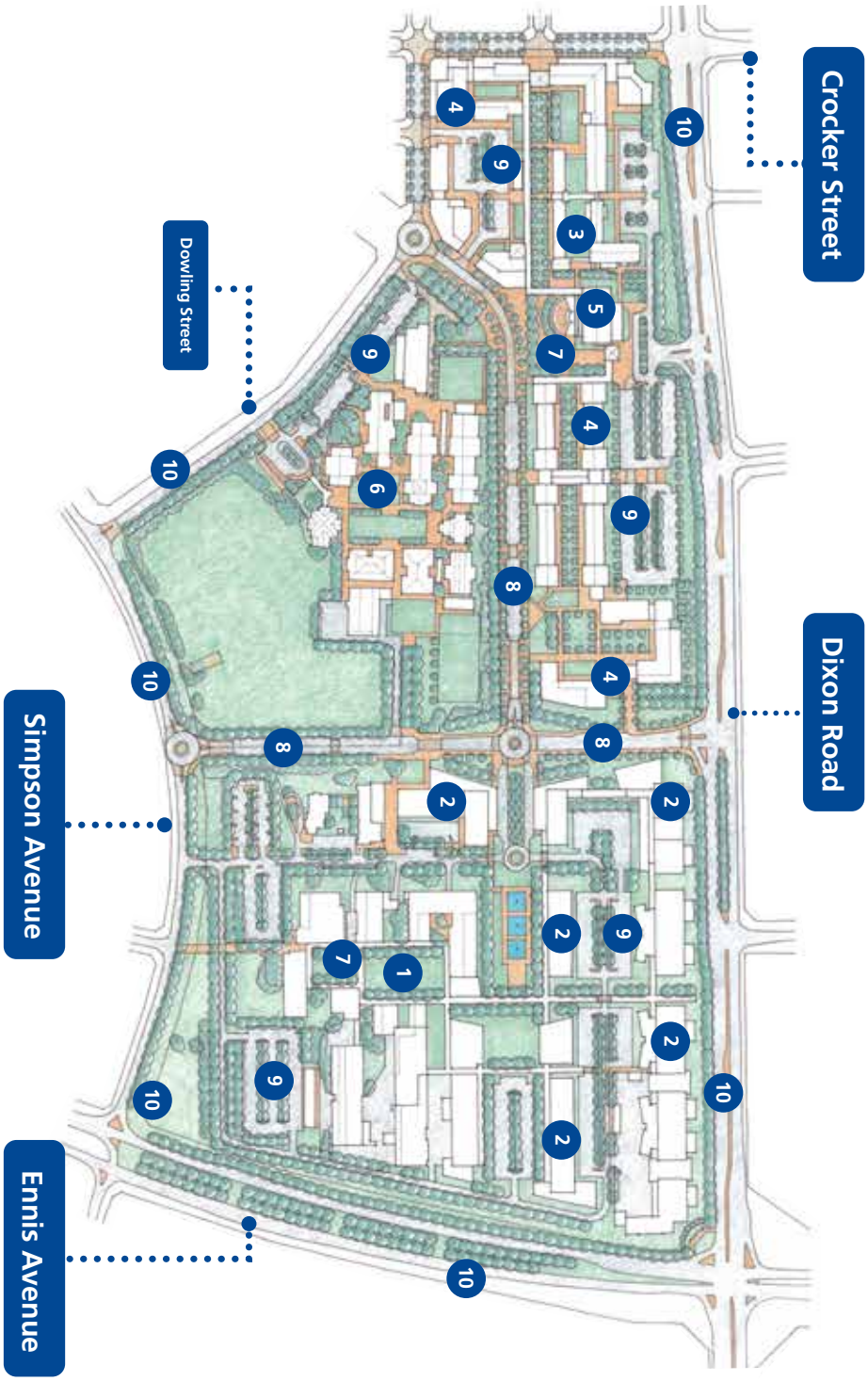
The CIoT could undertake further expansion to the west of the proposed new north-south road through to the Campus Square. This westward expansion is beyond the scope of the existing CIoT masterplan and the arrangement and composition of buildings shown on the IDP is notional at this stage. Notwithstanding the notional status of this part of the plan, the intent of the IDP is to show how this part of the Campus Sector can be arranged as a place with shared facilities that provide a consolidated interface between the CIoT and University, as originally intended by the State Government and its partnering stakeholders, including the City of Rockingham. Any share buildings would ideally be located in this area where they would complement the functions of the shared community library and Campus Square.

The IDP responds to the suburban character of existing streetscapes and landscaping within and around the Sector by proposing a distinctly urban landscape and tree planting regime. It also makes provision for kerbside street car parking wherever possible to service visitor parking needs close to adjoining land uses, to distribute traffic as widely as possible and to slow vehicle speeds.

The Plan conveys an urban townscape character that is consistent with landscape treatments applied elsewhere in the Strategic Metropolitan Centre, particularly in more recent developments in the City Centre and Waterfront Village Sectors.

Within the meaning of the Planning and Development Principles listed in Section 2.2, there is scope for further flexibility in the interpretation of the DPP requirements that could result in acceptable alternative development configurations to those illustrated in the IDP, particularly in relation to the scale and configuration of individual campus developments.

Figure 5.1 Campus Sector Indicative Development Plan



1. Challenger Institute of Technology – refurbished original campus buildings, spaces and landscape
2. Challenger Institute of Technology – staged campus expansion
3. Murdoch University – Rockingham Campus – completed Stage 1 development
4. Murdoch University – Possible future education/training campus or related mixed use development
5. Existing library serving joint campus/community
6. Kolbe Catholic College with rationalised eastern boundary
7. Campus square
8. Proposed low speed access road
9. Car park
10. Major streetscape enhancement

Figure 5.2 Interface of Campus Sector with Adjoining Smart Village South

Figure 5.3 Building Height

Figure 5.4 Frontage Types

5.2 RESIDENTIAL DEVELOPMENT

Residential development is not a "preferred use" within the Campus Sector.

The endorsed Centre Plan and subsequent Scheme Amendments have made provision for the development of high density mixed use development, with residential as a preferred use in the adjoining southern Smart Village. This land is well situated on the planned route of the central transit system and residential development in this Sector could service any future requirement for student accommodation.

5.3 BUILDING HEIGHT

The height of buildings is unlikely to be an issue in the development of the Sector since residential is not a preferred use and tertiary education buildings in non CBD locations seldom exceed 3-5 storeys in height.

To ensure that the scale of development is compatible with that of the adjoining Sectors, a maximum building height of 19.0 metres or 5 storeys shall apply to development in the Dixon and Ennis Precincts and a maximum building height of 12.5 metres or 3 storeys shall apply to development in the Dowling Precinct, subject to minimising any negative impacts of building overshadowing on adjoining buildings and pedestrian spaces as illustrated in Figure 5.3.

5.4 FRONTAGE TYPES

The Centre Plan has generally been formulated in accordance with consolidated 'Main Street' development principles that require buildings to frame, address and activate an interconnected, hierarchical street network.

It is recognised that the legacy of earlier masterplanning and development of the CIoT, Murdoch University and Kolbe College campuses means that there is little opportunity to apply street oriented development principles and related car parking arrangements in the Campus Sector other than at the western end of the University at the interface with the southern Smart Village.

Figure 5.4 illustrates an orderly arrangement of 'Frontage Types' based on the common principle that building frontages to all streets, major laneways and public spaces should be activated.

Two 'Frontage Types' from the Centre Plan are applicable to this Sector, with local modifications so that building frontages will be positioned and managed according to the desired level of level of street activation and streetscape character as follows:-

Type 3 - Moderate Level of Activation, 0-2 Metre Setback

A moderate level of frontage activation with campus related retail, commercial and offices at ground level and a 2 to 3 storey façade positioned behind a variable 0-2 metre, green landscaped setback. The ground level of buildings should address the street with a façade that is transparent over at least 30% of its area.

Type 4 – Moderate Level of Activation, 2-3.5 Metre 'green' Setback

A moderate level of frontage activation with academic and campus related floorspace behind a 2-3.5 metre, green landscaped setback. The ground level of buildings should address the street with a façade that is transparent over at least 30% of its area.

5.5 CAR PARKING

In addition to Section 2.6.5, the management of carparking distribution and its impact on townscape quality is an important issue addressed in this Policy Statement.

To facilitate contiguous streetscapes and to limit the visual impact of carparks, parking areas at the western end of the Sector shall be consolidated and located behind generally contiguous buildings or an appropriate colonnade or structural screening device (other than a blank wall). Such devices are intended to maintain street facade continuity and in general should not comprise more than 25% of the length of any individual street frontage.

Where individual Precinct development standards allow for some variation to this principle parking areas should be screened from the street by an appropriate structural screening device (other than a blank wall), hedge or planting of an appropriate urban character.

Provision for on-street parking embayments should be made wherever possible in streetscape redevelopment.

The number of crossovers and driveways serving a development will be limited by the City to optimise streetscape continuity.

6. Precinct Policies

6. Precinct Policies

An important objective of the planning and development process is to encourage development and diversity within the Campus Sector. Diversity and administrative flexibility will continue to be facilitated by dealing with property in the Sector under a single zone in the Scheme.

Ongoing planning and development will be controlled by reference to the IDP and the framework plans relating to 'Building Height' and 'Frontage Types' (referred to in Section 5) and the following Precinct Policies and any supplementary development guidelines and related Policy Statements, which Council may adopt from time to time.

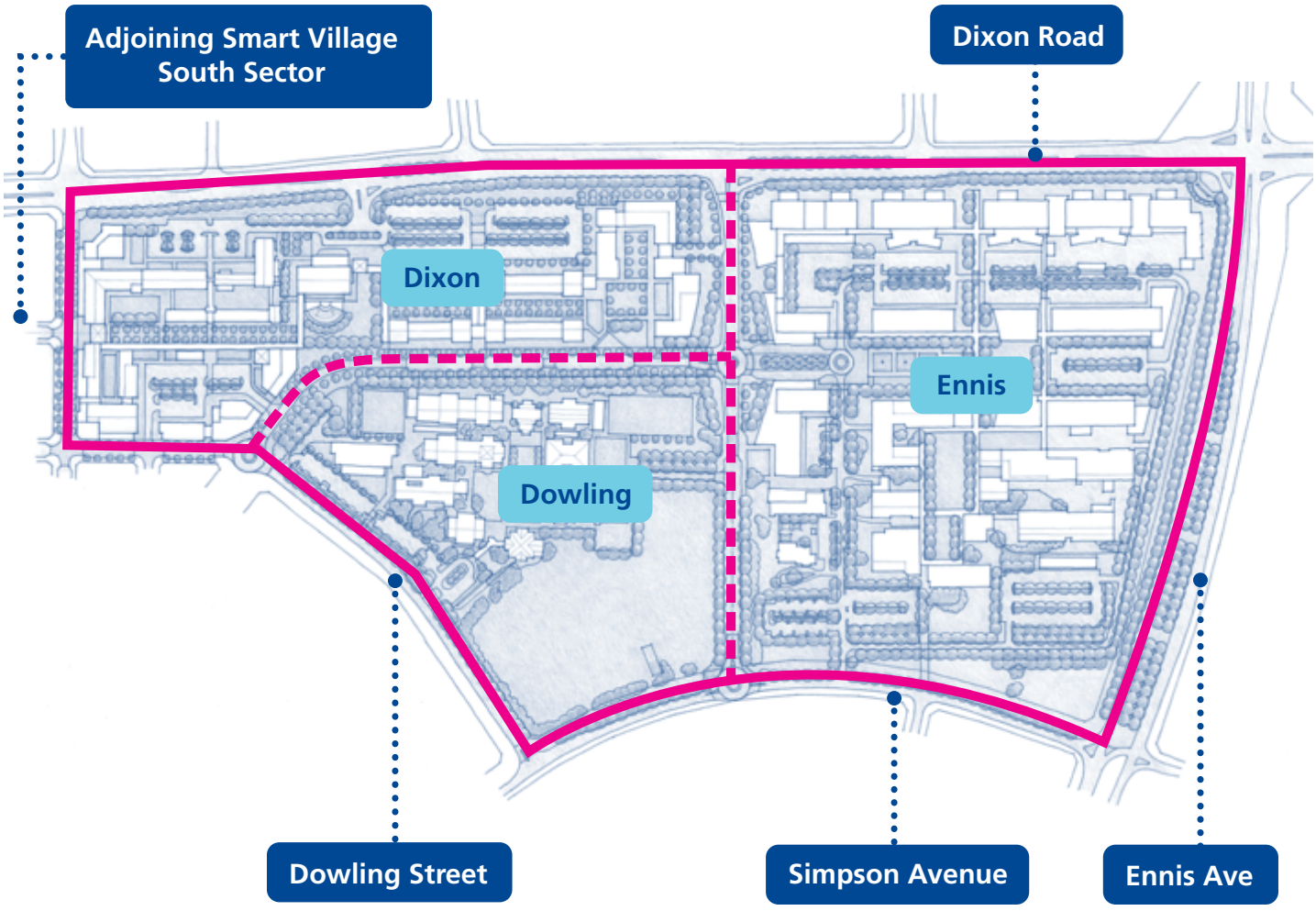
The Campus Sector has been divided into 3 Precincts, comprising:-

- Dixon
- Ennis
- Dowling

The Campus Precincts are based on areas where a particular geographic identity, activity mix and/or townscape character is envisaged. The Precinct boundaries are not intended to define the boundaries of individual campuses which may extend over one or more Precincts. The location and boundaries of the Precincts are illustrated in Figure 6.1.

The desired future character, preferred uses and required elements of development within each of these Precincts are further described in the following sections.

Figure 6.1 Precinct Boundaries



6.1 DIXON PRECINCT POLICY

6.1.1 Application

This Policy applies to the Dixon Precinct as defined in the Precinct Plan (refer to Figure 6.1). The Dixon Precinct, encompasses land bounded by the Dixon Road, Crocker Street (extended) and the proposed east-west and north-south link roads.

6.1.2 Desired Future Character

The completed first stage of University development established an orderly foundation for campus development with a rectilinear assembly of high quality academic buildings, interconnected spaces and a clear architectural vocabulary. The City expects the underlying site planning principles and standard of development to be replicated in any future expansion of the University and CIoT campuses.

While the City recognises that the Rockingham Campus of Murdoch University currently functions as a satellite to the main South Street Campus, it nevertheless expects that the campus will be progressively funded to expand its physical scale and level of sophistication to the point where it projects its own identity as one of the key assets of the Strategic Metropolitan Centre.

It is anticipated that the CIoT could undertake further expansion to the west of the proposed new north-south road through to the Campus Square. Notwithstanding the notional status of this part of the Precinct Concept Plan, this part of the Campus Sector should be arranged as a place with shared facilities that provides a consolidated interface between the CIoT and University, as originally intended by the State Government and partnering stakeholders, including the City of Rockingham. Any share buildings would ideally be located in this area where they would complement the functions of the shared community library and Campus Square.

The close proximity of the campus to the Kwinana industrial area and the Garden Island Naval Base may influence course offerings and academic and research functions to the extent where a component of new development is partly or wholly funded by outside organisations. The character and configuration of such development should be managed to maintain a high standard of well articulated architecture and an orderly arrangement of buildings along a legible network of pedestrian paths, spaces and street alignments.

A comprehensive landscape improvement programme should be implemented to raise the sense of urbanity in the Precinct and to create the setting within which walking becomes an attractive and stimulating option.

6.1.3 Preferred Uses

Within the Dixon Precinct the preferred uses are:-

- education
- education related commerce and research

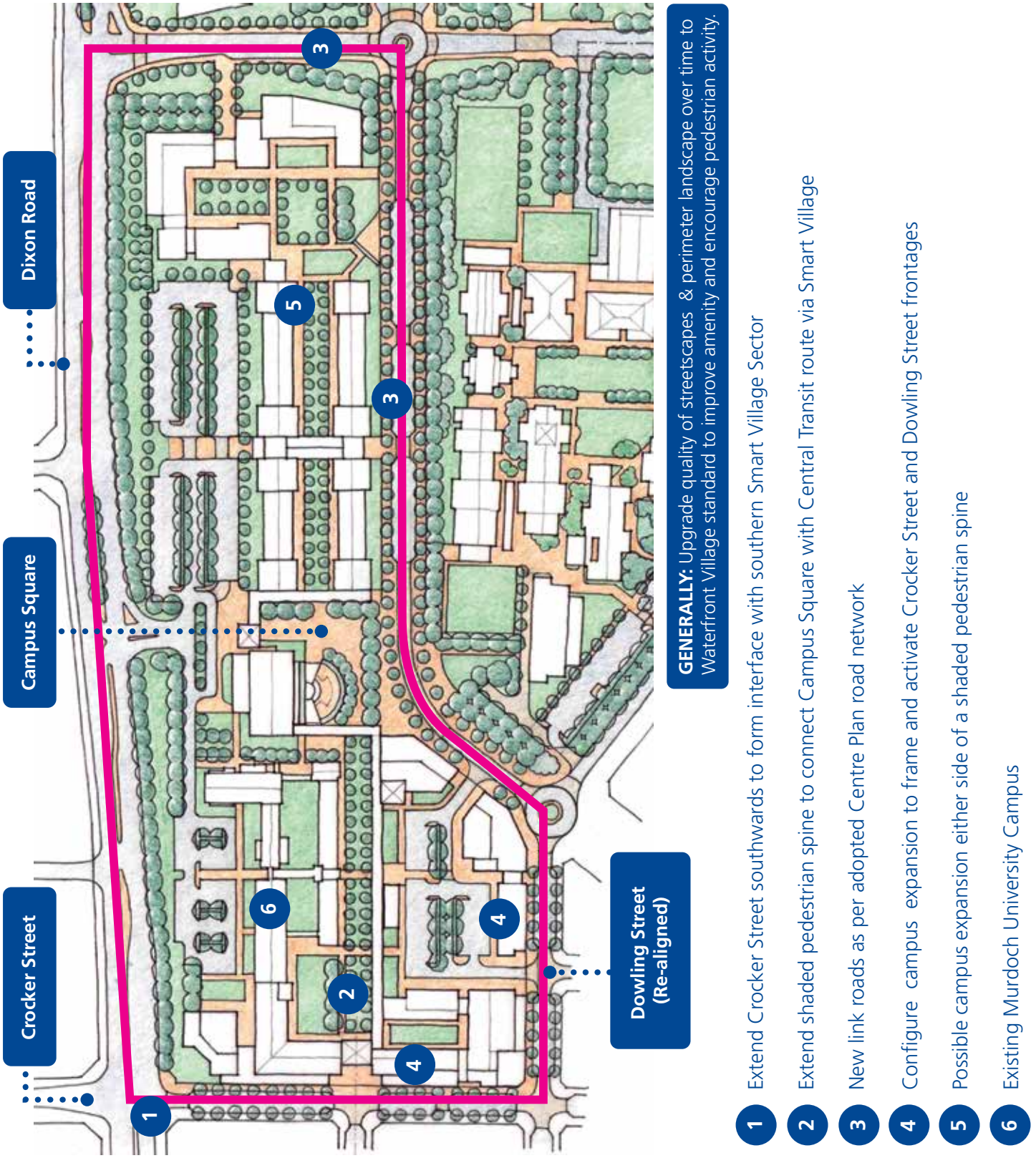
Other permissible uses listed under the Scheme are not preferred.

6.1.4 Required Elements – Dixon Precinct

The IDP (refer to Figure 5.1) and the Dixon Precinct Concept Plan (refer to Figure 6.2) show the general location and pattern of development envisaged by the City and preferred under this Policy. Within the scope and meaning of the planning and development principles listed in Section 2.2, there is scope for further flexibility in the interpretation of the Centre Plan in relation to the scale and configuration of particular developments. Notwithstanding the indicative intent of these plans, development will be required to incorporate and maintain the following elements, as applicable:-

(a) The Precinct is to be developed as a high quality education campus that is well connected to adjoining campuses, the adjoining southern Smart Village and other city centre land uses.
(b) Buildings are to be located, configured and activated to frame and address the relevant axes, pedestrian paths, major outdoor spaces and street alignments that are referred to and generally illustrated in this Policy.
(c) A formal Campus Square should be developed in conjunction with the construction of the proposed east-west link road to provide a spatial focus and public gathering place adjacent to the shared campus/community library.
(d) Wherever possible, colonnades or covered walkways should provide protection for pedestrian movement between separate buildings and major public spaces at ground and first floor levels.
(e) The siting and design of buildings should maintain a north-south orientation as far as possible to optimise winter sun penetration and aid energy efficiency.
(f) Consistent with Section 5.3, development in the Precinct will be subject to a 12.5 metre height limit along street frontages, with any additional height to a maximum of 5 storeys or 19.0m to be setback a minimum of 3.5 metres. The scale and massing of buildings are to be designed to minimise overshadowing of adjoining buildings, major spaces and courtyards.
(g) The facades of buildings should be well-articulated through the use of deep window reveals, projecting balconies, roof overhangs and sun shading devices.
(h) Car parking is to be provided in accordance with Table 3 of Town Planning Scheme No.2, refer to Appendix 1.
(i) Off-street car parking will generally be consolidated and located as generally indicated by the Precinct Concept Plan.
(j) The frontage of any building is to incorporate and maintain the required area of transparent facade with suitably glazed windows and doors, consistent with the applicable 'Frontage Types' set down in Section 5.4.
(k) Variety and high design standards will be encouraged in the fit-out, awning treatments, signage and private street furniture attached to individual tenancies that may occupy ground floorspace along the activated Crocker and Dowling Street frontages.

Figure 6.2 Dixon Precinct Concept Plan



6.2 ENNIS PRECINCT POLICY

6.2.1 Application

This Policy applies to the Ennis Precinct as defined in the Precinct Plan (refer to Figure 6.1). The Ennis Precinct, encompasses land bounded by Dixon Road, Ennis Avenue, Simpson Avenue and the proposed north-south link road.

6.2.2 Desired Future Character

The Precinct has undergone a staged expansion and redevelopment with new buildings occupying previously vacant land in the northern half of the site and plans for the refurbishment of the older parts of the CIoT campus.

An almost contiguous line of modern, single storey academic buildings and training workshops will change the face of the CIoT campus from its Dixon Road frontage.

The mix of technical, administrative, commercial and social development courses offered by the CIoT through its Rockingham campus requires a broad range of academic accommodation and facilities ranging from formal classrooms to workshop pavilions. While the level of sophistication of individual buildings will vary according to purpose, the scale, massing and material composition of development should be co-ordinated to present a coherent campus identity.

The nature of course offerings means that all buildings within the campus need to be highly accessible to both pedestrian and vehicular traffic. The CIoT masterplan allows for the development of a campus ring road inside which a network of segregated pedestrian paths and spaces will allow for convenient movement between buildings.

As far as possible the treatment of streetscapes and open spaces throughout the campus should contribute to the development of a credible urban townscape character within the wider Strategic Metropolitan Centre.

6.2.3 Preferred Uses

Within the Ennis Precinct the preferred uses are:

- education
- education related commerce and research

Other permissible uses listed under the Scheme are not preferred.

6.2.4 Required Elements – Ennis Precinct

The IDP (refer to Figure 5.1) and the Dowling Precinct Concept Plan (refer to Figure 6.4) show the general location and pattern of development envisaged by the City and preferred under this Policy. Within the scope and meaning of the planning and development principles listed in Section 2.2, there is scope for further flexibility in the interpretation of the Centre Plan in relation to the scale and configuration of particular developments. Notwithstanding the indicative intent of these plans, development will be required to incorporate and maintain the following elements, as applicable:-

(a) The Precinct is to be developed as a high quality education campus that is well connected to adjoining campuses and other city centre land uses.
(b) Buildings are to be located, configured and activated to frame and address the relevant axes, pedestrian paths, major outdoor spaces and street alignments that are referred to and generally illustrated in this Policy.
(c) Wherever possible, colonnades or covered walkways will provide protection for pedestrian movement between separate buildings and major public spaces at ground and first floor levels.
(d) The siting and design of buildings should maintain a north-south orientation as far as possible to optimise winter sun penetration and aid energy efficiency.
(e) Undertake such works as may be necessary to provide a safe and attractive pedestrian connection between Kolbe College and the proposed Campus Square on the northern side of the proposed east-west road link. Ideally, the integrated urban design of such a connection should be factored into the design of the road.
(f) Consistent with Section 5.3, development in the Precinct will be subject to a 3 storey or 12.5 metre maximum height limit. The scale and massing of buildings are to be designed to minimise overshadowing of adjoining buildings, major spaces and courtyards.
(g) The facades of buildings should be well-articulated through the use of deep window reveals, roof overhangs and sun shading devices.
(h) Car parking is to be provided in accordance with Table 3 of Town Planning Scheme No.2, refer to Appendix 1.
(i) Off-street car parking will generally be consolidated and located as generally indicated by the Precinct Concept Plan.
(j) The frontage of any building is to incorporate and maintain the required area of transparent facade with suitably glazed windows and doors, consistent with the applicable 'Frontage Types' set down in Section 5.4.

Figure 6.3 Ennis Precinct Concept Plan

6.3 DOWLING PRECINCT POLICY

6.3.1 Application

This Policy applies to the Dowling Precinct as defined in the Precinct Plan (refer to Figure 6.1). The Dowling Precinct, encompasses land bounded by Dowling Street, Simpson Avenue, the proposed east-west link road and the proposed north-south link road.

6.3.2 Desired Future Character

Development has been undertaken in accordance with the Kolbe College masterplan. All buildings are single storey and they follow a north-south solar orientation which allows for winter sun penetration to teaching areas and adjoining courtyards.

The known campus masterplan makes provision for further development including a new gymnasium to the south of the existing administration building and additional academic accommodation to the east of the chapel. New hard courts are proposed for land in the north eastern corner of the site and an existing driveway from Simpson Avenue would be removed to allow for the consolidation of playing fields.

To varying degrees, the implementation of these proposals would be reliant on the construction of the new north-south and east-west link roads that are proposed in the Centre Plan.

Significantly, the Kolbe College masterplan assumed that the road reserve for the proposed north-south road link would be entirely accommodated within the adjoining CIoT property, rather than being equally distributed either side of the common boundary, as proposed in the CIoT masterplan and as illustrated in the Campus Sector IDP.

The DPP recognises that the location and alignment of the north-south road as illustrated in the IDP is an essential pre-requisite to the orderly roll out of the proceeding CIoT campus redevelopment. While a 20 metre wide road reserve along the illustrated alignment would encroach on the Kolbe College property by a distance of 10 metres, the school could achieve a net benefit through the acquisition from the CIoT of more than 2.5 times that land area in the north east corner of a re-configured Kolbe College site.

As a consequence, the Campus Sector IDP and Dowling Precinct Concept Plan illustrate the City's preferred location and alignment of the proposed north-south road but do not show the full extent of future development envisaged in the Kolbe College masterplan.

While the City supports the further development of Kolbe College, the DPP recognises that parts of the Kolbe College masterplan may need to be reviewed by the College and its architects to satisfactorily accommodate future buildings and facilities within any rationalised site boundaries.

The implementation of the proposed north-south and east west link roads will improve access to Kolbe College and has the potential to enhance campus security by increasing the level of passive surveillance along the northern and eastern boundaries. In this respect, it is important that the new streets are constructed to a high level of streetscape amenity to encourage pedestrian movement along comfortable, well shaded footpaths.

While it is anticipated that any new building development with Kolbe College would be designed to harmonise with the architectural treatment of existing buildings, there is ample opportunity to accommodate additional academic floorspace through two storey construction if the need arises.

As far as possible the landscape treatment of open space within the Precinct and streetscapes around the perimeter of the Precinct should contribute to the development of a credible urban townscape character within the wider Strategic Metropolitan Centre.

6.3.3 Preferred Uses

Within the Dowling Precinct the preferred uses are:-

- education

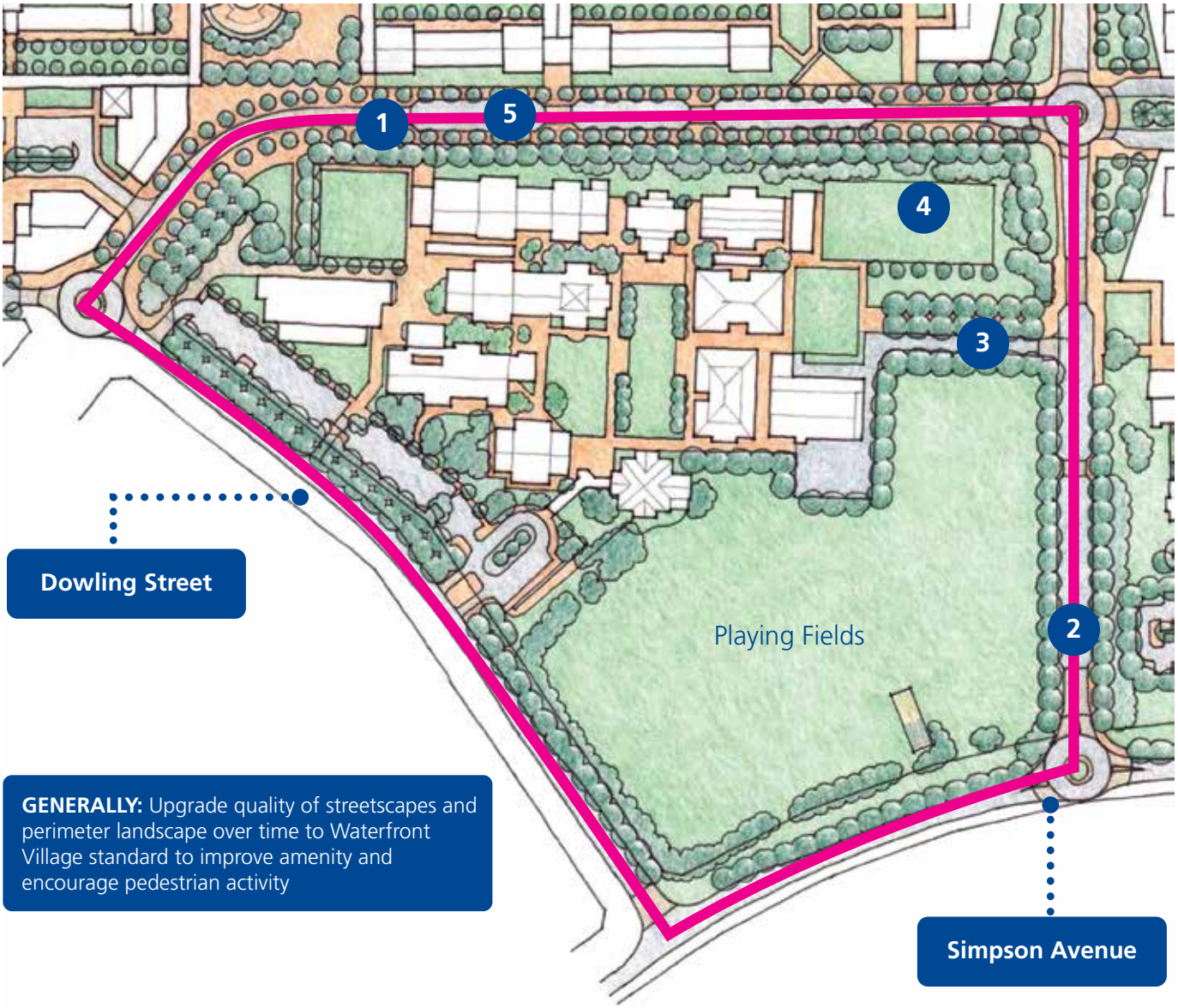
Other permissible uses listed under the Scheme are not preferred.

6.3.4 Required Elements – Dowling Precinct

The IDP (refer to Figure 5.1) and the Dowling Precinct Concept Plan (refer to Figure 6.4) show the general location and pattern of development envisaged by the City and preferred under this Policy. Within the scope and meaning of the planning and development principles listed in Section 2.2, there is scope for further flexibility in the interpretation of the Centre Plan in relation to the scale and configuration of particular developments. Notwithstanding the indicative intent of these plans, development will be required to incorporate and maintain the following elements, as applicable:-

(a) The Precinct is to be developed as a high quality education campus that is well connected to adjoining campuses and other city centre land uses.
(b) Buildings are to be located, configured and activated to frame and address the relevant axes, pedestrian paths, major outdoor spaces and street alignments that are referred to and generally illustrated in this Policy.
(c) Wherever possible, colonnades or covered walkways will provide protection for pedestrian movement between separate buildings and major public spaces at ground and first floor levels.
(d) The siting and design of buildings should maintain a north-south orientation as far as possible to optimise winter sun penetration and aid energy efficiency.
(e) Undertake such works as may be necessary to provide a safe and attractive pedestrian connection between Kolbe College and the proposed Campus Square on the northern side of the proposed east-west road link. Ideally, the integrated urban design of such a connection should be factored into the design of the road.
(f) Consistent with Section 5.3, development in the Precinct will be subject to a 3 storey or 12.5 metre maximum height limit. The scale and massing of buildings are to be designed to minimise overshadowing of adjoining buildings, major spaces and courtyards.
(g) The facades of buildings should be well-articulated through the use of deep window reveals, roof overhangs and sun shading devices.
(h) Car parking is to be provided in accordance with Table 3 of Town Planning Scheme No.2, refer to Appendix 1.
(i) Off-street car parking will generally be consolidated and located as generally indicated by the Precinct Concept Plan.
(j) The frontage of any building is to incorporate and maintain the required area of transparent facade with suitably glazed windows and doors, consistent with the applicable 'Frontage Types' set down in Section 5.4.

Figure 6.4 Dowling Precinct Concept Plan



1. Upgrade pedestrian pavements to facilitate safe and convenient links between Kolbe College Community Library and Campus Square
2. New north-south link road as per Centre Plan road network
3. Relocate access driveway to run off new north-south link road and allow for consolidation of playing fields
4. Add additional hardcourts on reconfigured Kolbe College site
5. Traffic-calmed east-west link road as per Centre Plan road network

7. Supplementary Policies

7.1 CENTRAL ARTS POLICY

7.1.1 Objective

The objective of the Central Arts Policy is to integrate the arts and culture into the built fabric and the day-to-day functioning of the Strategic Metropolitan Centre.

7.1.2 Aspects of the Policy

- The Central Arts Policy will foster ongoing development of an arts culture through the provision of facilities, the programming of arts and cultural activities and the incorporation of an arts component into the planning, development and operation of the Strategic Metropolitan Centre.
- A public art component is to be incorporated into major public building and townscape commissions.
- The City will facilitate the execution of public art beyond the familiar stand-alone sculpture or painting to encompass integral contributions to the form and aesthetics of public spaces, building facades, landscape and street furniture.
- Public art may act as significant landmarks at key entry points to the City or specific spaces and buildings or it may be employed to reinforce localised identity as has, for example, already occurred in the City Square, in the forecourt of the Justice complex and more recently at the gateway to the Waterfront Village.
- An ongoing programme of arts and cultural activities and community involvement will be pursued by Council to ensure that a wide cross section of interests and age groups is catered for in the development and functioning of the City Centre.
- Arts and community festivals will provide opportunities for periodic expression and the enlivenment of the public domain.

7.1.3 Funding of Public Art

A diverse range of funding options is to be pursued for the ongoing development of arts facilities, the running of arts programmes and the incorporation of public art within development.

One percent of the capital cost of public buildings and other appropriate public works is intended to be set aside for the integration of an arts component.

Council will work with other tiers of Government and the private sector to achieve similar funding for public art.

7.2 SECURITY POLICY

7.2.1 Objective

The objective of the Security Policy is to integrate a passive approach to crime prevention through appropriate planning and environmental design measures to minimise both the actual and perceived incidence of crime.

7.2.2 Passive Security Principles

In assessing planning and development proposals, the City will have regard for the incorporation of the following passive security principles:-

- Incorporate residential occupation into as much as possible to provide extended hours, low key surveillance of public space and buildings.
- Activate the ground or street level as much as possible.
- Avoid grade separated movement networks which remove pedestrian activity from the streets.
- Frame streets, pedestrian routes and public spaces with active building frontages to minimise the area of exposed, blank walls and the prevalence of pockets of unclaimed space.
- Give priority to ground floor building tenancies (usually retail) which generate people movement and incorporate glazed shopfronts etc with a minimum of blank wall surface.
- Encourage commercial and community occupation of public pedestrian pavements - whether it be in the form of outdoor restaurants, cafes, charity stalls, buskers or street theatre.
- Make public spaces, pedestrian pavements and parks and gardens attractive, comfortable and well lit.
- Orient residential development towards public streets and laneways such that the outlook oversees the public domain and a defensible pattern of built form and space is established.
- Select durable and easily cleaned materials and finishes where public contact is envisaged.

8. Delegation

9. Adoption and Operation

8. Delegation

The Council has the authority to delegate the determination of any application for planning approval. An applicant wishing to know whether the Council or one of the City's officers will determine an application should contact the City.

9. Adoption and Operation

Adoption

This Planning Policy was adopted by the Council at its ordinary Meeting held on the 25 November 2014.

Operation

The Minister for Planning granted Final Approval to the supporting Amendment No.140 to Town Planning Scheme No.2 on 2 September 2015. The Scheme Amendment introduces the 'Primary Centre Campus Zone' and provides the statutory framework to this Planning Policy. A Notice to this effect was published in the Government Gazette on the 15 September 2015. As a result of these actions, this Planning Policy came into operation.

Appendices

A1 CAR PARKING

Table A.1 Car Parking Requirements / Allowances

USE	MINIMUM PARKING REQUIREMENT (AND MAXIMUM PARKING ALLOWABLE - IN BRACKETS)
Residential	The provisions of the Residential Design Codes are taken to apply
Cinema, Theatre	1 bay per 8 (6) seats
Consulting Rooms	3 (4) bays per consultant
Fast Food Outlet	1 bay per 14 (11) m² NLA
Health Studio	1 bay per 20 (15) m² NLA available to the public, including swimming pools
Office	1 bay per 60 (40) m² NLA
Private Recreation, Restaurant, Reception Centre	1 bay for every 8 (6) persons the building is designed to accommodate
Shop	1 bay per 22 (17) m² NLA
Showroom, Warehouse	1 bay per 80 (60) m² NLA
Hotel, Motel, Tavern	1 bay per bedroom plus 1 bay for every 5 (4) m² of bar and public areas including lounges, beer gardens and restaurants
Child Care Premises	1 bay per employee and 1 bay per eight children
Public Assembly, Public Worship	1 bay per 8 (6) seats
Short Stay Accommodation	The provisions of the Residential Design Codes with respect to multiple dwellings are taken to apply

A2 INTERPRETATIONS

Active or Interactive Frontages

Refers to street frontages where there is an active visual and physical engagement between people in the street and those on the ground floors of buildings. This quality is assisted where the building facades include the main entrances, and the ground floor uses (such as shops, cafes, offices and residential dwellings) face and open towards the street. Refer to Section 4.4, for an explanation of the various levels of activation related to 'Frontage Types'.

Amenity

Means all those factors which combine to form the character of an area and includes the present and likely future amenity.

Articulation

An element of building design which means the breaking up of a façade into individual elements to provide a modulated effect aimed at enhancing individual building identity, variety and interest. This can be achieved through the use of such elements as window projections, balconies, awnings, minor recesses and/or projections of walls or parts of walls to provide visual interest, and to enhance the 'fine grained' scale of development.

Building Envelope

Means an area of land within a lot marked on a plan approved by the responsible authority, within which all buildings must be contained.

Built Form

The configuration of the aggregate of all buildings, structures, etc., which make up a town or city.

Bulk

The size or mass of a building, referring to structures which in their context appear relatively large.

Character

Character is essentially the combination of the public and private domains. Every property, public place or piece of infrastructure makes a contribution, whether large or small. It is the cumulative impact of all these contributions that establishes Precinct or neighbourhood character.

Centre Plan

Means the Rockingham Strategic Metropolitan Centre - Centre Plan, Volumes 1 and 2 as adopted by Council on the 22nd September 2009 and the Western Australian Planning Commission on the 10th November 2009.

City Centre

Means the major retail, commercial, civic and mixed use activity centre and the major social and employment hub of the Strategic Metropolitan Centre. In this instance, the existing extent of the City Centre Sector (Sector 1) is defined in Figure 1.2.

Façade

Means the exposed face(s) of a building towards roads or open space, or the frontal outward appearance of a building.

Fine Grain

Refers to horizontal strips of development broken into a vertical rhythm by individual shop fronts and windows. This is usually a reflection of the original subdivision pattern of narrow lot frontages. A similar visual effect can be created for new, wide frontage development if the building is broken up into narrow modules by the use of architectural detailing and different colours.

Height

Means the measurement taken from the natural ground level immediately in front of the centre of the face of the building to a level at the top of the ridge, parapet, or flat roof, whichever is the highest, but does not include any lift plant, water tower or similar utility or service, not exceeding 3 metres in height, or any architectural feature or decoration (other than a freestanding sign) not used for any form of accommodation, which may be approved by the Council.

Human Scale

Buildings of a size or comprising a range of architectural elements which are of a magnitude and proportion related to our bodily dimensions.

Laneway

Means a narrow or very narrow local 'street', usually paved without a verge, located along the rear and/or side property boundary. Might be used exclusively by pedestrians, or shared by both pedestrians and vehicles, depending upon the circumstances.

Legibility

Is where the design of a street system provides a sense of direction and connection, giving clear signals regarding the spatial layout and geography of an area.

Light Rail or Streetcar

A modern electric tram system which usually runs on-street, but may also be capable of being segregated from road traffic.

'Main Street'

Means mixed land use developments fronting a street in a manner whereby pedestrian access to the majority of individual businesses can be achieved directly from the street, and/or where customer car parks on private property do not separate the road reserve boundary from the front of a building.

Massing

The size and volume of a building.

Mixed Use Development

Good mixed use development involves the 'fine grain' mixing of compatible land uses in a balanced blend, integrated in close proximity to each other. Physically it includes both vertical and horizontal mixing of uses. No single use should dominate other uses, although residential use is often the major component. Good mixed use development has the potential to improve the efficiency and amenity of neighbourhoods, reduce travel demand, increase walkability, and make more efficient use of available space and buildings.

Northern Waterfront Sector

Means the area defined as Sector 9 in Figure 1.2 and is generally bounded by Rockingham Beach Road, Patterson Road, Wanliss Street and Victoria Street.

Precinct

Means a local area defined for the purposes of describing and managing the preservation and/or development of specific urban characteristics.

Public Realm or Public Domain

Means spaces that are physically accessible to the public, and those aspects of other spaces that are visible from physically accessible spaces. It incorporates features such as streets, parks, shops, community buildings and the street facades of other buildings.

Scale

The size of a building and its relationship with its surrounding buildings or landscape.

Sector

Means a distinct geographic area within a Centre that may reflect an established local identity, co-ordinated ownership, zoning and/or policy characteristics. A sector may be comprised of one or a number of precincts.

Smart Village Sector

Means the area defined as Sector 3 in Figure 1.2 and it includes the land formerly used as sporting grounds on Dixon Road.

Strategic Metropolitan Centre

Means the area as defined by the Centre Plan as the Rockingham Strategic Metropolitan Centre. The boundary is defined in Figure 1.2.

Street Alignment

Means the common boundary between the land comprising a street (i.e. the road reserve), and the land abutting it.

Street Setback

Means the horizontal distance between the street alignment and a building, measured at right angles to the street alignment. The 'street setback area' is the area between the street alignment and the street setback line.

Streetscape

(a) means the total visual impression gained from any one location within a street including the natural and man-made elements; and
(b) is made up of the appearance of, and the relationships between, buildings in terms of design, scale, materials, colours, finishes, signs, external furniture, paving materials for roads, footpaths and landscaping.

Surveillance

Means the presence of passers-by or the ability of people to be seen in public spaces from surrounding windows, decks, balconies or the like. 'Casual surveillance' means "eyes on the street" provided by local people going about their daily activities.

Sustainability

Is meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity.

Sustainable Development

Means development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Traffic Calming

Means the introduction of physical traffic management measures or techniques into a road or street aimed at reducing the impact of traffic on that road or street.

Transit Oriented Development (TOD)

Means a compact, mixed use community within the walkable catchment of a transit place, blending housing, shopping, employment and public uses in a pedestrian-friendly environment that makes it convenient and practicable for residents and employees to travel by public transport instead of by private car.

Urban Form

Means the broad shape and structure of an urban community and the distribution of its major features.

Walkability

Means the ease with which a person can walk in an area.

Walkable Catchment

Means the actual area served within a 600m (5 to 10 minute) walking distance along the street system from a central transit system stop or an 800m walking distance from the City Centre.

Waterfront Village Sector

Means the area defined as Sector 2 in Figure 1.2 and refers to the area of the old Rockingham Beach Town Centre which includes waterfront parks, beachfront cafes, restaurants, 'Main Street' shops, community facilities, apartments and village green.

where the coast comes to life