City of Melville

Local Commercial and Activity Centres Strategy

Report

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Contents

1 Executive Summary

1.1 Need for a Local Commercial and Activity Centres Strategy

The introduction of *Directions 2031 and Beyond* and *State Planning Strategy 4.2: Activity Centres for Perth and Peel* (SPP 4.2) has changed the focus of retail-centric planning under the former *Metropolitan Centres Policy* to a more holistic understanding of activity centres as places for a range of activities and types of transactions. Employment, residential density, transport networks, urban form quality and amenity, activity centre maturation, and the overall hierarchy in which the centres sit, now need to be considered alongside the economic viability of a centre in order to contribute to a metropolitan area planned for future sustainability. To respond to these policy requirements, and to the need to better plan for the future of the City of Melville community, the following Local Commercial and Activity Centres Strategy (LCACS) has been developed.

1.2 What is the Local Commercial and Activity Centres Strategy

The City of Melville LCACS and Activity Development Framework have the potential to form a robust, flexible decision-making framework to assist in fulfilling the various goals of activity centre development from the perspective of the State government, City of Melville, prospective developers and the local community. The strategy attempts to value the needs of all groups involved in activity development, with an overarching understanding that the benefits of successful, prosperous activity centres to the wider community depends on the ongoing commercial viability of the activities undertaken at these locations.

1.3 How to Use the Local Commercial and Activity Centres Strategy

The primary tool of the LCACS is an Activity Development Framework, designed to provide clear guidance to planning officers, prospective developers and the local community about the future expectations for activity centres across the City of Melville. The framework has also been designed to fit in with the existing City of Melville planning assessment processes. The Activity Development Framework, within the current City of Melville planning system, is shown in Figure 1.

The framework first sets out the strategic intent for activity centres, then follows through with clear goals and assessment criteria to be used at the statutory planning level. The framework is designed to give guidance for activity centre planning and assessment at all levels of planning for:

- Strategic planning officers - to plan for the future of individual activity centres, integrate activity centre planning into other strategic planning documents and actions, and assist in assessing structure plans;
- Statutory planning officers - integrate strategic planning for activity centres into the statutory planning system (e.g. Community Planning Scheme, planning policies), and assist in assessing structure plans and development applications;

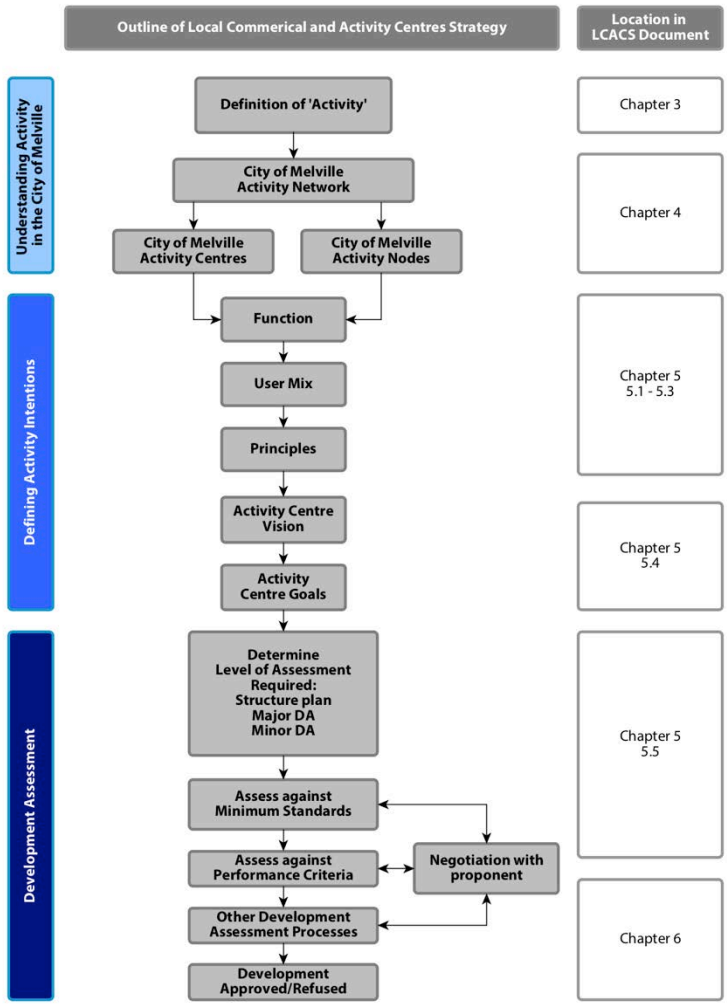
- Determining authorities (e.g. City of Melville Councillors, Development Assessment Panel) - provide a means of justifying decisions on development applications that addresses outcomes desired to be achieved as well as outcomes to be avoided;
- Land owners - assist in providing an understanding of the potential of their land;
- Prospective developers - provide an understanding of the expectations for different types of development and the evaluation of development proposals by City of Melville planning officers in the development application process; and
- Local community - provide an understanding of the intended direction for activity development across the City of Melville and a vision for individual activity centres, to assist in facilitating community input and participation in activity development.

The framework is also intended to be flexible to allow for changes in markets conditions, user mix needs, developer intentions and wider economic forces.

The Activity Development Framework is comprised of three main sections:

- Understanding activity in the City of Melville;
- Defining activity intentions; and
- Development assessment.

Figure 1. Activity development framework



Source: Pracsys 2013

1.3.1 Understanding Activity in the City of Melville

The first three chapters of the LCACS discuss activity in the context of current State government policy and within the City of Melville. Chapter 2 introduces the two State government documents driving the move from traditional Commercial Strategies focused on retail development to a more holistic understanding of activity. Chapter 3 of the LCACS sets out the definition of activity, the classification of formal activity centres under SPP 4.2 and outlines the concept of activity forming networks, serving a population catchment, within a geographic area. Chapter 4 of the LCACS outlines the types of activity located within the City of Melville in terms of activity centres, activity nodes and the overall network formed by these.

1.3.2 Defining Activity Intentions

The first four sections of Chapter 5 of the LCACS set out the parameters for assessing activity. A methodology for determining the activity centre function, user mix, principles and vision is presented.

The focus is on activity centres as they host the most significant proportions of activity, however the methodology is applicable to all types of activity.

1.3.3 Development Assessment

The final section of Chapter 5 sets out the Activity Development Framework and how it can be used to assist in assessing proposed developments. The framework consists of:

- Areas of assessment - six characteristics of activity centres important to support commercial transactions as well as social and environmental transactions in activity centres;
- Activity centre goals - outcomes to be encouraged and outcomes to be avoided;
- Minimum standards - the minimum expectations to be applied to development applications to achieve each goal; and
- Performance criteria - the ideal expectations that developments should be moving towards.

Chapter 6 sets out other measures required to implement the LCACS. These are actions to be taken by the City of Melville to further integrate the LCACS into the Community Planning Scheme and Local Planning Policies as needed to ensure the success of the LCACS.

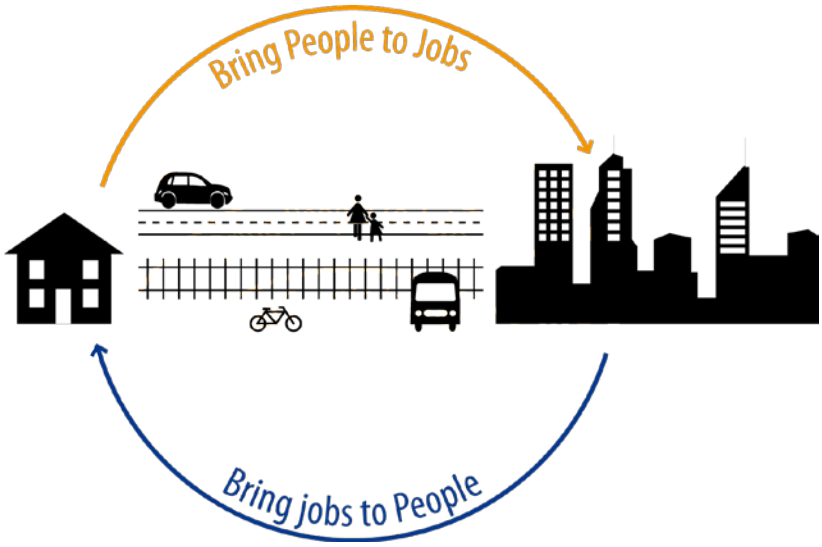
2 Introduction

2.1 Planning Policy Context

The introduction of *Directions 2031 and Beyond* and *State Planning Strategy 4.2: Activity Centres for Perth and Peel* (SPP 4.2) has changed the focus of retail-centric planning under the former *Metropolitan Centres Policy* to a more holistic understanding of activity centres as places for a range of activities and types of transactions. SPP 4.2 requires consideration of many aspects of activity centre planning which previously may not have been deemed critically important. Employment, residential density, transport networks, urban form quality and amenity, activity centre maturation, and the overall hierarchy in which the centres sit, now need to be considered alongside the economic viability of a centre in order to contribute to a metropolitan area planned for future sustainability.

Activity centre planning also needs to consider higher-level strategic planning requirements, including the *Directions 2031 and Beyond* employment self-sufficiency (ESS) and residential density targets. These deal with the problem of more closely aligning places of residence with places of work. This problem can be dealt with by bringing people to reside near existing jobs, or locating jobs near existing places of residence. Figure 2 illustrates the three ways residents and jobs can be better aligned. These are by bringing people to where the jobs are, bringing jobs to where the people are, or by providing efficient transport to link people and jobs.

Figure 2. Aligning residents and jobs

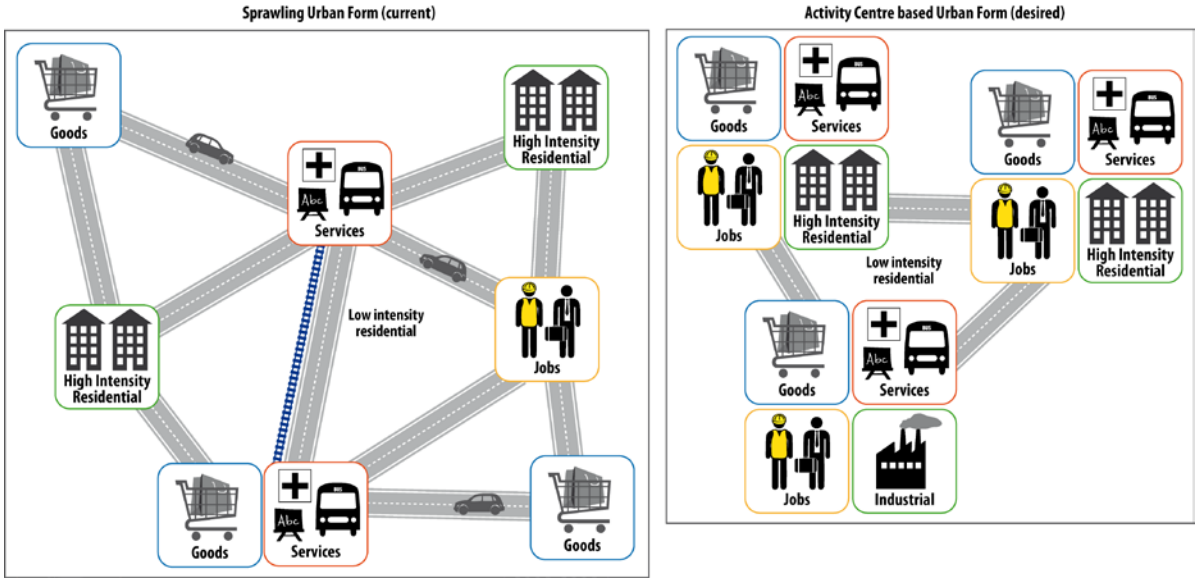


Source: Pracsys 2013

A Local Commercial and Activity Centres Strategy (LCACS) has an important role to play in setting out the expectations for future development within activity centres, which can be considered to be the fundamental building blocks of sustainable urban form. Activity centres in Perth and Peel are expected to be the main locations of future residential density and commercial development, as well as support a range of social, community and recreation activity. Figure 3 illustrates the difference between sprawling urban form with dispersed activity, residential development and expansive

transport networks, and activity centre-based urban form, where activity and residential development are grouped around high intensity nodes connected by efficient transport networks.

Figure 3. Alternative urban forms



Source: Pracsys 2013

There are a range of potential advantages associated with activity centre-based urban form. These include:

- Locating dwellings near daily or weekly destinations such as schools, employment, recreation, services and shops (or close to a low-cost, efficient transport network) effectively reduces the overall cost of housing. This effect has been quantified as the Housing and Transport Index. This may also provide more equitable access to goods and services for residents.
- Concentrating destinations at a node or along a corridor facilitates more efficient and less costly servicing via public transport, reducing the dependence of residents on private vehicles while maximising the catchment of potential users.
- Concentrating people in smaller areas of land reduces the need to continually expand the boundaries of the urban area, which will in turn reduce the need to use land valuable for habitat, agriculture or other natural resources use or conservation.
- Delivery of essential services, such as water, power, communications and waste removal services may be more efficient in an area of higher population density.
- Reduce the consumption of resources, including water, fuel, electricity and building materials.

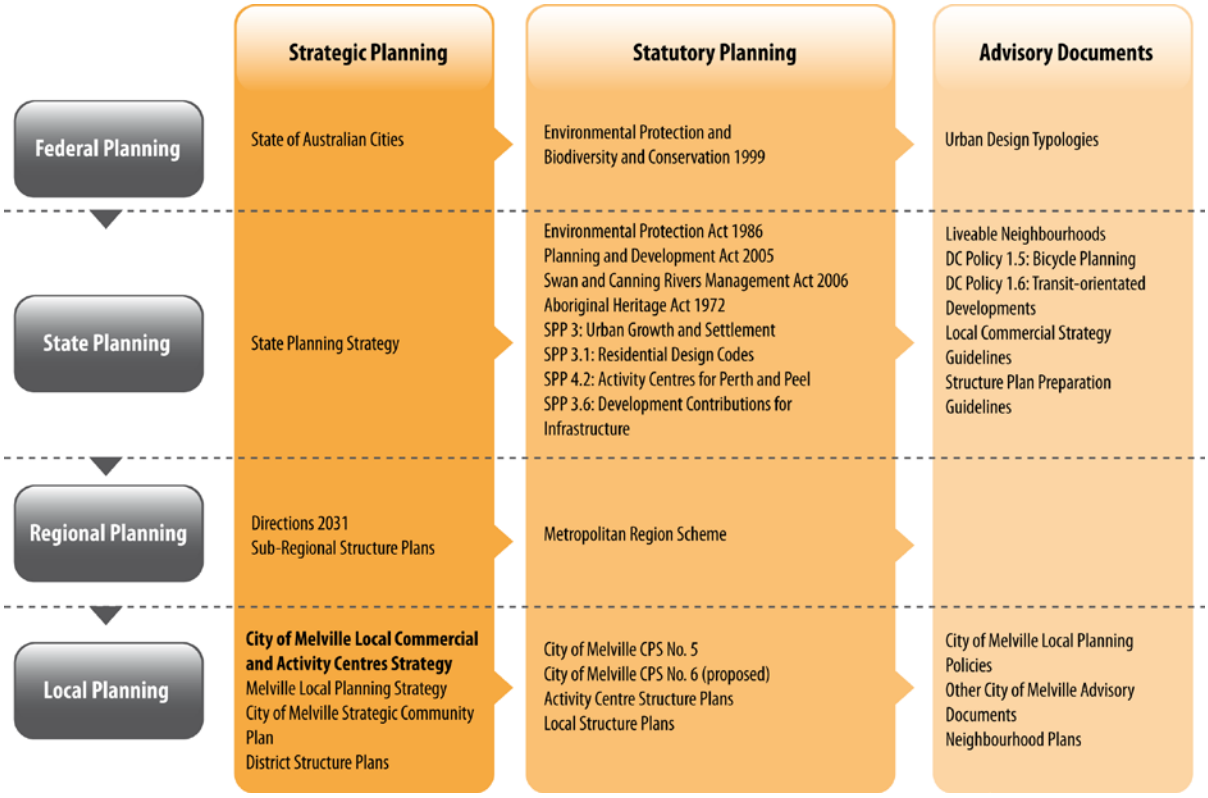
2.2 Purpose of the City of Melville LCACS

The City of Melville LCACS is a strategic document intended to guide planning for activity centres and commercial development within the City of Melville for planning officers, developers and the City of Melville community. Unlike previous commercial strategies, the LCACS is intended to provide a

framework for future development that allows activity to respond to market needs while encouraging desired positive outcomes for better functioning activity centres, and controlling the negative impacts of development.

Figure 4 shows the position of the LCACS within the hierarchy of planning controls.

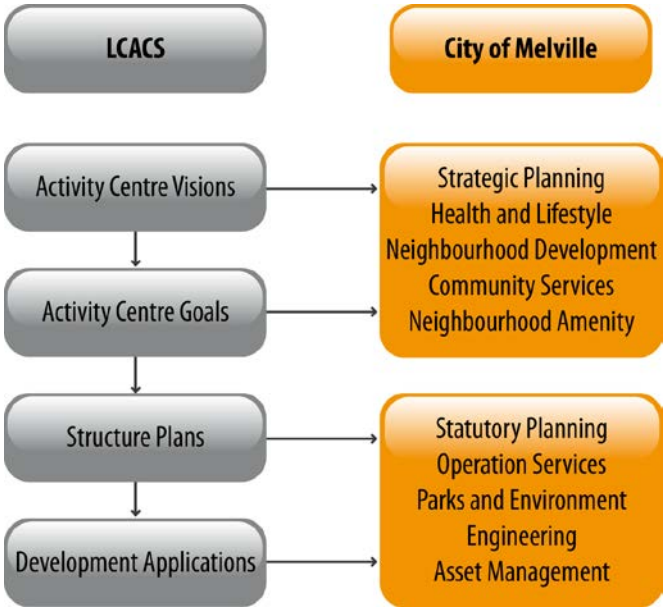
Figure 4. LCACS position in hierarchy of planning controls



Source: Pracsys 2013

A set of robust minimum standards and performance criteria have been developed to ensure developers, planning officers and residents understand the future expectations for the activity centres network and for individual centres. These will also provide the means for preparation and assessment of structure plans and development applications. In addition, the LCACS has the potential to influence a range of other planning instruments and administration activities, including providing support for prioritising City of Melville investment and decision-making (see Figure 5).

Figure 5. LCACS influence



Source: Pracsys 2013

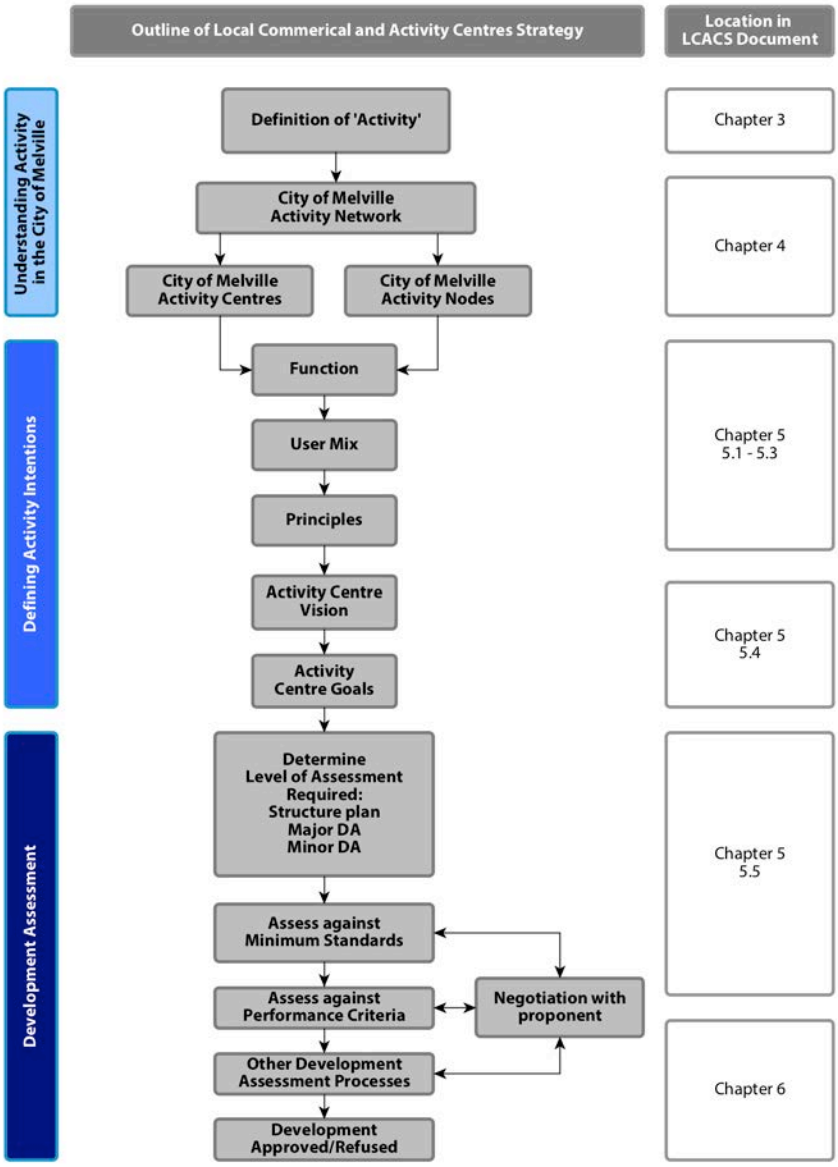
2.3 Local Commercial and Activity Centres Strategy Outline

The City of Melville LCACS has been developed through the following process:

- Understanding the City of Melville local context and factors driving change in commercial and activity development;
- Assessing the current performance of City of Melville activity centres using a series of economic sustainability and urban form metrics;
- Assessing the extent and types of activity occurring outside activity centres, but within the City of Melville;
- Undertaking an analysis of City of Melville commercial needs for the next ten years, in terms of retail, office and entertainment floorspace demand;
- Developing a challenges, opportunities and constraints analysis;
- Workshops with City of Melville planning, technical services and community development officers to understand the positive outcomes desired for activity centres and the negative aspects to be controlled for;
- Undertaking engagement with major activity centre stakeholders to understand future needs; and
- Formulation of the Activity Development Framework, including decision-making criteria, and outlining other processes to implement the LCACS.

The City of Melville activity development framework has been developed using the following logic flow:

Figure 6. Activity development framework



Source: Pracsys 2013

2.4 Using the Local Commercial and Activity Centres Strategy

This framework should be used by:

- Strategic planning officers - to plan for the future of individual activity centres, integrate activity centre planning into other strategic planning documents and actions, and assist in assessing structure plans;
- Statutory planning officers - integrate strategic planning for activity centres into the statutory planning system (e.g. Community Planning Scheme, planning policies), and assist in assessing structure plans and development applications;

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The framework first sets out the strategic intent for activity centres, then follows through with clear goals and assessment criteria to be used at the statutory planning level. The framework is designed to give guidance for activity centre planning and assessment at all levels of planning. The framework is also intended to be flexible enough to allow to responses changes in markets conditions, user mix needs, developer intentions and wider economic forces. The framework has the following components:

- **Activity centre functions** – these set out at a high level whether the primary function of the activity centre is population-driven or strategic, and reference the scale of the catchment for population driven functions. Current functions for all City of Melville activity centres have been assessed. Where aspirations for future functions are known these have also been noted.
- **Activity centre user mix** - the split of residents, visitors, workers and enterprises is integral to the function of an activity centre. User needs for the activity centre catchment are considered in the vision for an activity centre and in the development assessment process.
- **Activity centre vision** – detailed visions for activity centres should be set as part of a structure planning, master planning or neighbourhood planning exercise. Where structure plans for high level activity centres exist, the activity centre visions have been noted.
- **Areas of assessment** – six areas of assessment have been established for all activity centres in the City of Melville. These have been used to categorise the outcomes to be encouraged and outcomes to be avoided into the framework. They are amenity, diversity, activation, access, resource use and economic performance.
- **Activity centre goals** – specific goals within each area of assessment have been established to guide statutory planning. It is expected in the future additional goals will be added or existing goals will change as activity centres and drivers for development change.
- **Minimum standards** – these are the minimum standard expected of development for activity centres to move from their current state to the desired future state identified in the vision for the activity centre. It is generally expected that all developments will comply with the minimum standards.

- **Performance criteria** – these are the ideal standard desired of development in activity centres as they move from their current state to the desired future state identified in the vision for the activity centre. It is generally expected that most developments will be able to achieve some of the performance criteria.

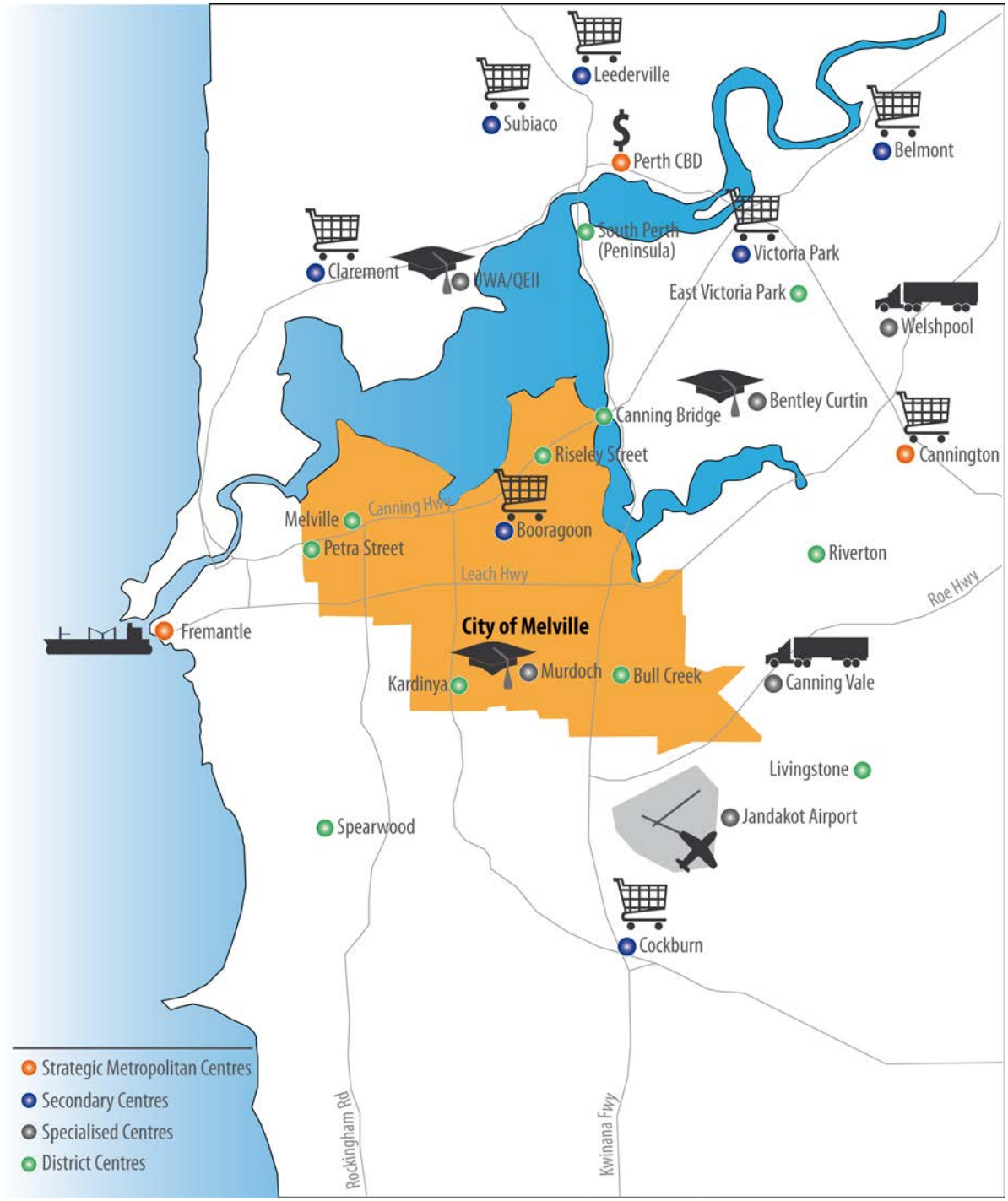
2.5 City of Melville Activity Centres Context

The City of Melville hosts a range of retail, commercial and other types of activity within a network of activity centres and activity nodes. The activity located within the City of Melville should not be considered as isolated pockets of activity, but as components of a wider network extending throughout the City of Melville and beyond, hosting a range of both complementary and competing functions. The major City of Melville activity centres and their primary functions are shown in Figure 7, along with major activity centres in the surrounding areas.

Of considerable importance to the City of Melville activity centres network are Murdoch Specialised Centre, Booragoon Secondary Centre and Myaree Mixed Business Precinct. Murdoch Specialised Centre hosts education and health activity of strategic importance to the Perth Metropolitan Region, currently including Murdoch University, Fiona Stanley Hospital and St John of God Hospital. Booragoon Secondary Centre is comprised primarily of Garden City Shopping Centre, a primarily comparison retail-based shopping destination with a catchment extending over a significant proportion of the Perth Metropolitan Region. Myaree Mixed Business Precinct is a former light industrial area, which has evolved into a precinct hosting a range of bulky goods retail, convenience retail, large format retail and light industrial land uses. The amount of retail floorspace within Myaree Mixed Business Precinct is currently over 60,000 m^2 and like Booragoon Secondary Centre, has a catchment extending far into the Perth Metropolitan Region. These three activity centres have significant interaction with the population catchment beyond the City of Melville, and links with other large activity centres across Perth. Canning Bridge District Centre, which is currently being structured planned, is expected to take on more strategic functions in the future and increase in importance as an activity centre within the City of Melville network.

The majority of other activity centres within the City of Melville are primarily convenience retail based, with some office land uses and other population-driven land uses. A prominent feature of the City of Melville activity centres network is a range of large activity centres that provide unique functions, rather than just competing functions with a limited catchment.

Figure 7. City of Melville activity centres network



Source: Pracsys 2012

3 Defining Activity

This section defines activity in the context of the City of Melville LCACS and provides an overview of the following aspects of activity development:

- Importance of activity within urban areas;
- Types of transactions that take place within activity centres;
- Locations of activity within urban areas, and the classification of these locations; and
- Networks that are formed by activity across an urban area.

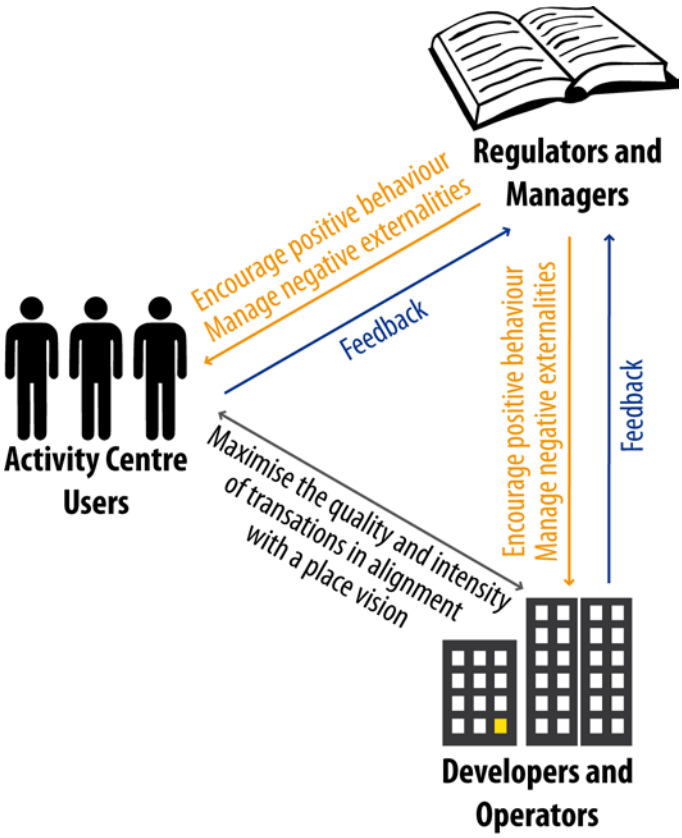
3.1 Importance of Activity

Much of land development, urban design, land-use planning and indeed 'place-making' is focused on developing unique and powerful place experiences, often in new or run-down locations. This has led to any number of interventions and initiatives that range in scale from 'macro' (e.g. built form guidelines, building setbacks, traffic management plans, community governance structures) to 'micro' (e.g. public art pieces, targeted public infrastructure, management of strategic sites). Some of these interventions can lead to investment of significant capital without a strong understanding of a site's users and their transactions within a place.

Activity centre users are just one of three primary activity centre stakeholder groups. Typically activity centre stakeholders fall into three different categories (see Figure 8):

- Activity centre users - i.e. the people who visit shops, cafes, etc., and generate the activity;
- Enterprise developers/operators - i.e. the owners or operators of shops, cafes, etc., who provide the destinations for users to visit; and
- Regulators/managers - i.e. those responsible for regulating the types of activity undertaken, such as the local government.

Figure 8. Activity centre stakeholders



Source: Pracsys 2013

3.2 Activity Transactions

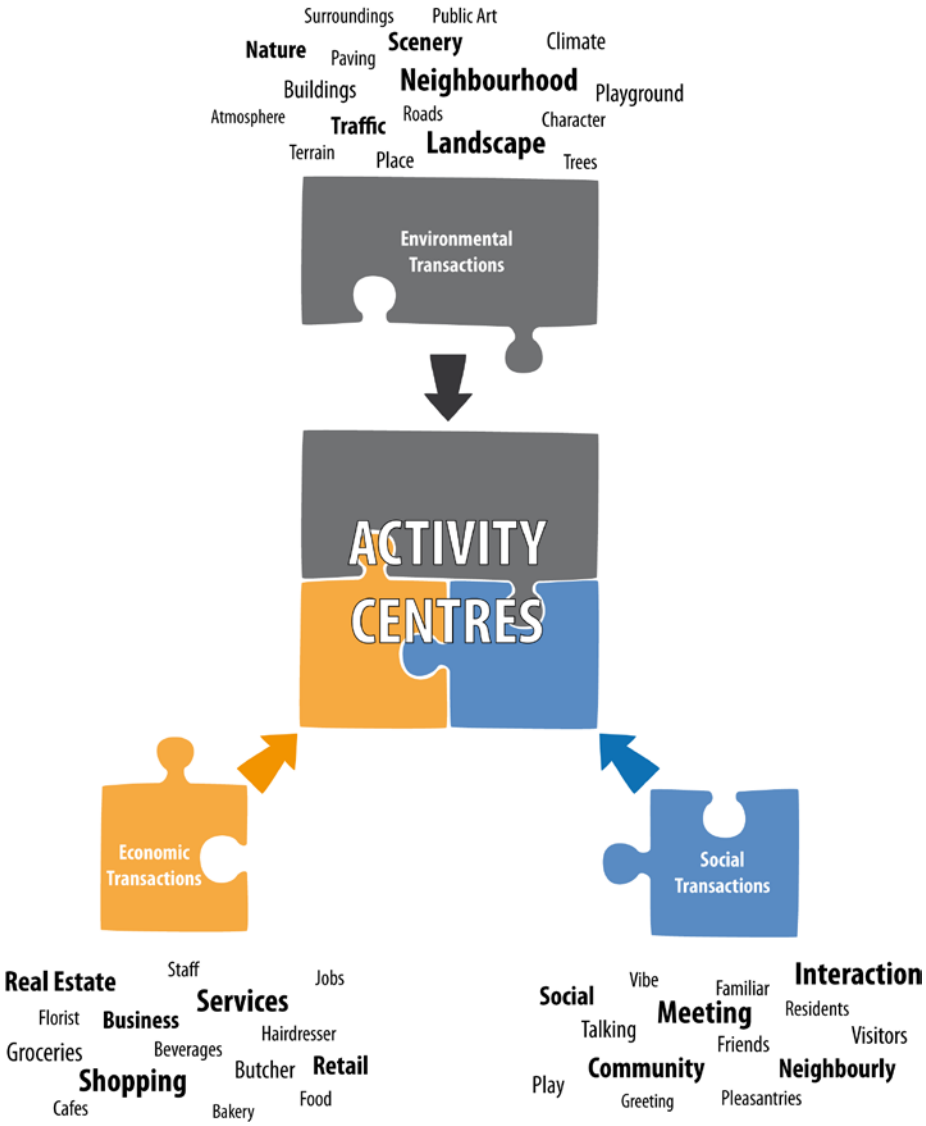
The types, quality, diversity and intensity of transactions within a defined area create activity. Transactions are undertaken by activity centre users, and occur between users, or between users and their environment. Users can be grouped as residents, workers, visitors and enterprises.

Transactions can be broadly classified into three general typologies (see Figure 9). These are:

- Economic - activities that primarily result in a transfer of goods and services in return for payment (e.g. retail trade, enterprises employing staff);
- Social – activities that are primarily focused on the informal exchange of information and company (e.g. catching up with friends, parents playing with their children); and
- Environment – activities that are primarily focused on users engaging with their physical environment (e.g. users enjoying public art, reading a book in the park).

In reality every transaction has an element of each of these typologies, although one is usually dominant.

Figure 9. Activity centre transactions



Source: Pracsys 2013

3.3 Locations of Activity

A range of different types of activity locations may host activity in any given geographic area. Some of these are formally identified by State and local governments, while others are informal agglomerations of transactions. The types of activity locations are listed in Figure 10.

Figure 10. Activity locations

Source: Pracsys 2013

Directions 2031 and SPP 4.2 formally identify a hierarchy of activity centres across the Perth Metropolitan Region, as well as Specialised Centres which do not fit into the hierarchy. SPP 4.2 defines activity centres as:

'...community focal points. They include activities such as commercial, retail, higher-density housing, entertainment, tourism, civic/community, higher education, and medical services. Activity centres vary in size and diversity and are designed to be well-serviced by public transport.'

The activity centres hierarchy does not address the functions of activity locations but provides a general understanding of the expected scale of activity centres. The higher a centre is in the hierarchy the larger catchment the centre is expected to serve.

Activity centres formally defined under SPP 4.2 are not the only locations of activity. Significant activity can occur outside the walkable catchment of formally defined activity centres. This also requires recognition and ongoing management as the needs of the activity centre users and market conditions change. These are referred to as activity nodes in the LCACS. Activity nodes are defined locations of activity occurring outside the walkable catchment of activity centres. A comparison of activity centres and activity nodes is shown in Figure 11.

Figure 11. Comparison of activity nodes and activity centres

Characteristic	Activity Nodes	Activity Centres
Location	Highly inelastic. The activity hosted is often directly related to the location, e.g. yacht club located on the river foreshore, and cannot be moved from the location. The location is not always the result of demand generated by the surrounding population, although this depends on the focus of the activity node, e.g. demand for a school relates to the surrounding population, but demand for a yacht club is regional and dependent on suitable waterfront real estate. The location may be related agglomeration benefits, e.g. complimentary land uses benefit from co-location, such as a recreation centre sharing infrastructure with a high school.	Highly elastic. The activity hosted may be the result of demand generated by the surrounding population, e.g. a supermarket could be located wherever demand is present, and can be moved to a different location if demand changes necessitate. The location may be related to agglomeration benefits, e.g. complimentary land uses benefit from co-location, such as a lunchbar servicing local offices.
Function	May be focused on a single activity, or type of activity, e.g. a tennis club may exist alone or co-located with a bowls club.	Usually provide for a range of different types of activities, e.g. a neighbourhood centre may include a supermarket, cafe, offices and a school.
Retail activity	Retail activity is typically incidental to the primary function of the activity node, e.g. a recreation centre or school may include a canteen.	Retail activity is often a strong focus of the activity centre, e.g. a shopping centre based around a supermarket, lunchbars servicing office workers.
Transport	May be located away from high-traffic roads, and may have limited or no public transport access. Activity nodes located in areas of high amenity, such as the river foreshore, typically have better access to cycling networks.	Are generally located on high-traffic roads and have at least one public transport stop within or adjacent to the activity centre.

Source: Pracsys 2012

3.4 Activity Networks

Activity centres or nodes in a local government area should not only be regarded as individual entities, but also as part of an open system whose main characteristic is the facilitation of a range of social, economic and environmental transactions. A local government area is part of a sub-region activity centres network, which is part of the Perth Metropolitan Region activity centres network, which is in turn part of a wider Australian national and global network of activity centres. To understand the role activity centres and nodes play in the wider network, and to enable decision-making that fosters better activity performance, the functions of each need to be understood.

4 City of Melville Activity

Commercial activity located in the City of Melville is comprised of activity centres (both within and outside the SPP 4.2 activity centres hierarchy), and activity nodes. The following section sets out the activity centre and activity node names and locations of commercial activity across the City of Melville.

4.1 Activity Centres Network

The City of Melville network of activity centres is listed in Figure 12 and Figure 13, and shown on a map in Figure 14. The City of Melville has a range of centres including a Specialised Centre, a Mixed Business Precinct, a Secondary Centre, six District Centres and a range of smaller centres forming the activity centres network. The assumed boundary of the activity centres captures additional activity beyond retail floorspace and are generally considered to extend to the walkable catchment set out in SPP 4.2. For different centres in the hierarchy these are:

- Strategic metropolitan centres: 800 m
- Secondary centres/District centres: 400 m
- Neighbourhood centres/Local centres: 200 m

Detailed boundary setting for activity centres should occur as part of a structure planning or precinct planning process for each activity centre.

Figure 12. Hierarchy activity centres

Level in Hierarchy	Activity Centre Name
Secondary Centre	Booragoon
District Centre	Bull Creek Canning Bridge Kardinya Melville Petra Street Riseley Street
Neighbourhood Centre	Applecross Bateman Village Brentwood Farrington Hislop Road McKimmie Road North Myaree Parry Avenue Winthrop Willagee
Local Centre	Archibald Street Attadale Bawdon Bristol Avenue Castle Hill

Level in Hierarchy	Activity Centre Name
	Gibson Street
	Glenelg Street
	Harrison Street
	Hulme Court
	Leeming Park
	Marmion Street
	Marshall Road
	McKimmie Road South
	North Lake Road
	Palmyra
	Mount Pleasant
	Reynolds Road
	Somerville
	Stock Road
	Webber Street
	Winthrop Deli

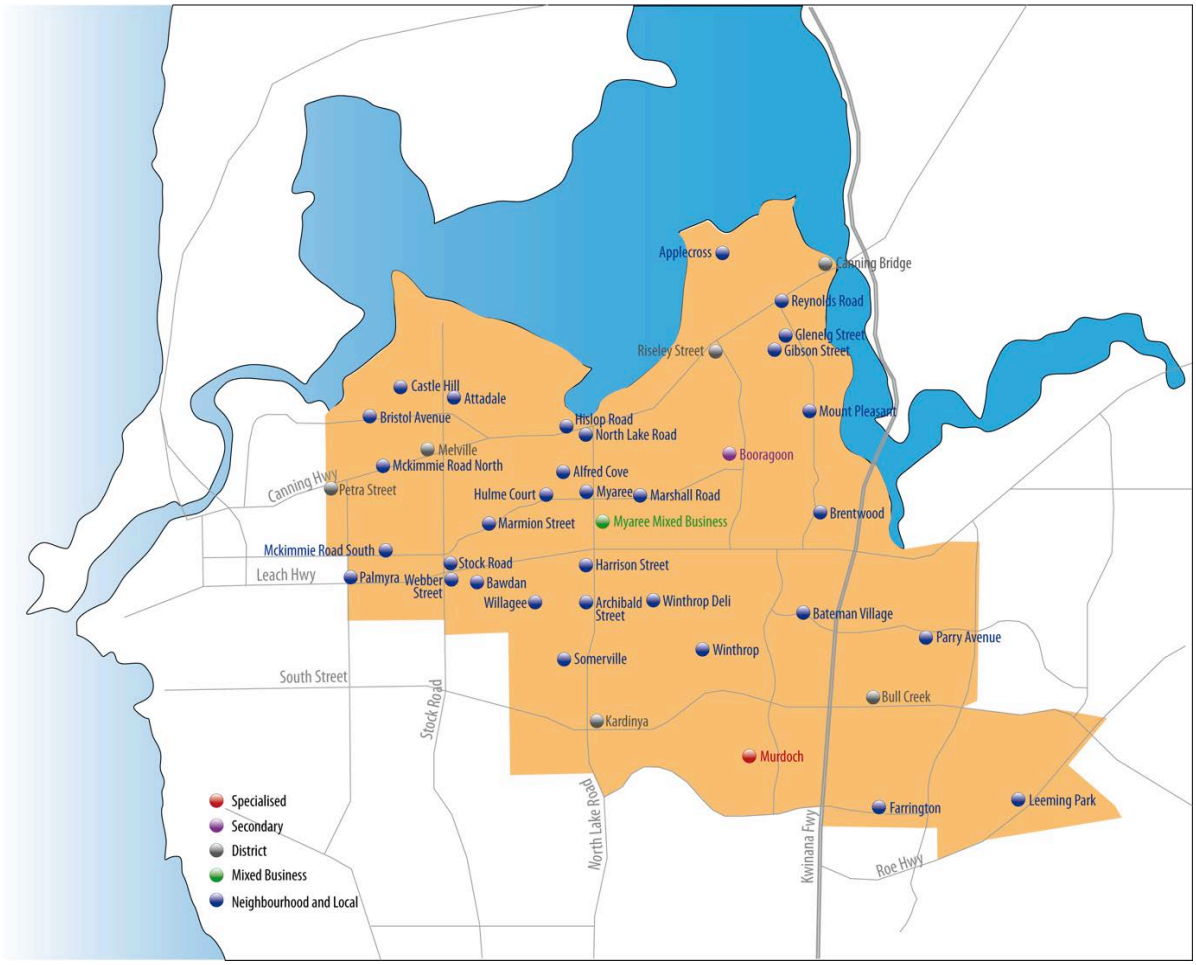
Source: Pracsys 2013

Figure 13. Non-hierarchy activity centres

Type of Centre	Activity Centre Name
Specialised Centre	Murdoch
Mixed Business Precinct	Myaree

Source: Pracsys 2013

Figure 14. City of Melville activity centre map



Source: Pracsys 2013

4.1.1 Specialised Centres

The City of Melville contains Murdoch, which is classified as a specialised centre under SPP 4.2. This type of centre is unique in the hierarchy. Under SPP 4.2 specialised centres are intended to focus on regionally significant economic or institutional activities that generate many work and visitor trips, which therefore require a high level of transport accessibility. Specialised centres provide opportunities for the development of complementary activities, particularly knowledge-based enterprises. A range of land uses that complement the primary function of these centres will be encouraged on a scale that will not detract from other centres in the hierarchy. Murdoch has had its primary functions as a specialised centre defined as health, education and research.

4.1.2 Secondary Centres

Booragoon is classified as a secondary centre under SPP 4.2. This type of centre is a level below strategic metropolitan centres in the hierarchy. Strategic metropolitan centres are defined as being multipurpose activity centres that provide a diversity of uses. Secondary centres perform similar functions to strategic metropolitan centres but offer a more limited range of services, facilities and

employment opportunities than strategic metropolitan centres, and typically serve smaller catchments. They perform an important role in the regional economy and provide essential services to their catchments.

Structure planning for Booragoon is currently underway, with the owner of Garden City Shopping Centre, the primary focus of the centre, proposing to expand the floorspace significantly and introduce new land uses.

4.1.3 District Centres

The City of Melville has six district centres. District centres are defined in SPP 4.2 as:

'…having a greater focus on servicing the daily and weekly needs of residents. Their relatively smaller scale catchment enables them to have a greater local community focus and provide services, facilities and job opportunities that reflect the particular needs of their catchments.'

In the activity centres hierarchy this type of centre is between a secondary centre and a neighbourhood centre in terms of catchment population size, residential density targets, and diversity and intensity of commercial activity. District centres are therefore expected to function at a medium level in terms of:

- Service population catchment;
- Accessibility and transport connectivity;
- Full range of retail and office floor-space; and
- Residential density.

4.1.4 Neighbourhood and Centres

The City Melville contains ten identified neighbourhood centres. Under SPP 4.2 neighbourhood centres are defined as:

'...providing for daily and weekly household shopping needs, community facilities and a small range of other convenience services.'

These centres have some significance in terms of the overall commercial network, but are not expected to provide comprehensive offerings of goods and services.

4.1.5 Local Centres

Local centres tend to be more focused on providing convenience shopping or entertainment offerings, such a local deli, takeaway food shop or cafe. The function of each local centre may be fairly unique. Future visions for local centres should respond to this.

4.2 Activity Nodes Network

In the City of Melville there are a number of activity nodes identified as the locations of significant activity separate to activity centres. Activity nodes are defined as locations of activity outside the walkable catchment of activity centres, or within the walkable catchment but isolated from activity centres by surrounding residential development. Activity nodes typically include some retail but the primary purpose of the place is generally focused on non-retail land uses.

The list of City of Melville activity nodes and the types of activities hosted is shown in Figure 15. The location of these nodes is shown in Source: Pracsys 2013

Figure 16. Non-retail activities such as sporting clubs, schools, recreation centres, museums and so on that are not shown in Source: Pracsys 2013

Figure 16 have been included as part of activity centres as they meet the criteria for being considered part of a centre.

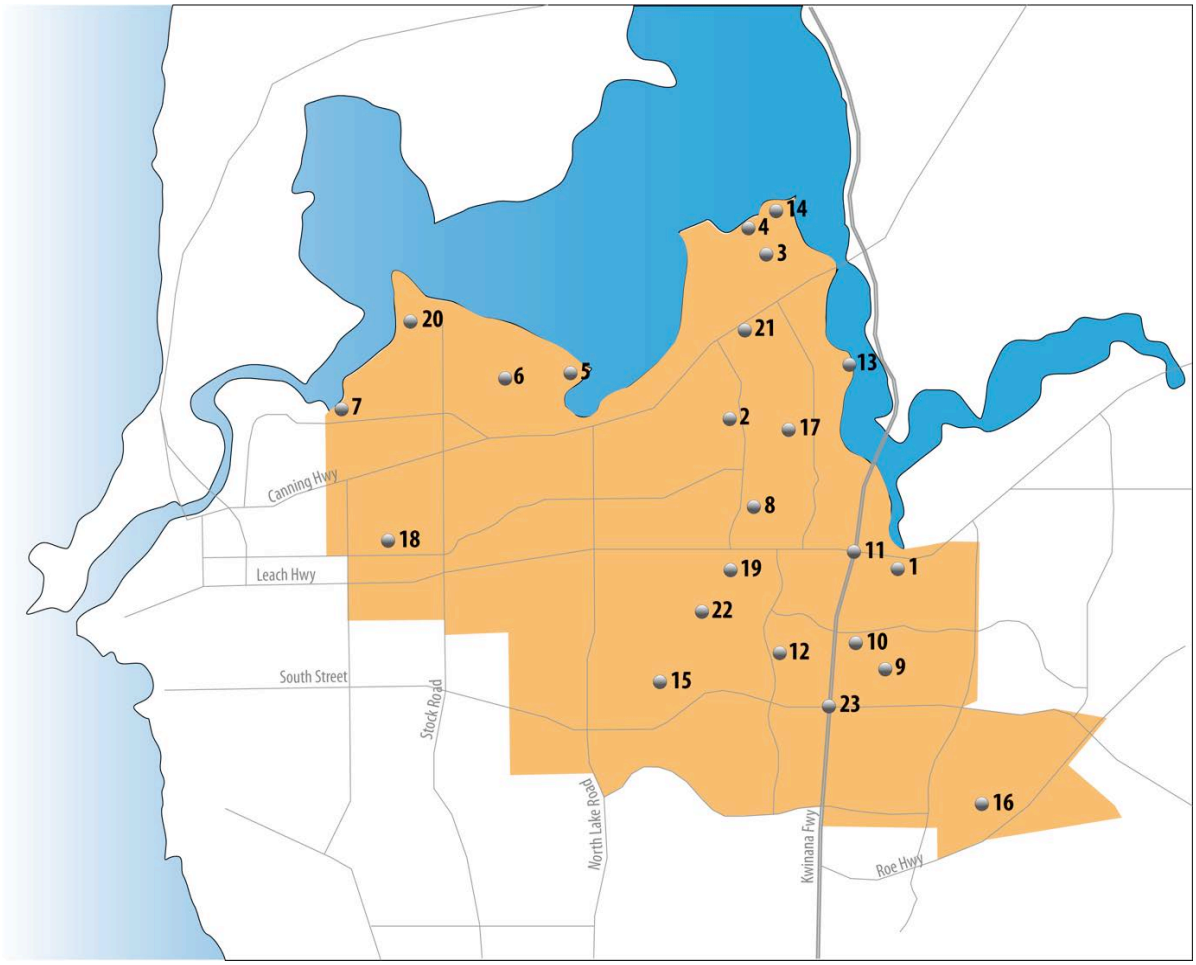
Figure 15. Activity nodes matrix

Node ID	Activities Present	Types of Activity				
		Education	Retail/ Entertainment	Civic	Sport/ Recreation	Transit
1	All Saints College Rossmoyne Senior High School	▣				
2	Applecross High School Ardross Primary School	▣				
3	Applecross Primary School	☐				
4	Applecross Tennis Club				☐	
5	Attadale Netball Club				☐	
6	Attadale Primary School Mel Maria Catholic Primary School St Joseph Pignatelli Catholic Church	▣		☐		
7	Bicton Baths Melville Water Polo Club				▣	
8	Booragoon Football Club				☐	
9	Bull Creek Primary School	☐				
10	Bull Creek Tennis Club Bull Creek/Leeming Scout Hall Southside BMX Club			☐	▣	
11	Bull Creek Train Station Aviation Heritage Museum Bull Creek AFA Bowling Club			☐	☐	☐
12	Corpus Christi College Yidarra Catholic Primary School St Thomas More Catholic Church	▣		☐		
13	Deep Water Point Cafe Deep Water Point Boat Ramp		☐		☐	
14	Heathcote Museum and Gallery Bluewater Grill South of Perth Yacht Club Challenger Tafe	☐	☐	☐	☐	

15	Kardinya Community Centre Kardinya Primary School Kardinya Bowling Club Kardinya Tennis Club Kardinya Lakes Cricket Club Kardinya Junior Football Club Melville City Hockey Club	☐		☐	☐☐☐☐☐☐	
16	Melville Glades Golf Club Banksia Park Primary School Bull Creek Leeming Amateur Football Club Leeming Bowling Club	☐		☐	☐☐	
17	Mount Pleasant Primary School Mount Pleasant Bowling Club	☐			☐	
18	Palmyra Primary School Palmyra Pre-Primary	☐☐				
19	Piney Lakes Education Centre	☐				
20	Point Walter Golf Course Point Walter Recreation and Conference Centre			☐	☐	
21	St. Benedict's Catholic Church			☐		
22	Winthrop Primary School	☐				
23	Murdoch Train Station		☐			☐

Source: Pracsys 2013

Figure 16. City of Melville activity node map



Source: Pracsys 2013

5 City of Melville Framework for Activity Development

The following section sets out the City of Melville Framework for Activity Development. The framework is comprised of the following components:

- Activity centre functions;
- Activity centre user mix;
- Activity centre vision;
- Areas of assessment;
- Activity centre goals;
- Minimum standards; and
- Performance criteria.

5.1 Defining Activity Centre Function

Activity centre function can be seen as having two main variables:

- Types of functions; and
- Size of catchment for functions.

The types of functions can be broadly defined as either population-driven or strategic in nature. The size of the catchment refers to the distance activity city centre users will travel from to access the centre, as a consumer (resident or visitor), employee or business owner.

5.1.1 Population-Driven Activity

Population-driven activities are those that are driven by the need to service a population's needs. Examples of these are retail goods such as groceries, clothing and stationery, and services such as tax accountants, hairdressers and general practitioners. Population-driven activity can serve different size population catchments, but are always dependent on the expenditure of their catchment. Larger activity centres comprised of agglomerations of co-located population-driven activities are generally expected to serve larger catchment populations. Workers in population-driven industries generally require lower qualifications and less training or knowledge than strategic industries, although this is not always the case.

Population-driven activities can be classified as for a local, sub-regional or regional catchment.

Figure 15 sets out the characteristics of population-driven activities. Figure 72 lists the City of Melville land use classes likely to host population-driven activity.

Figure 17. Population-driven activity catchment characteristics

Catchment Size	Characteristics	Examples
Regional	Encompasses activities that only viable at city-wide catchment size (i.e. capital city or major regional town). The cost of operation or the level of specialisation result in the activity being only economically viable at a regional level.	Universities, tertiary hospitals, IKEA, WA State Government Departments, company head offices.
Sub-regional	Encompasses activities that are only viable with a large catchment size, but are viable on a smaller scale than a whole city or major regional town.	District hospitals, technical colleges, agglomerations of comparison retail (e.g. bulky goods, fashion), major bank branches, cinemas, fine dining restaurants.
Local	Encompasses activities that serve a small catchment through offering convenience goods and services for household daily and weekly consumption.	Supermarkets, specialist grocery stores, small bars, cafes, casual restaurants, fast food, service stations.

Source: Pracsys 2013

5.1.2 Strategic Activity

Strategic activity is not tied to a particular catchment population, but are typically supported by exporting goods or services outside the regional area. This may be intrastate, interstate or internationally. Examples of these are the sale of goods online from a warehouse in Perth to customers in Geraldton, New South Wales or Singapore, or the export of alumina from a refinery in Kwinana to customers in China. This type of activity is not limited by the size and expenditure of the local, sub-regional or regional population. Strategic activities have the potential to increase the overall wealth of a regional economy as they are sourcing expenditure from outside the regional catchment. This means the presence of strategic activities can have significant flow-on effects to the overall wealth and expenditure of the local, sub-regional or regional economy in which it is located. Thus, agglomerations of strategic activity are typically supported by population-driven activities catering to the local catchment.

Rather than classifying strategic activity by catchment size, it is more relevant to characterise strategic activity as either 'existing activity' or 'new activity'. Two methodologies for determining the presence of strategic activity agglomerations are provided in Figure 16. Figure 72 also indicates whether City of Melville land use classes have the potential to accommodate strategic activity.

Figure 18. Strategic activity definitions

Activity Type	Characteristics	Examples
Existing	One or few identifiable strategic agglomerations. Other uses are present that support the strategic function (i.e. food retail). Well-established, usually located in and high-amenity and high-access locations.	Mining industry offices located in West Perth with associated convenience food and comparison retail, or medical research facilities located at Queen Elizabeth II Medical Centre.
New	New uses generally in the same sector or supply chain to favour localisation economies. Location near growth corridors, infill development and/or mass transit infrastructure. Drive future investment in urban amenities and services.	N/A

Source: Pracsys 2013

5.2 Defining Activity Centre User Mix

Understanding the user mix of an activity centre is critical to understanding how the functions of the centre are fulfilled. Understanding the user mix can also assist in understanding why a centre which should be performing well according to other measures (e.g. floorspace attraction, competition from surrounding centres, quality urban form), may not be performing as well as predicted.

Activity centre user mix can be divided into four main groups:

- Residents;
- Visitors;
- Workers; and
- Enterprises.

5.2.1 User Mix Characteristics

Figure 19 sets out the characteristics of these user groups. An activity centre user may belong to more than one of these groups. For example, a resident may also be a worker and may access an activity centre for the purpose of work and to undertake consumer transactions.

Figure 19. User mix definitions and attributes

User Group	Characteristics	Relationship to the Activity Centre	User Attributes
Residents	Live within a defined distance of the centre. Strategic Metropolitan Centres: live within an 800 m walk Secondary Centres/District Centres: live within a 400 m walk Neighbourhood Centres: live within a 200 m walk	Are part of the local catchment for the centre, regardless of centre scale.	Demographics (e.g. age, income, sex, ethnicity, physical mobility, cultural alignment)
	Purpose of accessing centre is to undertake consumer transactions.		Length of stay/frequency of trips
Visitors	Live outside a defined distance of the centre. Strategic Metropolitan Centres: live outside an 800 m walk Secondary Centres/District Centres: live outside a 400 m	Are part of the sub-regional, regional or extra-regional catchment for the centre, regardless of centre scale.	Demographics (e.g. age, income, sex, ethnicity, physical mobility, cultural alignment)

User Group	Characteristics	Relationship to the Activity Centre	User Attributes
	walk Neighbourhood Centres: live outside a 200 m walk		
	Purpose of accessing centre is to undertake consumer transactions.		Length of stay/frequency of trips
Workers	May live within any distance of the centre.	Are part of the local, sub-regional, regional or extra-regional catchment of the centre.	Demographics (e.g. age, income, sex, ethnicity, physical mobility, cultural alignment)
	Purpose of accessing the centre is for employment at the centre.		Length of stay/frequency of trips
Enterprises	Premises from which transactions are undertaken are located within the centre boundary. Premises may be fixed, temporary or mobile (e.g. office, weekend market, courier vehicle). Enterprise may be population-driven or strategic in nature.	Have a local, sub-regional, regional or extra-regional catchment.	Type of industry Type of premises Number of employees Turnover

Source: Pracsys 2013

5.2.2 User Mix Implications

The user mix composition of an activity centre and their attributes determine what type of transactions, and therefore activity and land uses, occur within the centre. User mix also has implications for the method of access to an activity centre. Residents of an activity centre are more likely to walk to a centre than visitors. Workers are more likely to want to use public transport to access a centre than visitors or residents as their place of residence is more likely to be further away and their length of stay is typically longer, making the trip via public transport a more attractive option.

Understanding the current user mix of a centre provides information about how the centre is currently being used. The potential user mix of the centre can be assessed by examining how well the current activity is meeting the needs of the catchment for the centre. From this, an ideal future user mix can be determined and form part of the vision for the future of the centre.

Figure 20 and Figure 21 show the alignment of activity centre functions and user mix.

Figure 20. Population-driven function and user mix

User Mix	Regional Catchment	Sub-Regional Catchment	Local Catchment
Residents			✓
Visitors	✓	✓	
Workers	✓	✓	✓
Enterprises	✓	✓	✓

Source: Pracsys 2013

Figure 21. Strategic function and user mix

User Mix	Existing	New
Visitors	✓	✓
Workers	✓	✓
Enterprises	✓	✓

Source: Pracsys 2013

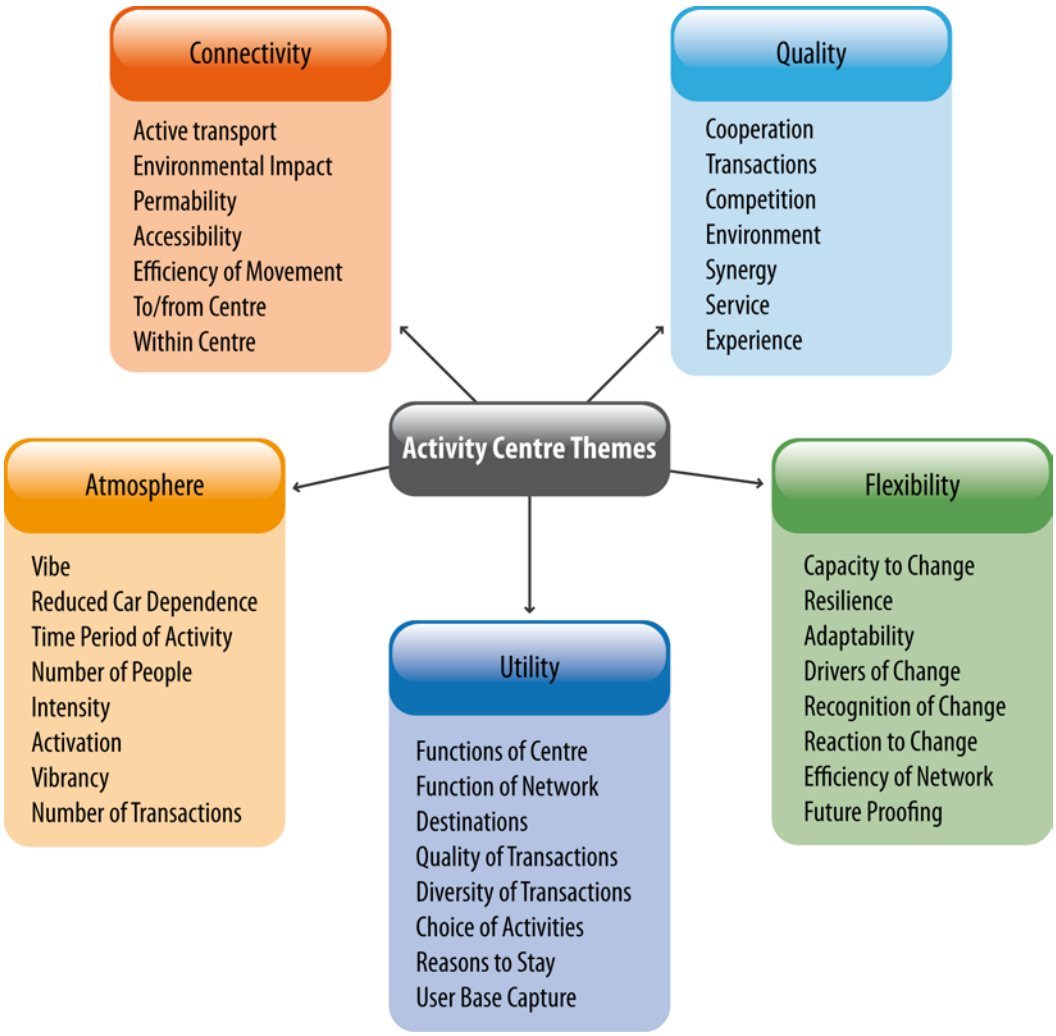
5.3 Defining Activity Centre Principles

Determining what positive outcomes are valued, and what negative outcomes should be avoided is an important part of planning for the future of successful, well-functioning activity centres. Positive and negative outcomes can be developed into activity centre principles that respond to the specific needs of the geographic area they are to be applied to. These principles should consider the following as a minimum:

- Function of centres;
- User mix needs;
- Local geography and climate;
- Local and State government goals;
- Private sector sector goals; and
- Community aspirations.

In consultation with the City of Melville, five overarching activity centre principles were determined to be relevant for City of Melville activity centres. These and the underlying themes are shown in Figure 22. These principles, along with an understanding of the function and user mix of each activity centre, can be used to develop a unique, clear vision for each activity centre and specific goals to achieve this.

Figure 22. Activity centre principles



Source: Pracsys 2013

5.4 Defining an Activity Centre Vision

A vision for the future of each activity centre is critical to being able to make decisions about future development and investment in a centre, and to ensuring the decision-making system provides enough flexibility to recognise and support innovative development. A vision should define the desired end state, or what success looks like, for each activity centre in terms of change in function, user mix and principles. It is best expressed as a statement of what life would be like if the stated goals were achieved.

A vision should also answer the following questions:

- Where are we now?
- Where do we want to be?
- Why do we want to get there?

Once a vision has been set, specific goals and targets for the activity centre can be determined. These goals and targets should respond to the vision and provide solutions for implementing the vision. This logic flow is illustrated in Figure 23.

Figure 23. Components of a vision

Source: Pracsys 2013

5.4.1 Capacity for Change and Drivers of Change

The capacity of the activity centre to change and the drivers of change need to be considered in order to understand the potential for change and the likelihood of delivering change. Figure 24 sets out a range of elements related to capacity for change and drivers of change in activity centres. When setting an activity centre vision, identifying the difference between capacity and drivers provides an understanding what changes are possible in the centre and the burden of investment required to make these changes a reality. This is particularly important where a vision for a centre is set where either the capacity or drivers are constrained.

Figure 24. Capacity for change and drivers of change

Type of Change	Element of Change	Examples
Capacity to Change	Land	Existing land Existing tenure Cost of development
	Built form	Existing buildings and tenancies Controls on development type and scale (e.g. planning schemes and policies, heritage restrictions, height limits) Cost of development
	Transport network	Road network and parking availability Public transport network Bicycle network Walking network
	Utilities	Energy Water and waste water

Type of Change	Element of Change	Examples
		Waste disposal
	Capital	Availability of investment capital (i.e. private and government investors)
	Willingness of stakeholders to support change	Land owners Business owners Local, State and Federal government Local community
Drivers of Change	Demand for goods, services and floorspace and land	Changes in demand (e.g. business and consumer expenditure/behaviour, population and business numbers)
	Supply of goods, services and floorspace and land	Change in competitive environment (e.g. competition from other activity centres, online retail, overseas businesses)
	Willingness of stakeholders to invest in change	Land owners Business owners Local, State and Federal government Local community

Source: Pracsys 2013

An activity centre vision should therefore be composed of the following:

- Function;
- User mix;
- Principles (desired outcomes to encourage, negative outcomes to avoid);
- Capacity to change; and
- Drivers of change.

5.4.2 City of Melville Activity Centre Functions and Visions

Using the methodology demonstrated in Section 5.1: Defining Activity Centre Function, current functions for City of Melville activity centres have been developed, with detailed goals (Figure 25). Where detailed planning for activity centres exists, the vision and desired future functions have also been noted.

Figure 25. Activity centre visions

Activity Centre	Current Functions	Activity Centre Visions	Future Functions
Murdoch Specialised Centre	Existing strategic Local population-driven	Murdoch will become Perth's second CBD – a centre of innovation and sustainability and a workplace and home for a diverse population of 35,000 employees, 20,000 residents and over 40,000 students. At its core will be a thriving university town with high class research, teaching of international reputation and a variety of complementary tenants all sharing amenities in an integrated campus environment. Murdoch Square will be the centrepiece, containing low-cost accommodation around a new shopping, leisure and community precinct. Murdoch Activity Centre will have world class health care facilities, Australia's largest hospital and an intense mix of export-oriented business, research and development and other key services. The mixed use precinct will be the gateway to the centre featuring a lively mix of apartments, offices, shopping and entertainment uses. In the backdrop, the wider Beeliar Regional Park is a unique setting for an active urban life within a compact core served by intercity trains and other rapid transit as the centre transforms into a	New strategic

Activity Centre	Current Functions	Activity Centre Visions	Future Functions
		distinctive Western Australian destination.	
Myaree Mixed Business Centre	Regional population-driven Sub-regional population-driven Local population-driven	N/A	N/A
Booragoon Secondary Centre	Sub-regional population-driven Local population-driven	To continue the focus on high-end retail as the primary function of the centre by increasing and improving the offer of retail in alignment with the expected needs of the catchment; To ensure Garden City is one of the premier high-end retail shopping destinations in the Perth Metropolitan Region catchment, providing an offer of goods and services, and an experience, that will attract retail transactions to the centre rather than allowing leakage out of the State or country; To ensure the proposed floorspace expansion of Garden City is commercially viable and palatable to the centre owners and users; To provide the best chance for an expanded Garden City to support the functions of Melville City Centre as a Secondary Centre, by facilitating the future development of non-retail commercial uses within and around the shopping centre, and of higher density residential dwellings within the activity centre walkable catchment; To improve the overall function and maturity of Melville City Centre as a Secondary Centre, by developing or providing capacity for: - A range of additional employment opportunities, meeting the employment targets of Directions 2031; - A comprehensive range of retail products and services, as appropriate to a centre surrounded by a residential area (i.e. no bulky goods); - Opportunity for significant entertainment, health and offices to develop as are appropriate, to provide for the catchment population of the centre; - Improved overall diversity of the activity centre; - Improved access to the centre by a variety of transport types; and - A walkable catchment with increased residential density and a wider variety of housing types than currently available.	Regional population-driven
Bull Creek District Centre	Sub-regional population-driven Local population-driven	N/A	N/A
Canning Bridge District Centre	Existing strategic Sub-regional population-driven Local population-driven	The Canning Bridge precinct will evolve to become a unique, vibrant, creative community centred on the integrated transport node of the Canning Bridge rail station. The precinct will be recognised by its unique location, its integrated mix of office, retail, residential, recreational and cultural uses that create areas of excitement, the promotion of its local heritage and as a pedestrian friendly enclave that integrates with the regional transport networks while enhancing the natural attractions of the Swan and Canning rivers.	New strategic
Kardinya District Centre	Sub-regional population-driven Local population-driven	N/A	N/A
Melville District Centre	Local population-driven	N/A	N/A
Petra Street DIstrict Centre	Local population-driven	N/A	N/A
Riseley Street District Centre	Local population-driven Sub-regional population-driven	Create an attractive and sustainable activity centre that is a vibrant, desirable and safe place to live, work and socialise; Facilitate viable, enduring and high quality development in the activity centre	N/A

Activity Centre	Current Functions	Activity Centre Visions	Future Functions
	Existing strategic	with an appropriate mix of land uses; Enhance the character, streetscapes and public spaces in the activity centre; Appropriately manage traffic, parking and accessibility issues; Promote a mix of housing choices; Encourage local employment and business opportunities; and Provide certainty to enable investment decisions to be made with reasonable confidence.	
Neighbourhood Centres	Local population-driven	N/A	N/A
Local Centres	Local population-driven	N/A	N/A
Activity Nodes	Local population-driven Sub-regional population-driven	N/A	N/A

Source: Pracsys 2013

5.5 Areas of Assessment, Goals and Metrics

Once a vision for an activity centre has been set, the following questions need to be answered:

- How do we identify success for activity centres?
- How do we measure our progress towards success?

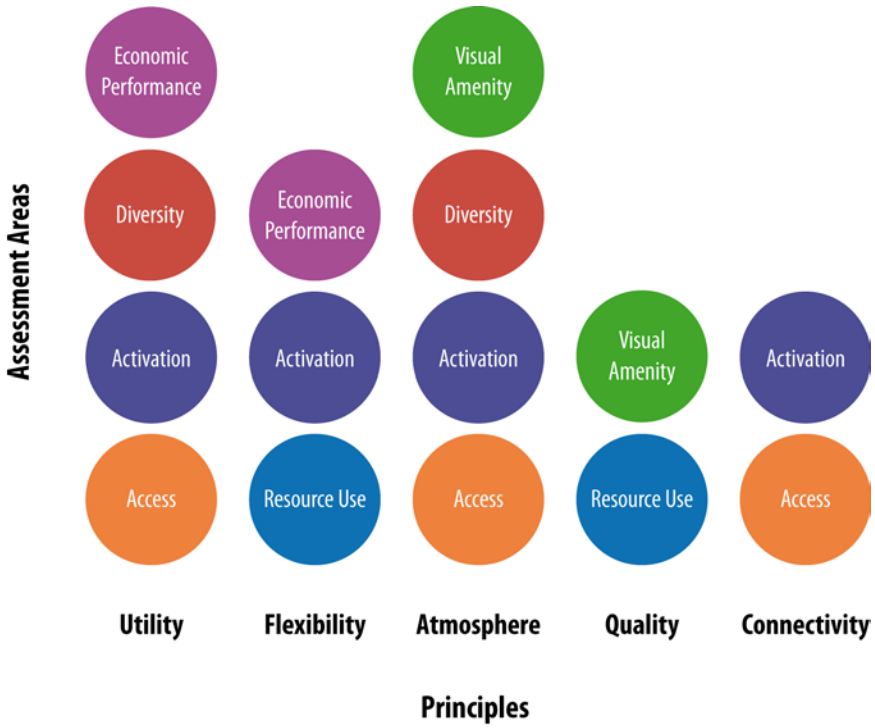
The City of Melville LCACS sets out:

- Areas of assessment to group together success criteria for activity centres;
- Goals to identify success in terms of each area of assessment; and
- Metrics to measure progress towards success by providing a framework to assess proposed developments against.

5.5.1 Areas of Assessment

From the five activity centre principles developed, six areas of assessment were determined to be relevant to City of Melville activity centres. These were established through research and development of a sound evidence base for characteristics of activity centres that are important to support commercial transactions as well as social and environmental transactions in activity centres. City of Melville planning officers, technical services officers and community development officers were integral to identifying the activity centre characteristics important for the City of Melville. The principles and their relationship to the six areas of assessment are show in Figure 26.

Figure 26. Principles and areas of assessment



Source: Pracsys 2013

Definitions of the six areas of assessment in the context of activity centres are shown in Figure 27. From these areas of assessment a range of specific goals were identified and implementation measures suggested. The implementation measures take the form of assessment criteria that can be applied to structure plans and development applications to assist in determining the appropriateness of these for the overall performance of activity centres.

Figure 27. Areas of assessment

ID Number	Area of Assessment	Definition
1	Amenity	Amenity is about how pleasant or offensive a place is in terms of visuals, sounds, smells, physical comfort, and perception of safety. Good amenity provides an incentive for people to use a place. Poor amenity barriers people from using a place.
2	Diversity	Diversity is about how many different opportunities for activity are located in a place, and how well the activities meet the needs of users.
3	Activation	Activation is about the alignment of the movement of people through a place and the physical interfaces of activity that draw people to an activity. It is also about how well linked the place is to the surrounding area in terms of physical access and visibility of activities.
4	Access	Access is about how people physically arrive at/depart from the place and move around within a place, and whether people of different physical abilities can access a centre safely by different modes (i.e. by walking, cycling, public transport, cars/motorbikes, freight).
5	Resource Use	Resource use is about minimizing the use of natural resources within a place and to access a place. This includes use and replacement of water, energy, building materials and so on.
6	Economic Performance	Economic performance is about the contribution of the place to the wider economy. This may include employment quantity and quality, types of land uses and industries, skills match of local labour force, and so on.

Source: Pracsys 2013

5.5.2 Assessment Criteria

Overarching goals for all activity centre assessments have been developed to apply to all types of development. Minimum standards and performance criteria have been developed to be applied at the structure plan level, major development applications and minor development applications. Figure 28 sets out criteria for distinguishing between a structure plan, major development and minor development. A development application may be considered major or minor for activity centres of all different levels of the hierarchy, or for activity nodes. If a planning document not listed here requires assessment, the assessing officer should use their discretion in determining what criteria the document should be assessed under.

Figure 28. Types of development

Development Type	Defining Characteristics	Explanation
Structure plan	As defined in the WAPC structure plan guidelines and in the City of Melville TPS.	Includes all types of structure plans assessable by local government (District, Local and Activity Centre). Where the local government is consulted on sub-regional structure plans the goals of this LCACS and the visions for activity centres should be considered.
Major Development Application	Does project have a significant impact on the activity centre/node vision?	A significant impact may be fulfilling an important part of the vision or deviating from the identified vision.
	Is the project of a significant scale?	Defining criteria for significant scale should be developed.
	Is the project for an important site?	Important sites for all activity centres/nodes should be identified.
Minor Development Application	If the answer to all major DA questions is no, then it is a minor DA.	In many cases a change of use will be a minor DA. However a change of use still has the potential to be a major DA.

Source: Pracsys 2013

Figure 27 sets out an identification system for each of the minimum standards and performance criteria. This provides a unique identification code for each metric.

Figure 29. Identification system key

Element	Identifier	Examples
Goals	ID Number and Goal Number	1.1
Minimum Standards	M	1M
Performance Criteria	P	1P
Structure Plan	S	1M-S
Major Development Application	MD	1M-MD
Minor Development Application	RD	1M-RD
Structure Plan/Major DA/Minor DA	ALL	1M-ALL
Major DA/Minor DA	MD/RD	1M-MD/RD

Source: Pracsys 2013

5.5.2.1 Amenity

Amenity can be defined as *'how pleasant or offensive a place is in terms of visuals, sounds, smells, physical comfort, and perception of safety. Good amenity provides an incentive for people to use a place. Poor amenity barriers people from using a place.'*

Good amenity can assist in maximizing expenditure capture of the activity centre catchment. Likewise, poor amenity may form a barrier to potential users within the activity centre catchment accessing the centre. Potential users may choose to travel further to an alternative location to undertake transactions if the alternative provides a more pleasant environment.

The following aspects of amenity have been identified as important for optimising user transactions within activity centres:

- Minimizing land use conflict;
- Providing soft landscaping and greenery;
- Providing high quality hard landscaping;
- Minimizing the visual impact of car parks;
- Minimizing the impact of noise and odour on land uses;
- Maximizing safety (both personal and from traffic); and
- Providing access to natural light.

Figure 30. Amenity minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
1.1M. Reduce the barriers to use of activity centres on the basis of amenity by addressing land uses, building and landscaping elements considered certain to compromise amenity.	1.1M-S. Identify nearby land uses/activities/business models likely to cause a barrier to use on the basis of amenity to the majority of the centre. The structure plan shall respond to these uses by demonstrating how proposed configuration mitigates the effects of identified barriers. Where barrier land uses are expected to be phased out over time this should be noted.	**1.1M-MD/RD. Identification of building and landscaping elements likely to cause a barrier to use on the basis of amenity to the majority of the development. The DA shall demonstrate how proposed configuration mitigates the effects of identified barriers.**	
1.2M. Limit the impact of commercial land uses and activities on residential land uses within and adjacent to activity centres.	1.2M-ALL. Provision shall be made to buffer residential and commercial land uses, where co-location of land uses has the potential to threaten the amenity of the residential uses or the viability of the commercial uses.		

Source: Pracsys 2013

Figure 31. Amenity performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
1.1P. Car parking design or configuration should not compromise the visual amenity of a centre.	1.1P-S. The structure plan should address the location, configuration and design of car parking areas. Where significant vehicle access is required for land uses to be commercially viable, bulk shared car parks are preferred to dispersed car parks for individual developments. Large areas of car parking should not be located between the public realm and activity interfaces.	1.1P-MD. Where significant vehicle access is required for land uses to be commercially viable, bulk shared car parks are preferred to dispersed car parks for individual developments. Large areas of car parking should not be located between the public realm and activity interfaces. Bulk car parks should be visually treated to screen the car parking areas and provide interest to people passing through the area. Ground level car parks open to the air should be landscaped with suitable shade trees provided at a rate of 1 per 6 car bays.	1.1P-RD. Where development is new, major DA performance criteria should be applied unless the developer can demonstrate why this is not practicable. Where development is a renovation or change of use, improvement to the car parking design or configuration should be undertaken where practicable.
1.2P. The incorporation of soft landscaping (greenery) into all activity centres should be encouraged to create a more pleasant and healthy environment. Landscaping that supports local fauna should be encouraged.	1.2P-S. The structure plan should provide for incorporation of green spaces and soft landscaping within and adjacent to activity centres. The tenure and future management of soft landscaped areas should be considered.	1.2P-MD/RD. Soft landscaping should be incorporated into all DAs in a manner appropriate to the built form and intended or potential land uses. A continuous soft landscaping theme is encouraged. Typically soft landscaping should be visually or physically accessible from the public realm or from semi-private areas where people are expected to moving through. Soft landscaping should be easy to maintain in the location and under all expected climatic conditions, without the need for excessive maintenance. Flora species capable of attracting local fauna are encouraged. Maintaining or upgrading existing soft landscaping can generally be considered to meet the criteria for soft landscaping provision. Where no practical opportunity exists to accommodate soft landscaping, the developer is required to demonstrate why.	

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
1.3P. Hard landscaping elements should be visually attractive, durable, easy to maintain and kept well-maintained. Hard landscaping should support the desired activity for the location.	1.3P-S. The structure plan should provide for incorporation of hard landscaping, including street furniture. The tenure and future management of hard landscaped areas should be considered. Ensuring continuity of public realm hard landscaping is encouraged.	1.3P-MD/RD. Hard landscaping should be incorporated into all DAs in a manner appropriate to the built form and intended or potential land uses. A continuous hard landscaping theme is encouraged. Hard landscaping should be of durable materials. Maintaining or upgrading existing hard landscaping can generally be considered to meet the criteria for hard landscaping provision. Where no practical opportunity exists to provide hard landscaping, the developer is required to demonstrate the reasons why. Plain concrete is generally not accepted as a suitable hard landscaping treatment for areas of high activity.	
1.4P. Areas of high pedestrian movement, entertainment, dining activity, meeting places and residential land uses should be protected from noise and odour emissions from traffic and other land uses. This may require some of these land uses to be separated from each other, or may require noise or odour amelioration measures to be undertaken.	1.4P-S. The structure plan should ensure core activity areas are oriented away from high traffic volume roads where possible.	1.4P-MD/RD. Developments likely to emit excessive noise or unpleasant odours should provide an assessment of the potential and likely impacts on the amenity of nearby developments. Where potential or likely impacts are identified, a mitigation plan should be produced and implemented. This may include but is not limited to ensuring 'barrier' and 'sensitive' land uses are not co-located, providing noise amelioration measures, and ensuring odour control measures are implemented. Limiting opening hours is not considered a preferred means of controlling noise emissions. Active frontages of development should be oriented away from high traffic volume roads unless it can be demonstrated this is not practicable.	
1.5P. People using the activity centre should feel safe at all hours of operation. Perception of safety should be supported using CPTED principles.	1.5P-S. The structure plan should address the need for people living the centre, visiting the centre and working at the centre to feel safe at all times. The configuration of the centre should consider the need for passive surveillance of the public realm by traffic, dwellings and tenancies.	1.5P-MD/RD. Design of the lots, public realm, private realm, buildings and landscaping should apply CPTED principles where practicable.	
1.6P. Reasonable amounts of natural light and sunlight should be available within activity centres.	1.6P-S. The structure plan should consider the potential impact of building bulk/height and access to natural sunlight.	1.6P-MD. Natural light and sunlight should be accessible from the public realm. Building design should minimise blocking the access of nearby developments to natural light and sunlight should be considered.	

Source: Pracsys 2013

5.5.2.2 Diversity

Diversity can be defined as *'how many different opportunities for activity are located in a place other than shops, and how well the activities meet the needs of users.'*

Diversity is important for trip generation and therefore catchment capture for all activity centres. Higher level centres are generally expected to provide a higher level of diversity as they are intended to provide for a wider variety of user needs. Diversity can have an influence on driving transport mode shift from private vehicles to alternatives such as public transport, walking and cycling. Activity centres of district level and above are expected to provide greater levels of diversity than lower level centres.

Diversity is not limited to land use category or use class. Diversity of goods and services within a land use category or use class is also relevant, as is diversity of employment and industry. For example, within the land use category 'Shop/Retail' a range of different convenience and comparison retail goods may be sold. A diverse range of convenience goods may include fresh produce, takeaway food

and packaged goods. A diverse range of comparison goods may include low-priced fashion items to high-priced durable goods. At the use class level using the example of 'Supermarket', a diverse offering may include international food shops, a premium supermarket selling gourmet brands or a supermarket selling low-cost generic brands in bulk. Within an individual land use there may also be greater or lesser diversity in the offer of goods sold. A supermarket may have only a small range of products available to fill a niche market or it may cater for a very large consumer base.

It is difficult to set minimum standards for diversity as the appropriate level depends on the activity centre function and vision. The type of measurement appropriate for diversity depends on the goals for the centre and the level of detail in the development being assessed.

Figure 32. Diversity minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
2.1M. Ensure land uses in activity centres are in line with the vision for the centre in terms of type and diversity so the centre can move towards offering an optimal mix of activities for its catchment.	2.1M-S. Ensure land uses in activity centres are in line with the vision for the centre in terms of type and diversity so the centre can move towards offering an optimal mix of activities for its catchment.	2.1M-MD. The structure plan should identify land uses appropriate to the vision for the centre. Land uses planned to be accommodated shall be in line with the type of activity centre and the vision for the centre, and shall be aligned with the intended catchment.	2.1M-RD. Land uses identified as contrary to the vision for the activity centre shall be refused. Developments proposing land uses that are identified as in line with the vision for the centre cannot be refused on the basis of land use. Land uses identified as integral to the centre function shall be encouraged.

Source: Pracsys 2013

Figure 33. Diversity performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
2.1P. Optimise activity diversity, in alignment with centre function, to encourage access by non-private vehicle transport and to support multi-purpose trips.	2.1P-S. The structure plan should improve the diversity of land uses proposed for the centre. These can be measured using an entropy index and PLUC. See Appendix F: Entropy Index Calculation Methodology for details.	2.1P-MD. The land uses proposed in the DA should improve the diversity of the centre towards the goal stated in the centre vision. Diversity can be measured using an entropy index and land uses by PLUC. See Appendix F: Entropy Index Calculation Methodology for details.	2.1P-RD. Not applicable.

Source: Pracsys 2013

5.5.2.3 Activation

Activation can be defined as *'the alignment of the movement of people through a place and the physical interfaces of activity that draw people to an activity. It is also about how well linked the place is to the surrounding area in terms of physical access and visibility of activities.'*

Activation is concerned with the frequency and concentration of social and economic transactions carried out by the user groups of a place. A well-activated activity centre can assist in maximizing the number and length of visits to the area. Activation is relevant at different levels of design detail, from the overall design and layout of an activity centre, including the road and access network, to orientation of lots and buildings, signage, down to the interface of individual tenancies with pedestrian traffic.

Activation is inseverable from access to and within activity centres, as the points of arrival or departure and the routes to access activity may guide people to particular areas of the activity centre and away from others, or may create confusion in how to access activity if the transit network is poorly legible. In a well-activated activity centre, individual tenancies will maximize capture of passing trade from car traffic and pedestrian traffic. In a poorly activated centre, it may be difficult for users to find some activities, they may choose not to access some tenancies if they are not designed and managed in a way that invites custom, or some minor activities may get a much lesser share of trade if they are poorly are positioned to capture passing trade from major activities (e.g. specialty stores gaining trade from people going to a supermarket).

Activation should be tailored to the function, catchment scale, vision and user mix of the activity centre. Understanding the type of activity desired, the access methods and the demographic characteristics of the user mix is critical to optimally activating an activity centre.

Figure 34. Activation minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
3.1M. Ensure core land uses for each activity centre type are identified, and planning and development provides for and ensures these uses are located where they will best activate the centre.	3.1M-S. Identify core land uses for the centre. The structure plan shall demonstrate the centre has capacity to configure land uses and access routes to support activation of the centre in alignment with the vision.	3.1M-MD. Core land uses for new activity centres shall be located to assist activation of all land uses. Configuration of land uses shall contribute towards activation of the centre.	3.1M-RD. Configuration of land uses shall contribute towards activation of the centre.
3.2M. Ensure planning considers the locations which most need activation within the centre.	3.2M-S. Identify which areas of the centre need to activated. These may be the central commercial area, a main street, areas that are currently poorly activated (e.g. have low foot traffic, vacant tenancies), or new areas which are likely to perform badly without activation.	3.2M-MD/RD. Identify which areas of the centre need to be activated. These may be the central commercial area, a main street, areas that are currently poorly activated (e.g. have low foot traffic, vacant tenancies), or new areas which are likely to perform badly without activation. Buildings and tenancies in these areas shall demonstrate how they will contribute to activating the area.	
3.3M. Ensure access modes support activation of the centre.	3.3M-S. Transport routes must support activation of centre by providing convenient pedestrian access to the core of the centre from points of arrival.	3.3M-MD/RD. Physical pedestrian access and visual access to activity interfaces shall be provided as part of all developments. Where the development is a change of use, the developer must demonstrate why the current access methods are appropriate to the new use.	
3.4M. Ensure activity interfaces support activation.	3.4M-S. Not applicable.	3.4M-MD/RD. Physical and visual access to activity interfaces shall be provided as part of all developments. Where the development is a change of use, the developer must demonstrate why the current access methods are appropriate to the new use.	

Source: Pracsys 2013

Figure 35. Activation performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
3.1P. Public/semi-private realm should support activation by encouraging social, economic and environmental transactions.	3.1P-S. Specify the minimum and maximum levels of intensity intended for the structure planned area, responding to the vision set out for the activity centre.	3.1P-MD. The built form proposed in the DA should improve the intensity of the centre. In the case of new development in structure planned areas or centres with design guidelines or similar planning controls, the built form should be in line with minimum and maximum levels of intensity intended for the area.	3.1P-RD. Built form or land uses that improve the intensity of activity are encouraged.
3.2P. Provide for centres with intense activity by ensuring built form and land uses support activation of the centre. Activity intensity can be measured using employment intensity and dwelling density.	3.2P-S. Specify the minimum and ideal dwelling density intended for the structure planned area, responding to the vision set out in the activity centre.	3.2P-MD. Where residential development is included as part of a DA, the developer should demonstrate how the development will contribute toward the identified minimum and ideal dwelling density for the area.	3.2P-RD. See 3.1P-RD

Source: Pracsys 2013

5.5.2.4 Access

Access can be defined as *'how people physically arrive at/depart from the place and move around within a place, and whether people of different physical abilities can access a centre safely by different modes (i.e. by walking, cycling, public transport, cars/motorbikes, freight).'*

Access is the most critical area of assessment for optimising transactions at activity centres as it has significant impacts on the urban form of a centre, and difficulty with access can form a barrier to potential users from accessing and therefore undertaking transactions at an activity centre. Access is relevant both to get to an activity centre and to move about within an activity centre. Access to an activity centre can be via a variety of modes or via multiple modes. These include:

- Driving (car, motorbike/scooter, taxi, freight vehicle);
- Public transport (bus, light rail, heavy rail, ferry);
- Bicycle; and
- Walking.

Two of the primary goals of SPP 4.2 are to reduce the overall need to travel, and to support the use of access by walking, cycling and public transport over other transport modes. Prioritising these access modes and improving their overall mode share is therefore a priority for activity centres.

Access mode to an activity centre is intrinsically linked to the catchment scale, user mix characteristics, physical environment characteristics, type of goods purchased and length of visit. Some of the factors which can impact choice of access mode are shown in Figure 36.

Figure 36. Access mode matrix

Factors Impacting Access Mode Choice	Walking	Cycling	Public Transport	Driving
Catchment scale	Local	Local Sub-regional	Local Sub-regional Regional	Local Sub-regional Regional
Length of visit	Short visits Long visits	Long visits	Long visits	Short visits Long visits
User physical ability	High ability	High ability	High ability Low ability	High ability Low ability
User income	High income Low income	High income Low income	High income Low income	High income
User age	Young age Middle age Old age	Young age Middle age	Young age Middle age Old age	Middle age Old age
Adverse weather (e.g. heat, rain)	Forms a barrier	Forms a barrier	May form a barrier	No barrier
Physical gradient	Forms a barrier	Forms a barrier	May form a barrier	No barrier
Type of goods purchased/consumed	Consumed on site Small quantities	Consumed on site Small quantities	Consumed on site Small quantities	Consumed on site Small quantities Bulky goods Large quantities Heavy goods

Source: Pracsys 2013

Conflict about access is typically one of the more contentious issues from the perspective of planners, developers and the local community. Traffic congestion, parking and freight unloading are common issues related to driving access. Safety is a common issue for access by walking. A lack of suitable infrastructure is a common issue for cycling access. Conflict between access modes is a common issue for all access types.

Figure 37. Access minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
4.1M. Ensure goals for change to mode share are considered at all levels of planning.	4.1M-S. Structure plans shall set targets for access mode share, with access via walking, cycling and public transport prioritised over driving. Reference shall be made to the intended user mix for the centre and their likely access needs.	4.1M-MD/RD. Developments shall demonstrate how they are contributing to the access mode share target. Where little or no contribution is made, developers shall demonstrate why.	
4.2M. Ensure pedestrian access is encouraged and prioritised by providing a minimum level of service to pedestrians in terms of access to and within centres, and legibility of the pedestrian network.	4.2M-S. Provision shall be made in the structure plan for people to conveniently and safely access locations of commercial activity within the centre, with pedestrian access given priority over all other modes. Access via cycling and public transport shall be prioritised over driving. Freight access shall be provided in a manner that does not disrupt, and is not disrupted by, other modes of access. Reference shall be made to the intended user mix for the centre and their likely access needs.	4.2M-MD. Footpath access to all commercial activities shall be provided. Footpaths shall provide a direct route between points of origin and destinations.	4.2M-RD. Development in existing centre shall be integrated with existing forms of access. If development is new, major DA minimum standards apply. If development is a change of use, the developer is not required to provide new access links but must demonstrate why the current access methods are appropriate to the new use.
4.2M. Ensure cycling access is encouraged by providing a minimum level of service to cyclists in terms of access and parking.	4.3M-S. See 4.2M-S.	4.3M-MD. Bicycle parking shall be provided near the entrance of destinations. Bicycle parking may be shared between destinations. Safe on or off-road access to the bicycle parking area shall be provided.	4.3M-RD. See 4.2M-RD.
4.2M. Ensure public transport access is encouraged by locating access points close to activity destinations while ensuring cycling and pedestrian access is prioritised over public transport access.	4.4M-S. See 4.2M-S.	4.4M-MD. Not applicable.	4.4M-RD. See 4.2M-RD.
4.2M. Ensure disabled parking is provided close to core activities.	4.5M-S. See 4.2M-S.	4.5M-MD. Disabled parking shall be provided convenient to the main destination/building entry. Disabled parking may be shared between destinations.	4.5M-RD. See 4.2M-RD.
4.2M. Promote active forms of transport by ensuring driving private vehicles are not prioritised over walking, cycling or public transport. Where appropriate to the land use and when in line with the vision for the centre, parking should be provided that enables large goods or large quantities of goods to be loaded into cars.	4.6M-S. See 4.2M-S.	4.6M-MD. Parking for others shall not be prioritised over pedestrians, cyclists and public transport users. All parking may be shared between destinations. However, this should not prevent parking from being provided convenient to destinations which are likely to require the transport of large goods or large quantities of goods from	4.6M-RD. See 4.2M-RD.

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
		the commercial destination.	
4.2M. Ensure convenient and efficient freight access is enabled without compromising the amenity of activity centres or the surrounding land uses.	4.7M-S. See 4.2M-S.	4.7M-MD. Efficient access and egress shall be provided for freight, that does not compomise the function of the activity centre, threaten amenity of the surrounding land uses or compromise safety for any form of access, including for freight.	4.7M-RD. See 4.2M-RD.

Source: Pracsys 2013

Figure 38. Access performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
4.1P. Pedestrian access should be safe and convenient for all people of varying mobility. 'Varying mobility' includes but is not limited to able-bodied adults, children able to walk and those in prams, people using walking aids, people in wheelchairs, gophers or other mobility devices, and people using visual aids. 'Safe' access refers to safety from other vehicles, inlcuding bicycles, cars, public transport and freight while walking or crossing transport routes for other access modes.	4.1P-S. The need for safe, convenient pedestrian access to core activity areas for people of all levels of mobility should be considered and addressed at the structure plan level.	4.1P-MD. Where pedestrian access is provided as part of a development, safe and convenient access for people of all levels of mobility must be provided between the development and other areas of activity and access routes.	4.1P-RD. Where pedestrian access is provided as part of a development, proponents should demonstrate how safe, convenient pedestrian access will be achieved.
4.2P. High levels of pedestrian comfort should facilitate access by walking, rather than forming a barrier to walking in inclement weather. In the context of the Perth climate, 'inclement weather' refers to excessive rain, wind and sunlight/heat. Design of the activity centre should minimise the contribution to the urban heat island.	4.2P-S. Proposed road widths must allow for shading of the pedestrian realm.	4.2P-MD. Where a development abuts or includes part of the public realm, shelter and shade should be provided to pedestrians. Awnings and street trees providing at least 50% coverage to a pedestrian pathway are both acceptable solutions.	4.2P-RD. Developments should contribute to improving the level of sheltering of the pedestrian realm. Where development is a change of use, the proponent may be exempt from compliance when they can demonstrate it is not appropriate for them to comply.
4.3P. See 4.2P.	4.3P-S. Measures to reduce the urban heat island are encouraged. These may include green spaces adjacent to or within activity centres, street trees with large canopies, and minimisation of hard surfaces in dark colours.	4.3P-MD/RD. Contributions to reducing the urban heat island are encouraged. Where green spaces, soft landscaping and trees are used to cool the urban environment, an adequate irrigation supply in periods of high heat and low rainfall should be provided. Large expanses of very dark hardstand should be avoided.	

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
4.4P. Cycling should be safe and convenient for cyclists of varying abilities and those accessing the centre for different purposes. 'Varying abilities' refers to the range of risk and comfort cyclists are willing to compromise on, and includes but is not limited to children are legally allowed to cycle on footpaths, to occasional recreational cyclists unused to dealing with traffic or cycling on the road, to frequent commuter cyclists who are confident cycling on the road with high volumes of traffic. 'Safe' access refers to the need to minimise the risk to cyclists of all abilities from other transport modes or the physical environment. 'Convenient' access refers to the degree to which cycling for different purposes is encouraged or discouraged through the infrastructure provided. Different purposes may include shopping, commuting to work, cycling for leisure or recreation, and so on.	4.4P-S. The structure plan should demonstrate how cyclists of varying abilities will be able to access the centre safely and conveniently. Where on-road cycle paths are provided the need to protect cyclists from passing, turning and parked cars should be addressed. Where off-road cycle paths are provided the need to separate pedestrians and cyclists should be addressed.	4.4P-MD. End of trip facilities for cyclists should be provided for visitors and employees. End of trip facilities for visitors should include convenient and highly visible parking. End of trip facilities for employees should include secure parking, showers and changing facilities, and lockers. Sharing of end of trip facilities is encouraged.	4.4P-RD. Proponents should demonstrate how cyclists visiting the development can be accommodated. Where no changes are possible to accommodate cyclists, the proponent is required to demonstrate this.
4.5P. Frequency and location of public transport access should support the vision of the structure plan.	4.5P-S. The structure plan should address the need for high frequency public transport to provide access to and from the core of the centre for residents, visitors and workers. Where existing public transport services are expected to be insufficient to meet the needs of users visiting the centre in the future, developers are encouraged to engage with the Public Transport Authority to discuss potential solutions.	4.5P-MD/RD. Public transport access points should be near the core of activity, but should not impede the movement of pedestrians and cyclists or threaten amenity.	
4.6P. Parking provision is minimized rather than maximized.	4.6P-ALL. The structure plan or development application should identify the minimum and maximum amounts of parking required to service the activity centre. Minimum levels of parking are preferred to allow alternative forms of transport to be accommodated. Parking beyond the maximum needed should not be provided. Reference should be made to the activity centre vision, functions and intended land uses.		

Source: Pracsys 2013

5.5.2.5 Resource Use

Resource use can be defined as *'minimizing the use of natural resources within a place and to access a place. This includes use and replacement of water, energy, building materials and so on.*'

Minimizing resource use in activity centres, unlike the other areas of assessment identified, does not directly impact the overall performance of the activity centre. However, it does have the potential to impact ongoing costs associated with maintenance and running of an individual activity centre in the future, or it can impact the overall sustainability of urban form. Promoting a more energy efficient urban form is the third primary goal of SPP 4.2, with reducing energy use, water use and infrastructure specifically targeted by the policy.

Costs associated with the maintenance and running of an activity centre are typically a cost to the land owner or local government, but have the potential to be passed on to businesses or consumers. Activity centres that have reduced requirements for energy and water resources also have the potential to be less sensitive to supply shocks. Alternatively, a poorly maintained activity centre has the potential to impact on amenity.

Figure 39. Resource use minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
5.1M. Provide for valuing the natural environment and minimising resource use in activity centres.	5.1M-S. Structure plans shall demonstrate how resource use will be minimised. Resources include building materials, energy and water. Resource minimisation may include but is not limited to building rating systems, renewable energy, recycling and use of durable or renewable materials.	5.1M-MD/RD. Developers shall demonstrate how water, energy and building materials will be minimised.	

Source: Pracsys 2013

Figure 40. Resource use performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
5.1P. Reduce water use and facilitate water recycling.	5.1P-S. The structure plan should consider the need for stormwater management and water recycling across the structure plan area, or as part of wider district management plan.	5.1P-MD/RD. Where possible stormwater runoff should be reused on site. Reuse may include filtering and irrigation of soft landscaping.	
5.2P. See 5.1P.	5.2P-S. The structure plan should consider the need to use low-water use plant species for landscaped areas.	5.2P-MD/RD. Where soft landscaping is provided, low-water use plant species are encouraged. Where plant species are proposed that are listed as high-water use plants, the developer is required to demonstrate why this selection is appropriate.	
5.3P. Reduce energy use and facilitate use of renewable energy sources.	5.3P-S. The structure plan should consider the potential impact of building bulk/height and access to natural sunlight for solar collectors.	5.3P-MD/RD. Building design should not prevent nearby buildings from being capable of mounting solar collectors or wind turbines.	
5.4P. See 5.3P.	5.4P-S. The structure plan should consider solar orientation of lots and buildings in order to minimise energy use.	5.4P-MD/RD. Building design should optimise solar efficiency and minimise energy use where possible.	
5.5P. Reduce the net use of building materials, reduce need for maintenance and encourage use of renewable materials.	5.5P-S. Not applicable.	5.5P-MD/RD. Building and landscaping materials should be durable, low maintenance and sourced from renewable resources where possible.	

Source: Pracsys 2013

5.5.2.6 Economic Performance

Economic performance can be defined as *'the contribution of the place to the wider economy. This may include employment quantity and quality, types of land uses and industries, skills match of local labour force, and so on.'*

Economic transactions are essentially the reason activity centres exist. While some activities within centres do not involve economic transactions, or economic transactions may be subsidised, the presence of goods and services to be consumed are the primary generator of trips to activity centres. Goods and services will only continue to be available in an activity centre if economic transactions continue to be viable. However, this does not mean that all activity centres should accommodate all economic transactions. Economic activity within activity centre is also important to assist in achieving the Directions 2031 goal of a dispersed pattern of employment across the Perth and Peel Regions. To facilitate greater levels of employment, especially strategic employment, away from the Perth CBD and the Central Sub-Region of Perth consideration of employment quantity and quality needs to be given as part of activity centre development.

Figure 41. Economic performance minimum standards

Goals	Minimum Standards		
	Structure Plans	Major Development Applications	Minor Development Applications
6.1M. Ensure the activities accommodated within the centre are in line with the vision for the centre.	6.1M-S. All centres shall provide land uses and land capacity in line with the vision for the centre.	6.1M-MD. Land use proposed shall be capable of accommodating the type of employment and industries outlined in the vision for the centre.	6.1M-RD. Not applicable.
6.2M. Ensure meeting employment goals are considered in the planning of activity centres.	6.2M-S. Structure plans shall demonstrate the capacity to achieve the employment quantum goals for the centre.	6.2M-MD. Not applicable.	6.2M-RD. Not applicable.
6.3M. Ensure employment quality is understood and considered where applicable to centre vision and function.	6.3M-S. Commentary on employment quality where applicable to centre function/vision is strategic (not population-driven).	6.3M-MD. Not applicable.	6.3M-RD. Not applicable.

Source: Pracsys 2013

Figure 42. Economic performance performance criteria

Goals	Performance Criteria		
	Structure Plans	Major Development Applications	Minor Development Applications
6.1P. Employment concentration should be of sufficient levels to effect a travel mode shift from private vehicles to walking or public transport.	6.1P-S. Employment quality should be aligned with the vision for the centre. Employment quality refers to the proportion of strategic jobs (high knowledge and/or export-orientated) to the proportion of population-driven jobs (those directly generated by the catchment population).	6.1P-MD. Employment-intensive land uses and business models are encouraged. Employment intensity provided should be in line with the vision for the activity centre, and contribute significantly to the overall centre employment target.	6.1P-RD. Employment-intensive land uses and business models are encouraged.
6.2P. Employment quality should be aligned with the vision for the centre. Employment quality refers to the proportion of strategic jobs (high knowledge and/or export-orientated) to the proportion of population-driven jobs (those directly generated by the catchment population).	6.2P-S. The structure plan should state the minimum and ideal employment quality ratios. Land uses proposed in the structure plan should have the potential to support the employment quality set out in the vision.	6.2P-MD. Not applicable.	6.2P-RD. Not applicable.

Source: Pracsys 2013

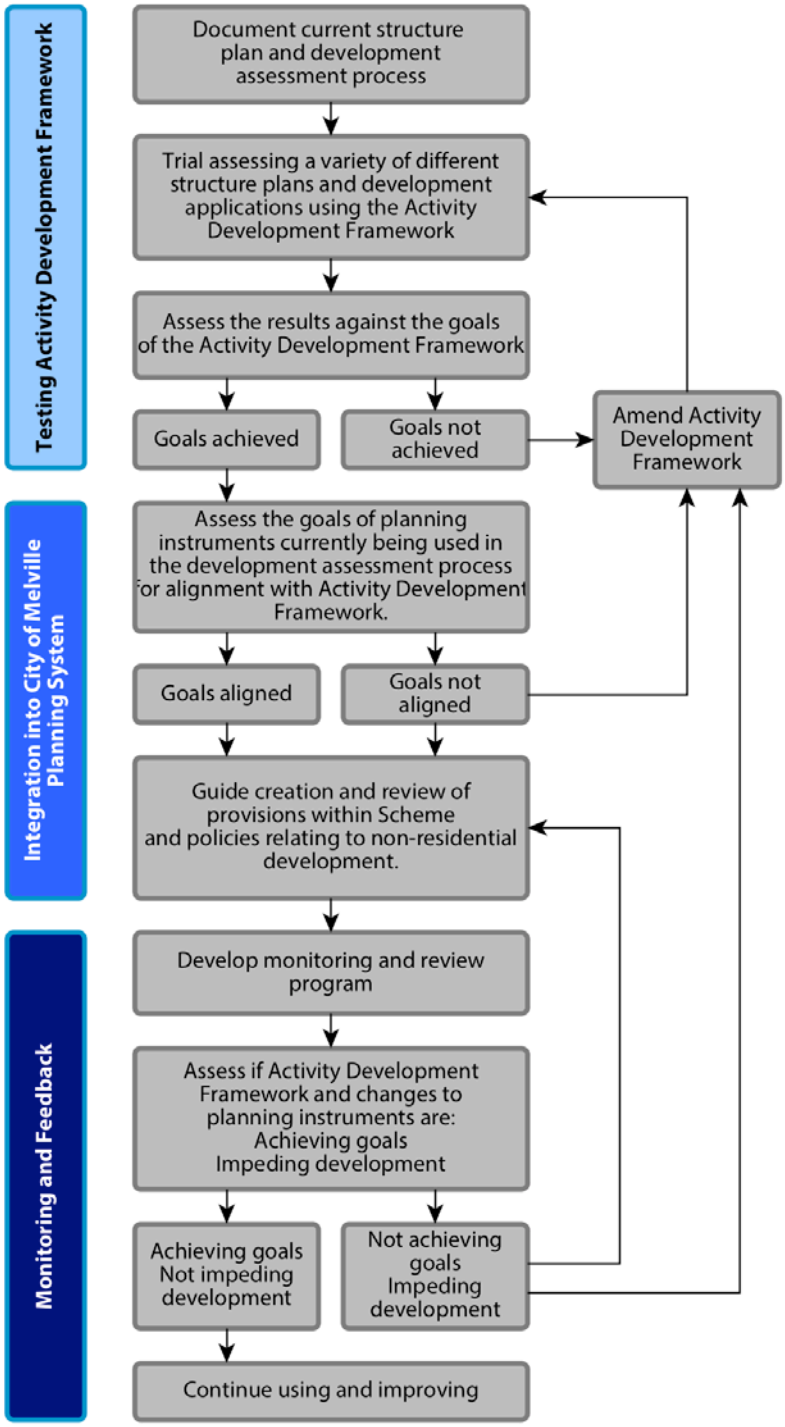
6 Implementation of the LCACS

The success of the City of Melville LCACS depends on the testing, feedback and monitoring of the results. Implementation of the LCACS will require a range of actions to be taken by the City of Melville. These include:

- Testing the practical application of the Activity Development Framework within the existing City of Melville planning system to ensure the framework has the intended consequences and does not overly complicate planning and development assessment;
- Amending the framework as identified by the testing process to ensure it fits in with the existing City of Melville planning system;
- Integrating the Activity Development Framework into the City of Melville planning system where the need is identified by the testing process or within the LCACS, to ensure the success of the LCACS;
- Communication of the Activity Development Framework to City of Melville planning and administration staff, potential developers and the local community;
- Ongoing monitoring of the successes and failures of the Activity Development Framework to achieve the stated goals;
- Applying feedback from monitoring success to amend the Activity Development Framework where identified.

A suggested logic flow for testing, integrating and monitoring of the Activity Development Framework is shown in Figure 43.

Figure 43. Integrating the Activity Development Framework into the City of Melville planning system



Source: Pracsys 2013

6.1 Testing the Activity Development Framework

The Activity Development Framework needs to be rigorously tested prior to integrating into the City of Melville planning system. Testing should include:

- Documentation of the current structure plan assessment and development assessment process to determine where the Activity Development Framework best fits within the existing system;
- Trial assessing a variety of already approved/refused different structure plans and development applications using the Activity Development Framework to understand how the assessment process is changed and to determine what the outcomes are; and
- Compare the results of the trial assessments against the goals of the Activity Development Framework. If the goals are not achieved the Activity Development Framework may need reassessment and amending. If goals are achieved the Activity Development Framework should be ready for integration into the City of Melville planning system.

6.2 Integration in the City of Melville Planning System

In order to be effective the LCACS will need to be integrated into the City of Melville planning system. Initially the goals of the planning instruments currently being used in the development assessment process should be assessed to determine their alignment with the goals of the Activity Development Framework. If goals are not in alignment the goals of the LCACS and other planning instruments should be reassessed and a decision made on how to revise the goals so all instruments are in agreement.

Next, where the LCACS should influence strategic and statutory planning instruments currently being used by City of Melville should be assessed, in particular the Local Planning Scheme and local planning policies. It will need to be determined whether changes to planning instruments are required, or additional planning instruments to be developed, to properly implement the LCACS.

The LCACS should be assessed against the Scheme to determine if there are conflicts between the two. If this is found to be the case a decision will need to be made on which instrument to give priority to. It may be also be desirable to incorporate some aspects of the LCACS into the Scheme if they are deemed important enough to need the additional strength of the Scheme to implement effectively. However, caution should be taken to ensure that the LCACS is not implemented rigidly and all possible unintended consequences are assessed before this is contemplated.

At present there are a range of local planning policies covering some of the criteria included in the LCACS activity development framework, but they are generally targeted at specific land uses. It is expected the LCACS will remove the need for some planning policies to exist, while others may need to be revised to ensure better guidance and consistency with the LCACS. The need for additional planning policies to clarify some aspects of the LCACS should also be investigated.

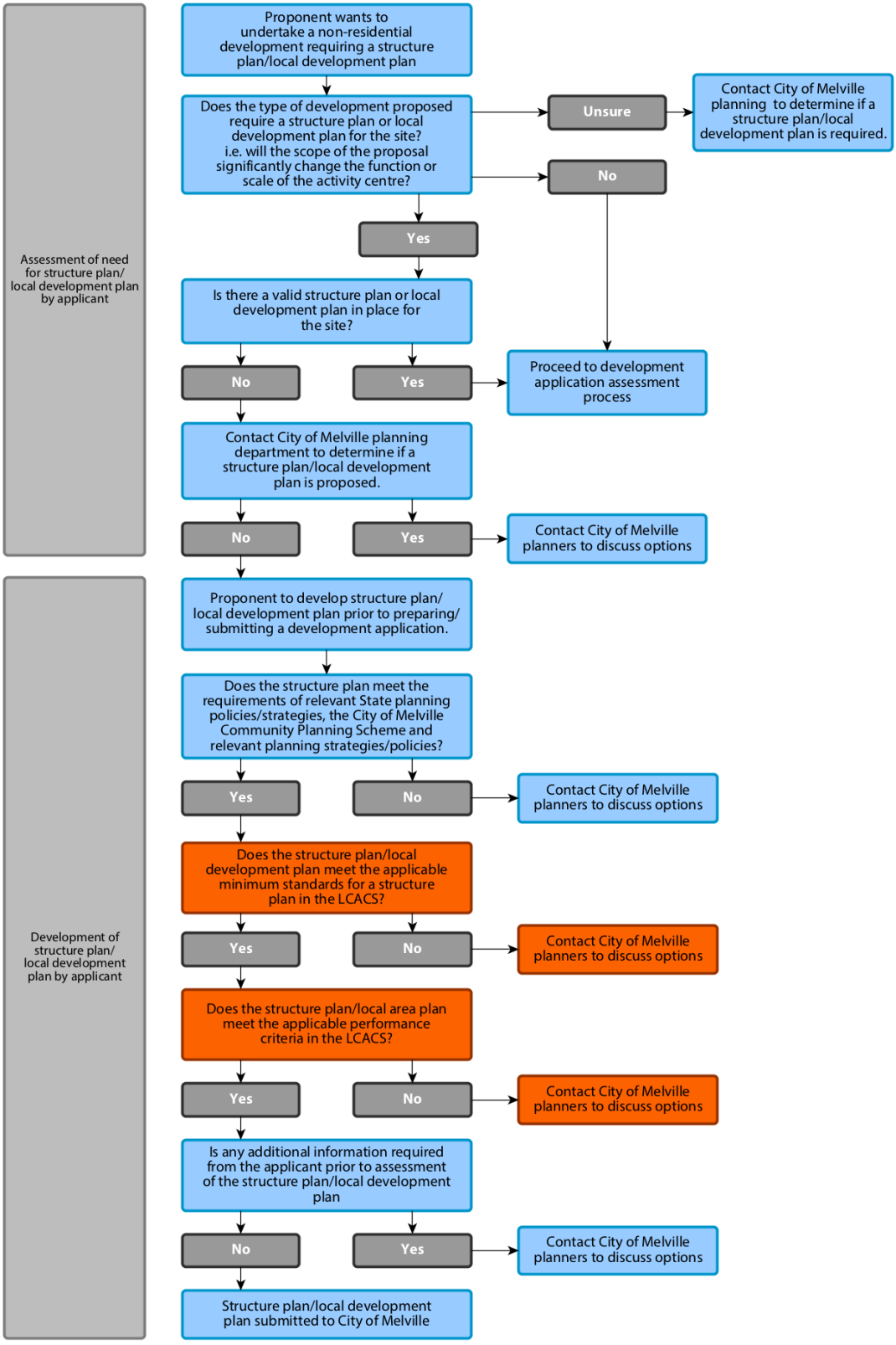
Next, it should be determined where strategic planning instruments, such as the Local Planning Strategy or Strategic Community Plan, can be used to assist further progression of the Activity Development Framework and the identification of visions for activity centres.

Next, other planning instruments or actions may be deemed appropriate to assist in implementation of the LCACS. These may include but are not limited to:

- Urban design guidelines;
- Neighbourhood plans;
- Economic development strategies;
- Governance frameworks;
- Structure plans;
- Capital works programs; and
- Community events.

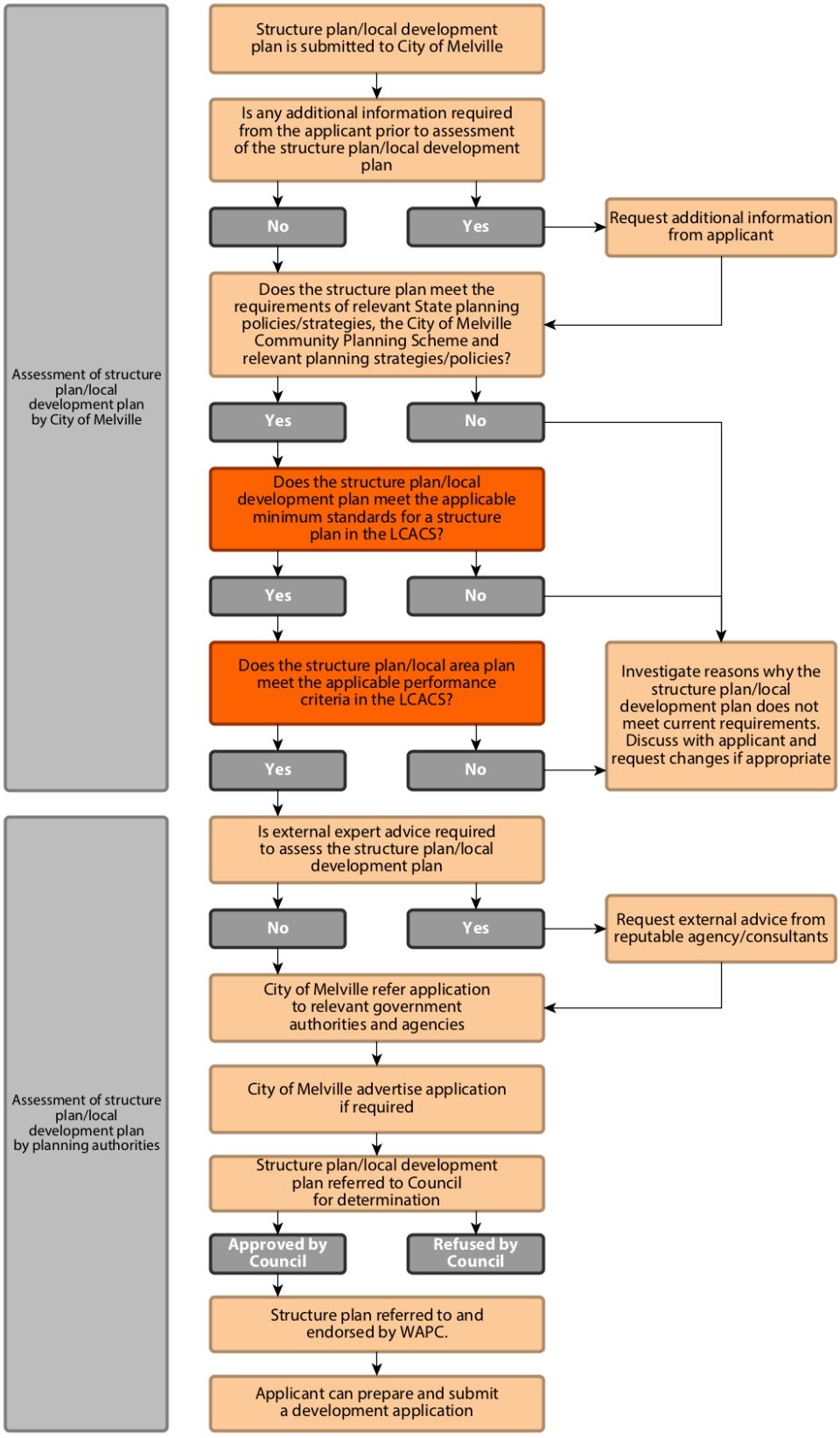
Finally, embedding the Activity Development Framework into the structure plan/local development plan and development assessment process is vital to ensure the LCACS is properly implemented. A general guide to the integration of the Activity Development Framework for the structure plan/local development plan process by an applicant is shown in Figure 44, and the expected structure plan/local development plan assessment process shown in Figure 45. A general guide to the integration of the Activity Development Framework into the development assessment process is shown for an application in Figure 46. and the assessment process by City of Melville shown in Figure 47.

Figure 44. Structure plan/local development plan process by applicant



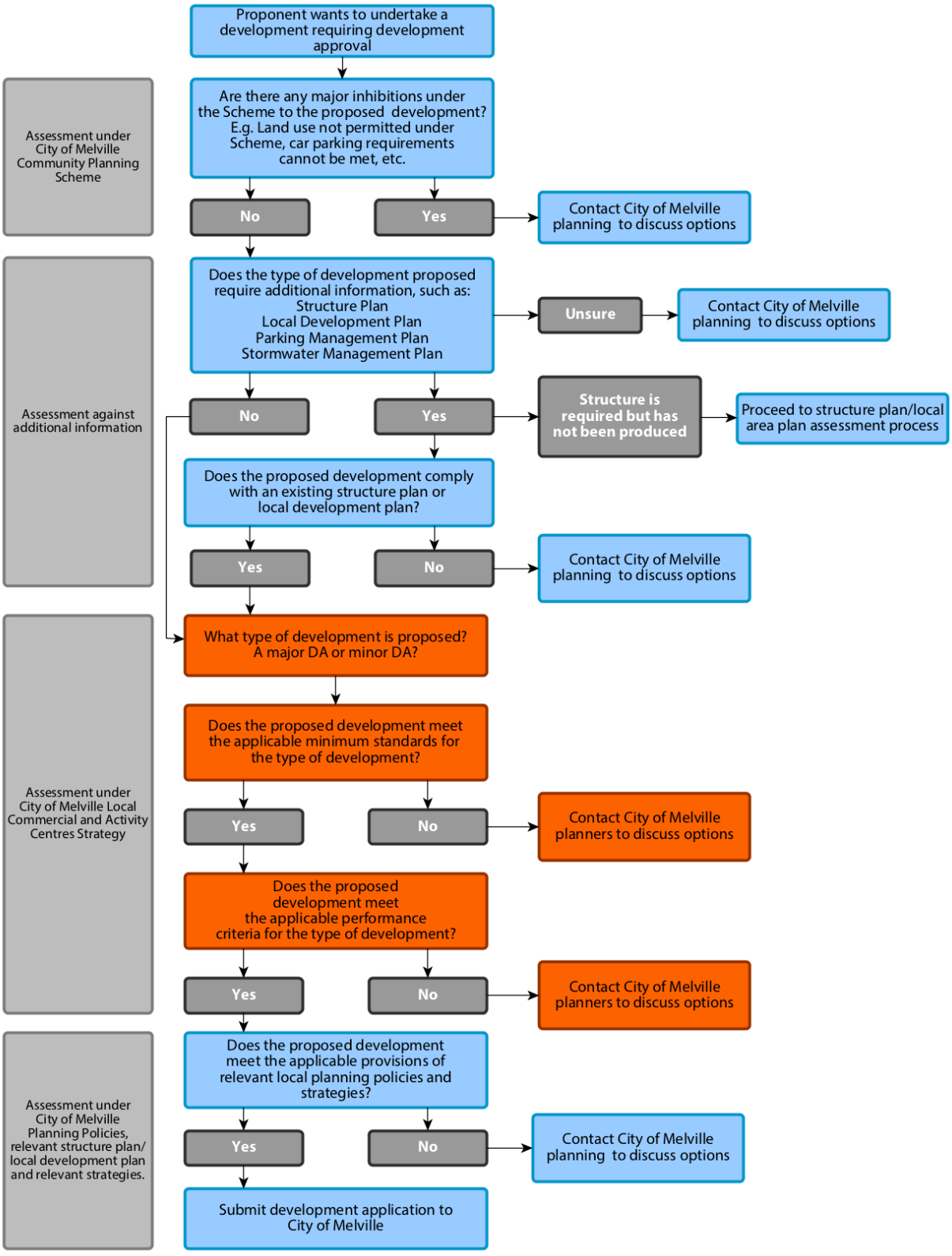
Source: Pracsys 2013

Figure 45. Structure plan/local development plan assessment process by City of Melville



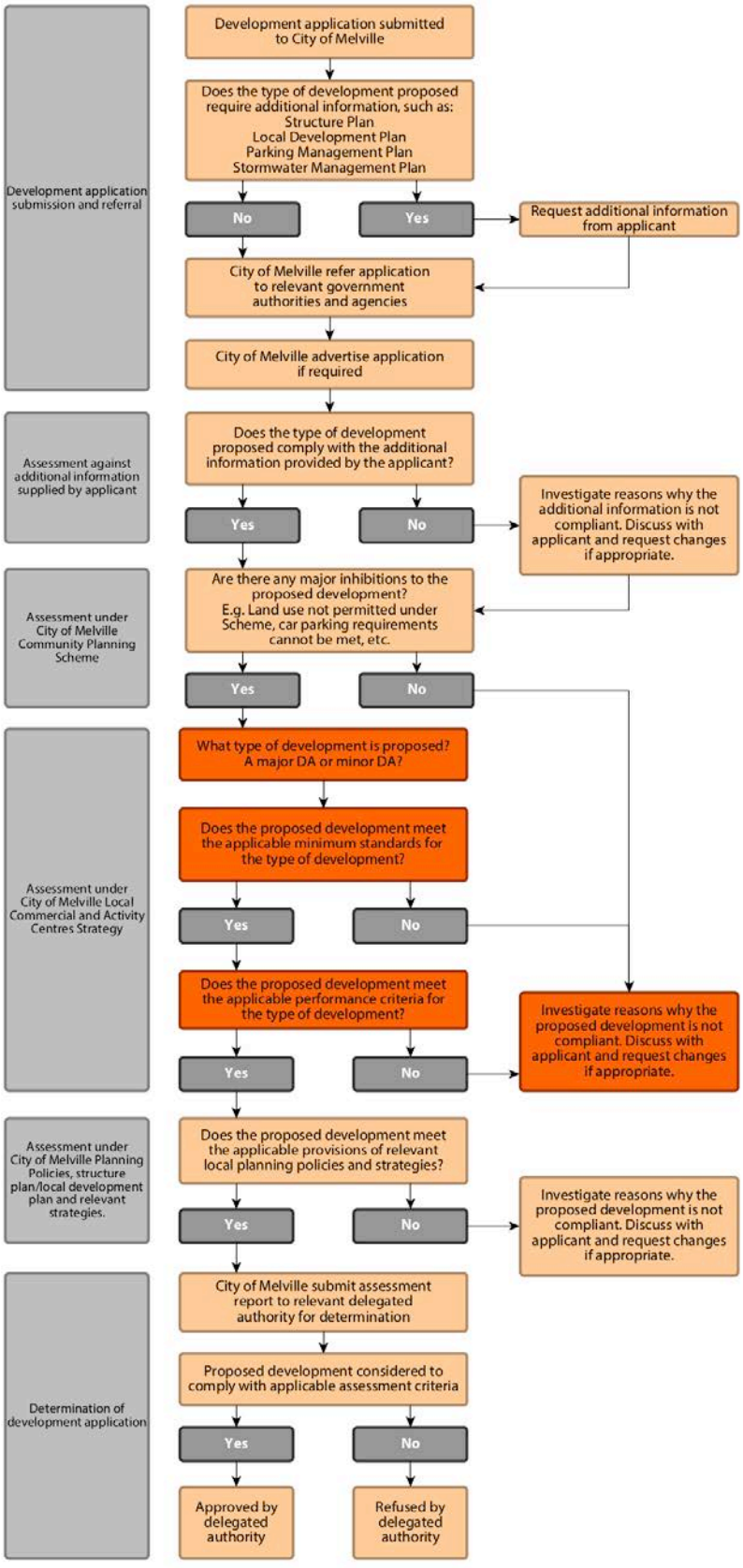
Source: Pracsys 2013

Figure 46. Development application process by applicant



Source: Pracsys 2013

Figure 47. Development assessment process by City of Melville



Source: Pracsys 2013

6.3 Monitoring and Review

The final stage of integrating the LCACS into the City of Melville planning system is development of a monitoring and review program. This program should have a defined:

- Timeframe for periodic review of the LCACS to ensure principles, goals and implementation criteria are still relevant and effective;
- Identified triggers for review of the LCACS outside the periodic review timeframe to ensure the LCACS can be reviewed if significant changes occur in non-residential development, commercial business models, internal City of Melville structures and so on; and
- A method is identified and implemented for collection of data on the effectiveness of the LCACS provisions to facilitate review of the strategy.

A successful monitoring and review program will ensure the LCACS stays current and relevant without the need for a new strategy every five years. It will also ensure that if the desired outcomes are not being achieved this can be identified as early as possible and amendments made to deliver the desired outcomes.

7 Appendix A: Retail Market Potential

The following appendix sets out the retail market potential for the aspirational and conservative scenarios in terms of floorspace demand. A minimum and maximum floorspace demand figure has been provided for both scenarios along with supply assumptions.

The floorspace demand numbers indicate the capacity of the catchment for each activity centre in the City of Melville to support retail floorspace over the next ten years, given current assumptions about household expenditure and household to floorspace ratios hold true. Results are presented for all high level activity centres (district centres and above) in terms of future retail floorspace minimum and maximum levels for each scenario modelled. The minimum and maximum levels of floorspace reference the minimum and maximum levels of productivity the floorspace can viably trade under. Trading below the minimum floorspace productivity means demand is likely too low to keep the floorspace financially viable. Trading above the maximum floorspace productivity means demand is likely to be greater than the floorspace has the capacity to support without creating negative externalities, such as parking congestion and poor service to customers. Any result in the range between the minimum and maximum is considered ideal to ensure the viability of the network as a whole.

These figures are intended to be used as a guide for planners, developers and the community on the likely patterns and scale of retail development for the future. Retail demand figures should not be used to restrict the scale of future development but to understand the trends in retail growth or contractions across the City of Melville and the implications for activity centres. If a proposed development results in retail floorspace supply significantly higher than modelled maximum demand for an activity centre, the reasons why the proposed supply can be supported should be explored. There are a range of reasons why higher levels of supply may be appropriate if circumstances change, leading to more favourable trading conditions. These include but are not limited to:

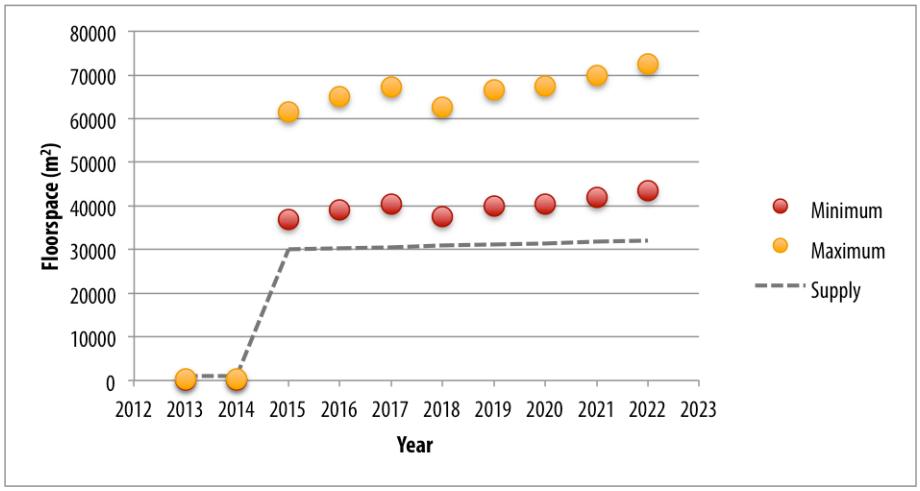
- The additional floorspace is of sufficient scale to increase the size of the catchment, therefore increasing the overall expenditure capture for the centre, enabling a larger floor area to be supported;
- The population within the catchment has increased more than predicted;
- The population within the catchment has become more affluent, increasing the potential expenditure at the centre;
- The ratio of floorspace to population has increased due to changes in retail business models and user behaviour;
- Access to the centre is improved, increasing the catchment size and/or capture;
- Changes to the tenancy mix or product mix offered result in greater expenditure capture of the catchment; and
- Other changes to user behaviour drivers result in greater expenditure capture or catchment size.

7.1 Retail Market Potential - Aspirational Scenario

The following section shows the modelled retail market potential under the aspirational scenario for Murdoch Specialised Centre, Booragoon Secondary Centre and the six district centres located in the City of Melville.

7.1.1 Murdoch Specialised Centre

Figure 48. Murdoch retail market potential graph - aspirational scenario



Source: Pracsys 2013

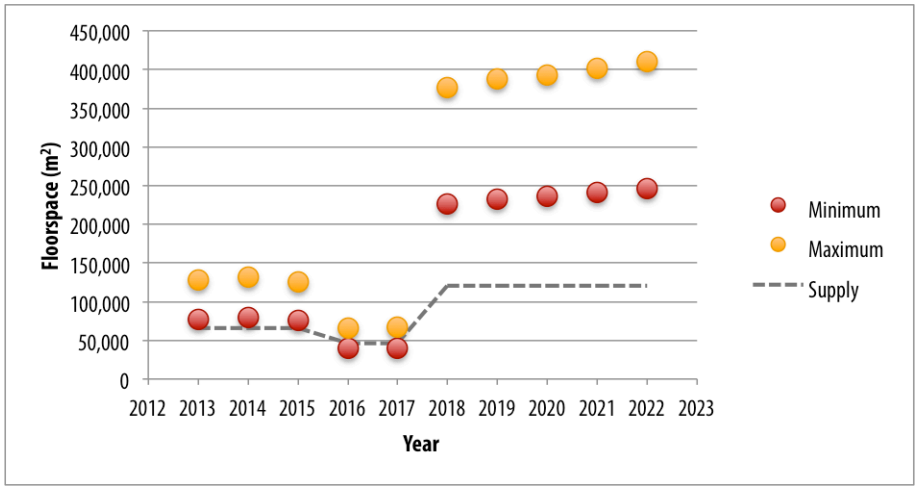
Figure 49. Murdoch retail market potential table - aspirational scenario

Floorspace	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Minimum	170	174	36,876	39,037	40,418	37,643	40,010	40,514	41,986	43,468
Maximum	283	290	61,460	65,062	67,364	62,738	66,683	67,524	69,977	72,446
Supply	1,029	1,029	30,029	30,323	30,617	30,911	31,205	31,499	31,793	32,087

Source: Pracsys 2013

7.1.2 Booragoon Secondary Centre

Figure 50. Booragoon retail market potential graph - aspirational scenario



Source: Pracsys 2013

Figure 51. Booragoon retail floorspace potential table - aspirational scenario

Floorspace	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Minimum	77,158	78,987	75,614	39,307	40,142	225,818	232,901	235,895	240,967	245,973
Maximum	128,597	131,646	126,023	65,512	66,904	376,363	388,168	393,158	401,611	409,955
Supply	65,979	65,979	65,979	46,185	46,185	120,000	120,000	120,000	120,000	120,000

Source: Pracsys 2013

7.1.3 Myaree Mixed Business Precinct

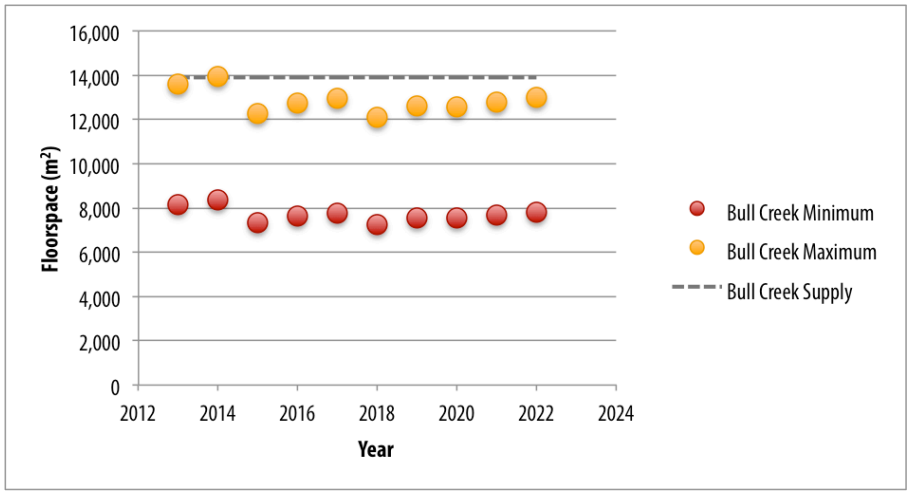
Figure 52. Myaree Mixed Business Precinct retail floorspace potential table - aspirational scenario

Floorspace	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Minimum	63,462	64,958	64,559	69,256	70,776	57,465	58,840	60,229	61,634	63,035
Maximum	105,770	108,263	107,598	115,426	117,961	95,776	98,067	100,382	102,723	105,058
Supply	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226

Source: Pracsys 2013

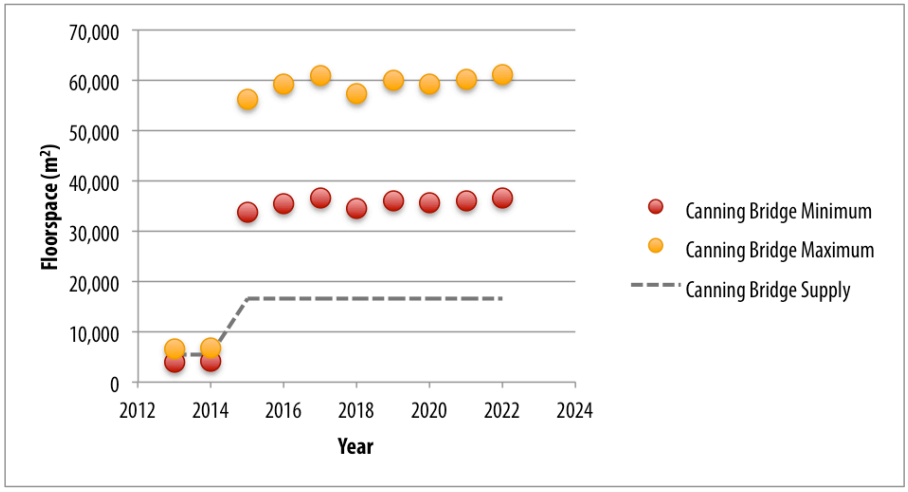
7.1.4 District Centres

Figure 53. Bull Creek retail market potential graph - aspirational scenario



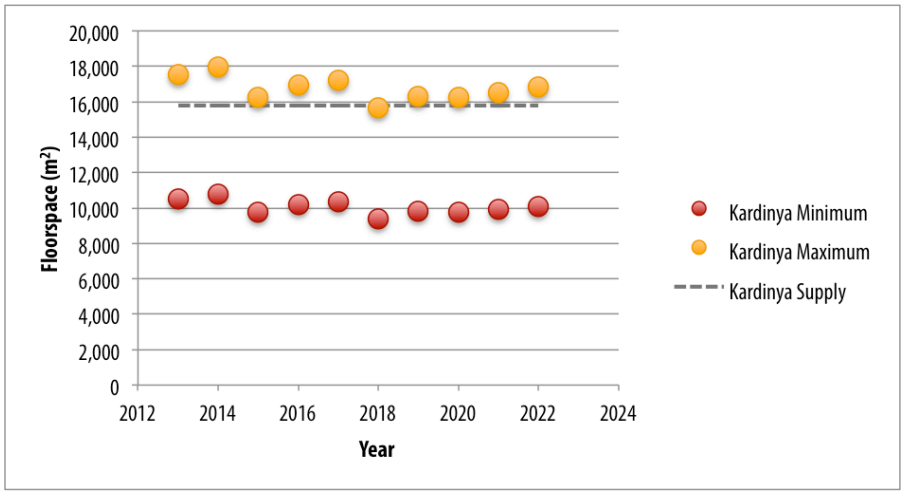
Source: Pracsys 2013

Figure 54. Canning Bridge retail market potential graph - aspirational scenario



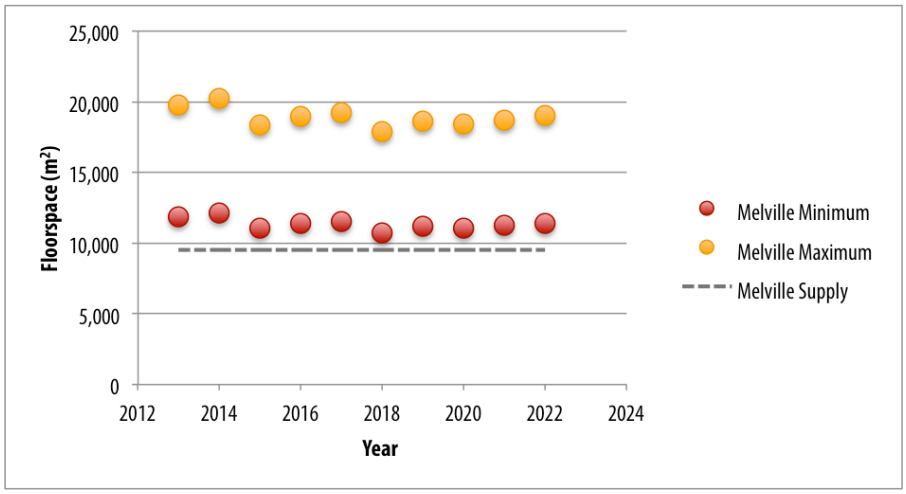
Source: Pracsys 2013

Figure 55. Kardinya retail market potential graph - aspirational scenario



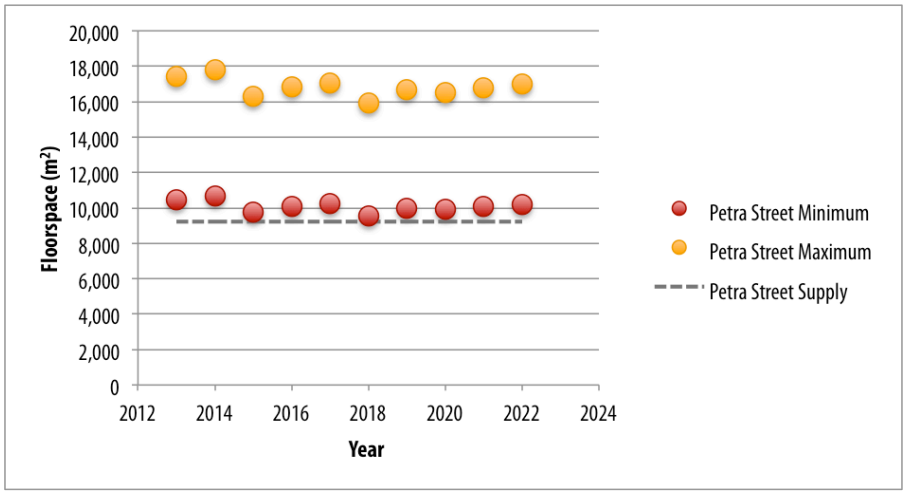
Source: Pracsys 2013

Figure 56. Melville retail market potential graph - aspirational scenario



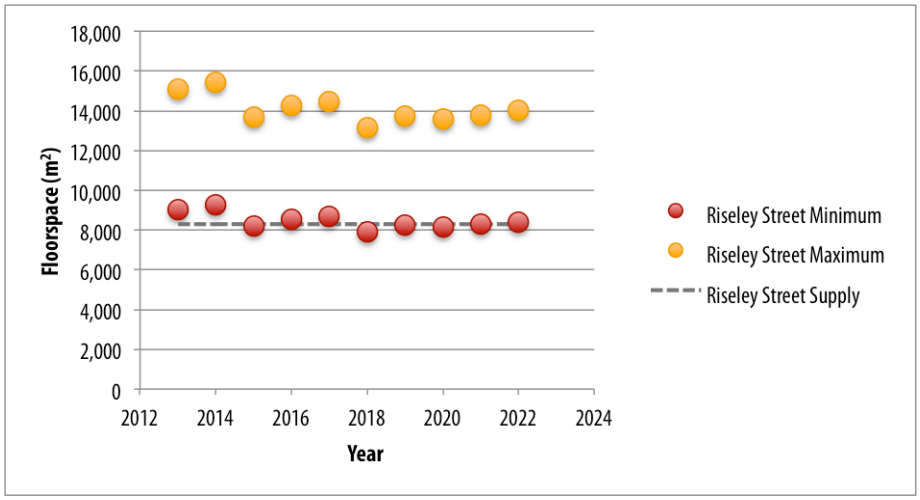
Source: Pracsys 2013

Figure 57. Petra Street retail market potential graph - aspirational scenario



Source: Pracsys 2013

Figure 58. Riseley Street retail market potential graph - aspirational scenario



Source: Pracsys 2013

Figure 59. District centres retail floorspace potential table - aspirational scenario

Centre Name	Floorspace	Year									
		2013 (m²)	2014 (m²)	2015 (m²)	2016 (m²)	2017 (m²)	2018 (m²)	2019 (m²)	2020 (m²)	2021 (m²)	2022 (m²)
Bull Creek	Minimum	8,168	8,357	7,352	7,638	7,765	7,256	7,570	7,538	7,676	7,811
	Maximum	13,613	13,929	12,254	12,730	12,942	12,093	12,617	12,563	12,794	13,018
	Supply	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894
Canning Bridge	Minimum	3,991	4,086	33,773	35,507	36,581	34,466	35,977	35,590	36,136	36,656
	Maximum	6,652	6,810	56,288	59,179	60,969	57,444	59,962	59,316	60,227	61,094
	Supply	5,424	5,424	16,624	16,624	16,624	16,624	16,624	16,624	16,624	16,624
Kardinya	Minimum	10,532	10,789	9,760	10,167	10,345	9,386	9,797	9,748	9,926	10,099
	Maximum	17,553	17,981	16,266	16,945	17,242	15,644	16,329	16,246	16,543	16,831
	Supply	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792
Melville	Minimum	11,885	12,142	11,039	11,398	11,544	10,727	11,195	11,074	11,242	11,405
	Maximum	19,808	20,236	18,398	18,997	19,240	17,879	18,659	18,456	18,737	19,008
	Supply	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526
Petra Street	Minimum	10,470	10,698	9,780	10,089	10,223	9,570	9,998	9,899	10,059	10,215
	Maximum	17,449	17,831	16,300	16,815	17,039	15,951	16,663	16,498	16,766	17,024
	Supply	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217

Centre Name	Floorspace	Year									
		2013 (m²)	2014 (m²)	2015 (m²)	2016 (m²)	2017 (m²)	2018 (m²)	2019 (m²)	2020 (m²)	2021 (m²)	2022 (m²)
Riseley Street	Minimum	9,041	9,257	8,212	8,553	8,685	7,887	8,236	8,151	8,279	8,402
	Maximum	15,069	15,428	13,686	14,254	14,474	13,145	13,727	13,585	13,799	14,004
	Supply	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277

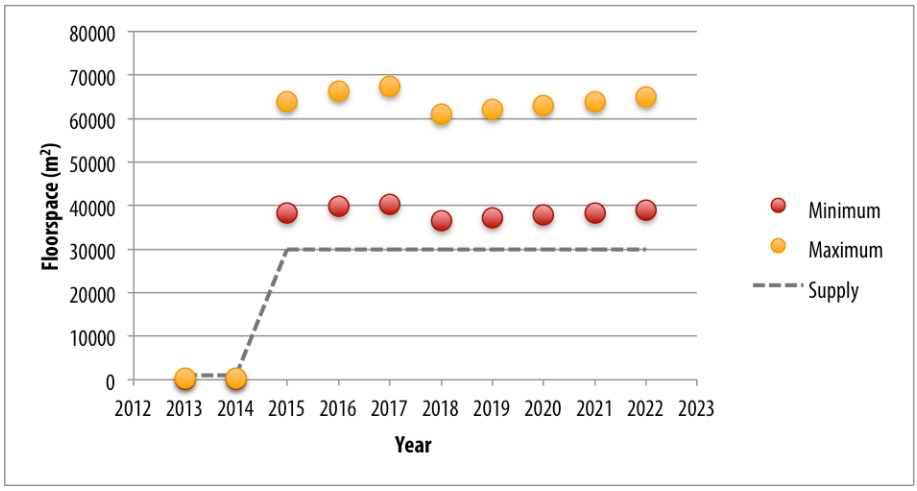
Source: Pracsys 2013

7.2 Retail Market Potential - Conservative Scenario

The following section shows the modelled retail market potential under the conservative scenario for Murdoch Specialised Centre, Booragoon Secondary Centre and the six district centres located in the City of Melville.

7.2.1 Murdoch Specialised Centre

Figure 60. Murdoch retail market potential graph - conservative scenario



Source: Pracsys 2013

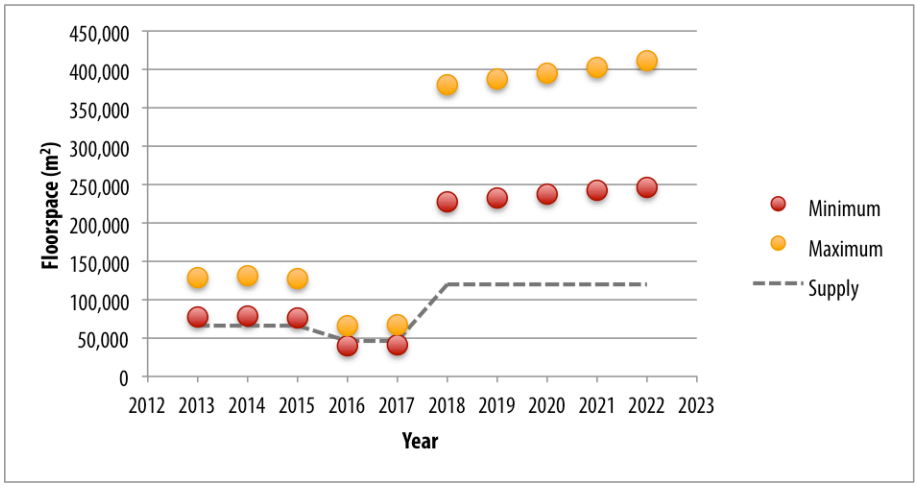
Figure 61. Murdoch retail floorspace potential table - conservative scenario

Floorspace	Year									
	2013 (m²)	2014 (m²)	2015 (m²)	2016 (m²)	2017 (m²)	2018 (m²)	2019 (m²)	2020 (m²)	2021 (m²)	2022 (m²)
Minimum	170	174	38,302	39,852	40,412	36,645	37,247	37,830	38,410	38,962
Maximum	283	290	63,836	66,420	67,354	61,076	62,078	63,050	64,016	64,937
Supply	1,029	1,029	30,029	30,029	30,029	30,029	30,029	30,029	30,029	30,029

Source: Pracsys 2013

7.2.2 Booragoon Secondary Centre

Figure 62. Booragoon retail market potential graph - conservative scenario



Source: Pracsys 2013

Figure 63. Booragoon retail floorspace potential - conservative scenario

Floorspace	Year									
	2013 (m²)	2014 (m²)	2015 (m²)	2016 (m²)	2017 (m²)	2018 (m²)	2019 (m²)	2020 (m²)	2021 (m²)	2022 (m²)
Minimum	77,158	78,987	76,746	39,873	40,639	227,728	232,450	237,133	241,866	246,497
Maximum	128,597	131,646	127,911	66,455	67,732	379,546	387,416	395,222	403,109	410,828
Supply	65,979	65,979	65,979	46,185	46,185	120,000	120,000	120,000	120,000	120,000

Source: Pracsys 2013

7.2.3 Myaree Mixed Business Precinct

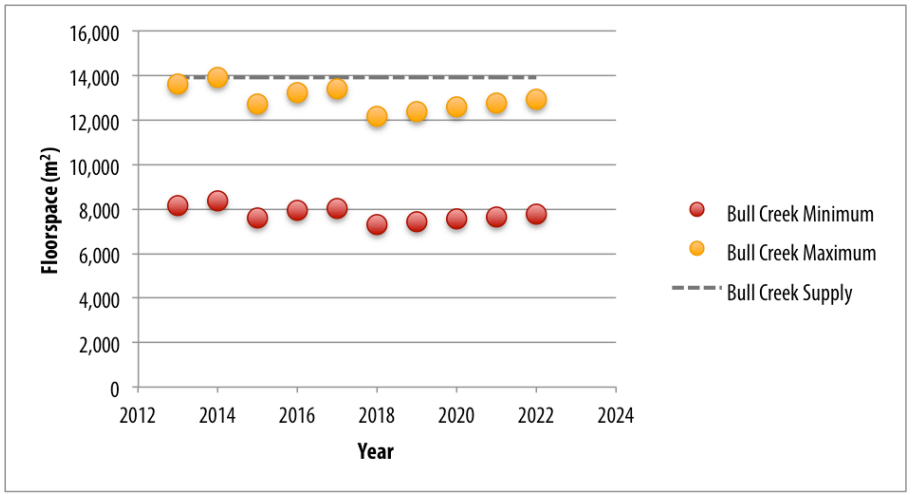
Figure 64. Myaree Mixed Business Precinct retail floorspace potential table - ~~aspirational~~ conservative. scenario

Floorspace	Year									
	2013 (m²)	2014 (m²)	2015 (m²)	2016 (m²)	2017 (m²)	2018 (m²)	2019 (m²)	2020 (m²)	2021 (m²)	2022 (m²)
Minimum	63,462	64,958	64,565	69,274	70,691	57,251	58,535	59,820	61,130	62,427
Maximum	105,770	108,263	107,609	115,456	117,818	95,418	97,558	99,701	101,884	104,046
Supply	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226	60,226

Source: Pracsys 2013

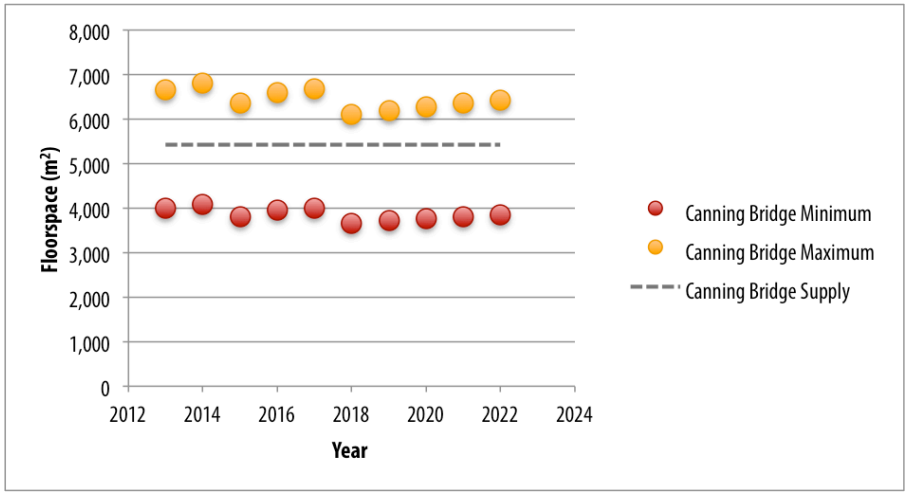
7.2.4 District Centres

Figure 65. Bull Creek retail market potential graph - conservative scenario



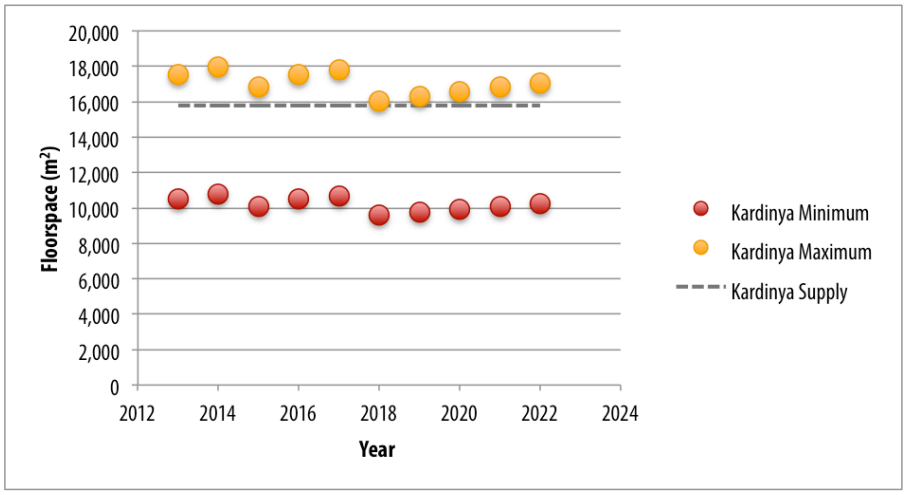
Source: Pracsys 2013

Figure 66. Canning Bridge retail market potential graph - conservative scenario



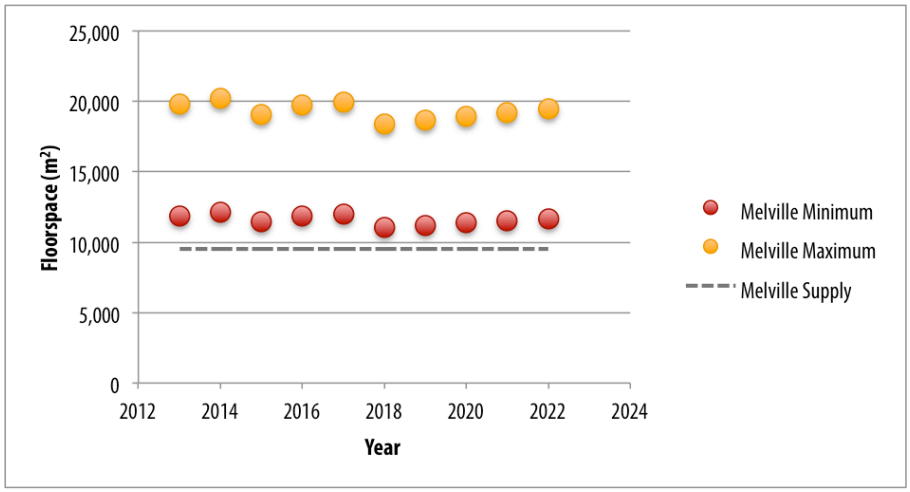
Source: Pracsys 2013

Figure 67. Kardinya retail market potential graph - conservative scenario



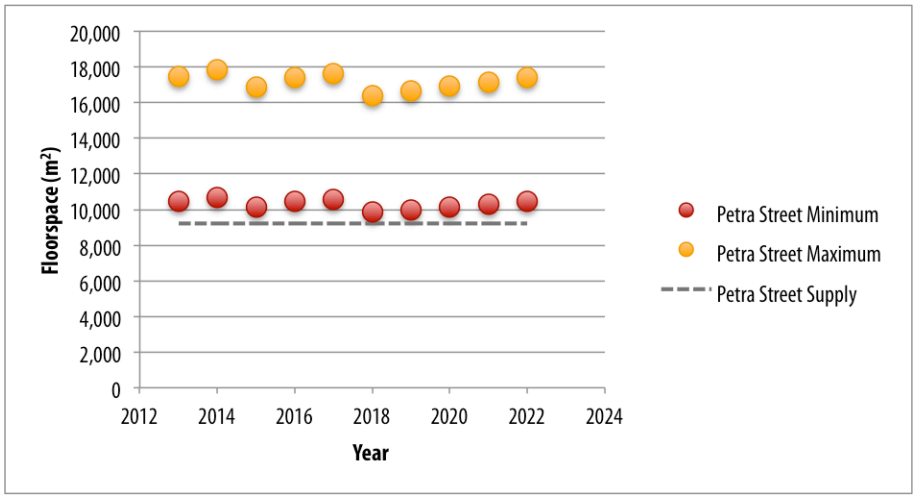
Source: Pracsys 2013

Figure 68. Melville retail market potential graph - conservative scenario



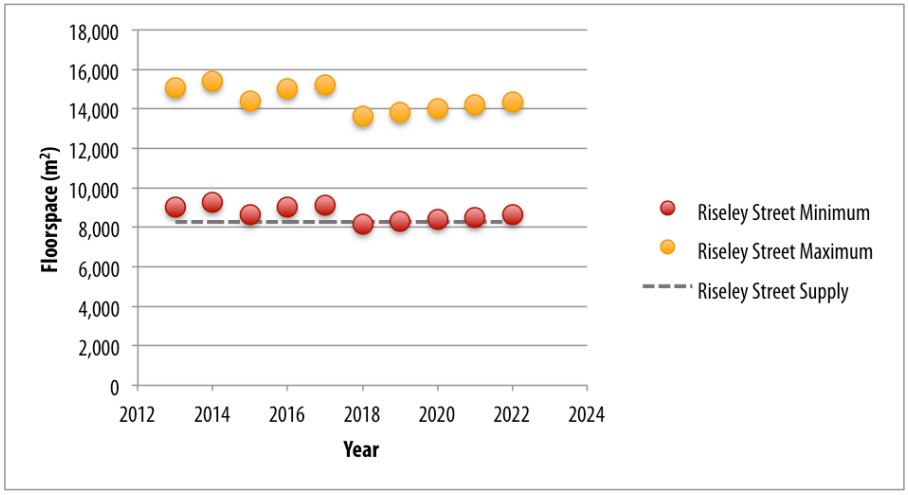
Source: Pracsys 2013

Figure 69. Petra Street retail market potential graph - conservative scenario



Source: Pracsys 2013

Figure 70. Riseley Street retail market potential graph - conservative scenario



Source: Pracsys 2013

Figure 71. District centres retail floorspace potential table - conservative scenario

Centre Name	Floorspace	Year									
		2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Bull Creek	Minimum	8,168	8,357	7,621	7,927	8,041	7,304	7,425	7,543	7,660	7,772
	Maximum	13,613	13,929	12,702	13,212	13,401	12,173	12,375	12,572	12,767	12,953
	Supply	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894	13,894
Canning Bridge	Minimum	3,991	4,086	3,814	3,957	4,008	3,661	3,714	3,764	3,813	3,859
	Maximum	6,652	6,810	6,356	6,595	6,680	6,102	6,190	6,273	6,355	6,431
	Supply	5,424	5,424	5,424	5,424	5,424	5,424	5,424	5,424	5,424	5,424
Kardinya	Minimum	10,532	10,789	10,101	10,536	10,695	9,628	9,785	9,939	10,092	10,238
	Maximum	17,553	17,981	16,835	17,559	17,825	16,047	16,309	16,565	16,819	17,063
	Supply	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792	15,792
Melville	Minimum	11,885	12,142	11,443	11,830	11,972	11,054	11,215	11,371	11,525	11,671
	Maximum	19,808	20,236	19,072	19,716	19,953	18,423	18,692	18,951	19,208	19,452
	Supply	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526	9,526
Petra Street	Minimum	10,470	10,698	10,117	10,449	10,581	9,847	10,000	10,148	10,296	10,437
	Maximum	17,449	17,831	16,862	17,414	17,635	16,412	16,666	16,914	17,160	17,394
	Supply	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217	9,217

Centre Name	Floorspace	Year									
		2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Riseley Street	Minimum	9,041	9,257	8,635	9,009	9,127	8,178	8,297	8,411	8,522	8,627
	Maximum	15,069	15,428	14,392	15,015	15,211	13,631	13,829	14,018	14,204	14,378
	Supply	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277	8,277

Source: Pracsys 2013

7.3 Retail Market Potential - Neighbourhood and Local Centres

For neighbourhood and local centres only retail floorspace supply figures have been presented, rather than providing minimum and maximum retail floorspace demand for the two scenarios. Gravity modelling does not always provide accurate data on actual demand for activity centres with less than 1000 m^2 retail floorspace as other factors influencing demand can become much more significant at small scales. Some reasons for this are:

- Gravity modelling does not account for user behaviour drivers other than floorspace scale and proximity to residences. Other drivers of user behaviour become significant factors when examining the viability of floorspace at small centres. These include the quality of the offer at small centres, the product mix available, the convenience of accessing goods and services and the alignment of these with the local user mix. Changes in user behaviour drivers have the potential to render marginal floorspace at small centres unviable.
- Small centres are often anchored by non-retail uses, such as office, service or entertainment uses. Trip generation to such a centre in these cases may not be accurately predicted by retail gravity modelling.

Changes to retail floorspace supply at neighbourhood and local centres as a result of new development should be considered in the context of the function of the centre and the change to the scale of the centre.

7.3.1 Neighbourhood Centres

The current retail floorspace supply for neighbourhood centres within the City of Melville is shown in Figure 72. These numbers should be used to understand the likely impact of proposed new development on the function and scale of the activity centres.

Figure 72. Neighbourhood centres retail floorspace supply

Centre Name	Floorspace Supply (m^2)
Applecross	3,802
Bateman Village	396
Brentwood	1,510

Centre Name	Floorspace Supply (m^2)
Farrington	2,656
Hislop Road	2,650
McKimmie Road North	2,719
Myaree	2,946
Parry Avenue	2,645
Winthrop	3,411
Willagee	1,392

Source: Pracsys 2013

7.3.2 Local Centres

The current retail floorspace supply for local centres within the City of Melville is shown in Figure 73. These numbers should be used to understand the likely impact of proposed new development on the function and scale of the activity centres.

Figure 73. Local centres retail floorspace supply

Centre Name	Floorspace Supply (m^2)
Archibald Street	244
Attadale	1,005
Bawdon	180
Bristol Avenue	745
Castle Hill	250
Gibson Street	190
Glenelg Street	173
Harrison Street	141
Hulme Court	Included in Myaree Mixed Business Precinct
Leeming Park	650
Marmion Street	1,234
Marshall Road	Included in Myaree Mixed Business Precinct
McKimmie Road South	255
North Lake Road	1,965
Palmyra	1,065
Mount Pleasant	236

Centre Name	Floorspace Supply (m^2)
Reynolds Road	182
Somerville	436
Stock Road	4,425
Webber Street	1,048
Winthrop Deli	100

Source: Pracsys 2013

8 Appendix B: Bulky Goods Market Potential

Retail market potential for bulky goods is shown in Figure 74. The floorspace demand for bulky goods has been extracted from the overall retail floorspace figures and presented separately. The majority of bulky goods floorspace is located within Myaree Mixed Business Precinct.

Figure 74. Bulky goods retail market potential table

Scenario	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Conservative	49,775	50,544	51,308	52,593	54,099	55,214	56,335	57,461	58,595	59,734
Aspirational	49,781	50,141	50,488	50,807	51,364	51,924	52,486	53,053	53,622	54,194

Source: Pracsys 2013

9 Appendix C: Office Market Potential

9.1 Population-Driven Office Market Potential

Population-driven office market potential is shown in Figure 75.

Population-driven offices accommodate industries or jobs directly related to servicing the needs of a specific catchment population. The location of population-driven businesses will be largely determined by the location of population growth, as well as activity centre hierarchy and maturity. Changes in population will increase demand for population-driven offices. Consumer services, producer services and knowledge intensive consumer services are collectively referred to as population-driven activity. Examples of population-driven office tenants are accountants, lawyers, medical consultants and printing services.

Figure 75. Population-driven office market potential table

Scenario	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Conservative	94,177	94,858	95,513	96,117	97,170	98,229	99,294	100,365	101,442	102,525
Aspirational	94,165	95,620	97,064	99,495	102,345	104,454	106,574	108,706	110,850	113,005
Supply	91,095	91,095	91,095	91,095	91,095	91,095	91,095	91,095	91,095	91,095

Source: Pracsys 2013

9.2 Strategic Office Market Potential

Strategic economic activity results from economic activity focused on the creation and transfer of goods and services to an external market. This type of activity occurs in places through the development of agglomerations of economic activity. As strategic activity is not related to population size of catchment size, demand cannot be modelled for the City of Melville.

The location of strategic offices is driven by a range of factors contributing to an enterprises' competitive advantage, including:

- Proximity of infrastructure specific to the firm, e.g. a harbour proximate to a ship-building firm;
- Proximity to the CBD of the region, in this case, Perth CBD;
- Proximity to other firms in the supply chain, e.g. proximity of lawyers and accountants used by an IT firm;
- The presence of suitable infrastructure, e.g. heavy rail stations and other high frequency public transport, high traffic road networks, retail and other floorspace useful to employees;
- Agglomeration of similar firms at the location;
- Personal choice of the firm owner or CEO.

Strategic office potential is related to the function of and vision for an activity centre, and the degree to which this can be fulfilled.

10 Appendix D: Entertainment Market Potential

Estimated entertainment market potential is shown in Figure 71. These figures are intended to be used as a guide and should not be used to limit future scale of entertainment floorspace.

Entertainment refers to a range of entertainment, recreation and cultural products that are sold directly to consumers. Central to the definition is not only the purpose of the product, but how it is consumed. Entertainment refers to entertaining goods and services consumed in the public realm. Entertainment goods that are purchased and consumed in the private realm fall under the definition of retail. For example the purchase of a computer game would be considered a comparison retail purchase. The purchase of tokens to play a computer game at Timezone would be considered entertainment. Other examples of entertainment products include bars and clubs, cinemas, bowling allies, museums and art galleries.

Figure 76. Entertainment market potential table

Scenario	Year									
	2013 (m^2)	2014 (m^2)	2015 (m^2)	2016 (m^2)	2017 (m^2)	2018 (m^2)	2019 (m^2)	2020 (m^2)	2021 (m^2)	2022 (m^2)
Conservative	70,983	71,496	71,990	72,446	73,239	74,038	74,840	75,647	76,459	77,275
Aspirational	70,974	72,071	73,159	74,991	77,140	78,729	80,327	81,934	83,550	85,174
Supply	68,674	68,674	68,674	68,674	68,674	68,674	68,674	68,674	68,674	68,674

Source: Pracsys 2013

Future entertainment market potential is a function on the population size and catchment size. An entertainment venue may perform a local function (e.g. a small bar), a sub-regional function (e.g. cinema) or a regional function (e.g. theme park). The results presented here are relevant to the City of Melville population but assume current levels of entertainment floorspace are meeting consumer needs. However, due to a number of unique characteristics of entertainment demand the amount of floorspace required in the future may be greater or lesser than predicted. Some of these characteristics are:

- There may be valid reasons to locate entertainment floorspace within an activity centre or an activity node, such as inelasticity of the activity to the location (e.g. a small bar may be located within an activity centre near high density housing, or a museum may be located near a landscape of significance to the contents of the museum);
- The attractiveness of entertainment floorspace is highly dependent on the operator (i.e. a café with poor food and service may have poor turnover, whereas a café with great food and service may trade to its maximum capacity);
- Demand for entertainment floorspace may be local or regional, with intense agglomerations of high quality entertainment floorspace typically have a regional attraction that will draw visitors from much further than isolated pockets; and

- Floorspace required for different types of entertainment can vary greatly. Changing trends in the types of entertainment sought after, and the frequency of visits to entertainment venues all have the potential to impact significantly on the amount of floorspace required in the future. For example, a small bar can accommodate a large amount of people relative to a bowling alley, when compared on the basis of floorspace.

11 Appendix E: Development Framework Explanatory Notes

The following appendix provides lists, look-up tables and explanatory notes on the minimum standards and performance criteria.

11.1 Land Use

11.1.1 City of Melville Use Class Table

Figure 77 provides a list of the use classes in the City of Melville Local Planning Scheme No. 6 and whether they are:

- Core land uses - these are ideally located in the core of the activity centre where activation is most important. The core land uses may vary with activity centre function;
- Barrier land uses - the location of these should be considered for potential impacts on amenity, diversity and activation, especially where proximate to sensitive land uses where high amenity is expected such as residential areas, cafes and restaurants;
- Sensitive land uses - these have the potential to be adversely impacted by barrier land uses;
- Strategic land uses - these should be identified where there is a vision to increase the employment quality of a centre; and
- Population-driven land uses - the catchment size for different land uses is identified.

This table should be used to test structure plans and development applications against the minimum standards and performance criteria where land use is a factor.

Figure 77. Use class table

Use classes	Core Land Uses	Barrier Land Uses	Sensitive Land Uses	Strategic Land Uses	Population-Driven Land Uses		
					Local	Sub-Regional	Regional
Aged or Dependent Persons Dwelling			✓			✓	
Amusement Parlour						✓	
Ancillary Accommodation			✓		✓		
Auction Premises						✓	
Bed and Breakfast			✓	✓		✓	
Betting Agency						✓	
Caretakers Dwelling			✓		✓		
Child Care Premises			✓		✓		
Cinema/Theatre	✓					✓	
Club Premises						✓	
Community Purposes					✓		

Use classes	Core Land Uses	Barrier Land Uses	Sensitive Land Uses	Strategic Land Uses	Population-Driven Land Uses		
					Local	Sub-Regional	Regional
Consulting Rooms						✓	
Convenience Store	✓				✓		
Educational Establishment			✓	✓	✓	✓	✓
Exhibition Centre							✓
Family Day Care			✓		✓		
Fast Food Outlet	✓				✓		
Food/Beverage Production	✓				✓		
Funeral Parlour							✓
Garden Centre		✓				✓	
Grouped Dwelling	✓		✓		✓		
Home Business			✓	✓	✓		
Home Occupation			✓	✓	✓		
Home Office			✓	✓	✓		
Home Store	✓		✓		✓		
Hospital	✓		✓			✓	✓
Hotel	✓		✓	✓		✓	
Industry - Cottage				✓	✓	✓	✓
Industry - General		✓		✓		✓	✓
Industry - Hazardous		✓		✓		✓	✓
Industry - Light		✓		✓		✓	✓
Industry - Noxious		✓		✓		✓	✓
Industry - Service		✓				✓	✓
Large Format Retail	✓	✓				✓	✓
Lunch Bar	✓				✓		
Market	✓					✓	
Medical Centre	✓				✓	✓	
Motor Vehicle Repair						✓	
Motor Vehicle Wash						✓	

Use classes	Core Land Uses	Barrier Land Uses	Sensitive Land Uses	Strategic Land Uses	Population-Driven Land Uses		
					Local	Sub-Regional	Regional
Motor Vehicle Wrecking		✓				✓	
Motor Vehicle, Boat or Caravan Sales		✓				✓	
Multiple Dwelling	✓		✓		✓		
Night Club	✓	✓				✓	✓
Office	✓			✓	✓	✓	✓
Place of Worship			✓			✓	
Reception Centre			✓				✓
Recreation - Private	✓						✓
Residential Building			✓		✓		
Restaurant/Cafe	✓				✓	✓	✓
Restricted Premises						✓	✓
Service Station					✓		
Shop	✓				✓	✓	✓
Showroom		✓				✓	✓
Single Bedroom Dwelling			✓		✓		
Single House			✓		✓		
Small Bar	✓	✓			✓	✓	
Storage		✓					✓
Tavern	✓	✓			✓	✓	
Telecommunications Infrastructure (TI)						✓	
Trade Display						✓	
Veterinary Centre		✓				✓	
Warehouse		✓				✓	✓
Other uses not listed	These should be considered in terms of their alignment with the activity centre vision, and the definitions of local, sub-regional and regional demand.						

Source: Pracsys 2013

11.1.2 WAPC Planning Land Use Categories

Structure plans generally require reporting using WAPC Planning Land Use Categories (PLUC), as detail on specific land uses shown in a use class table is not known. Figure 78 provides a conversion

of PLUC to City of Melville use classes. In some cases, such as some industrial uses, additional information is required before the correlating PLUC can be determined. Where the land use is determined as 'not listed', *Appendix C of the Commercial Land Use Survey 1997* should be referred to for guidance. This can be accessed from the Western Australian Planning Commission website: www.planning.wa.gov.au

Figure 78. WAPC Planning Land Use Categories and City of Melville land use class conversion table

WAPC Planning Land Use Categories			City of Melville Use Classes
PLUC No.	Planning Land Use Category (PLUC)	PLUC Definition	
1	PRIMARY/RURAL	Land use activities which usually involve the use of large areas of land including mining, agriculture, fishing and nature conservation. The function of many of these activities is to make use of, or extract from, the land in its natural state. Since such activities are the first step in the production process they are quite distinct from the other categories.	N/A
2	MANUFACTURING/ PROCESSING FABRICATION	This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.	Industry - Cottage* Industry - General* Industry - Hazardous* Industry - Light* Industry - Noxious*
3	STORAGE/ DISTRIBUTION	Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulky goods, but does not include activities that attract general retail trade activities.	Storage Warehouse
4	SERVICE INDUSTRY	This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.	Funeral Parlour Industry - Service Motor Vehicle Repair Motor Vehicle Wash Motor Vehicle Wrecking
5	SHOP/RETAIL	Any activity which involves the sale of goods from a shop located separate to and/or in a shopping centre other than those included in category 6 – Other Retail.	Convenience Store Fast Food Outlet Food/Beverage Production Garden Centre Home Store Lunch Bar Market Restaurant/Cafe Restricted Premises Service Station Shop
6	OTHER RETAIL	Many of these activities normally are not accommodated in a shopping centre. By virtue of their scale and special nature, the goods of these activities separate them from the Shop/Retail category (e.g. car sales yard, carpet showroom).	Auction Premises Large Format Retail Motor Vehicle, Boat or Caravan Sales Showroom Trade Display

WAPC Planning Land Use Categories			City of Melville Use Classes
PLUC No.	Planning Land Use Category (PLUC)	PLUC Definition	
7	OFFICE/BUSINESS	Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floorspace or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.	Consulting Rooms Medical Centre Office
8	HEALTH/WELFARE/ COMMUNITY SERVICES	Includes government, government-subsidised and non-government activities which provide the community with a specific service, such as hospitals, schools, personal services and religious activities.	Child Care Premises Community Purposes Educational Establishment Family Day Care Hospital Place of Worship Veterinary Centre
9	ENTERTAINMENT/ RECREATION/ CULTURE	Activities which provide entertainment, recreation and culture for the community and which occur in building and/or on land, such as passive and active sports venues, museums, amusements, gambling services, hotels and the like.	Amusement Parlour Betting Agency Cinema/Theatre Club Premises Exhibition Centre Night Club Reception Centre Recreation - Private Small Bar Tavern
10	RESIDENTIAL	Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing. Floorspace and employment on private Residential land uses are not included in the output of the Commercial Land Use Survey.	Aged or Dependent Persons Dwelling Ancillary Accommodation Bed and Breakfast Caretakers Dwelling Grouped Dwelling Home Business Home Occupation Home Office Hotel Multiple Dwelling Residential Building Single Bedroom Dwelling Single House
11	UTILITIES/ COMMUNICATIONS	All forms of local, State, national and international communication, transport and other utilities (electricity, gas, water, sewerage, roads, parking and other transport or communication related activities, etc.) covering the public and private sectors.	Telecommunications Infrastructure (TI)

***NOTE: More information is required to determine what PLUC category these use classes are aligned with.**

Source: Pracsys 2013

11.2 Crime Prevention Through Environmental Design Principles

Goal: People using the activity centre should feel safe at all hours of operation. Perception of safety should be supported using Crime Prevention Through Environmental Design (CPTED) principles.

While there is a range of resources that provide valid guidance on using built form to reduce the risk of crime, the WAPC Design Out Crime Planning Guidelines have been referred to here. These are intended to provide a guide for planning officers and developers on potential responses to improving safety in activity centres. Other sources of guidance are acceptable providing the data is published and based on sound academic research.

The Designing Out Crime Planning Guidelines outline five principles for built form design that should be considered at the macro (structure plan) and micro (development application) levels. The five principles and their related design solutions are set out in

Figure 79.

Figure 79. CPTED principles

Principle	Potential Design Solutions	
	Structure Plans	Development Applications
Surveillance	Land uses should be compatible with neighbouring uses. Strategic footpaths and cycleways to be in view of adjacent land uses. Avoid 'seas of car parks'. 'Big box uses' should be arranged to have no public access to the sides of buildings. Avoid over use of buffer and security zones which push land uses apart to the point of isolation. Avoid concave building envelopes. Illuminate unwanted congregation areas and entrapment spots.	Lots should be located to ensure adequate surveillance of public realm spaces. Locate uses that can provide natural surveillance wherever possible. Ensure clear sightlines to public realm spaces from adjacent buildings. Light primary pedestrian routes. Ensure level changes do not obscure public places. Front boundary fencing should be visually permeable.
Access Control	Management of traffic patterns in order to moderate car-related crime (car theft, hijacking, get away vehicles). Delineation and alignment of public access routes away from inappropriate environments.	Create places and streets that support legitimate uses in full view of the legitimate community. Avoid cul-de-sacs linked by pedestrian routes unless part of a wider open space connection with surveillance. Avoid use of back lanes without guardian surveillance from properties. Minimise multiple escape routes. Secure access against offenders with gates and defining structures. Ramps and steps can create effective local access controls. Changes of ground level delineate ownership or use changes. Integrate security screens and bars as design elements not afterthoughts. Careful consideration of scaleable fences and bollards which may inhibit pursuit of offenders.
Territorial Reinforcement	Define public and private land use areas and ownership boundaries clearly. Align major transport infrastructure to	Create sub-neighbourhoods to engender local character areas. Plan and design communities with supporting facilities and land uses.

Principle	Potential Design Solutions	
	Structure Plans	Development Applications
	minimise land take.	Clearly define private ownership by structures and surface materials. Avoid ambiguity of ownership and responsibility. Appropriate signage.
Target Hardening	N/A	Consider the installation of traffic management elements to discourage vehicle-enhanced break-ins to shops and commercial premises in streetscapes. Ensure individual site security measures do not adversely affect local area security considerations. Incorporate shuttering and window barring as integral design elements where openings are susceptible to break-in and concealed crime exit. Ensure building parapets do not conceal unlawful access. Install closed circuit television where natural surveillance is poor. Where fencing is required for security it should be no less than two metres in height.
Management and Maintenance	Establish training for public open space managers. Consider durability, adaptive re-use and robustness of built form and open spaces in the design decision-making process.	Incorporate management conditions such as shopping trolley collection points where practical in planning approvals. Ensure spatial management responsibility is clear between public and private sector organisations. Establish systems for reporting of problems and fixing them. Remove graffiti as soon as possible after occurrences. Establish effective maintenance plans for public spaces. Maintain plants to retain visibility where required. Train maintenance staff to identify and report potential problems.

Source: Pracsys 2013, WAPC 2006

11.3 Determining if an Industry is Population-Driven

A population-driven industry can be identified through the following criteria:

- Does the industry or land use provide goods or services to the local, sub-regional or regional catchment? If yes, then the industry is population-driven.
- Does the industry or land use export goods or services outside the local, sub-regional or regional catchment as its primary market? If yes, then the industry may be strategic.

11.4 Determining Presence of a Strategic Agglomeration (ECF)

Determining the presence of a strategic industry or employment agglomeration is necessary to determine whether an activity centre has a strategic function. Two methodologies may be used to determine the presence of a strategic agglomeration. These are:

- Employment concentration factor (ECF) analysis; and
- Shift share analysis.

11.4.1 Employment Concentration Factor Analysis

ECF measures the concentration of a particular industry in the region compared with that industry's presence in Australia. An ECF of 1.0 means that an industry has the same concentration in the region as it does in Australia. However, the metric gives no indication of the relative size of the industry, i.e. a sub-region may have a very high ECF with a small number of employees if the industry is small, whilst a low ECF in a large industry may still equate to a significant proportion of employees.

Two datasets can be used in an ECF analysis:

- **Dataset 1:** Table showing Industry of Employment by Region (aggregation of LGAs), using 2011 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder.
- **Dataset 2:** Table showing Industry of Employment by Nation, using 2011 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder.

The methodology for ECF analysis is as follows:

- For Dataset 1 (Industry of employment by Region) calculate the number of people in employed in each industry as a percentage of the total number of people employed;
- For Dataset 2 (Industry of employment by Nation) calculate the number of people in employed in each industry as a percentage of the total number of people employed;
- Construct a table that integrates Dataset 1 and 2;
- Divide the regional employment share by the national employment share for each industry of employment; and
- The product of the division provides the Employment Concentration Factor.

11.4.2 Shift Share Analysis

Shift share analysis is a technique that aims to identify the industries that are most competitive in the region, through an analysis of employment growth. Employment growth is broken down into different components to determine what share of the growth can be attributed to growth in the national economy, what percentage can be attributed to the industry mix, and the remainder is then assumed to result from particular competitive strengths developed in the region.

Shift share analysis is useful to reveal which industries have the greatest regional competitive advantage or disadvantage (however, it does not indicate the reasons why).

Four datasets can be used for shift share analysis:

- **Dataset 1:** Table showing Industry of Employment by Region (aggregation of LGAs), using 2006 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder;
- **Dataset 2:** Table showing Industry of Employment by Region (aggregation of LGAs), using 2011 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder;

- **Dataset 3:** Table showing Industry of Employment by Nation, using 2006 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder; and
- **Dataset 4:** Table showing Industry of Employment by Nation, using 2011 Census – Counting Persons, Place of Work (database). Can be obtained from ABS Table builder.

Shift share analysis should be undertaken utilising the following methodology:

- Using Datasets 1 and 2, derive the employment profile for the region for the base year and the current year using 1 digit ANZSIC classificatio ;
- Using Datasets 3 and 4, derive the employment profile for the Australia for the same time periods using 1 digit ANZSIC classification; and
- For each industry, calculate the three components using the following equations.

$$National\ Share = iRegion^{t-1} * \left[\frac{(AUS]^t}{AUS^{t-1}}\right)$$

$$Industry\ Mix = iRegion^{t-1} * \left(\frac{iAUS^t}{iAUS^{t-1}} - \frac{AUS^t}{AUS^{t-1}}\right)$$

$$Regional\ Shift = iRegion^{t-1} * \left(\frac{iRegion^t}{iRegion^{t-1}} - \frac{iAUS^t}{iAUS^{t-1}}\right)$$

Where:

$iRegion^t = the\ regional\ employment\ in\ industy\ i\ in\ the\ current\ year$

$iRegion^{t-1} = the\ regional\ employment\ in\ industy\ i\ in\ the\ base\ year$

$iAUS^t = the\ National\ employment\ in\ industy\ i\ in\ the\ current\ year$

$iAUS^{t-1} = the\ National\ employment\ in\ industy\ i\ in\ the\ base\ year$

$iAUS^t = total\ National\ employment\ in\ the\ current\ year$

$iAUS^{t-1} = total\ National\ employment\ in\ the\ base\ year$

The sum of all three components should equal the change in industry employment in the region between the base and current periods.

Key areas of comparative advantage are those industries for which the region has both positive industry mix and regional shift values, and amongst those, those industries where the regional shift is greater than the industry mix.

12 Appendix F: Entropy Index Calculation Methodology

Current and future land use diversity can be measured using an entropy index. The methodology for calculating land use diversity using Shannon's Index is presented below.

Diversity of the built environment has been shown to contribute to a reduction in private motor vehicle use as evidenced by vehicle kilometers travelled (VKT), car ownership, and mode choice. It is important to note that while land use mix does affect VKT, car ownership and mode choice, it is generally not as influential as accessibility. Consideration should be given to this during the assessment process.

Data Sets

The Department of Planning Land Use and Employment Survey (2008) is required to calculate diversity using Shannon's Index.

Materials

Spreadsheet software will be required to undertake the diversity calculation, such as Microsoft Excel or similar.

An excel model set up to calculate diversity has been provided and may be used.

Methodology

The reporting of existing and future land use diversity should be undertaken using the following methodology:

1. Using the Department of Planning Land Use and Employment Survey data identify the complexes that fall within the activity centre or study area boundaries.

2. Aggregate the total floorspace of all complexes in all PLUC categories.

3. Add in estimates of all additional floorspace developed since the survey

4. Calculate the proportion of each floorspace category relative to the total number of quantity of occupied floorspace

5. Multiply each floorspace proportion by the natural log of itself

6. Sum the resulting product of all PLUC categories and multiply this by -1

7. Divide the result by the natural log of the total number of PLUC categories

The resulting number can be expressed as a percentage.

13 Glossary

Access – how people physically arrive at/depart from the place and move around within a place, and whether people of different physical abilities can access a centre safely by different modes (i.e. by walking, cycling, public transport, cars/motorbikes, freight vehicles).

Activation - the alignment of the movement of people through a place and the physical interfaces of activity that draw people to an activity. It is also about how well linked the place is to the surrounding area in terms of physical access and visibility of activities.

Activity centre - community focal points. They include activities such as commercial, retail, higher-density housing, entertainment, tourism, civic/community, higher education, and medical services. Activity centres vary in size and diversity and are designed to be well-serviced by public transport.'

Activity interfaces - the main points of contact between consumers and enterprises. These are typically the main locations of interaction between the public and private realm, and include windows, doors, entries, displays of goods, al fresco areas, and so on.

Activity node - are locations of activity outside the walkable catchment of activity centres, or isolated form activity centres by surrounding residential development. They are not formally recognised by SPP 4.2, and are generally not recognised by the City of Melville Local Planning Scheme No. 5.

Amenity – how pleasant or offensive a place is in terms of visuals, sounds, smells, physical comfort, and perception of safety. Good amenity provides an incentive for people to use a place. Poor amenity barriers people from using a place.

Comparison retail - refers to retail goods for which the volume of goods and the number of transactions are generally lower, occur less frequently and have a higher cost both in terms of the value of goods purchased and the search costs involved. Examples of comparison retail goods include electronics and furniture.

Convenience retail - refers to retail goods for which the volume of goods and number of transactions are generally higher, occur more frequently and have lower costs both in terms of the value of goods purchased and the search costs involved. Examples of convenience retail goods include fuel and groceries.

Diversity – how many different opportunities for activity are located in a place other than shops, and how well the activities meet the needs of users.

Economic Performance – the contribution of the place to the wider economy. This may include employment quantity and quality, types of land uses and industries, skills match of local labour force, and so on.

Employment self containment (ESC) – is the proportion of jobs located in a geographic area that are occupied by residents of the same area, relative to the total number of working residents of that area.

Employment self-sufficiency (ESS) – is the proportion of jobs located in a geographic area (region, corridor, local government) relative to the residents in that same area who are employed in the workforce. For example, if the area has 1,000 employed residents and 450 local jobs available, the employment self-sufficiency rate is 45%.

Entertainment – refers to a range of entertainment, recreation and cultural products that are sold directly to consumers. Central to the definition of entertainment is not only the purpose of the product but also how it is consumed. Entertainment refers to entertaining goods and services consumed in the public realm. Entertainment goods that are purchased and consumed in the private realm fall under the definition of retail. For example the purchase of a computer game would be considered a comparison retail purchase. The purchase of tokens to play a computer game at Timezone would be considered entertainment. Other examples of entertainment products include, bars and clubs, cinemas, museums and art galleries.

Population-driven industries/employment – industries or jobs directly related to servicing the needs of a specific catchment population. As such its location will be largely determined by the location of population growth, as well as activity centre hierarchy and maturity. Consumer services, producers services and knowledge intensive consumers are collectively referred to as population-driven.

Resource Use - minimizing the use of natural resources within a place and to access a place. This includes use and replacement of water, energy, building materials and so on.

Strategic employment - results from economic activity focused on the creation and transfer of goods and services to an external market. The location of strategic employment is not driven by population growth, but rather by a range of other factors, including agglomeration economies.