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# Australian CBD Car Parking – The Next Decade



Car parks in Australian CBDs are in many ways a finite product. There are now very few new car parks being built within CBDs, certainly not enough to keep up with demand. In addition, most City Councils are actively looking at ways to limit car access into CBDs. As a result, daily parking rates are becoming more expensive for commuters,

although this is yet to have a discernible impact on values.

With changes to technology and the increasing cost of car parking, owners of car parks are having to become more innovative in the services that they provide. In this paper, Colliers International and Parking & Traffic Consultants look at the Australian CBD

non-residential car park market and how this sector is expected to change over the next decade.



### SUPPLY BEGINS TO SLOW AND LIMITED NEW CAR PARKS EXPECTED

The number of car spaces increased from 141,690 car spaces in 2006 to 153,400 car spaces in 2011, with the strongest increases being in Brisbane CBD and Canberra. Currently, Melbourne has the most car spaces at just under 40,000 spaces, however the rate of increase has slowed dramatically over the past five years.

Although reasonably strong overall, the increase since 2009 has been relatively minor. Much of the increase in car space across Australian CBDs occurred between 2006 and 2009. Between 2009 and 2011, the total increase amounted to just 103 car spaces across all CBDs. Sydney CBD car spaces declined over this time period, as did Perth CBD.

**TABLE 1: NON RESIDENTIAL CAR SPACES IN AUSTRALIAN CBDs, 2006 - 2011**

	Number		2006 - 2011	
	2006	2011	No.	%
Sydney CBD	28,543	28,498	-45	-0.2%
Melbourne CBD	38,908	39,898	990	2.5%
Brisbane CBD	21,697	25,141	3,444	15.9%
Adelaide CBD	23,784	25,530	1,746	7.3%
Perth CBD	20,828	22,831	2,003	9.6%
Canberra	7,926	11,514	3,588	45.3%
Total	141,686	153,412	11,726	8.3%

Source: RPData

Supply of car parking is expected to moderate over the next decade. In 2012 and 2013, all new car parks will be contained within office and retail developments. For each capital city, new development can be summarised as follows:

- › Sydney CBD – A total of 127 new car spaces will be developed over the next two years within two new developments – 8 Chifley and 163 Castlereagh Street. Despite both being large developments, they both contain relatively little car parking.
- › Melbourne CBD – Just over 700 car spaces are to be developed over the next two years. This high level is due to the significant development pipeline in this market. Eight new buildings will be completed over this time period.
- › Brisbane CBD – The completion of three buildings will add 274 car spaces to the Brisbane CBD, the majority of which will be located in 111 Eagle Street and 145 Ann Street.
- › Adelaide CBD – Just under a third of all new non-residential CBD car parks will be in Adelaide CBD, the majority of which will be located at 70 Franklin Street.
- › Perth CBD – A large number of new car spaces are to be added to in the Perth CBD, primarily due to a significant amount of new office development.
- › Canberra – A total of 270 new car spaces are to be constructed in this market over the next two years.



Importantly, there will be no new multi-storey car parks developed. Redevelopment of existing multi-storey car parks will also continue as CBD sites become more valuable for alternative uses, thereby reducing significantly the amount of car parking available.

**TABLE 2: FUTURE NON RESIDENTIAL CAR SPACES IN AUSTRALIAN CBDS, 2009 - 2013**

	Number			2009 - 2011		2011 - 2013	
	2009	2011	2013	No.	%	No.	%
Sydney CBD	29,447	28,498	28,625	-949	-3.2%	127	0.4%
Melbourne CBD	39,080	39,898	40,612	818	2.1%	714	1.8%
Brisbane CBD	24,474	25,141	25,415	667	2.7%	274	1.1%
Adelaide CBD	25,509	25,530	26,640	21	0.1%	1,110	4.3%
Perth CBD	23,216	22,831	23,715	-385	-1.7%	884	3.9%
Canberra	11,583	11,514	11,784	-69	-0.6%	270	2.3%
Total	153,309	153,412	156,791	103	0.1%	3,379	2.2%

Source: RPData, Property Council of Australia

**DEMAND CONTINUES BUT BEHAVIOUR IS SLOWLY MODIFYING**

The majority of car spaces in Australian CBDs are used by workers and in all CBDs around Australia, the number of workers has increased by 100,000 people over the past five years. The increase has been far more significant in Melbourne CBD, accounting for almost half the Australian CBD total.

This increase in CBD workers is expected to continue, although it will moderate slightly from the high rates experienced over the past five years. Access Economics forecast that an additional 79,000 workers will inhabit our CBDs over the next 4 years. The strongest increases are expected to occur in Sydney and Melbourne CBDs.

To compare the supply of parking to demand, a ratio of CBD car spaces to 100 workers has been used. In all capital cities, this ratio has declined between 2006 and 2011 with the exception of Brisbane and Canberra. The increase in Canberra has been the most significant of all cities, increasing from 16.2 to 19.6. The city which has seen the most significant decline has been Melbourne CBD, moving from 16.1 in 2006 to 13.8 in 2011.

The cities which have the lowest ratio of car spaces to workers are Sydney CBD and Melbourne CBD, our biggest CBDs.

The highest proportions are in Adelaide and Brisbane CBDs. In the case of Adelaide CBD, it has almost twice the provision of car spaces than Sydney CBD, the city with the lowest provision.

**TABLE 3: NON RESIDENTIAL CAR SPACES PER 100 CBD WORKERS , 2007 - 2013**

	CBD Workforce			
	2007	2009	2011	2013
Sydney	234,962	234,386	240,236	250,743
Melbourne	259,304	278,939	289,015	302,829
Brisbane	109,467	112,699	117,249	125,421
Adelaide	100,623	103,173	107,391	112,639
Perth	114,503	115,853	122,660	129,388
Canberra	52,500	56,395	58,798	61,710
Total	871,359	901,447	935,348	982,732

	Car Spaces			
	2007	2009	2011	2013
Sydney	28,173	29,447	28,498	28,625
Melbourne	39,211	39,080	39,898	40,612
Brisbane	22,833	24,474	25,141	25,415
Adelaide	24,589	25,509	25,530	26,640
Perth	20,921	23,216	22,831	23,715
Canberra	8,071	11,583	11,514	11,784

	Car Spaces per 100 CBD workers			
	2007	2009	2011	2013
Sydney	12.0	12.6	11.9	11.4
Melbourne	15.1	14.0	13.8	13.4
Brisbane	20.9	21.7	21.4	20.3
Adelaide	24.4	24.7	23.8	23.7
Perth	18.3	20.0	18.6	18.3
Canberra	15.4	20.5	19.6	19.1

Source: Deloitte Access Economics, Colliers International

When forecast out to 2013, the ratio declines further in all cities, with Brisbane having the most significant decline. In Sydney CBD, the city with the lowest ratio, the ratio declines to just 11.4 car spaces per 100 CBD workers.

While the ratio of car parking to CBD workers is declining, the importance of car parking is also declining relative to other forms of transport. In 2010, an office tenant survey conducted by Colliers International found that bicycle parking was seen as just as important as car parking. This was a distinct change from the same survey conducted in 2005 when car parking was seen as far more important. These are distinct changes in behaviour by tenants, and the expectations for car parking.

A further indication of modification of behaviour is the importance that tenants place on being close to public transport. Since 2005, this has remained the most important driver in attracting and retaining staff by tenants when choosing an office location and has steadily increased in importance over time.





### PRICING GOES UP FOR A VARIETY OF REASONS

CBD daily rates for parking show a distinctly cyclical component and have increased in all cities, except Brisbane, since 2008. Forecast performance of office markets are a good indicator of short term movements in parking rates as, not surprisingly, an imbalance between the amount of car parking being developed to the increased number of workers leads to higher demand for car parking and more significant price increases.

Historically, Melbourne CBD and Perth CBD have had the strongest office rental increases between 2008 and 2011 and have also experienced the strongest increase in car park rates. Similarly, a distinct downturn in parking rates was experienced in both Sydney and Melbourne CBDs between 2008 and 2009, a time at which the vacancy rate increased.

The provision of parking analysis undertaken earlier provides a good indication of parking rates. Adelaide CBD has the highest provision of parking per CBD worker of all capital cities. It is also one of the cheapest car parking rates of the CBDs. Sydney and Melbourne, with the lowest provision, have the highest.

**TABLE 4: CAR PARK RATES FOR AUSTRALIAN CBDS, 2008 - 2011**

	CBD Daily Rates			
	2008	2009	2010	2011
Sydney	\$58.00	\$54.50	\$60.50	\$64.00
Brisbane	\$40.00	\$47.50	\$35.00	\$39.00
Perth	\$16.00	\$29.00	\$29.40	\$31.00
Melbourne	\$56.00	\$52.00	\$58.00	\$66.00
Adelaide	\$18.50	\$18.50	\$22.00	\$23.20
Canberra	n/a	\$8.50	\$9.50	\$10.00

	CBD Monthly Rates			
	2008	2009	2010	2011
Sydney	\$825.00	\$600.00	\$699.00	\$660.00
Brisbane	\$630.00	\$660.00	\$555.00	\$540.00
Perth	\$549.84	\$645.00	\$666.00	\$681.00
Melbourne	\$525.00	\$425.00	\$545.00	\$568.00
Adelaide	\$255.40	\$275.00	\$257.00	\$276.00
Canberra	n/a	\$255.00	\$229.00	\$275.00

Source: Colliers International

Parking rates in Australian CBDs are also amongst the most expensive in the world. The results detailed in Table 4 are shown in US dollars. Sydney CBD makes the Top 10 for monthly parking rates, while Melbourne and Sydney CBDs are both in the Top 4 for the daily rate. Compared to previous years, Australian CBDs rate higher partly because of the strong Australian dollar, but also because of the relatively strong performance of Australian office markets, leading to significant increases in employment.

**TABLE 5: MOST EXPENSIVE GLOBAL CAR PARK RATES, 2011 (USD)**

Monthly Rate		Daily Rate	
London - City	USD 1,083.59	Oslo	USD 89.04
London - West End	USD 1,014.32	Copenhagen	USD 73.11
Zurich	USD 822.15	Melbourne	USD 69.53
Hong Kong	USD 744.72	Sydney	USD 67.42
Tokyo	USD 744.00	London - City	USD 65.97
Rome	USD 718.90	Tokyo	USD 62.00
Perth	USD 717.43	London - West End	USD 57.73
Geneva	USD 704.70	Vienna	USD 57.51
Sydney	USD 695.31	Amsterdam	USD 57.51
Oslo	USD 612.15	Geneva	USD 46.98

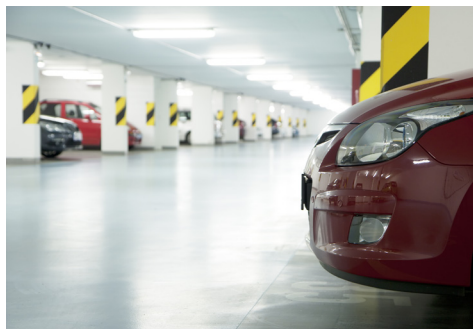
Source: Colliers International

The performance of Australian CBD office markets and the strong Australian dollar are, however, not the only driver of increasing parking rates. There are a number of other influences, including the way Government intervenes to restrict parking, which makes it more expensive, as well as the relative attractiveness of existing standalone car parks to be used for alternative uses.

Car park levies and licenses have now been introduced in many CBDs and this adds to the cost of parking. Although there are no levies as yet in Brisbane, Adelaide and Canberra, there is much discussion in these cities about whether they should be introduced. A summary of the current levies is as follows:

- › Sydney: Parking levies were introduced by the NSW Government in business districts of Sydney in 1992 to discourage car use. The levy applies to off-street commercial and office parking spaces. For the City of Sydney, the current rate is \$2,100 per liable space per annum.
- › Melbourne: Congestion levies were introduced in 2007 to relieve congestion and discourage car use. The congestion levy for the Melbourne CBD currently amounts to \$910 per car park space per annum.
- › Brisbane: No levies have been introduced. In 2007, Brisbane City Council banned further development of public car parks in the CBD as a policy to encourage people to use public transport.
- › Perth: The Perth Parking Management Act was introduced in 1999 and requires the licensing of all non-residential parking bays within the Perth Parking Management Area. The policy is part of a wide-ranging plan to preserve Perth's air quality, reduce traffic congestion, improve pedestrian safety, free up short-term shopper parking and create a city environment that is both economically and environmentally healthy. Licenses for short stay public parking bays (including bays located on streets) are \$567.20 per bay per annum, while long stay public parking bays and tenant parking are \$598.30 per bay per annum.
- › Adelaide: No levies have been introduced.
- › Canberra: No levies have been introduced.

Another way that local councils look to discourage car use is through street scaping which, if successful, would have a moderating impact on car parking prices. Some of the methods



councils use to discourage cars is to slow them down or to complicate road networks by narrowing lanes, changing car lanes to bicycle lanes, closing roads at particular times and making some streets one-way only.

### INCREASES IN VALUE DIFFICULT TO ASCERTAIN

Car parks are a tightly held asset class that rarely trade, even in good economic times. This makes it difficult to ascertain value changes over time. The types of investors that are attracted to car parks include car park operators, investors looking to spread their investment risk over a variety of property types and, particularly in the CBD, investors looking for redevelopment opportunities. Dependent on location, car parks are attractive as sources of secure cash flows with relatively stable income growth, although as outlined earlier, can be susceptible to changes in Government policy.

### THE MAIN ATTRIBUTES OF CAR PARKS AS INVESTMENTS ARE AS FOLLOWS:

- › Limited or no obsolescence.
- › Reduced levels of capital expenditure/upgrade costs compared to more traditional investments.
- › Car parks have a diversified income stream derived from multiple users.
- › Restricted future supply to most major CBD locations throughout Australia with city councils discouraging construction of new commercial car parks in the CBD in order to reduce traffic flows to the CBD.
- › Inability of an ageing Public Transport System to keep up with demand of population growth.
- › Minimal management required.
- › Potential opportunities for redevelopment

Yields for well-established commercial car parks are generally slightly above commercial buildings in the same price range in comparable locations, with a slight risk premium factored into these transactions for a variety of reasons including:

- › Increased uncertainty surrounding changes to Government legislation, including changes and increases to parking levies;
- › Casual parking as a discretionary spend which generally diminishes in times of economic uncertainty; and
- › A smaller market for car parking assets.

Investment demand for car parks has slowed in recent years, similarly to other asset classes. Yields have increased and have only just started to show signs of stabilisation, and some firming, over the past 12 months. In comparing car park sales, differences in yields depend on a range of factors including the lease or management agreement structure and term, location and proximity to certain positions within the CBDs (e.g., higher values close to main retail malls/centres).

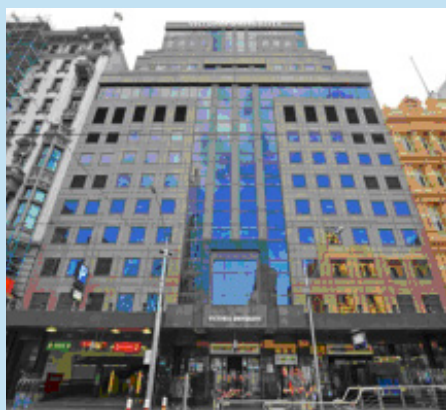
The most recent car park sale is a component of 300 Flinders Street, Melbourne which transacted in November 2011. The sale reflected an initial yield of 7.6%, however the property was purchased with plans to increase revenue as detailed in the following case study.

Within the Sydney CBD the most recent sale was the Cinema Car Park located at 521-527 Kent Street, Sydney which transacted in 2009. This car park was subject to a short term lease and

reflected an initial yield of 8.35%, with an internal rate of return analysed at 10.68%. The limited transactions to have occurred highlight the tightly held nature and small size of this market.

Our analysis of freehold car park sales between 2009 and 2011 within Sydney, Melbourne, Brisbane and Adelaide reflects initial yields ranging from 7.60% to 9.00%, with variations reflective of specific property characteristics. Any fluctuation in yields over the previous ten years has correlated with the fluctuation in commercial yields over this period, with a 50 to 100 basis point spread generally being reflected between freehold car parks and commercial investments.

We are unable to determine accurately whether rentals for car parks have increased over the past 10 years because individual car parks are inherently different, with diverse revenue streams and operational costs. Our view is that given the increase in parking fees across most capital cities throughout Australia, the limited new supply of car parks in centralised locations and the subsequent limited opportunities for tenants to secure these tenancies, car parking rentals have increased and are likely to continue to increase given the strength in tenancy demand and limited new supply.



#### CASE STUDY: 300 FLINDERS STREET, MELBOURNE

The property is located in a prime Melbourne CBD location one block from Collins Street and the financial precinct, being the preferred business location for major banking, insurance, and financial services companies.

300 Flinders Street, Melbourne comprises a nineteen level commercial building which includes above ground parking completed in 1991 and purchased by Victoria University in 1993 to become their city campus. The car park component of the building comprises nine levels above ground with 574 bays and has been sold under a proposed plan of strata subdivision, while the upper levels and the adjoining retail arcade are being retained by Victoria University.

##### Sale Particulars:

Sale Date - November 2011  
 Market Yield - 7.60% (Initial)  
 Sale Price - \$28,200,000  
 No. Car Spaces - 574 bays  
 \$/bay - \$49,129

The construction of the car park is generally concrete with internal columns and a polished granite external finish, fluorescent lighting, sprinkler system and illuminated exit signs are incorporated internally. Lift access within the building is provided via two lifts situated in the centre core providing access from the ground level to Level 8. Two internal stairways provide emergency access.

The car park at the time of purchase was managed by Greenco Parking Pty Ltd on a monthly arrangement with the passing net income reflected at \$2,143,107 per annum (actual income to end August 2011).

We have been advised that the gross passing income was reflected at \$2,911,610 with total operating expenses reflected at \$768,503 (or 26.4% of total revenue) which is broadly in line with industry parameters.

The property offered potential to increase the revenue with the termination of car park discount for Victoria University staff. Given Victoria University owned the car park there was a 50% discount for staff parking within the building (previously at just over 10% of total occupancy).



The table below summarises the majority of car park sales to have occurred throughout Australia. We have primarily focused on CBD locations

**TABLE 6: CBD CAR PARK SALES, 2001-2011**

Property	Year	Sale Price (\$Million)	No. Of Car Spaces	Value (\$ / Space)
<b>Sydney</b>				
Opera House Car Park, Sydney	2004	\$75.0 (Leasehold)	1,200	\$62,500
World Square Car Park, George Street, Sydney	2005	\$42.0	547	\$76,782
109 Pitt Street, Sydney	2007	\$18.1 (Leasehold)	143	\$126,909
1 Dixon Street, Sydney	2007	\$9.2	93	\$ 98,925
521-527 Kent Street, Sydney	2009	\$41.0	906	\$45,254
<b>Melbourne</b>				
542 - 546 Little Bourke Street, Melbourne	2001	\$5.0	370	\$13,514
114 Flinders Street, Melbourne	2002	\$40.4	864	\$46,701
474 Flinders Street, Melbourne	2004	\$9.75	309	\$31,533
114 Flinders Street, Melbourne	2007	\$54.5	864	\$63,079
233 Collins Street, Melbourne	2008	\$11.0	147 (70 Stacked)	\$74,830
Aquavista Car Park, 401 Docklands Drive, Docklands	2009	\$4.5	109	\$41,284
522 Flinders Lane, Melbourne	2009	\$38.0	975	\$38,974
Watergate Car Park, 767 Bourke Street, Docklands	2009	\$3.82	114	\$33,465
5 South Centre Road, Tullamarine	2011	\$8.0	650	\$12,335
300 Flinders Street, Melbourne	2011	\$28.2	574	\$49,129
<b>Brisbane</b>				
Festival Car Park, 45 Charlotte Street, Brisbane	2001	\$11.0	325	\$33,846
40 Tank Street, Brisbane	2005	\$15.4	290	\$52,931
Valley Metro Car Park, Fortitude Valley	2006	\$11.4	800	\$14,250
Festival Car Park, 45 Charlotte Street, Brisbane	2008	\$16.0	325	\$49,231
32 Cordelia Street, Brisbane	2010	\$9.7	215	\$44,919
<b>Adelaide</b>				
28 Hindley Street, Adelaide	2001	\$9.4	585	\$15,983
15 - 19 Victoria Street, Adelaide	2006	\$5.5	168	\$32,738
Adelaide Central, North Terrace Adelaide	2008	\$47.7	1,206	\$39,539

## LEASES & MANAGEMENT AGREEMENTS

There are generally two forms of car park management agreements – lease agreements and management agreements.

Lease agreements generally provide a car park owner with greater security of income and, as such, are generally more favoured by owners rather than operators. These agreements are generally negotiated on a base rental payment or a monthly basis, generally in advance, with a percentage fee applied to gross revenue over a pre-determined threshold. This then provides upside for the property owner in the event the operator increases revenue. Rent review calculations are always included and are inserted at regular intervals in the lease agreement and/or CPI increases applied annually.

Car parking rentals are typically determined based on a percentage of car park turnover. Based on our discussions with a number of market participants and anecdotal evidence, an operator/tenant entering into a lease typically requires a profit of between 8.00% to 10.00% of the gross revenue, although most would require between 8.00% to 9.00%. We highlight however that these percentages may vary depending on the strength of demand from various operating groups/tenants for a particular car park asset. Considerations that an operator/tenant may have regard to include the characteristics of the car park including but not limited to the location and if securing the asset would complement their existing business, parking demand in a particular area, size of the car park and levels of staffing which relate to operational risk. As an example, where there is strong demand and competition from operators for a particular car park, an operator/tenant may settle for a lower profit margin (i.e. pay a higher rental) in order to secure the asset. After the deduction of all the operational costs and outgoings (including parking levy) that a tenant would be responsible for, the remaining surplus is equal to the rental likely to be paid which can be broken down into both a base rental and turnover rental.

Management Agreements are generally structured based on a percentage of turnover. Management type agreements are currently more favoured by commercial operators compared to larger guaranteed based lease agreements. The inherent risk for an owner where a management agreement is in place is that there is no guaranteed level of income, however some of these risks can be mitigated with the inclusion of a minimum fee (base fee) and performance related fee (incentive fee) which incentivises the operator to maximise revenues and reduce costs. Additional inclusions within a management agreement can include minimum requirements for customer satisfaction and owner satisfaction, as well as the option for the owner to conduct an audit of the financial performance of the car park.

The management fees for a car park payable by the operator are dependent upon the characteristics of each car park including the type of car park and required staffing levels, the amount of remote monitoring required and administration costs. Additionally, some operators include additional costs on top of the management fees including administration, auditing costs and remote monitoring. In broad terms (subject to the specific nature of each car park), management fees overall typically range between 3% to 5% of gross turnover.



## CHANGING TECHNOLOGY IMPACTING OFF-STREET PARKING

Changes in technology, societal trends and environmental concerns are already having a significant impact on off-street car parking and, although we aren't quite at the point of having driverless vehicles (General Motors has announced these will be ready by 2020), there are a number of changes that will impact upon the Australian parking industry as we know it.

### 1. TECHNOLOGICAL CHANGES

#### FINDING A SPACE INSIDE CAR PARKS

Individual bay sensors have changed the way that customers approach car parks and have been the most significant customer service innovation in car parking technology in the last few years. What started out as a "nice to have" for car park owners has now almost become a "must have" both in new car parks being planned and in old car parks being upgraded.

The benefits for the customer are immediate: "follow the green light to the nearest available space", "go to level 4 where there is lots of parking to choose from", "turn right to find a space for disabled driver/parent with pram". More recent developments will also allow customers to find their car at the end of their visit to the shopping centre or when returning to pick up their car at the airport car park, with kiosks being planned where drivers can punch in a registration plate or a ticket number and be told the location of the vehicle (by the use of camera-based systems).

Benefits for owners include increased occupancy, improved management of parking allocation, reduced ventilation costs due to a lower amount of redundant circulation and efficiency in the supply of parking. Although no specific data on individual car parks is available, it is generally accepted that parking guidance systems (PGS) have resulted in cost savings (no need to employ staff to direct customers to available spaces, particularly at busy periods), greater competitive advantage (against competitors who do not offer the service) and increased profitability of the car park operation.

#### FINDING A SPACE AROUND TOWN

A natural extension of these systems is the development of city-wide guidance where a number of car parks collaborate in order to offer drivers clear information at key intersections as to the location and availability of parking. The initiative for these systems rests with local Councils who have overall transport and congestion issues on the roads under their control, particularly where they operate off-street and on-street parking facilities. Getting the private operators to participate ensures that drivers have a wide range of choice and, at the same time, reduces the amount of time spent driving around looking for a space on the street or in a car park near their final destination. Although there are few examples of these systems currently in Australia, expect to see more of them in the coming years, similar to the typical model that exists in many European cities.

#### NEW BILLING SYSTEMS

Licence Plate Recognition technology is also starting to gain traction in some car parks, initially to support existing access control equipment but with a longer term objective (at least according to the manufacturers) that they will eventually replace the more traditional ticket-based systems. Cameras located at entry and exit points can read a registration plate and allocate an entry and exit time, automatically calculating the parking fee.



Parking guidance at Canberra Centre (QIC)

Current systems are utilising LPR to control the more common abuses in car parks which, for example, offer a certain amount of free parking (say 3 hours): if you work or study near that car park you may have been tempted to exit prior to the expiry of the free period and re-enter the car park immediately to take advantage of an additional free period (commonly known as the “three hour shuffle”). The cameras will detect vehicles with a registration number which has already used up its free period (normally over a 24 hour period) and will not let you out the second time without a paid ticket. LPR also assists in the management of Early Bird and staff parking areas within car parks.

Another use of this technology relates to airport parking (particularly in the Long Term car parks), where one may rather pay the charge for a lost ticket than the actual fee for a multi-day stay. By querying the data stored from the camera the car park attendant can easily verify the actual time that a registration number arrived in the car park and calculate the correct fee even if the customer has lost (or claimed to have lost) his ticket.

### REMOTE MONITORING

Developments in technology are evolving daily and owners and car park managers need to stay abreast of potential ways in which their car parks can operate more efficiently. Remote control rooms (by the installation of CCTV cameras and intercoms at each entry/exit/automatic payment machine) allow operators to monitor many car parks from a single central location and assist customers who may be having trouble with the operation of a particular piece of equipment. This greatly improves car park performance and reduces the number of people who need to be employed in individual car parks to collect parking fees and attend to certain equipment malfunctions.

In a tightening market for car park revenues, the more efficient the operation, the higher the potential returns can be.



Image supplied by Commend

Technological improvements need to go hand in hand with improved customer service. The perceived absence of staff in car parks could be seen by customers as negative and increase a feeling of vulnerability unless they are aware that someone is watching out for their safety. Some car parks are introducing help points throughout their facilities in order to increase the level of security for customers.

### PAYMENT SYSTEMS

Technological developments are also affecting the way people pay for parking. Traditional ticket-based systems are being challenged by electronic systems whereby parking charges are being calculated by LPR systems or electronic tags (such as those used on motorways) or through the use of credit cards at entry and exit. Online prepayment of parking fees for events or for long term stays at airports also eliminates the need for tickets by the use of bar codes which customers can download and print prior to undertaking the journey, much in the same way that flyers can print their boarding passes online.

The advent of pay-by-phone systems has been slow to take hold in Australia, although they have proven very popular in the UK and other countries. This involves customers paying for parking in a specific location by registering with the provider of the system and charging the fee to a pre-registered credit card. The customer can receive a text message advising him of the expiry time and (if the parking rules allow it) top up the parking space with additional time. Subject to the uptake of mobile phones in a particular area, these systems do not require parking meters, eliminating the need for the original capital investment and ongoing costs such as equipment maintenance, cash collection, etc. Recent changes to local legislation are paving the way for these systems to become more widely used, again with the long term outcome of reducing capital costs and ongoing repair and maintenance expenses on payment systems.

## 2. CHANGES TO SERVICES

Increased competition and space constraints are making car park owners and operators more sensitive to customer needs.

Product differentiation within a car park, particularly where the clientele is varied, (for example, in an airport), provides customers with choice. A business traveller may be willing to park in the premium undercover car park when travelling for work, but if he is going away for a week's holiday with the family he may prefer to park in the remote long term car park and take the shuttle bus to the terminal.

Similarly, in a shopping centre a customer may be prepared to pay a fee to have the convenience of parking in the valet area if he knows that he will be purchasing many or bulky items or if the car park is particularly busy and he is short of time.

Most CBD car parks have, or are in the process of improving their level of presentation by increasing attention to painting, lighting and directional and way-finding signage. Some car parks have introduced dynamic signage, help points and value added services. Some examples of value added services offered in Australian car parks include:

- › Dry cleaning and Laundry services (Fee Based)
- › Complimentary Newspapers for monthly account holders
- › Complimentary bottled water in summer, chocolates at Easter
- › Special parking deals on Valentine's Day, Birthdays
- › Mechanical Services (Fee Based)
- › Car Wash Services, including Dry Wash (Fee Based)
- › Battery Jump Start Packs to assist customers (seen at an airport car park)
- › Valet Services (such as at a some shopping centres)
- › Information points (flyers, brochures, local information, Maps)

Electric vehicles are being recognised as a new element affecting car park services and operators are taking into consideration the need to provide recharging outlets for these cars within new and retro fitted properties.





Some of the free services offered by a French car park operator

In Paris, for example, there is an operator that provides innovative services to customers, including the loan of umbrellas, shopping trolleys/bags and even a bicycle, by handing in the parking ticket at the reception. They have even made a deal with an internet provider to provide free wi-fi access.



Car park owners have the opportunity to create a relationship with regular customers thanks to technological developments. We talked earlier about LPR – this not only allows for better management and revenue collection but also puts the owner in a position to “know” its customers through their registration number. Similarly, the use of credit cards in lieu of tickets creates the opportunity of identifying regular customers.

### VARIABLE PRICING

The development and management of different parking products within one site requires the ability to implement variable pricing rates in order to maximise use of the asset at different times of the day or the year, or to create special packages to ensure customers are able to get the best value for money (and owners to maximise their overall revenues). Online booking systems, which can seamlessly integrate with many types of parking control equipment, provide customers with the opportunity to shop around online for parking in a similar way as they currently do for purchasing such items as flights and tickets to concerts and sporting events.

Airports and entertainment venues can offer online booking and payment via credit card for specific times and durations at specific car parks or parking areas within a larger precinct. The customer pays upfront, thus reducing costs of collection and processing of cash and uses a pre-printed bar code or a predetermined credit card to enter and exit the car park. If you consider the queues that would be experienced at the end of a show both at the automatic pay stations and at the exits, it makes a lot of sense for the customer as well as for the owner to be able to offer this type of service.

Privacy issues apart, these technologies and developments are set to change how an owner markets its car park to its customers, with increased opportunities for the implementation of loyalty programs. The cross marketing of parking with other services provided on site (eg. coffee shops) again provides the ability to implement loyalty incentives and result in additional revenues across the entire property.

Increased pressure being applied by local councils to reduce traffic flows into/out of CBDs at peak times creates an opportunity for owners and operators to adopt flexible

pricing to encourage non peak time usage of the car park (before 7am, after 7pm and during the lunch time period).

### USING APPS TO FIND CAR PARKS

We are all aware of the fact that every day new mobile phone apps appear on the market to increase the accessibility of information on all kinds of subjects.

Parking is no different. There are now many “parking apps” available. There are apps which allow you to find a free parking space, remember where you parked your car (including directions of how to get there), find nearby car parks, keep track of the time left on the meter, get a reminder when it is about to expire and take photos of your location.

The City of Perth has recently launched an app which allows drivers around the city to identify the location of car parks it manages that have free spaces (and the number of spaces available) and even “stay up to date with special parking discounts and promotions”. Although it is difficult to vouch for the extent to which these apps are being used, it is certainly a sign that the parking battle is getting tougher.

### 3. CHANGES TO PHYSICAL DESIGN

The current Australian Standard relating to off-street car parks is AS2890.1 and the last time it was revised was in 2004. Since then, the only update relates to the design of disabled parking spaces. This means that despite all the changes which we have seen in the last few years with regards to efficient design, we are still designing car parks to suit vehicle sizes and technology developments which are fast becoming outdated. Considering the potential life of a building of over 50 years, it becomes obvious that these changes are going to become more significant as time goes on.

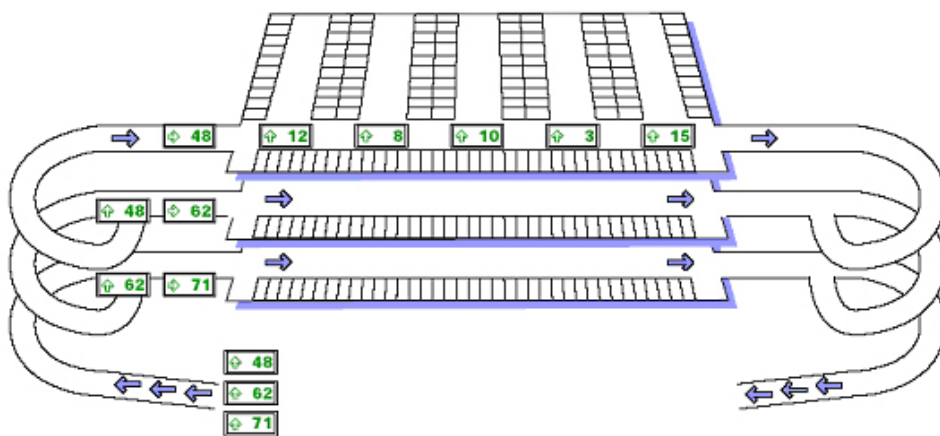
Requirements for buildings to gain valuable green star ratings also include certain aspects of car park design. For example, they include the provision of small cars as well as bicycle spaces (inclusive of end-of-trip facilities). These requirements assume that, in fact, there is demand for such modes of transport. Whilst it is true that more people are driving small cars and that more and more people are riding bikes, the matching of demand and supply is not an exact science. Therefore, car parks with small parking spaces may be having them occupied by SUVs (and overflowing into the next bay) or their bike parking not fully utilised.

The most efficient design allows for wider column spans than the traditional 8 metre centres (where three cars can fit) or, even better, those where columns are pushed to the perimeter of the aisles. Look at this example at Heathrow’s T5 car park:



Column free spans result in flexible design layouts (the configuration can be changed just by changing the line marking).

Traditional floor plates with ramps located at the extremities of the floor require vehicles to travel the length of each car park level in search of a parking space (and repeat the same process on the way out).



Example of one way circulation and express ramps

#### 4. WORKPLACE TRANSPORT PLANS

Someone once said that the best car space is the one that is not built. Initiatives that assist developers to minimise parking supply are not only worthy of consideration from a cost saving point of view but may be essential in order to obtain Development Approvals. One example is the implementation of workplace transport plans.

An interesting example is the plan implemented by Optus in 2007 when they relocated their offices from North Sydney to a new campus in Macquarie Park. The issue facing the company related to being able to accommodate 6,000 staff in a 2,000 space car park in an area initially not very well served by public transport (particularly when compared to North Sydney).

According to the NSW Government – Premier’s Council for Active Living website, the Optus Sustainable Transport Strategy was designed to increase the travel choices for employees to commute to Optus Centre Sydney (OCS) in Macquarie Park, with an emphasis on improving access by sustainable modes of transport.

The main themes of the Transport Strategy were:

- To reduce the need to travel
- To improve alternative non-car methods of travel
- To ensure the most efficient use of car parking spaces

A number of alternative transport options have been developed over time. The strategy development started in around 2005 to ensure that viable alternatives were in place on day one of the move and it has been undergoing continuing improvement ever since. The strategy includes a number of services such as bus services, shuttle to the nearby new train station, flexible work arrangements and subsidies for public transport users. The car park operates on a charge basis with discounts and priority given to car-pooling

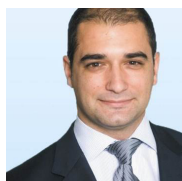


**NERIDA CONISBEE**

National Director | Research  
E: [nerida.conisbee@colliers.com](mailto:nerida.conisbee@colliers.com)  
TEL: +61 3 9612 8803  
FAX: +61 3 9092 1303

vehicles; a number of spaces are also allocated to people with mobility impairments and an allocation also exists for people who only use their car occasionally. Net revenues from the car park after covering costs are used to fund the Transport Strategy.

Car-pooling has proved to be very successful, with over 300 groups registered on the Ride Share Scheme representing around 10% of employees.



**CHRIS MILOU**

Manager | Valuation  
E: [christopher.milou@colliers.com](mailto:christopher.milou@colliers.com)  
TEL: + 61 2 8337 6225  
FAX: + 61 2 8987 0125



**CRISTINA LYNN**

Managing Partner  
Parking & Traffic Consultants  
E: [cristina.lynn@parkingconsultants.com](mailto:cristina.lynn@parkingconsultants.com)  
TEL: + 61 2 9968 1844  
FAX: + 61 2 9968 1755

**COLLIERS INTERNATIONAL**

Level 12  
Grosvenor Place  
225 George Street  
Sydney NSW 2000  
TEL: +61 2 9257 0222  
FAX: +61 2 9347 0831

**PARKING & TRAFFIC CONSULTANTS**

Suite 11, 599 Military Road  
Mosman NSW 2088  
[www.parkingconsultants.com](http://www.parkingconsultants.com)



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