CITY CENTRE CAR PARKING MANAGEMENT PLAN

November 2012

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Luxmoore Parking Consulting

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SUMMARY

The population of Geraldton, currently at approximately 39,000, is forecast to grow significantly by 2020, and with this growth, the city's transport system needs to reflect convenience and ease of traffic circulation, enhanced pedestrian mobility, slower speeds, more emphasis on multimodal connectivity and more convenient parking.

Taking cognisance of the objectives of the City Centre Transport Planning & Car Parking Strategy, the study considers a number of parking issues in the city centre and the major findings associated with each. These include the ample availability of public parking at times of peak demand, the need to focus on making better use of the available parking rather than adding to the supply, and the need to use parking pricing as a Travel Demand Measure.

Parking must be seen as an essential part of the overall transportation system and not a stand-alone service. Parking management should consider the needs of developers and retailers as well as residents and special interest groups such as schools that may cause or be affected by parking spillover. Planning should also include different users such as motorcycles and bicycles.

Parking has a considerable cost to a community and parking issues are usually categorised in terms of supply, or management. Supply issues deal with too few spaces being available and the expectation that a public or private organisation must provide more spaces. Management issues relate to available facilities not being used effectively. Better management will result in more efficient use of parking resources as well as the achievement of more strategic planning objectives.

The City of Greater Geraldton (CGG) does not have a parking supply problem as much as a parking management problem. Parking is not controlled effectively and in line with the CGG's strategic goals.

In Geraldton unless the anomaly of free parking on-street is eliminated, parking as a tool to change commuter habits will not be achieved and there will be no incentive for property owners to provide extra parking spaces. Additionally, the small income generated from off-street parking will not sustain any significant investment in improved transport infrastructure or an increase in other modes of transport. It is necessary for Geraldton to ensure that current and future short-term parking areas are in fact utilised in the manner for which they are demarcated. It is also recognised that there is a need for a transition period as the CGG and the community cannot be expected to change overnight from their current parking practices.

It has been identified that there are a number of benefits for the community and for developers if the CGG builds deck car parks on land it either owns or can acquire inexpensively. This solution will ensure greater flexibility for developers, more shared parking, better urban design and improvements in pedestrianisation and traffic flow as a result of increased consolidation of parking. A deck car park feasibility model shows that car park construction is a significant long-term investment and once built, its use is difficult to change.

New technology, improved signage and revised pricing are all needed to ensure greater compliance with parking regulations and to sustain an available supply of parking for bona fide patrons of the businesses and destinations in the city centre.

Parking is increasingly recognised as not only an essential part of overall land development and the transport system, but also as a means to realise various community objectives such as reducing traffic congestion, achieving environmental goals and in particular, attracting private investment.

CONTENTS

Table of Contents

1. INTRODUCTION

One of the key strategies of the City of Greater Geraldton's (CGG) Community Strategic Plan 2011 – 2021, is to facilitate the Geraldton city centre as the heart of the region. An important step is to ensure all residents and visitors to the city have a variety of low cost or free transport options to choose from.

The CGG appointed Luxmoore Parking Consulting to develop a sustainable parking management plan to ensure residents and visitors in Geraldton have better access and more choice. The plan aims to reduce congestion in the city centre as it expands and to provide certainty for investors.

It is clear that access to car parking is essential for the success of most commercial developments. It is acknowledged that availability of convenient car parking is one of the major influences on how or whether people travel to a particular place.

This report incorporates the development of a suite of integrated policy objectives for car parking and sustainable modes of alternative transport that support the central commercial area. The findings, options and recommendations will allow the CGG to determine the optimum quantity and most appropriate management regimes for car parking in the city, taking into account forecasting of future needs, the need for ready parking access, the encouragement of sustainable modes of transport and the CGG's desire to continually improve the amenity of the area.

It is acknowledged that in the last 10 years there has been an increasing trend towards more efficient use of existing transport infrastructure as an alternative to expanding roads and parking facilities. This technique is 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 modes (such as walking, cycling, car sharing and public transport), particularly under congested conditions. Environmental concerns and rising fuel costs are factors prompting a reduction in the reliance on private motor vehicles.

The challenge for the CGG is to find a balance between adequate parking supply to ensure the vitality of the businesses in the city and the trend towards more efficient use of transportation infrastructure and TDM techniques.

Figure 1: Parking management paradigm shift

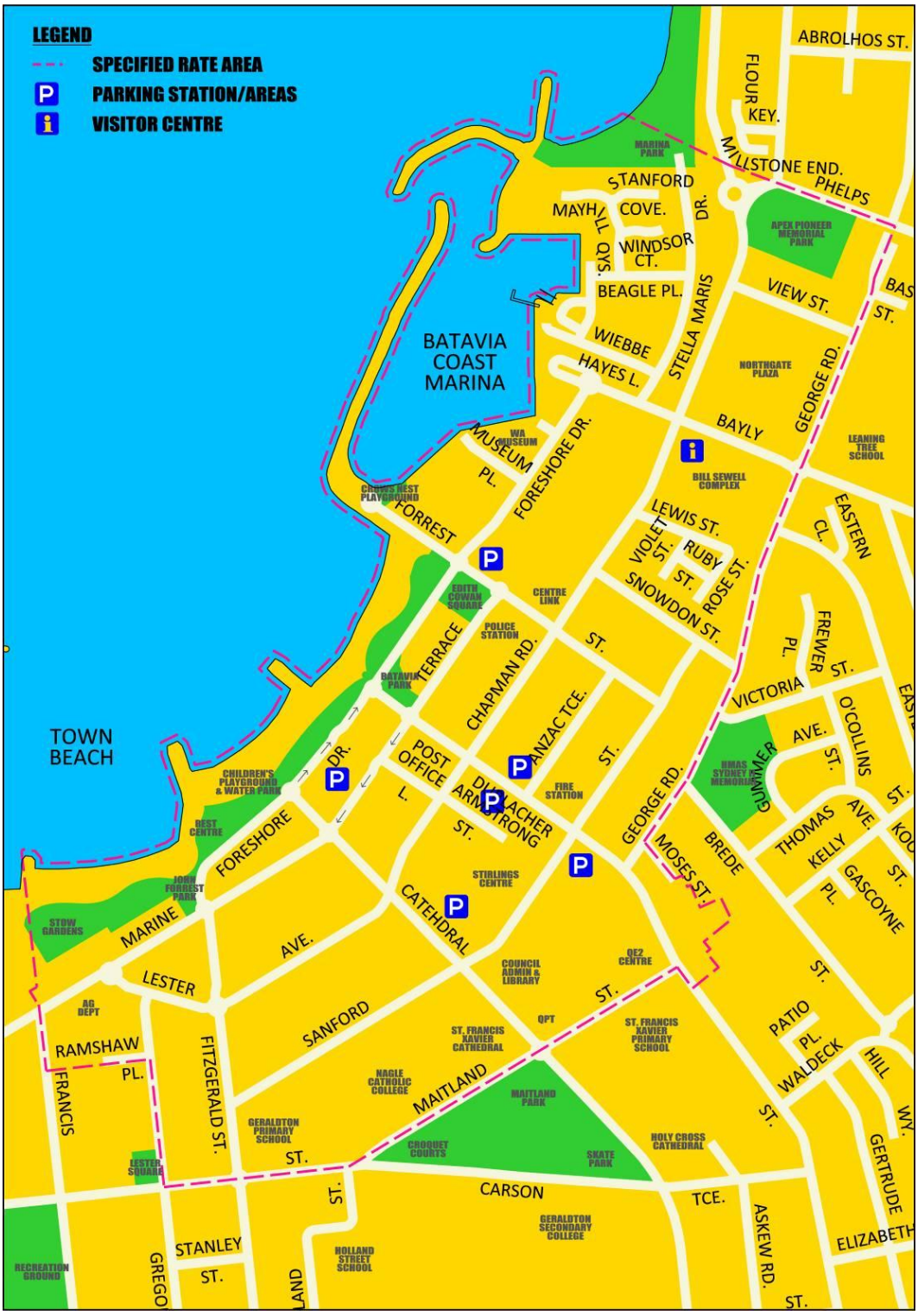
Parking management represents a paradigm shift a change in the way parking problems are defined and potential solutions evaluated	
Old paradigm	Motorists should nearly always be able to easily find, convenient, free parking at every destination. Parking planning consists primarily of generous minimum parking requirements, with costs borne indirectly, through rates, taxes and building rents.
New paradigm	Parking facilities should be used efficiently, so car parks at a particular destination may often fill (typically more than once a week), provided that alternative options are available nearby, and travellers have information on these options. This means, for example, that car parks have a sign describing availability, that motorists may often have a choice between paid parking nearby, or free parking a few blocks away. It also requires good walking conditions between parking facilities and the destinations they may serve. Parking planning can therefore include shared parking, parking pricing and regulations, parking user information, and improved pedestrianisation.

Source: Victoria Transport Policy Institute, BC, Canada, Parking Management, Evaluation and Planning – Todd Litman. April 2006.

2. CITY CENTRE BOUNDARY

The city centre area for the purpose of this report is shown on the map below and is the same area that a specified area rate is charged for car parking. It generally includes the land zoned "City Centre" and "Marina" in Town Planning Scheme No. 3 (Geraldton).

Figure 2: City centre boundary



3. CITY CENTRE TRANSPORT PLANNING & CAR PARKING STRATEGY

Prior to consideration of parking and sustainable transport issues, it is worthwhile to summarise pertinent aspects relating to parking in the CGG's City Centre Transport Planning & Car Parking Strategy document.

3.1 OBJECTIVES

The objectives of the City Centre Transport Planning & Car Parking Strategy are to:

a) Provide an adequate supply of short and long-term car parking spaces that are conveniently located and are easily accessible to support the desired growth of the city centre;
b) Develop an integrated public and private car parking network, which is flexible to accommodate changes in car parking demands over time, however does not detrimentally affect the environment, traffic or pedestrian flows;
c) Ensure that the provision of car parking facilities does not diminish the urban character, cause a loss of building stock or result in a poor urban design outcome;
d) Ensure that an over-supply of car parking does not occur that discourages alternative forms of transport and actively promote these other sustainable modes of transport within the city centre;
e) Control and manage the car parking supply/demand balance through ownership of properties for the establishment of publicly available parking facilities; and
f) Actively encourage the minimisation of greenhouse emissions by designing parking and other associated facilities so as to encourage the use of alternative modes of transport (such as public transport, bicycling and walking).

3.2 CITY CENTRE CORE AND OUTER AREA

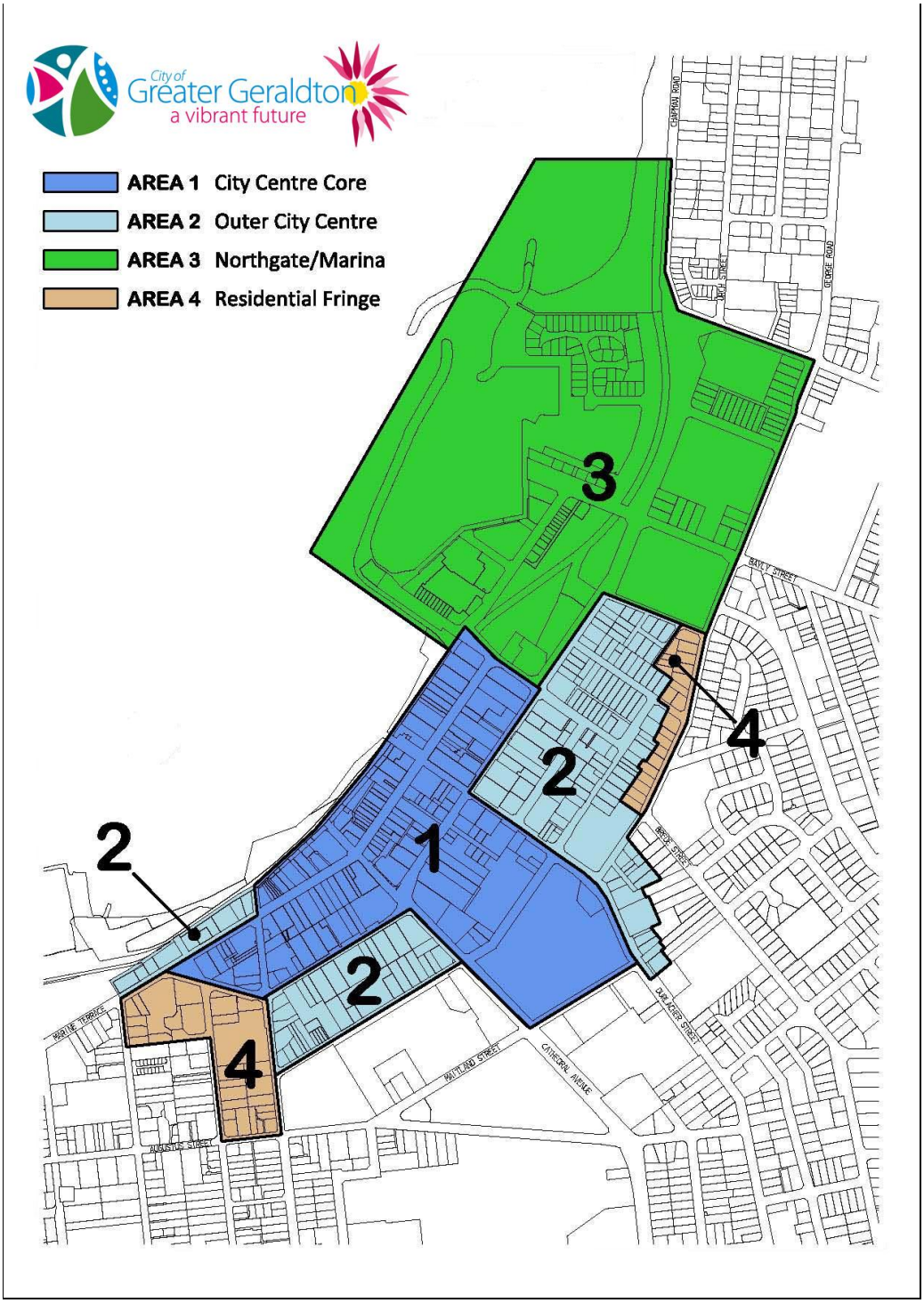
The general intent in the city centre core is to provide short-term car parking facilities, both kerbside and in car parking stations, in the pedestrian-oriented inner core area and to operate these in such a manner as to support the commercial and retail viability of the city centre. All day car parking may be made available to increase occupancy rates.

For the outer city centre area, the intent is to provide short-term kerbside facilities, long-term car parking stations and promote pedestrian access to the city centre core. Additionally there is a desire to ensure accessibility for residents to properties and to restrict long-term (non-residential) parking in residential areas. The Strategy is intended to prioritise the utilisation of public car parking facilities within the city centre as follows:

1. Shoppers;
2. Tourists and visitors; and
3. All day parkers and workers.

Night entertainment patrons will generally have reciprocal parking from the above users. Short-term parking will be given priority within the city centre core precinct to ensure priority groups 1 and 2 as prescribed above are well catered for. The greatest demand for long-term city centre parking comes from city centre workers. The CGG should encourage strategies promoting the use of all day car parking facilities located on the immediate fringes of the city centre, which are linked by strong pedestrian connections that are safe, comfortable and vibrant. In the long-term an effective and convenient public transport network may complement this.

Figure 3: City centre core and outer area



Source: City of Greater Geraldton City Centre Transport Planning & Car Parking Strategy. December 2011.

4. PARKING ISSUES AND FINDINGS

This section considers a number of parking issues in the city centre and summarises the major findings associated with each.

4.1 COUNCIL'S ROLES IN PARKING

The CGG provides and maintains parking facilities as a community service to improve road safety, traffic safety and pedestrian safety, user convenience, and environmental and residential amenity. The CGG's current role in parking covers a range of responsibilities but can be broadly categorised as managing the supply and use of parking as follows:

- Supplying and maintaining public on and off-street parking facilities throughout the city;
- Regulating and enforcing the use of this public parking through time limits and pricing;
- Regulating and enforcing the use of private parking through management agreements (although this does not occur consistently in the city at present); and
- Regulating the supply of private parking through the City Centre Planning Policy, which requires developments to provide a certain number of car park spaces.

Figure 4 illustrates CGG's existing roles in parking as described above.

Figure 4: Council's existing roles in parking

	Public	**Private**
Supply	On-street Public off-street	Off-street (i.e. parking supply through the planning process)
Use	Regulation (time limits, pricing and enforcement)	Management agreements to regulate private off-street parking facilities

Parking enforcement plays a vital role in ensuring that parking resources are used in the best interests of the community. Businesses require adequate parking for patrons with a regular turnover of vehicles. Near-capacity parking (with little vehicle turnover) discourages potential shoppers and harms trade and potentially the local economy.

4.2 PUBLIC PARKING SUPPLY

Detailed city centre parking surveys have been undertaken in Geraldton in May 2006 and again in February 2008. The 2008 survey counted a supply of 1,251 spaces comprised of 589 on-street, and 662 in public car parks. This figure represents an increase of 192 spaces over the supply of 1,059 counted in 2006.

Of greater significance than the stock of parking is its utilisation, which is demand for the parking measured at times of peak demand. Regular peak demand does not necessarily include occasional seasonal demand such as just prior to Christmas. It is estimated from the surveys that peak demand in the city centre regularly occurs on a Thursday and a Friday between approximately 11am and 2pm.

The data indicates that:

- The highest total parking occupancy for the city centre occurs on Fridays between 12 and 12.30 pm;
- The total occupancy of the 6 public off-street car parks was 62% on Thursday 11 May 2006, 66% on Friday 12 May 2006 and 66% on Thursday 7 February 2008. The 4% increase on Thursdays between 2006 and 2008 occurred despite an increase of 64 spaces in the supply of parking in the public parking car parks;
- Between the two Thursday surveys there was a small reduction (20 spaces) in the occupancy of on-street time restricted spaces indicating that some parkers may have switched to the public car parks; and
- Although the occupancies of some on-street parking and public off-street car parks is close to or exceeds, capacity, overall there is currently ample public car parking in the Geraldton city centre.

4.2.1 Findings

- The highest demand for parking in the city centre occurs on Fridays between 12.00 and 12.30 pm;
- At no time are more than 75% spaces occupied. At all times, there are at least 25% (312) spaces vacant for public parking; and
- Peak occupancy of public off-street car parks only reaches 66%. There are always more than 200 spaces available off-street.

This indicates a need to focus on making better use of the available parking over the short-term rather than adding to the supply.

It is valuable to continue with the surveys every 2 years based on the same geographic area in order to compare changes in demand and supply.

4.3 LONG AND SHORT-STAY PARKING

Objective a) (refer to Section 3.1 above) in the City Centre Transport & Car Parking Strategy requires an adequate supply of conveniently located short and long-term parking. Figures 5 and 6 show the current time restrictions in CGG provided parking. Note the Department of Transport Marina Car Park, as advised by the Department, is currently intended for users of the adjacent state-managed facilities.

4.3.1 Short to medium-stay

Short – to medium-stay parking is required for business and retail needs. Generally:

- Short-stay parking (up to 2 hours) is provided for shopping areas and medical and professional suites; and
- Medium-term parking (between 2 and 4 hours) is provided for district centre parking, sports facilities, entertainment centres, hotels and motels.

4.3.2 Long-stay / commuter

Long-stay parking (4 – 24 hours) is provided to cater for tenants, employees, contractors and other drivers.

The surveys undertaken by the CGG to date are valuable, but could easily have expanded to provide additional data that will assist in the management of parking. The surveys only counted capacity and occupancy. They did not record duration of stay, compliance, or origin or destination of parkers.

While the CGG rangers undertake regular patrols, there is no evidence that short-term parking areas are not abused by long-term parkers. During a site visit on 18 November 2009, it was noted that many cars were parked for longer than the signed time restriction, while other drivers were observed to be feeding the meters only after a CGG vehicle stopped at the car park. Anecdotally, some retailers advise that staff park close to their places of work in short-term zones.

The CGG requires empirical data to reconcile with anecdotal information about parking demand and supply in the city centre. This data will be useful in many areas, including the development of policy and planning regulations, the determination of where parking supply is critical and the setting of time and payment controls. In particular it will assist in responding to many of the parking issues raised by different stakeholders.

More detailed surveys will provide additional information on car park and on-street usage, including matching the times of entry and exit of individual vehicles, and the opportunity for the CGG to obtain information on the postcode origin of vehicles using different parking facilities.

4.3.3 Findings

- Commuter parking in short-term parking areas does not appear to be actively discouraged; and
- The two yearly parking surveys should be expanded to obtain additional data on compliance, duration of stay and origin or destination of drivers (shows in Appendix E).

4.3.4 Cost of providing parking

Each on-street kerbside parking space requires 15.6m^2 with a 2.6m wide encroachment into the roadway effectively reducing the roadway by one lane.

Off-street parking generally requires 29m^2 per space which includes an allowance for aisles and vehicle access. With the price of commercial land in the city centre approaching $1,250 per m^2 (July 2008), the cost of each off-street at-grade space is at least $36,250 (at-grade 29 x $1,250) plus the cost of construction, an additional $3,000. Thus the provision of every 25 off-street parking spaces represents an opportunity cost of >$1,000,000 foregone by the provider of the parking.

The cost of constructing multi-deck parking is much higher at >$31,306 per space, plus the cost of the land.[1] A three level deck car park in the CBD with 120 spaces will cost $3.8m to build (in 2010 dollar figures), plus the cost of purchasing the land, $1.5m. This is equivalent to $44,000 per space.

4.3.5 Findings

[1] Rawlinsons. Construction Handbook 2009 (allowing a 1.10 x premium above Perth for Geraldton and land area of 9.73m^2 per space for 3 levels above ground.

- When considering the purchase or construction of additional parking capacity, it is important to be aware of the true cost per space and any opportunity cost foregone if the land is used for parking; and
- It is far easier and cheaper to make better use of existing parking capacity than to construct more spaces.

4.4 SHARED PARKING

It cannot be reasonably expected that every development fully provides all its own parking facilities. These must be integrated and parking resources in a city centre should be shared in order to maximise effective use of the resource.

Shared parking takes advantage of the fact that most parking spaces are only used part time by a particular motorist or group, and many parking facilities have a significant portion of unused spaces, with utilisation patterns that follow predictable daily, weekly and annual cycles. Parking can be shared among a group of employees or residents. It can also be shared among different buildings and facilities in an area. Land uses such as offices, professional services, medical facilities and banks typically have weekday peaks, whereas restaurants and theatres have evening peaks. Shops and malls may have weekend peaks.

Acceptable walking distances[2] to shared parking include distances of:

- Less than 250m for residents, professional services and medical facilities (< 3 minutes);
- Less than 350m for general retail, employees, restaurants etc. (< 5 minutes); and
- Less than 500m for overflow parking and major events (< 8 minutes).

Figure 5 shows a radius of 250m and 350m from a point taken as the centre of the city, being the Civic Centre in Sanford Street. Parking Station No's. 3, 4 and 5 are all within 350m (< 5 minute walk) of the Art Gallery. A second radius of 250m is shown from a point being the intersection of Marine Terrace and Durlacher Street. Parking Station No's. 1, 3 and 4 are within 250m (< 3 minute walk) from the majority of the Marine Terrace retail strip.

2 VTPI 'Online TDM Encyclopaedia' (http://www.vtpi.org/tdm)

Figure 5: Walking distances

There are large number of pockets of off-street parking in Geraldton which are not well utilised, yet the public is not encouraged to park in these as they appear to be restricted for the specific use of only certain drivers or drivers are unaware of their availability.

There are many parking areas which have vacant spaces that could be used for short-term shared parking. The car park adjacent to the CGG council offices opposite Stirlings shopping centre appears to be restricted to Council vehicles and staff only. However, other signs in this car park clearly state that the restriction only applies between 8.30am and 5.30pm Mon – Fri (refer to Figures 8 and 9). It does not apply at night and on weekends. The 50 spaces in this car park are well located for both Woolworths on a Saturday and for the Queens Park Theatre at night, yet it is not clear to the public that this parking can be shared with these two venues after hours and on weekends.

This reserved parking approach results in pressure on commercial tenants and the CGG to provide additional parking, which is expensive and not fully utilised. This has a substantial cost to the community despite there being vacant spaces in the immediate vicinity. Another example of shared parking potential for drivers accessing the city centre is the Francis Street car park which is less than 400m from many retail traders.

4.4.1 Findings

- There are many opportunities for shared parking in the city centre; and
- The CGG as the owner/provider of much of the off-street parking should actively encourage shared parking particularly close to major parking generators.

Figure 6: Council parking signage

Figure 7: Car park restriction times

4.5 FREE PARKING OR USER PAY

Large areas of on and off-street parking in the city centre are free. The debate on whether to provide free parking at any time is often instigated by the demands of vested interests who appeal to the CGG to provide free parking as a counter to the supposed attractiveness of free parking at competing retail centres. This request assumes that it is the free parking that attracts shoppers to the other centres.

It is important to recognise that there is no such thing as free parking. The CGG and ratepayers are subsidising parking on valuable land that could be generating income or could be put to other uses. Issues such as the opportunity cost of off-street parking and forfeited interest should also be considered. The true cost of parking is hidden in higher development costs, and consequently higher rates, rents and prices to consumers.

Drivers will not travel to a city centre simply because the parking is free. Parking is a means to other ends. If the CGG offered free casual parking at all parking spaces from 10am to 3pm each day, it is doubtful whether this alone in the long-term would attract drivers away from other centres. Drivers want the confidence of being able to find a parking space close to their destination. They generally would rather pay for this convenience than endure the uncertainty of not finding a space.

The user pay principle requires that drivers pay for the cost of providing, operating and maintaining the parking facilities they use.

Free or very cheap on-street parking encourages drivers to cruise the streets generating pollution and noise, increasing the potential for collision and wasting fuel. Bus services are not free, therefore by offering large areas of free parking, the CGG is not providing any incentive to parkers, especially commuters, to convert and make use of alternative means of transport. Similarly, there is no incentive to the private sector to consider the provision of additional parking in areas which are surrounded by free parking.

Consideration should be given to introducing on-street paid parking in high demand areas such as Marine Terrace. Paid parking in these precincts will increase the turnover (churn) of available parking spaces and provide a disincentive to long-term parkers.

4.5.1 Findings

- The concept of free parking in Geraldton is a misnomer. Ratepayers are funding the purchase, provision and maintenance of parking that is provided free;
- The annual growth in registered vehicles as the population of the city expands will create additional demand for parking;
- The continued provision of free parking will encourage more car use and provides no incentive to walk, cycle or use another mode of transport; and
- Private sector developers will not be inclined to provide additional parking if competing locations around them are available for free.

4.6 PARKING PRICING

There is some degree of acceptance of paying for parking in the city centre. Fees are charged at six CGG car parks are shown in Figure 8.

Figure 8: City of Greater Geraldton parking fees – December 2012

Parking Station No.	Fee	1st hour	All day (9 hours)
3, 4, 5 and 6	1.20 / hour		$7.00
1	1.20/hour		Max 2 hour parking
2 library car park	1.20/hour	15 min free	Max 2 hour parking
On-street	No charge	Free	Time Restrictions
Car park 3,4,5 and 6	All day permit		$25.00 per week

There are also a number of car parks provided by the CGG and by private owners that are subject to various time restrictions, but do not charge for parking.

Charging for parking in the city centre is made more difficult by the CGG offering significant amounts of free parking. On-street parking meters were installed in the Geraldton city centre in 2001 but these were removed in December of that year.

On-street kerbside parking is the most convenient parking in any city centre and as such, it should be priced to achieve three main objectives:

- To encourage the turnover of parking spaces several times a day;
- To encourage users towards cheaper parking in off-street car parks; and
- To discourage long-term stays.

It is submitted that free on-street parking in the Geraldton city centre which has been in effect since 2002, achieves none of these objectives. Furthermore, the financial viability of any future car park, which may be considered by the CGG or a private developer, will be seriously disadvantaged unless realistic parking fees are implemented for parking on the street in the city centre.

The application of pay parking in car parks adjacent to main streets while not charging for parking on the street itself is anomalous. As a guiding principle, on-street parking charges within 250m of public off-street car parks with pay parking should be set to at least 15% above the off-street fee. This fee is to reflect the premium nature and convenience of on-street parking and to provide an incentive for drivers to park off-street. The CGG has received regular requests from Marine Terrace traders to increase parking enforcement in order to create more churn of parkers. Additionally, they have mentioned that parkers would prefer to pay a small fee to park than incur a $75 infringement.

Comparative fees in other urban areas are shown in Figure 9.

Figure 9: Comparative parking fees

City		Fee	1st hour	All day (9 hours)
Albany		Time limits only		
Ballarat				
Bunbury	on-street	50c / half hour	$1.00	n/a
	off-street	80c / hour	80c	$3.60
Dubbo		Time limits only		
Joondalup (town centre)		60c / hour	60c	$3.00
Kalgoorlie		Time limits only		
Launceston		60c – 90c / half hour	$1.00 - $1.90	$2.00 - $5.00
Mandurah (town centre)		Time limits only		
Midland (town centre)		First 2 hours free		$3.00

4.6.1 Findings

- Free on-street parking in the city centre is contrary to Geraldton's strategy of prioritising public car parking for short-term shoppers and visitors;
- It discourages churn of parkers in high demand areas;
- It will not encourage minimisation of greenhouse emissions;
- It does not motivate drivers to come into the city;
- It is the reason for on-street spaces having a higher occupancy than off-street parking; and
- In the long-term it discourages the private sector from considering the provision of additional parking facilities.

4.7 FLEXIBLE PRICING

Flexibility in the setting of parking fees and the hours to which paid parking applies is fundamental to the success of any parking business, even CGG provided parking with a broader community focus. Parking demand is dynamic and responds to different external events; the weather, availability of public transport, circumstances in the vicinity of the car park and demand at other car parks. This flexibility provides the ability to increase fees to certain types of parker to discourage their patronage, e.g. increasing all day rates in December to create more capacity for casuals, but it also permits the ability to decrease fees to encourage particular parkers at specific times, e.g. at night and on weekends and over extended public holiday periods when general demand is lower.

Flexibility will allow CGG to offer discounts in conjunction with retailers and to provide businesses the option of paying towards the cost of their customers' parking.

4.7.1 Finding

- To be able to easily vary parking fees and provide a better level of service, the CGG needs to consider the implementation of new parking technology.

4.8 COMPLIANCE

As parking is regarded by many as a right and not a privilege, there is a general resistance to paying for parking. Human nature is such that users will seek to avoid paying for parking if they believe they have a reasonable chance of getting away with non-payment.

The current system of issuing parking infringements in Geraldton is inefficient and largely ineffective. There are 8 FTE rangers who have many other inspectorial duties in addition to checking on parking.

The tyre chalking system in non-metered areas requires rangers to visit every parking space twice. The old meters installed in six car parks, functioned poorly, giving rise to public frustration and many justified appeals against the fines. More importantly, the CGG rangers were spending considerable ineffective time in the city centre, instead of allocating more valuable resources to patrolling in areas of high demand such as Marine Terrace and at schools and other high risk areas.

The CGG issue approximately 12 parking fines per day. About 80% of these are eventually paid. Infringements currently generate approximately $140,000 per annum.

4.8.1 Findings

- The method of checking compliance has recently been improved with electronic machines for issuing infringements;
- The greater the perception that an infringement will be issued for illegal parking, the greater the level of compliance by drivers;
- The penalty for infringement of parking regulations needs to be reviewed upwards to provide a deterrent; and
- The extra income raised from more efficient patrolling will cover the cost of new technology and also permit the employment of additional staff, thereby providing a greater likelihood that non-observance of parking regulations will discovered.

4.9 PARKING TECHNOLOGY

The more convenient it is to pay for parking, the less of a burden it becomes for drivers. The old Smartedge ticket parking machines installed in Geraldton were unreliable, and provided a poor level of service to drivers. They had a downtime rate in excess of 40%.

These machines have recently been replaced with modern Reino MX machines which are solar powered and provide options to pay by coin or credit card.

As there are a large variety of different technologies available, it is recommended that the CGG first determine its required functionalities, before committing to any tender to replace the current machines.

Figure 10: Ticket parking machines

4.9.1 Findings

New parking technology can be specifically tailored to the requirements of Geraldton. Some of the main characteristics of new machines with proven technologies include:

- Solar power;
- No electrical cabling required so machines can easily be relocated;
- Wireless transmission of information and data;
- Acceptance of credit card, smart card and coins;
- Provision of a ticket or a receipt;
- Uptime > 99%;
- Options to provide payment at the discretion of a business/tenant;
- Offering flexible parking fees at different times;
- Integration with hand held enforcement machines which further reduces the time taken to inspect and issue an infringement; and
- Rangers have recently been issued with electronic machines for issuing infringements but these do not integrate with the old technology ticket machines.

4.10 PARKING SIGNAGE

The current parking signage in Geraldton is inconsistent, not particularly informative and generally provides a negative message. There is no indication to visitors to assist them to find shopper, long-term or trailer car parks. Improved signage will improve navigation by drivers and increase the perception of available parking.

Examples of the assortment of parking signs are illustrated below in Figure 11. The signage is further confused by many different types of signs used by private operators of car parks.

The present parking signage is provider led, not customer led. Drivers want to know where to look for parking when they need it, understand the way the information is communicated and obtain the information quickly and without fuss.

A coherent parking guidance system, for both cars and pedestrians is a cost effective means to reduce time spent searching for spaces.

Wayfinding signage should be linked with signs showing parking, walking distances and routes to major destinations.

4.10.1 Findings

- Parking signage should be redesigned to communicate a clear and customer friendly message;
- Parking guidance signs should be introduced at a distance from car parks to easily guide drivers to off-street parking; and
- Wayfinding signs are needed at car parks to indicate walking distances to various nearby destinations.

Figure 11: Parking signage UPDATE PHOTOS

4.11 LOCATION OF FUTURE PARKING FACILITIES

As with all cities, Geraldton has large amounts of parking located in less convenient places and not enough parking where it is currently required. There are however excess parking spaces available at all times in the city centre.

There do not appear to be critical locations for the provision of additional parking as illustrated on the maps in Figures 5 and 6. The provision of multi-level public parking facilities is not warranted in the short or medium term (1-10 years) as the city has more than 25% spaces vacant at peak demand times. The CGG is fortunate to own large areas of land which may be suitable for the eventual construction of deck parking such as Parking Station Numbers 1 and 5. These should not be considered for sale or alternative use without careful examination of the loss of a potential multi-use deck parking facility.

There are a number of benefits for the community and for developers if the city builds deck car parks on land it either owns or can acquire inexpensively.[3]

- **Flexibility:** Developers gain a new option with the provision by the city of well located parking which can be used initially by employees with a subsequent transition to greater use by patrons of businesses.

- **Shared Parking:** Public parking spaces allow shared use among different sites whose peak parking demands occur at different times e.g. a bank and a cinema. Fewer spaces are needed to meet the combined peak parking demands.

- **Park Once:** When all businesses have individual parking spaces they want only their own customers to park there. Once customers leave the premises, they want them out of the parking space as soon as possible requiring the customer to drive to another private parking area in order to make a second stop at a nearby business. Shared parking allows drivers to park once and visit multiple sites on foot reducing vehicle traffic and increasing pedestrian traffic.

- **Consolidation:** A central public car park consolidates scattered spaces, assists infill development and encourages the conversion of surface parking to higher and better uses. All property owners can use more of their land for buildings and less for parking.

- **Better Urban Design:** Multilevel public parking consumes less land than if each site provided on-site parking and the deck car parks can be located where they interfere least with vehicle and pedestrian circulation. They also permit continuous storefronts without 'dead gaps' created by small at grade car parks. To further improve the streetscape, the ground floor of multilevel car parks should be dedicated to retail uses.

It is vital that any potential deck car park be supported by multiple generators of parking, but it is just as important to note that car parks are long-term projects which impact significantly on the surrounding design and traffic environments. Their use cannot easily be changed.

[3] The High Cost of Free Parking. Donald Shoup. American Planning Association 2005. Chapter 9.

4.11.1 Findings

- The CGG owns an adequate spread of well located public car parks;
- The purchase of additional land for public parking in the city centre is warranted in circumstances which provide greater flexibility, or shared parking, or improved urban design or convenience for parkers visiting multiple destinations in the city; and
- Careful consideration should be given to the potential disposal of land currently used as at-grade public parking.

4.12 PARKING FOR LOADING AND COMMERCIAL VEHICLES AND DISABLED DRIVERS

The principles of shared parking apply equally to these vehicles, with the exception that spaces need to be designated and conveniently located. Several issues arise.

Firstly the users of these parking spaces need to be monitored to ensure that only bona fide loading and disabled drivers are using them. Regular enforcement is necessary for both time restrictions and driver types. Loading and commercial spaces should be available to the general public after hours and on weekends. There is no need to preclude the use of these spaces outside of commercial hours.

Where specific spaces are set aside for special users (refer to Figure 12) there are diverse opinions on whether to charge these parkers for parking if they are in a charge parking area. Many councils charge all parkers on the basis of the user pay principle, added to which there is a premium for these drivers having the convenience of a well located parking space. Other councils provide this parking at a discounted fee or provide the first 15 minutes free of charge. New technology will permit flexibility for the CGG in the charging systems for special users.

4.12.1 Findings

- Parking spaces for special use vehicles should be available and clearly demarcated to enhance the city's attractiveness for these drivers; and
- Geraldton's city centre has significant vacant capacity to create parking for special use vehicles such as tourist buses, motor cycles and vehicles with trailers/boats/caravans.

Figure 12: Poorly indicated bus, caravan and trailer parking area

4.13 PARKING CHARGES

Parking charges in Geraldton do not seem to serve any strategic purpose. The primary aim of fees should be as a TDM tool to assist in the implementation of the objectives in the City Centre Transport Planning & Car Parking Strategy. Initially, this should be to discourage long-term parking close to the city centre core and other major retail areas, encourage long-term parking in more remote locations and provide incentives to use alternative modes of transport.

4.13.1 Findings

- Parking charging does not achieve the objectives in the City Centre Transport Planning & Car Parking Strategy;
- Free parking on-street encourages vehicle use; and
- Free and very cheap parking discourages further investment in parking by the private sector.

4.14 DESIGN AND MAINTENANCE

The general presentation of most fee paying public car parks can be improved. Pedestrian walkways are unsuitable, ticket machines are unreliable and facilities for trolley collection are non-existent. Parkers paying a fee are entitled to expect a safe, easy to use environment.

Figure 13: Pedestrian access requiring upgrade

4.15 CASH-IN-LIEU

This system of allowing developers/property owners to pay a contribution instead of providing the minimum required number of parking spaces is popular in Australia. Town Planning Scheme No. 3 (Geraldton) provides for the payment to be not less than the cost of construction plus the value of the land. The funds are to be hypothecated to a special fund exclusively for the provision, construction and maintenance of parking facilities within reasonable proximity of the premises. In March 2010 the fund had a balance of only $140,425.

4.15.1 Findings

- The cash-in-lieu system is restrictive in that funds must be used towards car parking. Their permitted use should be expanded to include expenditure on improvements to transport and access infrastructure especially where these will reduce the demand for parking;
- Many bonuses are permitted but there is no specification of the rate of bonus for design initiatives; and
- Cash-in-lieu should be clearly defined in a policy which should as a minimum incorporate:

    - A clear and certain method of calculating the fee and whether this includes the cost of land and how the fee is to be re-evaluated each year;
    - The entitlements if any, of the developer/landlord who has paid the fee;
    - The obligations on an owner where there is a 'change of use'. No additional cash-in-lieu payment should be generated for a site where some contribution has already been paid, unless the change of use requires additional car parking in excess of the original parking requirement;
    - The use of the funds received. Limiting the use of cash-in-lieu generated funds to 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 and infrastructure; and
    - Most council's state that cash-in-lieu may only be considered where the council has public parking available in the vicinity and/or has firm proposals to provide such a facility. It is very desirable that council's do not link cash-in-lieu policy solely to the availability or planned availability of public car parking in the vicinity of the proposed development. Such a limitation is inconsistent with a policy enabling wider application of the funds generated.

A comparison of cash-in-lieu policies at metropolitan council's in Western Australia is shown in Appendix A. Recommendations on cash-in-lieu are incorporated in Section 5.1.4.

The most efficient method of providing parking is above-ground deck parking; the least efficient is at-grade parking. With a cost of $44,000 per space (refer to Section 4.3.4) for a deck car park (land and construction). The current annual income from cash-in-lieu, parking fees and infringements cannot be expected to make any significant contribution to the provision of additional parking supply. In order to create a meaningful source of funding for improved transport, a user pay principle needs to be implemented in Geraldton.

4.16 PARKING MANAGEMENT IN THE GERALDTON CITY CENTRE

The current management of parking in Geraldton encourages car use (currently estimated at >95% all trips) and provides only a small net return to the CGG. A summary of findings relating to the major parking issues confirms that a number of different factors operate against the achievement of the objectives of the City Centre Transport Planning & Car Parking Strategy.

- Free on-street parking encourages on-street searching for bays, and does not encourage the use of off-street car parks;
- On-street parking churn is low because of free parking;
- Free/low priced parking will not encourage investment in parking by the private sector;
- The low all day rate at the car parks does not discourage long-term stays, thereby reducing bays available for shoppers;
- Paid parking in the city centre is cheaper than public transport, hence there is no incentive to use other forms of transport. (A return 2-zone bus fare with a 25% concession is equivalent to $5.40 per day);
- There is an incorrect perception of shortage of parking bays. Average vacancy at peak demand time is greater than 25%;
- Drivers will continue to expect to find a space close to their destination;
- Shared parking can be encouraged by the use of informative signs which indicate not only the availability of spaces, but also the walking distances to various destinations;
- The level of compliance with parking regulations has not been measured but it is acknowledged that it can be improved;
- Some stakeholders are demanding more parking bays and more enforcement resources expecting the CGG to provide these;
- Current infringement methods and penalties of $75,00 does encourage compliance;
- New technology for pay parking and enforcement will assist in providing more effective parking management and greater convenience for drivers;
- There is no encouragement of shared parking;
- The cost of providing parking does not relate to the fee charged;
- Improved parking guidance is necessary including display of walking times to major destinations;
- The purchase of additional land for parking in the city centre is not warranted;
- The presentation of car parks could be upgraded especially for pedestrians; and
- The cash-in-lieu system curtails the use of funds only towards providing more parking.

The CGG does not have a parking supply problem as much as a parking management problem. Parking is not controlled effectively and in line with the city's strategic goals.

5. KEY AIMS AND ACTIONS

The following sets out the actions associated with the issues identified above, including where necessary, the need for further examination of certain issues.

5.1 PUBLIC PARKING SUPPLY

There are a number of options available to increase the supply of parking in the Geraldton city centre.

5.1.1 Use existing parking capacity more efficiently

The quickest, cheapest and most effective way of adding to the stock of public parking is to use the existing stock more efficiently. This can be achieved in many ways including improved enforcement and better presentation of car parks. It also includes unifying the management of adjoining small car parks.

Several privately owned car parks provide separate bays for the various businesses in the centre they service. The boundaries of these various parking areas are not clear to drivers and the signage is confusing. The car parks are not well presented and the fragmentation of parking inevitably means that the available parking is not fully utilised.

An opportunity exists to consolidate the management of these and other similar areas and thereby maximise the use of the available parking capacity. With consistent external and internal signage and some upgrade, there will be more effective sharing of the parking, a better perception of the availability of public parking in the city and improved security. This will result in more confidence finding a bay, less congestion on the streets and more effective use of total parking supply.

Subiaco for example has outsourced the management of some consolidated Council and privately owned parking areas south of Rokeby Road between Hay Street and Roberts Road. This strategy has been successful in providing the public with a well presented large parking area close to the Regal Theatre. The car park is used at all hours seven days a week. A fee is payable and the net income is distributed pro rata between all the owners.

While it is not suggested that the CGG outsource its parking, it is recommended that the CGG approach the various owners of off-street parking and negotiate to permit the CGG to take over the management of all the parking in each area as a single car park. The CGG's rights and obligations will need to be specified and some provision may need to be made for special users. The CGG will also need to expand its enforcement resources.

In exchange for the CGG receiving any infringement or other income that may be generated from these sites, the CGG will agree to reinvest in upgrading all of the sites with signage, lighting and other measures. The upgraded presentation and the consolidation of the management of off-street parking in the city will yield benefits for all stakeholders including customers, retail and commercial tenants, landlords, the CGG and the general public.

Another option involves the provision of information on parking availability and price using signage, brochures and maps, websites, and parking information incorporated into general marketing materials. There may also be opportunities to provide real-time information on the location of available parking spaces although providing this information can be difficult to obtain and expensive. However, good parking information tends to reduce motorist delay and frustration and increase the satisfaction of drivers parking in an area.

This is a strategy that is planned to be implemented in Geraldton – with parking & wayfinding directional signage installed on the approaches to the city centre and a brochure developed to detail the parking restrictions. Both the signage and printed information need to be reviewed and parking information provided through the CGG website. Also, the development of multi-modal access guides (to provide concise directions to a particular destination by walking, cycling, driving and public transport and including details on parking availability and price) should be developed for all CGG venues and printed on the back of business cards, included with event invitations and available on the CGG website.

5.1.2 Minimum parking requirement

A common way of increasing parking supply is to provide at least a certain number of parking spaces. A developer may choose to exceed this amount. The existing Town Planning Scheme No. 3 (Geraldton) has minimum parking requirements for the city centre, clause 5.7.5. These need to be reviewed and this is further detailed in Section 5.8.

5.1.3 Planning consent conditions applying to car parking

The planning consent conditions should be reviewed and designed to ensure that:

- The objectives of the City Centre Transport Planning & Car Parking Strategy are achieved;
- A 'Green Travel Plan' is provided (in accordance with the CGG's Green Travel Plans local planning policy);
- On-site loading is provided;
- Secure, undercover, well lit bicycle parking on-site is provided for employees at a rate of 1 stand per 15 employees, and showers and lockers are provided in each development for staff use;
- Bicycle parking is provided outside the entrance to destinations where visitors are expected to stay for 30 minutes or more. For retail development they should be provided at a rate of 1 stand per 200m^2 GLFA, for office developments at 1 space per 800m^2. The bicycle parking should use approved bicycle stands, have clear signage, good passive surveillance and lighting and preferably be undercover; and
- Car parking for people with a disability is provided in accordance with the Australian Standards.

5.1.4 Cash-in-lieu

Many cities give developers the option to pay a fee in lieu of providing the required number of parking spaces.

Cash-in-lieu provides many benefits. Developers obtain flexibility and make fewer demands for concessions. It provides drivers the opportunity to park once and visit multiple sites on foot, rather than park in the exclusive spaces provided by businesses which have their own parking. Public parking spaces built with the revenue from cash-in-lieu allow shared parking among different sites with differing peak parking times and therefore fewer spaces are required to meet the combined peak parking demand. Parking requirements generally require at-grade parking for smaller buildings. Cash-in-lieu allows business to meet their parking requirements without on-site parking resulting in better urban design and a safer, more walkable city.[4]

There are two basic approaches to setting cash-in-lieu fees. The first is to calculate an appropriate fee on a case by case basis for each development or change in land use. The second is to charge a uniform fee for all projects. The case by case approach is complicated, time consuming and expensive to administer. It also creates uncertainty for developers. It is therefore recommended that the CGG continues with a uniform fee for all parking cash-in-lieu. The two issues that then need to be addressed are the actual fee, and the entitlements of the developer/landlord who has paid the fee.

Fees charged by cities in Australia, the USA, Canada, the UK and other countries are diverse varying from a percentage of the cost of constructing a space in a deck parking facility ($28,460 in Perth in 2010) to the expected NPV (net present value) of the capital and operating costs of the space minus the expected net income from charges for parking in the structure over a 30 year term. The cash-in-lieu calculation here is therefore the expected value of the parking subsidy implicit in constructing a new parking space. The cost of land is not included in this calculation.

The other important purpose of cash-in-lieu is that it reveals the high cost of providing parking spaces especially if they are subject to a low parking fee or are expected to be free. 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 city, and the city does not subsidise developers. Developers subsidise parking.

The current cash-in-lieu rate is generally between $13,000 and $40,000 per at grade space depending on location (refer to Appendix 2 of the City Centre Transport Planning & Car Parking Strategy). The rate is calculated on a combination of land value for 29m^2 plus the cost of constructing an at grade facility. This is approximately a 33% discount on the true value. The cost of constructing a space in a deck car park is at least $30,000 excluding the cost of land (refer to Appendix B). In order for the CGG to build up a reserve to assist in constructing a multilevel public car park, it is therefore recommended that the CGG review its cash-in-lieu contribution figures so that a more equitable percentage of the true cost of providing multilevel parking spaces is recoverable from developers.

The land footprint required per bay reduces per level constructed in a deck car park. At-grade parking requires 29m^2 per bay; a 2-storey deck 15m^2; a 3-storey deck 10m^2; and a 4-storey deck 7.5m^2.

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4 The High Cost of Free Parking by Donald C Shoup. American Planning Association 2005. Chapter 9.

A number of cities that use cash-in-lieu to improve access, which may include the provision of parking spaces, do not guarantee when and where the spaces will be provided. Accordingly, there should not be a right to any refund if parking is not constructed as the funds may be used for other purposes (e.g. cyclist end of trip facilities) which reduce the demand for parking. Similarly there should not be any right given over a parking space to a developer, other than what the developer provides.

The CGG should make the Town Planning Scheme cash-in-lieu provisions more flexible by allowing use of the accumulated funds to optimise the use of existing parking supply, by improving management, correctly pricing on-street parking and by investing in infrastructure that will improve access to, or reduce the demand for, parking in the vicinity of the development.

5.1.5 Build parking facilities – deck car park feasibility

This solution involves the use of public resources to construct parking facilities. Traditionally this has been the method of addressing parking shortfalls in Geraldton, and has the advantage that the CGG 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.

In conjunction with the monitoring of spaces taken as cash-in-lieu and expanded occupancy surveys, the CGG needs to develop a plan to identify and prioritise potential sites for the construction of parking decks in the city centre.

In considering locations for future deck parking, potential options are restricted to those where the CGG either owns or has long-term tenure over the land. Figure 14 shows several possible locations. As the cost for each 100-bay deck car park will exceed $3 million (in 2010 dollars), opportunities which will require significant additional expense associated with the purchase of land should be discarded.

There are a number of locations where deck or multi-storey parking structures could be constructed in the long-term if needed. The CGG owns a number of properties in the city centre area, as a reserve for additional off-street parking locations. Potential sites for constructing parking decks over existing at-grade parking facilities could include Parking Stations No's. 1 and 3, and the CGG staff car park off Sanford Street. Any multi-level car park would need to be a mixed use facility incorporating commercial premises on the ground levels.

Prior to intended construction of any deck car park, the CGG should commission an initial design and feasibility study for the proposed site. The study is an inexpensive way of considering sketch drawings and elevations that comply with local planning regulations for the precinct, as well as obtaining an updated estimate of construction costs and proposed user types, parking fees and income that will be generated from the development to ensure optimal accessibility. The study should also detail the proposed pedestrian links to the new car park. Once the study is complete, the results can be made available to the community for comment and to encourage interest from the private sector.

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 CGG, potential locations for deck parking must have common characteristics:

- They must have multiple generators of parking;
- They should be utilised day, night and weekends;
- Their shape must permit a practical layout for a deck parking facility;
- There must be opportunities for vehicle access to/from more than one street; and
- They must be are capable of linkage with pedestrian pathways to their major generators.

These pedestrian pathways will require significant upgrading to ensure they provide a very high standard of convenience and safety.

These characteristics, together with options where the CGG already owns the land, must be considered for potential deck or future parking sites and especially at the following locations as shown in Figure 14.

- **Midalia Beach:** Consider as an at-grade all day car park with a connecting bus service to city centre for commuters.
- **Batavia Coast Marina Stage 2:** Consider as an at-grade all day car park with potential for shared use as a market on weekends/evenings.
- **Beaurepairs site plus rear of Library block:** Install a new right of way around the building and install deck car park with ground floor commercial.
- **Adjacent to SGIO building:** The location is not appropriate for a deck car park and could potentially be sold subject to acquisition of another site for car parking.
- **Central Earthmoving, Lotteries House and the site next to the Army barracks:** These can be developed into a deck car park.
- **Department of Transport Marina car park:** This would require a connecting bus to the city centre for commuters. The Department currently only supports use of this carpark by users of the adjacent state managed facilities.
- **Uniting Church site at rear of McDonalds:** Consider integration into land on either side with potential for a future deck car park.
- **Fire Station site:** This large 3,228m^2 site is well located opposite the post office and adjacent to the popular car park number 3. It could be developed as a multi-use facility.

In order to properly appreciate the financial cost/benefit requirements for a multilevel car park, a three level, 250-space Deck Car Park Feasibility Analysis is shown in Appendix B. Based on the major assumption of parking fees commencing at $1.40 per hour, plus the provision of paid all day, monthly, evening and weekend parking at varying fees, the model shows that a surplus will only generated for the first time in Year 14, and the Net Present Value only changes to positive in Year 20.

A deck car park is a significant long-term investment and once built, its use is difficult to change.

The library off-street car park, which can be expanded into the CGG owned Beaurepairs site is a good example for a potential multi-deck car park as it complies with all of these fundamental characteristics. It is well located within a 250m walk to several destinations. It has good street access for vehicles. It has the potential for shared parking for short-term use during the day, for patrons of the tavern at night, and for residents and/or visitors to a potential development on the vacant PTA site west of Marine Terrace.

The car park would need to be designed as a multi-use facility with commercial on the ground floor and the car park concealed behind an appropriate facade.

Figure 14: Possible car park locations

5.1.6 Remote parking

This solution involves the development of additional parking where land is relatively inexpensive and available e.g. fringe parking near a commercial district or parking that is seldom used on weekdays. It requires the provision of information and incentives to encourage long-stay parkers to use the remote facility. This can include signs, brochures, pedestrian improvements, shuttle services, regulations and pricing. Remote parking must be either free or relatively inexpensive. It is a less expensive option than increasing city centre parking supply and may allow the use of otherwise vacant land.

To some extent this has been the way parking has been provided in Geraldton – with city centre parking being time-limited for use by shoppers and long-stay parking provided in the periphery area. Unfortunately the level of compliance with the regulations is low.

5.1.7 Redesign existing facilities

This solution involves increasing parking supply by using currently wasted areas (corners, edges, undeveloped land) and sizing a portion of spaces for motorcycles, bicycles and compact cars. It can be an inexpensive way to increase capacity, however, the potential is usually limited.

5.1.8 Better placemaking

Drivers choose parking spaces for their convenience location and price and not for their architectural style or aesthetic fit into the area. Consequently car parks are consequently often provided as cheaply as possible. For this reason cities should therefore regulate the design of parking structures to ensure that they do not disfigure the street. This applies especially to multi-level car parks where the ground floor can be designed to provide visual interest, safety and shelter for pedestrians. A mixed use approach makes a parking structure much more attractive as an urban place.

When parking is in front of a building, pedestrians must approach the store by walking through an uninviting, possibly hazardous car park. When parking is adjacent to or behind a building, pedestrians can see into store windows as they walk by.

It is worthwhile to re-emphasise that the majority of users of a car park are not drivers, but pedestrians. Many of the CGG car parks can be made far more attractive, convenient and safe for pedestrians and in doing so, this will set a benchmark which other developers will follow.

5.1.9 Shared parking

Shared parking means that parking spaces are shared by more than one user, which allows parking facilities to be used more efficiently. Shared parking takes advantage of the fact that most parking spaces are only used part time by a particular motorist or group, and many parking facilities have a significant portion of unused spaces, with utilisation patterns that follow predictable daily, weekly and annual cycles.

There are various degrees of shared parking. A parking space assigned to a specific user is not shared at all. On-street parking spaces located in busy, mixed use urban areas tend to be the most shared. In-between are parking spaces that are shared among various employees at a particular worksite, parking that is shared by customers at a variety of businesses located in a shopping centre, or arrangements by one facility to use another facility's parking at certain times, such as a tavern that allows its parking spaces to be used on Sunday mornings by attendees at a nearby church. An assigned employee parking space is typically used about 2,000 hours per year, while an on-street parking space in a busy area often gets three times as much use. Efficient sharing of spaces can allow parking requirements to be reduced significantly.

Parking demand in commercial precincts and mixed use developments is typically less than the demand generated by an individual use.

Opportunities for shared parking in Geraldton include:

- The CGG staff car park off Sanford Street;
- The Francis Street car park; and
- The many privately owned 'customer parking only car parks' which could be utilised outside of business hours.

In order for this solution to work effectively drivers must be encouraged to use the shared parking with clear signage, parking guidance and notification of the options by the different destinations.

5.1.10 Motorcycle parking

The provision of motorcycle parking in privately owned car parks where parking maximums are in place is a matter for the operator to determine. Motorcycle and scooter parking can reduce the amount of space required for parking and by so doing reduce development costs.

Assuming 2% of vehicles are motorcycles or scooters and five parked motorcycles occupy the same space as two cars, then a 500 space car park should provide sufficient space to provide 10 motorcycles and this would result in a net saving of 5 parking spaces. With a higher mode share these numbers increase.

As motorcycle and scooter parking and mobility scooter parking is very likely to increase in importance in response to higher fuel costs and an ageing population, it is recommended that public car parks initially assume that 2% of vehicles are motorcycles or scooters. This figure should be reviewed based on demand and in light of experience at each site. Where demand requires, preference should be given to converting motor car spaces to motorcycle or scooter parking.

5.1.11 Bicycle parking

One or two bicycle stands for short-term visitor/customer bicycle parking should be provided on average every 50m[5] on streets in the retail core. They should be located within 20m of pedestrian access to a destination, with good passive surveillance and lighting.

[5] Supplementary Document Four: ARTA Guidance Note for Cycle Parking Facilities 2007

5.1.12 Pedestrian routes

Walking routes between off-street parking facilities and key locations such as the city centre core, community facilities and the foreshore, should be direct, safe and pleasant. Where feasible they should take the pedestrian past active shop frontages.

Where a parking building access crosses a footpath, the design should make it clear that pedestrians have priority over vehicles.

5.2 PARKING CHARGES

Charge parking has been in force in Geraldton's off-street car parks for more than 10 years. The current level of charges for off-street parking in Geraldton do not serve any purpose other than to assist enforcement by eliminating the need for chalking tyres. They do not discourage long-term parking or provide any incentive to use public or other forms of transport.

The current level of income generated by paid parking ($320,000 per annum) does not cover the cost of maintenance, enforcement, security and replacement of parking meters and signage.
It is recommended that the CGG review its current parking fees annually to reach a level which will achieve some of the CGG's strategic objectives for paid parking. This is especially important if the CGG intends to build deck car parking.

The introduction of pay parking on-street should be considered when regular peak hour demand is starting to exceed 85%. It is also important that the 85% occupancy is occurring with **compliant** parking. Adequate enforcement, therefore, will need to be ensured prior to any decision to implement pay parking. Parking enforcement hours should include all periods of high demand.

The implementation of pay parking on-street is designed to save cruising time, reduce traffic, conserve energy, improve air quality and increase income to the CGG. More specifically, if the price of on-street parking is set to keep about 15% of spaces vacant, drivers will generally always be able to find a space at their destination. On-street parking fees should therefore be 15-20% higher than equivalent off-street parking charges to reflect the premium nature of kerbside parking and to encourage drivers to use the off-street facilities.

When applying this criterion, consideration should be given to adjacent streets where regular parking demand may rise as a result of the implementation of pay parking in areas where demand already exceeds 85%. This will require regular surveys of parking demand in these areas.

It is recommended that the CGG undertake a parking survey updating the 2008 survey to assess any changes and take appropriate action, and use the results, supplemented by additional surveys as required, to identify locations where parking charges should be introduced or increased. The introduction of pay parking on-street is premised on regular peak hour demand exceeding 85%.

5.3 IMPACT ON CITY CENTRE

Spillover parking problems can be addressed through introducing parking regulations and increasing enforcement. Paid parking can also be introduced in areas that experience spillover parking problems, although this would not occur until paid parking was introduced in all city centre parking facilities, on and off-street.

Using management, enforcement and pricing to address spillover problems has a varied impact on parking demand with some reduction in traffic volumes.

5.3.1 Parking for businesses

Many businesses fear that reduced parking supply will discourage customers. The actions in this plan are designed to improve overall accessibility and user convenience. If an area is attractive, if short-term parking is convenient, and if businesses offer good value and services, customers are usually willing to pay for parking. Businesses should also be pro-active and encourage their staff to use remote parking locations and offer parking fee discounts to customers. This can only be achieved with modern parking technology and with the commitment by the CGG to more innovative parking initiatives which, in turn will require additional resources and technologies.

It must be acknowledged that local businesses require an adequate supply of short-stay parking. This has been endorsed by requests from Marine Terrace cafes for more frequent enforcement to ensure more turnover of spaces.

Assuming there is an insufficient supply of short-stay off-street parking for business, and there is insufficient on-street, short-stay parking on the nearby non-residential streets, spillover into adjacent residential streets can result. As this parking is necessary from an economic perspective, time-restricted parking is then appropriate on these streets.

As new developments are constructed with reduced parking provision, pressures on on-street parking in adjacent residential areas are likely to increase.

The provision of some long-stay / unrestricted parking for employees working in the general area is both reasonable and necessary. Even with good public transport, and some employees walking or cycling to work, provision may need to be made for some employees who work in the area, to bring their car to work. This parking could be 5 minutes (400m) walk or more from the place of employment, but it needs to be available.

As Geraldton grows, commuter parking will need to be provided within reasonable distance of the city centre. This is likely to require the provision of a commuter bus providing reliable transfers to/from the city centre with the cost to drivers included in their parking fee.

For example Launceston City Council have implemented a shuttle bus/park & ride service which loops around the city, picking up people including commuters, shoppers and tourists and dropping them at key destinations. It encourages people to leave their cars at home, or for those who live a little further out, to use the less congested and cheaper car parking facilities on the outskirts of town and catch the free bus in. This promotes a healthier way of getting around while reducing the amount of traffic and pressure on parking.

A park and ride from the Inveresk precinct outside the CBD was implemented as a fixed term service during December in 2006 and 2007 to cater for peak shopper demand. The advantage of park and ride in this area is that it reduces parking pressures on the City centre, and it can be combined with park and walk or park and bike thus encouraging a more active form of travel.

Figure 15: Extract from Launceston's The Examiner, 29 March 2010

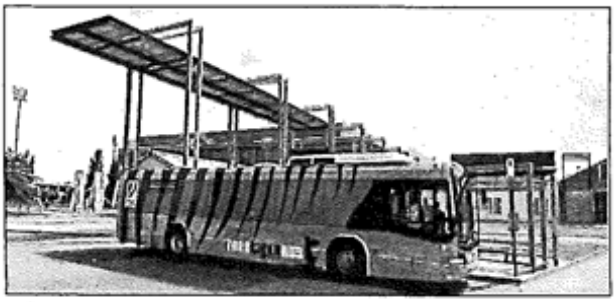
Tiger service bites into parking

MORE than 11,500 people have made use of the Launceston City Council's free Tiger Bus service since it began operating in December last year.

The Tiger Bus was one of the initiatives shaped by the council's sustainable parking and transport strategy, and instantly drew interest from the public.

Nearly 1000 people used the service in its first week of operation.

Split into two different services — the Tiger Explorer and the Tiger Run — the distinctive striped bus is designed to ease pressure on parking spaces in the CBD.



Launceston's free Tiger Bus has carried 11,500 passengers.

The Tiger Run has been designed for commuters, allowing them to "park and ride" to the city centre, while the Tiger Explorer is aimed at shoppers and tourists, travelling a 30-minute circuit to provide easy access to the CBD and landmarks like Launceston Aquatic, the Launceston General Hospital and City Park.

Both services start and finish at the Inveresk car park in front of the Queen Victoria Museum and Art Gallery, allowing people to park for the day and catch the bus to the city centre.

Launceston Mayor Albert van Zetten said the reception for both services provided by the Tiger Bus had been "fantastic".

"It's also great to see an increase in the number of people using the Tiger Run service, which in turn frees up short-term parking in the CBD," Alderman van Zetten said.

It is also necessary to review the current time restrictions in place in some of the residential streets which are more remote (>250m) from the business area. In some streets, such as those west of Cathedral Avenue, the current time restrictions are no longer necessary and could be eliminated or reduced to allow parking for employees. It is recommended that current restrictions in streets more remote from the business areas are reviewed to assess whether they can be modified.

5.3.2 Resident priority schemes

There are some people in Geraldton who object to having the streets in front of their homes in constant use for parking. There have been requests from some of these residents living near high activity centres to introduce resident only parking permits in their street.

One suggestion is that all residential streets close to the business precincts should be made 'Residential parking only'.

While it is true that unrestricted application of resident parking permits that reserve all the on-street spaces for residents and their visitors will prevent spillover from adjacent commercial areas, they also leave many unused on-street parking spaces, especially during the working day.

A resident permit only parking scheme in these streets would be an unnecessary over-reaction to the spillover problem[6]. It would preclude shared parking opportunities and would have a negative impact on businesses in the precinct.

6 The High Cost of Free Parking. Donald C Shoup. American Planning Association 2005. Chapter 17.

It must also be communicated to residents that on-street parking is a public resource provided for a community and it should be available to all drivers. Parking exclusive to residents results in the inefficient use of a community asset.

Demands for resident parking typically result from spillover parking. Spillover problems refer to the undesirable use of on-street parking by customers and employees of nearby businesses, or schools, or occasionally as a result of major events in an area.

It is significant to note that regulation of parking will not in itself curb anti-social behaviour, excessive noise and litter. It is also important that spillover issues should not be used to justify excessive parking supply. The combined implementation of regulations, pricing and strict enforcement can reduce the need for additional supply.[7]

It is recommended that the CGG identify existing and potential parking spillover effects and where appropriate, implement measures to protect adjacent residential areas such as on-street time restrictions and residential parking schemes.

5.3.3 Resident parking schemes

There are several ways to address spillover problems, such as regulating parking with the use of time restrictions and permit schemes. The most effective means is to use pricing, such as charging non-residents to park on residential streets.

Resident parking schemes can take the form of time restrictions combined with resident parking permits, or parking meters with exemptions for residents.

Residents can purchase permits which strictly identify the vehicle and the street in which it may park and the times it may park. Alternatively, fees can be collected by the implementation of parking meters with residents having a permit/card which allows them to park.

Another option is to offer parking on the street to non-residents between certain times if they pay a fair market price. This can be achieved by the sale of non-resident permits. In many cities where this system applies, the system is successful and resident acceptance has been high because the net income generated from the sale of non-resident permits is earmarked to fund additional public services in their street or in the immediate precinct. These 'parking benefit districts'[8] are a compromise between free on-street parking that leads to overcrowding and residential permit parking that leads to under-use. The parking benefit district is better for both residents and non-residents. Residents get some public services paid for by non-residents, and non-residents get to park at a fair market price rather than not at all.

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7 Parking Management Best Practices. Todd Litman. American Planning Association 2006. Chapter 5.

8 Shoup page 435.

5.3.4 A compromise solution

It is recommended that instead of making all residential streets near to the business precincts 'Residential parking only' a compromise solution is implemented incorporating the measures suggested below.

The CGG should establish a monitoring program to identify where and when spillover problems occur. This includes parking utilisation and duration surveys, but can also include the establishment of a hotline for residents and businesses to report spillover problems.

It should initially be ensured that:

- There is an insufficient supply of (on-street and off-street) short-stay parking to meet the business needs in the area, and as a result, some on-street parking for business customers has become necessary on nearby residential streets; and
- Spillover parking from nearby business activities has been identified as an important issue for residents on streets affected by this parking.

Once this has been established, action is required that will provide an equitable solution that meets the legitimate needs and concerns of both parties. This should include measures to protect residential areas from commuter parking and any business spillover parking in locations where problems have been identified, and measures to improve the supply of short-stay parking for business needs.

In addition, the CGG should ensure to the extent practicable, that there is an adequate (reasonable minimum) supply of long-stay parking for employees within reasonable walking distance of their place of work.

Once this is in place, measures should be taken to protect residential areas from commuter parking and any business spillover parking, in locations where problems have been identified.

5.4 PARKING ENFORCEMENT

The major objective of enforcement is to ensure that all parkers comply with the objectives of a city's parking policy and regulations. Successful enforcement is to be measured not by the income it generates, but by the level of compliance by parkers. This compliance level is partly the result of the perception of the likelihood of an infringement being issued, and also the cost of the infringement relative to the fee for parking.

It is submitted that in comparison to the many costs of driving a vehicle, the average parking fine of $75 in Geraldton is not a huge deterrent. Of more significance is the high administration cost to Geraldton in dealing with the many appeals generated as a result of poorly performing technology.

The entire system of ensuring parking compliance in Geraldton needs to be reviewed in conjunction with the determination and stricter implementation of parking policy, the installation of reliable technology, the setting of flexible fees and the more effective use of Rangers. Until such time as more ticket parking machines are installed on-street and in off-street car parks, additional Ranger resources will be required if levels of compliance are to increase.

The current tyre chalking method used by Rangers who have to pass by each vehicle twice to inspect whether it is compliant with parking regulations is ineffective and a waste of resources. There is a need for dedicated parking inspectors to increase the perception that non-compliance will likely result in an infringement. This is the approach undertaken to good effect in many small towns such as Vincent, Victoria Park and Cambridge in Western Australia.

No single aspect of parking compliance will rectify the current inefficiencies and gaps in the process. A review of the system, the technology and the resources is needed to ensure the most effective use of the Ranger's time.

5.4.1 Parking technology

The CGG should install new parking meters on-street as soon as possible.

Modern technology permits a variety of methods of calculating fees and charging for parking.

Current technologies allow for parking machines to communicate with a central management system. The central management system provides alarms, status messages such as low paper, full cash box etc. and complete audit facilities. All recent large scale parking machine installations have opted for the wireless communication option. The benefits of increased up-time and reduced labour costs far outweigh the running costs.

As well as communication systems, best practice is to use solar powered battery operated machines.

Installation of new machines can be achieved by a tender for a small number of machines, with a supply contract permitting the CGG to purchase additional machines at a fixed price over a 3 year period. There are several options for funding the purchase, including the supplier leasing the machines to the CGG so that their cost can be funded out of incremental income generated, rather than from the CGG's cash resources.

It is no longer necessary for organisations such as the CGG to allocate funds in advance of the purchase of pay parking meters. Most suppliers will provide finance arrangements whereby the cost of capital can be amortised over several years and paid for from the future income earned by the machines. It is estimated that the pay-back period for new meters in the city will be less than 2 years.

Feasibility studies, locations of machines, functionality of the equipment, various options for payment and key performance indicators for maintenance can all be incorporated into various stages of the tender process. It is recommended that the CGG obtain professional, independent assistance in this important process.

Effective enforcement is an important component of parking management. To be effective parking enforcement must be frequent, fair and friendly and fines must be high enough to enforce proper parking behaviour without being so high that they seem excessive.

The current enforcement regime has been ineffective in targeting vehicles overstaying the time limit or moving vehicles within the off-street car parks in the city centre. A review of the enforcement regime is necessary to ensure that parking is maintained for the use of customers. This improved enforcement will result in long-stay vehicles being displaced from the city centre car parks and arrangements will need to be made to accommodate these cars in more remote locations.

Figure 16: Solar powered parking meters with several options for payment

The implementation of pay parking requires an understanding of many of the issues and processes that need to be considered before, during and after the implementation of pay parking. These are dealt with thoroughly in a paper entitled *Considerations for the Installation of On-Street Pay Parking.*[9]

[9] Considerations for the Installation of On-Street Pay Parking – by Larry Schneider of ARRB Group Ltd., presented to Canadian Parking Convention, October 2007.

The following table compares the parking meter technology available and supported elsewhere in Western Australia with that currently installed in Geraldton.

Figure 17: Parking meter technology comparison

New technology	Current technology in Geraldton
Support available in Perth for several different products with many other users e.g. Subiaco, Joondalup, Cambridge, Perth, Fremantle	Support available from Perth and Sydney
Constant wireless transmission of information and data	New Reino Net system will provide information available on number of tickets issued, time of issue, cash received
Convenient payment options via credit card, smart card, coins and banknotes	Credit card usage to be encouraged
High level of reliability with uptime > 99% Machines transmit fault signals if they are not operating	Machines need not be manually inspected every morning reducing labour costs
Solar powered machines do not require direct sunlight or trenching or cabling and can be relocated if necessary	Some machines require mains power if located undercover
Sophisticated anti-vandal and anti-theft features	Reasonably vandal resistant
Opportunities for customer service such as: • Links available to provide payment for customers parking at the discretion of a commercial tenant • Provision of a discount to specified cardholders such as disabled or pensioners who may receive the first 15 minutes free • Provision of an initial grace period e.g. for less than five minutes parking • Identification of resident permit holders, residents' visitors or business permit holders	None of these available
Opportunities to offer flexible parking fees at different times e.g. a flat fee on weekends or for a special event Remote programming	Not able to provide this

Pay and display and pay by space parking meter systems are compared in Figure 18 below.

Figure 18: Pay and display and pay by space

Advantages		Disadvantages
Pay and display	Paid time overlap (>10% revenue)	Extra walking distance
	Unlimited layout of spaces	Uses more paper
	Spaces need not be marked	
	Automatic issue of receipt (ticket)	
	Easily relocated/expanded to additional spaces	
	Alternatives available if a machine is not working	
	Can be used on and off-street	
	Easily understood by the public	
	Less queries on infringements	
	More detailed transaction data available from every ticket issued	
Pay by space	Shorter walking distance for drivers	Overlap is used, unless machine resets to zero
	Paperless, more environmentally friendly	Restricted number of spaces
	Less moving parts therefore less maintenance	Spaces must be marked and numbered
	Quicker for enforcement	Inconvenient to relocate
	Receipt can be generated on demand	No alternative if a machine is not working
		Not used off-street
		Confusing for some parkers especially elderly
		Bay numbering requires maintenance
		Fixed fee structure encourages overlap

5.5 QUALITY PARKING SERVICE

Parking is a means to an end, not an end in itself. However, parking is usually the first and last point of contact that a customer associates with a visit to the city centre and the quality of the service (or lack of it) often has a significant impact on the customer's overall experience.

5.5.1 Aesthetics

Locating off-street parking facilities behind buildings tends to create a more attractive and pedestrian friendly streetscape. Parking structures can be more attractive and make a positive contribution to the urban environment if they have ground floor retail fronting the street. Parking facilities can be designed to be more attractive, with appropriate landscaping and detailing. This can be required in planning schemes or through the provision of incentives to encourage such designs.

The aesthetics of off-street car parking is highlighted with a desire expressed for street level retail development to mask parking. It should be noted that Crime Prevention through Environmental Design (CPTED) principles do not support this type of development as it reduces the opportunity for passive surveillance to occur.

5.5.2 Safety and security

Car parks are to be designed to minimise crash risk to vehicles and pedestrians and to provide personal security with appropriate visibility, lighting, patrols and alarms.

5.5.3 Parking Station No. 5

Parking Station No. 5 (Sanford Street) currently serves as a case study on how not to operate a popular car park with a high turnover of short-term spaces. The car park is not well laid out causing uncertainty for drivers which leads to disputes with the enforcement authority.

It is recommended that the car park should be redesigned and set up as a good example of parking practice. The car park should be presented to a high standard of convenience, safety and customer service to illustrate to the public and to develop what a pay parking area can provide. This should include:

- Redesigning the access and traffic flow for the car park with a single entry and a single exit lane;
- All spaces to be available to all bona fide users;
- Introduce new pay and display technology;
- Provide a high level of lighting and safety-by-design to encourage after hour use by parkers for the theatre and other areas. This will require review and probable upgrade of the security elements on the pedestrian walkways to the theatre;
- Charge an hourly rate with no maximum to discourage long-term stays. Charge a flat fee after 6pm;
- Where night events occur at the Queens Park Theatre provide a visible, mobile security presence at the car park until an advertised time for example 11pm;
- Upgrade the signage both at the car park, and on all main roadways leading to the car park;
- Ensure regular enforcement patrols;
- Implement a minimum of 2% of spaces for motorcycles; and
- Provide parking for at least 10 bicycles.

5.6 WAYFINDING SIGNAGE

There is a lack of adequate signage directing drivers of cars, motorcycles, scooters and cycles to parking facilities in and around the city. The current style of wayfinding signage for the public off-street car parks does (refer to Figure 12) not give advance warning of location, does not indicate the number of spaces available or the type of parking available (short-term or long-term).

A new wayfinding system should include a hierarchy of easily identifiable signs, providing a logical progression from the major approaches to the centres, onto the main streets within the centre and then through to individual car parks. It is recommended that wayfinding signage is installed initially on all main routes into each high activity centre. Additionally, signage should promote walking times to nearby destinations such as the art gallery, the museum and major retail centres.

Figure 19: Examples of car park and wayfinding signage

5.7 OVERFLOW PARKING

It is recommended that the CGG confirm and publicise an overflow parking plan for special events and peak demand periods. Practical methods of dealing with overflow parking issues (such as set out in Appendix C) reduce parking demand and traffic congestion and confusion. They are particularly appropriate at any location where peak parking demands create problems.

They require the establishment and communication and marketing of alternative and remote parking facilities, combined with secure pedestrian access. Costs will include additional staff time, equipment and special services. The additional management and enforcement costs can be offset by increased income from pay parking and fines.

The CGG needs to establish and clearly communicate clear rules to inform drivers where and when they may or may not park. This requires not only clearer signage, but also advance notification of nearby options (wayfinding signage and maps).

The overflow plan must be supported by effective enforcement systems (for example Christchurch in New Zealand adopts a 'zero tolerance' approach towards parking infringements including monitoring, fines and even towaways). Increased enforcement is to be applied in certain areas especially at times which attract crowds. This is likely to require additional staff resources.

5.8 DEVELOPMENT STANDARDS FOR PARKING

The current standard for parking in the city centre (1:80m^2 GFA) is minimalist and does not focus on the basic issues of supply, price and management of parking. Additionally there is dispensation of parking to 1:100m^2 GFA if the developer chooses to pay cash-in-lieu.

When comparing the predominant uses in the city centre and then averaging their parking requirements (in accordance with the parking rate required elsewhere outside the city centre) this gives an approximate rate of 1:20m^2 GFA.

Retail and office development are typically major components of CBD land uses. Retail development parking rates can vary considerably, but appear to average at approximately 1:20m^2 GFA, whilst the office development rate is 1:40m^2 GFA.

The Review of the Victoria Planning Provisions dated October 2007[10] recommended a single rate of 3.5 spaces per 100 m^2 LFA (leasable floor area) or 1:28.6m^2 LFA for a range of uses in activity centres including most shops, restaurants, taverns, hotels and medical centres. The same document recommended a higher rate of 1:20m^2 LFA for supermarkets, and a lower rate of 1:33m^2 LFA for office development.

Office development parking demands are determined primarily by employees, whereas retail development parking demands are determined primarily by shoppers/visitors. This can be an important distinction as the travel characteristics and travel mode choice of both can differ significantly. The office parking requirement is determined primarily by the proportion of employees travelling to work by car, the number of employees per car and the floor space per employee. The following table demonstrates the effect on the car parking demand of different car mode shares (with the remainder not working on the day, or walking/cycling, or using public transport) and a range of office floor space per employee. It assumes that the average car occupancy is 1.2 employees per car.

Figure 20: Car parking demand and mode share

Floor space/employee	85% car mode share	80% car mode share	75% car mode share
20m^2	1:28m^2 GFA	1:30m^2 GFA	1:32m^2 GFA
25m^2	1:35.5m^2 GFA	1:37.5m^2 GFA	1:40m^2 GFA
30m^2	1:42.5m^2 GFA	1:45m^2 GFA	1:48m^2 GFA

Office visitor parking needs could be met on-street or nearby. Alternatively, the on-site parking could be increased by a factor to accommodate visitor parking. For example, Christchurch City Council, New Zealand adds 5% to employee parking to accommodate visitors.

The above indicates that an appropriate single flat parking rate for all city centre land uses would be 1:30m^2 GFA. This takes into account the trend towards reduced floor areas per employee in modern office developments. It could, however, be insufficient for a number of uses, particularly supermarkets.

[10] Review of Parking Provisions in the Victorian Planning Provisions Advisory Committee Draft Report, August 2007.

A flat rate of 1:35m^2 GFA would be generally acceptable for office developments, but would result in many non-office developments providing insufficient on-site parking. This approach is seen as appropriate as the CGG is seeking to encourage the use of alternatives to the car for travel outside the commuter peak periods.

Another option to consider that fits reasonably well with the 'historic' parking ratios, is to set flat rates as follows:

- 1:20m^2 GFA for ground floor and mezzanine floor uses; and
- 1:40m^2 for all other floors.

This recognises that retail developments tend to be located on the ground floor, and that the majority of office floor space is located above the ground floor.

5.8.1 Conclusion

A single flat parking rate is seen as appropriate for the city centre (and other major activity centres) given the high turnover in land uses. This approach considerably simplifies the administration of land use development applications. It also provides certainty for developers knowing that the rate is set regardless of changes in use of the building.

It is recommended that the rates be:

- All uses 1:35m^2 GFA;

  OR

- 1:20m^2 GFA for ground floor and mezzanine floor uses; and
- 1:40m^2 for all other floors.

Additionally the lesser rate for cash-in-lieu payments should be deleted. This in effect provides an incentive for a developer not to provide any parking which then ultimately becomes the responsibility of the local government to pick up the short fall. If relaxations are going to be given they should be based on the merits of the individual development and these merits clearly documented.

5.9 EDUCATION

The broader environmental, economic and social impacts of parking are rarely understood or appreciated by motorists. The clamour for 'more parking' has been allowed to develop without any communication of its negative effects and growing unsustainability. An improved and ongoing campaign of communication on the unsustainability of current parking practices and on the benefits of parking management is required.

Everyone who drives a car is a stakeholder. The education program needs to be aimed at all stakeholders including planners, developers, designers, retailers, tenants, elected officials and council officers, business and community groups, schools, residents, visitors, commuters and the general public.

It is recommended that education on the need for, and benefits of managing parking demand should be available and regularly communicated in the CGG publications. As a minimum, it should deal with the following issues:

- Drivers cannot expect unlimited parking close to their destination;
- Unlimited supply has environmental, social and economic drawbacks;
- The principle of user pay as free parking has a high direct and indirect cost;
- Need for sustainability planning;
- The provision of long-term employee parking away from the inner core of high activity centres;
- Benefits of improved compliance; and
- Options for reinvestment of income from parking services and cash-in-lieu into improving transport infrastructure.

The CGG can also offer to enforce parking regulations on private property allowing the CGG to collect additional income and be reimbursed the costs of the necessary additional resources. In order to provide this regularly requested service and to improve parking compliance generally, it is recommended that the CGG dedicate additional resources for parking inspection and enforcement.

The CGG's media and online publications are to regularly reinforce the unsustainability of current parking practices and the benefits of managing parking demand.

6. CONCLUSION

If Geraldton is to provide more customer friendly parking, a more focused approach to the management of parking is needed. Wayfinding signage to Geraldton car parks is haphazard and compliance is relatively poor. Technology for pay parking and enforcement is outdated, and does not offer convenient options to parkers. It provides the CGG with very little management information.

Geraldton can continue to provide more and more at-grade parking, to the extent that it becomes a city within a car park. Alternatively it can manage its parking more effectively and ensure that the parking available is targeted for the use of bona fide patrons of the city's commercial, tourist and other attractions. This includes incentives to persuade employees and others to convert to alternative forms of transport. Increased 'churn' of parking bays in high demand areas will encourage visitation to businesses in the city.

The responsibility for parking should be seen in the context of managing a varied business providing a paid and some free services to a large number of clients; a business that if operated efficiently, could yield the CGG a substantial net income per month. This income can be used to continually upgrade accessibility to and within the city.

7. RECOMMENDATIONS

The following recommendations are intended to be part of an integrated plan to minimise the use of the private vehicle and to inform the Geraldton community of the opportunities and benefits of alternatives.

It is envisaged that with the implementation of the recommendations, the results will encourage the use of alternative modes of transport, improve the turnover of parking spaces and ensure sustainable access to the city centre.

Figure 21: Parking recommendations for Geraldton's city centre

Section reference	Summary of recommendation
4.3.2	Expand the scope of the current parking surveys to incorporate duration of stay, and compliance with restrictions. Undertake parking surveys every two years.
4.4 / 5.1.9	Amend signage in the CGG car parks to encourage parking outside of restrictions. Encourage shared parking.
4.6	Introduce on-street parking fees in high demand areas.
4.9 / 5.4.1	Purchase additional technology for more convenient payment of parking on and off-street.
4.10	Redesign and implement new parking signage.
4.10 / 5.6	Introduce wayfinding signage for vehicles and pedestrian.
4.11	Consider the purchase of additional land for public parking in the city centre.
4.14 / 5.1.8 / 5.1.12	Undertake ongoing upgrades of pedestrian walkways within off street car park.
5.1.4	Amend the cash-in-lieu policy to create more certainty and expand the potential use of its funds potential. Apply the policy to all developments.
5.1.5	Develop a plan to identify and prioritise potential sites for construction of deck parking. Commission initial design and feasibility study for identified sites.
5.1.10	Allocate 2% bays in public off street car parks to motorcycles/scooters.
5.1.11	Provide additional kerbside bicycle parking facilities.
5.2	Introduce on-street parking fees.
5.2	Review parking fees every 2 years based on survey results.
5.3.1	Review current time restrictions in residential streets near the city centre.
5.3.2 / 5.3.4	Review existing and potential spillover effects and implement measures to protect residential streets.
5.4	Review ranger resources.
5.5.3	Upgrade Parking Station No. 5 to a high level as an example of good practice.
5.7	Confirm and publicise parking overflow plan for special events.
5.9	Establish and regularly communicate a broad education programme on parking and the need to change attitudes.

APPENDIX A – Western Australian Cash-in-lieu Comparisons

Local Authority	Council Conditions		
	Payment Basis	**Use of Funds**	**Other Criteria**
City of Bayswater	Not less than estimated cost to owner of providing and constructing plus value of land that would have been occupied by parking spaces.	To provide public parking stations anywhere in the District.	Council must have provided a public parking facility nearby or have firm proposals to do so.
City of Canning	Not less than sum of construction cost plus value of that area of applicant's land that would have been occupied by parking spaces including access etc. Note: Land of sufficient area to accommodate the parking spaces may be accepted as an alternative.	For acquisition and/or development of land as a public car park in the locality of the proposed development, or related expenses.	Council must prepare and adopt a programme to acquire and develop land as a public car park prior to accepting cash-in-lieu. Council must define areas to which cash-in-lieu applies.
City of Fremantle	Not less than the cost to the owner of providing and constructing the car parking spaces required by the Council.	The provision of public car parking stations in the locality or the provision of transport infrastructure (incl. infrastructure for cyclists, pedestrians and public transport).	Council has adopted a policy detailing costs of providing car parking in the area and the uses of funds.
City of Joondalup	Based on estimated cost of construction of the parking area or areas suitable for the proposed development and includes value of the land which would have had to be provided to meet Council's requirements. May be discounted by the Council.	Used to provide public car parks in the locality as deemed appropriate by Council.	There is adequate provision for car parking or a reasonable expectation in the immediate future that there will be adequate provision in the proximity of the proposed development.
City of Mandurah City Centre	Sum of fair market value of the space on a designated site identified in City Centre Parking Plan assuming an area of $30m^2$ plus average construction cost (ground or decked depending on location) plus admin costs.	Acquisition of land for the provision of additional parking bays in accordance with City Centre Car Parking Plan. Approximately 10% to be used for alternative mode facilities. May be refunded if not used within 10 years.	Where a public car park exists or is proposed which may adequately serve the car parking demands.

Local Authority	Council Conditions		
	Payment Basis	**Use of Funds**	**Other Criteria**
City of Melville	Sum of the cost of construction of a bay as set out in Council's schedule of fees and charges plus the cost of land based on 30m^2 per bay for parking stations and 15m^2 per bay for verge parking in road reserves (with verge parking acceptability at Council discretion).	To the development and maintenance of car parking facilities and, where necessary, the cost and acquisition of land for that development.	• May be considered only if adequate parking exists in the locality or can be provided by acquisition of land in the locality; and/or • Where there are restrictions on the site • Where no foreseeable problems are likely to exist in the future
City of Nedlands	A construction component cost assessed at time development is charged plus a land value component based on land value and no. of bays @ 29m^2/bay. (There is a separate policy for a Government Road)	Paid into the City Development Welfare and Services Reserve Fund for use in providing public parking stations anywhere in the District.	Council has provided or has firm proposals to provide a Council car parking station in close proximity to the development site within 24 months from time of agreeing to cash payment. Also 'exceptionally good' reasons exist for wanting the development to proceed – refer 3rd and 4th bullet points under Rockingham.
City of Rockingham	Not less than the estimated cost to the owner or developer of providing and constructing the parking bays required plus the value of their land that would have been occupied by the parking spaces and manoeuvring area.	For the provision of public car parking facilities within reasonable proximity to the site concerned.	• Availability of existing and proposed car parking within the vicinity of the development • Development's contribution to streetscape • Need for such a facility or service in the locality • Whether proposal would encourage the upgrading of the area
City of Stirling	Estimated average cost including land and construction (may include both on-street and off-street bays).	• Parking – land, construction, improvements, loan servicing, maintenance • PT infrastructure where it would reduce parking demand	An identified location exists within close proximity for provision of additional bays.
City of Subiaco	The amount fixed as such in a planning policy, or if the Council has not made a policy over the 12 months prior to the application = 50% of (27m^2 x land value per m^2 + at-grade construction cost) per shortfall space.	For the provision of public parking or facilities, infrastructure and services for cyclists, pedestrians and public transport users, and for reimbursing the Council for any expenses for the purpose of the above including loan repayments.	Council must be satisfied that public parking facilities or public transport services are available to satisfy the parking demands or such public parking facilities are proposed to be available.
City of Swan	None identified		

Local Authority	Council Conditions		
	Payment Basis	**Use of Funds**	**Other Criteria**
Town of Victoria Park	Contribution rate based on estimated cost of land in the vicinity, the cost of constructing the bay and any other related costs.	To acquire land for parking in appropriate areas or as a contribution towards the cost of providing existing parking facilities in the area. Contributions may be cash or land or a combination of both. <u>Note:</u> The land on which parking facilities are provided is not limited to that purpose.	Only permitted in localities where the Council is proposing to provide a public car park in the near future or where one already exists. Contributions may comprise all or part of the on-site parking requirement.

APPENDIX B – Deck Car Park Feasibility Analysis

Luxmoore Parking Consulting	DECK CAR PARK REVENUE ESTIMATE								June 2010
	250 Spaces								
Parking Fees									
Avge Increase pa	4%			**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Public per hour				$1.40	$1.46	$1.51	$1.57	$1.64	$1.70
All day Mon-Fri				$7.00	$7.28	$7.57	$7.87	$8.19	$8.52
Evenings				$3.00	$3.12	$3.24	$3.37	$3.51	$3.65
Monthly parkers				$175.00	$182.00	$189.28	$196.85	$204.73	$212.91
Parking Volumes	Volumes	Avge duration	Usage	**Estimated**	**Annual**	**Revenues**			
				Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Public Mon -Fri	400	2.25	150	$327,600	$340,704	$354,332	$368,505	$383,246	$398,575
All day Mon-Fri	45	8.00	45	$81,900	$85,176	$88,583	$92,126	$95,811	$99,644
Monthly parkers	50	24.00	50	$105,000	$109,200	$113,568	$118,111	$122,835	$127,749
			245						
Public Sat-Sun	500	2.75	229	$200,200	$208,208	$216,536	$225,198	$234,206	$243,574
Public evening	80	2.50	80	$87,360	$90,854	$94,489	$98,268	$102,199	$106,287
Total $ excl GST				**$802,060**	**$834,142**	**$867,508**	**$902,208**	**$938,297**	**$975,829**
Revenue/space/day				$8.79	$9.14	$9.51	$9.89	$10.28	$10.69

FEASIBILITY FINANCIAL MODEL **June 2010**

DECK CAR PARK **Years 1 - 10**

Total Site Area (sqm)		2917
No. Levels		3
No. Bays		250
Sqm per bay		35
Cost per bay		$30,000
Escalation rate (Rev Yrs 1-4 @4%)		3%
Total Construction Cost		$7,500,000
NPV Rate		6%

Revenue		
Occupancy	Rev/bay/pd	Rev/pa
Year 1	$8.79	**$802,060**
Year 2	$9.14	**$834,142**
Year 3	$9.51	**$867,508**
Year 4	$9.89	**$902,208**

		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Costs											
Annual direct costs	$ /space	$515	$530	$546	$563	$580	$597	$615	$633	$652	$672
Total Operating Costs		$128,750	$132,613	$136,591	$140,689	$144,909	$149,257	$153,734	$158,346	$163,097	$167,990
Financial Costs											
Loan Principal	$7,500,000										
Rate	8%										
Term (years)	20										
Repayments Assuming PMT		$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892
Repayments incl principal and interest											
Provision for depreciation/sinking fund		**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Buildings (30 Years)		$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
Total Revenue		$802,060	$834,142	$867,508	$902,208	$929,275	$957,153	$985,867	$1,015,444	$1,045,907	$1,077,284
Total Expenses	Op Costs & Deprec	$378,750	$382,613	$386,591	$390,689	$394,909	$399,257	$403,734	$408,346	$413,097	$417,990
Operating Profit/Loss		$423,310	$451,530	$480,917	$511,520	$534,365	$557,896	$582,133	$607,097	$632,810	$659,294
Profit/Loss After Repayments		-$340,582	-$312,362	-$282,974	-$252,372	-$229,526	-$205,995	-$181,758	-$156,794	-$131,081	-$104,597
Net Present Value of operating profit after repayments (incorporating current and preceding periods)		**-$321,303**	**-$599,304**	**-$836,895**	**-$1,036,797**	**-$1,208,312**	**-$1,353,531**	**-$1,474,410**	**-$1,572,785**	**-$1,650,372**	**-$1,708,778**

FEASIBILITY FINANCIAL MODEL **June 2010**

DECK CAR PARK **Years 11 - 20**

Total Site Area (sqm)		2917
No. Levels		3
No. Bays		250
Sqm per bay		35
Cost per bay		$ 30,000
Escalation rate		3%
Total Construction Cost		$ 7,500,000
NPV Rate		6%

Revenue

Occupancy	Rev/bay/pd	Rev/pa
Year 1	$19.07	**$1,739,920**
Year 2	$19.64	**$1,792,118**
Year 3	$20.23	**$1,845,881**
Year 4	$20.84	**$1,901,258**

		Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Costs											
Annual direct costs	$ /space	$692	$713	$734	$756	$779	$802	$826	$851	$877	$903
Total Operating Costs		$173,029	$178,220	$183,567	$189,074	$194,746	$200,588	$206,606	$212,804	$219,188	$225,764
Financial Costs											
Loan Principal	$7,500,000										
Rate	8%										
Term (years)	20										
Repayments Assuming PMT		$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892	$ 763,892
Repayments incl principal and interest											
Depreciation		**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Buildings (30 Years)		$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
Total Revenue		$1,109,603	$1,142,891	$1,177,177	$1,212,493	$1,248,867	$1,286,333	$1,324,923	$1,364,671	$1,405,611	$1,447,780
Total Expenses	Op Costs & Deprec	$423,029	$428,220	$433,567	$439,074	$444,746	$450,588	$456,606	$462,804	$469,188	$475,764
Operating Profit/Loss		$686,573	$714,671	$743,611	$773,419	$804,122	$835,745	$868,318	$901,867	$936,423	$972,016
Profit/Loss After Repayments		-$77,318	-$49,221	-$20,281	$9,527	$40,230	$71,854	$104,426	$137,975	$172,531	$208,124
Net Present Value of operating profit after repayments (incorporating current and preceding periods)		**-$1,749,509**	**-$1,539,827**	**-$1,330,538**	**-$1,122,377**	**-$916,156**	**-$703,747**	**-$484,967**	**-$259,622**	**-$27,518**	**$211,549**

FEASIBILITY FINANCIAL MODEL **June 2010**

DECK CAR PARK **Years 21 - 30**

Total Site Area (sqm)		2917
No. Levels		3
No. Bays		250
Sqm per bay		35
Cost per bay		$ 30,000
Escalation rate		3%
Total Construction Cost		$ 7,500,000
NPV Rate		6%

Revenue

Occupancy	Rev/bay/pd	Rev/pa
Year 1	$19.07	**$1,739,920**
Year 2	$19.64	**$1,792,118**
Year 3	$20.23	**$1,845,881**
Year 4	$20.84	**$1,901,258**

		Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Costs											
Annual direct costs	$ /space	$930	$958	$987	$1,016	$1,047	$1,078	$1,111	$1,144	$1,178	$1,214
Total Operating Costs		$232,537	$239,513	$246,698	$254,099	$261,722	$269,574	$277,661	$285,991	$294,571	$303,408
Financial Costs											
Loan Principal	$7,500,000										
Rate	8%										
Term (years)	20										
Repayments Assuming PMT											
Repayments incl principal and interest											
Depreciation		**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
Buildings (30 Years)		$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
Total Revenue		$1,491,213	$1,535,949	$1,582,028	$1,629,489	$1,678,373	$1,728,725	$1,780,586	$1,834,004	$1,889,024	$1,945,695
Total Expenses	Op Costs & Deprec	$482,537	$489,513	$496,698	$504,099	$511,722	$519,574	$527,661	$535,991	$544,571	$553,408
Operating Profit/Loss		$1,008,676	$1,046,437	$1,085,330	$1,125,389	$1,166,651	$1,209,151	$1,252,925	$1,298,013	$1,344,453	$1,392,287
Profit/Loss After Repayments		$1,008,676	$1,046,437	$1,085,330	$1,125,389	$1,166,651	$1,209,151	$1,252,925	$1,298,013	$1,344,453	$1,392,287
Net Present Value of operating profit after repayments (incorporating current and preceding periods)		**-$1,228,449**	**-$558,976**	**$167,431**	**$958,145**	**$1,821,524**	**$2,776,062**	**$3,833,661**	**$5,007,743**	**$6,313,442**	**$3,281,721**

APPENDIX C – Event Management Plan

Background

Event parking management plans reduce parking demand and traffic congestion and confusion. They are particularly appropriate at any location where peak parking demands create problems.

They require the establishment and communication and marketing of alternative and remote parking facilities, combined with secure pedestrian access. Costs will include additional staff time, equipment and special services.

The CGG needs to establish and clearly communicate clear rules to inform drivers where and when they may or may not park. This requires not only clearer signage, but also advance notification of nearby options (wayfinding signage and maps).

Any event management parking plan requires the allocation of sufficient resources for both the planning and the implementation stages. These include not only labour and supervision, but signage, liaison with other organisations (e.g. the police), technology for communications, and prior dissemination of information in the media to those attending the event as well other persons or businesses that may be affected by traffic and parking management associated with the event. The cost of additional resources should be recoverable wherever possible from the event organisers.

Overview

This Plan provides a checklist of the issues that need to be addressed by specific procedures by which transportation and parking issues related to large events in the city will be handled. It will describe how vehicular and pedestrian activity in the vicinity of the event will be controlled, and also the methods of minimising traffic and parking impacts in the neighbouring communities.

Drivers coming to and departing from the event will be encouraged to use specific routes and preferred parking facilities. This goal will be achieved through a combination of pre-selling parking spaces, permanent signage, changeable message signs, media releases, and mass marketing programs designed to inform the public and event attendees about these travel routes and parking facilities.

The use of various temporary traffic control devices, in conjunction with the deployment of traffic police close to the venue, will give priority to the established travel routes, thereby minimising traffic and parking impacts on the neighbouring communities.

The following issues should be considered for all major events which will have an impact on parking and traffic in the precinct.

1. Constraints

The Plan is subject to the following constraints:

No access from …… (specify the routes)

Keep existing public transit routes open.

Avoid sending traffic into streets which are already congested during weekend/evening hours and also have a large number of pedestrians.

Minimise vehicle/pedestrian flow conflicts as much as possible. Large numbers of pedestrians and vehicles will be arriving and leaving the event at the same time. To protect pedestrians and to keep traffic flowing, areas of conflict should be kept to a minimum.

Direct traffic away from streets which pass through adjacent neighbourhoods. Event-related vehicular usage of these streets will be discouraged.

Discourage or prohibit event attendees from parking on-street in surrounding communities.

2. Geographic and timeframe definitions

The Plan will focus on traffic and parking impacts in several areas. Insert a detailed map of the area and its boundaries.

3. Resources

Determine the staff and external support required and ensure staff are:

- uniformed, identifying them as a parking and traffic officer;
- trained, particularly what to do in an emergency;
- have suitable communication equipment; and
- are made aware of other staff and other organisations such as traffic police and ambulance officers that are on duty at the event.

4. Parking supply

Detail the number of on and off-street parking spaces available.

5. Parking zones and times

Define the zones and the applicable times for the event.

6. Preferred access routes

Detail these for both inbound and outbound traffic.

7. Traffic flow & control – inbound

The CGG is to implement comprehensive and intensive public information programs to educate all event attendees about the options for driving to the event area.

8. Traffic flow & control – outbound

Immediately following an event, there will be a large number of pedestrians departing and moving toward their cars, buses, and downtown businesses. The dispersal of pedestrians into the commercial streets will be a significant factor in minimising the number of pedestrian/vehicle conflict points. In the first minutes at the end of an event, when the greatest numbers of attendees are departing, some streets immediately surrounding may need to be closed to vehicular traffic to facilitate this dispersal.

9. Pricing

Wherever possible, parking should be paid for in advance at a fixed fee for the duration of the event and for at least 3 hours thereafter. If meters are used, their normal per hour fee structure should be adjusted for the event. Payment should be simple and convenient and easy to understand (e.g. $10).

Payment for parking will recover some of the additional costs incurred in managing the event.

10. Public information program

The event organisers are to ensure that the general public and ticket holders are fully informed regarding all features of the transportation and parking plan for the venue.

A public information plan will utilise the event organisers' communications resources to inform and educate the public. Major features of this program will include printed materials, on-line information, media exposure (print, radio and television) and other information sources.

10.1 Printed materials

The organisers are to produce printed materials detailing information regarding parking and transportation for the venue. Information to be included will be locations of available parking facilities modes of public transit, suggested vehicular and recommended pedestrian ingress and egress routes. Printed information will also present maps, parking prices and costs for the various modes of transportation.

The printed materials will be widely distributed well in advance of the event. In addition, they will be available to the general public and be mailed to all season ticket holders and other ticket purchasers as necessary.

10.2 On-line information

The event organisers are to make transportation and parking information for the venue available on the associated web page through a variety of links including but not limited to their home page.

10.3 City of Greater Geraldton home page

This is to include a Traffic Information Page. Addresses for on-line links will be listed on event organisers' printed materials as they relate to transportation and parking.

10.4 Radio/television

The event organiser is to use both television and radio to communicate information regarding the venue and parking transportation and parking.

Television may be used to promote the key messages of the transportation and parking plans for the event as well as promoting available modes of transportation with clear instructions on how this information may be obtained. Radio/SMS may be used to assist by relaying real time information and current traffic reports.

11. Information at the event

A comprehensive communication program will also include messages at the venue to keep the public informed. Screens are to be located inside and around the venue providing transportation-related information.

Scoreboard/stage messages and public address announcements may be used to communicate messages specific to parking operations.

Finally, the event organiser is to employ trained and supervised 'Customer Assistance Officers' throughout the nearby areas and at the venue to answer questions and offer assistance regarding transportation and parking.

APPENDIX D – Summary of Stakeholders Meeting

Parking Management Plan

Invitation to Stakeholder Workshop

12.30 pm Wednesday 18 November 2009

The Community Infrastructure Department (Infrastructure Planning and Development) has appointed Luxmoore Parking Consulting (Luxmoore) to undertake a Parking Management Plan. This study forms part of the draft Plan for the Future 2009-2014.

The Plan will cover:

- The amount and approach to public parking pricing, on and off street in the City Centre.
- Parking Standards to be applied to new developments.
- Service Standards to be applied to the management of parking.
- Marketing and promotion of parking management.

It is recognised that parking issues cannot be dealt with in isolation from the broader issues of car use and transport, and that parking is an essential element of the overall transportation system and not a stand alone service.

The key aims and actions of the Plan will address:

1. Public Parking Stock in the City Centre
2. Long and Short Stay City Centre Parking for Non Residents
3. Parking Charges
4. Potential Impact on City Centre Residential Streets
5. Parking Enforcement
6. Quality Parking Management
7. Improving Access
8. Development Standards
9. Marketing and Information.

In order to more clearly understand stakeholder's major issues and requirements, we would appreciate an appropriate representative of your organisation attending a workshop on

Wednesday 21 October 2009 from 12.30 – 2pm

Parking Management Plan

Agenda

Wednesday 18 November 2009

12.30 **Introduction – Tony Brun, CEO**

Parking Strategy in context – Syd Jerram,

Director Community Infrastructure

12.45 **Parking Strategy Issues and Options - Larry Schneider, Luxmoore**

- **Role of Luxmoore**
- **Parking demand and supply**
- **Alternative travel modes**
- **Some attitudes to parking**
- **Cost of parking**
- **Free parking**
- **Key topics**

1.00 **Some issues for discussion:**

- **What are stakeholder's concerns in relation to parking demand and supply?**
- **What is your wish list**
- **Where to from here**
- **What other stakeholders should be consulted?**

2.00 **Finish**

Please send the names of your representative(s) that will attend the workshop to Luke Ertzen lukeertzen@cgg.wa.gov.au Tel 9956 6693

Yours sincerely,

Parking Management in Geraldton

Stakeholder Workshop Presentation

November 2009

Larry Schneider

Luxmoore Parking Consulting

A division of the ARRB Group Ltd

- National and international specialist consultancy providing transport solutions
- Offices in all Australian capital cities and Dubai, Indonesia and China

Luxmoore is a specialist consultancy with expertise in all aspects of parking including planning, policy, management, operations and technology

- we do not operate car parks
- we do not supply parking technology
- we provide quality outputs that are practical and reliable.

Quality parking solutions exceeding client expectations

Role of Luxmoore

- Gather information - what are the key issues
- Analyse current parking supply and demand
- Review parking fees, restrictions and enforcement
- Consider parking service standards
- Develop options and solutions
- Ongoing engagement with stakeholders
- Recommend an action plan

Parking issues cannot be dealt with in isolation from the broader issues of car use and transport.

Growth in vehicles - WA

- Registered motor vehicles in WA
  - 2003 1,438,000
  - 2007 1,676,000
- An increase of 17% over 4 years
  - (78% passenger cars)
  - Additional 59,500 vehicles p.a.

- Assuming Geraldton represents <2% of WA's population, additional **22** cars per week **every week,** need parking
- Not just one space - at work, at home, at shops, movies, events, schools

Cars are usually parked >22 hours per day

Some attitudes to parking

- Parkers expect to find a space close to their destination
- CBD employees are entitled to park close to their place of work
- High reliance on cars for trips to the city
- We must continue to provide more and more parking spaces

Changing nature of parking management

Old attitude - Predict and Provide

- "Parking problem" means "inadequate supply"
- Parking should be provided free or subsidised
- Car parks should never fill
- "Predict and provide" approach means "more parking is better"
- Every destination should satisfy its own parking need (minimum ratios)
- Parking costs should be subsidised or incorporated into building costs

A "demand satisfaction" approach

New Approach - Demand Management

- Too much capacity is as harmful as too little
- Existing parking needs to be used more
- Full car parks are acceptable if additional parking or public transport is available
- Encourage shared parking facilities between different destinations and generators
- Charge directly for parking in all areas - principle of "user pay"

- Limits to be based on capacity of each centre to accommodate parking, not on their capacity to accommodate development

A paradigm shift from a "demand satisfaction" to a "demand management" approach

Value of Geraldton's car parks

- Assume a minimum land value of $1,250sqm
- A car park requires minimum 25sqm per space
- Geraldton's 500 off-street car park spaces have a value of **$15.6 million**

- Value of 460 on-street parking spaces (at $3,000 construction cost/space) is **$1.4 million**
- Construction cost of off-street bays in deck car park is >$34,000
- 100 space deck car park will cost **$3.4 million** construction cost, **PLUS** the cost of land

It is easier, more flexible and less expensive to make better use of existing parking capacity, than to create additional parking

Some findings

- Parking ratios are generous
- Significant number of city centre parking is used by employees
- Parking fees do not generate a commercial rate of return
- On street premium bays are free, yet off street parking is charged for
- Spillover will become a problem in residential streets
- Level of compliance with restrictions could be improved (Marine Terrace)
- Car parks could provide higher level of service (convenience, security)
- Current parking capacity should be used more efficiently
- Poor end of trip facilities for cyclists

Who are the major users of car parks?

250m and 400m walking distances

Acceptable walking distances to shared parking include distances of:

- less than 250m for residents, professional services and medical facilities (< 3 minutes)
- less than 350m for retail, employees, restaurants etc. (< 5 minutes)
- less than 500m for overflow parking and major events (< 8 minutes).

Effect of current parking pricing

- Is there an incorrect perception of shortage of parking spaces
- Does pricing encourage on street searching for spaces
- Does pricing discourage use of public transport
- How elastic is demand
- Does free parking after 12 noon Saturday generate more patrons
- Are drivers demanding more and more spaces
- Is the City expected to fund these spaces

Cash in lieu

Benefits

- Flexibility for developers
- Provides more concentrated parking supply – more efficiently
- Creates more opportunities for shared parking
- Better urban design, safer, more walkable city
- It illustrates the high cost of providing parking (developers can pay the fee or provide it for free)

Major issues

- What should the fee be set at
- How is it to be spent
- What are the entitlements of developers who have contributed

Other issues

What role does the City currently play in parking?

- Is its role efficient and effective
- Could it be better provided by the private sector
- Does it hinder/provide an incentive to the private sector

Who are the other stakeholders?

What is your wish list for parking?

there is only one spot with Free Parking

Car park construction costs

per Rawlinsons 2009

Type	Construction method	Rate ($/m²)	Floor area per car space (m²)	Construction cost per car space
1	At-Grade parking areas	$75	35.70	$2,677
2	Above Ground Parking Stations - 2 storeys	$ 450	29.20	$13,140
3	Above Ground Parking Stations - 3 storeys	$555	29.20	$ 16,206
4	Ground Level Under Croft Parking (3 storey office building)	$555	32.00	$17,760
5	Above Ground Parking Stations - 4 storey	$680	28.40	$19,586
6	Above Ground Parking Stations - 5 storey	$680	28.40	$19,586
7	Above Ground Parking Stations - 6 storey	$680	28.40	$19,586
8	Partially Underground Under Croft Parking (3 storey office building)	$680	32.00	$27,200
9	Underground Parking - 1 level	$1,715	32.00	$54,880
10	Underground Parking - 2 level	$1,715	32.00	$54,880
11	Under Croft Parking - 2 levels (6 storey office building)	$1,135	32.00	$36,320

Land area per car space

Type	Construction method	Land area per car space (m²)
1	At-Grade parking areas	35.70
2	Above Ground Parking Stations - 2 storeys	14.60
3	Above Ground Parking Stations - 3 storeys	9.73
4	Ground Level Under Croft Parking (3 storey office building)	32.00
5	Above Ground Parking Stations - 4 storey	7.10
6	Above Ground Parking Stations - 5 storey	5.68
7	Above Ground Parking Stations - 6 storey	4.73
8	Partially Underground Under Croft Parking (3 storey office building)	32.00
9	Underground Parking - 1 level	32.00
10	Underground Parking - 2 level	16.00
11	Under Croft Parking - 2 levels (6 storey office building)	16.00

Combined construction & land costs (land at $500 sqm)

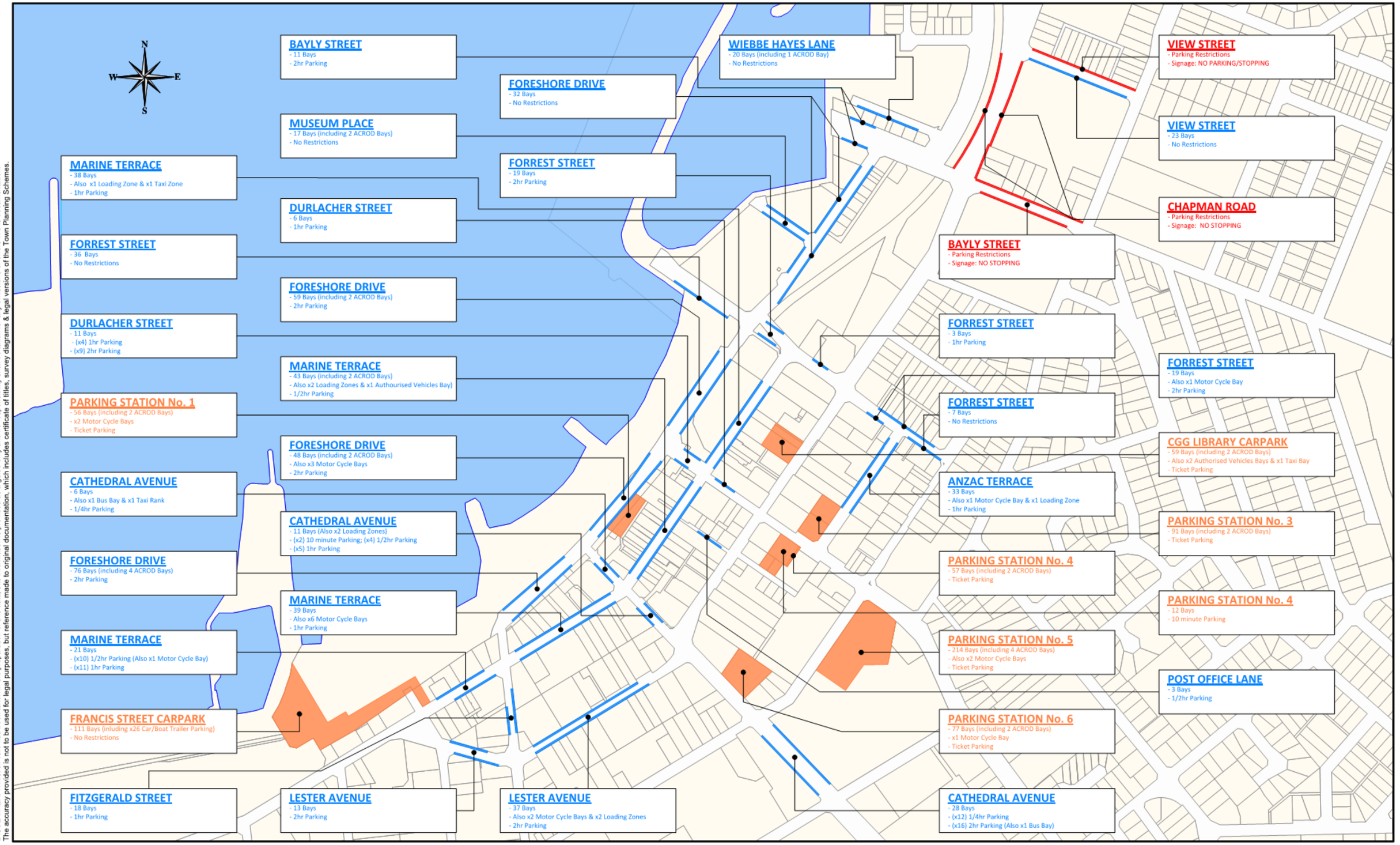
Type	Construction method	Construction cost per car space	Land cost per car space @ $488/m²	Total parking space cost (Construction + Land)
1	At-Grade parking areas	$2,678	$ 17,707	$20,384
2	Above Ground Parking Stations - 2 storeys	$13,140	$7,242	$20,381
3	Above Ground Parking Stations - 3 storeys	$16,206	$4,826	$21,032
4	Ground Level Under Croft Parking (3 storey office building)	$17,760	$ 15,872	$33,632
5	Above Ground Parking Stations - 4 storey	$19,586	$3,522	$23,117
6	Above Ground Parking Stations - 5 storey	$19,586	$2,817	$22,413
7	Above Ground Parking Stations - 6 storey	$19,586	$2,346	$21,942
8	Partially Underground Under Croft Parking (3 storey office building)	$27,200	$ 15,872	$43,072
9	Underground Parking - 1 level	$54,880	$ 15,872	$70,752
10	Underground Parking - 2 level	$54,880	$7,936	$62,816
11	Under Croft Parking - 2 levels (6 storey office building)	$36,320	$7,936	$44,256

Summary of issues raised at the Workshop

Summary of Issues raised by 13 attendees at the Parking Management Workshop, 18 November 2009.

- Integration with public transport and cycling is important part of TravelSmart campaign;
- Public transport virtually non-existent for most communities because PTA won't provide convenient services;
- Mode share targets are irrelevant without public transport to back it;
- Foreshore requires shared parking and creation of a slower speed environment;
- Consider meters on some of the back streets;
- Ocean Hotel is charging $130 for monthly parking;
- Many retail businesses don't have sufficient parking, and much of it is used by staff;
- Explain the need to purchase sites and construct more bays;
- Agree that education is important;
- Need to improve the presentation of car park sites;
- On-street pay parking needs to be re-introduced;
- Expand enforcement to ensure compliance and Council to provide this on private sites;
- Insufficient enforcement since meters were taken off the street;
- Encourage churn in the main retail areas; and
- Cash-in-lieu needs to be sorted out and applied more clearly.

APPENDIX E



City of Greater Geraldton
a vibrant future

CURRENT AVAILABLE PUBLIC ON-STREET & OFF-STREET PARKING WITHIN THE CENTRAL BUSINESS DISTRICT (CBD)

Operator:	RJT
Department:	IPD (Assets)
Drawing No:	
Date: 16/03/12	Scale: 1:6000 (A3)