CITY OF SUBIACO

Transport, Access and Parking Strategy

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Approved by Council on 25 July 2017

www.subiaco.wa.gov.au

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1 Introduction

The City of Subiaco Transport, Access and Parking Strategy (TAPS) has been completed to identify and affirm the strategic position of the City with regard to all aspects of transport, access and parking in Subiaco, and how they relate to one another. The requirement for TAPS was set out by the City as:

"develop a transport and parking strategy to identify and affirm the strategic position of the city with regard to all aspects of transport, access and parking in Subiaco, and how they relate to one another".

The Strategy is not only built on the various plans and transport related strategies the City has already developed, but is a document that integrates strategies on the various modes of transport, how they interrelate to each other, impacts on land use planning and address the wider strategic issues around parking. TAPS also sets out the future review of detailed plans for transport, access, parking and land use planning.

The City has, over recent years, developed a range of transport related plans and strategies that seek to guide the improvement of transport to and within the City of Subiaco. This suite of strategies and plans include:

- The City of Subiaco Strategic Community Plan
- The City of Subiaco Corporate Business Plan 2015-2019
- The City of Subiaco Integrated Transport Strategy 2015-2020
- The City of Subiaco Parking Strategy 2012-2016
- The City of Subiaco Economic Development Strategy 2013-2017.

In addition to these documents, the City has also progressed a range of transport or planning related studies, strategies and plans that are also relevant to the transport network within the City. These include:

- Draft Bike Plan
- Draft City of Subiaco Positive Ageing Plan
- Parking Management Precinct Plans for the Town Centre and Subiaco East
- Subiaco Activity Centre Plan, the North Subiaco Structure Plan, and various reports on transport matters developed as part of the review of the City's Town Planning Scheme
- Potential to convert Hay Street and Roberts Road into two-way traffic flow corridors.

The TAPS integrates the intent and outcomes of these documents, alongside wider metropolitan and State planning strategies and policies, into one broader strategy document that establishes a vision for transport and access to service the City for the next 20 years. Critically, TAPS will form a direct link into the update of the City of Subiaco Local Planning Strategy, and therefore it will set in place a series of policies, strategies and projects that will be embedded in the Local Planning Strategy.

1.1 City of Subiaco Strategic Community Plan

Whilst the various plans and strategies already completed can be seen as a driver for the evolution of the TAPS, transport as a whole is clearly firmly at the forefront of the minds of many in the community, as discussed in detail in the Strategic Community Plan. The City of Subiaco Strategic Community Plan is the overarching plan guiding the future of the City and therefore it is critical that the outcomes of that plan related to transport form the basis for the vision related to the TAPS. The City is currently conducting the

four yearly review of its Strategic Community Plan. Within the Strategic Community Plan, there was a section dedicated to transport – An Effective and Integrated Transport System.

1.2 An Effective and Integrated Transport System

The Strategic Community Plan sets out the vision for an effective and integrated transport system as being:

"In 2030 there is a range of sustainable transport options available, making it easy to get into and around the city. There is sufficient parking within the city and congestion has been reduced".

This vision was expanded upon in terms of how community participants in the process viewed the future in terms of transport:

"We have a range of sustainable transport options for residents, visitors and workers, making the city less car dependent. The city has a comprehensive, safe and convenient network of cycle and pedestrian routes, and public transport is efficient and accessible to all. The city's roads are managed in such a way that there is less congestion and parking spaces are available to those who need them".

There were three objectives in terms of achieving the vision for an effective and integrated transport system, which were:

- A road management system that meets the needs of all users
- A range of sustainable and accessible transport options
- An effective parking system that is accessible to all users.

Each of the objectives included strategies, outcomes and who was responsible for achieving the objective within a summarised table format, with each set out in the following sections. These objectives, and the overall vision for the community, led directly into the vision and objectives for the TAPS, set out in section 3.

1.2.1 Road management system

There are two strategies associated with the road management objective which focussed on the impact of traffic movements on local streets, as shown in Table 1. The outcome of the strategies would be to reduce congestion and improved safety for all road users.

Table 1 Road management system strategies

No.	Strategy	Community outcomes	Who will contribute
5.1.1	Manage and plan our road networks to reduce congestion, while incorporating the increasing population and major developments.	Reduced congestion and increased safety on our roads for all users.	City of Subiaco Neighbouring local governments State government agencies
5.1.2	Reduce the impact of traffic on local roads.	Reduced congestion and increased safety on our roads for all users.	City of Subiaco Community Business community State government agencies Police

1.2.2 Range of transport options

Three of the strategies for a range of options focussed on the potential for improved public transport. The strategies included for this objective were developed at a time when light rail was being considered through the City and other proposals had also been examined for light rail.

The strategies for the range of transport options are set out in Table 2.

Table 2 Range of transport options strategies

No.	Strategy	Community outcomes	Who will contribute
5.2.1	Investigate the opportunities for regular public transport services that are free for users.	Knowledge of the potential to bring such services to Subiaco.	City of Subiaco Neighbouring local governments State government agencies
5.2.2	Work to ensure that the proposed light rail system services and benefits the city.	Light rail connections which enhance access to, from and around the city.	City of Subiaco Community Business community Neighbouring local governments State government agencies
5.2.3	Improve the public transport system that services the city.	Improved public transport accessibility and linkages.	City of Subiaco Community Business community Neighbouring local governments State government agencies
5.2.4	Improve and enhance the city's pedestrian and cycle networks.	The ability to walk and cycle in and around the city.	City of Subiaco Community Community organisations/groups State government agencies

1.2.3 Effective parking system

The preferred parking strategies to achieve the objective were based around management of existing parking supply, as well as providing enough flexibility for commercial parking requirements.

Table 3 Effective parking system strategies

No.	Strategy	Community outcomes	Who will contribute
5.3.1	Develop a comprehensive parking system that considers both the supply and management of parking.	Parking options that are easy to access, flexible and appropriate for all users. Innovative management of the city's parking facilities.	City of Subiaco Community Business community Parking providers State government agencies
5.3.2	Ensure flexibility for commercial parking requirements in the city.	Flexibility in parking requirements that encourage businesses to come to the city.	City of Subiaco Business community

1.3 Metropolitan Strategic Planning

Although the TAPS focusses on the transport network and land use implications within the City, the local network forms part of, and contributes to, the wider Perth Metropolitan transport network. As such, it recognises the strategic intent of wider area land use and transport planning. The two Government key strategic planning documents are the Perth and Peel @3.5million and draft Perth Transport Plan.

1.3.1 Perth and Peel @3.5million

The Perth and Peel@3.5million suite of documents were released by the WA Planning Commission (WAPC) in May 2015 for public comment. The documents, including a series of frameworks relating to sub-regional areas, set out a series of land use and transport outcomes aimed at supporting the future vision for Perth and Peel regions:

"a great, connected city that is globally competitive and technologically advanced; that is sustainable, resilient and respects its natural assets and heritage; that maximises the use of new and existing infrastructure; and that offers a mix of housing and lifestyle choices".

The City of Subiaco is within the central sub-region. The majority of the City is designated as an Activity Centre or a Station precinct, particularly the northern parts of the City. These designations reflect the existing higher form of urban development within the City and its importance as an economic and employment generating location. No specific transport proposals outside of the existing infrastructure were noted within the plan.

1.3.2 Perth Transport Plan

The Perth Transport Plan (PTP), which was completed to address the land use and strategic transport outcomes set out in Perth and Peel @3.5million, was released for public comment in July 2016 and formalised in January 2017. The vision set down for the plan is:

"A vibrant, connected and productive Perth will need a transport network that meets the following objectives:

- optimise use of the existing network and as it grows
- integrate with land use and across the public transport, active transport and road networks
- deliver high frequency, 'turn up and go' mass rapid transit connected with effective public transport feeder services
- provide a safe, connected active transport network of primarily off-road cycleways and walkways
- maintain a free-flowing freeway and arterial road network for the efficient distribution of people and freight".

Key infrastructure and service operation elements for the City of Subiaco relating to the PTP were:

- proposed light rail corridor running along Thomas Street from Central Perth to UWA/QEII
- potential connection within the inner-city subway system
- proposed high priority public transport corridor between Stirling and UWA/QEII
- proposed underground heavy passenger rail connection from Stirling Station to Murdoch Station with an interchange point at Shenton Park
- impact of two separate high capacity freeway connections at the periphery of the City
- lack of definition around strategic role of Thomas Street

- nomination of Salvado Road, Station Street, Rokeby Road, Hay Street and Aberdare Road as strategic cycling routes and Coughlan Road, Hamersley Road, Rankin Road and Keightley Road as local routes.

1.4 Why have the Transport Access and Parking Strategy?

As set out in the introduction, the TAPS will integrate the intent and outcomes of local and metropolitan wide strategic documents into one broader strategy document that establishes a vision for transport and access to service the City for the next 20 years. In turn, the TAPS will be set into the Local Planning Strategy and therefore guide transport network outcomes for the foreseeable future.

It is important to understand the implications for the network with the TAPS and the challenges that are faced within the network. The following two sections summarise these issues.

1.4.1 Business as usual

Contemporary urban living is going through somewhat of a renaissance if not a revolution around the world. There is some suggestion that this is technology based and that is a factor, but it is as it always has been, largely based around demographics. There are two waves of generational change happening. Baby boomers are in the process of downsizing and their children form part of a different demographic, and the Gen Y's are moving into the renting and buying market. This simultaneous movement provides massive opportunities for middle and inner ring suburbs in cities throughout Australia. There is a unique opportunity for these places, such as Subiaco, to cater for these two high spending and high job creating groups.

From a transport perspective there are a few elements already known about these groups:

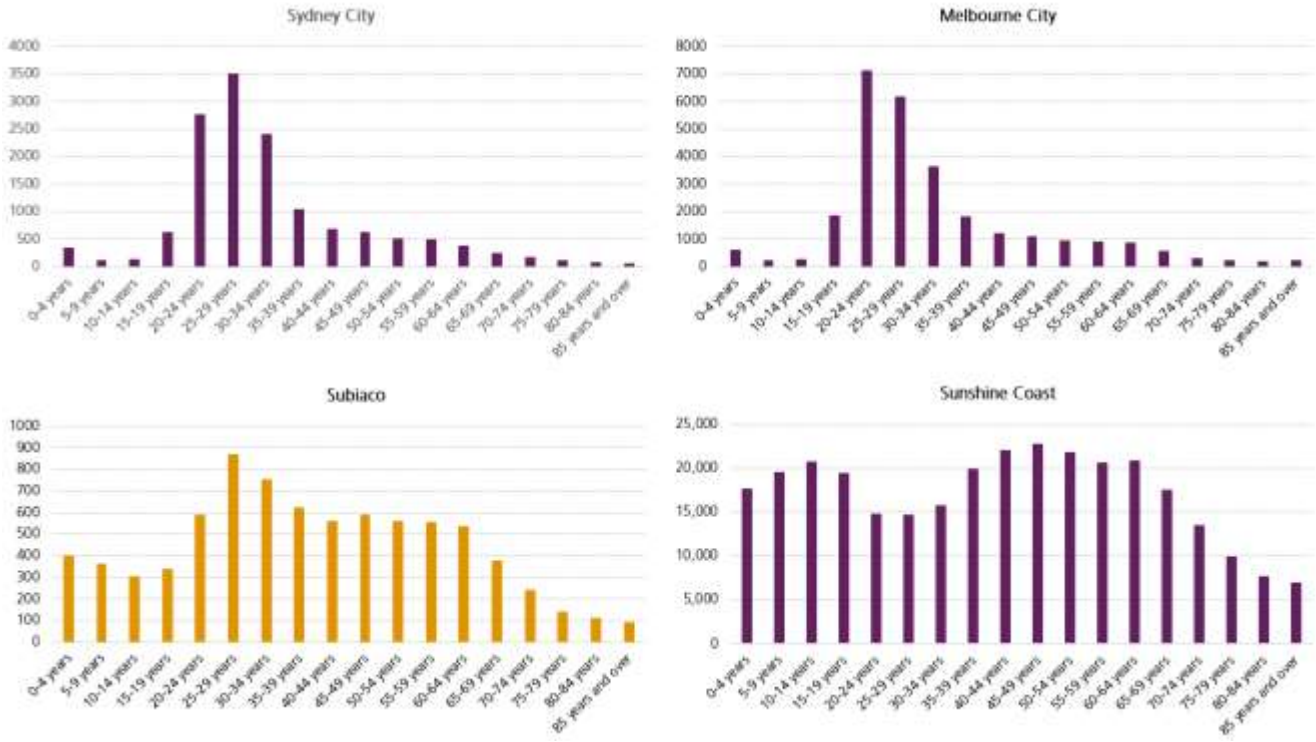
- They are selling cars not buying them
- They are walking not driving
- They live in the public spaces not private spaces
- They demand equity and freedom through public transport
- They are demanding that you look after them before you look after cars.

This is a change from 20 years ago when looking after the largest demographic (baby boomers) meant providing road space and parking space. The competition for economic and social sustainability is now requiring a much more mature and equitable approach. This will only make the attractiveness of Subiaco increase in the context of the overall Perth metropolitan region.

It is all too easy to provide a transport strategy which says the right words about alternate modes and reducing car dominance, but always leaves enough wriggle room for an authority to continue on their business as usual model, of assuming travel will remain the same and continue to provide for a future that was the same as our post-war past.

This is no longer a sustainable economic option, nor does it make best use of the assets for residents and businesses in that area. Suburbs and regional cities are at risk of sending all their bright young millennials to the big cities taking entrepreneurial business, active living, job creation and high spending with them and leaving the less productive demographics behind. The demographic information below, showing a population profile comparison between Subiaco, central Sydney, central Melbourne and the Sunshine Coast for 2011, highlights this.

Figure 1 Population profile for various cities



The present demographic profile for Subiaco is excellent in that there is a distribution of population throughout age groups, with an emphasis on employment and economic generating age groups. This in turn creates an environment for a mix of dwelling types and diversity in activity. Higher levels of younger population are clearly evident in both Sydney and Melbourne whilst a location such as the Sunshine Coast has a higher ageing population counterbalanced with younger families.

The challenge will be to provide a transport network for the active walkable and affordable communities into the future that will maintain the energy and vibrancy that was created back in the 1990's when Subiaco was the 'go-to' inspiration for inner urban life.

1.4.2 Challenges of transport network

Many of the existing characteristics of the present transport network in the City of Subiaco are set out in the following section. Within the existing and future networks, there are challenges that the City will face in managing use of network resources to achieve the overall vision of the TAPS. These include:

- Changing land uses in the City, and the resultant transition from employment and event based travel demands to increasingly residential, retail and multiple purpose based trips
- A street and road network that will generally not be able to provide physical capacity, placing the onus on more effective management of what is available
- Traffic growth, in whatever form it takes, is likely to come from development within the City rather than the periphery as new demand will take the place of the trips that are being lost from the removal of various land uses
- Ongoing management of parking associated with all the activity in the City on a daily basis – both on-street and off-street parking

- Pressure of through movements and network demand which impacts on the City but are created by Central Perth, the QEII Medical Centre, UWA and other activity centres adjacent to Subiaco
- The impact of metropolitan wide strategic land use and transport planning proposals
- Impact of rapidly advancing technology in the transport network and how that will affect movement into and around Subiaco
- Transition of trips in Subiaco to more readily reflect the ease of walking and cycling accessibility for local residents to retail, employment, educational, community and recreational land uses
- Potential introduction of new high capacity light and heavy rail connections at the periphery of the City
- There is limited scope for improved public transport to serve the areas in the south of the City as there is limited additional patronage on offer to make those services feasible
- Demographic changes in the City will see a change in travel behaviour and demands on transport network assets
- Funding of any new transport asset may require different approaches or more user pays
- Resources of the City to be able to effectively manage the assets available through appropriate means – relying more on technology and smarter application of information.

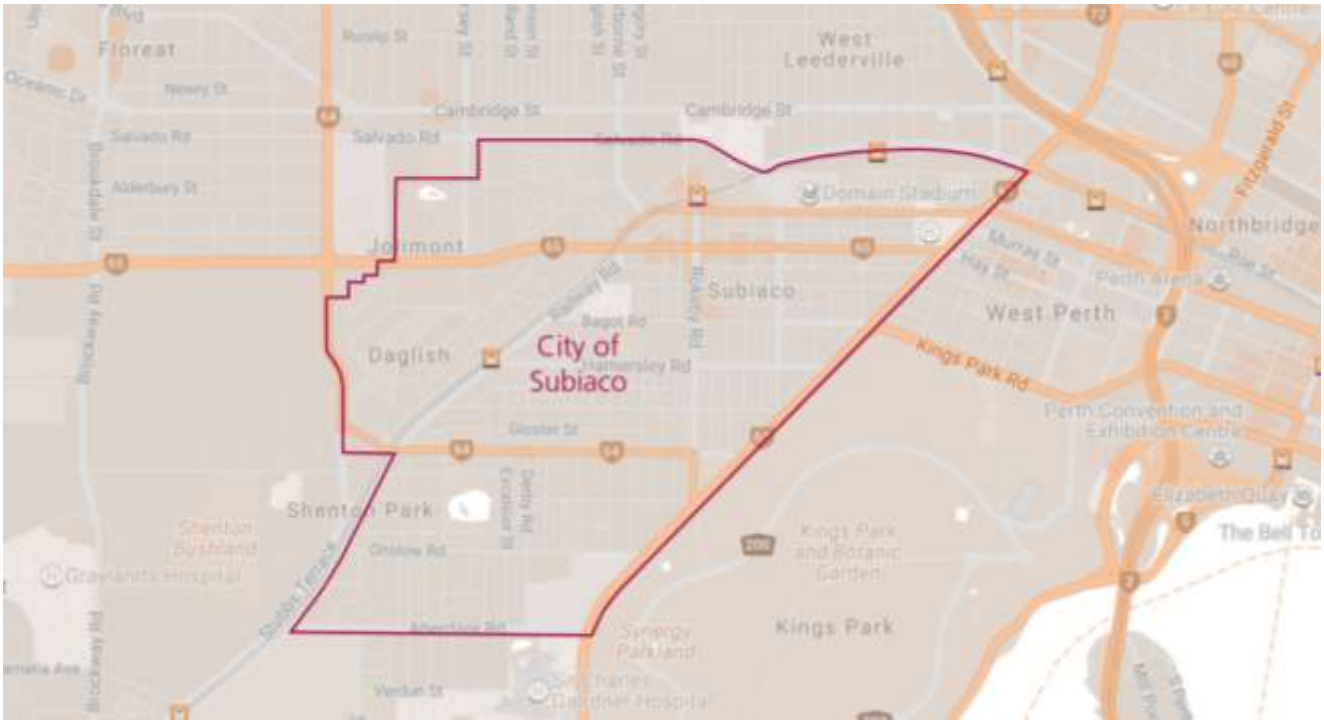
2 Transport in Subiaco

Subiaco is an established inner City locality, with European settlement occurring in 1851. Prior to European settlement by Benedictine Monks, the area was traversed by Noongar people, with connections between remaining natural features accessible in the Whadjuk Trail Network.

The existing Perth to Fremantle railway was opened in 1881 and the locality experienced increased settlement with a more defined street network and residential, retail and light industrial development. Subiaco has continued to develop and evolve from that period of time into an intensively settled inner urban City with its own unique character and blend of land uses. As such, its overall transport network is very defined.

The location of the City respective to Central Perth and other locations is shown in Figure 2. Elements of the land use and transport network that have framed the outcomes in the TAPS are summarised in the following sections.

Figure 2 City of Subiaco boundaries (source: Google)



The details in the following sections are summarised, with more substantial details on network characteristics available from the reports listed in section 1.

2.1 City of Subiaco Profile

The City has recently seen a significant change in its boundaries as a result of the City of Perth Act taking effect on 1 July 2016. The Act resulted in a portion of the City of Subiaco in Crawley and Nedlands being ceded into the City of Perth which included residential neighbourhoods, the University of WA and significant health facilities at the QEII Medical Centre. This change has substantially changed the land use composition and population of the City with the area ceded supporting substantial employment, economic and educational activity.

The enactment of the City of Perth has also resulted in a reduction in the overall population of the City of Subiaco from 18,832 at the 2011 Census down to 17,401 at the 2016 Census. Population projections for the five Census areas in the City of Subiaco for the year 2036 shown in Figure 3 indicate a general increase in population growth, predominantly in Subiaco Centro and North, as shown in Figure 4. The forecast residential population for 2036 is 22,710, an increase of over 23% on the current population.

Figure 3 City of Subiaco Census localities

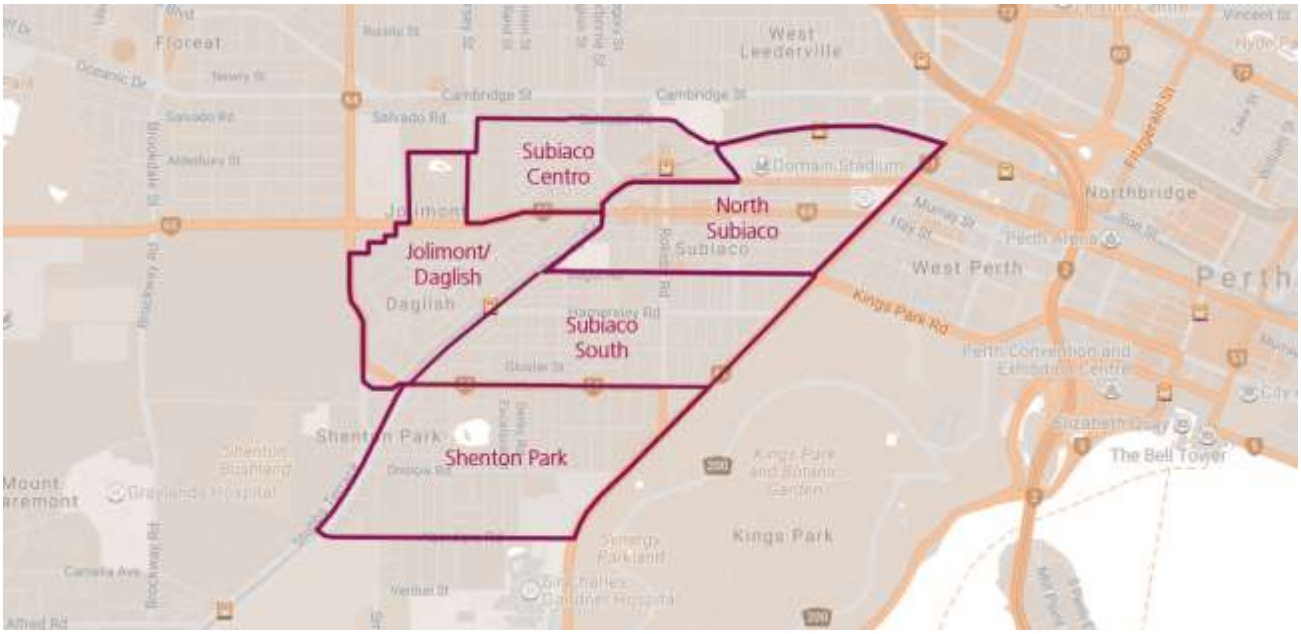
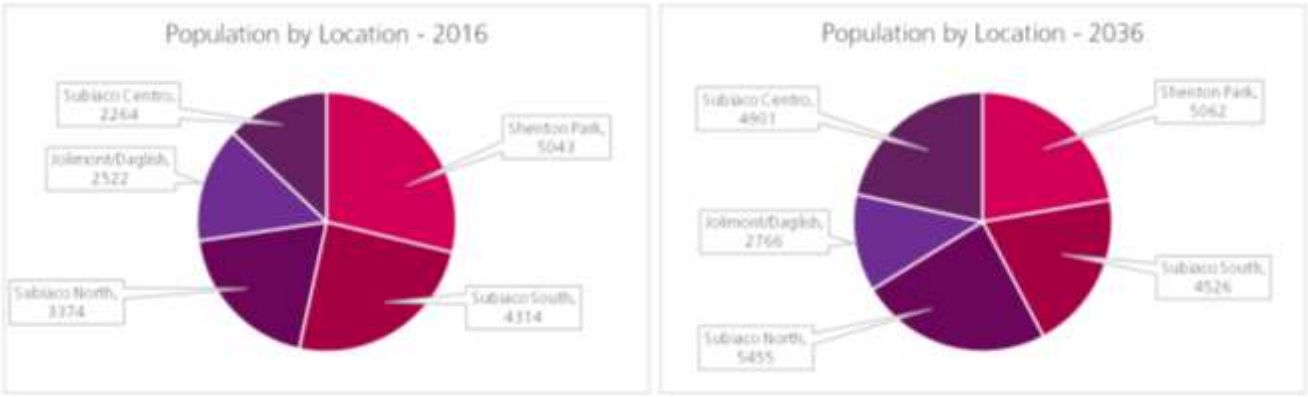


Figure 4 City of Subiaco population by area, 2016 and forecast



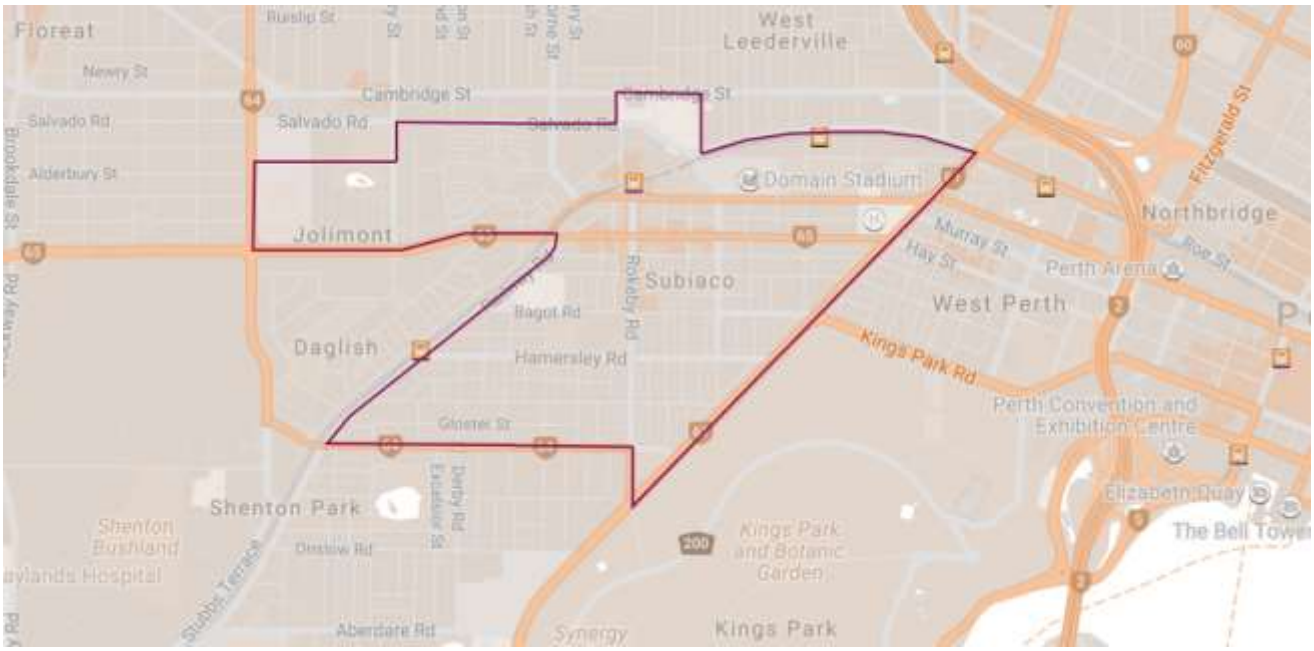
Although a breakdown of employment by area is not yet available from the 2016 Census, there would be a substantial reduction in the total number of jobs within the City as a result of the City of Perth Act associated with the QEII Medical Centre and University of WA. From the 2011 census, over 9,000 out of a total of 24,200 people employed in the City were classified in health care services or educational services. With the opening of the Perth Children's Hospital, there will be a further relocation of health care related employment from the City, including flow-on relocation of professional health services and impact on adjacent businesses. Although many of these jobs will be relocated from Subiaco, the transport demands associated with those land uses will still see many trips passing through Subiaco.

The City also houses a significant professional and consulting industry which is based in and around the Subiaco Activity Centre. Employment within professional offices will remain a substantial driver of the local economy and is forecast to experience continued expansion. For the transport network, this presents specific challenges primarily around commuter parking demands and accessibility by Public Transport.

The City houses substantial retail land uses ranging from self-contained retail shopping centres through to a range of speciality, convenience and hospitality based retail outlets. As recognised in metropolitan wide strategic planning documents, population growth in key areas will facilitate growth to local economies and progressive make areas self-sufficient. With this growth comes pressure on existing transport networks and infrastructure, in particular in constrained locations such as Subiaco.

The Subiaco Activity Centre Area Economic, Retail and Employment Report identified that there was just under 50,000m^2 convenience, comparison and entertainment retail floor space in 2013. This was projected to grow only minimally up to 2018 however that projected growth did not take into account the redevelopment of the Station Street market site or other developments such as the Fine China Site. The area of influence for that report, which informed the Activity Centre Structure Plan, is shown in Figure 5.

Figure 5 Subiaco Activity Centre Area Economic, Retail and Employment Report boundary (source: Pracsys)



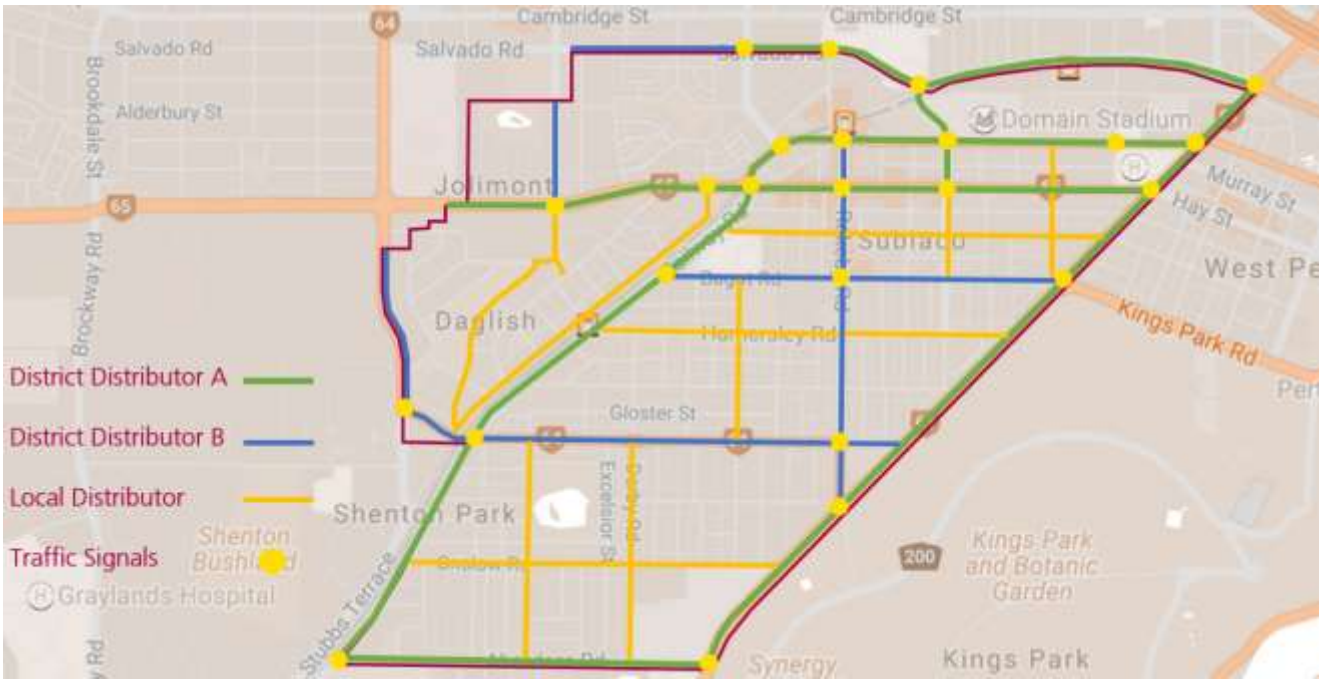
At present, both Australian Rules Football teams play home games at Domain Stadium (Subiaco Oval) with other events including concerts also staged at the venue. With construction of Perth Stadium on the Burswood Peninsula due for completion in time for 2018, AFL games will no longer be held in Subiaco. In addition to the Stadium, there is also a substantial night time economy within Subiaco comprised of a range of restaurants, bars, cafes and a theatre. Over 8,500m^2 of entertainment floor space is present and additional developments will increase activity during and outside of business hours.

2.2 Street Network

The majority of the street network in the City of Subiaco is set on a true east-west, north-south grid pattern. The City is bounded by major classified distributor roads on all sides, as shown in Figure 6, with

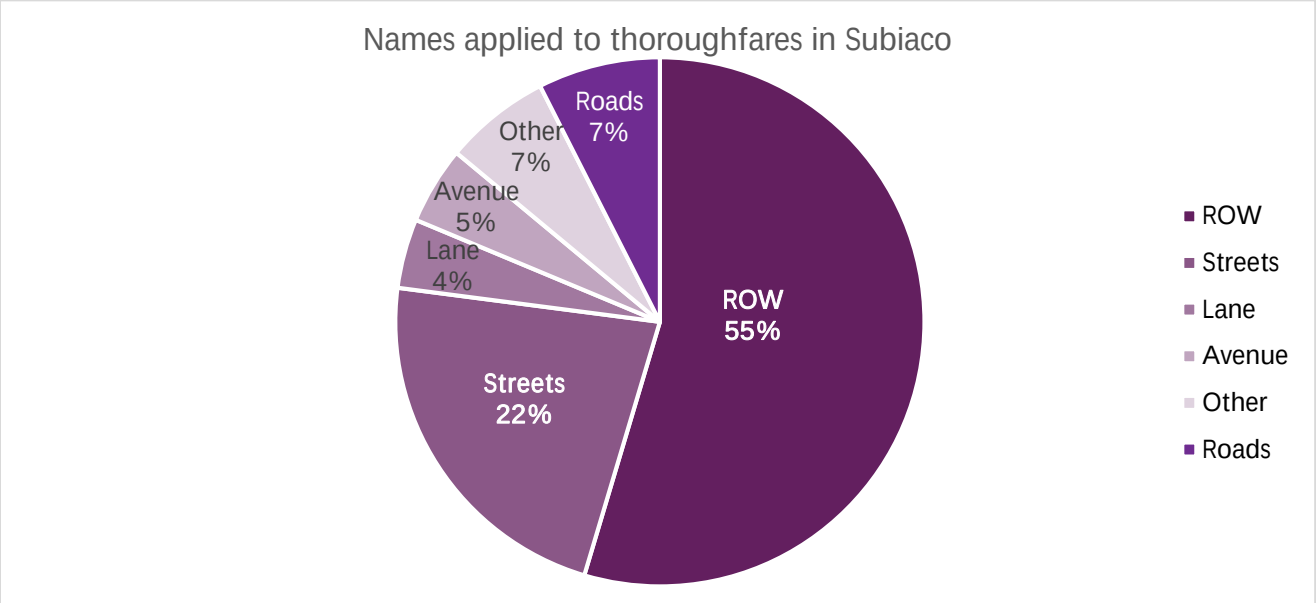
these roads containing a substantial amount of through traffic to destinations outside of the City. The street network within the Subi Centro and Australian Fine China areas are more contemporary, with Daglish based on a modified grid which runs off the alignment of the Perth-Fremantle rail line.

Figure 6 Major road network in Subiaco



The majority of streets in Subiaco are local residential streets, typically two-way with on-street parking and a posted speed limit of 50km/h. The street network overall is highly permeable and well defined and there is a network of rear laneways servicing many residential properties. Over half of all gazetted thoroughfares in Subiaco are Right of Way (ROW) lanes, as seen in Figure 7.

Figure 7 Names applied to thoroughfares in Subiaco



There are a range of intersection controls and priorities with 24 signalised intersections or pedestrian signals throughout the City. Given the number of distributor level roads in the City of Subiaco, they provide for the substantial and managed movement of vehicles. From the latest available count information, Thomas Street on the eastern boundary of the City, accommodates over 45,000 vehicles on an average weekday with constantly high traffic volumes during working hours. Railway Road, north of Aberdare Road, carries in excess of 23,000 vehicles per day and Selby Street, north of Nash Street, carries over 20,000 per weekday.

Within the City itself, traffic distributes throughout the grid network with many of the higher level distributor roads carrying between 12,000 and 16,000 vehicles per day, many with more defined morning and afternoon peak patterns associated with employment and school trips. Whilst there is no one dominant vehicle route through the City in any direction, the one-way pair of Roberts Road and Hay Street combined carries between 26,000-30,000 vehicles per day.

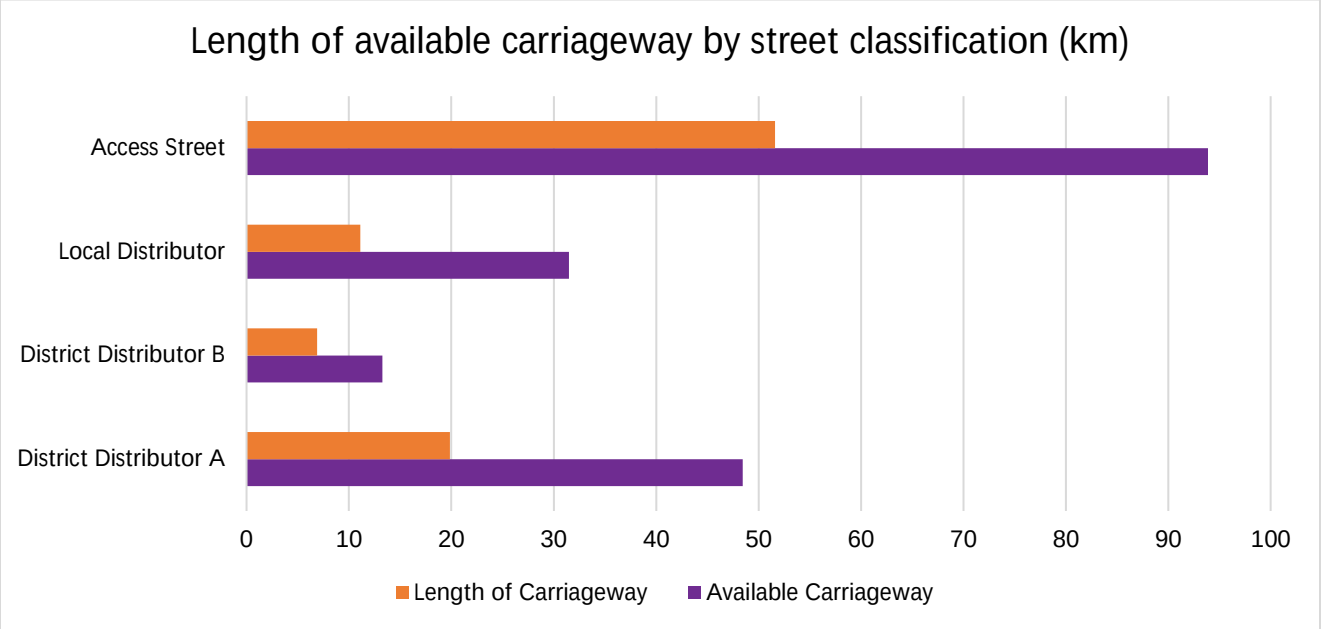
Traffic volumes on the main distributor and activity roads and streets in the City have not uniformly increased or decreased in recent years, as seen in Table 4. Although there is no uniform consistency, across 13 survey points on the main distributor road network in Subiaco between 2010 and 2014, traffic volumes actually decreased by 3%.

Table 4 Traffic volumes on streets in Subiaco

Street	First Year	Second Year	Difference in All Day Traffic Volumes
Haydn Bunton Drive	2010	2014	-12%
Hay Street West	2010	2015	-1%
Onslow Road	2009	2015	6%
Rokeby Road	2010	2014	-6%
Roberts Road	2010	2014	16%
Nicholson Avenue	2010	2015	-7%
Hay Street (near Thomas St)	2010	2014	-36%
Selby Street	2010	2014	6%
Railway Road	2009	2013	3%
Bagot Road	2010	2014	-25%

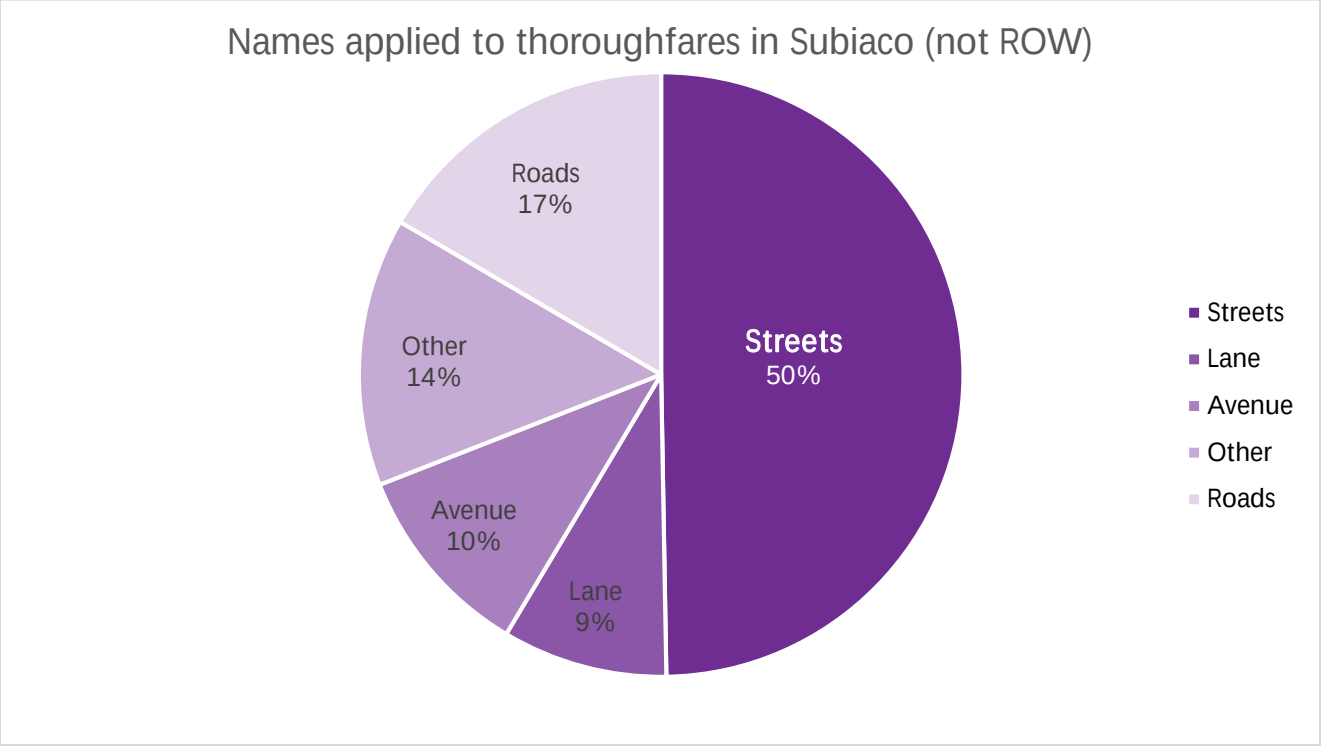
Although the distributor road network carries substantial volumes of primarily through traffic, local access streets still form the majority of the overall constructed and available network to residents and visitors to Subiaco, with nearly 52km of street length and 94km of street carriageway as shown in Figure 8. Available carriageway on district distributor roads reflects wider streets and more lanes.

Figure 8 Length of available carriageway by street classification



The role and primacy of the street in the overall network is shown in Figure 9 which reflects the naming of all thoroughfares in Subiaco with the exception of ROW. Streets, Lanes, Avenues and other minor classifications of access streets are the most common form of nomenclature.

Figure 9 Names applied to thoroughfares in Subiaco (not ROW)

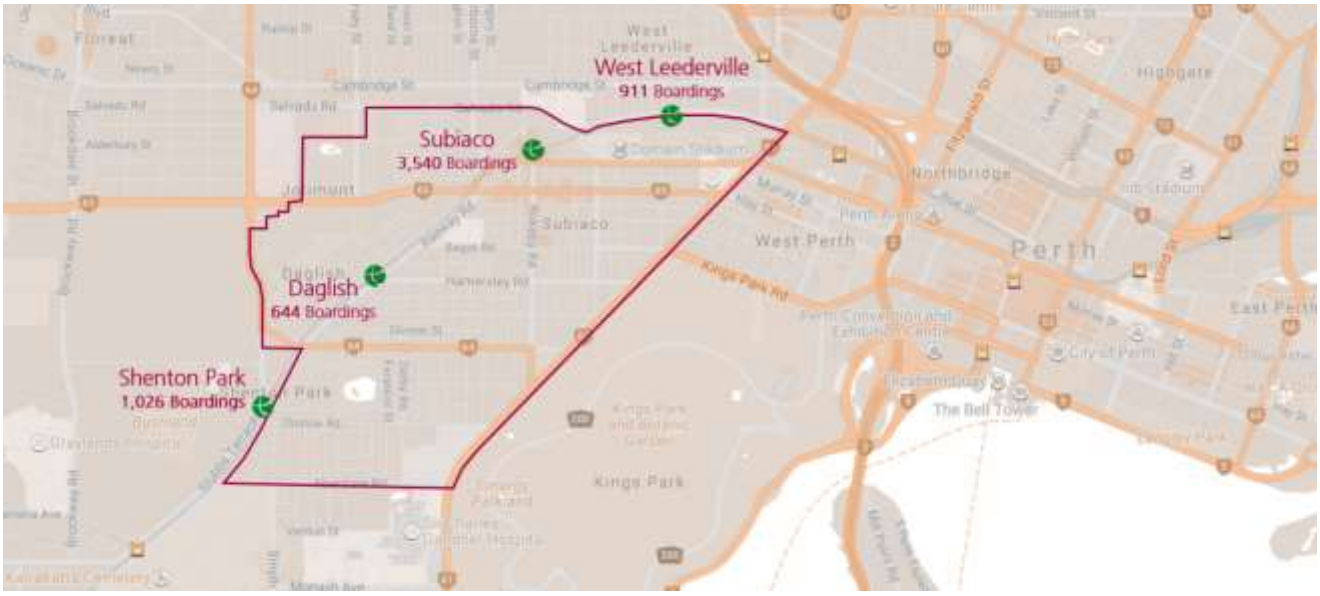


2.3 Perth to Fremantle Rail Line

The City is serviced by four train stations on the Perth to Fremantle rail line, West Leederville, Subiaco, Daglish and Shenton Park Stations. Urban rail train services along the Perth to Fremantle rail line provide frequency of services ranging from 10 to 20 minutes during peak periods in both directions with half hourly services during evenings.

Due to peak station stopping patterns, three of the Stations in the City receive a less frequent service during peak hours than out of peak hours. Bus connections are also provided at Shenton Park, Subiaco and Daglish Stations. Total daily boardings for the four stations from 2015 are shown in Figure 10.

Figure 10 Train boardings 2015 (source: Transperth)



By boardings, Subiaco is the 18th busiest station on the Transperth urban rail network with Daglish ranked 50th out of 69 Stations. Subiaco has a substantial number of alighting passengers in the morning accessing employment within the City.

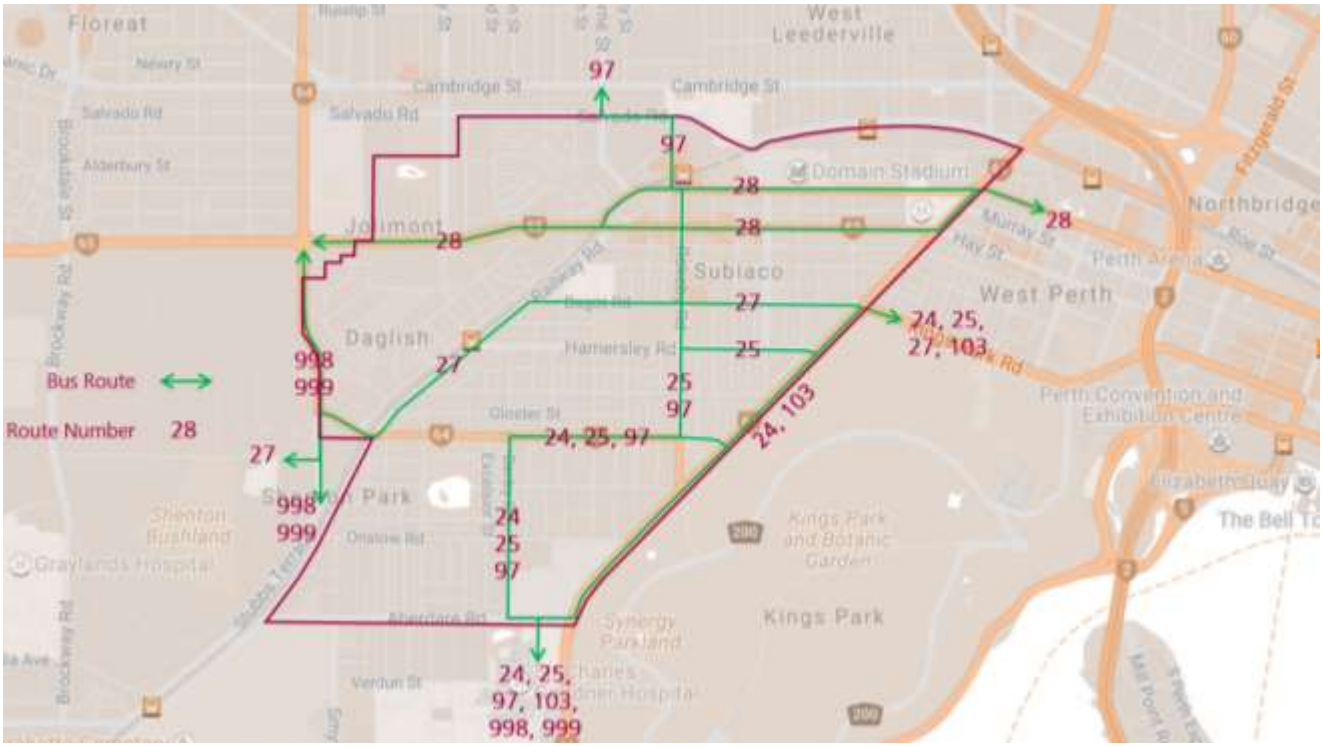
Because of significant local employment opportunities, it is one of the most successful stations in the overall network in attracting both boarding and alighting trips during both peaks, rather than trips being largely in one direction.

2.4 Bus Network

Subiaco has eight separate bus routes that pass through the City. There are no terminating bus services based in Subiaco with the exception of the 97 route on weekdays however some services do provide a connection to the urban rail network, as discussed in the previous section.

Although at first glance it would appear that the City has a wide coverage of bus routes, shown in Figure 11, the majority of routes serving Subiaco do not provide a high frequency service such as five minute headways or "turn up and go" and on the weekends some services do not run at all – including the main north-south 97 service.

Figure 11 Bus routes in Subiaco (source: Transperth)



This form of network and service frequency is relatively typical of many other inner city localities however the lack of a high frequency through route connecting central Subiaco with other locations in Perth is notable by its absence. Many other locations have benefitted from the introduction of 900-series routes including the City of Belmont, City of Vincent and Town of Victoria Park.

Due to the geography of the City, limited population to the west of Subiaco and the nature of the local street network, the City doesn't benefit from additional capacity available from city-bound commuter services that many other inner city locations benefit from. For instance, routes to and from the west use Cambridge Street rather than traverse the local network in Subiaco.

An analysis of all-day bus services running through the City of Subiaco indicates the primacy of routes running around Subiaco rather than through. Figure 12 and Figure 13 set out all day bus services along routes serving the City with the 998, 999, 24 and 103 largely traversing boundary roads. The majority of services operate at reasonable "tidal" frequencies during peak periods of around 15-20 minutes however the paucity of some services outside of peak periods hinders any serious attempt to support overall modal shift in the City for non-employment or education related trips.

The Subiaco Shuttle, or more formally Route 97, is an important bus service connecting the UWA and QEII Campuses to Subiaco. It provides a local service for Subiaco residents, workers and visitors, as well as a regional service between major centres and Subiaco Station. The City has recently been successful in negotiating an extension of the service to Leederville Station in the morning and afternoon weekday peak periods. The service is subject to funding arrangements that include the City contributing a significant proportion of running costs per year for a route that passes through two other local government areas

Figure 12 All day bus services to Perth, 97 to West Leederville and Clockwise 998

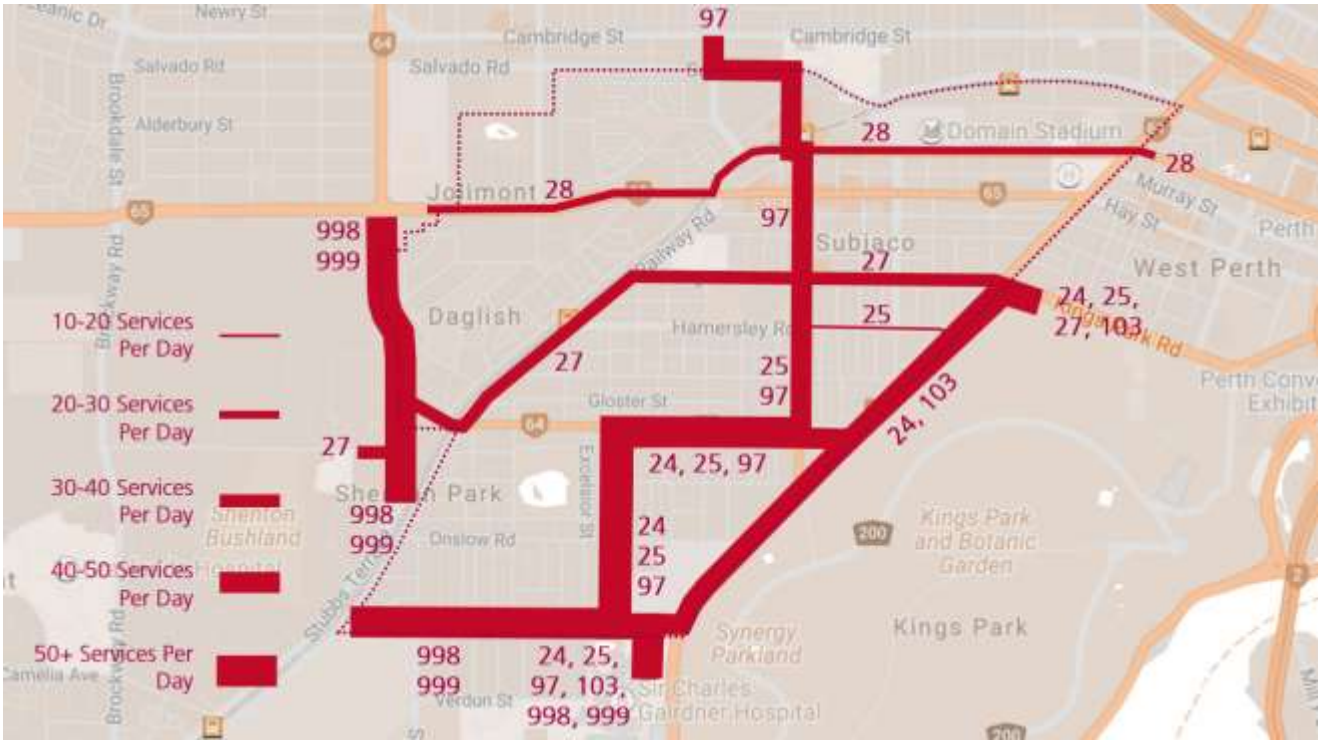
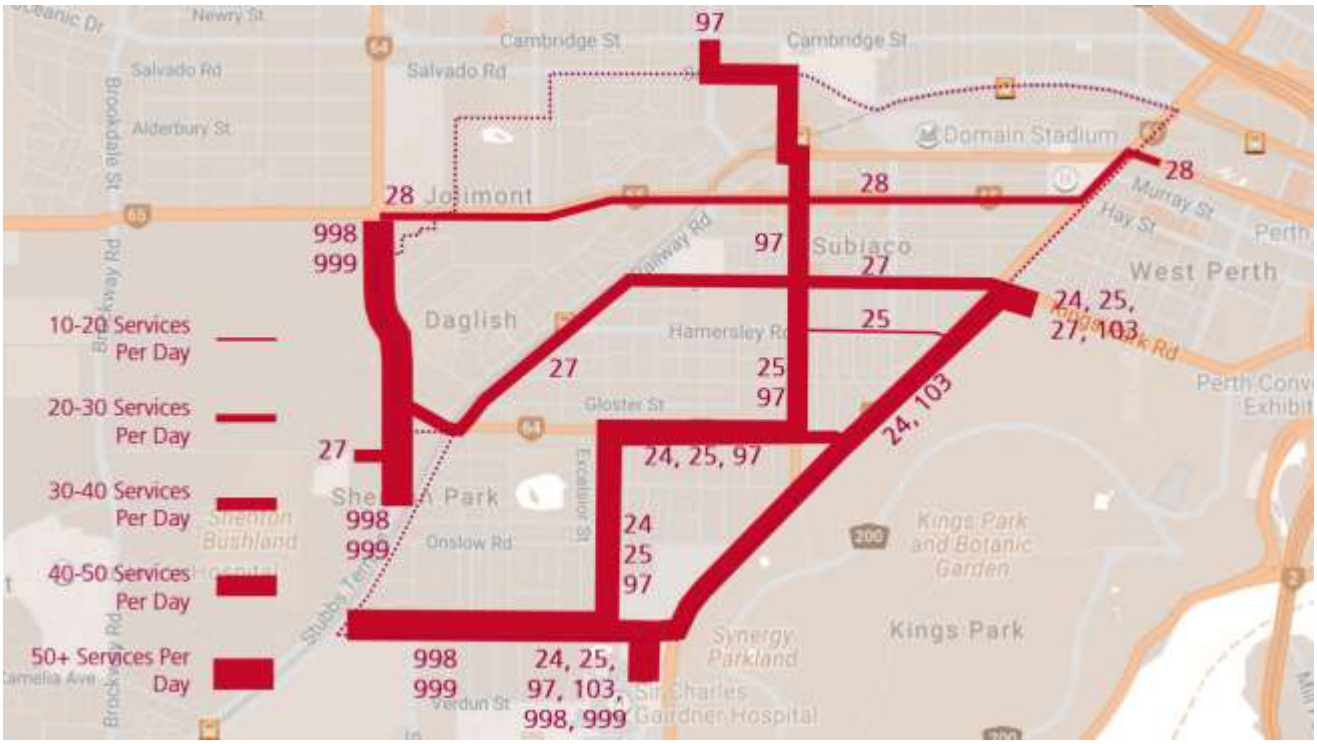


Figure 13 All day bus services from Perth, 97 to UWA and Anti-Clockwise 999



2.5 Cycling

As with the regional road network and public transport services, Subiaco has a very high quality regional through route, or Principal Shared Path (PSP), for cyclists which provides connections for commuting and recreational cycle trips to locations adjacent to the City. The PSP is a key route between the western suburbs and Central Perth and it eventually connects into Fremantle and coastal routes.

In addition to the PSP, there is also a connection into the centre of Subiaco for the Coast to City path. This series of paths connects Subiaco to City Beach. The alignment of the PSP and Coast to City are shown in Figure 14. The steady year on year increase of use in the PSP connection through Subiaco is shown in Figure 15 which is supplemented by anecdotal evidence of an increase in casual cycling trips through the City.

Those key segregated facilities aside, the Subiaco Bike Plan notes that a lack of dedicated cycling infrastructure, an abundance of kerbside parking, high traffic volumes and difficulty in crossing major intersections combine to create an intimidating road environment and form barriers that are preventing more of the community from cycling. No substantial changes put in place since the completion of the bike plan have altered this position.

Figure 14 Main shared path cycle routes (source: DoT)

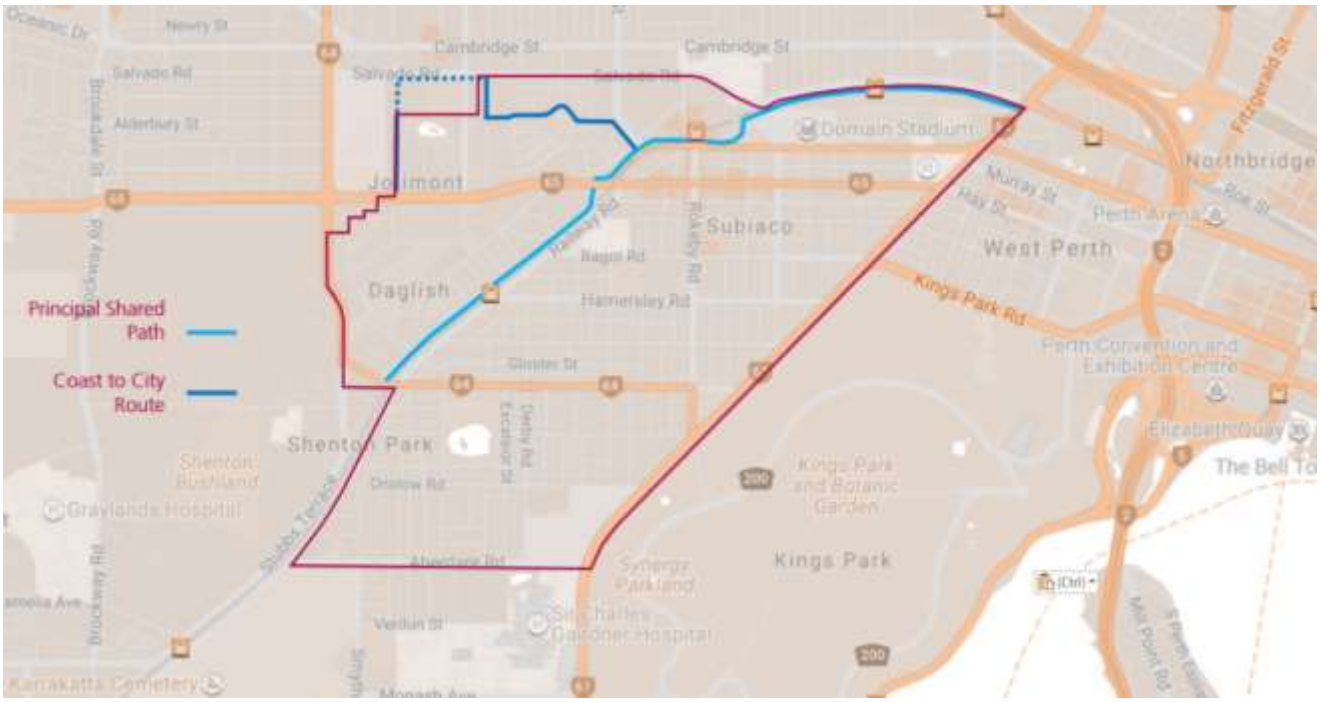
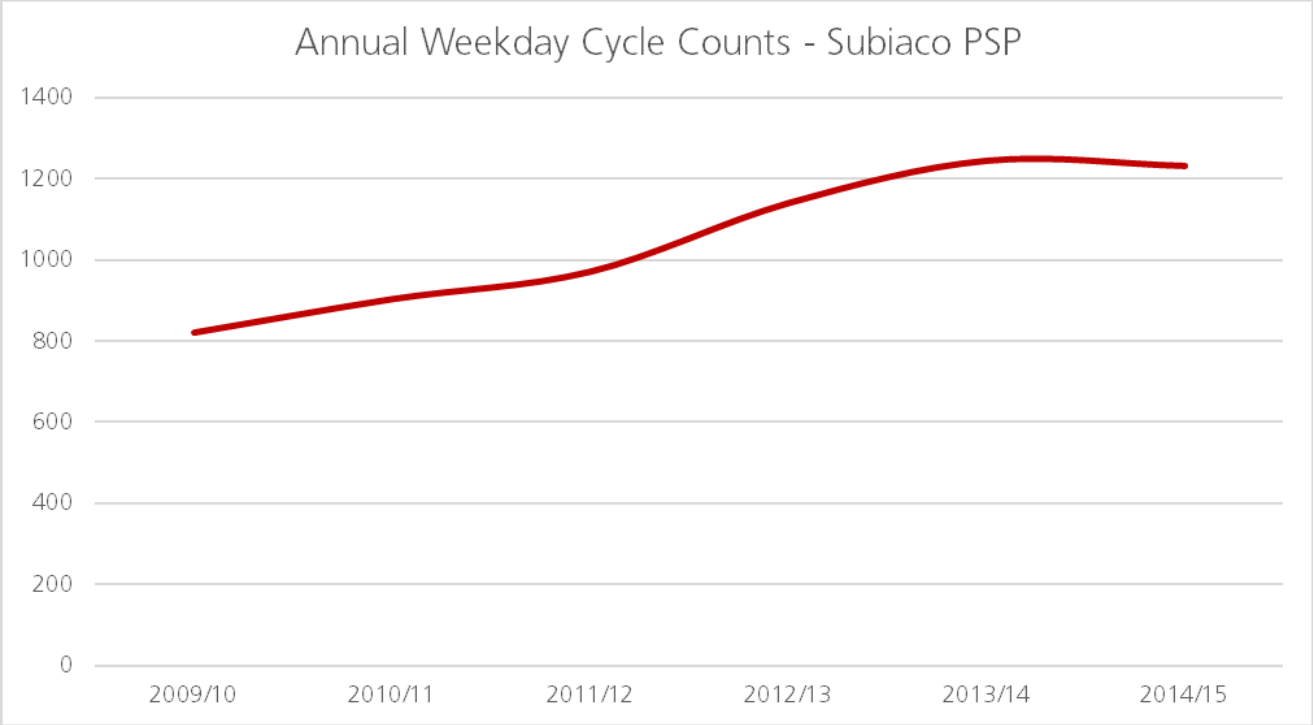


Figure 15 PSP cycle count annual weekday average (source MRWA)



2.6 Walking

Subiaco has excellent overall pedestrian accessibility. There is a significant network of pedestrian paths throughout the City providing for accessibility to local amenities as well as dedicated pedestrian paths through and around parks.

There is a significant volume of pedestrian activity in the centre of the City based around retail, commercial and entertainment land uses as well as there being high levels of pedestrian activity around Subiaco and West Leederville train stations.

As with all transport modes, there are gaps in the overall network and the general level of pedestrian priority crossing major traffic routes can be heavily influenced by prioritising traffic demands. Design within the redevelopment areas such as Subi Centro and Australian Fine China have provided excellent pedestrian facilities and also have been designed around a permeable street network.

Overall, the nature of the street network as a grid contributes to a huge opportunity to encourage more short distance pedestrian trips around the City.

2.7 Freight

Within the City there are no streets or roads that are classified under the MRWA restricted access vehicle network (RAVS). Both Roberts Road and Hay Street are however classified as Primary Freight Routes under State Planning Policy 5.4.

There are no substantial generators of freight and there is no land that is zoned as Industrial within the City Planning Scheme which would be likely to generate significant freight traffic. Freight movements are therefore typically reserved for servicing local retail, commercial, health and hospitality land uses.

Those movements are contained on the existing local street and road network. Typically on the distributor road network in Subiaco, freight or heavy vehicle movements (including buses) account for 3-4% of overall daily traffic volumes.

2.8 Travel Demand Management

Travel demand management refers to either strategic or targeted measures designed to reduce the impact of private vehicle trips, reduce the need for additional road infrastructure and ultimately contribute to wider societal benefits such as improved health indicators. It is a part of a holistic approach by Government to inform and encourage people to challenge their own travel behaviours.

Over the past 15 years, the City has actively engaged in promoting travel demand management measures ranging from completion of comprehensive programmes such as TravelSmart, through to the annual promotion of events such as Bike to Work breakfast and Walk Over October.

The City, in partnership with the Department of Transport, also actively promotes TravelSmart initiatives through the production of separate maps setting out public transport accessibility and cycling and walking information. These maps are readily available in hard or soft copies.

During the past 15 years, there have been marked trends in the City (recorded through Census data) in relation to use of transport modes to and from employment. There have been increases in the overall use of bus, train, bicycle and walking modes with private vehicle use being static.

In terms of proportional use of modes, there are significant more trips made by walking and public transport in Subiaco to and from work. Some of these trends can be attributed to travel demand management, some due to infrastructure improvements and some due to increasing residential population and employment opportunities for local residents.

2.9 On-Street Parking

As is common place in inner urban areas in cities around the world, there is significant demand for on street space within Subiaco for all transport users, including on-street parking. The premium placed on on street space for parking in Subiaco is exacerbated by the presence of land uses that see occasional high visitor volumes to the City such as the Hospitals and Subiaco Oval. Visitors to those uses directly compete for available space with residents (and their visitors), businesses, employees and other attractors such as schools, community facilities, recreational areas and retail land uses.

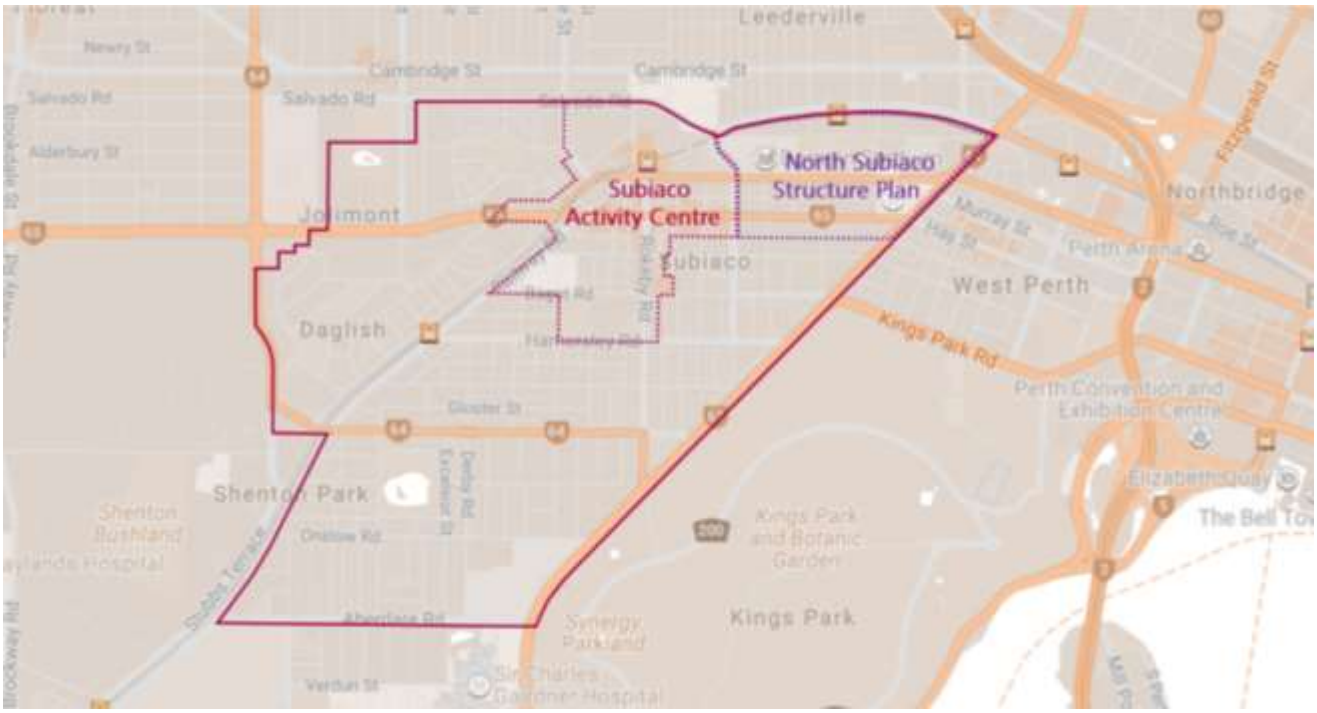
The City has a range of existing on-street parking management practices in place from specific time controls through to short term paid (ticket) visitor bays and enforced parking management in the City Centre. A range of other controls are in place, including visitor permits for some areas of higher activity and event specific parking limitations around Subiaco Oval.

Although many of the older low density dwelling areas in the City have access to parking from rear lane ways, many residential properties have no off-street parking which results in a reliance on permitted on-street parking.

Management of on-street parking within the City is necessarily complex and specific to locations and a range of factors. There are nearly 10,000 on-street bays available within the City and there is limited, if any, potential to add many more on-street bays. This places the onus on the management of on-street bays being effective, targeted and supportive of the land uses adjacent to the parking supply.

Management of parking resources is particularly critical within the Subiaco Activity Centre and North Subiaco Structure Plan and areas immediately adjacent which suffer from high demand by commuters wanting to drive and access the diversified land uses, shown in Figure 16.

Figure 16 Subiaco Activity Centre and North Subiaco Structure Plan boundaries



2.10 Off-Street Parking

There is a range of off-street parking available within the City, including:

- Individual residential dwelling parking (including visitors)
- Off-street parking associated with development (tenants of residential, commercial, retail and educational land uses, hospital parking etc.)
- Off-street parking managed by the City of Subiaco
- Commercially operated off-street parking
- Park and Ride bays at Stations.

Exact volumes of off-street parking bays are unknown however there are some indicators as to the overall quantum of parking through these statistics:

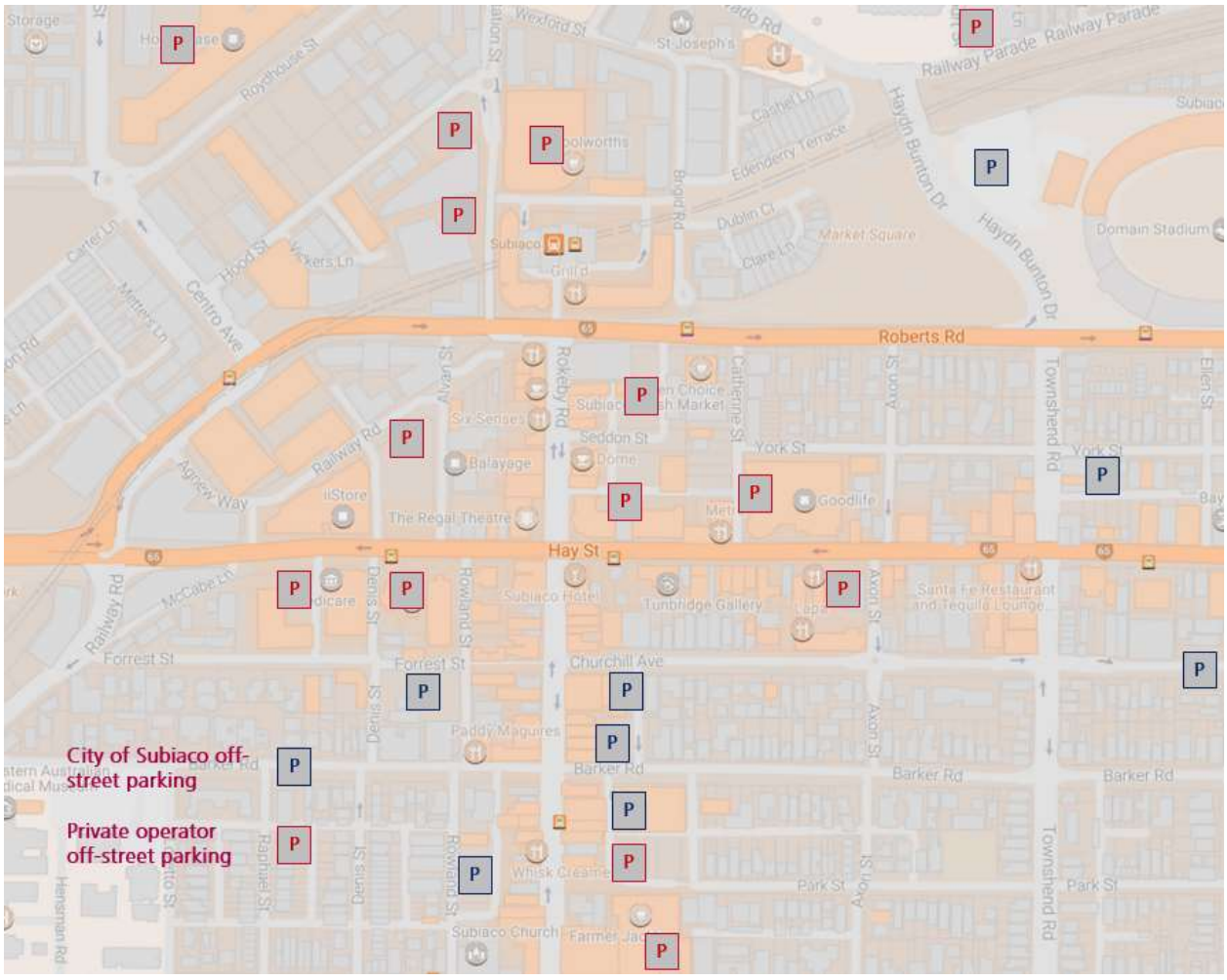
- There were 1,220 paid off-street parking bays available through commercial firms in the Subiaco City Centre reported in the 2012-2016 parking strategy
- There are approximately 400 off-street bays associated with both King Edward Memorial Hospital and Princess Margaret Hospital
- There are approximately 200 marked bays and a further 60 unmarked bays used at Perth Modern School
- There were over 8,800 vehicles recorded as being attributed to private residences in the 2011 Census. Although this number is not entirely accurate, nor does it suggest all vehicles attributed to residential dwellings park off-street, it provides an indicator as to residential demand

- As at the 2011 Census, there were over 3,500 residents driving to employment from their residence in the City of Subiaco
- As at the 2011 Census, 65% of the workforce in Subiaco (which at that stage comprised of over 24,000 employees) travelled to work by car.

As opposed to on-street parking capacity, off-street parking provision will increase with additional development in Subiaco in the future. Therefore, issues of supply, demand and management are all relevant. Off-street parking availability within the centre of Subiaco, as highlighted in the Subiaco Activity Centre Structure Plan, is a key element of the transport network – both short term parking to allow for retail and commercial use and commuting bays.

The Structure Plan, and supporting parking assessment considered that there needed to be the implementation of centralised and consolidated public parking sites to service the activity centre. The structure plan includes proposed locations for multi-deck car parking sites on the perimeter of highly pedestrianised retail and mixed use precincts. These sites consider existing car parking provision and possible future land uses that may require car parking. The location of the primary City of Subiaco and private operator off-street parking stock within proximity to the Activity Centre is indicatively shown in Figure 17.

Figure 17 Main off-street parking locations



3 Vision and Objectives

Development of the TAPS is underpinned by a series of other strategies, plans and data that have informed the longer term strategies proposed. The underlying documents and data informed the TAPS, however in order for the recommendations to have a meaningful basis, an overarching vision and set of objectives were required. If there was no vision for the strategy, and no objectives, the success or otherwise of the TAPS could never be understood.

Within the City of Subiaco Strategic Community Plan, discussed in section 1.1 and section 1.2, an overall vision has been developed for the City, as well as a series of objectives for an integrated transport system. That vision is still the primary vision for the community and informed the development of the vision for the TAPS, as discussed in the following section.

3.1 Vision

The development of the TAPS vision started out being informed by existing higher level strategic planning documents for the City of Subiaco and Perth as a whole. Those documents, and their respective visions, formed the basis for discussion with both officers and Councillors of the City of Subiaco in November 2016. Key elements of the vision were discussed with Council in November 2016, along with a number of alternative approaches to the setting of a vision.

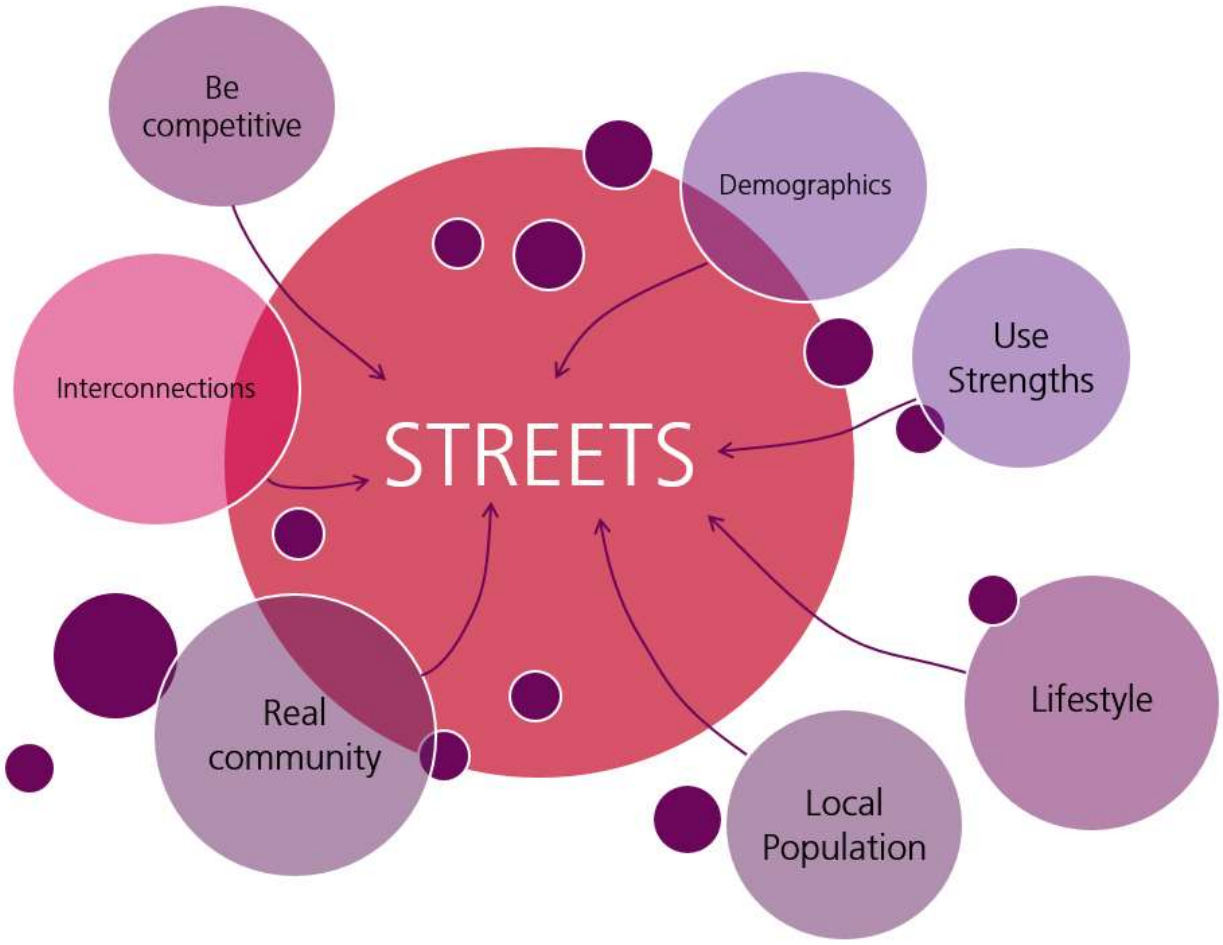
Key elements presented to Council were:

- The requirement for a vision based around the community – as per the WAPC Integrated Transport Plans guidelines
- The primacy of the City of Subiaco Strategic Community Plan and the objectives of that plan within the "effective and integrated transport system" focus area
- What elements of the transport network relate to how Subiaco has developed and a comparison of Australian and Global locations
- The importance of providing touchstones for Council to understand the outcomes of the various strategies within the TAPS
- What existing and future groups the community may be comprised of
- A 15-20 year look ahead in terms of land use and transport elements in the City.

From the presentation, Council were directly engaged for input on the TAPS vision, with a range of factors being offered by Councillors. These factors are shown in Figure 18, alongside the key component of the transport network and the TAPS vision – streets.

The factors provided by the Councillors highlighted the importance of streets to the City and how their different and unique characteristics all play a key role in defining the City and supporting the community. A range of characteristics were raised relating to how important various elements of streets are, including street trees/shading, heritage frontage, public transport use, residential uses, traffic routes, connection points, width of streets and movement of pedestrians along and across streets. The importance of the street as the building block for the transport network now and in the future, formed the basis for the vision.

Figure 18 Vision workshop - key elements



Following the Council workshop, the vision established for the TAPS was:

"Subiaco's streets – where our community connects"

In relating the vision of the TAPS back to the Strategic Community Plan and the focus areas in that key document, four separate broad objectives for the TAPS were established, as set out in the following section.

3.2 Objectives

Four broad based objectives were set for the TAPS based around the vision and the focus areas already established in the Strategic Community Plan.

"Design our streets for all users

Manage our streets to support the growth of our community in the future

Allow our streets to connect our community and activity

Integrate our streets to reflect development form and function"

There were a range of elements, responses and design prompts from the Strategic Community Plan engagement exercise that provide a clear desire of the community to retain specific characteristics of the City, even as the population increases and activity intensifies. These elements, listed below, are all related to the design and role of the fundamental element of the transport network in Subiaco – streets.

- We are a vibrant and friendly city that has retained its village feel
- Create a social environment that is accessible and inclusive for everyone
- Create and maintain a safe environment for the community
- Preserve and maintain valued street trees
- Continue to be at the forefront of supporting sustainable verges
- We have a wide variety of quality entertainment, shopping, recreation and leisure facilities, making the city an attractive destination for residents and visitors
- Support a diverse range of dining and drinking venues, both indoors and outdoors
- Work towards establishing the Subiaco town centre as a destination of choice
- Ensure new developments consider and respect the built heritage and the character of the streetscapes
- Work to ensure appropriate infrastructure exists to support increased density
- Reduce the impact of traffic on local roads
- People friendly streets, streets designed to minimise vehicle use, reduce traffic flow through CBD
- Pedestrian friendly streets
- The ability to walk and cycle in and around the city.

Given the ever present competing demands, designing streets for all users within an inner metropolitan area is typically easier said than done, in particular given the restrictions placed upon the City by other standards and regulations – at national and state levels. There is a duty of care, sometimes legislative restrictions, around design of streets and there is also an underlying requirement for the street environment to be safely designed.

But the careful and deliberate designing of streets as places will hallmark the future of Subiaco. In much the same way that Subiaco undertook a significant shift in planning policies in the early 1980's relating to retention and conservation of built heritage elements, the focus on street design now will continue to pay social, economic and community dividends in the future.

But what will the outcomes of the TAPS look like if the Vision and Objectives are met? Seven key outcomes, or touchstones, have been developed to provide a readily understandable platform that can be understood by Council and the community.

These outcomes underpin where the TAPS will lead transport and land use integration in the future and are set out on the following page. These outcomes are supported by the inclusion of feature and ambitious projects within each of the modal themes set out in sections 4 to 9. Feature projects are those that will be progressed immediately in conjunction with, or as a result of, the TAPS. Ambitious projects are those schemes or policies that will take many years to implement but will have a far reaching, and strategic impact, for the City as a whole.

Subiaco is the place for people

Our streets will prioritise the interaction of people resulting in health, economic, social and environmental benefits.

Our streets are great places

Parking does play a role in street design, but places dominated by parking lose considerable aesthetic value and people often avoid them, and of course don't spend money.

Subiaco – stick, stop, stay and spend

We want people to stick, stop, stay and spend. They are more likely to do this if the transport network is contributing to the quality of living, working and playing space.

We want people to stay and use our streets

Whether it is a shopping street, a living street or a mixed use street we want to encourage people to inhabit them. Streets should encourage people to interact and be part of the community.

Parking has to generate benefits, not just cars

People will seek out quality places by any means. If they arrive by modes other than a car, the benefit to the business and broader community is maximised.

Make transparent changes

Changes to traffic and parking must be considerate, empathetic, transparent and done at a pace that the community can comprehend, contribute to and adjust to. It must be completely apparent to all stakeholders why changes are being made.

Our streets are our greatest asset and the future of our City

Changes to transport in Subiaco should be focused on what is being improved for the benefit of our City. We are building a more accessible, sustainable and vibrant part of one of Australia's great Inner City locations.

4 Land Use and Transport Integration

Large sections of the City will remain relatively unchanged into the future and therefore the existing level of integration between land use and transport will generally remain as is. Within these areas around Daglish, Subiaco South and Shenton Park, changes relating to the transport network will be primarily around street management and small scale infrastructure improvements focussed on street design for all users.

Although many areas of the City will remain substantially unchanged, integration between land use and transport within the City over the next 15-20 years will become pivotal as a result of large scale redevelopment projects and strategic plans. The progression of redevelopment within the Subiaco Activity Centre, North Subiaco (including Princess Margaret Hospital site and land surrounding Subiaco Oval) and potentially King Edward Memorial Hospital will all result in a substantial change in transport network usage and demands.

These sites will also open up the opportunity to integrate land use and transport together to maximise amenity for existing and future residents and also implement development controls that are relevant to the form of development proposed. Serving these areas with the highest possible public transport accessibility should underpin planning for these sites, as should a substantially reduced level of parking requirement to reflect more contemporary trends in urban development.

These sites are not the only critical areas where transport and land use will require careful consideration. The reconfiguration of Hay Street and Roberts Road, along with the possibility of strategic light and urban rail links, will require more detailed planning to ensure that network responses make the most of these new high capacity connections without causing undue impact on the overall network and residents. High quality, frequent public transport will make best use of the local network to provide access for workers and visitors coming into Subiaco and also provide greater opportunity for residents of the City.

Local area precinct parking plans are also a means of integrating the transport network with existing and future land uses. These plans have direct impact on every day movements by local residents and businesses and as such have to be sympathetic to those demands. Those local precinct plans should be underpinned by the principle that the available street space for parking needs to be managed, not expanded and there should be a focus on making best use of the existing community assets – leafy streets and ease of access for pedestrians to local shops and services.

The other key element of land use integration and the transport network is the requirement for on-site planning and assessment of individual impacts of development. Within TAPS, it is acknowledged that there will be an evolution of the transport network to manage available resources and focus on public transport accessibility and walking and cycling. This transition should be acknowledged in Town Planning Scheme 5 (TPS5) with the incorporation of reporting requirements for transport impacts of development.

The focus on transport impacts should be on end outcomes, not the performance of intersection turning movements for vehicles. Deemed to comply requirements for development should be incorporated in TPS5 for transport impacts of development. This will reduce the level of reporting required to support planning applications and reduce red tape. The recommended approach is set out in Table 5.

Table 5 Development application transport assessment requirements

Development type	Transport requirements	Complies with all requirements	Non-compliant
Residential – Grouped and Multiple Dwellings greater than 10 units	• Site is within 250m door to entrance of Station or bus stops for services with 12 min peak frequency • Proposes minimum parking requirements • Satisfies visitor parking requirements • Provides or exceeds End of Trip and bike parking requirements	Deemed to comply, no formal assessment Applicant must set out compliant details in planning report	Requires full assessment under WAPC Volume 4 Transport Impact Assessment Guidelines – Individual Developments Must incorporate trip generation rates from similar developments in Subiaco recorded within 24 months prior to application
Mixed Use (Moderate or High Impact under WAPC Guidelines)	• Site is within 250m door to stop of Station or bus stops for services with 12 min peak frequency • Proposes minimum parking requirements • Satisfies visitor parking requirements • Provides or exceeds End of Trip and bike parking requirements • Includes Travel Plan	Deemed to comply, no formal assessment Applicant must set out compliant details in planning report Applicant must submit Travel Plan with application	Requires full assessment under WAPC Volume 4 Transport Impact Assessment Guidelines – Individual Developments Must incorporate trip generation rates from similar developments in Subiaco recorded within 24 months prior to application
Commercial (Moderate or High Impact under WAPC Guidelines)	• Site is within 250m door to stop of Station or bus stops for services with 12 min peak frequency • Proposes minimum parking requirements • Satisfies visitor parking requirements • Provides or exceeds End of Trip and bike parking requirements • Includes Travel Plan	Deemed to comply, no formal assessment Applicant must set out compliant details in planning report Applicant must submit Travel Plan with application	Requires full assessment under WAPC Volume 4 Transport Impact Assessment Guidelines – Individual Developments Must incorporate trip generation rates from similar developments in Subiaco recorded within 24 months prior to application
Other	Requires full assessment under WAPC Volume 4 Transport Impact Assessment Guidelines – Individual Developments for moderate or high impact outcomes. Assessment form must be agreed with City of Subiaco prior to assessment Must incorporate trip generation rates from similar developments in Subiaco or similar location recorded within 24 months prior to application		

Feature Project – Local Planning Scheme 5

The City is preparing a new planning strategy and scheme that seeks to provide a balance between growth of all forms of development and the provision of different types of parking and transport options.

In activity centres, less on-site parking would be considered as public transport access is more effective in moving more people in and around inner city locations, however visitor parking is essential to get right as part of developments, on-street, or public off-street. The City will work to improve provisions for pedestrians and cyclists (both local and commuter), and will work with state government agencies to improve public transport.

In areas of the city more remote from public transport it will be important to provide the right amount of parking for new developments, local centres and other destinations. The rates of required parking for new developments in these areas will reflect their location and access to public transport.

Conversely, if the state doesn't support their own growth requirements and targets within in the inner metropolitan area with improved transport networks, their strategy won't work.

One change the City has already made to support business and activity in the town centre is to allow land uses in existing buildings to change quickly without the need for planning approval. These existing buildings are unable to provide more parking on site, but new land uses were being called in due to parking considerations. If the building exists in the town centre, most land uses can now occur without this process delaying new businesses.

Ambitious Project – MRA Redevelopment of PMH and Subiaco Oval

The City is keen to see the redevelopment of the PMH site and Subiaco Oval be a leading example of land use and transport integration occurring as part of a large scale redevelopment including a range of land uses including new educational facilities. As the MRA develops its proposals for the site it will be important to embed within any plans, excellent transport connections for all modes of transport with a focus on supporting walking, cycling and use of public transport modes.

This strategy promotes a high-frequency bus service along Hay Street, eventually becoming light rail in the future, cycle lanes along Hay Street connecting through the PMH site to the proposed Murray Street cycle lanes in the City of Perth, and the return to two-way traffic on both Hay Streets and Roberts Road.

PTA proposes more frequent train services at West Leederville Station over time with Forrestfield-Airport Link trains running along the Fremantle line. In the longer term the Perth Transport Plan discusses the idea of a metro/subway system for Perth, where a station near PMH would be an appropriate location to support existing and future development in the area and promote ease of transferring across the rail network.

As the proposals for PMH and land surrounding Subiaco Oval are developed over the coming years (as shown to the right in the indicative concept plan developed by the City), the City will work proactively with agencies to secure support for these critical transport improvements as part of redevelopment plans.

4.1 Strategies

No.	Strategy	Community outcomes
LU1	As development in the activity centres continues to occur, and demand for transport increases, adequate supply of alternate modes will be provided.	● ● ● ●
LU2	Have a Local Planning Strategy, Scheme and associated policies that provide for an appropriate amount of parking, cycle facilities and other requirements to support the growing demand for transport.	● ● ● ●
LU3	Ensure that economic outcomes, town centre activity, and community access are at the forefront of planning for streets.	● ● ● ●
LU4	Ensure that medium-long term plans for station precincts outside of the activity centres are in place to guide development.	● ● ● ●
LU5	Take leadership role within Inner City Councils on transport and land use policy – refocus efforts on strengthening connections to adjoining inner city councils.	● ●

● Design our streets for all users
● Manage our streets to support the growth of our community in the future
● Allow our streets to connect our community and activity
● Integrate our streets to reflect development form and function

Action
Work with state government transport agencies to deliver the actions identified in this Strategy.
Complete the City's new Town Planning Scheme and policies, implementing the activity centre plans through the scheme.
Prepare a planning policy that outlines the requirements to undertake a transport assessment, require a travel management plan and/or a parking management plan as part of a proposed development.
Ensure Implementation of Subiaco Activity Centre Plan supports development of Economic Activity – such as no parking requirements for small shops, key public and private transport routes focus on the Activity Centre Core.
Ensure that the economic and activity benefits of the Hay St/Roberts Rd 2-Way project are articulated.
Prepare Local Development Plans for the area near Daglish and Shenton Park Stations, in consultation with the community.
Ensure that developments in the north-eastern part of the City capitalise on and are provided with an appropriate level of alternative forms of transport.
Work with stakeholders and agencies to ensure the redevelopment of the Princess Margaret Hospital site is done with best-practice land use – transport integration practices in mind, and securing the support of other agencies for achieving excellence in transport provision.
New buildings that anticipate employment of more than 30 people within them are to prepare and implement a workplace travel plan as a condition of approval.

5 Walking and Cycling

The majority of Subiaco is blessed with a comprehensive network of pedestrian paths along a grid of residential and mixed use streets. In newer development areas, care has been taken to incorporate pedestrian permeability and planting that will provide a shady, attractive environment now and in the future. Established parks, ranging from the larger Lake Jualbup in Shenton Park through to small individual lot pocket parks, provide areas for safe pedestrian movement and activity.

Within the main activity areas of the City, pedestrian movement forms the most critical part of any journeys on the transport network. Pedestrian trips include those to and from the Station, to and from retail outlets, to and from local businesses and to and from parked cars to the end point of the journey. These small, yet incredibly important trips, will become more and more important as Subiaco evolves over the next 20 years and therefore they have the most importance in the TAPS.

Walking trips facilitate community interaction. They facilitate economic transactions that directly contribute to the health of the community and they provide an efficient means of people covering short distances where other modes are impractical. For an inner urban, increasingly populated and developing area such as Subiaco, these sorts of trips are coveted and reflect a desirable outcome. Subiaco is already ranked as one of the most walkable locations within Perth, and many of the planning and infrastructure decisions in the past have allowed this to evolve.

Cycling is popular in Subiaco and the key PSP continues to see growth in use. The City's streets generally offer a safe, low speed network to cycle on. Although there are two high quality cycling connections through Subiaco, the overall cycle network for an inner city location is average at best and the City has not substantially progressed any on-street cycle facilities that would encourage cycling by all members of the community. This was acknowledged with the Bike Plan completed in 2014, and a number of proposals within that plan were removed on the basis of community reaction.

The City has invested in travel demand management programmes over the past five years and supported events to encourage use of non private vehicle modes. These programmes and events, such as TravelSmart Workplace and TravelSmart School, Bike to Work Breakfast, Ride to School Day and Active Commuter Challenge, enable people to make choices about how they travel and how they use the movement network. Readily available material is promoted by the City through a range of means. These programmes and event management have contributed to a relatively high take up of walking and cycling for all trips in comparison to other areas in Perth and Perth as a whole.

Whilst the user-demand programmes such as TravelSmart can encourage changes in behaviour, provision of infrastructure – both on the street network and for the end user – is a critical element. That there is no requirement for bicycle parking for residential developments in TPS4 outside of R-codes requirements and the requirements around end of trip facilities in non-residential development are limited to secure parking facilities results in a situation where any attempts to engender significant modal shift through travel demand management alone will be fruitless.

Infrastructure provision, in particular proposed cycling priority routes, was subject to detailed comment when the City of Subiaco Integrated Transport Strategy and Bike Plan were released for public comment in 2015. Much of the comment was focussed around the appropriateness of Townshend Road and Hamersley Road being transformed into primary level on-street prioritised cycle infrastructure. Much of the remainder of the Bike Plan was endorsed.

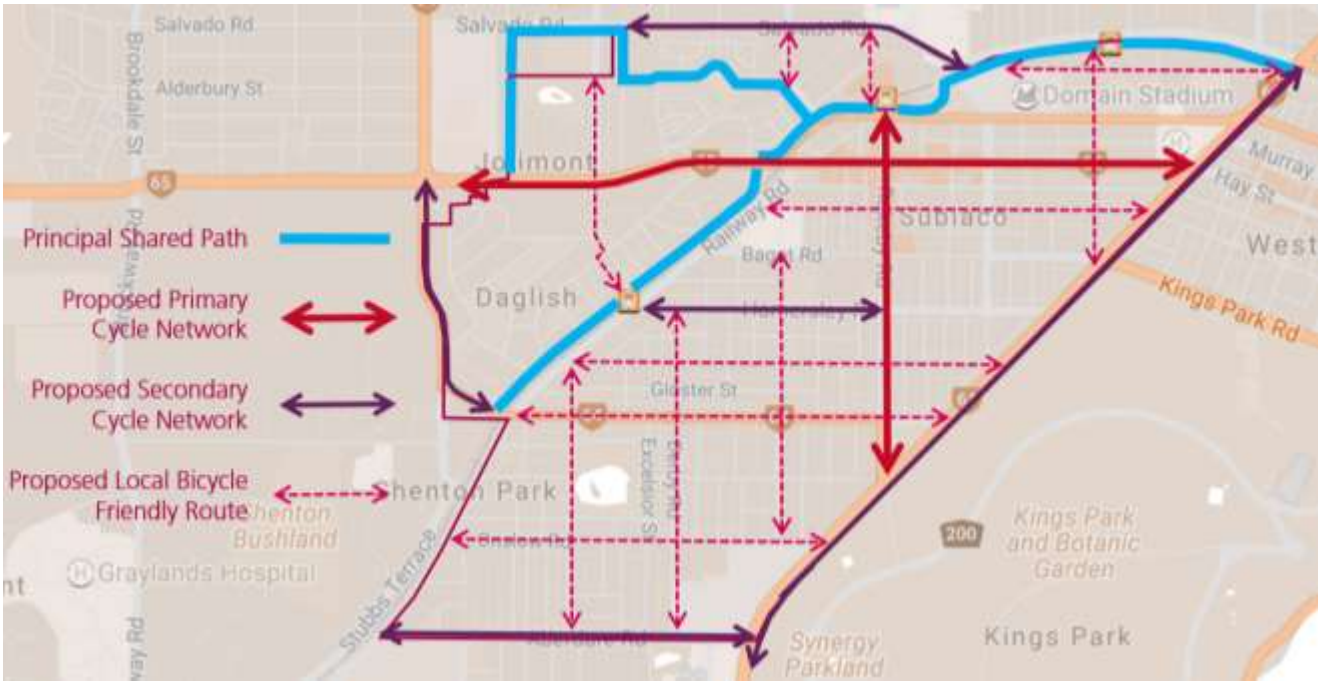
The engagement response relating to Townshend Road was justified on the basis that the street itself has a specific character, impacts on competing land uses and substantial existing tree canopy. The removal of the Hamersley Road route in the final Bike Plan was less justified, in particular given the nature of the street itself and the ability for the route to connect Rokeby Road to the residential areas to the south and west.

The majority of the Bike Plan recommendations focused on a grid network that set out a logical, permeable and safe network for cyclists that supplemented the existing PSP network through and adjacent to the City. On that basis, and given the extensive engagement and assessment work undertaken for the Bike Plan, the recommendations within it are supported by TAPS for progression.

Since the completion of the Bike Plan, however, the Department of Transport and various local authorities have started to engage on, design and implement Bike Boulevard treatments which allow for all street users, but prioritise safe cycling movements for all. This form of cycling infrastructure is based around the principle of designing a street for all users through the promotion of cycling priority and sharing street space. The intent of the Bike Boulevard network is reflected in the Perth Transport Plan.

Whilst the Bike Plan supported in TAPS sets out the strategic network, the introduction of Bike Boulevards in Subiaco must be supported and driven by residents and community groups. Their early involvement in defining and delivering a Bike Boulevard is critical. The strategic bike network is shown on Figure 19, however there are substantial local gaps in the network where Bike Boulevard treatments could be considered and progressed as a priority.

Figure 19 Indicative bicycle network (Source: Subiaco Bike Plan)



The design of Bike Boulevards allows for the retention of on-street parking, reduces speed limits and ensures that the overall street network is still accessible by vehicles. This form of infrastructure could provide the backbone of the overall Subiaco cycle network, in particular when they are supported by the local community and driven by the desire to improve connections to local amenities and facilities.

Feature Project – Bike Boulevards

Bike Boulevards are a relatively new approach to redesigning local streets and allocating space to active modes of transport. New Bike Boulevards are being progressed in Bassendean, Bayswater, Belmont, Claremont, Doubleview, Nedlands and Joondalup and are suited to the Subiaco street network.

The first example Bike Boulevard, Shakespeare Street Bike Boulevard was opened in December 2016. The project, funded by the State Government through the Safe Active Street Program and delivered by the City of Vincent, is based on design parameters that included:

- "Bike boulevards are a type of on-road cycleway where speed limits have been reduced and cyclists are given right of way. Users are not fast cyclists. They are mums, dads, children, senior citizens and others making short to medium length trips on bikes to schools, train stations or shops.
- Bike boulevard routes are clearly marked with on-road markings and signs. Speeds are reduced to 30 km/h and red pavement and raised platforms are installed to help alert people that they are entering a bicycle and pedestrian friendly space.".

The introduction of a Bike Boulevard is heavily reliant on community participation, engagement, advocacy and support. The City will work with the community to examine streets and routes for Bike Boulevards in Subiaco and a review of the bike plan will help facilitate implementation. The introduction of Bike Boulevards will support all bicycle users, improve conditions for pedestrians and support measures to reduce speed and improve safety of our streets.

Images – Department of Transport (www.smarttransport.wa.gov.au)

Ambitious Project – Cycle Infrastructure along Hay Street

The City proposes to convert both Hay Street and Roberts Road to two-way traffic to improve overall circulation around the City and provide for changes in land use and transport integration. Hay Street would become a busy high street designed for pedestrians, cyclists, public transport, alfresco, vibrancy and other activities found in an exciting centre.

As part of the design the City will consider dedicated cycle infrastructure along Hay Street which will support local people, and commuter cyclists, accessing the facilities along the street by bike. This would contribute substantially to how people move in and around the City and form a key addition to the cycle network in Subiaco.

The introduction of dedicated cycling infrastructure has been successfully implemented in cities around Australia and the World. Dedicated cycling infrastructure now forms an accepted and heavily used element to the transport network that provides overall benefits to the movement of people and goods in dense city environments. The recent success of Cycling Superhighways in London is indicative of the potential success in introducing such infrastructure along Hay Street when it transitions to two-way running.

There would be many options, and challenges, in integrating dedicated cycling infrastructure, however the balance of transport modes along Hay Street needs to reflect and support the ultimate outcomes sought for this busy, people focussed activity corridor.

5.1 Strategies

No.	Strategy	Community outcomes
CW1	Walking and cycling are to be considered a critical form of transport, along with public transport on all of the city's streets.	● ● ● ●
CW2	Recognise that pedestrians and cyclists are those road users who are best placed to stick, stop, stay and spend.	● ● ● ●
CW3	In Activity Centres and local centres, consider pedestrians and cyclists as a priority when designing street improvements / upgrades.	● ● ● ●
CW4	Cyclists are welcome on all of the City's streets and designs should cater for this.	● ●
CW5	Implement strategies to encourage increases in walking and cycling trips within the City.	● ● ● ●

● Design our streets for all users
● Manage our streets to support the growth of our community in the future
● Allow our streets to connect our community and activity
● Integrate our streets to reflect development form and function

Action
Develop a design guide for Rokeby Road and Hay Street that provides appropriate spaces, priority, nodes for pedestrians and cyclists, incorporate cycling facilities as part of the Hay Street and Roberts road two-way conversions.
Review the Bike Plan in consultation with the community and those that visit Subiaco to align with other actions in this strategy such as "self-explaining streets".
As a result of the outcomes of the Bike Plan review, plan and implement Subiaco's first bicycle boulevard.
Continue to explore avenues of external funding to compliment the city's own funds for improvements to the city's bicycle network.
Provide appropriate bicycle end of trip facilities throughout the activity and local centres.
Participate in the State Government's Your Move Travel education program.
Develop Wayfinding Strategy for pedestrians and cyclists.
Request the PTA install secure cycle parking and end of trip facilities at all train stations within the City.
Investigate improved pedestrian and cycle access to West Leederville Station, in keeping with proposed educational land uses within redevelopment plans. To include a signalised crossing of Roberts Road at Coghlan Street.

6 Public Transport

Subiaco as a locality has been shaped by accessibility to public transport, primarily through the Perth to Fremantle rail line since opening in 1881, as well as tram lines which extended along Hay Street and Rokeby Road from the early 1900's to 1958. These rail-based public transport services established initial land use and transport patterns that have shaped the overall transport network within the City and how it integrates with land uses.

The urban rail line between Perth and Fremantle is a critical piece of transport infrastructure, with four stations located within the City providing convenient, reliable and frequent access to other destinations within the metropolitan region. The majority of peak use for these Stations is based around commuter travel or for school based trips.

Subiaco Station itself is one of the success stories of the entire "heritage lines" network of the Fremantle, Midland and Armadale train lines. With the sinking of the rail line in 1998, coupled with significant investment in infrastructure and facilitation of adjacent land use redevelopment by State Government, the Station caters for higher volumes of inbound and outbound passengers in peak periods than most other Stations on the network. For boarding passenger numbers alone, it is ranked behind only Fremantle and Midland Stations on the heritage lines.

The role of public transport figures prominently within all existing land use and transport strategies developed by the City or at a metropolitan level by the State. It is seen as not only a means to provide accessibility to residents, workers and visitors, however it is also seen as a means of accommodating the level of redevelopment being considered for the City without there being a dependence on private vehicle use. This is seen within the Strategic Community Plan where strategies around choices within the transport network focussed on public transport provision.

Within the Activity Centres and key activity corridors, the role of public transport as a critical land use and transport integrator cannot be underplayed. Providing ease of accessibility by public transport, presently by train and bus but potentially including light rail in the future, will allow for movement of people to and from local and regional destinations. This will generate countless benefits, ranging from greater access to employment, education and goods through to stimulating and sustaining economic activity with Subiaco.

The benefits of public transport accessibility are readily visible in Subiaco today and therefore it is easy for people to translate the benefits into the future when understanding the need for greater public transport accessibility. Without the urban rail line and existing Stations, the form of development around Subiaco would be markedly different if past planning focus was solely on private vehicle oriented development.

The next stage in the evolution of the City as the principal inner city transit supportive location in Perth is for Subiaco to be established as a destination and interchange for public transport, rather than a location that is simply serviced by public transport. This will involve a substantial progression in terms of accessibility for all future public transport modes, as illustrated in Figure 20 and Figure 21.

Figure 20 Existing public transport connections

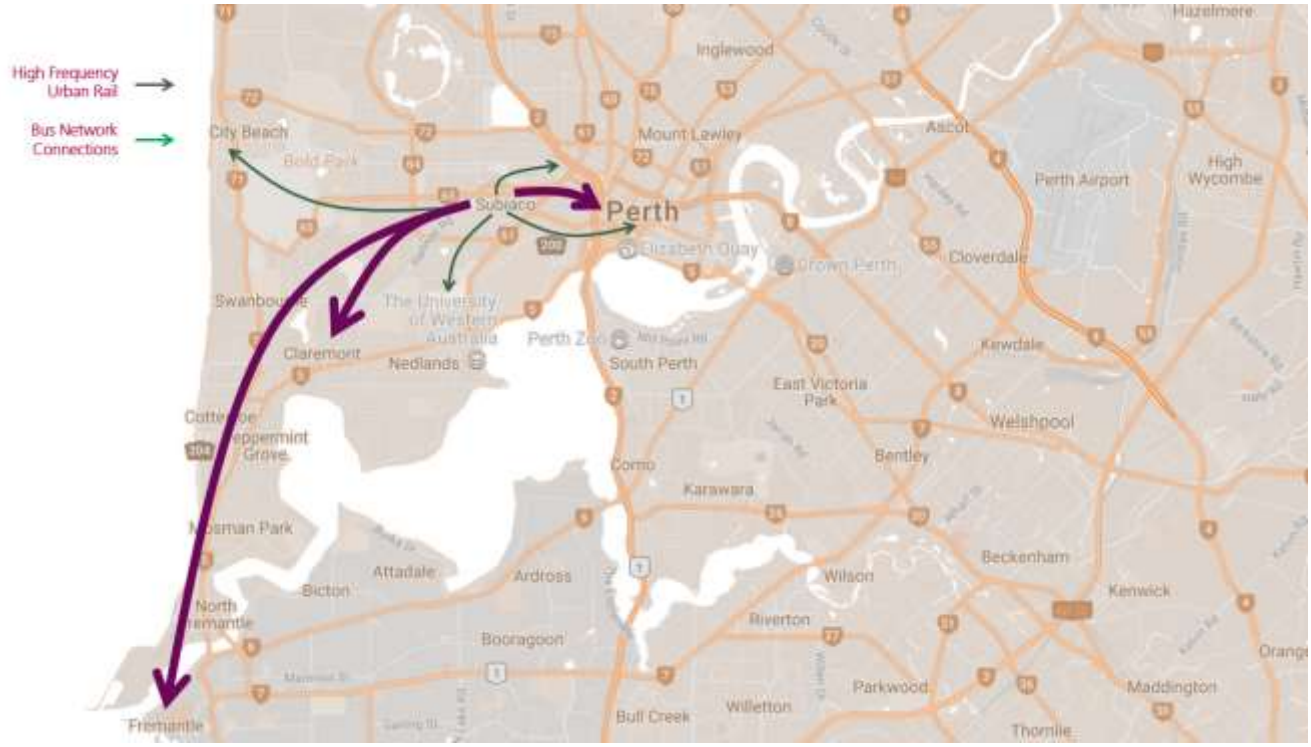
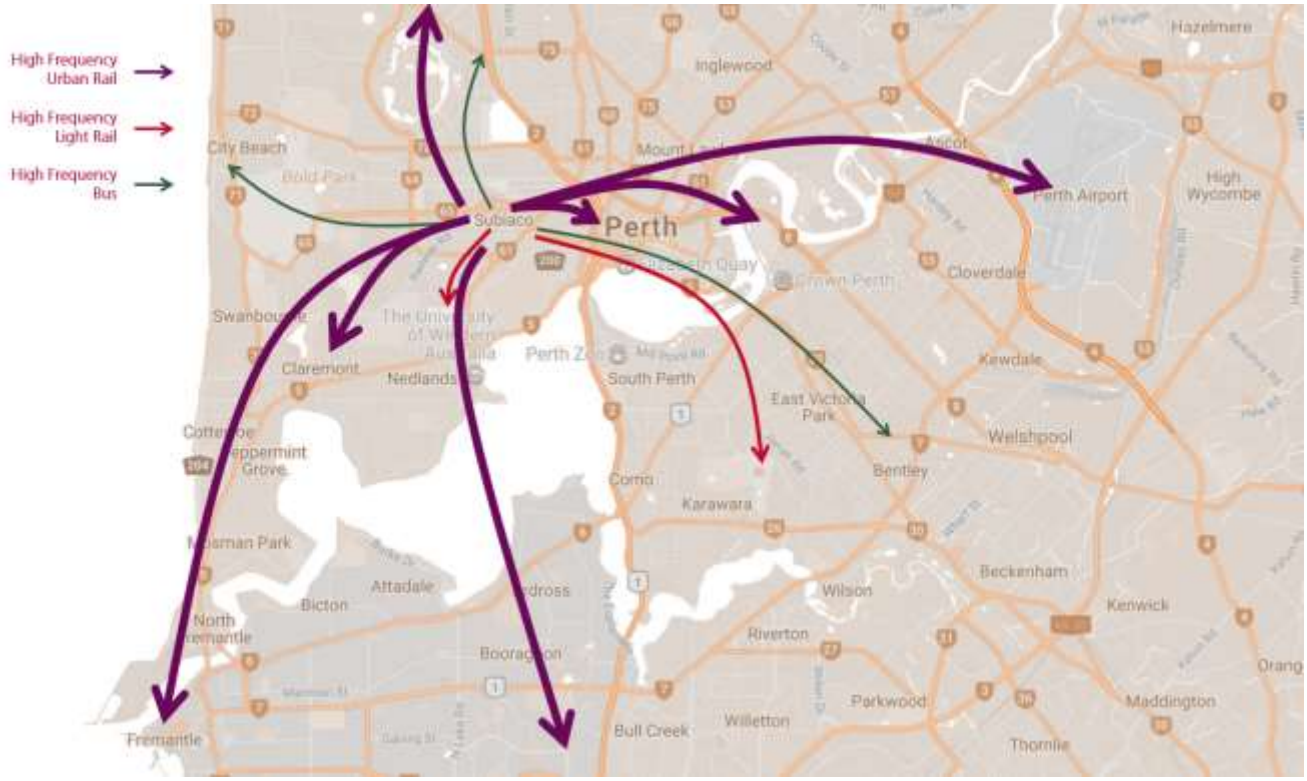


Figure 21 Future public transport connections



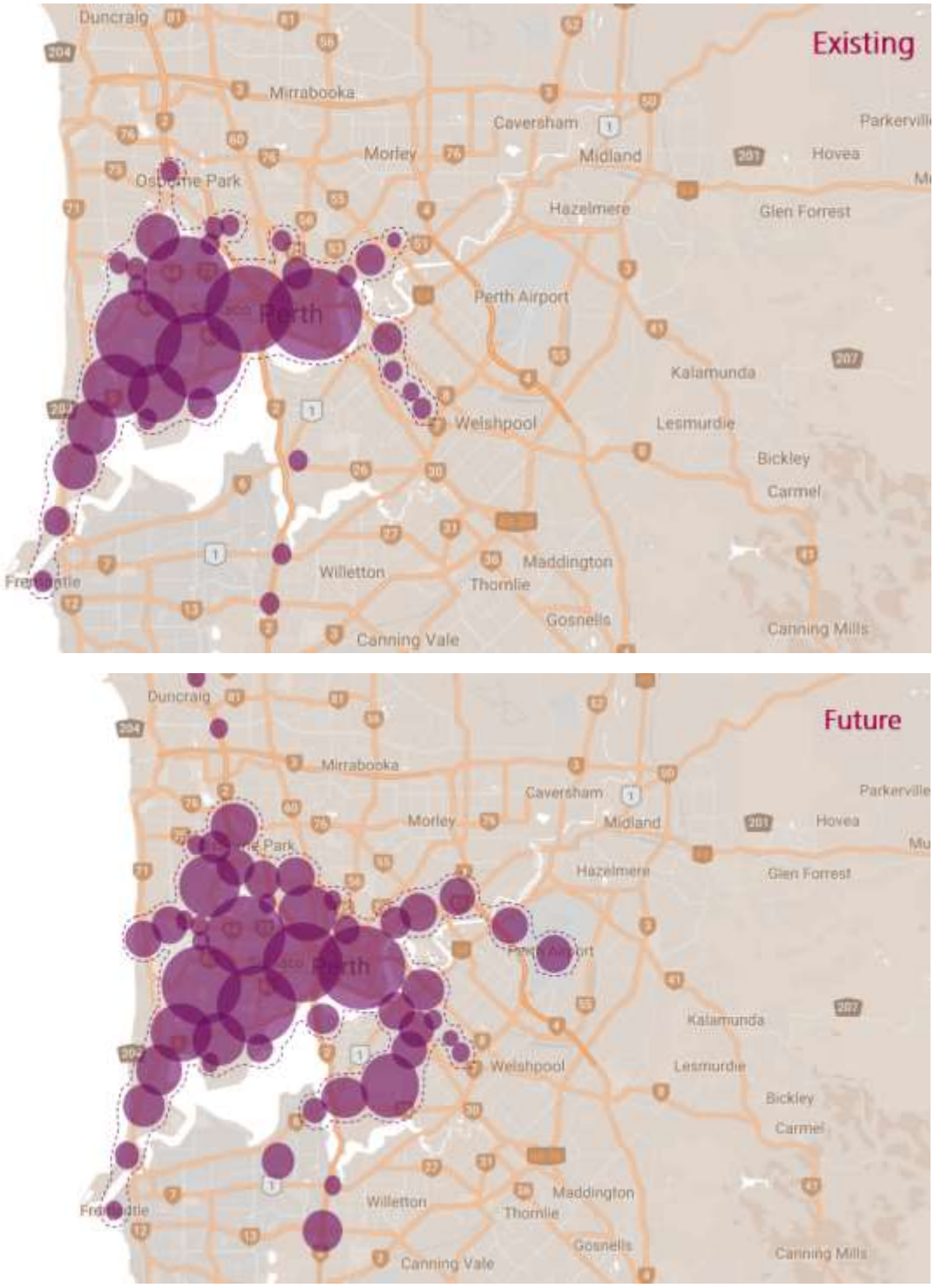
The longer term provision of public transport in the City is focussed around:

- **Provision of additional urban rail capacity and frequency at all Stations in the City with the opening of the Forrestfield-Airport Link and through running of those services along the Perth-Fremantle Rail Line**. This additional capacity and frequency will significantly increase accessibility and connectivity to the entire network as well as provide Subiaco with a significant competitive advantage to other inner city Activity Centres in that passengers travelling between Subiaco and the Airport would not have to transfer trains. In 2020, passengers from the T1 International Terminal would be in the heart of Subiaco within 27 minutes, which is substantially quicker than by private vehicle. Passengers connecting to the new direct London-Perth service at T3 would have a similar journey time, again quicker than by private vehicle.
- **Direct trains to and from events at Perth Stadium**. Train services to and from events at Perth Stadium would pass through Subiaco and West Leederville. With existing infrastructure, hospitality and resident and worker populations, there would still be a significant movement of people between Subiaco and the Perth Stadium.
- **Provision of Light Rail as a third mode**. Within all recent strategic plans for the introduction of light rail in Perth, routing of this mode has consistently included the City of Subiaco. This is recognition that the City has existing resident and worker population to sustain patronage levels required, as well as the basis from which to influence modal shift and grow future patronage. It is likely that plans for future light rail will progress with a connection through or into Subiaco. Construction of a link along Thomas Street would provide direct access to the educational and medical precinct to the south of the City, as well as to wider area inner metropolitan locations such as Curtin University. A future spur line into Subiaco along Hay Street would further consolidate Subiaco's position as having the highest level of public transport accessibility outside of Central Perth.
- **High frequency bus connections to and through Subiaco**. The recent success of higher frequency bus services being introduced along key activity corridors in Perth highlights the potential for new services to connect Subiaco to other key locations in the inner metropolitan region including Glendalough, Victoria Park and Wembley. These services would allow for the transfer of patrons using existing routes, as well as providing access to the City by visitors and workers located outside of Subiaco. The concept of a CAT bus to Subiaco has been raised previously, however this would only connect to one destination and Subiaco would be at the end of the route, plus there are funding implications for the City. A high-frequency 900-series route would connect to multiple destinations and be much more successful than a Central Perth focussed CAT service.
- **Subiaco Station as an interchange and focal point for the network**. At present, there is limited interchange capability at Subiaco. For the future network to ensure resilience and accessibility to be maximised, Subiaco Station needs to evolve into providing interchange capabilities. This will involve land use and transport network compromises because patrons will not use public transport if there are substantial transfer penalties or there is a lack of frequency in service provision. The focus of the interchange would be around Subiaco Square Road, with the form of facility to be provided dependant on design requirements.

The indicative outcome from these overall network improvements is seen in the "reach" of public transport catchments to Subiaco Station by public transport modes for a thirty minute trip shown in Figure 22. Overall journey time is one element in successfully attracting new trips or modal shift, and

introducing these new elements to the network for the City will have benefits beyond just public transport patronage.

Figure 22 Indicative 30 min public transport reach - existing and future



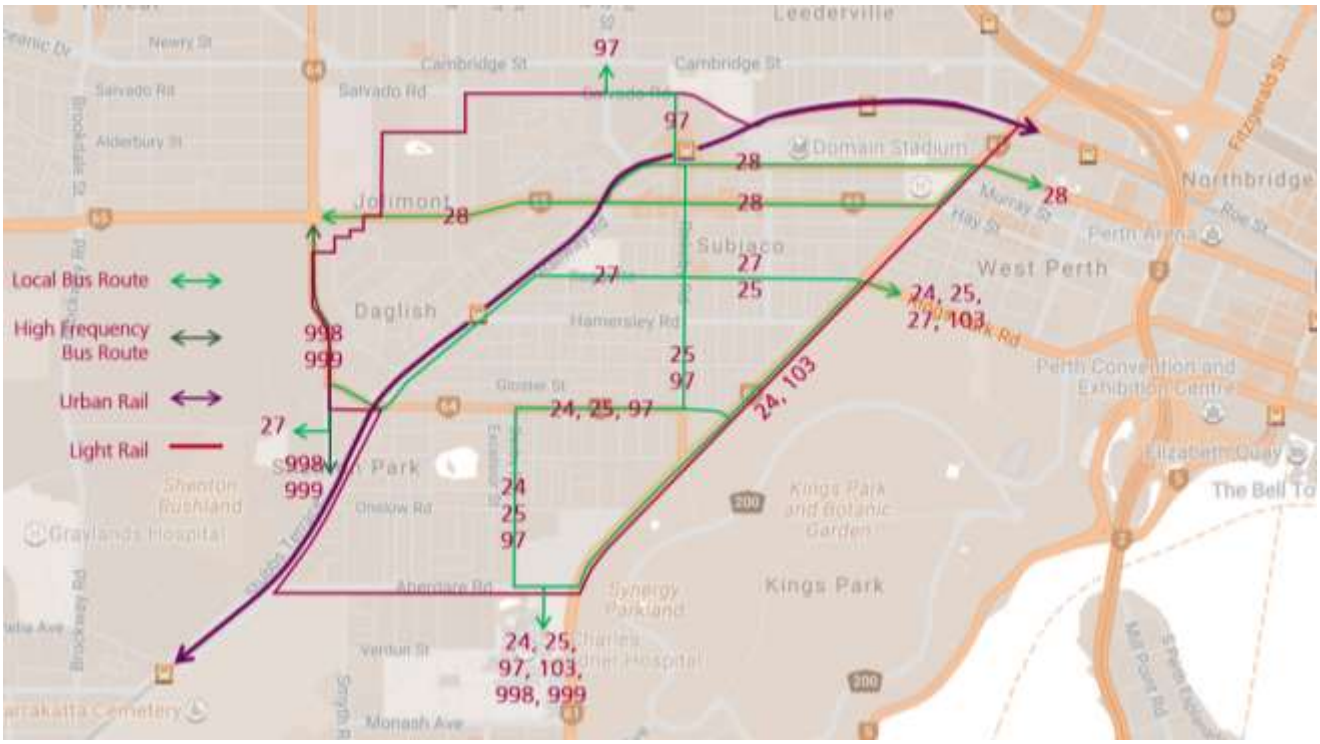
Evolving to the longer term network and far greater public transport accessibility within the City of Subiaco will require staging of public transport interventions, significant inputs from the PTA and the

introduction of supporting land use integration measures as set out in TAPS. There are three distinct stages which would aid the progression of the ultimate network:

- Short term measures – principally bus based improvements
- Medium term measures – introduction of increased bus frequency and priority, Forrestfield-Airport trains introduced
- Longer term – Metropolitan wide strategic measures which support a higher capacity, higher frequency public transport network.

The short term network, shown in Figure 23, would focus on uplifting existing public transport service frequency, principally the 24, 27 and 97 routes. The 97 service in particular provides for the movement of people to and through Subiaco from main employment and activity locations at Leederville, QEII and UWA. This service should have evening and weekend frequencies as a matter of course.

Figure 23 Short term public transport network

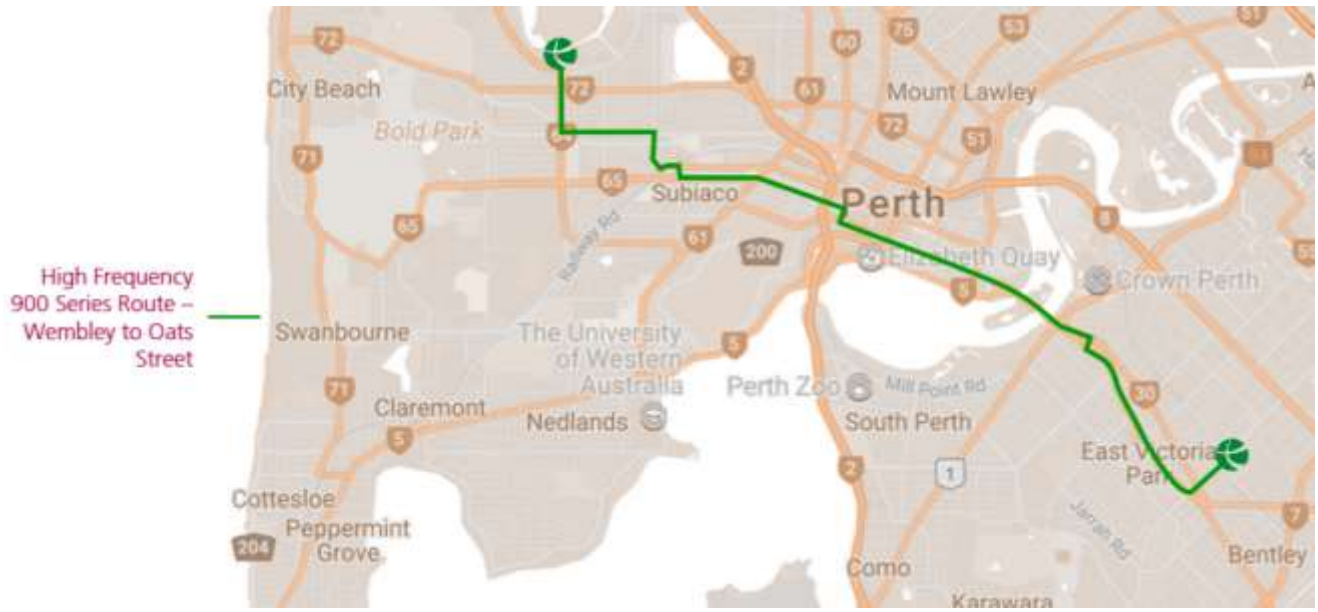


The medium term public transport network will see a marked increase in both the available capacity and frequency of both buses and urban rail. The introduction of Forrestfield-Airport Link trains through the City in 2020 will provide a substantial boost in both travel times to other locations in Perth and capacity for trips between the City and Central Perth. The medium term network, up to 2027, is shown in Figure 24, and includes higher frequency bus connections through Subiaco to Perth, Stirling/Glendalough and Victoria Park.

Figure 24 Indicative medium term public transport network

The indicative higher frequency bus route to Oats Street Station in Victoria Park is shown in Figure 25 would provide greater connectivity between high activity locations and support the development of these communities.

Figure 25 High frequency 900-series route Wembley to Oats Street



The longer term network would see the introduction of larger, more strategic rail based infrastructure that would support development in Subiaco. These projects typically evolve over time and would require substantial investment from State and Federal Governments or new funding models to achieve.

These projects, as indicated on Figure 21, would include a new subway network in Inner Perth with connections through the City of Subiaco, a heavy urban rail connection between Stirling and Murdoch via the City of Subiaco and Light Rail – both in to Subiaco via Hay Street and along the periphery to UWA. Planning for these links is embryonic and does not provide the form of heavy rail connections that would support plans for the Subiaco Activity Centre or the orderly movement of people through the urban corridor west of the existing Perth-Joondalup Rail Line.

Any plans for a longer term subway system linking key inner city locations must include Subiaco as a hub and interchange. Subiaco is, and will continue to be, a key employment and population centre in the inner west and therefore any proposed subway system should include station(s) within its boundaries to support future growth. This should include an interchange station with the Perth-Fremantle Rail Line to allow passengers to transit through Subiaco rather than Central Perth. As a means of supporting growth, providing travel choice, improving modal shift to public transport and reducing the burden on already heavily used Central Perth Stations, a subway to urban rail interchange is seen as a critical long-term requirement.

The potential alignment of an underground urban rail connection between Stirling and Murdoch is presently indicated within the Perth Transport Plan. The City supports additional rail-based infrastructure to the west of the Joondalup-Mandurah line, as many employees in the professional/health/education fields work in activity centres in these areas, and the urban planning framework calls for increased population in inner-city activity centres. For longer distance Urban Rail, the City considers that a better option would be to build a rail line that connects Subiaco to Wembley, Churchlands, Innaloo and Stirling.

The theory behind locating the interchange point at Shenton Park is questionable, as the network should connect Activity Centres, of which Subiaco is a key one. The argument that the UWA land north of Shenton Park would require this infrastructure more than the Subiaco Activity Centre is not supported, given that Subiaco is expected to accommodate more people and jobs in the future, and an Activity Centre Plan has been prepared to facilitate that.

The longer term use of Subiaco as the key interchange west of the City for existing Perth-Fremantle rail line, proposed inner city Subway, north-south underground rail connection and a Light Rail spur will provide resilience in the public transport network that will ultimately act as the secondary north-south corridor for movement in Perth throughout the next century. Longer term planning for Perth as a whole must take consideration of this, rather than allowing public transport to compete with or complement urban freeways.

Overall, benefits from the introduction of heavy rail based infrastructure are readily obvious – they provide a high quality and high frequency level of service that people will readily use. This outcome is reflected in the success of the Gold Coast Light Rail project, a hallmark for the ambitious project set out in the public transport component of TAPS.

Feature Project – 900-series bus service on Hay Street

As the Subiaco Activity centre continues to grow it will be essential to provide an excellent level of public transport. Whilst light rail is the ultimate goal for Hay St transport, the City is working with Transperth to secure a high-frequency bus service running from Wembley to Subiaco, on to the Perth CBD via St Georges Terrace, through East Perth and to Victoria Park, as shown indicatively in Figure 25.

It could be extended further to City Beach. The City considers that this route would run at least every 10 minutes and run in a similar fashion to other 900-series routes in Perth which operate high frequency well into the evenings and on weekends.

A CBD CAT-style service was investigated, however a 900-series service is preferred as it would run through Subiaco connecting to multiple destinations, rather than being at the end of a CAT route.

The City would also need to pay for a CAT service in a similar fashion to the City of Perth paying for CAT services in Perth, which would add a high cost to both public and private parking in Subiaco. The Central City CAT services are effectively subsidised by parking income, with the potential for that income to cover new bus route costs limited.

Ambitious Project – A rail future for Subiaco

The City of Subiaco has always supported light rail, particularly down Hay Street, where trams used to run. The City considers that light rail along Hay Street, such as those successfully introduced in Gold Coast illustrated to the right, should be the priority route for the state government planning west of Central Perth. This route would support the growth of Subiaco without absolute reliance on private cars, support the PMH redevelopment (amongst others) and assist with the revitalisation of West Perth.

The Perth Transport Plan introduced the concept of a metro for Perth. Whilst not a short-term proposition, it is essential that planning for other modes accounts for where a metro may run. The city envisages a metro line with a station near the PMH redevelopment site, where Hay and Thomas Streets intersect, servicing East Subiaco and West Perth – as shown in the image to the right. Passengers could also interchange with light rail at this location.

For longer distance Urban Rail, the City considers that a better option would be to build a rail line that connects Subiaco to Wembley, Churchlands, Innaloo and Stirling. The line would mostly be underground, and trains from the airport line could run to Subiaco and then follow the new line north to Stirling, and potentially further north. This would also provide better train services for commuters from the north-western suburbs to Subiaco and West Perth.

The longer term future for overall high capacity transport rail options in Perth must include Subiaco as a cornerstone of that network as both a destination and a key interchange.

6.1 Strategies

No.	Strategy	Community outcomes
PT1	Subiaco Station and the surrounding precinct to become a destination.	
PT2	Advocate for increased public transport services to multiple destinations, both rail and bus, throughout the week, but particularly after hours.	
PT3	As part of the Hay Street conversion to two-way, consider future provisions for light rail and work with the State to achieve this as an "ambitious" project.	
PT4	Build upon the State's Transport Plan for Perth which included additional rail lines in the western suburbs and the concept of a metro, to ensure it provides improved outcomes for the City.	

- Design our streets for all users
- Manage our streets to support the growth of our community in the future
- Allow our streets to connect our community and activity
- Integrate our streets to reflect development form and function

Action
Work with state partners to secure a high-frequency bus service along Hay Street as part of the two-way project. This service should connect Wembley to Perth city via Subiaco, and potentially on to Victoria Park.
Ensure economic benefits are secured for Subiaco as direct trains to Perth airport are introduced.
Advocate for higher frequency of train services after hours, and improvements to non-peak period bus services on routes 97, 24 and 25.
Advocate for future Light Rail connections in to and through Subiaco and seek meaningful technical input into the future planning for heavy rail network.

7 Parking

Within Subiaco, the issue of parking has long been a polarising one. It is also a complex issue that is not "solved" in isolation to the rest of the transport network, or mutually exclusive to land use development outcomes or plans.

From a strategic perspective, decisions made around parking and land use development have failed to take competitive advantage of Subiaco's location, its offering or its advantage of accessibility to public transport. In large part, inaction on various parking management issues has directly led to the current real issues or perceptions around parking.

Many of the immediate issues present in the City of Subiaco Parking Strategy 2012-2016 have been addressed however the longer term strategic approach to parking outlined within TAPS focusses on the issues relevant to parking in the future, in particular the need to have parking work for all users (in particular businesses and residents) and for the supply of parking in redevelopment areas to be commensurate with contemporary planning rather than outdated, engineering based policies. Satisfying all the demands of everyone is not possible, nor is it practical – and in this regard the City has to manage, positively and equitably, what resources it has available.

The City is already undertaking more refined management of its resources, which includes incentivising turnover of bays to support local businesses, tighter controls around issuing of permits for residential properties, implementing real-time parking management and enforcement in off-street bays, supporting use of technology-based demand tools for on-street parking and examination of cash in lieu parking policy interventions. These measures are all a result of the day-to-day issues the City experiences with parking provision and management.

Many of these items relevant to the centre of the City were addressed in the 2016 Subiaco Activity Centre Parking Rates Investigation, which noted the following issues were to be examined in order to progress management of parking:

- Consistencies in (parking) rates, discretion built in (to allow for flexibility in development form)
- Clearer policies, making it easier for applicants to provide the information needed to support development applications
- Strengthening on the cash in lieu policy
- Minimum and maximum parking rates stated for both residential and non-residential land uses
- Refine the categories for non-residential land uses down to broader categories
- Reciprocal arrangements more clearly stated
- A preference for parking rates to apply uniformly across the activity centre.

Within the existing Town Planning Scheme 4 (TPS4), parking rates applied are minimums and cash-in-lieu and reciprocal parking arrangements are allowed for throughout the City. The investigation revealed that cash-in-lieu is an ineffective system which is creating confusion and is an impediment to effective development outcomes (or even attracting development in the first place), the application of minimum rates is fuelling vehicle demand on the local network (and therefore embedding car use over other modes) and the arrangements around reciprocal rights are largely untested.

To continue on with present controls and management priorities is, therefore, not an appropriate strategy for the City for the next 5 years, let alone the next 20 years. For instance, retaining existing

controls may result in some management issues around Princess Margaret Hospital when land uses transition and parking demand patterns change.

The parking strategies within TAPS are based around the following fundamental principles which extend or evolve current thinking around parking management:

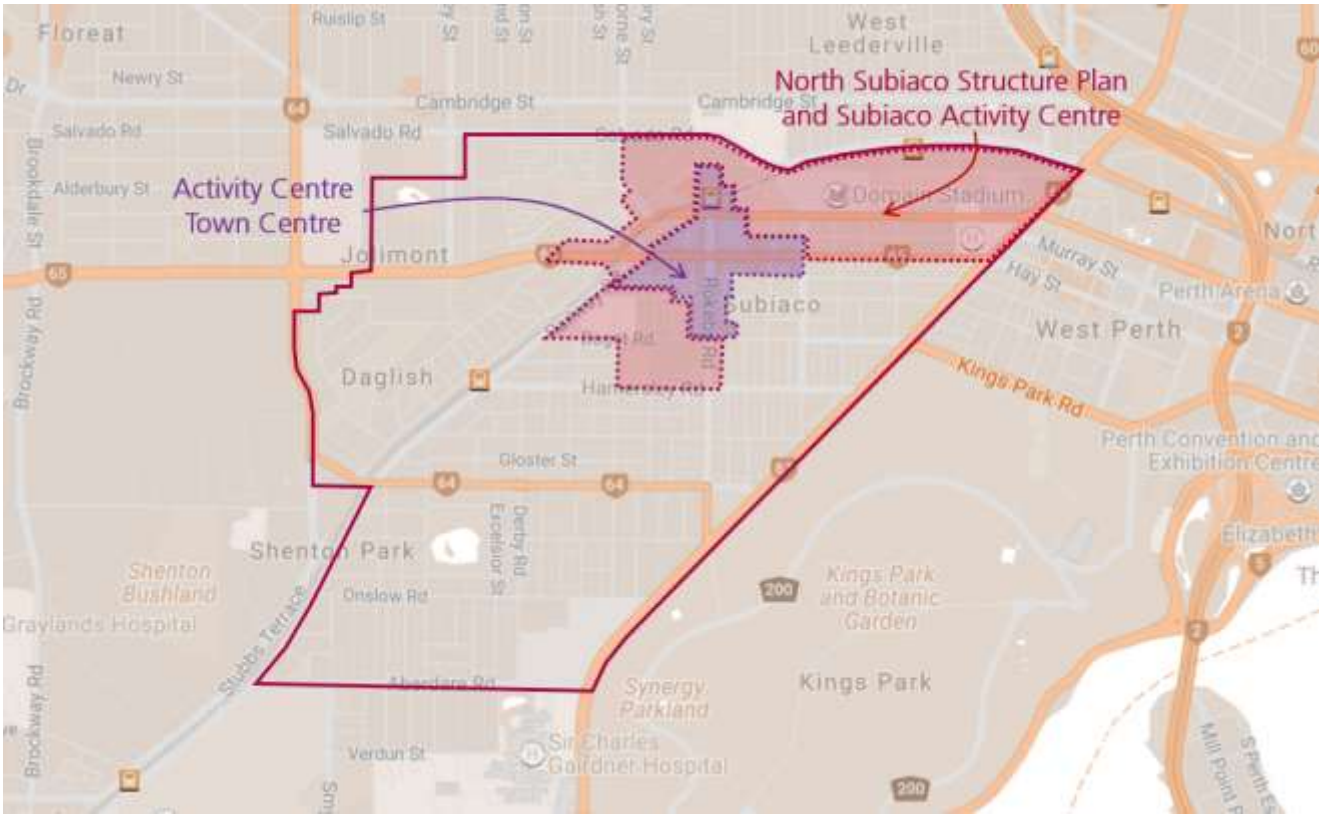
- Reduction in the number of categories within TPS5 for parking rates to simplify residential and non-residential categories for the key activity areas
- Implementation of a range of appropriate minimum and maximum parking rates tied to other transport modes
- Strengthen bicycle parking and end of trip facility requirements
- Removal of cash-in-lieu requirements for key activity areas and replacement with a developer contribution scheme to target vehicle impacts on the street network
- Removal of discretionary clause for cash-in-lieu policy in remainder of City
- Inclusion of a developer contribution scheme for provision of residential or commercial bays over the minimum required for areas outside of the key activity areas
- Ticketing of on-street parking within activity areas based on variable parking demand regime
- Introduction of staged parking supply controls within TPS5 based on progressive roll out of higher frequency public transport services
- Application of reciprocal parking arrangement discretion for visitor parking provision only.

The 2016 Subiaco Activity Centre Parking Rates Investigation highlighted the number of different land use classifications within TPS4 and the resultant issues relating to applying specific rates to specific types of development. That investigation proposed a simplification of parking rates based on a minimum and maximum regime for six separate land use categories to provide greater certainty for developments.

The variations in rates proposed within that report, and the coverage, alluded to a further simplification that could be applied and is proposed within TAPS. For ease of use, six non-residential categories are proposed. Three separate geographical areas based on existing land use planning are also proposed – within the activity areas and outside of the activity areas, as shown in Figure 26. Explicit rates for the Town Centre zones in the Subiaco Activity Centre would prevail.

The strategic rates proposed for these land uses and areas are shown in Table 6 and reflect more contemporary values for an inner city area that has excellent existing and future accessibility to public transport, walking and cycling infrastructure. Cash-in-lieu provisions would be removed for the activity areas, with the exception of Heritage buildings, with exemption related to public transport accessibility removed. Where development is mixed used, or an adjacent supply can be demonstrated, reciprocal parking arrangements for visitor bay provision would be allowed.

Figure 26 Application of single or variable non-residential rates



For residential development, specific rates would be split by geographical areas shown on Figure 26 with rates for the Subiaco Activity Centre and the North Subiaco Structure Plan areas differing from the rest of the City, as set out in Table 7.

From a strategic perspective, as higher frequency public transport services are provided, more definitive controls around parking levels would be incorporated in TPS5 with access to public transport and provision of EOT facilities being the key determinants in the volume of on-site parking allowed. The four key corridors where proximity to public transport in the future will be taken into consideration, as well as the indicative 400m catchments for Shenton Park and Daglish Stations, are shown in Figure 27.

Visitor parking bays provided in mixed use or residential developments within the activity areas would be subject to reciprocal use rights if the availability of bays can be secured within a development site, or if there are bays available within close proximity to the development site.

Table 6 Strategic parking rates – non residential

Land Use	Minimum Car Park Rate			Maximum Car Parking Rate	Bicycle Parking		Unit of Measure
	Subiaco Activity Centre Town Centre	North Subiaco Structure Plan and Subiaco Activity Centre	All other areas		Employee	Visitor	
Medical Centre, Consulting Rooms	1.5	2	2	2.5	1 "Class 1" per 4 consulting rooms	1 "Class 3" per 4 consulting rooms	Per Consulting Room
Office and Other Commercial	1	1.5	1.5	2	1 "Class 1" per 100m²	1 "Class 3" per 250m²	Per 100m² NLA
Restaurant, Reception Centre, Small Bar, Tavern	0	2	4	At discretion	1 "Class 2"	1 "Class 3" per 100m²	Per 100m² NLA
Hotel, Motel and Short Stay Accommodation	0.25	0.5	0.5	0.75	1 "Class 1" per 15 rooms	1 "Class 3" per 30 rooms	Room
Fast Food, Lunch Bar	1 per 20m²	1 per 20m²	1 per 20m²	1 per 15m²	1 "Class 1" per 100m²	1 "Class 3" per 50m²	Per 100m² NLA
Shop, Convenience Store, Home Store, Showroom	3	3	3	4.5	1 "Class 1" per 100m²	1 "Class 3" per 100m²	Per 100m² NLA
Other uses not listed and uses not in Scheme	To be determined by City on a site specific basis. All uses must include End of Trip facilities and secure bicycle parking.						

Bicycle Parking – Table 6

Class 1 refers to fully enclosed individual lockers that provide a high level of security.

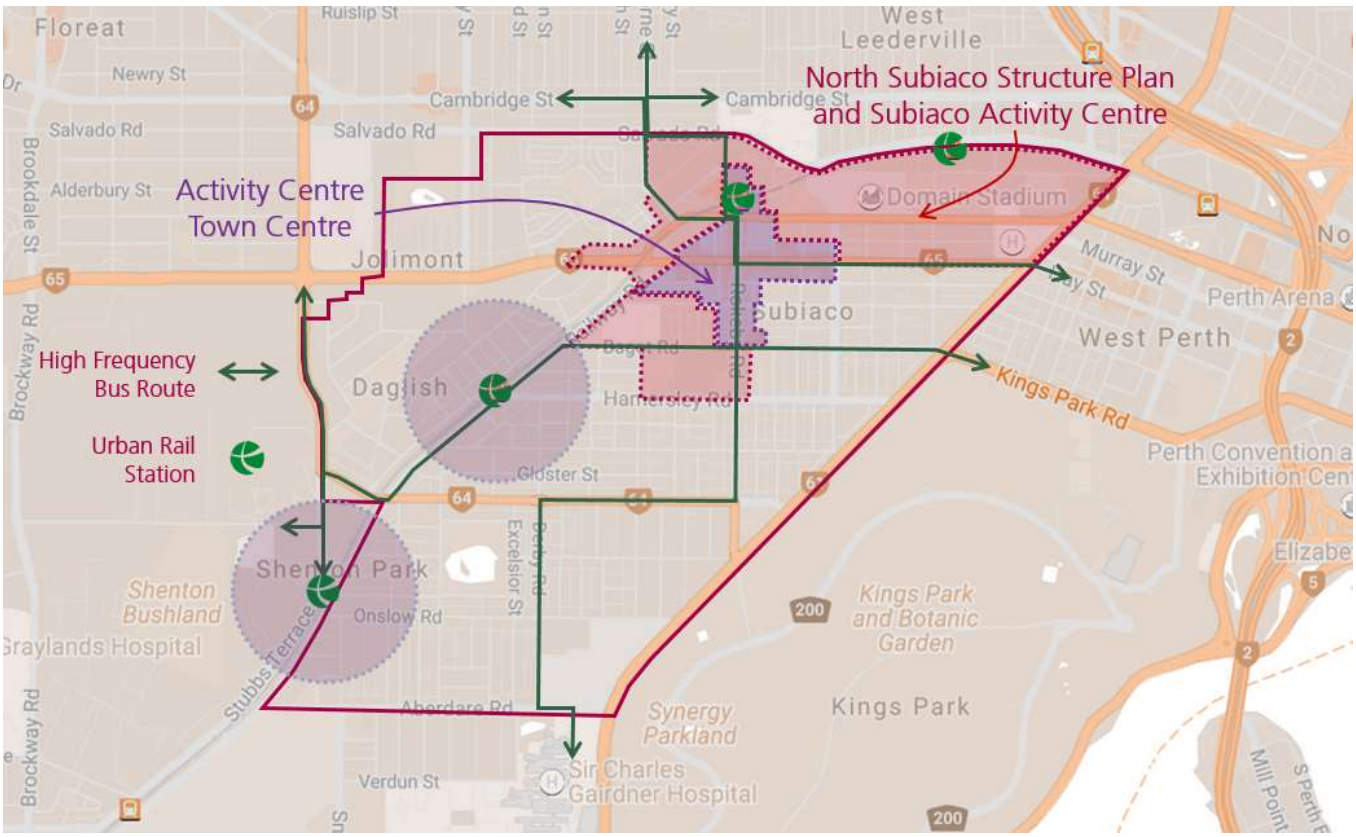
Class 2 refers to locked compounds fitted with class 3 facilities, with communal access using duplicate keys or electronic swipe cards, and which provide a medium level of security.

Class 3 refers to facilities to which the bicycle frame and wheels can be locked, and which provides a low level of security.

Table 7 Strategic parking rates - residential

Category	Minimum Car Park Rate	Maximum Car Park Rate	Minimum Bicycling Parking Rate	Residential Visitor Car Park Rate
Residential (Activity Centre Rates)	0.5 bays per unit 1 per unit 2 bedrooms or more	1.25 bays per unit 1.5 bays per unit 2 bedrooms or more	1 space per unit 1 space per 5 units for visitors	1 per 4 residential units up to 12 units, 1 per 8 after 13 units Reciprocal discretions apply
Residential (Non Activity Areas)	1 bay per unit	1.25 bays per unit 2 bedrooms and under, 1.5 bays per unit subject to contribution payment	1 space per unit 1 space per 5 units for visitors	1 per 4 residential units up to 12 units, 1 per 8 after 13 units Reciprocal discretions apply
Residential (Non Activity Areas along future high frequency public transport routes)	0.75 bays per unit 1.25 bays per unit 2 bedrooms or more	1.25 bays per unit 2 bedrooms and under, 1.5 bays per unit subject to contribution payment	1 space per unit 1 space per 5 units for visitors	1 per 4 residential units up to 12 units, 1 per 8 after 13 units Reciprocal discretions apply

Figure 27 Future high frequency public transport corridors and stations



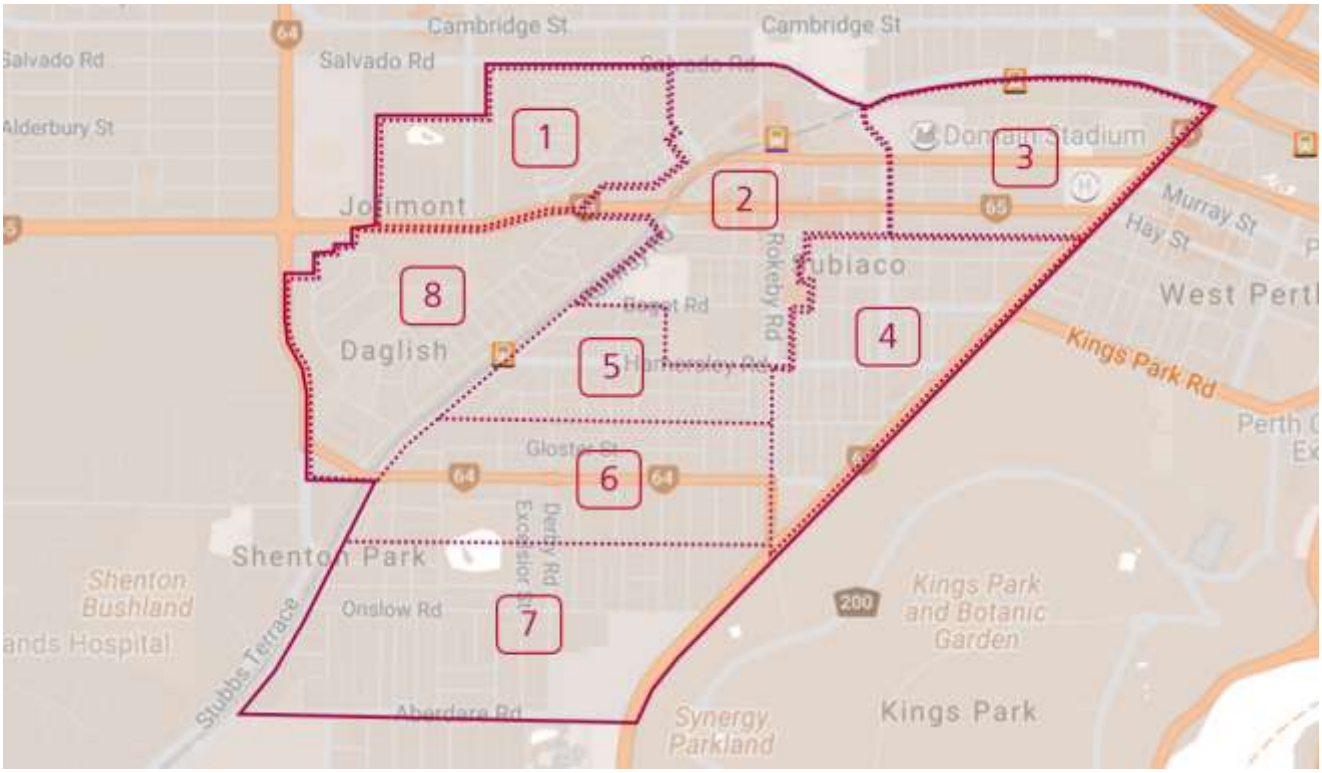
At the core of on-site controls and demand measures is the staged introduction of greater on and off street parking controls, as well as the potential/staged reallocation of some existing at-grade parking resources controlled by the City for development purposes. These two key elements will provide the City with the ability to maintain control over on-street parking supply, contribute to more effective land-use transport integration and develop an on-going income stream that will contribute to the overall economic health of the City.

On-street parking controls would see the wider implementation of timed on-street paid parking within Subiaco over a timeframe of the next five to ten years. It would need to be underpinned by a comprehensive assessment and business case development to ensure that the most relevant and cost effective technology is employed. Wider on-street paid parking controls should begin within the activity areas and around those locations where significant redevelopment will take place.

The management system for on-street parking should be able to provide real-time parking supply and cost information to drivers through an on-line platform and be flexible enough to be able to provide Council with the ability to alter payment on an instantaneous basis. This form of technology exists and is a key tenet of ongoing parking management in many cities.

Visitor parking controls are presently managed through a system of permit allocation and fees being paid for additional permits. Future visitor parking permit controls should be implemented on a zonal system according to geographical or activity basis. Indicative splits for zones are set out in Figure 28 to reflect the Activity Centre, North Subiaco, some suburb boundaries and locations to manage on-street parking demands around local centres. These zones largely reflect the precincts within the Parking Strategy 2012-2016 implementation plan.

Figure 28 Potential visitor permit parking zones



The City presently has a range on at-grade parking areas which are predominantly in the Subiaco Activity Centre or North Subiaco areas. The use of these existing assets to support both future redevelopment potential, as well as providing a community based parking resource, was highlighted in the Subiaco Activity Centre plan.

The reallocation of at-grade parking resources would see the redevelopment of existing at-grade parking facilities presently managed by the City for higher density residential and commercial land uses. The majority of the existing parking bays within the activity centre are zoned for potential redevelopment, however the quantum of site development on offer to the private market may need to be uplifted to be able to result in a commercially viable situation where public parking is available at ground/basement level with development above.

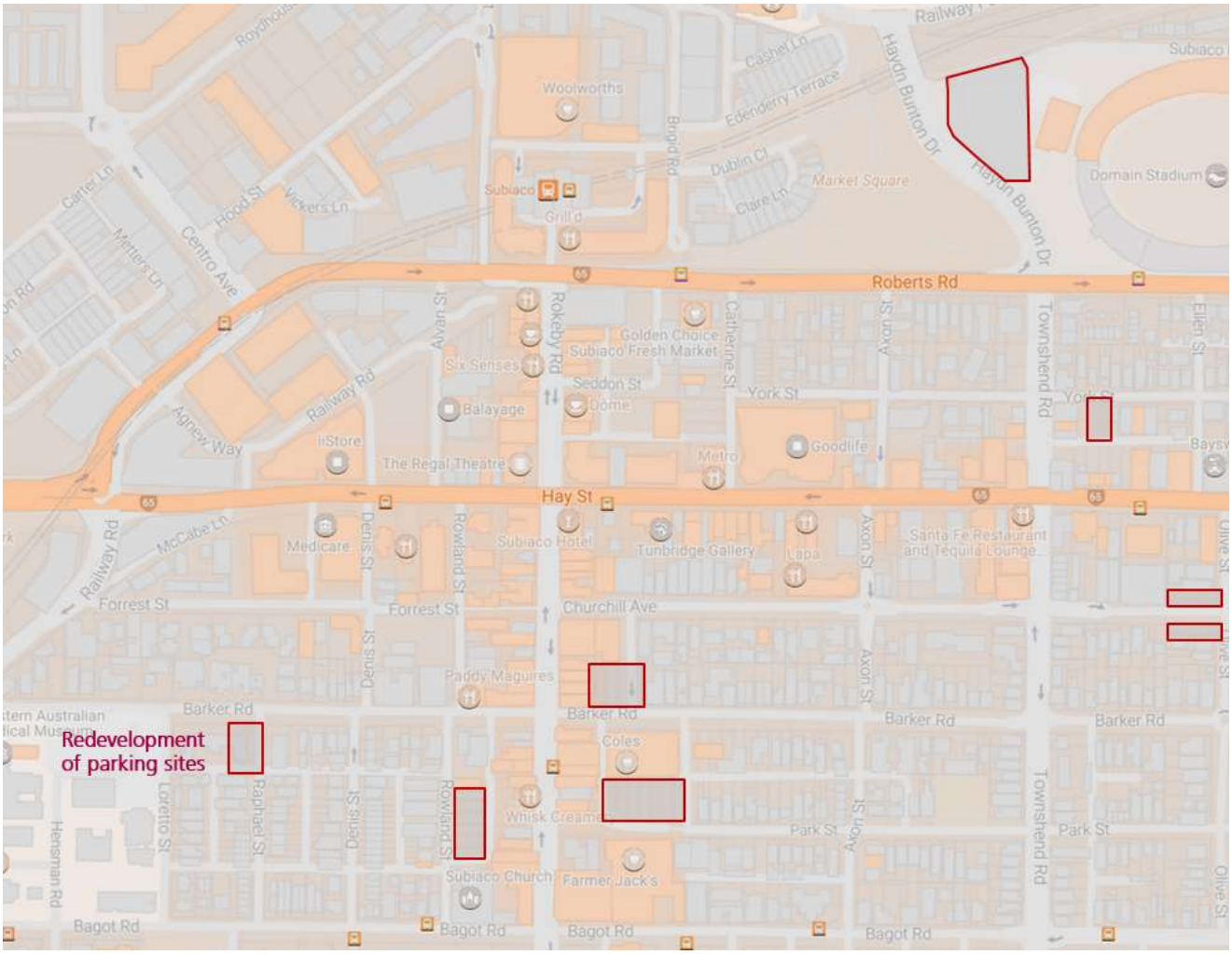
This very model is now being contemplated by the City of Perth who are a significant parking manager and landholder in Central Perth.

Parking within these locations could be subject to agreement with a private service provider if Council were unwilling to take on the management of the facilities. The repurposing of existing at-grade parking sites into redevelopment sites would provide the City with an asset, provide for more residents and jobs in keeping with existing land use planning, and would provide the form of parking that supports the type of development form in Subiaco.

This type of redevelopment could be seen in the longer terms at the following parking sites, as shown in Figure 29:

- Rowland Street
- Park Street
- Barker Road
- Haydn Bunton Drive
- York Street
- Churchill Avenue.

Figure 29 At grade parking sites for longer term redevelopment



The profile of on-street parking use will also see evolution over the next 10 years. With the introduction of wider management measures as well as the impact of substantial changes to the street network around the Hay Street and Roberts Road corridor, there will need to be a prioritisation of street space for specific users. In simple terms, there is only so much road space available and how that kerb space is allocated to vehicles or other uses will result in changes to existing practices.

There should be priority on the allocation of parking space to best suit certain areas – as is the case with the City of Perth through their application of Planning Policy 22.9 – On Street Parking. That policy sets out the prioritisation for the provision of kerb-side space based on zones and user groups. The same form of policy should apply within Subiaco, within areas set out in Figure 30 and an indicative priority of user groups shown in Table 8.

This type of policy would allow for the support of a car share scheme in the City, which should be encouraged given the nature of the City and potential for success. Establishing a car share scheme will have a range of benefits from increased mobility through to reduced demand for on-street parking.

The implementation of a car share scheme could take the form of a private operator supported by provision of on-street infrastructure or the City could choose to examine a form of car share scheme run by Council in its own right or in an arrangement with a service provider.

Figure 30 Kerbside allocation areas

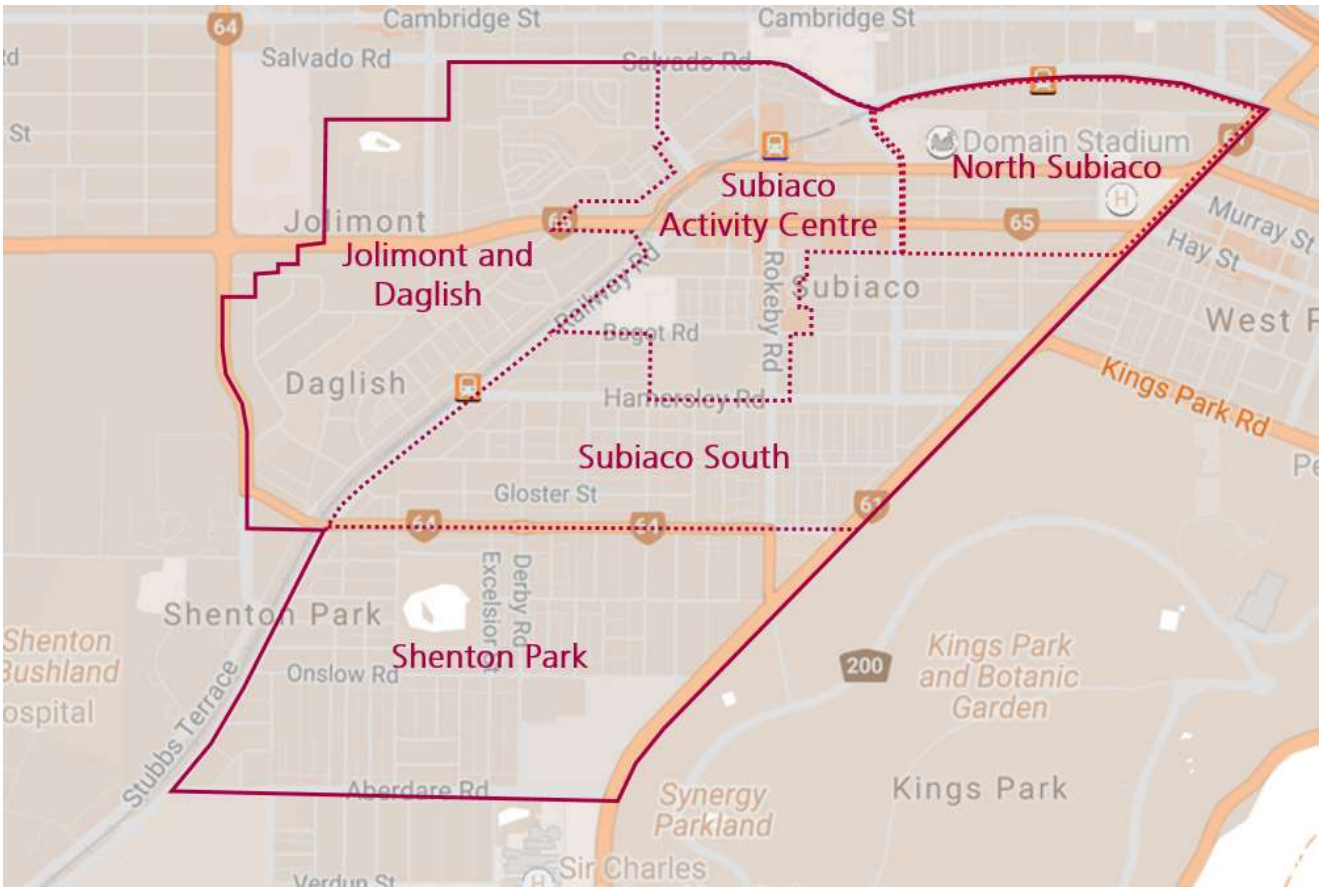


Table 8 Street space allocation priority

Area	Jolimont and Daglish	Subiaco Activity Centre	North Subiaco	Subiaco South	Shenton Park
Priority of space allocation	• Short stay car and m/c parking • ACROD parking • Longer stay car and m/c parking for residents and visitors • Transperth Buses • Car Share • Service vehicles • Taxis	• Transperth Buses • Service vehicles • ACROD parking • Short stay car and m/c parking • Car Share • Taxis	• Transperth Buses • Service vehicles • ACROD parking • Short stay car and m/c parking • Car Share • Taxis • Longer stay car and m/c parking	• Longer stay car and m/c parking for residents and visitors • Transperth Buses • ACROD parking • Car Share • Short stay car and m/c parking • Service vehicles • Taxis	• Longer stay car and m/c parking for residents and visitors • Transperth Buses • ACROD parking • Car Share • Short stay car and m/c parking • Service vehicles • Taxis

Feature Project – Wayfinding and demand driven parking

Effective wayfinding for parking has benefits that range from individual user oriented outcomes through to the overall community. Providing drivers with real time information around where parking is, how to access it and what the charging regime is help inform choices and more effective manage what parking resources are available.

Better, more relevant wayfinding reduces circulating vehicle trips, assists drivers in making economic and time based choices and allows for clear messaging around parking to be provided.

Wayfinding elements can range from static signage through to more detailed interactive web and mobile platform, data driven information.

The City already employs some wayfinding elements in parking, however more interactive information should be examined to support local businesses and residents. This will be particularly critical within the North Subiaco and Subiaco Activity Centres where both future street and parking capacity will be limited.

Demand driven parking models are also being increasingly used to manage available on-street bays through variable time charges and use of platforms such as EasyPark. These elements allow people to park and then interact with payment and time systems remotely through apps. This type of management should be rolled out throughout the key Activity Centres.

Ambitious Project – Car sharing scheme

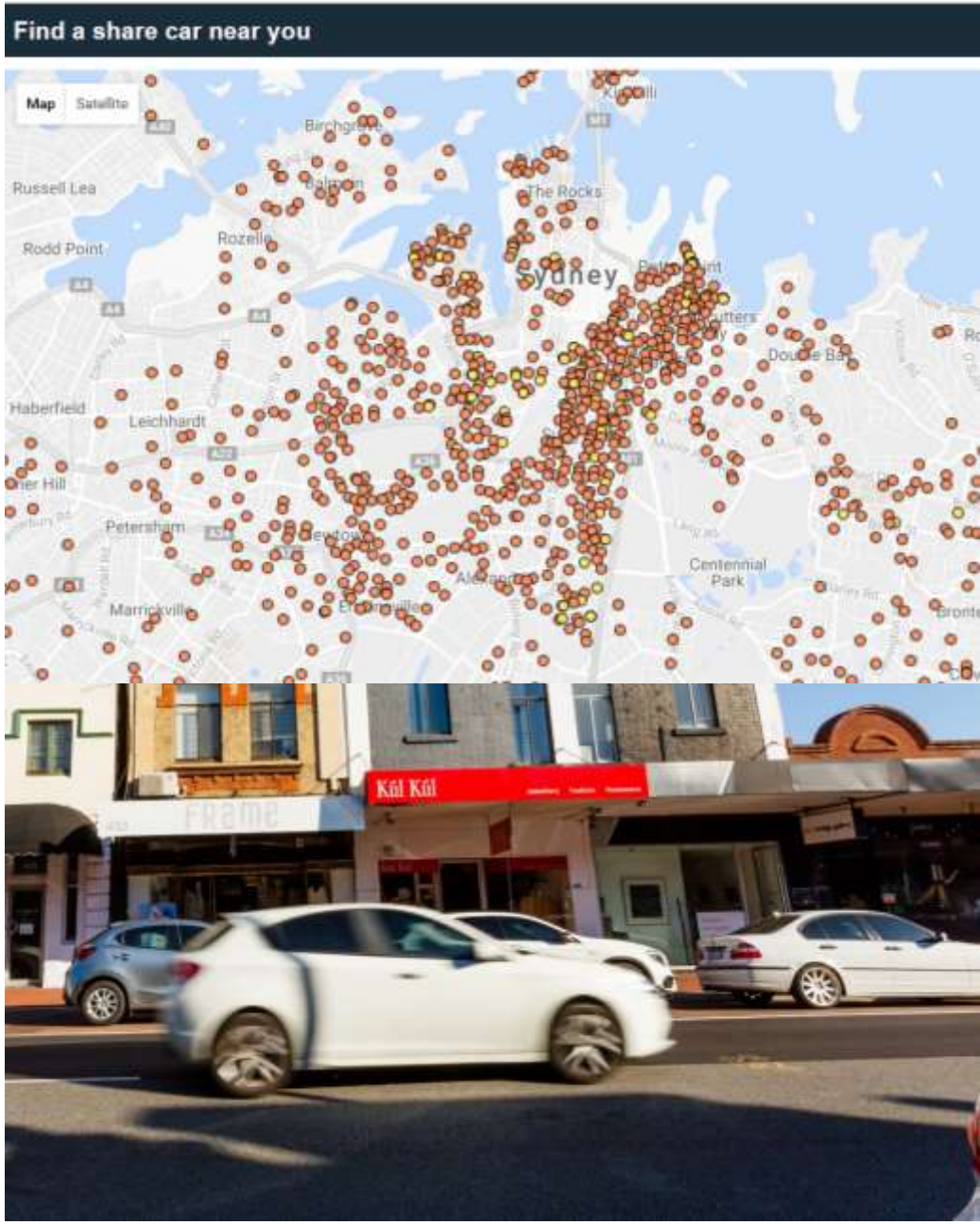
Car sharing programmes in Australia have been proven to be valuable additions to managing overall demand on streets (parking, congestion, environmental considerations) and provide wider economic and environmental benefits.

The City of Sydney commenced trialling a car share scheme in 2007 and since January 2011, car share members have grown from 6,100 to almost 31,000 (map of active bays in the scheme shown to the right). This programme is an example of a very successful scheme that could be applied in Subiaco to assist in managing travel demands and catering for latent demand around car ownership and usage models.

In 2012, the City of Sydney commissioned an independent economic appraisal of car sharing. The study found that "car sharing led to an easing of parking congestion and savings to residents of $21 million a year, including $18.5 million in deferred car purchases by residents and business. The study found other benefits include:

- reduced travel times and traffic congestion
- reduced parking times
- personal health improvements from more walking
- reduced greenhouse gas emissions due to less cars on the road
- more efficient vehicle usage".

The introduction of a car sharing scheme in Subiaco could be readily facilitated and supported by the City of Subiaco in conjunction with other inner city Councils wanting to provide residents with choices in travel behaviour and car ownership.



7.1 Strategies

No.	Strategy	Community outcomes
PA1	Minimise the amount of off-street parking provided within proximity of major public transport corridors and stations including relevant adjustment factors for parking provision in LPS5. Within LPS5, implement minimum and maximum parking ranges for a reduced number of land uses in the Activity Centre and North Subiaco as well as minimum bicycle parking rates.	
PA2	Manage supply of residential parking provision through the application of cash in lieu based on additional bays provided over minimum levels required in State based design codes.	
PA3	Support implementation of parking caps for major redevelopment projects led by State Government agencies.	
PA4	Actively pursue redevelopment of all at-grade off-street parking assets in the City's ownership to incorporate development quantum including managed publicly available parking.	
PA5	Ensure new developments provide appropriate parking, particularly for visitors.	
PA6	Implement a tiered parking control system for both off and on street parking as follows:- (i) Designation of parking that is to be presented as all day storage for commuter vehicles and price that parking such that it is fully occupied. (ii) timed ticket parking in core activity centres and other areas where commercial and retail visitor parking is dominant and turnover is paramount and price that parking such that occupancy does not exceed approximately 85%. (iii) timed parking restrictions on the fringes of activity centres and other places where all day parking is not desirable and enforce that parking so that occupancy does not exceed 85%. (iv) parking areas focused on preservation of residential access and amenity.	

	(v) Provide compliance enforcement in line with community expectations of the signed parking controls.	
PA7	Work with other car park operators to integrate all parking supply and ensure that each sector contributes positively to local economic and social outcomes.	
PA8	Inform visitors to Subiaco where parking is available.	

Design our streets for all users
Allow our streets to connect our community and activity
Manage our streets to support the growth of our community in the future
Integrate our streets to reflect development form and function

Action
Implement new parking rates for vehicles and bicycles within LPS5.
Cash-in-lieu requirements.
Undertake study of off-street parking areas and potential development outcomes.
Support specific development based parking caps within redevelopment areas.
Develop on-street parking policy setting out priorities, user requirements and standards for design.
Review the parking precinct plans, identify the appropriate tier for areas within the precincts and the appropriate parking regime for each car park and street.
Implement a periodic review of on and off street parking fees in each precinct to ensure appropriate levels of occupancy during peak periods.
Actively provide information through all channels including the media, live travel information and wayfinding methods to advise incoming motorist where parking is located, when new parking comes on line, and undertake other activities to demonstrate that sufficient parking is available in Subiaco.
The new town planning scheme and associated policies to ensure new development provides adequate visitor parking in particular, and appropriate levels of resident or worker parking for the new development.
Begin discussions with car share operators to work towards a Subiaco Car Share service with the aim to have a modest number of car share vehicles and spaces around the city, and to ensure major new developments provide space for share cars to be available.
Undertake an annual survey of parking satisfaction considering availability, cost and enforcement and measures over time.

8 Street Network

The street network in the City of Subiaco has formed the basis for the development of its community for over a century and a half. The street network has supported the expansion, evolution and transition of the City throughout its history and will continue to define how the City develops and how people and goods move around in to the future.

The "street" within Subiaco is the primary form of thoroughfare. It is also the primary interface between land use and the transport network for residents, visitors and workers within the City on a daily basis. Streets are the most important element of the network and form the basis for development patterns in the City.

The street network within Subiaco has evolved from a starting point that involved no cars. Streets were historically set out and designed to allow people to move around and access houses, services and commercial outlets as well as connect to public transport in efficient as means as practical. That pattern of use has not altered through to the present day and the street network that has evolved within Subiaco has allowed it to thrive as a successful, attractive and accessible inner city location.

At the heart of the original design of the street network in Subiaco, and for many of the additions to the street network since, has been the focus of moving people and providing for public interaction. Pedestrians therefore have to form the basis of all design for streets, and designing streets should start with their requirements to make every trip a safe and convenient one, not just an adjunct to vehicles. The hierarchy of users and the priority they take during the design process should accordingly reflect use of the street as a space, not just for vehicles.

Subiaco is also advantaged through the lack of substantial high capacity, prioritised road infrastructure dividing the City. This characteristic has allowed the City to develop as it has, and in turn this has helped shape the community itself. Although two main east-west distributor road connections pass through the centre of the City, the volume of traffic that they carry has not significantly grown over a number of years – this is a characteristic that is seen across much of the distributor road network in the City.

The grid nature of the street and road network allows traffic generated within the City, and traffic passing through the City to other destinations, to distribute more generally than if there were a highly defined hierarchy based road network as seen in outer suburban areas. Moves to greatly increase capacity for vehicles at key intersections should therefore be resisted by Council as this prioritises those through vehicle movements and therefore private vehicle trips. Changes to the street network and intersections should support local movement and connections. This was highlighted within the Strategic Community Plan where the community ideas for the future around road management were:

- People friendly streets
- Streets designed to minimise vehicle use
- Reduce traffic flow through the CBD.

It is also recognised that the street and road network have multifunctional purposes, rather than simply providing for transport needs. Streets are a key part of the urban forest within Subiaco and the area is renowned for leafy, narrow and low speed environments. Streets carry underground and above ground utilities to support urban development as well as form a key element (as a contributor and distributor) to the drainage network. Most importantly for an area of high activity like Subiaco, streets foster significant commercial interaction and are economic drivers.

Narrowing the importance of streets down to traffic engineering concerns is therefore lacking in recognition of all of the attributes that make up successful complete streets. Streets are places in their own right.

The key strategy elements in TAPS for streets reflect these values, as well as the overall vision and objectives for TAPS. Key objectives that will define streets in Subiaco in the future are:

- **Staged approach to reducing posted speed limit in Subiaco**. The need for vehicle speed in the activity areas of Subiaco is a disproportionate consideration in comparison to pedestrian and cyclist safety, the types of land uses present and the impact on journey times. Even on main routes through the City, 85th percentile speeds do not even reach the posted speed limit (in general). When travel times for key routes are looked at for travel times during peak hours, as shown in Figure 31, the reality is that average speeds bear no resemblance to posted limits. Reducing overall speed limits, coupled with traffic management measures, will improve safety for cyclists and pedestrians, support the primacy of streets and result in minimal impact on average journey times. The initial lower speed zone is shown in Figure 32 reflecting the Activity Centre and North Subiaco areas. The longer term proposal for a Council wide area where boundary roads could retain existing speed limits (**Subi40**), with the remaining streets all 40km/h.
- **Design Street Manual for Subiaco**. Current guidelines and standards are based around road design and not streets. Basing street design on more contemporary guidance will result in people friendly streets and spaces in the future, further cementing the reputation of Subiaco as a great place to live and move around. Some of the principles that could be embedded within the manual are already on the ground along Rokeby Road.
- **(Re)establish Subiaco as an exemplar Council**. The overall measures within TAPS, set alongside the Strategic Community Plan and other Council strategies and measures, are seeking to re-establish Subiaco as a leading location amongst inner city metropolitan cities around Australia. This reputation is important for Subiaco as a place, as a desirable location and one from which other areas desire to replicate.
- **Within major corridors, base street design decisions on pedestrians**. This strategy recognises that pedestrian movements are key to the overall function of the local transport network.
- **Implement two-way project along Hay Street and Roberts Road**. The planning, design and implementation of the two-way running of Hay Street and Roberts Road will reinforce the role of these two thoroughfares as being critical to the function of Subiaco as an Activity Centre, as opposed to primarily supporting through movements between areas outside of Subiaco. Roberts Road will be designed to function better for vehicle movement from east to west, whilst Hay Street will be designed along main street principles to function better for public transport, cyclists and pedestrians, and for vehicles accessing the Activity Centre (rather than passing through). Particular consideration along Hay Street will be given to pedestrian space and crossing ability, cyclists movements, bus stops and priority where appropriate, and ensuring a slow vehicle speed environment.

Figure 31 Peak hour travel times - the reality of average speeds (source: Google Maps)

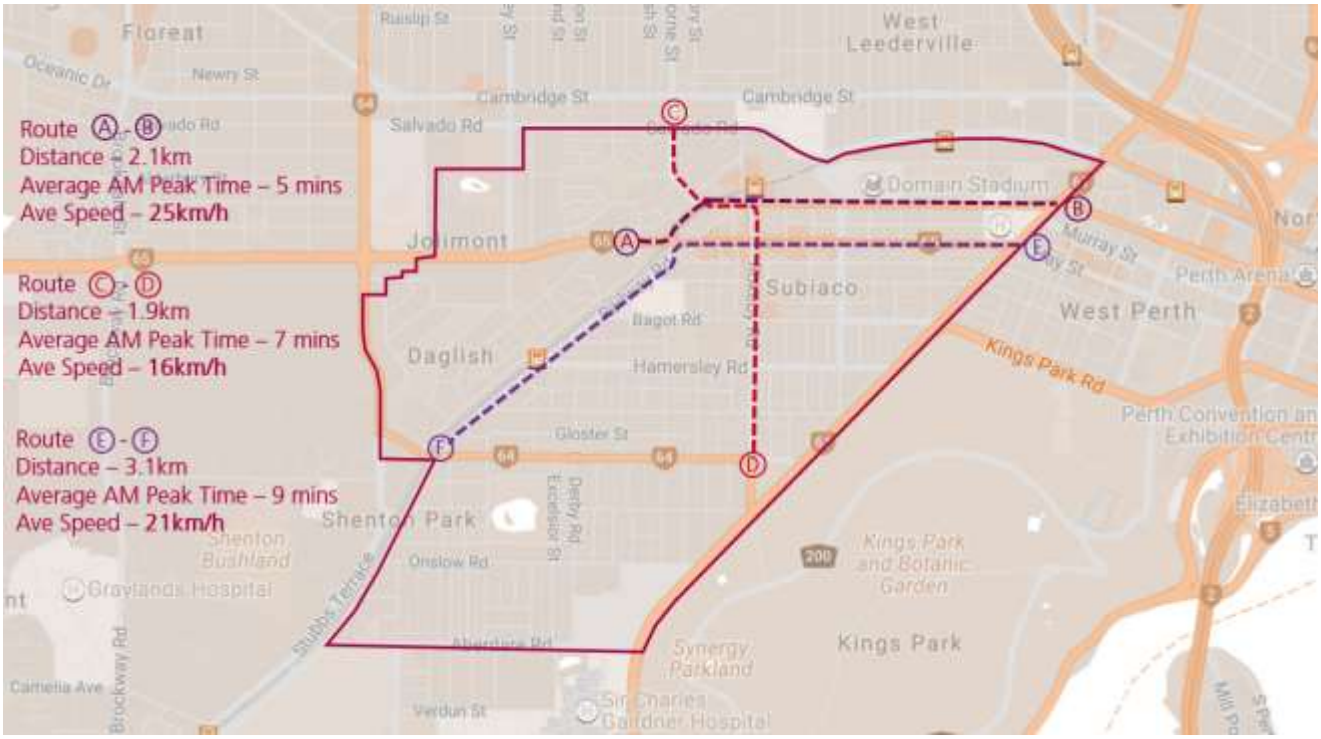
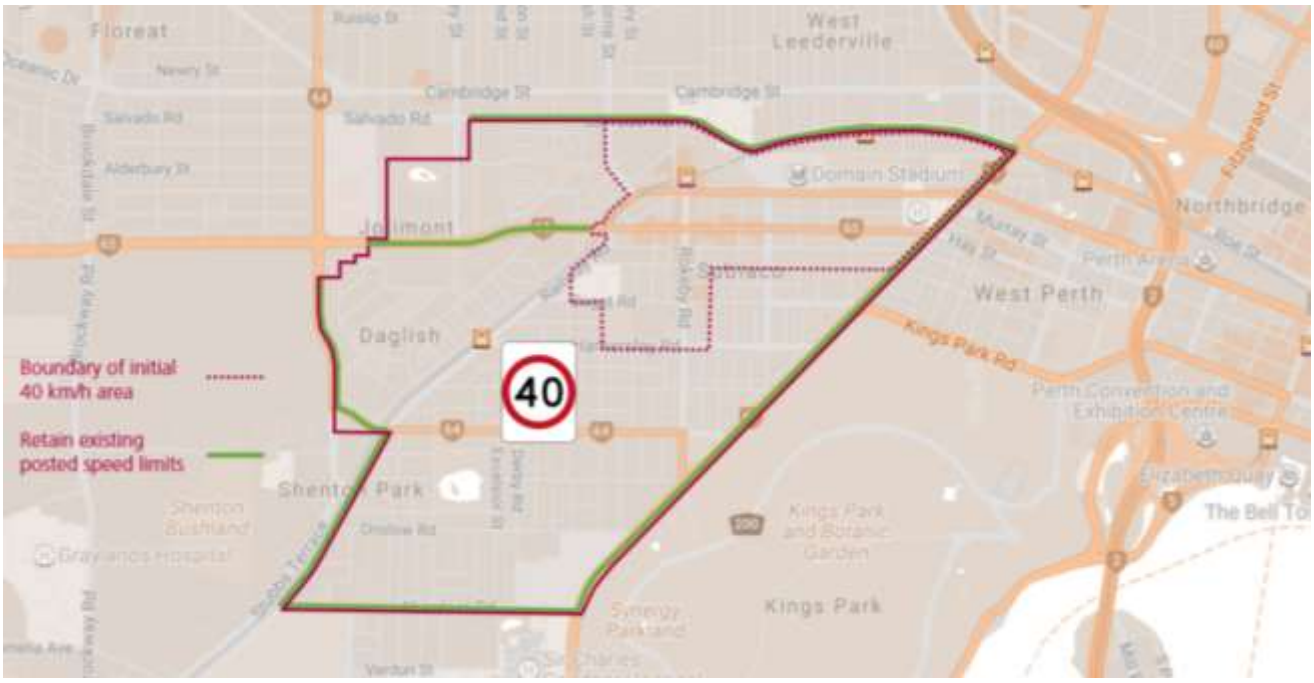


Figure 32 Initial and overall 40 km/h zone boundary



Feature Project – Hay Street two-way

The planning, design and implementation of two-way configuration for Hay Street and Roberts Road is seen by the City as a transformational land use and transport integration project that will reinforce the function of Subiaco as an Activity Centre. This project will support the stick, stop, stay and spend approach of TAPS.

The City will take a proactive, transformative design approach to Hay Street and propose a reshaping of the corridor to support existing and future urban form and transport modes. Hay Street is one of Subiaco's busiest locations where people interact, commerce can thrive and various transport modes compete for space. Hay Street will be designed as a "place" that will be held up as an exemplar of design in the future.

Particular consideration along Hay Street will be given to pedestrian space and accessibility, cycling movements and supporting infrastructure, bus stops and priority where appropriate, on-street parking management and ensuring a slow vehicle speed environment. Various design solutions would be applicable at different locations along the corridor. Design of intersecting streets will also have to be addressed to maintain, and potentially enhance, access to and from land uses fronting those streets.

Roberts Road will be designed to reflect adjoining land uses and relevant levels of traffic without providing substantial additional capacity or inducing traffic through Subiaco. Its function will be to complement the role of Hay Street and ensure legibility in the street network continues.

Ambitious Project – Subi40

Staged approach to reducing posted speed limit in Subiaco.

The need for vehicle speed in the activity areas of Subiaco is a disproportionate consideration in comparison to pedestrian and cyclist safety, the types of land uses present and the impact on journey times. Even on main routes through the City, 85th percentile speeds do not even reach the posted speed limit (in general).

When travel times for key routes are looked at for travel times during peak hours, as shown in Figure 31, the reality is that average speeds bear no resemblance to posted limits. Reducing overall speed limits, coupled with traffic management measures, will improve safety for cyclists and pedestrians, support the primacy of streets and result in minimal impact on average journey times.

The initial lower speed zone is shown in Figure 32 reflecting the Activity Centre and North Subiaco areas. The longer term proposal for a Council wide area where boundary roads could retain existing speed limits, with the remaining streets all 40km/h.

8.1 Strategies

No.	Strategy	Community outcomes
SN1	Economic and activity outcomes are the first considerations for Subiaco's 'high' streets.	
SN2	Pedestrians and cyclists are important considerations for all streets, particularly those in the activity and local centres, and those that are designated as cycle routes.	
SN3	Hay Street to be designated as the east-west 'high' street in Subiaco Town Centre and be designed to support activity, vibrancy and business sustainability. Roberts Road to be designed to support through traffic movements with good connectivity back to Hay Street.	
SN4	Recognise that the western suburbs freeway (Stock Road to Stirling) proposed in the Perth Transport Plan would lead to substantially increased traffic through Subiaco as vehicles would travel from that new freeway to the City and is not supported.	
SN5	Understand that the speed of vehicle traffic in Subiaco is less critical than safe streets that allow for activity, commerce and community use. Support overall reduction in posted speed limits.	
SN6	Ensure that we don't replace a high demand for parking in Subiaco with a high traffic demand issue through Subiaco.	
SN7	Develop Street Design Manual specific to Subiaco, which will include a "self-explaining streets" model based on current practices within WA and overseas. This manual to include other actions listed within TAPS such as bicycle boulevards and improved pedestrian facilities.	
SN8	Continue to pursue external funding for street projects, including Blackspots, MRRG, which should not only consider safety, but also economic benefits and community support.	

Design our streets for all users

Manage our streets to support the growth of our community in the future

Allow our streets to connect our community and activity

Integrate our streets to reflect development form and function

Action
Complete the design and implement the two way configuration for Hay Street, focussed on economic outcomes and designed for alternative modes of transport (pedestrians, bikes, buses, light rail).
Complete the design and implement the two way configuration for Roberts Road, with a design that reflects relevant levels of traffic without providing additional capacity or inducing traffic through Subiaco. Ensure connections to Hay Street and the Activity Centre.
Reduce the speed limit on Rokeby Road and Hay Street to 30kph for its full length.
Undertake streetscape upgrades for the southern portion of Rokeby Road from Bagot Rd to Thomas St once overall street design approach for Subiaco has been resolved.
Implement blanket 40km/h speed limit on all streets within the City of Subiaco not inclusive of Aberdare Road, Thomas Street, Salvado Road and Selby Street.

9 Policies, Innovation and Network Resilience

There are significant challenges in managing the transport network from a local government perspective, many of which are illustrated in the TAPS and have also been voiced by the community through the Strategic Community Plan engagement process. For the City of Subiaco over the past few decades, the relatively structured set of responsibilities when it comes to the transport network has evolved. So too has the pressure on Council to enact sophisticated and justifiable management responses.

This pressure has been most visible in Subiaco in the past 10 years when it comes to development outcomes and parking. This was evident in the engagement process for the Strategic Community Plan and there is nothing to suggest that pressures on decisions made by Council in respect of the transport network will ever go away. On the contrary, the policy and management initiatives that Council takes over the next five years in key activity areas will largely shape the City for generations to come.

Although much of the strategic policy basis within TAPS is built around part of the transport network that has its genesis in the late 19th and early 20th centuries, the transport network can't "sit still" when it comes to catering for the needs of residents, visitors or businesses. It has to be dynamic. As such, policy responses and innovation must evolve.

Many of the policies set out in the modal sections of the TAPS cover the element of resilience – the total application of the measures in the TAPS are designed to achieve the vision and objectives. Much of the innovation will result from determining the most efficient and effective means of implementing the individual actions within TAPS. For instance, many of the actions can be achieved through innovative approaches based on data and technology improvements, including:

- Parking management and control of supply and demand for both on and off street parking, including parking management plans for development
- Collection and use of relevant data to support infrastructure decisions such as Hay Street two-way project
- Sharing and working with others, including researchers, private enterprise and other government agencies – a recent example in Melbourne being the Living Transport Lab
- Set out clear plans for the management of assets in the transport network and linking those plans through both asset management and allocation of funding
- Prioritise management of key assets and use of available funds for the City on an annual basis
- Promote and enforce travel demand management tools such as Travel Plans – online information being the key
- Supporting car sharing platforms or other appropriate uses of the network within the on-street parking policy
- Planning controls on parking supply for residential development – funding for other transport modes in the same vein as cash in lieu
- Encourage turn up and go public transport usage through vastly improved wayfinding, supporting real-time information for public transport services and real-time user interface information to hand held devices
- Parking permit controls for local residents – promote online driven content.

Council will also be able to advocate for positive changes to travel behaviour through their own actions, including reducing overall fleet sizes and supporting use of public transport and cycling as modes of travel to the workplace.

Feature Project – Workplace Travel Plan

In order to achieve success in the implementation of measures in the TAPS, the City of Subiaco must lead by example. One of the key policies that can be easily be implemented is the completion of a workplace Travel Plan. This form of initiative, and travel demand management policy, is an easy to implement and successful policy that can yield visible results. Combined with other measures in the TAPS, the Travel Plan for the City of Subiaco will result in some meaningful changes to travel behaviour of staff.

Travel Plans are becoming more common in Western Australia as organisations can quantify benefits through productivity gains, environmental and sustainability achievements and cost savings.

The objectives of the Travel Plan for the City of Subiaco should be based around reducing overall vehicle trips, promoting alternative forms of transport for journeys to, for and from the workplace and providing employees with relevant incentives to change travel behaviour.

The Travel Plan should be reviewed on an annual basis where impacts can be monitor and results publicised so that the outcomes can be understood by the community and other firms or organisations seeking to implement Travel Plans.

For individual development sites, Travel Plan would be complemented by other measures set out in TAPS, including Parking Management Plans.

Ambitious Project – Subiaco as a laboratory

The University of Melbourne, along with a range of public and private organisations, has established a "connected transport living lab" in a 1.2km² area on the fringe of Central Melbourne.

The area has been covered with a range of data collection devices and instruments to collect details on movement and activity throughout the lab. The project is being led by the University of Melbourne with a range of social, economic and environmental objectives with an overall goal of providing the data outcomes to industry that would help shape decisions around how transport networks are managed in high activity urban centres.

"Intelligent transport systems will analyse this data and deliver insights into traffic planning, pedestrian flows, public transport efficiency and freight movements.

The research tells us that connected transport could in time reduce the economic impact of road crashes by 90 per cent, not to mention the devastating human impact."

The location of Subiaco, and the range of activities present in the area would lend itself to the development of a similar exercise.

The rapid evolution of data availability and how this data is used will inform many decisions made by planners and Councils in the future. For instance, the information collected at present by the City on parking availability and length of stay would be used in the future to provide empirical data for making decisions on how to allocate on-street bays or how to charge for parking on-street.

Melbourne launches world-first connected living transport lab

Posted by admin on January 9, 2017 at 12:24 pm

The fringe of Melbourne's CBD will become a connected transport living lab from this year, in an ambitious project that will connect data from vehicles, bicycles, transport infrastructure and more, to prevent traffic jams and crashes, and cut travel times and carbon emissions.

The project, led by the University of Melbourne School of Engineering, is now set to hit the streets following the signing of an University MOU today with 17 private and public sector project partners.

The University of Melbourne is collaborating with industry leaders from Australia and around the globe to integrate data from VicRoads, Public Transport Victoria, the City of Melbourne, City of Yarra with traffic updates from global giant HERE Maps, to deliver insights into traffic planning, pedestrian flows, public transport efficiency and freight movements.

A 1.2 square km 'test bed', taking in busy freight and commuter routes and shopping strips — including Australia's most congested road, Hoddle Street —will be fitted with thousands of sensors, enabling communication between thousands of devices and data sets that have until now been islands — such as tram and train movements.

9.1 Strategies

No.	Strategy	Community outcomes
PIN1	Progress technology based on-street parking demand management.	
PIN2	Actively pursue redevelopment of at-grade off-street parking assets in the City's ownership to incorporate development quantum including managed publicly available parking.	
PIN3	Seek partnership with agencies, organisations, research bodies and businesses to guide future policy and development control responses relevant to the transport network.	

Design our streets for all users

Manage our streets to support the growth of our community in the future

Allow our streets to connect our community and activity

Integrate our streets to reflect development form and function

Action
Provide an annual report to Council on the progression of TAPS in April each year, to aid with budget planning for the following year and to adjust parking fees to maintain a general 15% availability of bays each year.
Review TAPS every four years following the release of ABS census data which informs us how people are travelling each year.
Develop a workplace travel plan for City of Subiaco employees and consider initiatives to reduce car travel and parking demand (such as pre-paid Smartrider cards).
Support the roll out of workplace travel plans for other large employers in the City.
Council to continue reducing its vehicle fleet and move towards more fuel efficient and possibly hybrid models, whilst maintaining a reduction in fleet capital and operating costs.

10 Implementation

The progression of strategies, polices and plans set out in TAPS is designed to be largely undertaken by the City of Subiaco. This element of TAPS is to ensure that the outcomes of the multi-modal and land use approach sanctioned within TAPS is largely self-determined. For the City of Subiaco to become an exemplar, and achieve the vision set out for the community, this is a critical feature of the strategy.

The progression of the strategies set out in TAPS by the City of Subiaco is also designed to complement those wider area strategies established by the State Government. Those wider area strategies are subject to a greater amount of flux, as seen in more recent times through both the planning for a light rail system in Perth and the formalisation and release of a metropolitan wide transport plan.

Some measures within TAPS will require support, collaboration, guidance, approval and funding from State Government. This allows the City of Subiaco to become a leader in effecting meaningful implementation of the strategies in TAPS, and resultant changes for the local transport network.

Many of the measures in TAPS, and the subsequent interpretation by the City of Subiaco, will see the character of large parts of the City of Subiaco remaining relatively unchanged. Those areas that will be subject to significant change, such as the potential redevelopment sites, require more deliberate enforcement of policy measures otherwise the overall outcomes of TAPS will be diluted.

The implementation of the headline policies is set out within this section to reflect:

- The individual strategy from each section of TAPS
- Who is responsible for implementation
- Whether implementation of the individual strategy is immediate (1-3 years), ongoing (3-10 years) or ambitious (no timeframe – greatest impact and therefore will evolve over longer period).

Abbreviations used in the table are:

CoS - City of Subiaco

DoP - Department of Planning

DoT - Department of Transport

MRWA - Main Roads WA

PTA - PTA/Transperth

MRA - Metropolitan Redevelopment Authority

Other LGA - Adjoining LGA, including Cities of Vincent, Perth and Nedlands and Town of Cambridge and Victoria Park

Private - Private developers, individual land owners, private companies

Research - Research institutions such as CEDA, Universities

Advocacy - Advocacy and professional groups such as PIA, Committee for Perth

Other - Other bodies with interest in area such as WAFC, EPA,

Strategy No.	Strategy	Responsibility	Immediate	Ongoing	Ambitious
LU1	As development in the activity centres continues to occur, and demand for transport increases, adequate supply of alternate modes will be provided.	CoS, PTA, Other LGA	•	•	
LU2	Have a Local Planning Strategy, Scheme and associated policies that provide for an appropriate amount of parking, cycle facilities and other requirements to support the growing demand for transport.	CoS, DoP, MRA	•		
LU3	Ensure that economic outcomes, town centre activity, and community access are at the forefront of planning for streets.	CoS, DoP, MRA, Other	•	•	
LU4	Ensure that medium-long term plans for station precincts outside of the activity centres are in place to guide development.	CoS, DoT, PTA, MRA, Other LGA, Private	•	•	
LU5	Take leadership role within Inner City Councils on transport and land use policy – refocus efforts on strengthening connections to adjoining inner city councils.	CoS, Other LGA		•	
CW1	Walking and cycling are to be considered a critical form of transport, along with public transport on all of the city's streets.	CoS, DoT	•	•	
CW2	Recognise that pedestrians and cyclists are those road users who are best placed to stick, stop, stay and spend.	CoS, MRA, DoT		•	
CW3	In Activity Centres and local centres, consider pedestrians and cyclists as a priority when designing street improvements / upgrades.	CoS, MRWA, DoT, PTA	•	•	
CW4	Cyclists are welcome on all of the City's streets and designs should cater for this.	CoS, DoT, MRWA	•		
CW5	Implement strategies to encourage increases in walking and cycling trips within the City.	CoS, DoP, DoT, MRA	•	•	
PT1	Subiaco Station and the surrounding precinct to become a destination.	CoS, MRA, PTA		•	•

Strategy No.	Strategy	Responsibility	Immediate	Ongoing	Ambitious
PT2	Advocate for increased public transport services to multiple destinations, both rail and bus, throughout the week, but particularly after hours.	CoS, PTA, DoT	•	•	
PT3	As part of the Hay Street conversion to one-way, consider future provisions for light rail and work with the State to achieve this as an "ambitious" project.	CoS, DoT, Advocacy		•	•
PT4	Build upon the State's Transport Plan for Perth which included additional rail lines in the western suburbs and the concept of a metro, to ensure it provides improved outcomes for the City.	CoS, PTA, DoT, Other LGA, Advocacy	•		•
PA1	Minimise the amount of off-street parking provided within proximity of major public transport corridors and stations including relevant adjustment factors for parking provision in LPS5. Within LPS5, implement minimum and maximum parking ranges for a reduced number of land uses in the Activity Centre and North Subiaco as well as minimum bicycle parking rates.	CoS, DoP, MRA	•	•	
PA2	Manage supply of residential parking provision through the application of cash in lieu based on additional bays provided over minimum levels required in State based design codes.	CoS, DoP, Other, Private	•		
PA3	Support implementation of parking caps for major redevelopment projects led by State Government agencies.	CoS, Private	•	•	
PA4	Actively pursue redevelopment of all at-grade off-street parking assets in the City's ownership to incorporate development quantum including managed publicly available parking.	CoS, DoP, MRA, Private	•	•	
PA5	Ensure new developments provide appropriate parking, particularly for visitors.	CoS, DoP, MRA, Private	•	•	
PA6	Implement a tiered parking control system for both off and on street parking as follows:-	CoS	•		

Strategy No.	Strategy	Responsibility	Immediate	Ongoing	Ambitious
	(vi) Designation of parking that is to be presented as all day storage for commuter vehicles and price that parking such that it is fully occupied. (vii) timed ticket parking in core activity centres and other areas where commercial and retail visitor parking is dominant and turnover is paramount and price that parking such that occupancy does not exceed approximately 85%. viii) timed parking restrictions on the fringes of activity centres and other places where all day parking is not desirable and enforce that parking so that occupancy does not exceed 85%. (ix) parking areas focused on preservation of residential access and amenity.				
PA7	Work with other car park operators to integrate all parking supply and ensure that each sector contributes positively to local economic and social outcomes.	CoS, Private	•		
PA8	Inform visitors to Subiaco where parking is available.	CoS, Private	•	•	
SN1	Economic and activity outcomes are the first considerations for Subiaco's 'high' streets.	CoS, MRA	•	•	
SN2	Pedestrians and cyclists are important considerations for all streets, particularly those in the activity and local centres, and those that are designated as cycle routes.	CoS, DoT, MRWA	•		
SN3	Hay Street to be designated as the east-west 'high' street in Subiaco Town Centre and be designed to support activity, vibrancy and business sustainability. Roberts Road to be designed to support through traffic movements with good connectivity back to Hay Street.	CoS, MRWA, DoT, PTA		•	•
SN4	Recognise that the western suburbs freeway (Stock Road to Stirling) proposed in the Perth Transport Plan would lead to substantially increased traffic through Subiaco as vehicles	CoS, DoT	•	•	

Strategy No.	Strategy	Responsibility	Immediate	Ongoing	Ambitious
	would travel from that new freeway to the City and is not supported.				
SN5	Understand that the speed of vehicle traffic in Subiaco is less critical than safe streets that allow for activity, commerce and community use. Support overall reduction in posted speed limits.	CoS, MRWA	•		•
SN6	Ensure that we don't replace a high demand for parking in Subiaco with a high traffic demand issue through Subiaco.	CoS		•	
SN7	Develop Street Design Manual specific to Subiaco, which will include a "self-explaining streets" model based on current practices within WA and overseas. This manual to include other actions listed within TAPS such as bicycle boulevards and improved pedestrian facilities.	CoS, Other LGA, MRWA, DoT, Advocacy		•	•
SN8	Continue to pursue external funding for street projects, including Blackspots, MRRG, which should not only consider safety, but also economic benefits and community support.	CoS, DoT	•		
PIN1	Progress technology based on-street parking demand management.	CoS, Private	•	•	
PIN2	Actively pursue redevelopment of at-grade off-street parking assets in the City's ownership to incorporate development quantum including managed publicly available parking.	CoS, Private, Other		•	•
PIN3	Seek partnership with agencies, organisations, research bodies and businesses to guide future policy and development control responses relevant to the transport network.	CoS, DoP, MRA, Other	•		

11 Measures

Strategies form an important element within both the planning process as well as a means of achieving the corporate objectives of the City of Subiaco. Local Government is responsible for the production of many statutory documents and strategies which guide not only the organisational outcomes, but most critically they guide and support the development, growth and form of community which ultimately they govern over.

Measuring the progress of a strategy such as TAPS is therefore critical, not only to achieve the vision and objectives set down in the document and give weight to the individual strategies, but also so that the City as an organisation can be ultimately accountable to its community. Typically, the measures for strategies is based around quantitative measure over a period of time.

The quantitative measurement of transport network performance and land use/transport integration can fluctuate substantially or provide skewed results unless there is a significant data set or a consistency to the collection of data over a long period of time.

In addition to quantitative measurement of the transport network, the City also reports annually on its Corporate Business Plan which is an element of the Integrated Planning and Reporting Framework required by legislation under the Local Government (Administration) Regulations 1996. As a matter of course, the outcomes of the TAPS should be reported on an annual basis using the focus areas in the Strategic Community Plan replicated in Section 1.2. This is the first area of measurement for the success of implementing TAPS.

In addition to the qualitative reporting for the Corporate Business Plan, there are a range of measures, by mode that the City of Subiaco can implement in the immediate term, with more detailed or evolved measurement of statistics progressing as TAPS evolves itself. These measurements are discussed in the following sections.

11.1 Update of TAPS

The implementation section of TAPS is set as having immediate actions, future actions and ambitious actions. Given the formulation of metropolitan wide plans, and the range of immediate planning issues around the Activity Centre and North Subiaco, it is recommended that the initial review of TAPS be undertaken in four (4) years from adoption in line with Census periods. This will allow for the impact of some of the more immediate strategies to be examined and a bedding down period for both TPS5 and metropolitan wide transport planning to be allowed for.

The initial review should be undertaken by Officers with any strategy or policy changes set out in a revised version of TAPS.

11.2 Land Use and Transport Implementation

The following quantitative data could be examined to understand changes in land use/transport integration.

- Census data comparisons between 2011, 2016 data onwards for population and employment within the Activity Centre
- Amount of cash contributions for additional parking
- Traffic count data from SCATS locations within the Activity Centre
- Pedestrian counts for Rokeby Road

- Smart Rider data for average weekday for trips into and out of Subiaco and West Leederville Stations
- Smart Rider data for average weekday for boardings and alightings of bus services in the Activity Centre, including at individual stop level
- Number of on-street bicycle parking racks provided
- Annual on-street parking turnover and occupancy surveys
- Total residential and worker population versus public transport use, over time
- Census Journey to work data over time – 4 year cycle
- Annual number of second visitor parking permits issued, and where
- Bus service kilometres through Subiaco – trends and actual routes
- Number of trains stopping per day at stations over time.

11.3 Cycling and Walking

The following quantitative data could be examined to understand changes in cycling and walking patterns.

- Pedestrian counts for Rokeby Road and other key activity locations
- Super Tuesday sites annual results recorded by Department of Transport – PSP along Fremantle Rail Line
- MRWA cycle counter results for the PSP
- Number of schools actively participating in TravelSmart programmes
- Amount of funding procured or allocated for cycling improvements
- Number of on-street bicycle parking racks provided throughout the City
- Strava or other on-line or application based mapping resources
- Install a cycle counter on Hay Street as part of the two-way and monitor cyclist numbers
- Survey the cycling community on a regular basis.

11.4 Public Transport

The following quantitative data could be examined to understand changes in public transport usage patterns.

- Smart Rider data for average weekday for trips into and out of all stations in the City of Subiaco
- Smart Rider data for weekend and out of peak hour trips into and out of all stations in the City of Subiaco
- Smart Rider data for average weekday for boardings and alightings of bus services in the City on a route by route basis
- Smart Rider data for weekend and out of peak hour for boardings and alightings of bus services in the City on a route by route basis
- Journey to work data from Census 2016 and updates
- Number of daily bus services per route, in bound and out bound
- External funding set against City funding for transport improvements.

11.5 Parking

The following quantitative data could be examined to understand both on-street and off-street parking patterns.

- Annual on-street parking turnover and occupancy surveys

- Annual revenue from on-street parking
- Length of stay at off-street car parks
- Monitor short-term parking facilities measure maintenance of 85% occupancy
- Outcomes of annual parking satisfaction survey
- Monitor all day vehicle storage facilities to ensure their use is being maximised by commuters.

11.6 Street Network

The following quantitative data could be examined to understand impacts on the street network within the City of Subiaco.

- Count data from SCATS locations within the Activity Centre
- Ongoing traffic count data collected by the City of Subiaco for asset management
- Speed surveys for main routes
- Length of street network with 40km/h speed limits
- Crash statistics
- Online traffic data statistics, such as Google, TomTom or Uber Movement data
- External funding vs city funds for street improvements and other road projects
- Evidence of people staying longer in the streets of importance for economic development
- Monitor pedestrian numbers at Hay/Rokeby and other appropriate locations.