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Parking Strategy

Final

Luxmoore Parking and Safety

a division of



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Document register

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Glossary of Terms

ATV	Average ticket value
Car pooling	An arrangement where more than one person shares a vehicle, usually for commuting
Churn	Describes how many cars use a bay in a day
DCP	Development Control Plan
FTE	Full-time equivalent in relation to measurement of employee numbers
GFA	Gross floor area
LGA	Local Government Area
LATM	Local Area Traffic Management – the use of physical devices, street-scaping treatments and other measures (including regulations and other non-physical measures) to influence vehicle operation, in order to create safe and more liveable local streets
Long-term parking	More than four hours
Off-street parking	Public and private parking that is not on-street
On-street parking	Kerbside public parking bays which may or may not be linemarked. Includes parallel, angle and 90° parking
pcm	Per calendar month
PCA	Parking control area
PCS	Parking control systems – ticket machines, pay by space, or virtual phone-based systems
PGS	Parking guidance systems – in-ground sensors, wayfinding, space indicator signs
PPS	Parking payment systems – cash and credit card
QR code	Quick response code – web links can be embedded in a QR code, which can be printed on a document or displayed on the screen of a smartphone.
Reciprocal parking	Parking facilities serving separate uses or a mixed-use development, but not shared concurrently between the users and not necessarily on one site
RMS	Roads and Maritime Services previously known as Roads and Traffic Authority (RTA)
Shared parking	Parking facilities on one site shared concurrently by a mixed-use development or separate developments
Short-term parking	Less than four hours
SWOT	Strengths, weaknesses, opportunities and threats
TDM	Travel Demand Management, also called transportation demand management or mobility management. The application of techniques and programs to achieve more efficient use of transport resources
TPS	Town Planning Scheme

Summary

1. Background

Luxmoore was commissioned by the City of South Perth to undertake a Citywide Parking Strategy. The key objectives of the strategy are to:

1. provide a strategic citywide parking framework for the short, medium and longer terms
2. identify a comprehensive action plan (including priorities and order of costs) to assist in the future preparation of Parking Control Areas (PCA) plans.

The investigations included a review of background documents, a SWOT analysis, stakeholder meetings, workshops and surveys, and an assessment of future demand.

The City is now progressing with the practical application of Stage 2 to different PCA's through the development of management plans for the different PCA's.

2. Stakeholder consultation

An important element of the investigation for this report was engagement with stakeholders to identify issues and potential options which would assist the City in achieving its planning objectives. Stakeholder engagement was conducted using the following methods:

- two parking workshops (one for local businesses and one for local residents)
- a parking strategy survey
- online forum discussions
- an interactive map for posting comments and suggestions relating to specific locations.

In regard to parking, a range of issues were raised at the meetings and in discussions on the 'Have Your Say' website from members of the public. Road safety in regard to on street parking was the overriding concern for the South Perth community, and this concern was expressed for residential areas, around schools and the university and along main arterials.

The remaining issues can generally be categorised in terms of supply or management. Supply issues include too few bays being available and the expectation that a public or private organisation must provide more bays. Management issues relate to available facilities not being used effectively. More effective management of existing parking is seen as more important than increases in parking supply.

3. Key findings

Based on stakeholder feedback, site visits and discussions with staff, key findings are listed below:

- Plentiful parking is available within a reasonable walking distance (250 m) of several key destinations.
- Surveys of parking demand patterns in the Mends Street, Angelo Street and Preston Street PCA's indicate an average demand at less than 81% of bays.

- There is an under-utilisation of pay parking in several locations, e.g. in Richardson Reserve.
- More effective use can be made of all public parking facilities such as George Burnett Leisure Centre and the Jetski car park.
- Simplification of time restrictions and fees will result in greater compliance and increased churn of bays.
- Parking restrictions and fees are confusing for a driver to understand and difficult for rangers to enforce.
- More effective enforcement technology and resources will assist in the management of parking.
- There are inadequate ranger resources and technology to adequately monitor compliance for public and private parking facilities especially at schools.
- Schools should provide their own traffic and parking management resources.
- Residents are sometimes inconvenienced by commuters parking in their streets.
- A permit scheme could improve convenience for residents.
- The parking supply from some developments should be unbundled to allow more effective use of the bays.
- TravelSmart plans should be applied for new and existing developments.
- Surplus parking income and cash-in-lieu could be used to fund improved access.
- The student-only Curtin Area Bus Service (CABS) should be shared by public commuters.
- A free local bus service could be funded by the City to increase non private vehicle patronage to local commercial areas such as the zoo where up to 70% of visitors arrive by private car.

4. Major Recommendations




Section and name		Recommendation	Page ref
4.1	Support and encourage different forms of sustainable transport The City needs to prioritise access for pedestrians, cyclists, public transport users and people with disabilities, and make the most of public transport infrastructure, balanced with the needs of the City road network, including the need to minimise congestion. The existing public realm in the City for pedestrians, cyclists and public transport user needs to be significantly improved given the current dominance of vehicular traffic.	Change the City's approach from the current predict and provide to a demand management approach whereby parking facilities are used more effectively and parking is proactively managed to align with the agreed strategy It is recommended that the City adopt five parking principles which are to underlie future strategies relating to travel behaviour: a) Focus on people access not vehicle access	17

Section and name	Recommendation	Page ref
<p>The provision of convenient public transport is fundamental element of changing mode-share. Unfortunately the City has little influence over the State Government's program for Public Transport to and serving the City. If public transport lags development, there will continue to be a high mode share for the use of private vehicles.</p> <p>It is important to acknowledge that a Parking Strategy is only one part of an Integrated Transport Strategy which should also incorporate a road safety strategy, a green travel plan, a pedestrian strategy, a bicycle strategy, a local area traffic management plans and a specific parking management plans.</p> <p>Some of these are already in place in the City (e.g. the 2011-16 Bike Plan, the TravelSmart RoadWise Local Action Plan (2006)). There are other documents which provide information on alternative transport modes and parking. A new Integrated Transport Strategy is planned for the City for 2016 which should bring all the above topics together into an updated, cohesive policy and therefore achieve the sustainable parking principles outlined above.</p> <p>There is increasing recognition that sustainable cities require a balanced multi-modal transport system, and the parking system should support the transport system. In particular, parking supply, utilisation, location and price are primary factors relating to travel behaviour mode choice.</p> <p>It is recommended that the City adopt five parking principles which are to underlie future strategies relating to travel behaviour:</p> <p>a) Focus on people access not vehicle access</p>	<p>b) Provide efficient and effective alternatives to car access</p> <p>c) Parking policy and strategy must support sustainable transport</p> <p>d) The appropriate amount of parking for the centre will be well below the unconstrained demand for parking</p> <p>e) The provision of parking requires a demand management, not a demand satisfaction approach</p>	

	Section and name	Recommendation	Page ref
	<p>This requires the development of innovative access programs targeted at a more active community.</p> <p>b) Provide efficient and effective alternatives to car access</p> <p>This requires the promotion of accessibility such as a park and ride facility or the availability of low fare or free buses, rather than the promotion of parking. The provision of high quality reliable public transport is a fundamental prerequisite for parking policies which seek to maintain supply within acceptable limits, reduce congestion and encourage alternative modes of transport.</p> <p>c) Parking policy and strategy must support sustainable transport</p> <p>The integration of commuter parking with public transport is a major opportunity to reduce the dependency on cars coming into a centre. Additionally, there is a need for better bicycle paths and quality end-of-trip bicycle facilities, as well as improved bus shelters with real-time information.</p> <p>d) The appropriate amount of parking for the centre will be well below the unconstrained demand for parking</p> <p>The available parking supply should be adequate, not excessive. It need not cater to occasional peak demand, or ensure that every driver will always be able to find a bay.</p>		

	Section and name	Recommendation	Page ref
	<p>Rather, it seeks to eliminate over-supply and unused capacity. Consolidated parking is a means of making better use of available supply. Sharing parking between multiple land uses and/ or businesses does not require each of them to provide their own parking. This ensures an adequate rather than excessive supply of parking and is particularly appropriate to the provision of overall parking in the commercial precincts.</p> <p>e) The provision of parking requires a demand management, not a demand satisfaction approach</p> <p>Controlling parking demand is the counterbalance to the management of parking supply, but it is far easier, more flexible and less expensive to make better use of existing parking capacity than to create additional parking. Parking management strategies recognise different hierarchies of users. Fees can be used to control demand and to encourage alternative modes. Additionally, improvements to transport and access infrastructure can be funded from additional income derived from parking.</p> <p>The future strategy for South Perth should therefore contain recommendations not only to curtail the supply of parking, but also to manage parking so as to constrain demand.</p>		

	Section and name	Recommendation	Page ref
	<p>Based on stakeholder feedback it is important that some of the net surplus generated from parking and enforcement is transparently reinvested into improved transport access, which may include upgrading parking facilities, the provision of better pedestrian and cycling access or public transport options.</p> <p>If the City intends to move towards a more sustainable, multi-modal transport system, there needs to be a commitment by all stakeholders to implementing such a policy to support these principles.</p> <p>Change the approach to parking The future strategy for South Perth should therefore contain recommendations not only to curtail the supply of parking, but also to manage parking so as to constrain demand.</p> <p>Based on stakeholder feedback it is important that some of the net surplus generated from parking and enforcement is transparently reinvested into improved transport access, which may include upgrading parking facilities, the provision of better pedestrian and cycling access or public transport options.</p> <p>If the City intends to move towards a more sustainable, multi-modal transport system, there needs to be a commitment by all stakeholders to implementing such a policy to support these principles.</p> <p>Change the approach to parking.</p>		
4.3.2	Proposed hierarchy for the commercial centres	A parking user hierarchy is to be implemented for different PCA's to support growth and intensification goals	20

Section and name		Recommendation	Page ref																																													
		<table border="1"> <thead> <tr> <th rowspan="2">Priority</th> <th colspan="2">Commercial centre</th> <th colspan="2">Outside commercial centre</th> </tr> <tr> <th>On-street</th> <th>Off-street</th> <th>On-street</th> <th>Off-street</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Essential </td> <td>Loading</td> <td>Disability permit holders</td> <td>Public transport</td> <td>Long-stay/commuter</td> </tr> <tr> <td>Public transport</td> <td>Short to medium-stay</td> <td>Residents</td> <td>Short to medium-stay</td> </tr> <tr> <td>Drop-off/pick-up</td> <td>Drop-off/pick-up</td> <td>Short to medium-stay</td> <td>Drop-off/pick-up</td> </tr> <tr> <td>Short to medium-stay</td> <td>Loading</td> <td>Disability permit holders</td> <td>Park and Ride</td> </tr> <tr> <td></td> <td>Motorcycle/scooter</td> <td>Loading</td> <td>Residents</td> </tr> <tr> <td></td> <td>Motorcycle/scooter & cyclists</td> <td>Long-stay/commuter & residents</td> <td>Long-stay/commuter</td> <td>Motorcycle/scooter</td> </tr> <tr> <td>Least important</td> <td>Disability permit holders</td> <td>Cyclists</td> <td>Drop-off/pick-up & motorcycle/scooter & cyclists</td> <td>Disability permit holders & loading & cyclists</td> </tr> <tr> <td>Not allowed in this zone</td> <td>Long-stay/commuter & park and ride</td> <td>Park and ride</td> <td>Park and ride</td> <td>Public transport</td> </tr> </tbody> </table>	Priority	Commercial centre		Outside commercial centre		On-street	Off-street	On-street	Off-street	Essential 	Loading	Disability permit holders	Public transport	Long-stay/commuter	Public transport	Short to medium-stay	Residents	Short to medium-stay	Drop-off/pick-up	Drop-off/pick-up	Short to medium-stay	Drop-off/pick-up	Short to medium-stay	Loading	Disability permit holders	Park and Ride		Motorcycle/scooter	Loading	Residents		Motorcycle/scooter & cyclists	Long-stay/commuter & residents	Long-stay/commuter	Motorcycle/scooter	Least important	Disability permit holders	Cyclists	Drop-off/pick-up & motorcycle/scooter & cyclists	Disability permit holders & loading & cyclists	Not allowed in this zone	Long-stay/commuter & park and ride	Park and ride	Park and ride	Public transport	
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4.6	Parking Surveys	Parking occupancy in high demand areas should be surveyed regularly in the same format and at the same time each year to measure actual usage and to compare changing patterns of usage from year to year in different commercial centres	22																																													
	Parking Advisory Group	It is recommended that the City appoint an administrative Parking Working Group chaired by the Parking Manager, which is responsible for bringing forward issues that cross boundaries between the traditional administrative units.	21																																													
4.7	Introduce parking controls and eventually pay parking	All new parking controls or charges need to be constantly reviewed by the City and amended as necessary depending on the result of regular parking surveys	23																																													
		The City should evaluate the introduction of parking controls and eventually pay parking particularly in areas adjacent to major trip generators. These controls should be used to encourage the use of alternative modes, but should also be set at a level which does not detract from the vitality of the city precincts	23																																													
4.8	Implement a consistent level of wayfinding, signage and parking restrictions	Public parking information should be applied and published uniformly across the entire City equally to council and privately owned public car parking areas	23																																													
4.9	Review existing parking enforcement	The City to increase the effective allocation of parking enforcement resources in combination with improved technologies for monitoring compliance such as in-ground sensors, licence plate recognition cameras and parking meters. Schools should self-manage their peak-time parking demand through tools such as TravelSmart for Schools	25																																													
4.10	Implement the requirements for a Parking Control and Management Plan (PCMP) for all new commercial or mixed used developments requiring more than 10 parking bays	The City implements a Parking Control and Management Plan to be provided with a development application for any project exceeding more than five bays	26																																													
4.13	Build parking facilities – deck car park feasibility	The City to develop a plan to identify and prioritise potential sites for the construction of parking decks to serve the commercial centres	27																																													
7.4	Private parking areas	The City gradually expands pay parking areas based on regular and comparative surveys of	41																																													

Section and name		Recommendation	Page ref
		usage. Pay parking fees are to be structured to favour short-term users and encourage a high churn of spaces.	
		The City increases the provision and enforcement of pay parking in privately owned public car parks and expands its enforcement resources and associated technology as appropriate to provide this service.	41
7.6	Parking intervention trigger	The City should apply various parking restrictions in areas of high demand to achieve a target peak occupancy rate (the average of the four highest hours in a day) of 85% for on-street parking. This means that the parking resource is well used but people can still easily find a space, thus reducing customer frustration. In other words, one parking space in every seven should be vacant. When peak parking occupancy is regularly above 85%, the City will recommend a change to the parking management approach. This is a recognised international approach to the best practice management of on-street parking.	44
7.7.1	On-street demand-responsive pricing	<p>Introduce priced parking with no time limits in areas with high parking demand and a low availability of spaces. Prices for on-street parking will be set according to the following general principles:</p> <ul style="list-style-type: none"> • Prices for on-street parking will be set at levels that ensure people can find a car park most of the time within a short walking distance of their destination. • In general, if the data for demand for parking in an area is found to decrease, then prices should also decrease and vice versa. • On-street parking in commercial centres will be prioritised to support customers and other short-term visitors ahead of long-stay commuters and residents. Prices are more effective than time-limits at prioritising users in this way. • The way parking prices are set in different parts of the City should be transparent and based on up-to-date empirical evidence of parking demand patterns in that area and observed trends in these patterns over time. 	46
7.7.3	Occupancy surveys	Parking demand should be reviewed every one to three years depending on how variable the demand is in each particular price area	47
7.7.4	Price adjustment	Prices should be adjusted either up or down in response to the occupancy surveys undertaken. In each case the goal is to maintain an average of 85% occupancy, as much as practicable	47

Section and name		Recommendation	Page ref
7.7.5	Times of operation	Standard hours of parking restrictions should be 8 am to 6 pm Monday to Sunday. However, some PCA's in the City experience high parking demand in the evenings, and where this occurs, the City should implement expanded paid parking hours where necessary to manage demand in accordance with the general principles (section 7.7.1).	48
7.9.2	<p>Summary of best practice in permit parking schemes</p> <p>Very few permit parking schemes are identical. Best practice can be achieved by collating the key findings and procedures implemented at other councils in Australia.</p> <ul style="list-style-type: none"> • Permit information documents provide accessible and easy to understand information to residents and other interested permit applicants. The most accessible documents have a user-friendly layout and are available in PDF format for download on the Council's website. • Some Councils include permit terms and conditions in their permit application forms. This is an important inclusion as the information relevant to the allocation, use and management of permits is readily accessible to the applicant, who may otherwise be unaware of the information • The holder of the permit is never guaranteed a parking space and this is to be emphasised in all permit documents. • A fee is usually charged for permits to recoup the costs of administering, operating and monitoring the permit 	Residential parking zones should have a time limit across the zone to prioritise short-term parking and deter commuter parking. Residents should be able to purchase parking permits to allow an exemption to the time restriction	50

	Section and name	Recommendation	Page ref
	<p>system and maintaining the signage and to discourage unnecessary applications.</p> <ul style="list-style-type: none"> • A maximum of two RPP are usually issued to the occupier of a residential property and the number of permits issued is reduced by one permit per off-street parking space. It is not clear whether a permit concession is granted if an off-street space has been converted to another use such as a shed or additional accommodation. • Permits are not issued for occupants of high rise buildings, new multi-unit developments or for dwellings located in the town centre. • RPP include the vehicle registration number. This assists with monitoring compliance. • Permits are assigned to streets or specific PCA's via a coding system to protect the residents privacy • Strict penalties apply for the misuse of permits including fines or the permit being revoked. Anecdotally the risk of cancellation/revocation of the permit is the most effective sanction to ensure compliance. • Administration costs are significantly reduced where application of permits is on-line. • Labour costs are reduced with technology which provides immediate wireless 		

	Section and name	Recommendation	Page ref
	<p>verification of a valid RPP, the vehicle registration it is linked to and the location where it is parked.</p> <ul style="list-style-type: none"> • Increasingly more ticket machines are installed in permit areas providing residents with exemptions, but generating income from the shared use of on-street bays during business hours. • Residential permit systems and quantities vary, but they generally always require payment. <p>Residential parking zones</p>		
7.9.5	New developments	To protect the sustainability of residential parking schemes, new developments within residential parking zones should not be eligible for parking permits	53
7.9.6	Technology and enforcement	The City should make use of new technology to ensure that residential parking zones remain an effective solution for managing parking demand and reducing the impact on residents	53
8.6	Cash-in-lieu - Use of funds	<p>A cash-in-lieu fee for all projects should be charged, but with a regular adjustment to the fee. The fee is to be based on a formula which takes into account the land value for each commercial centre set by the City every 2 years and the cost of construction.</p> <p>Criteria</p> <p>Property owners/developers may apply to make payments to a parking cash-in-lieu fund as an alternative to providing a proportion of required on-site parking in cases where:</p> <ul style="list-style-type: none"> - The City may consider it undesirable for efficiency, traffic operation, pedestrian amenity, traffic demand management, achievement of transport objectives or other reasons for the specified parking to be provided totally on-site, or - The physical constraints of the site (including geophysical constraints, small block size, etc.) make on-site provision impracticable, or - It is impractical, because of the need to construct basement parking lower than two levels, owing to the significant cost associated with deep basement parking spaces 	59

Section and name	Recommendation	Page ref
	<p>The fee may be discounted by the City to a maximum of 50%, subject to the development meeting any of the following criteria and no other reduction on parking supply having been permitted:</p> <ul style="list-style-type: none"> - The developer can show access to alternative options to accommodate the transport access requirements of those potential users of the development for whom on-site parking will not be provided - There exists adequate provision for car parking in the proximity of the proposed development - The development will contribute significantly to the streetscape and will encourage the upgrading of the locality - The City is satisfied that public transport facilities are available to satisfy the transport access demands of employees, residents and visitors to the development 	59

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1 Introduction

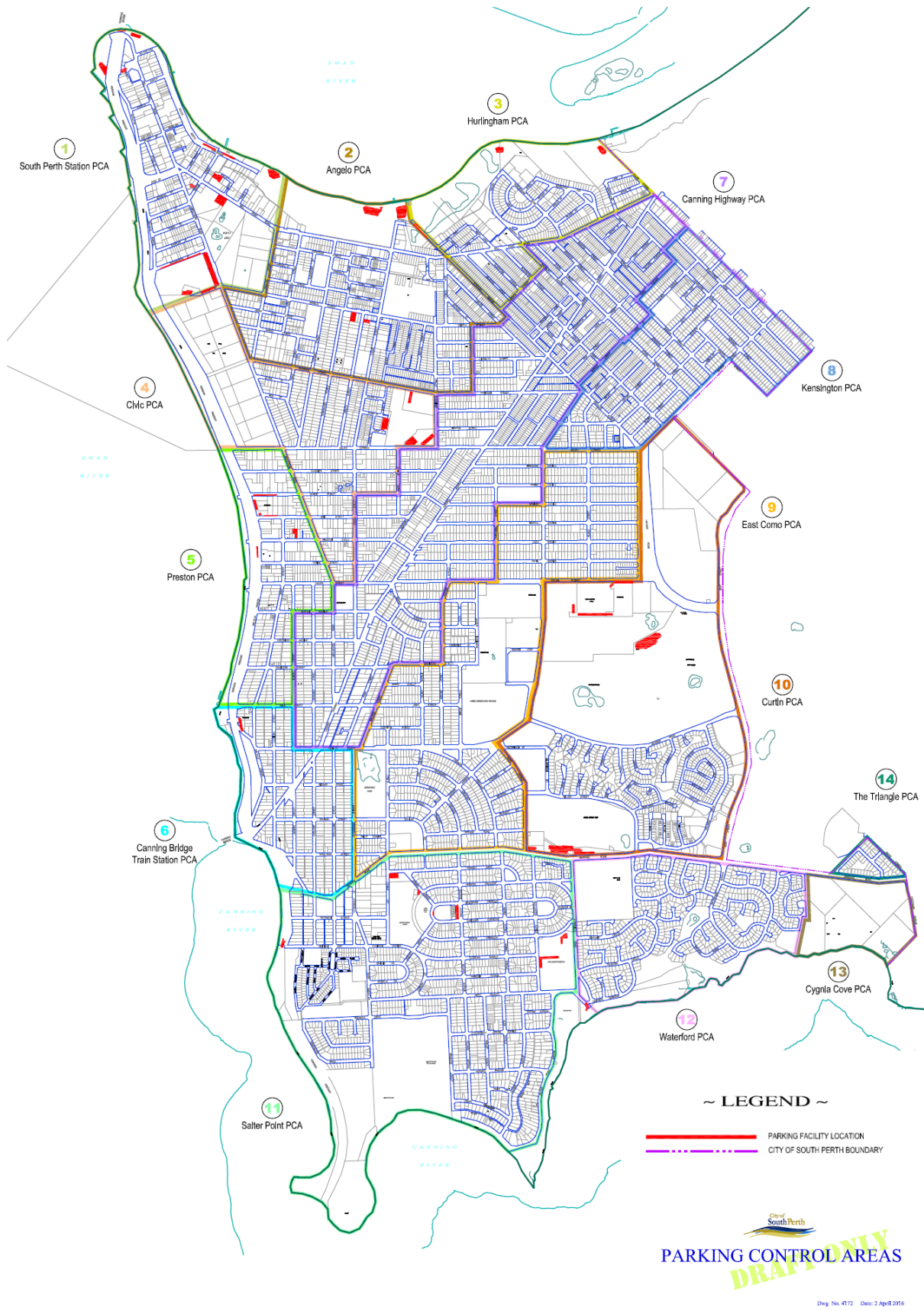
Luxmoore Parking and Safety (Luxmoore) was commissioned by the City of South Perth (the City) to undertake a Citywide Parking Strategy. The key objectives of the strategy are to:

1. provide a strategic citywide parking framework for the short (0-3 years), medium (4-7 years) and longer terms (+8 years)
2. assist in achieving Council's goals in relation to travel demand management and sustainable modes of transport
3. support the aims and objectives of other Council strategies and policies and aid in achieving the outcomes identified in various town planning documents
4. identify a comprehensive action plan (including priorities and order of costs) to assist in the future preparation of Parking Control Area (PCA) management plans.

The investigations included a review of background documents, a SWOT analysis, stakeholder meetings, workshops and surveys, and an assessment of future demand.

The City is now progressing with the practical application of Stage 2 to different PCA's through the development of management plans for the different PCA's. Figure 1-1 shows the 14 PCA identified by the City.

Figure 1-1 Parking Control Areas



2 Stakeholder consultation

2.1 Consultation methods

An important element of the investigation for this report was engagement with stakeholders to identify issues and potential options which would assist the City in achieving its planning objectives. Stakeholder engagement was conducted using the following methods:

- two parking workshops (one for local businesses and one for local residents)
- a parking strategy survey
- online forum discussions
- an interactive map for posting comments and suggestions relating to specific locations.

A summary of the forum presentation, survey questions and responses to the on-line survey are attached in Appendix A – Parking Strategy survey results.

2.2 Parking workshops

Stakeholders were invited to a public forum at Council’s offices on 22 and 23 July 2015. It is intended that a further report-back session will be held to present the major findings and recommendations contained in this report.

The South Perth community identified many issues with parking in the area, as well as possible solutions to these issues and opportunities for parking. The following sub-sections provide greater detail on the feedback received.

2.2.1 Business workshop

Seven local businesses were represented at the workshop where a number of issues were raised. Potential solutions to the various parking issues raised are provided in the Table 2-1 below.

Table 2-1: Business workshop discussion

Topic	Potential solution	Supply or management?
Zoo parking	<ul style="list-style-type: none"> • Drop off zone • Provide parking fee rebates for zoo patrons • Provide better parking information for zoo patrons 	Both
Areas of commercial and high activity areas (Mends, Angelo and Preston Streets)	<ul style="list-style-type: none"> • Improved signage and information • Wayfinding technology • Timed parking • Permits for workers • More use of enforcement technology 	Management
Parking at Canning Bridge Station	<ul style="list-style-type: none"> • Bus links to/from underutilised parking 	Management
Schools	<ul style="list-style-type: none"> • Introduce ‘kiss and ride’ • Educate children about parking • Cash-in-lieu could be redirected to schools 	Both

2.2.2 Community workshop

Fourteen members of the local community attended the workshop. Potential solutions that arose from the discussion are listed in Table 2-2.

Table 2-2: Community workshop discussion

Topic	Potential solution	Supply or management?
Zoo parking	<ul style="list-style-type: none"> • Redevelop Western Power substation verge • Encourage zoo patrons to travel via public transport • Dedicated staff parking 	Both
Residential parking	<ul style="list-style-type: none"> • Introduce residents permits • Timed parking to discourage commuter parking • Minimum parking ratios for new developments • Verge parking • Improved signage and wayfinding • Extend the CAT service to South Perth • Introduce traffic calming in areas of parking congestion 	Both
Areas of commercial and high activity areas (Mends St, Angelo St, Preston St)	<ul style="list-style-type: none"> • Turn Mends St into a pedestrian mall/shared zone and encourage active transport • Rezone to high density to keep amenities within walking distance • 2 hour free parking for local residents • Stop cash-in-lieu and make developers provide full parking facilities • Increase supply • Increase road widths • Consider bringing back the tram 	Both
Parking at Canning Bridge Station	<ul style="list-style-type: none"> • Timed and/or paid parking • Provide bike storage and lock-up facility • Identify underutilised parking e.g. George Burnett Leisure Centre and provide bus links 	Management

2.3 Parking strategy survey

This section provides an overview of the responses from the Parking Strategy Survey. The survey form and resulting graphs showing more detail of these responses are provided in Appendix A – Parking Strategy survey results.

A total of 46 people responded to the survey¹. The majority of respondents were:

- residents
- over the age of 45
- male.

¹ Note: Responders were able to skip questions therefore not all responses will total 46

Three respondents were business owners and two were workers employed in the local area. Residential parking accounted for the most responses (31) with parking for shopping and leisure/ entertainment collecting 13 responses each.

The survey provided detail on the level of support by survey respondents for a number of different approaches to parking. Table 2-3 shows the overriding response (excluding 'not applicable' responses).

Table 2-3: Support for parking management strategies

Possible strategy	Level of support
Shorter parking times	Agree or strongly agree (41%)
Longer parking times	Disagree or strongly disagree (52%)
Paying for parking	Strongly disagree (50%)
Walking further to destinations	Disagree or strongly disagree (33%)
More enforcement of parking restrictions	Strongly agree (41%)
Improved information (e.g. signage/parking apps)	Agree or strongly agree (63%)

A number of comments were provided within the survey responses which relate to parking issues and suggest parking solutions.

The majority of issues concerned parking supply (usually a perceived lack of parking), and road safety (usually where parking resulted in dangerously congested streets and unsafe driving conditions). Other common issues reflected concerns about paying for parking, illegal parking and provision of bike parking.

The main suggestions for improvements were categorised as follows:

- residential parking permits
- improved signage (including line markings)
- an increase in parking supply
- improvements in traffic management to assist in traffic flow around areas of high parking demand.

By identifying the relevant trip attractor for each comment, it has been possible to target the main suggestions to the specific parking conditions, as illustrated in Figure 2-1. The trip attractors specific to South Perth have been identified as follows:

- commercial and high activity areas
- leisure activity and parkland areas
- main arterials
- residential
- schools
- train station
- universities.

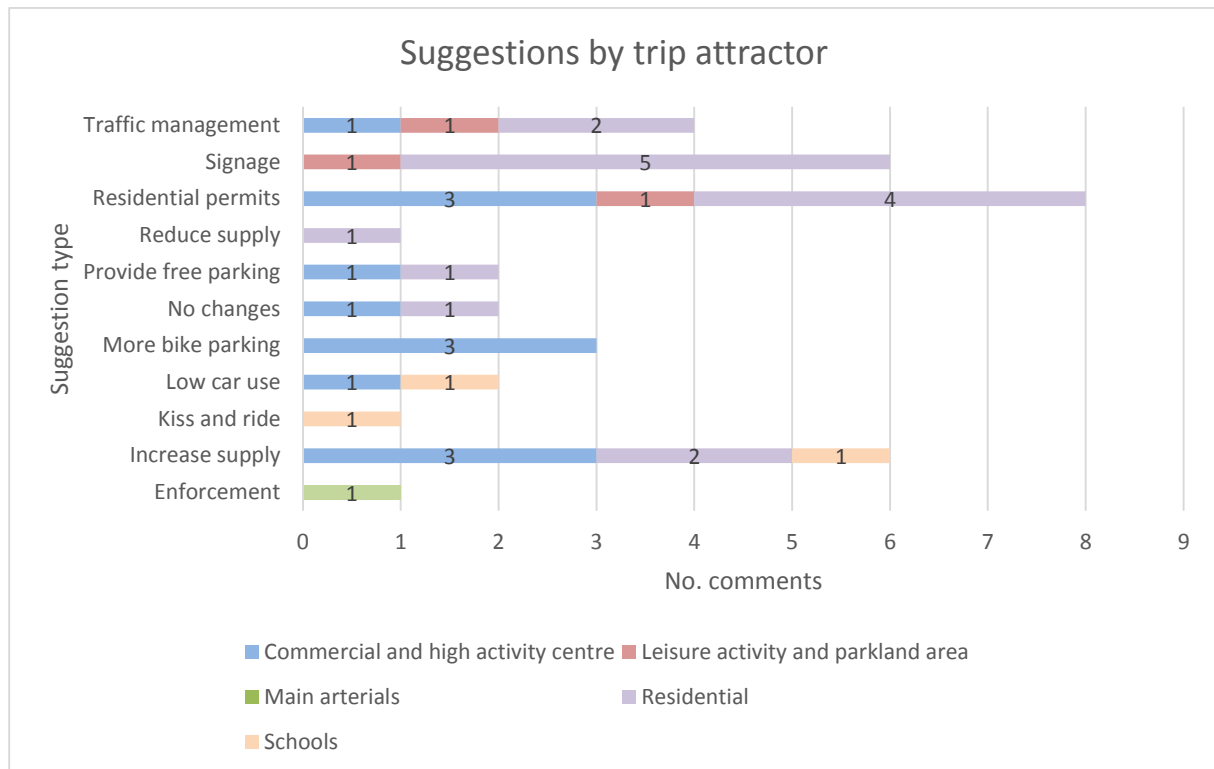


Figure 2-1: Suggestions by trip attractor

Residential permits were suggested by a large number of respondents, for several trip attractors. Residents were mainly concerned about getting parking in their own streets, although some also wished to obtain free parking throughout the City, particularly in areas of commercial and high activity due to their status as ratepayers. No comments relating to the train station or the university were made.

The requests for improved signage largely related to residential areas, particularly where residential streets were being used by commuters or city workers for long term parking.

Increases in supply were deemed necessary mostly in commercial/high activity areas although increases in parking for residents and schools were also mentioned by some.

Suggestions concerning traffic management were a feature for commercial, leisure and residential areas and this was mainly in relation to improving safe traffic flow in those areas.

2.4 Issues resulting from the ‘Have Your Say’ website

2.4.1 Forum topics

A total of 12 comments were received in response to the posted forum topics. Table 2-4 provides a summary of the responses to four questions that were posted by the CoSP on the ‘Have Your Say’ website.

Table 2-4: Forum topics and responses

Topic	Suggestions	Supply or management?
What do you think we can do to make movement simpler in the City of South Perth and help reduce congestion?	<ul style="list-style-type: none"> • Prioritise active transport • Improve streetscape • Rationalise parking spaces • Consider technology such as Smartparking.com.au • Actively manage parking in the peninsula area during and following redevelopment. 	Management
How can we cater for good movement, parking and transport opportunities and ensure there is adequate parking provision in the future?	<ul style="list-style-type: none"> • Provide residents with parking permits 	Management
What suggestions do you have to manage parking on South Perth streets? Is it a problem on some streets or everywhere?	<ul style="list-style-type: none"> • Introduce timed parking • Find alternatives to paid parking 	Management
Do you think we need to better manage and limit parking within residential areas, both on-street and off-street?	<ul style="list-style-type: none"> • Expand verge parking 	Supply

Overall, suggestions relate to the management of existing parking rather than providing more bays, and reflect comments found from the other consultation methods. The community recognises that the appearance of roads and the transport mix can have a beneficial effect on congestion and movement in a locality. In addition the community would like to see better enforcement of parking to discourage commuter parking in residential streets, and the provision of residential parking permits. Verge parking was suggested as a way of increasing supply.

2.4.2 Map feedback

A total of 126 suggestions and issues were posted using the online mapping tool. Comments have been allocated to individual trip attractors, and it is indicated whether they relate to:

- On-street parking
- Off-street parking
- both on and off street parking
- bike parking
- items not associated with parking.

Overall the main concerns related to on-street parking in residential areas, around schools and to a lesser extent in commercial and high activity areas. Off-street parking was mainly a concern for areas of leisure and parkland activity. Refer to Figure 2-2 for more detail.

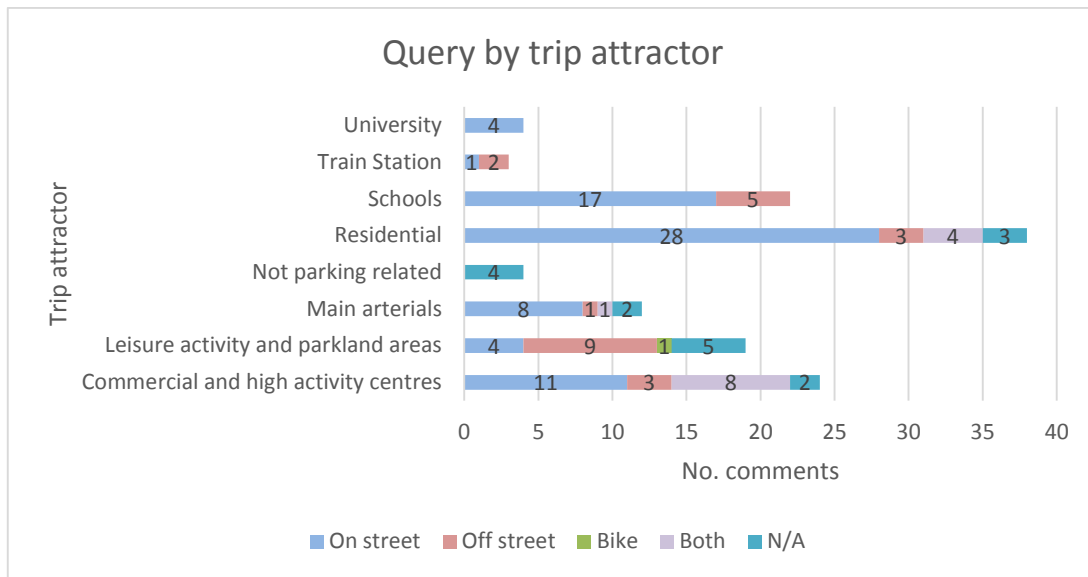


Figure 2-2: Map feedback by trip attractor

Where respondents described their parking issues and/or provided suggestions for improvements or solutions to parking issues, these have been categorised into common themes (Figure 2-3).

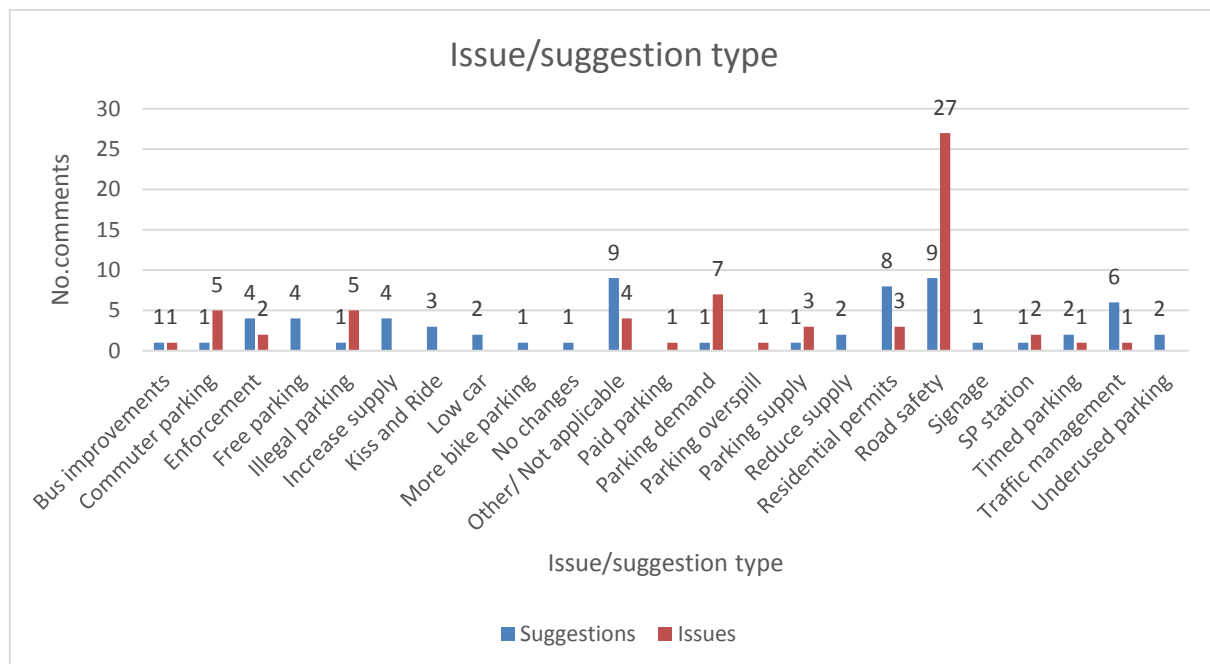


Figure 2-3: Map feedback – issue/suggestion type

It can be seen that the majority of comments related to issues with road safety. Nine respondents provided some suggested solutions for road safety issues which included better signage, roundabouts, changes to road layouts, traffic calming, or a review of current parking restrictions.

Other issues/suggestions related to residential permits, parking demand and traffic management. Many of these issues and solutions can be categorised as management solutions rather than calls for increased supply.

With regard to road safety, Figure 2-4 provides an outline of where these concerns were mainly felt.

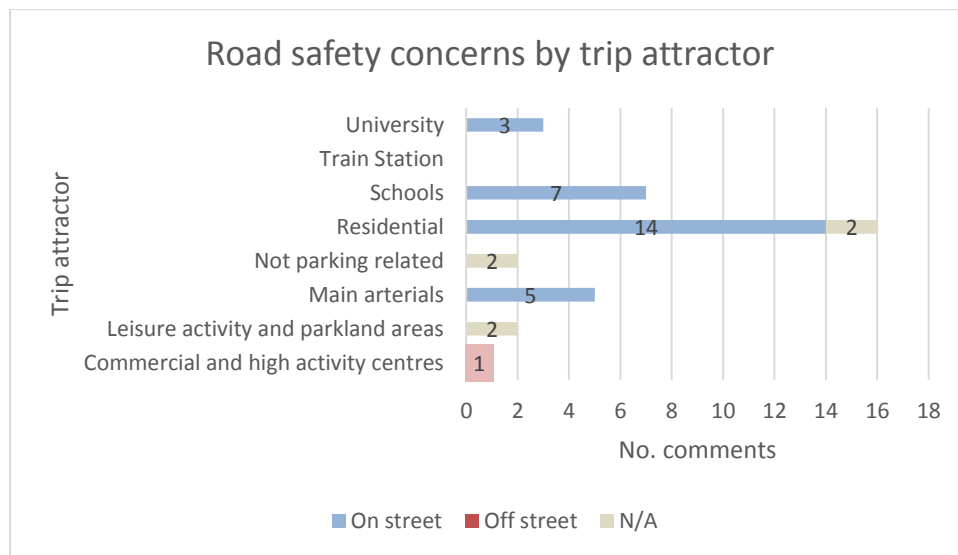


Figure 2-4: Road safety concerns by trip attractor

It is clear that road safety concerns are concentrated in residential areas, around schools and along main arterials, and relate to on-street parking. Comments about parking by university students were only about road safety, with specific reference to Jackson Road where traffic can be reduced down to one lane at times.

2.5 Summary

In regard to parking, a range of issues were raised at the meetings and in discussions on the 'Have Your Say' website from members of the public. Road safety around on-street parking was the overriding concern for the South Perth community, and this concern was mainly felt in residential areas, around schools and the university, and along main arterials.

The remaining issues can generally be categorised in terms of supply or management. Supply issues include too few bays being available and the expectation that a public or private organisation must provide more bays. Management issues relate to available facilities not being used effectively. The main suggestions raised by stakeholders are listed in Table 2-5. It can be seen that more effective management of existing parking is viewed as more important than increases in parking supply.

Table 2-5: Summary of stakeholders' comments

Trip attractor	Parking type	Supply-related comments	Management-related comments
Commercial and high activity areas	Mainly on-street	<ul style="list-style-type: none"> • Stop cash-in-lieu and make developers provide full parking facilities (Section 8) • Increase supply (Sections 4.12 and 4.13) 	<ul style="list-style-type: none"> • Improved signage and wayfinding information (see Sections 4.8 and 6.5) • Timed parking (Section 7.5) • Permits for workers and ratepayers (Section 7.9) • More use of enforcement technology (Section 4.9) • More bike parking
Leisure activity and parkland areas	Mainly off-street	<ul style="list-style-type: none"> • Redevelop Western Power substation verge • Dedicated staff parking 	<ul style="list-style-type: none"> • Drop-off zone • Provide parking fee rebates for zoo patrons • Provide better parking information for zoo patrons (Section 6.5) • Encourage zoo patrons to travel via public transport (Section 2.2.2)
Main arterials	Mainly on-street	<ul style="list-style-type: none"> • None mentioned 	<ul style="list-style-type: none"> • Better enforcement of parking (Section 4.9)
Residential	Mainly on-street	<ul style="list-style-type: none"> • Minimum parking ratios for new developments (Section 6.14) • Verge parking 	<ul style="list-style-type: none"> • Introduce residents permits (Section 7.9) • Timed parking to discourage commuter parking (Section 7.5) • Improved signage and wayfinding (Sections 4.8 and 6.5) • Extend the CAT service to South Perth (Section 2.2) • Introduce traffic calming in areas of parking congestion
Schools	Mainly on-street	<ul style="list-style-type: none"> • Cash-in-lieu could be redirected to schools (see chapter 8) 	<ul style="list-style-type: none"> • Introduce 'kiss and ride' • Educate children about parking (Section 2.2)
Train station	Both on- and off-street	<ul style="list-style-type: none"> • Provide bike storage and lock-up facility (Section 4.1) 	<ul style="list-style-type: none"> • Bus links to/from underutilised parking e.g. George Burnett Leisure Centre (Section 6.6) • Timed and/or paid parking (see chapter 7)
Universities	Mainly on-street (Jackson Road mentioned in 3 of 4 comments)	<ul style="list-style-type: none"> • None mentioned 	<ul style="list-style-type: none"> • 'No parking' signs to be placed further along the road (Section 6.13)

3 SWOT analysis

Parking is a highly subjective topic which gives rise to many issues. Based on previous documents, site visits and input from the stakeholder meetings, the points below summarise the main parking-related issues affecting the City in a SWOT analysis.

3.1 Strengths

- Plentiful parking is available within a reasonable walking distance (250 m) of several key destinations.
- Three surveys of parking demand patterns in the Mends Street, Angelo Street and Preston Street PCAs indicate an average demand at less than 72% of bays.
- Some good public transport links including bus, train and ferry services and cycle paths are available.
- Road safety considerations motivate and provide justification for many parking restrictions.
- All parking meters accept credit card payments and Easypay (pay by phone).
- The traffic and transport departments focus on amenity and safety rather than parking or enforcement income, e.g. Comer Street bay redesign (refer to Figure 3-1).
- Traffic Impact Studies must be submitted for proposed developments which means that transport provision is given due attention and any negative impacts can be assessed.
- Traffic Management Plans must be submitted to deal with contractor vehicles to ensure no loss of amenity to local residents and businesses during construction.



Figure 3-1: Comer Street bay redesign

3.2 Weaknesses

- There is an under-utilisation of pay parking in several locations, e.g. in Richardson Reserve (refer Figure 3-2).



Figure 3-2: Underutilised pay parking at Richardson Reserve

- There is no TravelSmart officer employed to promote alternative transport options.
- Historically there has been a reactive approach to parking complaints.
- There is an ad hoc approach to management of long-term parkers, e.g. along Canning Highway which has parking restrictions applied to areas in isolation.
- Parking wayfinding and guidance are minimal.
- There is a confusing mix of timed parking restrictions including 5, 15 and 30 minutes, 1P, 2P, 3P, 4P and different start and finish times, e.g. Welwyn Avenue commercial area (refer Figure 3-3).



Figure 3-3: Confusing signage

- Parking restrictions and fees are confusing for a driver to understand and difficult for rangers to enforce.
- Cash-in-lieu is not always applied consistently.
- There are inadequate ranger resources to adequately monitor compliance for public and private parking facilities especially at schools.
- Residents are sometimes inconvenienced by commuters parking in their streets.
- User information on the City's website is not customer friendly.
- Parking policy has not been used to optimise mode share targets.
- There are no maximum caps on parking provision in some PCA's meaning that developments could introduce excess parking bays without considering the existing supply or the impact on roads.
- There is no clear event parking management strategy.

3.3 Opportunities

- More effective use should be made of all public parking facilities such as George Burnett Leisure Centre and the Jetski car park which are largely underutilised on weekdays.



Figure 3-4: Unused parking at the George Burnett Leisure Centre

- The parking supply from some developments could be unbundled to allow more effective use of the bays.
- Schools should provide their own traffic and parking management resources.
- TravelSmart and car parking management plans should be applied for all new developments.
- A new Integrated Transport Plan is planned for release in 2016. A 2006 draft Integrated Transport Plan has not been published or adopted.

- More effective enforcement technology and additional resources will assist in the management of parking, in particular the monitoring of compliance. Some innovations are being trialled by rangers (e.g. parking sensors) and are being researched (e.g. licence plate recognition).
- Simplification of time restrictions and fees will result in greater compliance and increased churn of bays.
- A permit scheme could improve convenience for residents subject to additional staff resources being available.
- Surplus parking income and cash-in-lieu could be used to fund improved access.
- The student-only Curtin Area Bus Service (CABS) could be shared by public commuters.
- A free local bus service could be funded by the City to increase non private vehicle patronage to local commercial areas such as the zoo, where up to 70% of visitors arrive by private car.
- A new train station in the Peninsula PCA would provide additional transport options to and from the area and reduce the demand for parking, especially by visitors.

3.4 Threats

- Significant additional parking for new developments (especially in the South Perth peninsula) will have a negative effect on road amenity and congestion.
- There is considerable parking spillover taking place in some PCA's, e.g. Curtin University (25,000 visitors per day with a 7000 bay cap on parking capacity).
- The volume and duration of stay by parkers especially commuters, is increasing.
- Free/cheap on-street parking encourages drivers to cruise for a vacant space, increasing congestion.
- Congestion and the lack of convenient parking for visitors will negatively impact on entertainment (the zoo) and on commercial areas.
- Increased train usage will create more and more demand for commuter parking.

4 Fundamentals of a parking strategy

4.1 Support and encourage different forms of sustainable transport

The City needs to prioritise access for pedestrians, cyclists, public transport users and people with disabilities, and make the most of public transport infrastructure, balanced with the needs of the City road network, including the need to minimise congestion. The existing public realm in the City for pedestrians, cyclists and public transport user needs to be significantly improved given the current dominance of vehicular traffic.

The provision of convenient public transport is fundamental element of changing mode-share. Unfortunately the City has little influence over the State Government's program for Public Transport to and serving the City. If public transport lags development, there will continue to be a high mode share for the use of private vehicles.

It is important to acknowledge that a Parking Strategy is only one part of an Integrated Transport Strategy which should also incorporate a road safety strategy, a green travel plan, a pedestrian strategy, a bicycle strategy, a local area traffic management plans and a specific parking management plans.

Some of these are already in place in the City (e.g. the 2011-16 Bike Plan, the TravelSmart RoadWise Local Action Plan (2006)). There are other documents which provide information on alternative transport modes and parking. A new Integrated Transport Strategy is planned for the City for 2016 which should bring all the above topics together into an updated, cohesive policy and therefore achieve the sustainable parking principles outlined above.

There is increasing recognition that sustainable cities require a balanced multi-modal transport system, and the parking system should support the transport system. In particular, parking supply, utilisation, location and price are primary factors relating to travel behaviour mode choice.

It is recommended that the City adopt five parking principles which are to underlie future strategies relating to travel behaviour:

f) Focus on people access not vehicle access

This requires the development of innovative access programs targeted at a more active community.

g) Provide efficient and effective alternatives to car access

This requires the promotion of accessibility such as a park and ride facility or the availability of low fare or free buses, rather than the promotion of parking. The provision of high quality reliable public transport is a fundamental prerequisite for parking policies which seek to maintain supply within acceptable limits, reduce congestion and encourage alternative modes of transport.

h) Parking policy and strategy must support sustainable transport

The integration of commuter parking with public transport is a major opportunity to reduce the dependency on cars coming into a centre. Additionally, there is a need for better bicycle paths and quality end-of-trip bicycle facilities, as well as improved bus shelters with real-time information.

i) The appropriate amount of parking for the centre will be well below the unconstrained demand for parking

The available parking supply should be adequate, not excessive. It need not cater to occasional peak demand, or ensure that every driver will always be able to find a bay. Rather, it seeks to eliminate over-supply and unused capacity. Consolidated parking is a means of making better use of available supply. Sharing parking between multiple land uses and/ or businesses does not require each of them to provide their own parking. This ensures an adequate rather than excessive supply of parking and is particularly appropriate to the provision of overall parking in the commercial precincts.

j) The provision of parking requires a demand management, not a demand satisfaction approach

Controlling parking demand is the counterbalance to the management of parking supply, but it is far easier, more flexible and less expensive to make better use of existing parking capacity than to create additional parking. Parking management strategies recognise different hierarchies of users. Fees can be used to control demand and to encourage alternative modes. Additionally, improvements to transport and access infrastructure can be funded from additional income derived from parking.

The future strategy for South Perth should therefore contain recommendations not only to curtail the supply of parking, but also to manage parking so as to constrain demand.

Based on stakeholder feedback it is important that some of the net surplus generated from parking and enforcement is transparently reinvested into improved transport access, which may include upgrading parking facilities, the provision of better pedestrian and cycling access or public transport options.

If the City intends to move towards a more sustainable, multi-modal transport system, there needs to be a commitment by all stakeholders to implementing such a policy to support these principles.

4.2 Change the approach to parking

Changing the City's approach to parking will reduce the trend in motor vehicle use and ownership.

Historically, the approach by local government to the provision of parking in Australian cities has embodied four key factors:

1. Mandatory minimum parking is required.
2. In addition to public parking, parking is to be provided by developers.
3. Commercial centres are to contain both on-street and off-street parking.
4. Each development (land use) is to provide its own parking.

The traditional approach to parking has been that motorists should nearly always be able to easily find convenient, free parking at every destination.²

Under this 'predict and provide' approach, parking planning is based on the premise that 'parking problem' means 'inadequate supply', and consequently more parking is better, every

² The concept has been clearly articulated by Litman, T (2006) Parking Management Strategies Evaluation and Planning – Victorian Transport Policy Institute.

destination should satisfy its own parking needs (minimum ratios), car parks should never fill, parking should always be free or subsidised or incorporated into building costs.

However, in the last ten years there has been an increasing trend towards more efficient use of existing transport infrastructure as an alternative to expanding roads and parking facilities, incorporated in a technique known as travel demand management (TDM). TDM emphasises the movement of people and goods, rather than motor vehicles, and gives priority to more efficient travel and communication modes (such as walking, cycling, car sharing, public transport and telecommuting), particularly under congested conditions. Environmental concerns and rising fuel costs are other factors prompting a reduction in the reliance on private motor vehicles.

Under this new 'demand management' approach, as distinct from the unsustainable demand satisfaction (predict and provide) approach, parking facilities should be used more efficiently. This means that car parks at a particular destination may often fill (typically more than once a week), provided that alternative options are available nearby, and drivers have information on these options. It does not mean that car parks should have sufficient capacity to cater to once-a-week peak demand. It requires that motorists have a choice between paid parking nearby (user-pay), or free parking a reasonable distance away. It also requires a high standard of walking conditions between parking facilities and the destinations they may serve. Parking planning should therefore include shared and reciprocal parking, parking pricing and regulations, parking user information, and pedestrian improvements.

The challenge for the City is to find a balance between adequate parking supply to ensure the vitality of the commercial centres, and the environmental, social and economic necessity towards more efficient use of transportation infrastructure and travel demand management techniques.

It is recommended that the City's approach to parking change from the current predict and provide to a demand management approach whereby parking facilities are used more effectively and parking is proactively managed to align with agreed strategies.

Parking management policies under this new approach will be effective in reducing the trend in motor vehicle use and ownership, and help to share the cost of parking infrastructure equitably.

This new approach is essential to achieve the Department of Transport's vision where public transport by 2031 will account for one in eight of all motorised trips (compared with one in 14 in 2011)³. It will provide all users (including the elderly, people with a disability, employees, shoppers, students, traders, residents and visitors) with safe and appropriate access to parking, whilst enabling adequate road access for pedestrians, cyclists, emergency vehicles, buses, street maintenance and delivery vehicles.

4.3 Introduce a parking hierarchy

When different parking user groups are competing for the same parking space and demand exceeds the supply there occurs a saturation of parking facilities. There needs to be recognition of different user priorities through the introduction of a parking hierarchy.

³ Public Transport for Perth in 2031, WA Department of Transport.

The objectives of the parking hierarchy are to uphold the safety and convenience of all road users, encourage the use of alternative transport modes such as walking, bus, train and cycling, promote equitable and transparent allocation of parking spaces across all user groups and facilitate consistent decision-making regarding parking infrastructure.

The parking user hierarchy should be applied to planning decisions in the City of South Perth. Policies should achieve the parking hierarchy through pricing, time regulations and enforcement. It is noted that parking restrictions required for road safety reasons, pedestrian crossings, emergency purposes and city services take precedence over all other users. For example, disabled parking is inconvenient and unsafe on-street and consequently a low priority in commercial centres. Disabled parking is therefore given a high priority in off-street car parks.

4.3.1 Parking user groups

To enable equitable sharing of parking resources, it is necessary to identify all the different parking user groups and prepare a parking hierarchy. The parking hierarchy assumes there are no other competing interests for the kerbside or off-street parking spaces e.g. pedestrian paths and footpath trading or eating, bus priority or cycle lanes. The following is a list in no specific order of parking user groups, their definitions and priority requirements.

Public transport

Parking restrictions are applied to indicate a bus or taxi zone specifically reserved for these vehicles/users. This user group should generally have priority when considering kerbside allocation.

Loading

Service vehicles are vital to the operation of a commercial centre. They should have a high priority for the allocation of a limited number of on-street parking spaces. However, planning requirements should ensure all new developments provide for service vehicles within the development itself. Loading zones should not be provided unless off-street loading facilities are not available.

They should cater for the needs of legitimate goods-carrying vehicles only. These vehicles are usually permitted to stand in a loading zone for 15 minutes while engaged in picking up or setting down goods. Proper enforcement is necessary to prevent loading zones from becoming private parking for owners or staff of commercial businesses. Private use motor vehicles should not be entitled to park in loading zones during business hours, but signage should permit short-medium stay parking after hours.

Disability permit holders

The Australian Disability Parking Scheme helps eligible people park nearer to their destination. ACROD⁴ permit holders in WA are entitled to park:

- in any space provided for a person with a disability in an on-street or off-street parking location, such as shopping centres, hospitals etc.
- in local government metered or regulated parking areas on-street for double the maximum time allowed.

⁴ Formerly the Australian Council for Rehabilitation of Disabled, now renamed National Disability Services Limited

Spaces allocated for persons with a disability should be given particular priority in the immediate vicinity of uses that have a high demand for disability access, such as hospitals and other community services. Wherever possible parking bays for the disabled should be located off-street to provide additional convenience and safety to the driver.

Drop-off/pick-up

Short-term parking for drop-off/pick-up (e.g. 5-15 minute parking) should be given priority in premium parking locations in close proximity to facilities i.e. at schools, public transport nodes and hospitals. Enforcement should ensure the turnover of this parking.

Short to medium-stay

For business and retail needs, short-stay parking is generally for up to 2 hours and medium-term parking between 2 and 4 hours. These user classes should be provided for commercial centres, hospitals, sports facilities, entertainment centres and hotels. Enforcement should ensure compliant turnover of this parking.

Long-stay/commuter

Long-stay parking (4-24 hours) is provided to cater for employees, commuters and other long-term parkers such as building contractors. This user class should generally be allocated a relatively low priority, particularly on-street and in areas with high public transport accessibility.

Park and ride

This parking is provided to cater for people transferring to another mode of transport to complete their journey (e.g. catching a bus or train). Park and ride should be given priority at satellite/remote public transport nodes. This type of parking is generally not considered appropriate in commercial centres or at transit oriented developments.

Residents

Parking for residents and their visitors. Most residential properties in the City currently have access to at least one off-street car parking space. However this may not be the case in the future in high density areas. Residential parking policy/permit schemes should manage the demands of resident and visitor parking, whilst discouraging motor vehicle use. Enforcement must ensure that access is not blocked to residents' off-street parking.

Cyclists

Parking for cyclists falls into two broad categories:

- all-day parking for employees and park-and-ride parking at public transport stations
- short-term parking for visitors to shops, restaurants, offices, recreational facilities and other institutions (within 50 m of destination).

Parking for cyclists should be given a high priority and planning requirements should ensure that adequate parking provisions and end-of-trip facilities for cyclists be incorporated into all new developments.

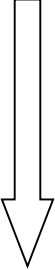
Motorcycle and scooter parking

Motorcycle/scooter parking is generally treated no differently to that of cars. If vehicles are to be charged for parking, this should apply equally to motorcycles if they use spaces allocated to cars. An incentive for these motorcycles is to provide them with free parking in dedicated motorcycle spaces.

As car parking spaces can be easily divided into two motorcycle spaces, there is flexibility to convert spaces depending on demand. Planning provisions should identify the environmental benefits of motorcycle/scooter use over cars and provide developers with incentives to provide motorcycle/ scooter parking in lieu of car spaces.

A program to encourage parking for motorcycles in appropriate locations in the commercial centres should be considered. These parking spaces should be well signed and promoted in Council communications.

Table 4-1: Proposed commercial centre parking user hierarchy

Priority	Commercial centre		Outside commercial centre	
	On-street	Off-street	On-street	Off-street
<p style="text-align: center;">Essential</p>  <p style="text-align: center;">Least important</p>	Loading	Disability permit holders	Public transport	Long-stay/commuter
	Public transport	Short to medium-stay	Residents	Short to medium-stay
	Drop-off/pick-up	Drop-off/pick-up	Short to medium-stay	Drop-off/pick-up
	Short to medium-stay	Loading	Disability permit holders	Park and Ride
		Motorcycle/scooter	Loading	Residents
	Motorcycle/scooter & cyclists	Long-stay/commuter & residents	Long-stay/commuter	Motorcycle/scooter
	Disability permit holders	Cyclists	Drop-off/pick-up & motorcycle/scooter & cyclists	Disability permit holders & loading & cyclists
Not allowed in this zone	Long-stay/commuter & park and ride	Park and ride	Park and ride	Public transport
	Residents	Public transport		

4.3.2 Proposed hierarchy for the commercial centres

The parking user hierarchy should be applied to planning decisions in the City. Policies should achieve the parking hierarchy through pricing, time regulations and enforcement.

It is recommended that a parking user hierarchy is implemented for different PCA's to support growth and intensification goals.

It is noted that parking restrictions required for road safety reasons, pedestrian crossings, emergency purposes and city services take precedence over all other users.

4.4 Focus on public education

The City needs to focus on public education on the broader impacts of parking, its environmental and other costs, and the benefits of sustainable transport policies.

An education program needs to be aimed at all stakeholders including planners, developers, designers, ratepayers, retailers, property owners, tenants, elected officials and council officers, business and community groups, students, residents, visitors, commuters, and the general public. Education and appreciation of the unsustainability of current parking demand should be available and regularly communicated in the City's publications.

The City needs to focus in the short- and long-term on continually educating all stakeholders on the broader impacts of parking, its environmental and other costs, and the benefits of sustainable transport policies. The education program is to be updated with actions being taken within the community to improve and provide information about different options for transport access.

The community need to understand that:

- a) drivers cannot expect unlimited parking close to their destination
- b) unlimited supply has environmental, social and economic drawbacks
- c) parking needs to be sustainable
- d) there is a cost for the provision of parking
- e) parking users need to help to share the cost of parking infrastructure equitably
- f) net surplus from parking services are to be reinvested into improving access and transport infrastructure.

The City's current website information on parking should be improved to include detailed information about all public parking facilities, fees and hours of operation and time restrictions. A very informative parking website for shoppers, visitors, employees and residents will help to educate the community about considering a range of possible parking options.

Despite every driver being a parker, the broader environmental, economic and social impacts of parking are rarely understood or appreciated by users, unlike their understanding of the effects of vehicle use. The clamour for more parking has been allowed to develop without any communication of its negative effects, and its growing unsustainability. This is true in South Perth where the city's website relating to parking is very regulation-oriented. An upgraded and ongoing campaign of communication on the unsustainability of current parking practices is required.

4.5 Parking Advisory Working Group

A Parking Advisory Working Group that includes City staff and representatives of Business Associations, residents and other stakeholders could be also of a great value. A working group is formed with a group of interested business and community stakeholders. They review the city's parking policies and use external specialists to assist in the planning and operation of parking facilities. Their role is primarily advisory and the setting of policy. It is acknowledged that:

this type of organisation gives a voice to members of local groups who are interested in improving parking conditions

- it has proved to be effective as a sounding-board and reviewer of recommendations by other local Council departments
- it requires interaction and communication with technical staff in the city's business sections
- it is usually focussed on the price and supply of parking
- it requires a clear parking management strategy to be in place.

The City of Bunbury has an effective Parking Committee which reviews all parking associated applications and recommendations by the city. The committee is made up of councillors, staff and representatives from the Chamber of Commerce and other external stakeholders.

It is recommended that the City appoint an administrative Parking Working Group chaired by the Parking Manager, which is responsible for bringing forward issues that cross boundaries between the traditional administrative units.

4.6 Parking Surveys

The City of South Perth should continue undertaking regular parking surveys in high demand areas to assess ongoing issues, determine if there is a high occupancy percentage from long term parkers and vehicles parking overtime, and determine parking trends. This data is essential to identify and justify triggers and priority areas for changes to regulations or enforcement effort.

It is recommended that parking occupancy in high demand areas should be surveyed regularly in the same format and at the same time each year to measure actual usage and to compare changing patterns of usage from year to year in different commercial centres.

The surveys can be undertaken internally by Council staff.

Figure 4-1: Parking survey results

PCA	Supply	Sept 14 Peak/max	%	Feb 15 Peak/max	%	Oct 15 Peak/max	%
Mends St	898/957	453/898	50%	536/954	56%	567/858	66%
Angelo St	272	195	71%	205	75%	Data not available	Data not available
Preston St	252	155	70%	205	81%	Data not available	Data not available
TOTAL	1,422/1,478	803	56%	946	64%		

The comparative results show that peak utilisation in each area is below 82% and there is ample supply.

4.7 Introduce parking controls and eventually pay parking

It is fundamental to recognise that there is no such thing as free parking; the costs are simply incorporated elsewhere. The true cost of parking is hidden in higher development costs, and consequently higher rents and prices to consumers. Property owners are subsidising parking on valuable land that could be generating income or could be put to other uses. Owners of

private vehicles are expected to cover the costs associated with owning and operating a car and constructing and maintaining road infrastructure; however, in most instances, the costs associated with vehicle storage, e.g. parking, are not usually charged directly to users. An example of the cost of provision of parking can be found in Appendix B – Cost of provision of parking.

It is recommended that all new parking controls or charges need to be constantly reviewed by the City and amended as necessary depending on the result of regular parking surveys.

It is recommended that the City should evaluate the introduction of parking controls and eventually pay parking particularly in areas adjacent to major trip generators. These controls should be used to encourage the use of alternative modes, but should also be set at a level which does not detract from the vitality of the city PCA's.

Short-term parking should be encouraged and enforcement should be improved. Providing dedicated parking for long term parkers in each PCA near public transport facilities will also help to minimise the amount of traffic passing through the City.

4.8 Implement a consistent level of wayfinding, signage and parking restrictions

All users want conveniently located, safe, secure and value-for-money parking with signage to their destination and restrictions that are clear, consistent and user friendly.

Parking wayfinding refers to a system of signs, directories and other design features which provide an early warning navigational aid. Most of the City's public and private parking areas are advertised by an inconsistent array of signs and 'P' logos which are usually located within 5 m of the car park entrance. They do not assist drivers coming into the commercial centres to plan their route well in advance so as to reduce their search time and traffic congestion. There is a presumption that 'drivers know where the parking is'.

Drivers want to know where to look for wayfinding information when they need it, understand the way the information is communicated and obtain the information quickly and without fuss.

A single, consistent system should guide drivers to all car parks. Once drivers are at the car park, then individual branding and signage can be used. Similarly, the City's maps and the website should show all public parking facilities, not just car parks owned by the City.

It is recommended that public parking information should be applied and published uniformly across the entire City equally to the City's and privately owned public car parking areas.

A coherent wayfinding system is a cost-effective means to reduce searching time for bays and unnecessary circulation of cars. Predictable, consistent and authoritative public information is the key to building confidence.



Figure 4-2: Examples of consistent car park and wayfinding signage in Parramatta

4.9 Review existing parking enforcement

The City needs to adopt a proactive approach to parking management.

Parking management includes the enforcement of parking restrictions to monitor and deter parking that is dangerous or inconsiderate to other motorists. The aim of enforcement is to maximise motorists' compliance with policies. The provision of more effective parking enforcement is essential to make the streets safer for all road users (particularly children and other vulnerable pedestrians), to ensure that parking bays are available for their intended use and to make the public roadways a more pleasant environment. Enforcement does not need to be uniform across the City, but targeted to tackle problem areas.

Businesses, shoppers, visitors and residents do not want parked vehicles to impede their movements or the movements of public transport. Parking penalties appropriate to the seriousness of the contravention should be introduced, particularly in the high demand areas identified. However, enforcement is not the only mechanism for increasing compliance. Effective communication with the public is essential so they are aware of the rules and regulations.

Parking restrictions throughout the City are enforced by a team of 5 FTE rangers (one of whom is a full time parking officer) and one part-time ranger. They undertake many roles including traffic management at schools and enforcement at some private car parks and are responsible for inspecting more than 850 City owned parking bays and another 43 private property agreements.

The City's Rangers currently spend approximately 60% of their time on parking duties and enforcement. This department issued approximately 5840 enforcement notices in 2014/15 and the parking infringement income in this year was approximately \$410,300.

In most parking facilities in the City (where parking meters are not installed) the current system of monitoring compliance is inefficient. The process whereby a parking enforcement officer must patrol an area twice in order to firstly chalk mark a tyre and then return one or two hours later to check the tyre, is an expensive use of labour resources. The efforts of the officers are often thwarted by technology such as email and SMS, which allow long-term users (e.g. employees) of short-term bays to shift their vehicles. Schools should manage their own peak-time parking demand and be encouraged to engage with the Department of Transport's TravelSmart to School scheme.

Increased compliance is not a reason for expanded implementation of parking meters, but it is certainly a benefit as it allows an enforcement officer to patrol once and to easily determine whether a vehicle has parked in excess of any time restrictions.

The current \$60/\$80 fine for overstaying the time or contravening other parking restrictions is a sufficient deterrent for many drivers. Surveys have not been undertaken on the level of compliance with parking restrictions. These should be undertaken to assess the effectiveness of the parking enforcement regime. The benefit of more efficient and simplified parking enforcement is the creation of additional capacity and improvement in the churn of on-street parking bays.

It is recommended that the City increase the effective allocation of parking enforcement resources in combination with improved technologies for monitoring compliance such as in-ground sensors, licence plate recognition cameras and parking meters. Schools should self-manage their peak-time parking demand. Additional enforcement staff and new technologies are essential for improved compliance.

Council currently charges a fee for monitoring compliance on private property as follows:

	Establishment fee	Annual fee
Small car park	\$175	\$100
Large car park	\$400	\$200

In addition to the fee, it is worthwhile to consider introducing a reciprocal monitoring arrangement on private property agreements whereby the City will monitor compliance for a fee, subject to private parking being allowed to be used by the public outside of business hours and subject to adequate security arrangements.

4.10 Implement the requirements for a Parking Control and Management Plan (PCMP) for all new commercial or mixed used developments requiring more than 10 parking bays and on multi residential developments

This is a tool for developers to commit to, prior to establishing a new parking facility. It is a worthwhile document for the City, for developers, their tenants, and for other parties as it sets out in detail, how parking in a proposed development will be controlled and managed after establishment. It has been implemented in several cities (such as Stirling and Cambridge⁵) and provides clarification for all parties affected by parking at a site. A proposed application form is included in Appendix C – Proposed Parking Control and Management Plan.

It places the onus on the developer to give consideration to the proposed practical plans to manage and control the parking on site in order to comply with the planning conditions. Approval of the plan should form part of the Development Approval for the project. Ongoing adherence to the plan should be monitored and enforced.

Discussion of the proposed Parking Control and Management Plan (PCMP) needs to occur together with compliance services, who will be responsible for monitoring compliance with the PCMP after construction.

⁵ Town of Cambridge, Parking Management Plan Information Sheet, 8 February 2010.

Reference to the PCMP is to be included in the Strategic Plan together with penalties for non-compliance.

It is recommended that the City implements a Parking Control and Management Plan to be provided with a development application for any project exceeding more than five bays.

4.11 Improve existing policies and obtain developer contributions for every Development Application

All new residential developments are likely to have an impact on parking, and if new residents wish to park on the street, this will increase the demand for spaces and the overall competition for parking spaces will increase in the area around the development having a direct impact on congestion, illegal parking and highway safety. Consequently, new developments should contribute to the improvement of the area to enhance the local street environment, improve safety, improve parking facilities and improve the overall amenity of access for businesses, visitors and residents and to encourage sustainable travel modes within the City.

Developers should work in partnership with the City to improve connectivity and permeability for pedestrians and cyclists whilst minimising the likelihood of conflicts with vehicular traffic and create an attractive, safer and more accessible environment for all users. This can be done by:

- a) supporting pedestrian and cyclist movement by creating pedestrian and cyclist priority access and connections
- b) creating bicycle parking areas and signs provided to inform cyclists of areas where cycle parking is provided
- c) supporting improvements to crossing facilities at key junctions
- d) improving / enhancing signage
- e) ensuring that routes are safe, accessible, well-lit at night and lined by active building frontages.

These contributions are especially applicable in the commercial precincts.

4.12 Funding car parking and TDM initiatives

The construction and maintenance of car parks, cycle paths, cycle lanes, footpaths and bus infrastructure can be economically difficult for a Council with restricted income and hence the rate of construction of this infrastructure can seem to take years when it is needed in the present. Programs for planned works for these facilities can be brought forward with increased funding.

Footpaths and cycleways are unable to create revenue as charging for their use is very complicated and a significant deterrent. However, revenue through car parking management is an ideal tool and achieves multiple goals. The cost of parking changes the behaviour of the driver, motivating them to consider alternative options and the revenue from the parking can be used to provide these alternatives as well as provide and maintain car parking facilities.

4.13 Build parking facilities – deck car park feasibility

The use of public resources to construct parking facilities has traditionally been the method of addressing parking shortfalls. It has the advantage that the City controls when and where parking supply is added. However it tends to be expensive, is slow to implement and represents a public subsidy for driving. Public Private Partnerships (PPP) may be another potential model for the provision of new car parking infrastructure.

It is recommended that the City develops a plan to identify and prioritise potential sites for the construction of deck parking to serve the commercial centres.

In considering locations for future deck parking, potential options are restricted to those where the City either owns or has long-term tenure over the land. As the cost for each 100-bay deck car park will be close to \$4 million (in current 2015 dollars), opportunities which will require significant additional expense associated with the purchase of land should be a low priority.

A further factor in considering deck parking is its impact on the urban landscape. Free standing deck car parks are generally not attractive buildings and are best constructed where they can be contained within or above or below other uses, not as single use structures.

In addition to being controlled by the City, potential locations for deck parking must have common characteristics:

- They must have multiple generators of parking.
- They should be likely to be utilised during the day, night and on weekends.
- Their shape must permit a practical layout for a deck parking facility.
- It is desirable that there be opportunities for vehicle access to/from more than one street.
- They must be capable of linkage with pedestrian pathways to their major generators.
- The pedestrian pathways must provide a high standard of convenience and safety.

A review of the design and layout of some on-street parking may also yield a small increase in bays.

The options of revenue from parking come in various forms and are set out below in order of their preference for most stakeholders:

- cash-in-lieu for lack of parking supply from developers
- parking meter charges on-street
- off-street parking fees
- parking fines.

Generally a combination of all four sources of revenue will be necessary for the City to fund increased parking capacity.

5 Future demand and usage assessment

Nine developments have recently been approved for the South Perth peninsular, (mostly mixed use) comprising 883 residential units and nearly 40,000m² of commercial space⁶. Table 5-1 shows the total number of bays associated with each development.

Table 5-1: South Perth developments – bay numbers

Development	Development type	Number of car bays	Number of residential units	Est. number of residential bays (based on 1.2 bays/unit)
Charles Street	Office	146	-	-
Melville/ Richardson Street	Mixed	175	70	84
Mill Point Road/ Harper Terrace	Mixed	44	14	17
Pinnacle South Perth	Mixed	253	102	122
Civic Triangle/ Civic Heart	Mixed	607	294	353
96 Mill Point Road	Mixed	252	118	142
Hardy Street	Mixed	119	39	47
Labouchere Road/ Lyll Street	Mixed	297	148	178
74 Mill Point Road	Mixed	248	TBC	TBC
TOTAL		2,141	785 (excl. 74 Mill Point Rd)	942 (excl. 74 Mill Point Rd)

The nine developments above will include a total of 2,141 parking bays. Where a split between bays allocated for residential and business use was available (Civic Triangle/ Civic Heart development), the parking ratio was found to be 1.2 spaces per residential unit. On the assumption that all developments will use the same parking ratio, this will result in a total of 942 bays for residential use. Even if these residential vehicles do not add to peak period traffic the remaining 1,200 bays will generate a considerable increase in parking and traffic demand throughout the day.

It is therefore essential that these additional bays are managed to ensure that they are optimally utilised by a range of short and medium term public parkers and not used as a park and ride for commuters travelling to the Perth CBD. A consistent approach to the management of public bays is required along with additional information provided to the public about the available capacity.

⁶ Source: Australian Property Institute

6 Management strategies – parking initiatives

When formulating management strategies to deal with specific issues, several parking options and initiatives would be appropriate for the City to use to contribute to its sustainable goals, particularly in relation to the achievement of land use and transport outcomes. Many are currently being used in the City. A series of initiatives to reduce the demand for parking and make more effective use of the existing supply are discussed below.⁷

6.1 Regulate parking

Regulate the supply of public parking to support parking and transportation objectives. This is already being achieved in a number of ways:

- Time restrictions limit the maximum time a vehicle can park in more convenient bays, to encourage turnover and shift long-term parkers to facilities designated for a longer length of stay. This should apply in areas either side of Canning Highway.
- Regulating users limits the types of vehicles that may use certain parking bays. This includes loading zones, taxi zones, permit bays and bays designated for use by people with a disability.
- Specify the allocation of parking ratios for particular types of developments such as customer or staff parking (short or long-term parking). This will be achieved by the Parking Control and Management Plan (refer to Section 4.10).
- Regulate on-street parking by prohibiting on-street parking on certain routes at certain times (e.g. providing clearways on busy streets during peak periods) to increase traffic lanes.
- Regulate on-street parking by installing marked bays and no standing line-marking in residential streets where high volumes of parked vehicles can frequently contribute to road safety issues. Comer Street (see Figure 3-1) is an example of effective implementation of traffic calming engineering to improve safety which also has the benefit of reducing parking demand.
- Favour higher value uses, e.g. service vehicles, deliveries and access for people with disabilities.

6.2 Shared parking

Shared parking means that parking bays on the same site are shared concurrently by more than one user, which allows parking facilities to be used more efficiently. Shared parking takes advantage of the fact that most parking bays are only used part-time by a particular group, and many parking facilities have a significant proportion of unused bays, with utilisation patterns that follow predictable daily, weekly and annual cycles. Efficient sharing of bays can allow parking requirements to be reduced significantly.

⁷ With acknowledgement to Draft Commercial Precincts Car Parking Plan – Stage 1 Glenorchy (Glenorchy City 2007).

There are various degrees of shared parking. A reserved parking space assigned to a specific user is not shared at all. This includes loading bays, which could be shared by making them available to all drivers outside of normal business hours. Loading bays in the City are time limited, but drivers are not well aware that they can be freely used outside these hours. Partial sharing occurs when arrangements are made by one facility to use another's parking facilities at certain times (e.g. if the zoo allowed its unused parking bays to be used during the evening by visitors to the Mends Street PCA).

Other opportunities for shared and reciprocal parking are residents' bays in nearby apartment parking facilities which are vacant during business hours and could be utilised by local employees.

Another significant shared parking opportunity which will make more efficient use of many unused additional bays is in residential streets near train station/bus routes. For example on-street bays either side of Canning Highway could be used between 8 am and 5 pm by many employees in business within a reasonable walking distance. It will of course be necessary to ensure strict compliance with the 5 pm cut-off time in order to provide unrestricted parking to local residents. Such shared use of existing bays is much cheaper and more flexible than constructing new bays.

Bays could also be set aside for car share vehicles (short term car hire that is available to members in high density, high activity areas with good public transport networks) to reduce the reliance on travel by private vehicle and enable those without cars to share the use of a single vehicle rather than purchase one (or a second car) of their own. Car share can be successful in reducing the demand for parking when provided at new mixed use developments for the use of residents and tenants.

6.3 Unbundled parking

Unpriced parking is often 'bundled' with building costs, which means that a certain number of spaces are automatically included with a purchase or lease and cannot be avoided, even if demand does not require a space. Unbundling parking means that parking is sold or rented separately. For example, rather than renting an apartment for \$1000 per month with two parking spaces at no extra cost, each apartment can be rented for \$850 per month, plus \$75 per month for each parking space. Occupants only pay for the parking spaces they actually need.

This approach is generally more efficient and fair, since owners/tenants save money when they reduce parking demand, are not forced to pay for parking they do not need, and can adjust their parking supply as their needs change. For this to function efficiently, building owners must be able to lease or sell excess parking spaces and the City should regulate nearby on-street parking to avoid spill-over problems that could result if residents use on-street parking to avoid paying rent for parking spaces.

6.4 Walking distance

It is worthwhile to clearly indicate to all users of the zoo the walking distance to/from their destination. Most people can walk 250 m in less than 5 minutes and 400 m in less than 10 minutes. The following map in Figure 6-1 indicates a 250 m and 400 m radius from the entrance to Perth Zoo. This information can assist parkers to seek alternative parking areas.

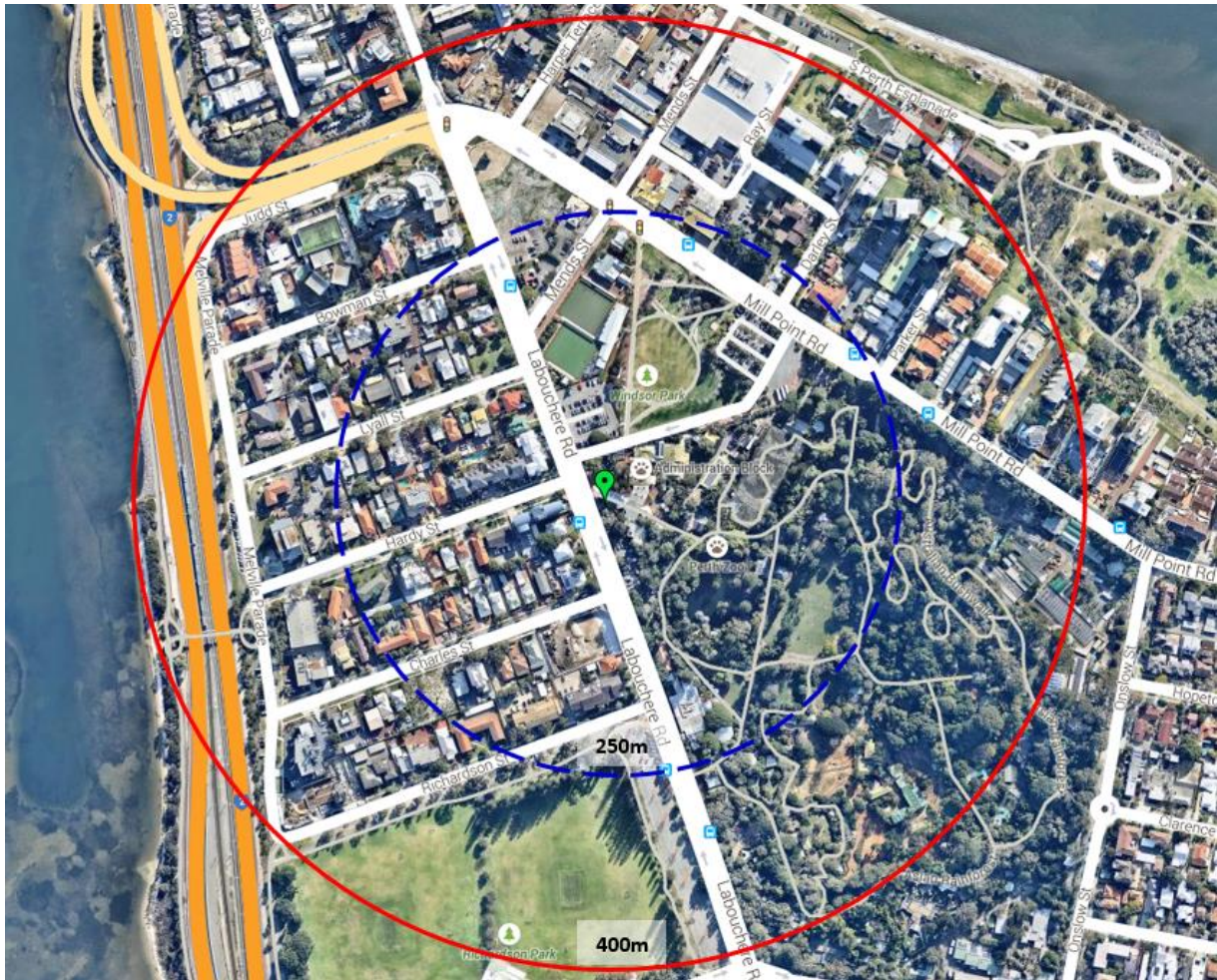


Figure 6-1: 250 m and 400 m walking distances from the Zoo

6.5 Improve user information

This involves the provision of information on parking availability and price using signage, brochures, maps, websites and apps (smartphone applications). Parking information and the negative messages currently available on the City’s website, as illustrated in Figure 6-2, can be substantially improved and made easier to access and print for motorists.

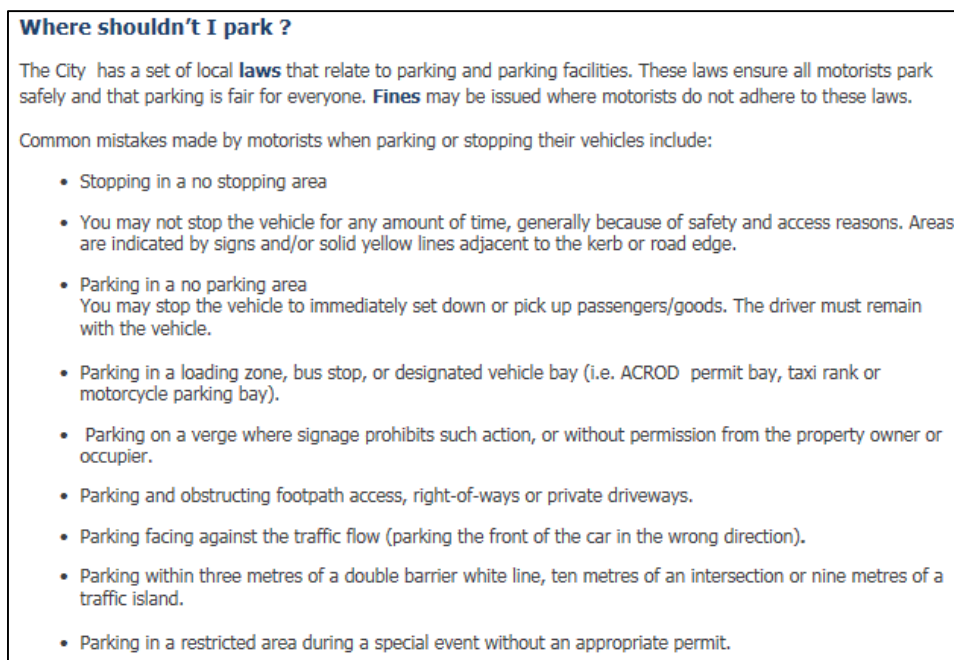


Figure 6-2: Extract from current City of South Perth website

There are also opportunities to provide real-time information on the location of available parking bays although providing this information can be difficult and expensive. Good parking information tends to reduce motorist delay and frustration, and increase the satisfaction of drivers visiting and parking in an area. An example of good practice in the provision of positive parking information is the City of Bunbury website⁸

6.6 Encourage use of remote parking

This involves encouraging long-term parkers to use off-site or at-fringe parking facilities through regulation and pricing for example at Jetski car park. It can free up significant quantities of parking for short-term visitors to a commercial centre.

6.7 Pedestrian improvements

Pedestrian improvements to paths and footpaths, creating or improving shortcuts, ensuring weather protection through continuous building awnings and street trees, pedestrian crossings and addressing security concerns, all contribute to increasing the range of parking facilities that can serve as a destination if they create a safer and more pleasant experience for users. Principles of crime prevention through environmental design (CPTED) can help create more open and pedestrian-friendly streetscapes.

An example of an initiative which has been successful in terms of road safety is the redesign of parking bays on Comer St, where parking bays are only marked on one side of the street at any one time. This scheme has had good feedback from the community and good outcomes from reducing traffic speeds and other safety issues (see Figure 3-1).

⁸ www.bunbury.wa.com.au.

6.8 Access management

Access management refers to improved coordination between roadway design and land use to reduce traffic problems. It results in fewer driveways and improved pedestrian connections by converting car-orientated strip development into more clustered development, and allowing for shared parking to occur. Examples of poor access management are the adjacent multi-lane driveways in the Angelo Street PCA.

Where streets are narrow or difficult to access (for example in South Terrace), it may be necessary to implement a restriction which ensure access by service vehicles. Figure 6-3 below shows a parking restriction which was implemented in Lane Cove, NSW where waste vehicles had previously been unable to pass due to on-street parking.



Figure 6-3 Parking restrictions for waste collection vehicles, Lane Cove

6.9 Overflow parking plans

This involves developing plans to deal with occasional periods of high demand (e.g. events on the Swan River). The plans may include prioritising the use of parking (e.g. for parents with children), information for motorists on where to find additional parking, the provision of free shuttle bus services between remote parking and the destination and special programs to encourage the use of alternative travel modes. Fund-raising groups and schools can provide shuttle services for a token donation subject to compliance with any insurance conditions. The development of overflow parking plans can be a quick and cost-effective solution to occasional parking problems.

Overflow parking can be managed by coordination and cooperation between the City and event organisers using shuttle bus services. Well lit, secure and signposted walking paths are also necessary to encourage remote parking for these events.

6.10 Pricing parking

This is dealt with in detail in section 7.

6.11 Parking taxes

Special parking taxes or levies can be used to reduce total parking demand, create a disincentive to drive and raise revenue. These schemes have encountered considerable opposition from the private sector in many cities such as Sydney, Melbourne and Perth. However, where the income from the tax has been transparently hypothecated to improving public transport (e.g. the Perth central area transit bus) the levy has been more acceptable to owners of parking bays.

Changing tax policies to support parking management objectives typically results in parking demand reduction as well as reducing traffic volumes. The introduction of these will require new legislation.

6.12 Alternative commuter benefits

This means that commuters are offered an alternative to parking subsidies, which is an effective way to reduce parking demand. Options could include:

- Parking cash out means that commuters who are offered subsidised parking are also offered the cash equivalent if they regularly use alternative travel modes. The system is offered by the City of Subiaco to its employees.
- Travel allowances are a financial payment to employees to cover commuting costs instead of using free parking. Commuters can use this money towards the cost of another travel mode.
- Transit and rideshare benefits are free or discounted public transport fares/vouchers are provided by employers.

These types of solution can be implemented by the City as part of employment contracts with staff and encouraged in the private sector as workplace travel planning initiatives. They could also be used by developers completing the Parking Management Plan.

6.13 Reduce parking supply

Reducing the physical capacity of parking supply can be achieved in many ways and can help to achieve strategic transportation and land-use objectives.

Specific strategies for reducing parking supply (some of which are described above) include:

- reducing the minimum parking requirements in planning schemes and development policies
- reducing minimum parking requirements for developments in more accessible locations, such as near bus stations, in areas with good walking facilities, etc.
- reducing minimum requirements if developers install travel demand management programs

- using cash-in-lieu to fund shared parking instead of each site having its own off-street parking
- limiting the maximum amount of parking that can be built, either at individual sites, or by establishing a cap on total parking in an area.

6.14 Parking ‘caps’ and maximum parking standards

Minimum parking ratios are generally set in isolation of broader policy objectives. In their current form they do not explicitly take into account accessibility by alternative modes of travel and other factors that might reduce demand for travel by car. Consequently, they may encourage an oversupply of parking and the use of cars in locations where good alternatives exist. While it is generally recognised that parking ratios need to be reviewed, the possible replacement of minimum parking ratios with maximum (permitted) parking standards (parking caps) for new developments does not appear to have been given very much detailed consideration in the Perth Metropolitan area⁹.

Maximum standards (without any associated minimums) are a more market-driven approach as they permit developers to determine how much parking they wish to provide in a new development up to the maximum amount. Over time, replacing minimum parking standards with maximum standards would reduce the incentives to the use of the car resulting from the oversupply and underpricing of parking. It is likely to be most appropriate for those centres where public transport offers a good alternative to the car. It should however be noted that parking maximums are not compatible with cash-in-lieu as developers are no longer required to provide parking for the land uses concerned.

6.14.1 Parking caps

The current approach to development applications in the City sets minimum parking ratios based on measures such as the gross floor area. The overall capacity of the road network providing access to the City or commercial centre has not yet been taken into account.

Scenarios for the Peninsula PCA of increased traffic associated with potential increased development in the City and the impact of providing parking based on the current parking ratios and new reduced ratios have been examined by Uloth¹⁰. The future demand forecasts in Section 5, based on continuing with the existing (business-as-usual) approach, clearly indicate that it will be necessary to limit parking supply in this PCA.

Setting a cap (maximum) on the supply of parking within a commercial centre is an appropriate parking management and supply policy for the City.

6.14.2 Maximum parking standards in other councils

In Rockingham, the initial Rockingham Village Policy included a proposed parking policy with a combination of minimum and maximum parking standards plus cash-in-lieu, although the approach has since been replaced with minimum standards (combined with compulsory cash-in-lieu for a proportion of the required parking).

⁹ Data Collection and Audit of Parking Provisions and Management in Perth Metropolitan Centres – Dept for Planning and Infrastructure ARRB Report, 20 Oct 2009. Section 2.4.

¹⁰ South Perth Station and Peninsula Area Parking Study, Uloth, 2009.

The Access and Parking Strategy¹¹ for the proposed Stirling City Centre found that if a restraint on parking supply is not applied, it will be necessary to significantly limit the floor spaces and dwelling units to below that currently envisaged.¹²

The Strategy for the Stirling City Centre proposes that the maximum amount of parking on all land within the city centre be regulated on a hectare-of-land basis similar to the City of Perth's Parking Policy regulations. The Strategy recommends a maximum of 250 bays per hectare and 200 around the Stirling train station.

Maximum parking standards have been introduced in the UK, and are included in the recently published Auckland Regional Parking Strategy (ARPS) where they apply only to non-residential development in the designated high density (mixed use) commercial centres and corridors. In the latter case it has been suggested that maximum parking standards initially be set at the same level as current minimum standards for the land uses concerned. According to the ARPS, maximum standards should be introduced as an integral part of the implementation of a comprehensive parking management plan for each commercial centre concerned.

In order to achieve an appropriate level of parking supply in the commercial high activity PCA's, mandatory maximum and minimum parking requirements will be necessary.

Regulations relating to the provision of parking are to include measures to maximise the use of all non-resident parking for the public as shared parking, and the expansion of time limited and pay for parking to encourage turnover (churn) of bays.

A maximum should be set on the total supply of parking in each PCA. Additionally, parking maximums are to be established for residential and non-residential developments.

Further clarification and recommended maximums for each PCA will be undertaken in Stage 2 of the report.

6.15 Benefits of better managed parking

It is recognised that changes to the management of parking and to existing attitudes of stakeholders towards parking supply cannot be made quickly. Small changes are necessary to alter the mindset of stakeholders and to create a more sustainable transport and access environment in the City.

The City has many opportunities to better manage the scarce parking facilities in the commercial centres. Implementation of these will have many positive benefits.

- Economic – they support increased development in the commercial centre with more efficient use of land for both parking and other land uses. The user pay principle is likely to mean businesses will pay for parking spaces which are more likely to be available. Development opportunities will increase and become more cost-effective when parking costs can be minimised and congestion is managed.
- Social – they support a shift to higher density which allows more housing and jobs which are easily accessible but may also reduce the amount of available land, because

¹¹ City of Stirling – Stirling City Centre Access and Parking Strategy – SKM, 13 Aug 2010.

¹² City of Stirling – Stirling City Centre Access and Parking Strategy – SKM, 13 Aug 2010, at p.2.

at-grade parking may be converted to building, which may or may not incorporate parking.

- Cultural – more effective monitoring of compliance will create more turnover of spaces in high activity areas and free up more bays for the correct users. This will attract more activity and investment to higher density areas.
- Environmental – until cars become electric and do not emit pollution, emissions would be less than if an increased parking supply was provided. This will attract more vehicles to the commercial centres.

One of the major management strategies to make more effective use of existing parking and to create greater availability of spaces for the correct users is pay parking. This is considered separately in Section 7.

7 Pay parking

7.1 General principles

Pay parking is one of the most effective ways of influencing parking and travel demand. Pay parking can influence parking location, destination, mode, travel time and, in particular, parking duration. The impacts vary depending on the price structure and the relative convenience of alternative parking facilities and modes.

As pay parking generally results in reductions in car use and traffic congestion among other environmental benefits, it is one of the essential transport measures necessary to ensure the long-term viability of commercial centres.

Pay parking increases equity by charging users (user pay) for their parking costs and by reducing the parking costs imposed on non-drivers. Paying directly rather than indirectly benefits consumers because it reduces parking and traffic problems and allows individuals to decide how much parking to purchase giving them an opportunity to save money. Drivers may use a space as long as they want, as long as they are prepared to pay for it. Several attendees at the stakeholder workshop indicated expansion of pay parking areas as an acceptable method of management of scarce parking facilities.

7.2 Pay parking objectives

It is important to define the objectives for pay parking in order to determine how fees will be structured:

- For traffic management – peak period fees should be high enough to encourage a shift in travel modes or times.
- For parking management – fees during peak demand periods and at the most convenient locations should be high enough to generate a maximum 85% occupancy rate. If prices are too low, parking becomes saturated causing motorists to cruise around in search of a space. The target is to ensure that at times of peak demand, 15% of spaces (one in seven) are available.

7.3 Guidelines to efficient pay parking pricing¹³

The following guidelines are separated into what is currently implemented and what should be implemented in the future in the City.

7.3.1 Pay parking currently applied in the City

Table 7-1 illustrates the current allocation of pay parking in the City. Note that start and finish times and charging days vary considerably.

¹³ With acknowledgement to Todd Litman “Parking Management Best Practices” American Planning Association 2006.

Table 7-1: Current allocation of pay parking in the City

Car park/street	Parking policy	Council/Private	Bays
Car Park 1 – Windsor Hotel	Hourly rate - \$3.00 9am-11am No fee required Fee payable at all other times. Customers can start an EasyPark parking session during the free period and will only be charged from 11am. Maximum 24 hours	Privately owned Managed by City	30 bays 1 ACROD bay
Car Park 2 - Zoo	Day rate - \$5.00 Payable on every day, 9:00am-5:00pm	Privately owned Managed by City	101 bays
Car Park 3 – Windsor Park	Hourly rate - \$2.30 Payable every day, 9:00am-5:00pm	Council owned % of machine takings to Zoo and South Perth Bowling Club	80 bays 2 ACROD bays
Car Park 6 – Richardson Reserve Car Park	Hourly rate - \$2.30 Monday to Friday, 8:00am-6:00pm	Council	179 bays 10 Zoo docent bays
Car Park 7 – Angelo St Car Park	First 2 hours free. Hourly rate after the first 2 hours - \$2.30 Monday to Friday, 7:00am-7:00pm	Council	62 bays 1 ACROD bay
Car Park 15 – Coode St Boat Ramp Car Park	Hourly rate - \$2.30 Payable on Saturday & Sunday and public holidays, 7:00am-7:00pm	Council	15 bays 25 trailer bays
SPE 1 – South Perth Esplanade Car Park 1	Hourly rate - \$2.30 Payable every day, 8:00am-6:00pm	Council	21 bays
SPE 2 – South Perth Esplanade Car Park 2	Hourly rate - \$2.30 Payable every day, 8:00am-6:00pm	Council	18 bays
SPE 3 – South Perth Esplanade Car Park 3	Hourly rate - \$2.30 Payable every day, 9:00am-5:30pm Maximum 4 hours	Council	33 bays 1 ACROD bay
SPE 4 – South Perth Esplanade Car Park 4	Hourly rate - \$2.30 Payable every day, 9:00am-5:30pm Maximum 2 hours	Council	26 bays 1 ACROD bay 1 loading zone
SPE 5 – South Perth Esplanade Car Park 5	Hourly rate - \$2.30 Payable every day, 9:00am-5:30pm Maximum 2 hours	Council	12 bays
SPE 11 – South Perth Esplanade Car Park 11	Hourly rate - \$2.30 Payable every day, 8:00am-6:00pm	Council	82 bays 2 ACROD bays 1 bus bay

Car park/street	Parking policy	Council/Private	Bays
Bowman St East Bowman St West	Hourly rate - \$2.30 Monday to Friday, 8:00am- 6:00pm	Council	20 - ticket Parking bays 20 - 2P bays 1 - loading zone Opposite side of road from ticket parking
Lyall St East Lyall St West	Hourly rate - \$2.30 Monday to Friday, 8:00am- 6:00pm	Council	27 - ticket parking bays 23 - 2P bays Opposite side of road from ticket parking
Hardy St East Hardy St West	Hourly rate - \$2.30 Monday to Friday, 8:00am- 6:00pm	Council	29 - ticket parking bays 26 - 2P bays 1 - L Opposite side of road from ticket parking loading zone
Charles St East Charles St West	Hourly rate - \$2.30 Monday to Friday, 8:00am- 6:00pm	Council	27 - ticket parking bays 27 - 2P bays Opposite side of road from ticket parking
Richardson St East Richardson St West	Hourly rate - \$2.30 Monday to Friday, 8:00am- 6:00pm	Council	78 - ticket parking bays 35 - 2P bays Opposite side of road from ticket parking
TOTAL			988

This structure charges drivers directly rather than indirectly and offers convenient locations and several options for payment including acceptance of coin, credit card and smartphone.

To effectively use pricing for parking management, the following will be necessary:

- Charge higher fees and provide shorter time periods at the most convenient spaces (on-street) to encourage high churn.
- Use incremental price structures in certain car parks (e.g. Richardson Reserve) to favour short-term users, e.g. \$1 for first hour then \$1.50 for second hour etc.
- Daily rates should be set at > 6 x hourly rate, and monthly rates at > 20 x daily rate.

- Ensure that fee structures are flexible and can be amended up or down in order to manage demand. It is inefficient to review fees only once a year in accordance with budget timetables.
- Encourage businesses to price parking and offer discounts or refunds to their bona fide clients.
- Provide discount parking to multi-passenger vehicles (car sharing).
- Ensure a high level of compliance by means of regular and unpredictable enforcement which will require increased staffing and technology resources.
- Implement different parking fees in the evening and on weekends in some PCA's.
- Minimise the exceptions to pay parking e.g. all residents, ratepayers, loading vehicles, couriers and ACROD parkers using public parking spaces should pay.

7.4 Private parking areas

The introduction of pay parking is expensive requiring specialised control and ongoing monitoring. As the City already has such expertise for its on-street parking facilities, these capabilities should be offered to small, privately owned car park owners that wish to provide better management of their parking and minimise abuse by unauthorised parkers.

It is recommended the City gradually expands pay parking areas based on regular and comparative surveys of usage. Pay parking fees are to be structured to favour short-term users and encourage a high churn of spaces.

It is recommended the City increases the provision and enforcement of pay parking in privately owned public car parks and expands its enforcement resources and associated technology as appropriate to provide this service.

7.5 On-street parking management

On-street parking plays an important role in the effective functioning of town centres and access to residential areas. Many businesses rely on on-street parking to provide access for their customers and meet their loading requirements. On-street parking also caters for specific uses such as dedicated space for taxis and mobility parking for people with impaired mobility.

On-street parking management broadly consists of the following:

- **Unrestricted:** where there are no limitations on parking
- **Time restricted:** with a range of time limitations and enforcement used to ensure compliance
- **Reserved parking:** reserved for a certain type of user, such as mobility card holders, or taxis, or for loading zones
- **Priced parking:** with varying rates applying sometimes alongside a time restriction.

Table 7-2 outlines types of parking restrictions that should be used by the City. There is also a description on where and why each restriction should be used.

Table 7-2: Types of parking restrictions and their policies

Restriction	Description	Policy
Loading zones	<p>Parking areas designated solely for loading or unloading goods or passengers</p> <p>This includes:</p> <ul style="list-style-type: none"> • general purpose loading zones • goods vehicles only loading zones 	<ul style="list-style-type: none"> • Loading zones will be provided in convenient locations to serve local business, commercial and retail activities • Goods vehicle loading zones are designated for vehicles of any size, weight and usage that deliver goods in the course of trade • Goods vehicle loading zones should be used in areas of high parking demand and a high density of retail and commercial premises • General purpose loading zones should be used in all other areas where there is a general need for loading or unloading • All loading zones will have a time restriction. This is usually 15 minutes. A user may stay longer than the time restriction if observed to be in the activity of loading or unloading • Loading zones should be avoided in angle parking bays to prevent larger vehicles overhanging into the carriageway
Mobility (ACROD) parking	<p>Parking areas reserved for the exclusive use of vehicles displaying a valid ACROD parking permit</p> <p>A valid mobility parking permit must be displayed at all times in the vehicle while it is parked in a mobility parking space</p>	<ul style="list-style-type: none"> • Provide mobility parking which is physically accessible, affordable and safe to use • Mobility parking should be provided, where practical, in angled parking as a preference to parallel parking spaces to enhance safety and accessibility • Time restrictions should be applied to mobility parking spaces • In general, mobility parking will not be provided if there are existing and available mobility parking spaces within 200 m of an accessible route to the destination • Mobility parking spaces will only be considered in commercial and mixed use areas. As a general rule mobility parking will not be provided in residential areas • Vehicles displaying a mobility parking permit can remain in time restricted on-street parking spaces for double the posted time¹⁴. • In all on-street paid parking areas vehicles displaying a mobility parking permit are given one hour free parking upon payment of the minimum tariff e.g. if a pay and display receipt shows parking is paid until 10:15am, then a mobility card holder can stay until 11:15 am • A consistent zero tolerance approach will apply to the illegal use of mobility parking spaces. Offending vehicles will be ticketed

¹⁴ Road Traffic Code 2000 - Clause 174. Updated 31 August 2011

Restriction	Description	Policy
Motorcycle parking	On-street parking set aside for exclusive use of motorcycles or motorised scooters	<ul style="list-style-type: none"> Motorcycle parking will sometimes be provided in an on-street space that is not suitable for regular car parking Long-stay motorcycle parking should be encouraged in off-street parking buildings On-street motorcycle parking may be time restricted or priced to prioritise short-term parking Pricing may be introduced to manage high demand. The price to park in on-street motorcycle parking spaces will be less than for a car in recognition of the lower impact on congestion and kerbside space Motorcycles are not allowed to park on the footpath
Taxi stands	On-street parking reserved for the exclusive use of taxis	<ul style="list-style-type: none"> Taxi stands are considered where there is high public demand for taxis. Any new taxi stand must be no closer than 400 m from an existing taxi stand The length of taxi stand should reflect the turnover of the space but generally taxi stands should be kept to less than three car lengths Taxi stands should not be located adjacent to bus stops and loading zones as the taxis will creep into this space. Where possible taxi stands should be located in a separate parking bay where no creep can occur Night-time taxi stands will be considered in areas where there is high night-time activity. Using loading zones or bus stops at night will also provide a better utilisation of on-street parking In general, taxi stands will not be considered in residential streets
Buses and coach parking	<p>On-street parking dedicated to waiting and lay-over of buses and tour coaches</p> <p>The following categories apply:</p> <ul style="list-style-type: none"> public transport short-term positioning layover space public transport longer-term parking coach parking 	<ul style="list-style-type: none"> Longer-term (greater than two hours) bus parking should be located on the edge of a commercial centre away from active street frontages Coach parking will be considered in locations of key tourist interest where a significant demand can be identified Longer-term coach parking will be located at the edge of a commercial centre away from active street frontages Time restrictions will be applied to coach parking areas
Car share parking (Section 6.2)	On-street parking reserved for car share operators' vehicles	<ul style="list-style-type: none"> Car share organisations must have membership available to all local residents and businesses, and 24-hour booking systems The City will support approved car share organisations by providing dedicated on-street parking spaces

Restriction	Description	Policy
		<ul style="list-style-type: none"> The City reserves the right to charge for the establishment and on-going provision of on-street car share parking spaces Car share organisations may be required to regularly report back to the City on the uptake and membership in each area that car share parking spaces are installed
Car-pool parking	<p>On-street parking reserved for vehicles carrying two or more occupants</p> <p>This is sometimes referred to as High Occupancy Vehicle (HOV) parking</p>	<ul style="list-style-type: none"> Car-pool parking is often provided in Park and Ride car parks or on-street parking adjacent to high-frequency public transport stations to encourage carpooling and obtain greater benefit from the parking space Car-pool parking should be provided at convenient locations to further encourage carpooling Vehicles must be carrying two or more occupants when parking to comply with the carpool restriction. The vehicle may have one occupant when exiting the parking space
Time restrictions	<p>General parking space whereby a maximum permitted time is posted</p> <p>Parking time restrictions are used to encourage turnover in areas that experience high parking demand</p>	<ul style="list-style-type: none"> There should be some consistency with the time restrictions used around the City to allow for greater legibility The following time restrictions should be used: P5, P15, 2P, 3P 2P is recommended for shopping high streets where paid parking is not suitable Longer time restrictions such as 3P are suitable for the fringes of a commercial centre Time restrictions above three hours should be avoided as they are difficult to enforce
Bicycle parking	Space reserved for bicycles provided on the footpath or within an on-street parking space	<ul style="list-style-type: none"> Bicycle parking in place of car parking can provide a vastly more efficient use of the parking resource. Typically 6 bicycles can be parked in a standard car space Bike parking infrastructure will be prioritised in commercial centres and in locations that support public transport use such as transport interchanges and rail stations

7.6 Parking intervention trigger

There are different parking controls that can be used to manage on-street parking. It is important that decisions to change controls are based on policy principles and empirical data. It is also useful for the public to understand how decisions to amend parking controls are made.

The Parking Intervention Trigger table below provides the trigger points where a new parking management control will be recommended to manage an increase in demand for parking.

Areas which experience low demand, or no change in demand, and do not reach the trigger points, will not require any change.

It is recommended that where parking demand is high, the City should apply various parking restrictions to achieve a target peak occupancy rate (the average of the four highest hours in a day) of 85% for on-street parking. This means that the parking resource is well used but people can still easily find a space, thus reducing customer frustration. In other words, one parking space in every seven should be vacant. When peak parking occupancy is regularly above 85%, the City will recommend a change to the parking management approach. This is a recognised international approach to the best practice management of on-street parking.

Table 7-3: On-street parking intervention triggers

Issue	Trigger point	Response
Demand pressure in currently unrestricted areas	Demand for on-street parking regularly exceeds 85% at peak times	<ul style="list-style-type: none"> • Introduce time restrictions suitable to local demand or paid parking to encourage turnover of spaces • Establish new residential parking schemes
Demand pressure in residential areas	Parking demand regularly exceeds 85% of available supply in residential areas at peak times where off-street parking options are constrained (e.g. heritage zones, or areas where off-street parking constraints apply)	<ul style="list-style-type: none"> • Introduce or alter time restrictions (suited to local demand) to encourage turnover of spaces (with resident parking permit schemes where appropriate) • Establish new residential parking schemes • Introduce paid parking areas to manage the high demand
Demand pressure in areas with time restrictions	Occupancy levels for time-restricted spaces regularly exceed 85% at peak times	<ul style="list-style-type: none"> • Investigate opportunities to increase the time restriction and/or introduce additional time restrictions on adjacent streets • Introduce paid parking to discourage longer stays
Demand pressure in areas with paid parking	Occupancy rates for paid parking in on-street spaces regularly exceed 85% at peak times	<ul style="list-style-type: none"> • Increase parking charges in line with Section 7.7 • Consider provision of additional off-street paid parking consistent with the investment criteria

These triggers are represented in the following diagram in Figure 7-1.

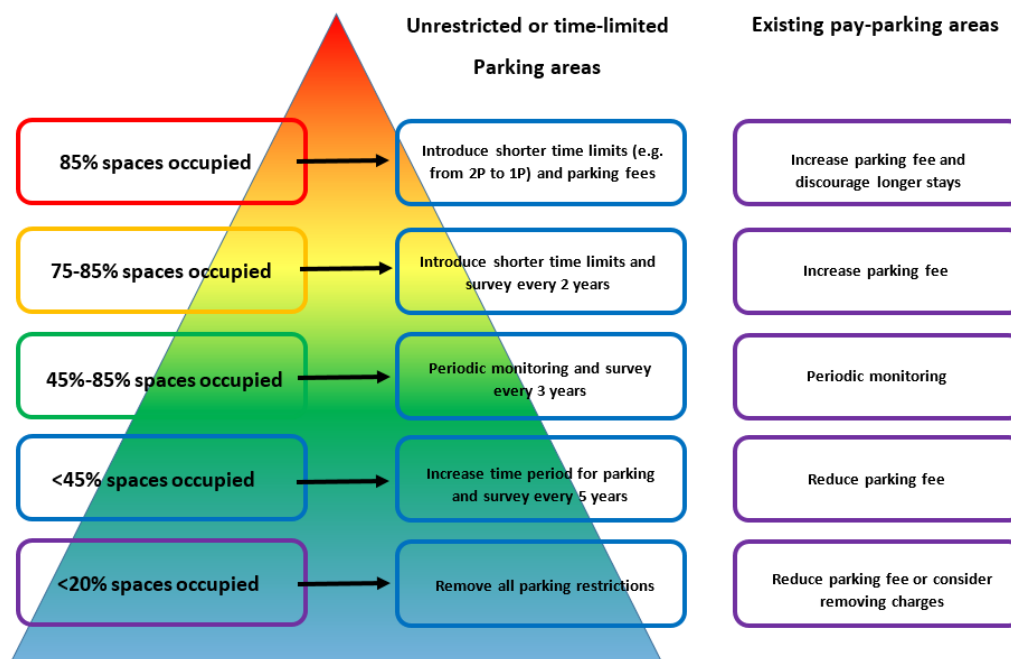


Figure 7-1: Parking framework

7.7 Demand-responsive pricing

When parking demand reaches a point where time restrictions are not being effective, priced parking is recommended. Time restrictions, for example 2P, work well in encouraging turnover where there is low to medium parking demand. As demand increases and the parking becomes full the only option to create parking availability is to reduce the time limit.

However, a reduced time restriction can have negative consequences as the time a customer can spend in the centre is reduced and there is a greater chance of receiving an infringement. Time restrictions are often misused by people taking advantage of free parking and moving their cars to avoid enforcement.

Paid parking can improve the availability of parking and provides greater flexibility in length of stay for the customer.

Demand-responsive pricing means that the prices charged for on-street parking will be adjusted based on parking demand data. Price rates will be adjusted up or down with the goal of maintaining on average 85% occupancy at peak times. An occupancy range of 70-90% is considered an acceptable range. The target parking occupancy rate is not set at 100% because some parking spaces should be available at all times. An occupancy rate of approximately 85% ensures that parking resources are well-used and people can park in a reasonable proximity to their destination. Maintaining some availability reduces the need for people to drive around searching for a parking space, thereby reducing congestion.

7.7.1 On-street demand-responsive pricing

It is recommended that priced parking with no time limits in areas with high parking demand and a low availability of spaces is introduced. Prices for on-street parking will be set according to the following general principles:

- Prices for on-street parking will be set at levels that ensure people can find a car park most of the time within a short walking distance of their destination.
- In general, if the data for demand for parking in an area is found to decrease, then prices should also decrease and vice versa.
- On-street parking in commercial centres will be prioritised to support customers and other short-term visitors ahead of long-stay commuters and residents. Prices are more effective than time-limits at prioritising users in this way.
- The way parking prices are set in different parts of the City should be transparent and based on up-to-date empirical evidence of parking demand patterns in that area and observed trends in these patterns over time.

7.7.2 Price areas

The paid parking in each PCA should be divided into price areas. These areas will be a collection of streets with broadly similar parking demand profiles. The areas may change over time in order to better manage demand. The parking price should be uniform across each price area.

7.7.3 Occupancy surveys

It is recommended parking demand should be reviewed every one to three years depending on how variable the demand is in each particular price area.

For example, in areas where demand is reasonably stable, occupancy surveys will normally be carried out every 3 years. In areas where demand varies considerably surveys may be carried out at more regular intervals. Prices should only be adjusted if warranted by changes in demand with the City ensuring any pricing adjustment (increase or decrease) is visible to the customer. Surveys will measure the on-street occupancy for the times of the day that paid parking is in operation across at least three different days. The City may also elect to undertake spot surveys at other times (or make use of information from in-ground sensors) to ensure appropriate occupancy levels are being maintained.

7.7.4 Price adjustment

It is recommended that prices should be adjusted either up or down in response to the occupancy surveys undertaken. In each case the goal is to maintain an average of 85% occupancy, as much as practicable.

The average occupancy of each price area should be determined by the average of the highest four hours each day recorded in the occupancy surveys.

Prices should then be set according to the following formula:

- When average occupancy is less than 50%, the price should be reduced by up to 25% of the hourly rate with no minimum price.

- When average occupancy is 50-70%, the price should be reduced by up to 15% of the hourly rate.
- When average occupancy is 70-90%, the price should not change.
- When average occupancy is 90-100%, the price should be increased by up to 15% of the hourly rate.

7.7.5 Times of operation

It is recommended that the standard hours of parking restrictions should be 8 am to 6 pm Monday to Sunday. However, some PCA's in the City experience high parking demand in the evenings, and where this occurs, the City should implement expanded paid parking hours where necessary to manage demand in accordance with the general principles (section 7.7.1).

7.7.6 Notification

Price increases or decreases made by applying this policy should be notified through the parking page on the City's website. The business association in the affected PCA should also be notified. The City should change the price no less than seven calendar days after notification. Although the City will be clear and transparent when price changes occur, there should be no public consultation each time prices are adjusted in response to changes in parking demand.

7.8 Off-street parking management and intervention triggers

The management of off-street parking facilities is designed to align with the City's strategic objectives, which are focussed on a mode shift towards public transport to help minimise traffic congestion. To achieve this, the City's policies should prioritise short-stay parking over commuter parking and achieve a consistent approach to setting parking rates.

Public off-street parking provides an important shared parking resource that ultimately results in less overall parking compared with individual sites providing for the parking demand.

Two main parking regimes apply to the management of off-street parking:

- Long-stay commuter parking provides parking for the working day. Commuter parking and contractor parking generally occurs during morning and evening peak periods.
- Short-stay parking involves the provision of parking for shorter duration activities, such as shopping, entertainment, personal or business visits. Short-stay parking travel generally occurs outside peak periods.

As with on-street parking, a demand-responsive management approach to off-street car parking is proposed. Most off-street parking under the control of the City acts as an extension to on-street parking and forms part of the overall parking supply in a PCA.

Table 7-4 provides the trigger points where a new parking management control should be recommended to manage an increase in demand for parking. However, areas that experience low-demand, or no change in demand, and do not reach the trigger points, will not require any change.

Where parking demand is high, the City should apply various parking restrictions to achieve a target peak occupancy rate (the average of the four highest hours in a day) of 85% for off-street parking. This means that the parking resource is well used but people can still easily find a space, thus reducing congestion and frustration. When peak parking occupancy is regularly above 85%, a change to the parking management approach is recommended.

Table 7-4: Off-street parking intervention triggers

Issue	Trigger point	Policy
Demand pressure in currently unrestricted car parks	Occupancy rates for currently unrestricted spaces regularly exceed 85% at peak times	<ul style="list-style-type: none"> Introduce time restrictions suitable to local demand or paid parking for all-day commuter parking
Demand pressure in car parks with current time restrictions	Occupancy levels for time-restricted spaces regularly exceed 85% at peak times	<ul style="list-style-type: none"> Investigate opportunities to reduce the time restriction and/or introduce additional time restrictions on adjacent streets; or Introduce paid parking with no time limits and use demand-responsive pricing
Demand pressure in car parks with paid parking	Occupancy rates for paid parking spaces regularly exceed 85% at peak times	<ul style="list-style-type: none"> Increase parking charges Improve public transport offering, or consider provision of additional off-street paid parking where investment criteria are met

7.9 Parking on residential streets

It is important to note that on-street parking on residential streets is part of the public road that is under the jurisdiction of the City.

Many residents have given feedback that they are increasingly being impacted by commuter parking in their streets. Public consultation revealed that residents in inner city suburbs want residential permit schemes to manage the parking pressures.

7.9.1 Increasing intensity of land-use and parking demand

- Residential parking zone:** this approach is used in older suburbs such as the city fringe where parking demand is high across a larger area and many properties do not have off-street parking. Applying restrictions across a larger area is more effective in reducing the commuter parking problems.
- Apply time restrictions to sections of a street (approximately 50%):** this approach should be used when the parking problems are limited to a few streets and most of the properties have off-street parking. It will initially be used in residential streets around some public transport stations. Typically P2 time restrictions are used and no permits are issued under this approach.

7.9.2 Summary of best practice in permit parking schemes

Very few permit parking schemes are identical. Best practice can be achieved by collating the key findings and procedures implemented at other councils in Australia.

- Permit information documents provide accessible and easy to understand information to residents and other interested permit applicants. The most accessible documents have a user-friendly layout and are available in PDF format for download on the Council's website.
- Some Councils include permit terms and conditions in their permit application forms. This is an important inclusion as the information relevant to the allocation, use and management of permits is readily accessible to the applicant, who may otherwise be unaware of the information
- The holder of the permit is never guaranteed a parking space and this is to be emphasised in all permit documents.
- A fee is usually charged for permits to recoup the costs of administering, operating and monitoring the permit system and maintaining the signage and to discourage unnecessary applications.
- A maximum of two RPP are usually issued to the occupier of a residential property and the number of permits issued is reduced by one permit per off-street parking space. It is not clear whether a permit concession is granted if an off-street space has been converted to another use such as a shed or additional accommodation.
- Permits are not issued for occupants of high rise buildings, new multi-unit developments or for dwellings located in the town centre.
- RPP include the vehicle registration number. This assists with monitoring compliance.
- Permits are assigned to streets or specific PCA's via a coding system to protect the residents privacy
- Strict penalties apply for the misuse of permits including fines or the permit being revoked. Anecdotally the risk of cancellation/revocation of the permit is the most effective sanction to ensure compliance¹⁵.
- Administration costs are significantly reduced where application of permits is on-line.
- Labour costs are reduced with technology which provides immediate wireless verification of a valid RPP, the vehicle registration it is linked to and the location where it is parked.
- Increasingly more ticket machines are installed in permit areas providing residents with exemptions, but generating income from the shared use of on-street bays during business hours.
- Residential permit systems and quantities vary, but they generally always require payment.

7.9.3 Residential parking zones

It is recommended that residential parking zones should have a time limit across the zone to prioritise short-term parking and deter commuter parking. Residents should be able to purchase parking permits to allow an exemption to the time restriction.

¹⁵ Per Leichhardt Council

Due to the permit applying to the zone it does not guarantee a parking space in the resident's street and there will be a cap on the total number of permits available (as a percentage of overall spaces within a zone) to ensure that the scheme is sustainable.

To cater for local businesses, residential visitors and tradespeople, there will be the ability to pay for a full days parking within a residential parking zone. A residential parking zone will also free up parking space for customers of local businesses. The daily price should be adjusted either up or down using the principles of demand responsive pricing.

7.9.4 Parking permit allocation and fees

When consulting on the introduction of a residential parking zone the City should invite expressions of interest to determine likely parking permit demand. Parking permits should then be allocated based on a priority system. One permit should be allocated to each priority category before issuing a second permit. This will continue if required until the total cap on permits is reached.

Parking permits are for residents in the applicable area and proof of address and registration details will be required. Residential parking permits will be issued by vehicle registration number and on an annual basis. The fee for parking in a residential parking zone will be set to recover the costs of administering the scheme including regular monitoring.

When considering the implementation of permit parking schemes, authorities should assess both the short and long term compatibility of permit scheme objectives with any adopted (or future) strategic initiatives associated with transport demand management and/or consolidated parking.

Permit parking schemes are intended to give priority parking to those who may be disadvantaged by others taking the limited parking space available. Prior to introducing a permit parking scheme, a parking study and appropriate planning and consultation with appropriate organisations such as state road authorities and planning authorities must be carried out.

Permit schemes should not apply to spaces where the general time limit is less than one hour parking, because these spaces are usually in high demand for short-term parking generated by a nearby activity.

7.9.4.1 Types of Permit Parking Schemes

Types of permit parking schemes with corresponding permits and their applications are given below. It should be noted that some of the listed schemes might not be applicable in some jurisdictions depending on the legislation applying.

- **Resident Permit Parking Scheme:** used where residents have limited or no off-street parking and have difficulty parking near their residences.

There are two types of controls that may be used to bring into effect a resident permit parking scheme:

1. Time Limits with Resident Vehicles Exceptions

In these schemes a time limit is imposed on vehicles parking on the street and permits are available to exempt residents' vehicles from these limits. The existence of the resident parking scheme is indicated by a plate underneath the time limit parking signs.

Time limits in these areas should not be shorter than one hour, and a two or four hour limit generally provides well for visitors, while discouraging commuter parking

2. Permit Zones

Where parking on the particular side of the street is exclusively for permit holders, with all other vehicles prohibited from stopping, then a permit zone should be used. This type of restriction will only be appropriate where there is a very heavy demand for resident parking and it is necessary to ban all other vehicles. This type of restriction has a disadvantage that it prevents visitors' vehicles from being parked in the zone.

This restriction includes the common situation adjacent to university campuses and on the fringe of the city CBD whereby certain lengths of on-street parking are commonly restricted to residents only during the daytime on weekdays.

- **Residents Visitors Parking Scheme:** similar to Resident Parking Scheme but used to allow a visitor of a local resident to park nearby.
- **Business Parking Scheme:** used where business people have no off-street parking and have difficulty parking near their business premises. These schemes should be restricted to relatively small and easy to regulate PCA's.
- **Special Event Parking Scheme:** used where parking from a major venue spills into a substantial adjoining area affecting residences or businesses.

7.9.4.2 Features

The following features are common to all parking permit schemes:

- A parking authority must set a list of eligibility criteria before issuing a permit and these should be incorporated in the permit application form. Fees may be levied for issuing parking permits but ideally they should not be set with the intention of making a profit but rather to recoup the costs associated with administering, operating, and maintaining the scheme. A restriction may be placed on the number of permits issued to each household and this restriction should be linked to the supply and demand for parking in the defined area. Only some classes of vehicle may be eligible, and this aspect should be stipulated in the criteria.
- The validity period of permits should be clearly identified.
- There should be a limit placed on the number of permits to be issued based on the capacity of the area to absorb on-street parking.
- The permit does not give exemption from other parking restrictions and laws.
- A permit scheme can be introduced in conjunction with permissive parking or pay parking schemes and may apply on a street-by-street or an area-wide basis as indicated by parking signs. For a permit scheme in a time restricted parking area, the permit area number or other identifier can be indicated on a plate or sticker below the sign. The word 'Excepted' must not be used on the permissive parking sign (see AS 1742.11). For Permit Zones, the sign must indicate the category of permit holder, e.g. 'Staff', but the words 'Only' or 'Excepted' must not be used.
- Only parking authorities can issue a permit, and they may do so for multiple areas at their discretion. The circumstances for the re-issuing of permits when lost, stolen or circumstances change must be clear. Penalties for fraudulent representations for, or use of, permits should be identified, as should the criteria for the cancellation of a permit.

- If permits are to be transferable, the conditions (if any) of their transfer should be specified.
- The permit must display information specific to the permit parking scheme including the nature of exemption permitted, e.g. exemption from existing parking fees and/or time restrictions.
- A permit holder can only get exemption from the times or charges when the holder's vehicle is parked in a permit parking space located within a parking area or road specified in the permit and designated by the parking authority for use by holders of such a permit. This is done by making sure that the area identifier on the parking sign corresponds with the area identifier shown on the permit. The permit needs to be displayed inside the vehicle to be in force.
- The holder of a permit can park in any part of the defined area or street for which the permit is applicable but they may not be guaranteed a space. If a space is guaranteed by the scheme then the location of that space should be clearly identified.

7.9.5 New developments

It is recommended that to protect the sustainability of residential parking schemes, new developments within residential parking zones should not be eligible for parking permits.

This will avoid developers passing on the costs of providing parking to ratepayers. Developers and new residents associated with new developments have a responsibility to ensure they have sufficient off-street parking to meet their needs.

The City should prepare information to assist developers, new buyers and tenants in understanding the new restrictions.

7.9.6 Technology and enforcement

It is recommended that the City should make use of new technology to ensure that residential parking zones remain an effective solution for managing parking demand and reducing the impact on residents.

Parking permits consist of labels that need to be displayed inside a vehicle's windscreen. This can be a time-consuming process and results in residents not being issued with a permit immediately. The City should consider an online and phone application system linking permits to vehicle registration. This will allow residential and visitor permits to be issued immediately (subject to verification of eligibility).

The linking of permits to vehicle registration reduces the potential for misuse and allows for the implementation of technology, such as licence plate recognition (LPR) cameras for enforcement. LPR consists of an in-vehicle camera that reads and recognises each vehicle's licence plate. LPR can identify whether the vehicle has overstayed the time restriction and if the vehicle has a permit. LPR therefore has the potential to become a key element of an effective, automated enforcement system that protects permit holders.

The City should implement new technology to transform the customer experience and allow for effective management of residential parking schemes.

7.9.7 Implementing residential parking zones

The implementation of a residential parking zone should be considered when:

- parking occupancy is regularly above 85% occupancy at peak times
- multiple requests are received for a parking zone.

Residential parking zone should have the following components:

- a time restriction across the zone, typically two hours
- restrictions will apply at different times depending on the specific situation, but typically Monday to Friday (excluding public holidays)
- the number of residential permits will be capped at a percentage of the total number of parking spaces
- parking permits will be issued based on priority.

Recommendations recently made relating to a residential permit scheme in the City of Subiaco cover:

- permit types
- streets for the permits to be operational in
- eligibility
- designated permit areas
- scope and allocation of permits
- method of application for a permit
- fees
- validity periods
- renewal of permits
- permit stickers
- administration of the scheme
- permit misuse
- Discretion of the City
- Application process
- Monitoring and enforcement.

8 Cash-in-lieu

Many cities give developers the option to pay a fee in-lieu of providing the required number of parking bays imposed by parking ratios. Cash-in-lieu is particularly beneficial when parking needs to be limited.

8.1 Benefits of cash-in-lieu

Cash-in-lieu provides many benefits (as summarised by Shoup¹⁶).

Flexibility. Developers gain a new option. If providing all the required parking bays on-site would be difficult or too expensive, developers can pay the cash-in-lieu fee instead of constructing bays.

Shared parking. Public parking bays built with cash-in-lieu revenue allow shared use among different sites whose peak parking demands may occur at different times (e.g. a bank and a bar), and fewer bays are needed to meet the combined peak parking demands.

Park once. When all businesses have individual parking bays (as is currently the case in the Southport Street area), they want only their own customers to park there. Once customers have left the premises, the owners want them out of the parking bays as soon as possible, requiring the customers to drive to another parking area in order to make a second stop in a nearby business. Shared public parking allows drivers to park once and visit multiple sites on foot, thereby reducing vehicle traffic and increasing pedestrian traffic.

Historic preservation. Parking requirements can discourage adaptive reuse of historic buildings if the additional parking bays required for a new use are difficult to provide on-site. By removing the requirement for on-site parking bays, cash-in-lieu fees make it easier to restore historic buildings and to rehabilitate historic areas.

Consolidation. Some cities also allow developers and property owners to pay cash-in-lieu fees to remove **existing** required parking bays. This option consolidates scattered parking bays, assists infill development, improves urban design, and encourages conversion of parking areas to higher-and-better uses that provide more services, yield more revenue, and employ more people. All property owners, not just developers, can use more of their land for buildings and less for parking.

Fewer variances. Where providing the required parking is difficult, developers often request variances to reduce the parking requirements for their sites. These variances weaken the general plan, require administration, and can create unearned economic windfalls for some developers but not others. By making fewer variances necessary, cash-in-lieu fees allow cities to create a level playing field for all developers.

Better urban design. Parking requirements typically result in at-grade parking for smaller buildings that cannot support the expense associated with providing their own deck parking. Because cash-in-lieu fees allow businesses to meet their parking requirements without on-site parking, they allow continuous storefronts without 'dead' gaps created by parking or parking driveways. Public parking structures consume less land than would be required if each site provided its own on-site parking, and cities can place the structures where they interfere least with vehicle and pedestrian circulation. The cash-in-lieu policy thus contributes to a better-looking, safer and more walkable environment.

¹⁶ The High Cost of Free Parking by Donald C Shoup. American Planning Association 2005. Chapter 9 at p.231.

True value: Another important purpose of cash-in-lieu is that it reveals the high cost of providing parking bays especially if they will be subject to a low parking fee or are expected to be provided at no charge. Developers have the choice to pay for or provide their own parking and the flexibility to charge a fee for its use, or provide it for free. Note that developers who pay the cash-in-lieu do not subsidise the commercial centre, and the commercial centre does not subsidise developers. Instead, developers subsidise parking.

8.2 Concerns

It is recognised¹⁷ that there are drawbacks to cash-in-lieu. However, developers' concerns as well as potential solutions are summarised below.

Lack of on-site parking. Parking is a valuable asset for any development, and a lack of on-site, owner-controlled parking can reduce a development's ability to attract tenants and customers and thereby reduce the value of the investment. This may be a valid objection, but its solution is simple: developers can provide the required parking rather than pay the cash-in-lieu fee.

High fees. Cities may not build and operate parking facilities as cheaply as the private sector. Cities may pay extra to improve the architectural design of parking structures and these higher costs may increase the cash-in-lieu fees. Although this might happen, most cities set their cash-in-lieu fees lower than the full cost of providing a public parking space.

No guarantees. Cities use the cash-in-lieu fee revenue to finance public parking, but they do not guarantee when or where the bays will be provided. To address this concern, some cities build the public parking first and accept cash-in-lieu fees only for the number of public bays already provided. The cities then use the cash-in-lieu fees to retire the debt incurred to finance the bays. Other cities, such as the City of Vincent, are obliged to refund the in-lieu fees if they have not built the public parking within a certain time. Cities can also allow developers to defer payment of the cash-in-lieu fees until the public parking bays are built.

Fewer parking bays. Cities use cash-in-lieu fees to finance public parking bays, but they do not commit to provide one public space for every private space not provided. Often they provide fewer. Some provide two public parking bays for each three cash-in-lieu fees paid. When this happens, the cash-in-lieu programs reduce the total number of parking bays. A smaller parking supply may lead to fewer customers and put businesses at a competitive disadvantage. There are two responses to this last concern. First, the more efficient use of shared public parking enables a smaller parking supply to meet the combined peak parking demand. Instead of many individual parking areas being underused much of the time, the city has fewer but larger parking facilities used throughout the day. Second, if the city collects cash-in-lieu fees to finance public parking bays instead of granting variances to reduce parking requirements, the cash-in-lieu policy actually increases the parking supply.

8.3 City of South Perth

The City has the discretion to offer car parking reductions for some non-residential developments, or to estimate a cash-in-lieu payment for the deficit bays between what is required under TPS6 and the number of bays which are prepared to be provided for a development.

¹⁷ The High Cost of Free Parking by Donald C Shoup. American Planning Association 2005. Chapter 9 at p.232.

According to Section 6.3A (clause 4) of the TPS6 (Appendix E – 6.3A Cash in Lieu of Car Parking Bays) cash-in-lieu in South Perth may include:

- a) The value of land on which deficit bays may be constructed
- b) The cost of constructing the deficit bays
- c) The cost of installing signs, facilities or equipment to regulate the permissible period of occupation.

However, according to clause 8 of the same section of that document, “for all comprehensive new development within Special Control Area SCA1 South Perth Station PCA, cash payments in lieu of providing the minimum number of car parking bays on the development site as prescribed in Table A of Schedule 9 [of TPS6] are not permitted’.

In addition, the City may allow a reduction in the number of bays required for non-residential uses in accordance with Policy P315 Car Parking Reductions for Non-Residential Developments (see Appendix F – Policy P315 Car Parking Reductions for Non-Residential Development).

8.4 Options for South Perth

The City has several options to raise funds for the construction of shared parking in existing developed areas:

- amend the Cash-in-lieu formula to exclude land costs as it varies from location to location and requires regular valuations
- charge a fee based on land and construction costs
- implement compulsory cash in lieu for all new developments based on construction only
- offer a discount on the true cost. This varies from nil to 30% (Stirling City Centre) to 50% (Subiaco)
- offer 80% of the true land and construction cost for 50% of the bays claimed as cash in lieu, and then at the construction cost only for the remaining bays claimed. This will encourage developers to build less bays

It would be practical for the Cash-in-lieu fee to be discounted by the City to a maximum of 50%, subject to the development meeting any of the following criteria:

- The developer can show access to alternative options to accommodate the transport access requirements of those potential users of the development for whom on-site parking will not be provided
- There exists adequate provision for car parking in the proximity of the proposed development
- The development will contribute significantly to the streetscape and will encourage the upgrading of the locality
- The City is satisfied that convenient public transport facilities are available to satisfy the transport access demands of employees, residents and visitors to the development.

This discount would provide a benefit to both the City and the developer, and thereby encourage investment.

Note: A developer shall not receive the benefit of both a reduction in the parking ratios and the discount on the cash-in-lieu fee. The city may grant a reduction of up to the stated maximums either under the Car Parking Reductions Policy or under cash-in-lieu but not both.

8.5 Stirling City Centre

Another option is to implement compulsory cash-in-lieu for all new developments as recommended for the new Stirling City Centre where parking supply will be severely constrained by the capacity of the road network. For the Stirling City Centre, SKM¹⁸ in association with Luxmoore Parking Consulting proposed the following principles for cash-in-lieu:

- All cash-in-lieu revenue shall be hypothecated for improvements to transport infrastructure for public transport, walking or cycling, or for the provision of public parking within the city centre.
- The cash-in-lieu payment shall be based on a proportion of the cost of provision of a parking bay, including the cost of land.
- The benefit of the cash-in-lieu payment shall increase as the level of on-site parking is decreased in a manner that ensures the overall cost to the developer is reduced.

8.5.1 Residential cash-in-lieu

Cash-in-lieu for each residential dwelling in the Stirling City Centre is proposed to be based on a fixed cost and a variable cost. The costs will be taken as a proportion of the discounted cost of a parking bay and indexed each year. It is proposed that two charges are introduced:

- A fixed cash-in-lieu is based on 10% of the discounted cost of a parking bay.
- A variable cash-in-lieu, which increases as the amount of parking provided decreases below 1 bay/unit. The cash-in-lieu payment to be set at 30% of the cost saving from the reduced level of parking provided, e.g. if 0.6 parking bays/unit is provided on site, the variable cash-in-lieu is calculated at 0.4 bays of the discounted indexed cost of a parking bay.

8.5.2 Non-residential cash-in-lieu

Cash-in-lieu for non-residential development in the Stirling City Centre would contain a fixed and a variable component:

- A fixed cash-in-lieu payment to be set at 50% of the discounted cost of a parking bay.¹⁹
- A variable cash-in-lieu which increases as the amount of parking is reduced below the maximum level of parking permitted. The variable cash-in-lieu payment is to be set at 50% of the saving from the reduced level of parking at the discount rate.

¹⁸ Stirling City Centre Access and Parking Strategy PB50196. SKM 13/08/2011.

¹⁹ Discounted cost is 75% of construction and land cost to the developer.

8.6 Use of funds

Clause 3 of Section 6.3A of the TPS6 requires the City to spend income from Cash-in-lieu in one of the following ways:

- a) To provide additional transport infrastructure in the vicinity of the development site, or
- b) To acquire land for the provision of additional transport infrastructure.

Limiting the use of cash-in-lieu generated funds to provide public parking is restrictive and assumes that additional parking is both necessary and desirable. In view of the importance of integrating transport policy and management and the competition for limited funding, it is clearly desirable that the funds raised be available for transport purposes in general. This should include services, new technologies and infrastructure, such as funding a shuttle bus to serve the commercial centres.

When a cash-in-lieu submission is provided for consideration it must be signed by the owner of the premises and not by any business owner or tenant as it is the owner who will obtain the long-term benefit of any cash-in-lieu concession.

It is recommended that the following are incorporated into the parking cash-in-lieu policy for the City.

It is recommended that a cash-in-lieu fee for all projects is charged, but with a regular adjustment to the fee. The fee is to be based on a formula which takes into account the land value for each commercial centre set by the City every 2 years and the cost of construction.

Criteria

Property owners/developers may apply to make payments to a parking cash-in-lieu fund as an alternative to providing a proportion of required on-site parking in cases where:

- **The City may consider it undesirable for efficiency, traffic operation, pedestrian amenity, traffic demand management, achievement of transport objectives or other reasons for the specified parking to be provided totally on-site, or**
- **The physical constraints of the site (including geophysical constraints, small block size, etc.) make on-site provision impracticable, or**
- **It is impractical, because of the need to construct basement parking lower than two levels, owing to the significant cost associated with deep basement parking spaces.**

All applications are to be signed by the owner of the premises and accompanied by a Parking Control and Management Plan.

Payment basis

Property owners/developers complying with the criteria shall make payments in lieu of providing a proportion of required on-site parking in accordance with the following:

- Not less than the sum of the construction cost to the owner plus the value of that area of the applicant's land that would have been allocated to parking spaces including access and manoeuvring areas.

The value of the land shall be based on an independent valuation that is current at the time of the application.

The following formula is proposed for the calculation of the fee in South Perth.²⁰

$$C = (A1 * (((A2/A3) * A4) + A5 * A6))$$

The six variables for the formula are set out in Table 8-1. It requires a land value for each PCA and a construction cost per space. The land value should be based on a valuation for each PCA set by the City every 2 years.

Table 8-1: Variables for formula

Variable name	Unit	Variable description
C	\$	Total cash-in-lieu contribution
A1	spaces	Number of parking spaces required under planning scheme which are not being supplied
A2	m ²	Land area per space
A3	levels	Number of building levels (including parking levels)
A4	\$/m ²	Land value per m ²
A5	m ²	Floor area per parking space
A6	\$/m ²	Construction cost per parking space

The six variables for the formula are set out in. It requires a land value for each PCA and commercial centre and a construction cost per space. The land value would need to be reviewed every two years.

This fee sets the benchmark for the true cost that would otherwise be incurred by the lessee/developer.

- **The fee may be discounted by the City to a maximum of 50%, subject to the development meeting any of the following criteria and no other reduction on parking supply having been permitted:**
 - **The developer can show access to alternative options to accommodate the transport access requirements of those potential users of the development for whom on-site parking will not be provided**
 - **There exists adequate provision for car parking in the proximity of the proposed development**
 - **The development will contribute significantly to the streetscape and will encourage the upgrading of the locality**
 - **The City is satisfied that public transport facilities are available to satisfy the transport access demands of employees, residents and visitors to the development.**

The agreed fee shall be paid in two equal instalments, one immediately prior to commencement of the development and the balance prior to practical completion of the development.

²⁰ ACT Government, Parking Supply Option Study, Luxmoore Parking Consulting Report No. 001239, 24 May 2010.

Allocation of income

Income received as parking cash-in-lieu be allocated to a special fund for accessibility improvements including:

- purchase of land for parking
- construction of parking spaces by council or within a joint venture
- a shuttle bus service in the City
- improving parking information systems
- real-time transit information system
- security lights and improved pathways to access parking area
- cycle paths and other cycling support facilities
- upgrading the design of on-street parking facilities
- increased resources and technology for monitoring parking compliance.

An example of the how a 20% discount would apply is shown in Table 8-2 below. It illustrates the win-win situation for developers and Council and other stakeholders.

Table 8-2 Recommended cash in lieu calculation

	Residential	Commercial
Land / bay	25 ² m (at-grade)	10 ² m (assume 3 deck)
Land cost / m ²	\$2,000	\$3,000
Land cost / bay	\$50,000	\$30,000
Construction cost / bay	\$2,800 (at-grade)	\$30,000 (deck)
True cost / bay	\$52,800	\$60,000
Cost of 10 bays	\$528,000	\$600,000
Less 20% discount	\$105,600	\$120,000
Benefit to developer	\$105,600	\$120,000
Income to Council	\$422,400	\$480,000

9 PCA Management Plans

9.1 Objectives of PCA management plans

Parking management plans need to be designed to make the most effective and efficient use of parking facilities. The City has identified 14 PCA's that require management plans as shown in Figure 1-1

Key objectives of parking management plans include:

- adequately catering to the demand generated by trip attractors in the PCA
- identifying parking supply and management policies and actions to support the short and longer term development of the PCA
- integrating parking location with the rail, bus, pedestrian and cycle networks
- integrating parking with urban design objectives.

Comprehensive parking management plans for each PCA will analyse alternative options and provide practical recommendations to implement the Parking Strategy and manage the City's parking supply more effectively.

The plans need to address all elements of the Strategy at a PCA level, and provide a series of recommendations on how the City's parking supply could be more effectively managed. The parking management plans will:

- Consider parking controls for the City's current parking facilities, to achieve appropriate access to all user groups.
- Support objectives defined in the Strategy.
- Explore viability for introducing permits, visitor and residential permits.
- Make comment on current enforcement technology and processes, including suggestions for improvement.
- Provide consideration of the short, medium and long-term future impacts of development within each PCA, such as the proposed train station in South Perth Station PCA.

The plans will also consider:

- The type of parking control measures, such as length of stay and hours of operation.
- Provision of parking facilities that encourage use of scooters and motorbikes.
- Even distribution of parking controls to best service the need of user groups in the area.
- Ease of use, communication and understanding from a parker's perspective.
- Paid parking, considering ticket machines and convenient methods of payment including pay-by-phone.
- Best practice management structure.
- Enforcement of parking controls and compliance priorities.
- Methodology for evaluating the success of the implemented changes.

9.2 Parking management implementation framework

Parking management plans for each PCA will vary, but adopting a consistent framework for the implementation of demand management controls in each PCA will ensure greater availability of parking. Linking this with parking and access information in many different forms, as well as improved compliance will not only ensure a better perception of parking, but will result in a more equitable allocation of scarce parking bays to all user groups.

Table 9-1 sets out broad guidelines for the development of parking management plans in the City.

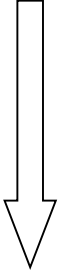
Table 9-1: Parking management implementation framework

Steps	Recommendations	Ref Section Parking Strategy								
1. Survey parking occupancy in PCA	<p>Occupancy surveys need to be conducted so that parking management plans can be based on empirical data and not a reactive approach to perceived issues. Results of occupancy surveys will determine what parking controls if any need to be implemented including whether paid parking and resident parking permits are required.</p> <p>It is important that parking surveys are performed periodically so that comparative analyses of occupancy rates can be performed. Table 9-2 shows the frequency at which the City should perform parking surveys according to previously measured peak time occupancy.</p> <p>Table 9-2: Survey frequency</p> <table border="1" data-bbox="363 1189 1177 1335"> <thead> <tr> <th>Peak Occupancy Rate</th> <th>Survey frequency</th> </tr> </thead> <tbody> <tr> <td><50%</td> <td>3 years</td> </tr> <tr> <td>50-80%</td> <td>2 years</td> </tr> <tr> <td>>80%</td> <td>1 year</td> </tr> </tbody> </table> <p>Comparative surveys are essential in determining the effectiveness of parking management plans and are the basis for introducing or changing parking control measures.</p>	Peak Occupancy Rate	Survey frequency	<50%	3 years	50-80%	2 years	>80%	1 year	4.6
Peak Occupancy Rate	Survey frequency									
<50%	3 years									
50-80%	2 years									
>80%	1 year									
2. Determine user groups that need to be catered for in PCA	<p>When different parking user groups are competing for the same parking space and demand exceeds the supply, a saturation of parking facilities occurs. There needs to be recognition of different user priorities through the introduction of a parking hierarchy. Section 4.3.1 details each parking user group and their priority requirements.</p> <p>The objectives of the parking hierarchy are to uphold the safety and convenience of all road users, encourage the use of alternative transport modes such as walking, bus, train and cycling, promote equitable and transparent allocation of parking spaces</p>	4.3								

across all user groups and facilitate consistent decision-making regarding parking infrastructure.

Table 9-3 details the priority that each user group should be given for on and off-street parking within and outside commercial centres.

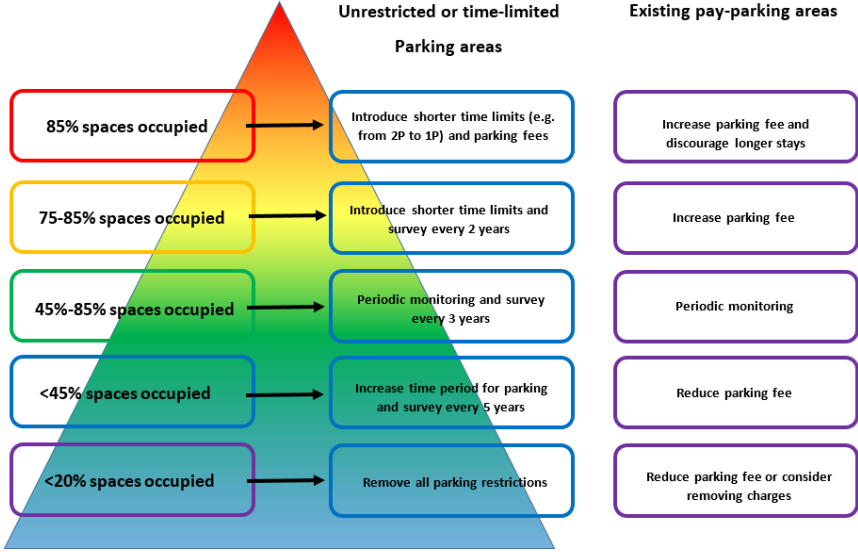
Table 9-3: Parking user group hierarchy

Priority	Commercial centre		Outside commercial centre	
	On-street	Off-street	On-street	Off-street
Essential  Least important	Loading	Disability permit holders	Public transport	Long-stay/commuter
	Public transport	Short to medium-stay	Residents	Short to medium-stay
	Drop-off/pick-up	Drop-off/pick-up	Short to medium-stay	Drop-off/pick-up
	Short to medium-stay	Loading	Disability permit holders	Park and Ride
		Motorcycle/s cooter	Loading	Residents
	Motorcycle/s cooter & cyclists	Long-stay/commuter & residents	Long-stay/commuter	Motorcycle/s cooter
	Disability permit holders	Cyclists	Drop-off/pick-up & motorcycle/s cooter & cyclists	Disability permit holders & loading & cyclists
Not allowed in this zone	Long-stay/commuter & park and ride	Park and ride	Park and ride	Public transport
	Residents	Public transport		

3. Introduce parking controls in line with survey findings

Where parking demand is high, the City should apply various parking restrictions to achieve a target peak occupancy rate of 85% for on and off-street parking. An occupancy rate of 85% means that the parking resource is well used but people can still easily find a space, thus reducing customer frustration. It will also save cruising time, reduce traffic, conserve energy, improve air quality and influence and contribute to traffic calming and parking management. In some precincts it may also generate income to the City. Parking management controls should be related to the level of excessive demand that is required to be managed.

4.7

	<p>There are different parking controls that can be used to manage on and off-street parking. It is important that decisions to change or introduce parking controls are based on sound principles and comparative survey data rather than a reactive approach to complaints. It is also useful for the public to understand how decisions to amend parking controls are made.</p> <p>Figure 9-1 shows the framework for the implementation of parking controls based on surveyed occupancy rates.</p>  <p style="text-align: center;">Figure 9-1: Parking framework</p>	
<p>4. Demand-responsive parking controls</p>	<p>It is important to define the objectives for parking controls in order to determine how controls will be structured:</p> <ul style="list-style-type: none"> • for traffic management – peak period parking controls should be structured to encourage a shift in travel modes or times. • for parking management – parking controls during peak demand periods and at the most convenient locations should be structured to generate a maximum 85% occupancy rate. <p>Demand-responsive control means that the fees and time restriction placed on parking will be adjusted based on parking demand data. Fees and time restrictions will be adjusted up or down with the goal of maintaining on average 85% occupancy at peak times.</p> <p>Each PCA should be divided into smaller zones. These zones will be a collection of streets with broadly similar parking demand profiles. The zones may change over time in order to better manage demand. The parking controls should be uniform across each zone within the PCA's.</p>	<p>7.7</p>

To achieve effective demand responsive controls, comparative occupancy surveys need to be performed periodically as explained in step 1 above.

Figure 9-2 shows an example of demand responsive pricing for 2P paid ticket parking.

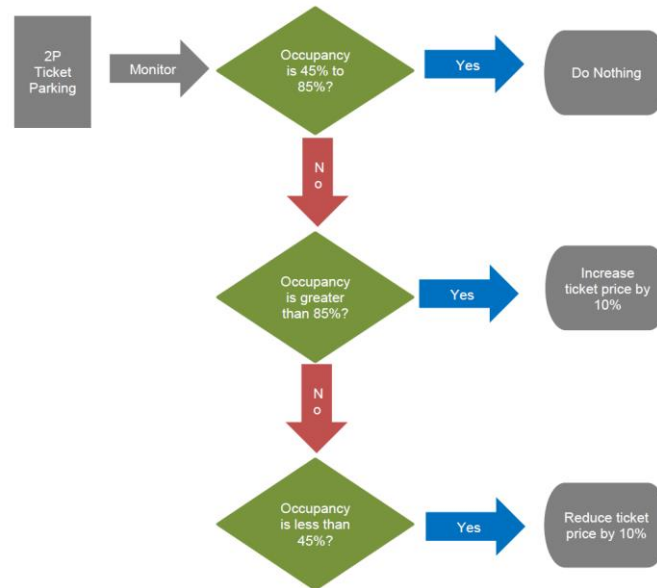


Figure 9-2: Demand responsive pricing

Parking management plans for each PCA need to address the above framework while also adhering to all recommendations set out in the Strategy.

The framework for the development of parking management plans set out above will ensure that parking in each PCA is consistently, effectively and efficiently managed. This will result in users generally being able to find parking close to their destination, improve the perception of parking availability, improve traffic management and reduce congestion.

10 Summary of reviewed documents

Luxmoore reviewed the following documents which are listed in date order:

- Town Planning Scheme No. 6 Amendments 25 and 30 (City of South Perth, 2013 and 2014)
- Policy P315 Car parking reductions for non-residential development (City of South Perth, 2013)
- Strategic Community Plan (City of South Perth, 2013)
- South Perth Station PCA – Transport and Access Strategy (GHD 2012)
- South Perth Station PCA Plan (The City of South Perth and the Western Australian Planning Commission 2011)
- State Planning Policy – Activity Centres for Perth and Peel (Western Australian Planning Commission 2010)
- South Perth Station and Peninsula Area Parking Study (Uloth, 2009)
- Integrated Transport Plan (City of South Perth 2006)

The key findings are summarised in Appendix D – Literature Review.

11 Recommendations for the City's parking strategy




The following consolidates the recommendations for long-term strategic direction for the City's Access and Parking Strategy.

Table 11-1: Recommendations and timeline

	Section and name	Recommendation	Page ref
4.1	<p>Support and encourage different forms of sustainable transport</p> <p>The City needs to prioritise access for pedestrians, cyclists, public transport users and people with disabilities, and make the most of public transport infrastructure, balanced with the needs of the City road network, including the need to minimise congestion. The existing public realm in the City for pedestrians, cyclists and public transport user needs to be significantly improved given the current dominance of vehicular traffic.</p> <p>The provision of convenient public transport is fundamental element of changing mode-share. Unfortunately the City has little influence over the State Government's program for Public Transport to and serving the City. If public transport lags development, there will continue to be a high mode share for the use of private vehicles.</p> <p>It is important to acknowledge that a Parking Strategy is only one part of an Integrated Transport Strategy which should also incorporate a road safety strategy, a green travel plan, a pedestrian strategy, a bicycle strategy, a local area traffic management plans and a specific parking management plans.</p> <p>Some of these are already in place in the City (e.g. the 2011-16 Bike Plan, the TravelSmart RoadWise Local Action Plan (2006)). There are other documents which provide information on alternative transport modes and parking. A new Integrated Transport Strategy is planned for the City for 2016 which should bring all the above topics together into an updated, cohesive policy and therefore achieve the sustainable parking principles outlined above.</p>	<p>Change the City's approach from the current predict and provide to a demand management approach whereby parking facilities are used more effectively and parking is proactively managed to align with the agreed strategy</p> <p>It is recommended that the City adopt five parking principles which are to underlie future strategies relating to travel behaviour:</p> <ul style="list-style-type: none"> f) Focus on people access not vehicle access g) Provide efficient and effective alternatives to car access h) Parking policy and strategy must support sustainable transport i) The appropriate amount of parking for the centre will be well below the unconstrained demand for parking j) The provision of parking requires a demand management, not a demand satisfaction approach 	17

Section and name	Recommendation	Page ref
<p>There is increasing recognition that sustainable cities require a balanced multi-modal transport system, and the parking system should support the transport system. In particular, parking supply, utilisation, location and price are primary factors relating to travel behaviour mode choice.</p> <p>It is recommended that the City adopt five parking principles which are to underlie future strategies relating to travel behaviour:</p> <p>Focus on people access not vehicle access</p> <p>This requires the development of innovative access programs targeted at a more active community.</p> <p>Provide efficient and effective alternatives to car access</p> <p>This requires the promotion of accessibility such as a park and ride facility or the availability of low fare or free buses, rather than the promotion of parking. The provision of high quality reliable public transport is a fundamental prerequisite for parking policies which seek to maintain supply within acceptable limits, reduce congestion and encourage alternative modes of transport.</p> <p>Parking policy and strategy must support sustainable transport</p> <p>The integration of commuter parking with public transport is a major opportunity to reduce the dependency on cars coming into a centre. Additionally, there is a need for better bicycle paths and quality end-of-trip bicycle facilities, as well as improved bus shelters with real-time information.</p> <p>k) The appropriate amount of parking for the centre will be well</p>		

	Section and name	Recommendation	Page ref
	<p>below the unconstrained demand for parking</p> <p>The available parking supply should be adequate, not excessive. It need not cater to occasional peak demand, or ensure that every driver will always be able to find a bay. Rather, it seeks to eliminate over-supply and unused capacity. Consolidated parking is a means of making better use of available supply. Sharing parking between multiple land uses and/ or businesses does not require each of them to provide their own parking. This ensures an adequate rather than excessive supply of parking and is particularly appropriate to the provision of overall parking in the commercial precincts.</p> <p>l) The provision of parking requires a demand management, not a demand satisfaction approach</p> <p>Controlling parking demand is the counterbalance to the management of parking supply, but it is far easier, more flexible and less expensive to make better use of existing parking capacity than to create additional parking. Parking management strategies recognise different hierarchies of users. Fees can be used to control demand and to encourage alternative modes. Additionally, improvements to transport and access infrastructure can be funded from additional income derived from parking.</p> <p>The future strategy for South Perth should therefore contain recommendations not only to curtail the supply of parking, but also to manage parking so as to constrain demand.</p>		

Section and name		Recommendation	Page ref																																												
	<p>Based on stakeholder feedback it is important that some of the net surplus generated from parking and enforcement is transparently reinvested into improved transport access, which may include upgrading parking facilities, the provision of better pedestrian and cycling access or public transport options.</p> <p>If the City intends to move towards a more sustainable, multi-modal transport system, there needs to be a commitment by all stakeholders to implementing such a policy to support these principles.</p> <p>Change the approach to parking</p>																																														
4.3.2	Proposed hierarchy for the commercial centres	<p>A parking user hierarchy is to be implemented for different PCA's to support growth and intensification goals</p> <table border="1"> <thead> <tr> <th rowspan="2">Priority</th> <th colspan="2">Commercial centre</th> <th colspan="2">Outside commercial centre</th> </tr> <tr> <th>On-street</th> <th>Off-street</th> <th>On-street</th> <th>Off-street</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Essential </td> <td>Loading</td> <td>Disability permit holders</td> <td>Public transport</td> <td>Long-stay/commuter</td> </tr> <tr> <td>Public transport</td> <td>Short to medium-stay</td> <td>Residents</td> <td>Short to medium-stay</td> </tr> <tr> <td>Drop-off/pick-up</td> <td>Drop-off/pick-up</td> <td>Short to medium-stay</td> <td>Drop-off/pick-up</td> </tr> <tr> <td>Short to medium-stay</td> <td>Loading</td> <td>Disability permit holders</td> <td>Park and Ride</td> </tr> <tr> <td>Motorcycle/scooter & cyclists</td> <td>Motorcycle/scooter</td> <td>Loading</td> <td>Residents</td> </tr> <tr> <td>Long-stay/commuter & residents</td> <td>Long-stay/commuter & residents</td> <td>Long-stay/commuter</td> <td>Motorcycle/scooter</td> </tr> <tr> <td>Least important</td> <td>Disability permit holders</td> <td>Cyclists</td> <td>Drop-off/pick-up & motorcycle/scooter & cyclists</td> <td>Disability permit holders & loading & cyclists</td> </tr> <tr> <td>Not allowed in this zone</td> <td>Long-stay/commuter & park and ride Residents</td> <td>Park and ride Public transport</td> <td>Park and ride</td> <td>Public transport</td> </tr> </tbody> </table>	Priority	Commercial centre		Outside commercial centre		On-street	Off-street	On-street	Off-street	Essential 	Loading	Disability permit holders	Public transport	Long-stay/commuter	Public transport	Short to medium-stay	Residents	Short to medium-stay	Drop-off/pick-up	Drop-off/pick-up	Short to medium-stay	Drop-off/pick-up	Short to medium-stay	Loading	Disability permit holders	Park and Ride	Motorcycle/scooter & cyclists	Motorcycle/scooter	Loading	Residents	Long-stay/commuter & residents	Long-stay/commuter & residents	Long-stay/commuter	Motorcycle/scooter	Least important	Disability permit holders	Cyclists	Drop-off/pick-up & motorcycle/scooter & cyclists	Disability permit holders & loading & cyclists	Not allowed in this zone	Long-stay/commuter & park and ride Residents	Park and ride Public transport	Park and ride	Public transport	20
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4.6	Parking Surveys	Parking occupancy in high demand areas should be surveyed regularly in the same format and at the same time each year to measure actual usage and to compare changing patterns of usage from year to year in different commercial centres	22																																												
	Parking Advisory Group	It is recommended that the City appoint an administrative Parking Working Group chaired by the Parking Manager, which is responsible for bringing forward issues that cross boundaries between the traditional administrative units.	21																																												
4.7	Introduce parking controls and eventually pay parking	All new parking controls or charges need to be constantly reviewed by the City and amended as necessary depending on the result of regular parking surveys	23																																												
		The City should evaluate the introduction of parking controls and eventually pay parking particularly in areas adjacent to major trip generators. These controls should be used to	23																																												

Section and name		Recommendation	Page ref
		encourage the use of alternative modes, but should also be set at a level which does not detract from the vitality of the city precincts	
4.8	Implement a consistent level of wayfinding, signage and parking restrictions	Public parking information should be applied and published uniformly across the entire City equally to council and privately owned public car parking areas	23
4.9	Review existing parking enforcement	The City to increase the effective allocation of parking enforcement resources in combination with improved technologies for monitoring compliance such as in-ground sensors, licence plate recognition cameras and parking meters. Schools should self-manage their peak-time parking demand through tools such as TravelSmart for Schools	25
4.10	Implement the requirements for a Parking Control and Management Plan (PCMP) for all new commercial or mixed used developments requiring more than 10 parking bays	The City implements a Parking Control and Management Plan to be provided with a development application for any project exceeding more than five bays	26
4.13	Build parking facilities – deck car park feasibility	The City to develop a plan to identify and prioritise potential sites for the construction of parking decks to serve the commercial centres	27
7.4	Private parking areas	The City gradually expands pay parking areas based on regular and comparative surveys of usage. Pay parking fees are to be structured to favour short-term users and encourage a high churn of spaces.	41
		The City increases the provision and enforcement of pay parking in privately owned public car parks and expands its enforcement resources and associated technology as appropriate to provide this service.	41
7.6	Parking intervention trigger	The City should apply various parking restrictions in areas of high demand to achieve a target peak occupancy rate (the average of the four highest hours in a day) of 85% for on-street parking. This means that the parking resource is well used but people can still easily find a space, thus reducing customer frustration. In other words, one parking space in every seven should be vacant. When peak parking occupancy is regularly above 85%, the City will recommend a change to the parking management approach. This is a	44

Section and name		Recommendation	Page ref
		recognised international approach to the best practice management of on-street parking.	
7.7.1	On-street demand-responsive pricing	<p>Introduce priced parking with no time limits in areas with high parking demand and a low availability of spaces. Prices for on-street parking will be set according to the following general principles:</p> <ul style="list-style-type: none"> • Prices for on-street parking will be set at levels that ensure people can find a car park most of the time within a short walking distance of their destination. • In general, if the data for demand for parking in an area is found to decrease, then prices should also decrease and vice versa. • On-street parking in commercial centres will be prioritised to support customers and other short-term visitors ahead of long-stay commuters and residents. Prices are more effective than time-limits at prioritising users in this way. • The way parking prices are set in different parts of the City should be transparent and based on up-to-date empirical evidence of parking demand patterns in that area and observed trends in these patterns over time. 	46
7.7.3	Occupancy surveys	Parking demand should be reviewed every one to three years depending on how variable the demand is in each particular price area	47
7.7.4	Price adjustment	Prices should be adjusted either up or down in response to the occupancy surveys undertaken. In each case the goal is to maintain an average of 85% occupancy, as much as practicable	47
7.7.5	Times of operation	Standard hours of parking restrictions should be 8 am to 6 pm Monday to Sunday. However, some PCA's in the City experience high parking demand in the evenings, and where this occurs, the City should implement expanded paid parking hours where necessary to manage demand in accordance with the general principles (section 7.7.1).	48

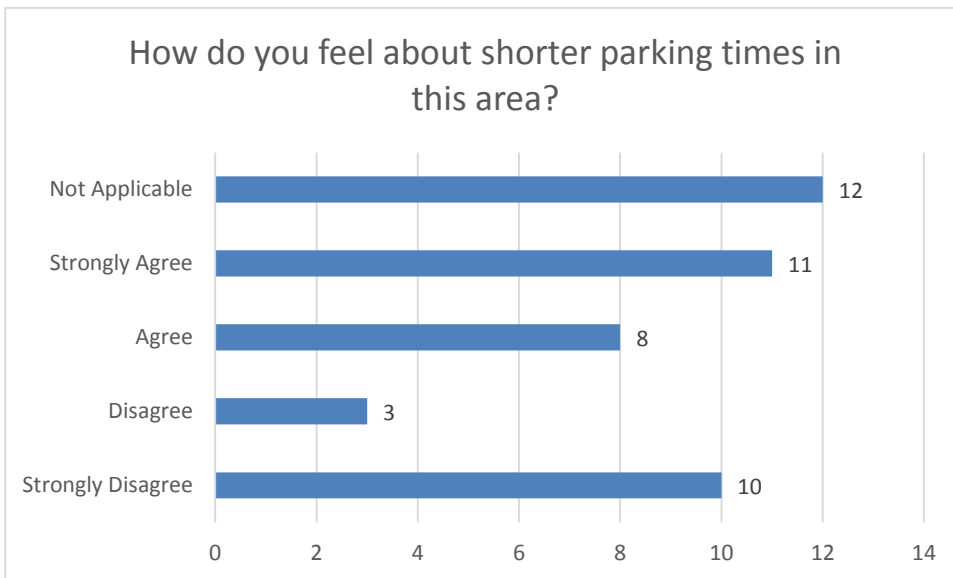
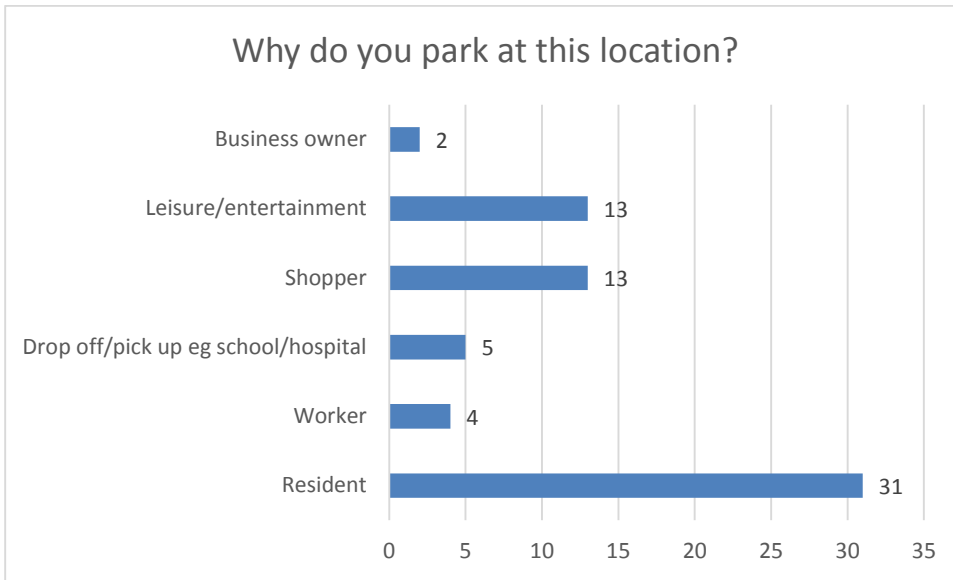
	Section and name	Recommendation	Page ref
7.9.2	<p>Summary of best practice in permit parking schemes</p> <p>Very few permit parking schemes are identical. Best practice can be achieved by collating the key findings and procedures implemented at other councils in Australia.</p> <ul style="list-style-type: none"> • Permit information documents provide accessible and easy to understand information to residents and other interested permit applicants. The most accessible documents have a user-friendly layout and are available in PDF format for download on the Council's website. • Some Councils include permit terms and conditions in their permit application forms. This is an important inclusion as the information relevant to the allocation, use and management of permits is readily accessible to the applicant, who may otherwise be unaware of the information • The holder of the permit is never guaranteed a parking space and this is to be emphasised in all permit documents. • A fee is usually charged for permits to recoup the costs of administering, operating and monitoring the permit system and maintaining the signage and to discourage unnecessary applications. • A maximum of two RPP are usually issued to the occupier of a residential property and the number of permits issued is reduced by one permit per off-street parking space. It is not clear whether a permit concession is granted if an off-street space has been converted 	<p>Residential parking zones should have a time limit across the zone to prioritise short-term parking and deter commuter parking. Residents should be able to purchase parking permits to allow an exemption to the time restriction</p>	50

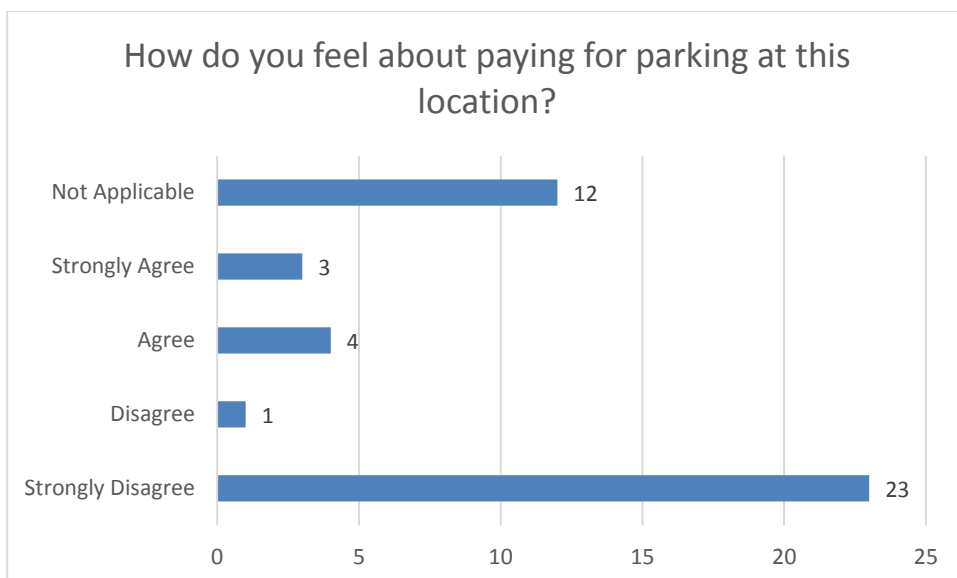
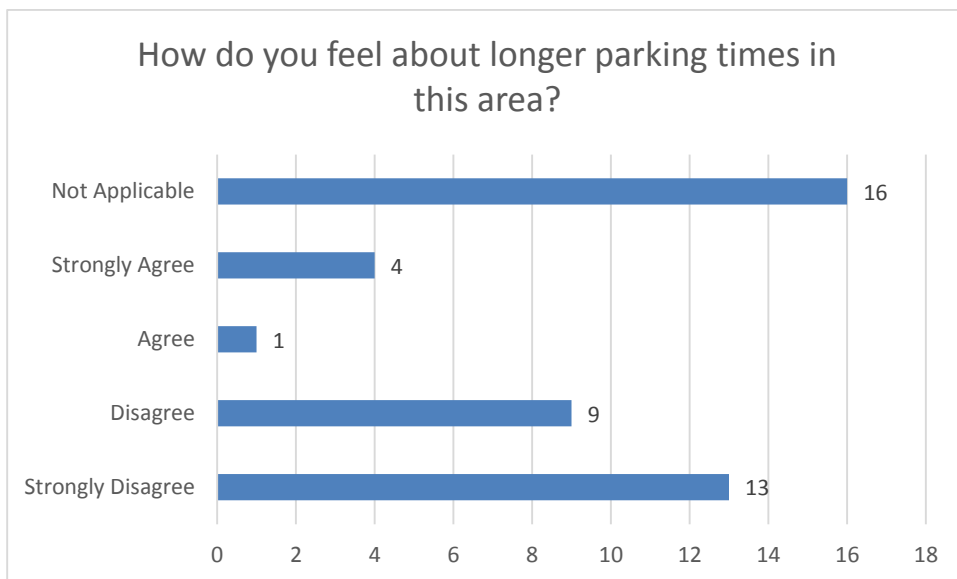
Section and name		Recommendation	Page ref
	<p>to another use such as a shed or additional accommodation.</p> <ul style="list-style-type: none"> Permits are not issued for occupants of high rise buildings, new multi-unit developments or for dwellings located in the town centre. RPP include the vehicle registration number. This assists with monitoring compliance. Permits are assigned to streets or specific PCA's via a coding system to protect the residents privacy Strict penalties apply for the misuse of permits including fines or the permit being revoked. Anecdotally the risk of cancellation/revocation of the permit is the most effective sanction to ensure compliance. Administration costs are significantly reduced where application of permits is on-line. Labour costs are reduced with technology which provides immediate wireless verification of a valid RPP, the vehicle registration it is linked to and the location where it is parked. Increasingly more ticket machines are installed in permit areas providing residents with exemptions, but generating income from the shared use of on-street bays during business hours. Residential permit systems and quantities vary, but they generally always require payment. <p>Residential parking zones</p>		
7.9.5	New developments	To protect the sustainability of residential parking schemes, new developments within residential parking	53

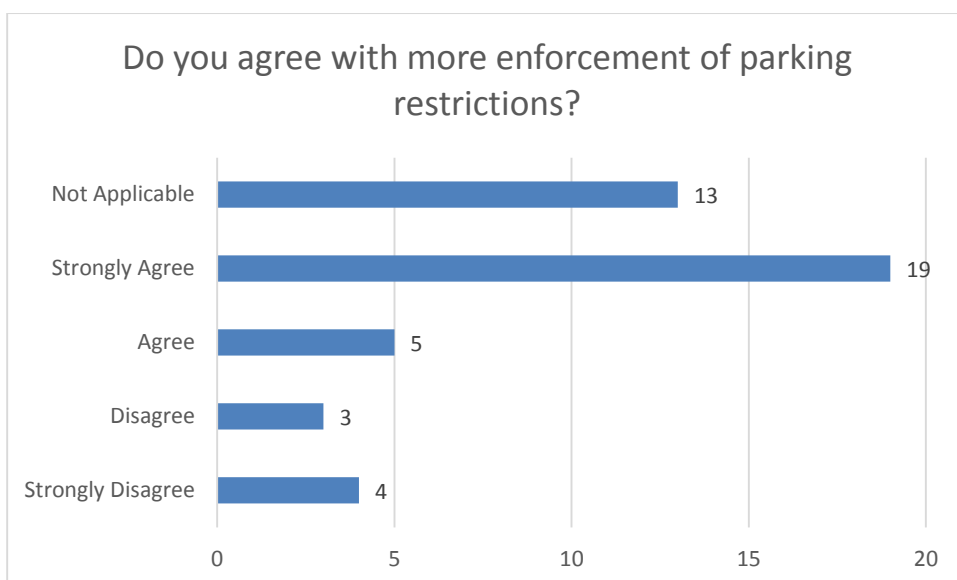
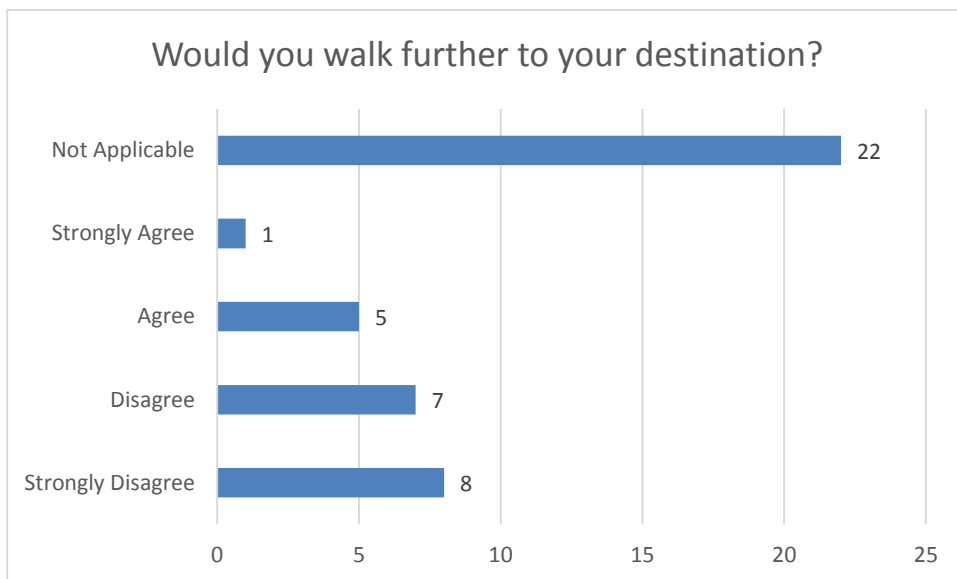
Section and name		Recommendation	Page ref
		zones should not be eligible for parking permits	
7.9.6	Technology and enforcement	The City should make use of new technology to ensure that residential parking zones remain an effective solution for managing parking demand and reducing the impact on residents	53
8.6	Cash-in-lieu - Use of funds	<p>A cash-in-lieu fee for all projects should be charged, but with a regular adjustment to the fee. The fee is to be based on a formula which takes into account the land value for each commercial centre set by the City every 2 years and the cost of construction.</p> <p>Criteria</p> <p>Property owners/developers may apply to make payments to a parking cash-in-lieu fund as an alternative to providing a proportion of required on-site parking in cases where:</p> <ul style="list-style-type: none"> - The City may consider it undesirable for efficiency, traffic operation, pedestrian amenity, traffic demand management, achievement of transport objectives or other reasons for the specified parking to be provided totally on-site, or - The physical constraints of the site (including geophysical constraints, small block size, etc.) make on-site provision impracticable, or - It is impractical, because of the need to construct basement parking lower than two levels, owing to the significant cost associated with deep basement parking spaces 	59
		<p>The fee may be discounted by the City to a maximum of 50%, subject to the development meeting any of the following criteria and no other reduction on parking supply having been permitted:</p> <ul style="list-style-type: none"> - The developer can show access to alternative options to accommodate the transport access requirements of those potential users of the development for whom on-site parking will not be provided - There exists adequate provision for car parking in the proximity of the proposed development 	59

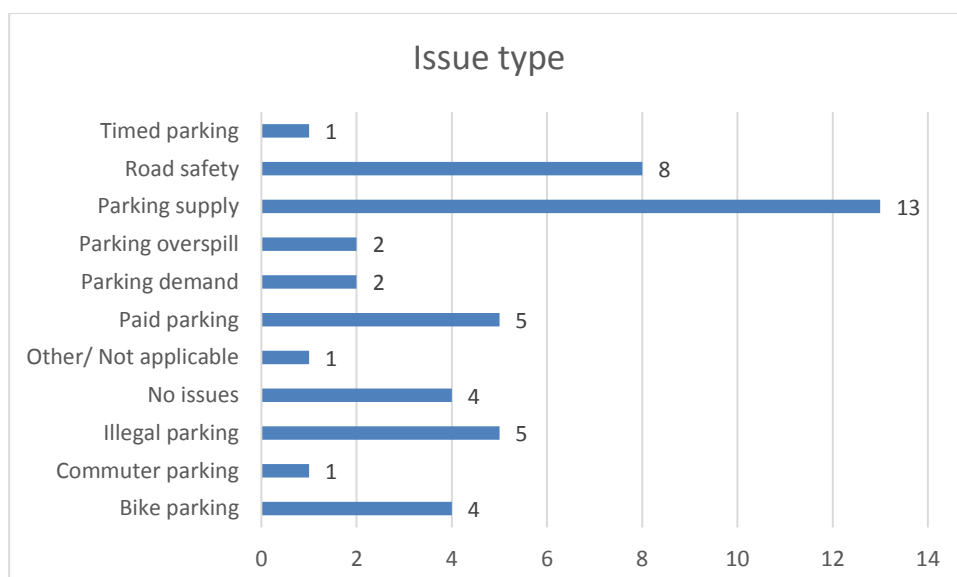
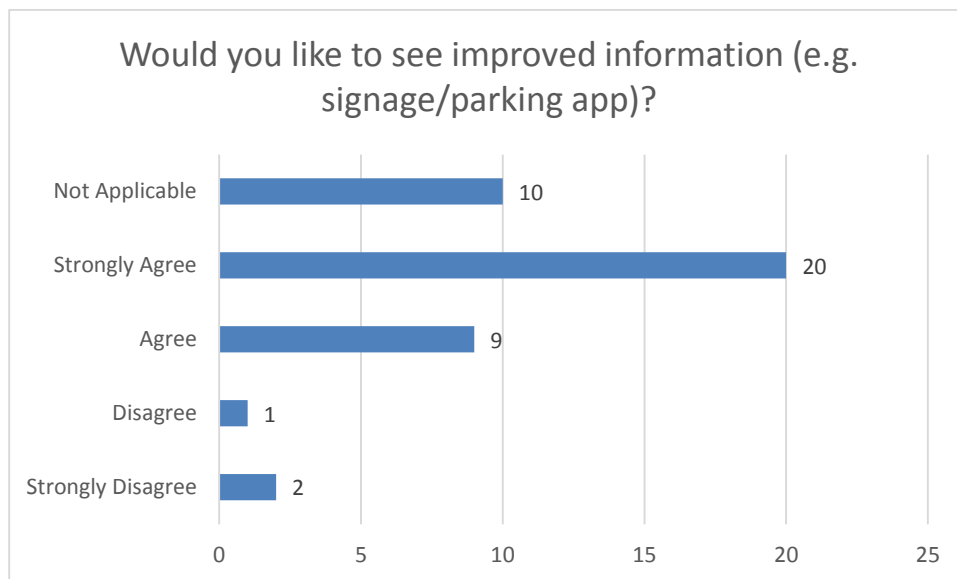
Section and name		Recommendation	Page ref
		<ul style="list-style-type: none">- The development will contribute significantly to the streetscape and will encourage the upgrading of the locality- The City is satisfied that public transport facilities are available to satisfy the transport access demands of employees, residents and visitors to the development	

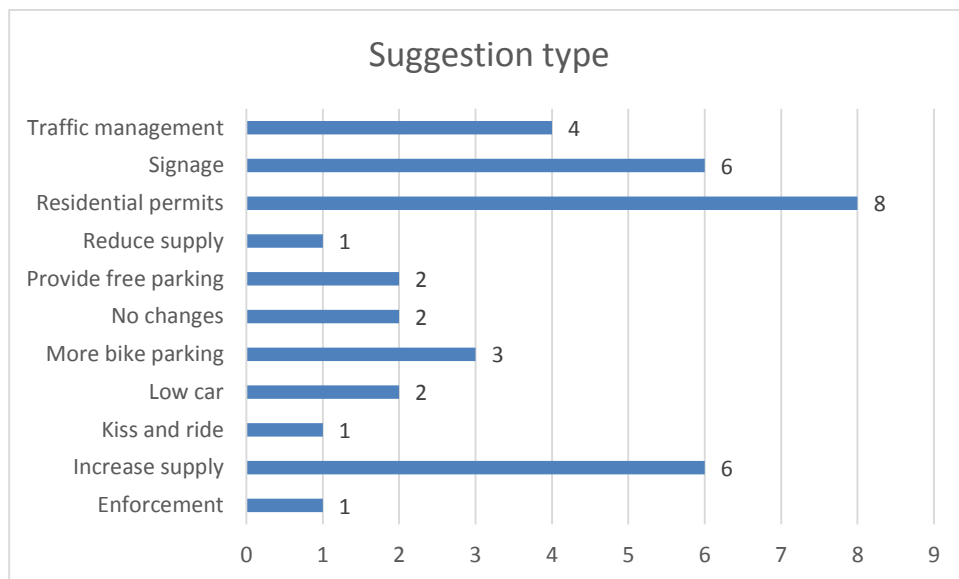
Appendix A – Parking Strategy survey results











Appendix B – Cost of provision of parking

It is important to understand some of the costs associated with the provision of parking.

Each on-street kerbside parking space requires 15.6 m² of land and encroaches 2.4 m into the roadway, effectively reducing the roadway by one lane. Off-street parking at-grade, generally requires 25 m² per space, which includes an allowance for aisles and vehicle access. The cost of constructing above-ground deck parking is at least \$33,000 per space, plus the cost of land. The cost of below-ground parking is even higher at > \$40,000 per space, plus the cost of land.²¹

According to the City Commercial Property Section based on recent land sales in the peninsula, the price of commercial land in the PCA is conservatively estimated at \$4,000 per m²²². Table B-1 is an estimate of the cost of provision of different types of parking in the PCA.

Table B-1: Estimated cost of providing one public parking bay in the peninsula PCA

Type of parking	Land per bay	Land cost \$4,000/m ²	Floor area per bay	Construction cost per bay	Est. min cost per bay
Off-street surface (at-grade)	25 m ²	\$100,000	25 m ²	\$3,000	\$103,000
Deck – 2 level	16 m ²	\$64,000	32 m ²	\$33,000	\$97,000
Deck – 4 level	8 m ²	\$32,000	32 m ²	\$33,000	\$65,000
Basement – 2 level	8 m ²	\$32,000	32 m ²	\$40,000	\$72,000

The provision of free parking (or parking at a very low fee) has an opportunity cost which can be measured in terms of the value of an alternative use of the land. For example the land used for all day parking at Richardson Reserve could generate significant income if a portion was sold for development. The provision of cheap parking has an opportunity cost to ratepayers as the car park generates far less income per annum than the interest that could be earned on the sale of the land.

²¹ Based on Rawlinsons. Australian Construction Handbook 2015. Edition 33. Rawlhouse Publishing P/L

²² Estimates provided by Council Commercial Property Section based on recent land sales in the area.

Appendix C – Proposed Parking Control and Management Plan

Proposed Parking Control and Management Plan to accompany Development Application																							
<p>1. Background</p> <ul style="list-style-type: none"> Describe objective of this Parking Control and Management Plan Property address Property description <p>Number of parking bays per category, e.g. tenant bays, short stay bays, mobility bays etc. Number and category of bicycle bays to be managed (if applicable) Other property details</p> <ul style="list-style-type: none"> Operational Responsibilities and Contact Details <p>Landlord Day to day management of car park Day to day management of all parking including motorcycles, bicycles and mobility bays</p>																							
<p>2. Conditions</p> <ul style="list-style-type: none"> General Conditions relating to the District Parking Plan Examples include: <ul style="list-style-type: none"> m) Short stay turnovers n) Tenant and public parking bays used for those purposes in accordance with the Planning Approval o) Mobility bays clearly marked and set aside for exclusive use p) Loading/unloading bays clearly marked and set aside for exclusive use q) Leasing of tenant bays to off-site tenants r) On-going availability of bicycle end of trip facilities 																							
<p>3. Surrounding area Details of parking on properties within 250 m of the pedestrian entry to the premises located on the property.</p> <table border="1"> <thead> <tr> <th>Property name and address</th> <th>Type & No. bays</th> <th>Method of control</th> <th>Fee (if any)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Reserved Tenant All day Short-term Loading Mobility Other TOTAL</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. etc.</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Property name and address	Type & No. bays	Method of control	Fee (if any)	1.	Reserved Tenant All day Short-term Loading Mobility Other TOTAL			2.				3. etc.							
Property name and address	Type & No. bays	Method of control	Fee (if any)																				
1.	Reserved Tenant All day Short-term Loading Mobility Other TOTAL																						
2.																							
3. etc.																							
<p>4. Details of Public Transport and pedestrian facilities serving the premises</p>																							

Proposed Parking Control and Management Plan to accompany Development Application

5. Proposed strategies to achieve conditions

- Achievement of short stay turnover rates
Methods are likely to include pricing and advertising.
- Non-conversion of public parking bays for tenant purposes
Methods could include: clear colour coding of tenant and public parking and locating tenant and public parking on different levels.
- Exclusive usage of mobility bays by mobility permit holders
Daily/weekly activities to ensure exclusive usage
Other activities, such as inspection of mobility marking on half yearly basis
- Exclusive use of loading bays for loading purposes
Daily/weekly activities to ensure exclusive usage
Irregular activities, such as inspection of loading bay markings on half-yearly basis
- Signage discouraging other use and directing couriers and other users towards special purpose bays. Outline policies on central loading activities or loading booking system if applicable.
- On-going availability of bicycle end of trip facilities
Proposed measures to ensure that unused bicycle bays are not converted into storage and visitors are aware of bicycle bays and are able to access these.
- On-going provision of safe access and internal route to the bicycle end of trip facilities
The safe entry/exit and internal route should be shown on drawings. In addition, the plan should indicate how on-going provision is ensured, e.g. regular remarking of bicycle lane logos etc.
- Spare parking on site to be offered to the tenants or occupants of buildings not part of the complex unless the parking is to be used for private residential purposes. For example, outlining options for reciprocal or shared parking, especially outside of business hours.

Appendix D – Literature Review

Town Planning Scheme No. 6²³ (Amendments 25 and 30)

The objective of the Town Planning Scheme (TPS) is to 'require and encourage performance-based development in each of the 14 PCA's of the City in a manner which retains and enhances the attributes of the City and recognises individual PCA objectives and desired future character'. The parts of the document which relate to parking are described in the following sub-sections.

Parking ratios

Table D-1: Car parking

Uses	Cars	Per 100 m ²
Mends St Commercial Centre	1 per 17m ² gross floor area	5.9
Neighbourhood commercial centre	1 per 20m ² gross floor area	5.0
Educational Establishment - Primary School Secondary School	1.5 per classroom	-
Office	1 per 25m ² gross floor area of which not less than 10% with a minimum of 2 bays shall be reserved for visitors	4.0
Residential	As prescribed by the Residential Design Codes (Between 1-1.5 bays per dwelling depending on the plot ratio area, number of bedrooms and distance from public transport routes)	-

²³ City of South Perth Town Planning Scheme No. 6, Government and Gazette No. 62, Initial adoption 2003

TPS Amendment 25²⁴

Amendment 25, released in December 2011, describes the special provisions relating to development in the South Perth Station PCA.

Table D-2: Development controls

Element	Guidance statements	Development requirements
<p>8. Parking within Special Control Area 1 South Perth Station PCA</p>	<p>In an urban area with excellent public transport and a highly walkable environment, there is strong rationale not to apply the high levels of parking provision associated with suburban environments. Maximum car parking requirements may be applied in the future.</p>	<p>8.1</p> <p>The minimum provision of on-site car parking shall be:</p> <ul style="list-style-type: none"> (a) 0.75 bays per dwelling for Single Bedroom Dwellings; (b) 1 occupier bay per dwelling; (c) 1 bay per 50 square metres of gross floor area for non-residential land uses; (d) 0.5 bays per Tourist Accommodation unit; (e) 1 visitor bay per 6 dwellings; (f) for non-residential land uses, 2 bays for visitors or 10% of the required occupiers' bays, whichever is the greater, marked for the exclusive use of visitors; (g) 1 bicycle bay per 3 dwellings in addition to the required car parking bays; and (h) 1 bicycle bay per 200 square metres of gross floor area of non-residential plot ratio area, together with end-of-trip lockers and showers. <p>8.2</p> <p>The on-site car parking requirements of Clause 8.1 shall apply unless the Council approves a lesser number of car or bicycle bays on the basis of reciprocal parking, or due to existing off-street parking being under-utilised, where the development is consistent with the guidance statement.</p> <p>8.3</p> <p>Reciprocal Parking</p> <p>For non-residential uses only, the Council may approve reciprocal parking arrangements where it is demonstrated that:</p> <ul style="list-style-type: none"> (a) existing car parking is under-utilised and demand is unlikely to increase in the foreseeable future; or (b) proposed land uses have different periods of peak demand.

²⁴ City of South Perth Town Planning Scheme No. 6 Amendment No. 25, Gazetted 2013

Table D-3: Performance criteria

Design consideration	Performance criteria
5. Vehicle management	The applicant shall submit a traffic engineer's impact assessment report confirming that additional traffic and on - street parking demand resulting from the additional floor space produced by the variation of Elements 3 and 5 does not cause an unacceptable impact on the surrounding street network.
6. Car parking	(a) The development site shall not have car parking bays at the ground level within 10 metres of a road frontage, unless allowed by Council. (b) At least 60% of the primary street frontage is to be an active street frontage.
7. Additional community benefits	The proposed development provides a community benefit above and beyond a development complying with the requirements of Table A, by meeting at least 3 of 7 criteria which include: (g) Car parks for public use beyond the users of the building.

This amendment encourages and supports the use of active and sustainable transport modes in high density areas. Provision for car parking is on a lesser scale than in lower density areas and recognises that future development is likely to constrain the availability of land for parking further (Section 5).

TPS Amendment 30²⁵

The amendment states that the payment can be spent by the City:

- to provide additional transport infrastructure in the vicinity of the development site, or
- to acquire land for the provision of additional transport infrastructure.

The cash-in-lieu payment shall be cost estimated to include:

- the value of land on which deficit bays may be constructed
- the cost of constructing deficit bays
- the cost of constructing and installing signs, facilities or regulatory equipment in the enforcement of parking restrictions at the location.

Policy P315 Car parking reductions for non-residential development²⁶

This policy was produced in order to facilitate a reduction in the number of car parking bays required for non-residential developments, specifically for areas where a good supply of alternative transport modes exist (with the exception of the South Perth Station PCA).

²⁵ City of South Perth Town Planning Scheme No. 6 Amendment 30 Adopted 2013

²⁶ City of South Perth, Strategic Direction 3 (Housing and Land Uses, 2013)

A percentage reduction of between 5 and 20 % (with adjustment factors of between 0.80 and 0.95) is available depending on factors such as:

- distance from a rail or bus station or other transport hub
- the mix of land use within the development
- distance from a public car park and the number of available public car parking bays
- availability of end-of-trip facilities
- access to secure on-street and/or adjacent street bicycle parking.

Cash-in-lieu is also to be taken into account.

Strategic Community Plan²⁷

The City's Strategic Community Plan 2013-2023 sets out six key strategic directions. Strategy number 5, Infrastructure and Transport focuses on the planning and facilitation of efficient infrastructure and transport networks to meet the current and future needs of the community.

This is further detailed to focus on:

- best practice, management and safe systems
- the provision of safe, efficient and reliable public transport
- a pedestrian and cycle friendly environment.

All of the above aims are supported by having an efficient and sustainable approach to parking management in the City. This is the background to the development of this City-wide parking strategy.

South Perth Station Precinct – Transport and Access Strategy²⁸

The Transport and Access Strategy was produced to support planning approvals for higher density development within the South Perth Station PCA.

The report identified three broadly defined parking zones within the study area. Parking provision within those zones are shown Figure D-1 below.

²⁷ Sections 5.1-5.3 of City of South Perth Strategic Community Plan 2013.

²⁸ Report for South Perth Station Precinct – Transport and Access Strategy, GHD, 2012

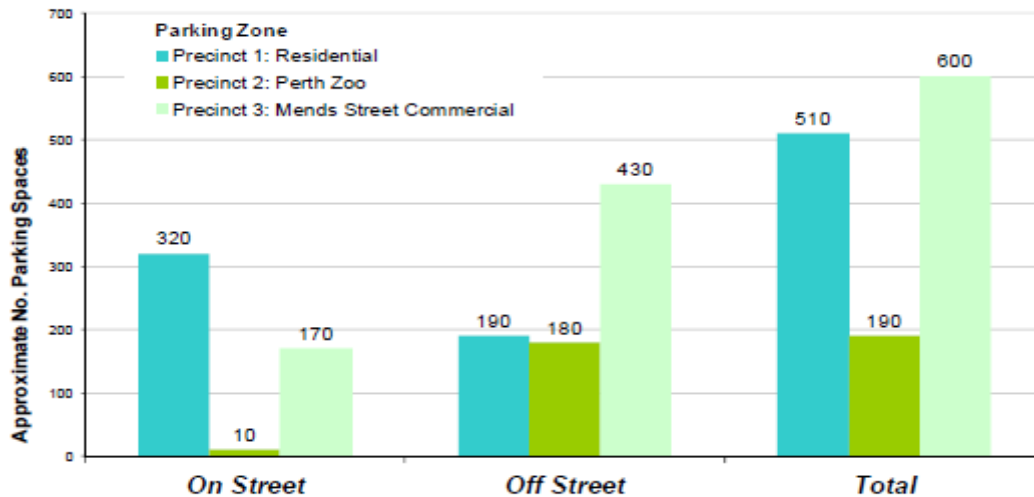


Figure D-1: Parking spaces by precinct (GHD 2012)

The report identified that parking management was an issue within the study area, especially during special events at the Perth Zoo and along the South Perth foreshore. To minimise parking issues, the report made a number of recommendations:

- Access to the precinct (including for Perth Zoo) by alternative transport modes should be encouraged.
- Park and ride activity during weekdays should be discouraged to provide car parking for local businesses.
- Four-hour ticket parking policy (alongside residential parking permits) should be introduced to discourage all day parking for the following streets:
 - Lyall Street
 - Hardy Street
 - Charles Street
 - Richardson Street
 - Melville Parade.
- A combination of traffic calming and 'no kerb' treatments should be used between the parking lanes, traffic lanes and footpaths on Mends Street to achieve slower and safer streets for pedestrians and cyclists.
- Existing parking arrangements within parking Zone 1 west of Labouchere Road should be retained if no train station is built.
- In the long term (if the station is built), changes to car parking restrictions should be introduced in the area bounded by Richardson Street, Labouchere Road, Melville Parade and Freeway Access Road..

South Perth Station PCA Plan²⁹

The City of South Perth together with the Western Australian Planning Commission commissioned a study to develop a framework which would guide development in the PCA surrounding the planned South Perth railway station on the Perth/Mandurah line.

Development and redevelopment opportunities were investigated and a South Perth Station PCA Plan was developed for the following areas:

- Scott/Richardson Streets
- Mends Street
- Railway Station.

The report recognised that there were significant risks if parking was not managed efficiently and included the following possible management approaches:

- the introduction of more ticketed or metered parking
- varied time restrictions
- resident permits
- dedicated parking for certain uses (such as Perth Zoo)
- the creation of parking space beneath Richardson Park and Windsor Park
- reciprocal parking.

To draw the above management strategies together, the report recommended that a comprehensive parking strategy for the PCA be implemented by the City to balance the needs of local businesses and residents.

State Planning Policy³⁰

The approach to lessening the overall amount of parking and using existing parking more efficiently is supported by the Western Australian Planning Commission's updated State Planning Policy (SPP) 4.2 Activity Centres for Perth and Peel (August 2010). It provides (at 5.3.2) that the planning of activity centres should:-

- take account of the need for access and parking priority accorded to different users and modes including public transport, freight/delivery, people with a disability, bicycles, pedestrians and private cars, and balance competing user needs such as workers and visitors
- promote an efficient supply of car parking by an appropriate allocation of on-street, off-street public and shared parking including cash-in-lieu and reciprocal/shared use arrangements
- prioritise access by different users and modes, e.g. central locations for short-stay parking with commuter and other long-stay parking near the edge of centres

²⁹ South Perth Station Precinct Plan, Western Australian Planning Commission, 2011

³⁰ Western Australian Planning Commission SPP 4.2 for Perth and Peel (August 2010).

- enable most parking in higher-order centres to be supplied in the form of public or common-user facilities rather than reserved for a class of users, e.g. customers of a particular site or business
- identify necessary improvements to public transport, walking and cycling infrastructure and capital and recurrent service funding needs.

SPP 4.2 also states in Section 5.3.2 that:

(3) For land within the boundary of an activity centre, the responsible authority should as a rule, set upper limits to car parking in view of opportunities for reciprocal and shared parking, availability of on-street or other public parking and the need for land efficiency.

(4) As a guide, two bays per 100m² [1 bay per 50m²] for showrooms and offices and 4-5 bays per 100m² [1 per 20-25m²] for shops. Minimums may be required, however, there should be flexibility for developers to provide less or no parking on-site and contribute cash-in-lieu towards facilities and services for common-use parking, public transport and alternative modes.

South Perth Station and Peninsula Area Parking Study³¹

This report found there was significantly more parking provided within the study area than is required to satisfy needs. The report made the following recommendations:

- Peninsula PCA
- Retain and enforce existing restrictions
- Introduce restrictions within Jetski and Narrows Bridge car parks during summer months to allow parking for recreational purposes.
- Business PCA
- Prior to the station being built
- the number of 2 hour parking bays should be reduced within Bowman, Lyall, Hardy and Charles Streets and the remaining spaces should be unrestricted
- do not introduce ticket parking at Richardson Reserve prior to the opening of the train station
- After the station is built
- provide cheap all day parking to allow park and ride to the CBD
- introduce residential parking permits
- provide all day parking at the southern and northern ends of Richardson Reserve
- introduce four hour ticket parking within the remaining streets
- provide cheap six hour parking for Zoo and Golf Club patrons

³¹ South Perth Station and Peninsula Area Parking Study, Uloth and Associates, 2009

- parking in Amherst Street and the Sports Club car park should remain free and unrestricted (but be monitored).
- Commercial PCA
- Mends Street
- do not provide long stay parking
- enforce existing restrictions
- permit all day parking on weekdays within Parking Station SPE11
- Perth Zoo
- monitor parking in the Mill Point Road car park and enforce 'Zoo only' parking
- Windsor Park car park to operate as is until after the station is built
- Parker Street
- remove existing restrictions
- introduce resident parking.

Draft Integrated Transport Plan (ITP)

The principles of the ITP are to:

- Reduce the need to travel by car and the length of trips undertaken.
- Provide a choice of travel options for South Perth residents and other network users and promote sustainable choices.
- Make it safe and easy for people to access goods, services and destinations, particularly by public transport, walking and cycling.
- Encourage an increase in the share of trips by public transport, walking and cycling.
- Demonstrate leadership.

Recommended strategies relating to parking issues include:

Issue		Proposed Response Plan	Actions	
A1	Significant traffic generators have the potential to increase traffic flows and external-internal-external trips. Associated with this is a potential increase in parking and public transport demands.	Increased focus on public transport and alternative modes of transport (through the TravelSmart program) to reduce the reliance on motor vehicles.	A-1-7	Ensure the City's parking plan is developed in conjunction with the operators of the major traffic generating developments in the City.

A17	Failure to adequately plan for parking (availability, demand, and planned capacity) may inconvenience users or may introduce potential hazards to road users.	Develop a City Parking Plan that balances the needs of car users with the desire to promote alternative transport modes.	A-17-1	Prepare a Parking Plan for the City incorporating current and future parking needs for both local and commuter parkers as well as enhancing the role of public transport in assisting the management of parking demand.
B13	Inappropriate management of commuter parking and failure to provide long term parking for South Perth commuters to the Perth CBD (e.g. Mends St and Canning Bridge) may detract from the use of alternative transport.	Devise a City-wide Parking Plan that balances the needs of all transport modes, without discouraging the use of alternative transport modes (other than the private car).	B-13-1	Prepare a Parking Plan for the City incorporating current and future parking needs for both local and commuter parkers as well as enhancing the role of public transport in assisting the management of parking demand.
E3	Significant traffic generators such as the Mend St PCA have the potential to increase traffic flows. Associated with this is a potential increase in parking and public transport demands.	Develop vibrant activities within the City.	E-3-1	Review the City's planning strategies and guidelines to ensure they encourage the use of alternate transport modes.

The above principles and actions demonstrate a commitment to supporting alternative transport modes in the City and recognises that parking is only one part of the transport mix.

Appendix E – 6.3A Cash in Lieu of Car Parking Bays

CITY OF SOUTH PERTH TOWN PLANNING SCHEME NO. 8

NOTES :

6.3A Cash in Lieu of Car Parking Bays

- (1) For the purposes of this clause, the term 'deficit bays' means the difference between:
 - (a) the total number of car parking bays required to be provided on the development site pursuant to clauses 6.3(1), 6.3(2) and 6.3(3) or such lesser number of bays as the Council may require having regard to clauses 6.3(4) or 6.3(5) or a planning policy; and
 - (b) the number of bays which an applicant proposes to provide on the development site with respect to a particular Use.
- (2) An applicant for planning approval for a non-residential development may, if Council agrees, make a cash payment to the Council in lieu of providing one or more of the deficit bays.
- (3) Before the Council agrees to accept a cash payment in lieu of any deficit bays, it must have a reasonable expectation that the payment can be spent by the City:
 - (a) to provide additional transport infrastructure in the vicinity of the development site; or
 - (b) to acquire land for the provision of additional transport infrastructure.
- (4) The amount of the cash-in-lieu payment shall be the cost estimated by the Council to provide the deficit bays. The cost may include:
 - (a) the value of land on which the deficit bays may be constructed, as estimated by a licensed valuer appointed by the Council;
 - (b) the cost to the Council of constructing the deficit bays; and
 - (c) the cost to the Council of constructing and installing signs, facilities or equipment to regulate the permissible period during which a vehicle may occupy the deficit bays.
- (5) Any costs incurred by the Council in estimating the amount of a cash-in-lieu payment shall be paid by the applicant seeking planning approval.
- (6) The cash-in-lieu payment shall be payable in such a manner and at such time as Council determines.
- (7) Cash-in-lieu payments received by Council under this clause shall be paid into appropriate funds to be used for the provision and maintenance of transport infrastructure within reasonable proximity to the development site. The cash-in-lieu payment may be used to reimburse Council for any related expenses, including loan repayments, which it incurs in providing and maintaining transport infrastructure.
- (8) For all comprehensive new development within Special Control Area SCA1 South Perth Station Precinct, cash payments in lieu of providing the minimum number of car parking bays on the development site as prescribed in Table A of Schedule 9 are not permitted.

NOTES ON CLAUSE 6.3A :

1. Clause 6.3A added by Amendment No. 30 (GG 12.9.2014)
2. Refer also to clause 6.3 for other car parking provisions.
[Notes added 12.9.2014]

Appendix F – Policy P315 Car Parking Reductions for Non-Residential Development



Policy P315 Car Parking Reductions for Non-Residential Development

Responsible Business Unit/s	Development Services
Responsible Officer	Manager Development Services
Affected Business Unit/s	Development Services

POLICY OBJECTIVES

To allow a reduction of the number of car parking bays required for non-residential Uses, where there are significant opportunities to promote alternate modes of transport or utilise existing transport and car parking infrastructure.

POLICY SCOPE

- This policy may be applied to any non-residential development or change in use which require the provision of car parking, other than the South Perth Station Precinct, or any other defined locality where specific car parking provisions apply in the form of the City's Scheme or Policies.
- In the case of a mixed use development, this policy shall only apply to the non-residential component.
- This Policy augments and is to be read in conjunction with the provisions of TPS6.

STATUS OF POLICY

This policy is a planning policy prepared, advertised and adopted pursuant to the provisions of clause 9.6 of TPS6. Under clause 1.5 of TPS6 all planning policies are documents supporting the Scheme.

DEFENITIONS

Comprehensive new development

As defined in TPS6, 'Comprehensive new development' means "a development which is determined by Council not to be a minor alteration, addition or extension to an existing development".

Public car parking place

A car parking facility listed under Table 3 of this policy. The number of car parking bays used for calculations shall not include motorcycle bays, trailer bays, on street bays, or any car bay allocated exclusively to a specified user group.

POLICY STATEMENT

The car parking requirement in Table 6 of TPS6 may be reduced by the City of South Perth through the application of adjustment factors (outlined in Table 1 below), reflecting particular site and design factors. Such factors are to be justified by the Applicant.

Tables 2 and 3 are included for guidance purposes only. Also refer to the cash-in-lieu provisions contained within TPS6. The number of car parking spaces within an existing public car parking place within 400 metres of the proposed development should also be confirmed on site.

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Policy Number: P315

Council Adoption: 28 May 2013, 02/15

Reviewed/Modified: 03/16

Relevant Council Delegation: DC690 Town Planning Scheme 6

Relevant Delegation: N/A

Relevant Management Practice: N/A

Table 1: Permitted Car Parking Reduction

	Percentage Reduction	Adjustment Factor	Factors to be successfully justified by the applicant to the City of South Perth
1a or 1b	20 per cent 15 per cent	0.80 0.85	The proposed development is within 400 metres** of a rail station; or The proposed development is within 800 metres** of a rail station.
2	15 per cent	0.85	The proposed development is within 400 metres** of a bus stop/station.
3	10 per cent	0.90	The proposed development is within 400 metres** of a ferry terminal.
4	20 per cent	0.80	The proposed development contains a mix of uses, where at least 45 percent of the gross floor area is residential, provided that the required provision of visitor bay's for each use are made available to visitors at all times.
5a or 5b or 5c or 5d	20 per cent 15 per cent 10 per cent 5 per cent	0.80 0.85 0.90 0.95	The proposed development is within 50 metres** of one or more existing public car parking place(s) with more than 50 car parking spaces; or The proposed development is within 400 metres** of one or more existing public car parking place(s) with more than a total of 75 car parking spaces; or The proposed development is within 400 metres** of one or more existing public car parking place(s) with more than a total of 50 car parking spaces; or The proposed development is within 400 metres** of one or more existing public car parking place(s) with more than a total of 25 car parking spaces.
6 or 6a	10 per cent 5 per cent	0.90 0.95	The proposed development provides 'end-of-trip' facilities* for bicycle users, in addition to any facilities required under Clause 6.4(5); or Secure on-site and/or adjacent street bicycle parking (facilities within public view to which at least five bicycle frames and wheels can be locked)***.

Note:

The calculated total adjustment factor is applied to the car parking requirement provisions outlined in Table 6 of TPS6. The maximum adjustment factor, where all factors are justified to the maximum extent is 0.35 (0.80 x 0.85 x 0.90 x 0.80 x 0.80 x 0.90 = 0.352512).

If the resultant number of deficit car parking bays is less than or equal to 0.5 bays, no parking bays or cash-in-lieu of parking is required.

* Minimum requirement: 1 male and 1 female shower in separate change rooms with at least one secure clothes locker per change room.

** This distance means the most direct route via a gazetted footpath not just the direct route.

*** Only relates to those applications which are not required to provide bicycle parking under the requirements of Table 6 of TPS6.

Table 2: Calculating the number of car bays subject to cash-in-lieu payment

TPS6 car parking requirement	R
Apply the total adjustment factor	A
Minus the car parking proposed to be provided on site	P
Minus the most recently approved on site car parking shortfall (after taking into account relevant adjustment factors), unless the proposal is deemed to be a comprehensive new development	S
Resultant number of car parking bays subject to cash-in-lieu payment	= R x A - P - S

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Policy Number: P315

Council Adoption: 28 May 2013, 02/15

Reviewed/Modified: 03/16

Relevant Council Delegation: DC690 Town Planning Scheme 6

Relevant Delegation: N/A

Relevant Management Practice: N/A

Table 3: Public Car Parking Places

Ref.	Name	Street	Suburb	Parking Bays
Car Park 7	Angelo Street	Angelo Street	South Perth	63
Car Park 8	Anstey Street	Anstey Street	South Perth	28
Car Park 11	Narrows Bridge	Mill Point Road	South Perth	18
Car Park 12	Mill Point Road Boat Ramp	Mill Point Road	South Perth	18
Car Park 13	Melville Place	Melville Place	South Perth	16
Car Park 14	Boat Shed Café	Coode Street	South Perth	130
Car Park 15	Coode Street Boat Ramp	Coode Street	South Perth	15
Car Park 18	Collins Street	Collins Street	South Perth	32
Car Park 22	Comer Reserve	Melville Parade	Como	45
Car Park 23	Comer Reserve	Eric Street	Como	12
Car Park 33	Manning Senior Citizens	Downey Drive	Manning	61
Car Park 35	Welwyn Ave	Welwyn Ave	Manning	56

LEGISLATION/ LOCAL LAW REQUIREMENTS

City of South Perth Town Planning Scheme No. 6.

**Record of Adoption of Policy P315:
CAR PARKING REDUCTIONS FOR NON-RESIDENTIAL DEVELOPMENT**

<i>Revision No</i>	<i>Description</i>	<i>Endorsed by Council</i>

Page 3 of 3

Policy Number: P315

Council Adoption: 28 May 2013, 02/15

Reviewed/Modified: 03/16

Relevant Council Delegation: DC690 Town Planning Scheme 6

Relevant Delegation: N/A

Relevant Management Practice: N/A