

A FINANCIAL STRATEGY FOR THE PROVISION OF PARKING IN
DARWIN CENTRAL BUSINESS DISTRICT

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ABSTRACT:

In 1985 a parking and traffic management strategy was developed for the Darwin Central Business District. This paper describes a major component of this strategy, a financial strategy to (a) service a debt created by construction of Darwin's first multi-storey public carpark, currently financed by a controversial levy imposed on developments with inadequate on-site parking; and (b) ensure funding is available for future parking facilities.

* The content and views expressed in this paper remain entirely the responsibility of the authors and do not represent adopted policy of the Darwin City Council. The Darwin Central Business District Traffic Management and Parking Strategies report (Draft) was under review by the Council at the time of preparing this Paper.

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INTRODUCTION

Following the almost complete destruction of Darwin by Cyclone Tracey in 1974 the city has recently experienced a population and economic growth rate surpassing that of Australian national and metropolitan averages. It is the major city and political centre of the Northern Territory, with an estimated regional population of 74,000 in 1985, approximately half the population of the Territory. In 1984 the first Darwin Regional Structure Plan since self-government was published, establishing broad principles for future land use planning and development (Department of Lands, Northern Territory, 1984).

While the Central Business District (CBD) of Darwin remains the business, cultural and governmental centre of the Darwin region it is by no means the geographic centre (as shown in Figure 1). The recent emergence of outlying employment, commercial and residential growth centres has affected the development of the CBD, necessitating an assessment of its potential and future. A Strategy Plan was therefore prepared in 1985 identifying "the desired, future character and role of the city centre" and providing for the first time in Darwin's history specific aims, objectives, and guidelines for the development of the CBD (Feros, 1985). The central aim of the Strategy Plan is to "revitalise and to enhance the central area of Darwin and to reinforce its role as the heart of the chief city of the Northern Territory of Australia".

During the preparation of the Strategy Plan the need to resolve key parking issues and develop an overall parking and traffic management strategy was recognised. Of particular concern regarding parking was the provision of adequate and suitable parking over the long term, the management and control of parking, the accuracy of parking ratios specified in the Darwin Town Plan, and the debt burden imposed in the form of a levy on building owners in the CBD by the construction of the West Lane carpark in 1981, Darwin's first and only multi-storey public carpark. It was believed that attainment of the aims of the Strategy Plan for the CBD would be greatly facilitated by satisfactory resolution of these issues.

This paper focuses on the major elements of the financial strategy underpinning the overall parking management strategy that was developed as part of a comprehensive study conducted in 1985 by Pak-Poy and Kneebone Pty. Ltd. (Pak-Poy and Kneebone, 1985). The recommendations in draft form were under review by the Darwin City Council at the time this paper was prepared.

STUDY CONTENT

Study Objectives

The parking component of the study was required to:

- 1.. Establish an accurate data base on parking utilisation within the CBD and travel characteristics of traffic entering the CBD.

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2. Determine the amount, nature, location and timing of future increases in the parking supply.
3. Make recommendations regarding changes to time limits and the introduction of charges for on-street parking, enforcement procedures, and penalties for parking violations.

Currently all on-street parking in the CBD is free and 45% has no time limit. Free, all-day on-street parking is available within 300 metres of the Mall, the commercial centre of the CBD, and approximately 700 vehicles legally park on-street all day on a week-day.

4. Project utilisation and determine an appropriate fee structure for the West Lane carpark.
5. Formulate an overall financial strategy to service the current debt and provide for long-term parking requirements in the CBD.
6. Review the parking generation rates specified for a range of land uses in the Darwin Town Plan.
7. Address miscellaneous parking requirements, such as taxi zones, tour bus stopovers and loading zones.

The synthesis of the above would constitute a parking strategy for the Darwin CBD.

Surveys

Three major surveys formed the core of the parking study, as well as providing essential information on travel characteristics of traffic entering the CBD. These are outlined below.

1. A comprehensive parking accumulation survey of on-street parking in the CBD to determine space turnover, accumulation, average parking duration and distribution of parking durations. Analysis of the survey data with the program PARK, developed by Pak-Poy and Kneebone Pty. Ltd., enabled parking characteristics for the entire on-street supply to be determined, forming the basis for a management plan for on-street parking. The proposed plan gives priority to casual parking in support of retail and commercial activity in the CBD by (1) decreasing time limits in areas of high demand and turnover; (2) introducing charges for selected on-street parking (for which five alternative methods were analysed because of wide-spread opposition to the traditional parking meter); (3) improving enforcement procedures; and (4) increasing penalties for parking violations (currently \$5.00 regardless of offence, with a maximum of one ticket in any single day).

An assessment of the demand for on-street parking, particularly in the vicinity of the West Lane carpark, also

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provided essential data for projecting utilisation of and therefore revenues from the carpark.

A parking demand survey to determine for various common land uses the relationship between floor area (or number of units) and parking demand, both all-day (employee) and casual (visitor). Consisting of questionnaires distributed to employees and office managers or building owners and interviews with visitors in conjunction with counts, the surveys demonstrated that the current parking generation rates were generally realistic and therefore appropriate for determining parking shortfalls for existing and future developments.

Roadside interviews on roads crossing a cordon around the CBD to provide data on vehicle type and occupancy, trip origin and destination, and trip purpose. Continuous vehicle classification counts accompanied each survey.

Public Involvement

A noteworthy feature of the study was a series of public workshops to identify key issues to be addressed in the study and to seek public response to the findings and options resulting from the study. Representatives of building owners, developers and CBD traders were active participants at these workshops which were deemed highly successful in that they provided an open forum for a discussion and exchange of ideas and paved the way for consensus on several key recommendations.

Public submissions were also invited and received on parking and traffic issues within the CBD.

CARPARKING FUND

West Lane Carpark

History

Darwin's first multi-storey public carpark began operations in 1981. Owned and operated by the Darwin City Council, the 443-space carpark was constructed to compensate for the loss of on-street parking resulting from the conversion of a section of the main commercial street to a pedestrian mall and to accommodate an anticipated increase in future parking demand in the core of the CBD. The carpark was not considered financially viable even at the planning stage, but it was believed that in the long term it would generate a surplus on its operations.

Funded through a grant of \$2.2 million (including land) and loan of \$4 million from the Northern Territory Government, the final cost of the carpark for a number of reasons substantially exceeded the cost estimate, creating a financial dilemma for the Council. The loan extends over a period of 32 years from date of issue, and currently represents a total annual repayment of \$551,000 of which \$536,000 is for interest alone.

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Revenue and Utilisation Trends

If repayment of the loan is excluded the carpark has operated at a surplus every year with the exception of the 1983-84 period. However, as evident from Table 1, operating expenses have increased on average over 50% per annum while at the same time income has risen only an average of 16% per annum. Currently revenues just offset operating and maintenance expenditures. It should be noted that only \$179,000 of the 1984-85 revenue is from parking charges, with the remainder derived from shop rentals in the ground floor arcade.

TABLE 1 - WEST LANE CARPARK INCOME AND EXPENDITURE

Financial Year	Income ⁽¹⁾ (\$)	Expenditure ⁽²⁾ (\$)	Surplus (Loss) (\$)
1981-82	191,633	103,856	87,777
1982-83	191,307	180,242	11,065
1983-84	250,095	285,786	(35,691)
1984-85	285,144	269,640	15,504

(1) Excludes carpark levy.

(2) Excludes debt repayment (\$551,006)

Table 2 summarises the fee schedule for the carpark. A survey demonstrated that overall the fees are substantially lower than for similarly located carparks in the CBD's of other major Australian cities. Scope clearly exists for increased revenues through higher fees since opportunities for alternative parking around the core are steadily diminishing.

TABLE 2 - FEE STRUCTURE FOR WEST LANE CARPARK

Period of Parking (Hours)	Charge
<u>Short-term:</u>	
0 - 1	Free
1 - 2	\$0.40
2 - 3	\$1.00
3 - 4	\$1.80
4 - 5	\$2.80
Each additional hour	\$1.00
Free after 4.00 p.m. each day and on weekends	
<u>Long-term:</u>	
All-day (cars on levels 11 and 12 prior to 9.30 a.m.)	\$2.00
Monthly Pass	\$45.00
Reserved	\$550-\$800 per annum

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Table 3 provides a detailed breakdown of the parking income by type of parking for 1984-85. Each space yielded an average of \$403 per annum, or \$1.61 per working day, with casual parking providing the least return per space. All returns are low when compared with central city car parks in other major cities in Australia.

Because, as reflected in Table 3, reserved parking provides a higher and guaranteed return the number of reserved spaces has steadily increased. To date this has not affected the availability of casual spaces for shoppers, but projected increased utilisation by casual parkers, the priority users, will soon necessitate restrictions on reserved parking, with financial implications.

TABLE 3 - WEST LANE CARPARK STATISTICS, FINANCIAL YEAR 1984-85

Type of Space	Allocation for Avg. Month	Annual Income (\$)	Income per (2) Space per Day (\$)
Reserved	148 ⁽¹⁾	63,202	1.71
Monthly Pass	39	19,801	2.03
All-day	75	37,500	2.00
Casual	181	58,163	1.29
TOTAL	443	178,666	\$1.61

- (1) Includes some non-revenue spaces.
 (2) Assumes 250 working days per annum.

Annual utilisation of the carpark remained generally constant until recently (but with significant seasonal variations within each year). Encouragingly, however, there has been an overall 20% increase in utilisation over the 1984-85 financial year, a trend that is likely to continue as demand for a constrained supply of spaces in the core of the CBD intensifies. The increase in utilisation of casual spaces exceeds 20%.

The parking utilisation survey revealed that in May, 1985, 91% of all 443 bays were occupied at the time of peak utilisation (a very short period), with utilisation of non-reserved spaces slightly lower at 85%. The average utilisation of all spaces over the period 7 a.m. to 4 p.m. (the only time a fee is charged) for a typical May, 1985 weekday was 79%. Utilization of non-reserved spaces averaged 63%, while 57% of the 158 casual spaces were occupied on average.

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Car Parking Fund

The Council established the Car Parking fund to embrace the financial operations of all carparking functions for which the Council is responsible.

The Council's objectives with respect to carparking are:

To provide a comprehensive system of controlled on-street parking within the municipality which fulfills the community requirements.

To provide off-street carparking in strategic locations in accordance with demand.

Table 4 summarises the income and expenditures for the Fund for the financial year 1984-85. Included is the interest and capital repayment on the \$4 million loan (\$551,000), and revenue obtained from the carparking levy imposed on buildings within the CBD (\$438,000).

Overall the Fund lost almost \$80,000 in 1984-85, or in excess of \$500,000 if revenue from the levy is excluded. Clearly the interest repayment is the major burden on the Fund.

TABLE 4 - CAR PARKING REVENUE AND EXPENDITURES, 1984-85

Account	Expenditure (\$)	Revenues (\$)
West Lane Carpark	269,640	285,150
Surface Carparks ⁽¹⁾	19,900	66,700
General	796,900 ⁽²⁾	655,200 ⁽³⁾
TOTAL	1,086,440	1,007,050

(1) Revenue-earning carparks only

(2) Includes interest and capital repayment of loan (\$551,000).

(3) Includes revenue from carparking levy (\$438,000)

Car Parking Levy

The levy was introduced in 1981 as a means of offsetting the annual debt repayments for the \$4 million loan undertaken by the Council. Assessed at \$129 per shortfall bay the total income from the levy was \$438,360 in 1984-85.

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The levy is imposed only on improved properties in the CBD, the rationale being that only properties with some activity on them generate parking. The levy is innovative in that it is applied to all improved properties with a parking shortfall and not just developments as is the practice in most other cities. Furthermore it is adjusted annually according to the size of the Car Parking Fund deficit. Prepayment for any period up to 30 years is possible, amounting to approximately \$2,500 per shortfall bay if the entire 30 year period is prepaid.

The levy is assessed according to the following formula:

$$A = B \times (C_1 - C_2)$$

where A = amount payable

B = amount per shortfall space (\$129 in 1984-85), computed annually so that the Car Parking Fund approximately balances

C_1 = the number of parking spaces required for that parcel of land as determined by applying the parking provisions in the Town Plan

C_2 = the number of parking spaces on the land.

$C_1 - C_2$ = parking shortfall.

Building owners and developers in the CBD have actively opposed the levy from the time of its introduction. Major criticisms include:

- the Council did not consult with building owners prior to assuming the debt;
- buildings constructed prior to introduction of the levy satisfied the then relevant parking provision requirements. Revised parking requirements developed for the purpose of administering the levy (and confirmed as realistic from surveys conducted as part of this study) have resulted in many of these buildings now, according to the regulations, having a parking shortfall;
- for these buildings the levy is an added and unanticipated annual expense that can upset their financial viability;
- the levy is a disincentive to development in the CBD because the levy amount is subject to change year-by-year (up or down);
- Council has complete discretion over the Car Parking Fund and therefore the levy amount;
- the levy cannot be readily recovered from tenants; and

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carparking fees for the West Lane carpark are unrealistically low, and additional revenue could also be derived from other carparking functions (such as increased penalties for parking violations), thereby alleviating the levy burden to some degree.

FINANCIAL OBJECTIVES

Two key issues to be addressed by the parking strategy were repayment of the current debt and the financing of future major parking facilities. Several fundamental issues had to be resolved prior to developing the financial strategy, particularly in light of the lack of consensus over allocation of financial responsibility and criticism of the current system by the private sector. From discussions with parties with an interest in the CBD and a review of practices elsewhere the following objectives were formulated to guide the development of the financial strategy:

the carparking function within the CBD should be self-financing, i.e. not require subsidies from general revenues;

the financing mechanism should provide for future parking requirements;

the major beneficiaries of parking facilities, on and off-street, should bear the direct costs of providing, maintaining and operating those facilities. These groups are identified as the developers of buildings or other parking generating activities in the CBD, and the users of those facilities, the motorist;

Such an allocation of financial responsibility does not ignore the benefits to the wider community since the cost of providing parking, whether in private or public facilities, is only one of many costs, albeit substantial, that must eventually be recovered through the conduct of business in the completed development. In this respect the cost of parking is distributed amongst all community members who patronise CBD establishments.

current carparking financial obligations should be satisfied by contributions from existing developments, with motorist contributions maximised;

contributors to the current carparking fund should not fund future major carparking requirements, such as a multi-storey carpark, since at this time there is no parking shortfall within the CBD;

contributions from future developments should at a minimum cover the construction costs of major new facilities since they will create the additional demand; and

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revenues from all parking functions within the CBD should be maximised by charging "market" prices for CBD parking. This supports the premise that direct users pay for parking provided to them.

RECOMMENDATIONS FOR A FINANCIAL STRATEGY

Current Obligations

The financial objectives outlined above dictated that the West Lane carpark be operated as an independent financial enterprise with operating revenues maximised and annual deficits offset by the levy on existing buildings only. It was recommended that the debt be included in the carpark finances and the levy phased out upon repayment of the debt. The major advantage of this approach is that the levy is tied to a specific and finite debt obligation and cannot be applied to financing other carparking activities. Prospective developers would also be unaffected by the levy system (as explained below).

Excess revenues from other carparking functions such as surface carparks, on-street parking charges (if introduced) and penalties for parking violations would not be applied to the debt but be used to support and upgrade those functions, as well as possibly purchase land for future fringe parking facilities.

Financial projections indicated that the debt could be repaid within 13 years, based on the following conditions:

- average utilisation of the carpark during the period a fee is charged (i.e. 7.00 a.m. to 4.00 p.m. on weekdays, refer Table 2) increases from almost 80% (determined for May, 1985) to around 90% by the 1986-87 financial year. The on-street parking accumulation surveys revealed that the average utilisation of on-street parking in and around the core between 8.00 a.m. and 5.00 p.m. on a weekday was approximately 90% in 1985, with anticipated development placing and even greater demand on existing parking facilities; and
- an increased fee structure is adopted in the 1986-87 financial year. The recommended rates are still generally lower than for comparable carparks in other cities.

As surplus operating revenues increase the levy required to service the debt would gradually diminish.

FUTURE CARPARKS

The need for a planning approach to the provision of future parking facilities was highlighted by the financial burden caused by construction of the West Lane carpark.

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It was recommended that cash-in-lieu payments from new developments cover the capital costs of future multi-storey car parks, the first of which would be constructed within the next ten years. The cash-in-lieu payment is equivalent to the average cost to the Council for providing a parking space over a predetermined period of time (say ten years). A cash-in-lieu payment is made for each shortfall bay, as determined by the formula for assessing the levy for existing developments. The basic premise underlying the payment is that regardless of who constructs the parking space it must be financed by the developer.

The cash-in-lieu system guarantees prospective developers a firm set of rules by which to determine in the planning stages of a proposed development the extent of any financial obligations to the Council regarding carparking provisions. This eliminates some of the current financial uncertainty resulting from the existing levy system which does not specify precise future contributions or the contribution period and therefore future outgoings for a development.

In preparing a cash-in-lieu system for future developments it was necessary to develop a procedure for determining the level of the payment, as outlined below.

1. The total peak parking demand for the CBD was projected for the 100,000 population level for the Darwin region, anticipated to be attained around 1995. The projection was determined by assuming a direct relationship between parking demand and levels of CBD employment. Employment projections prepared by the Northern Territory Department of Lands were adjusted in recognition of employment opportunities expanding more rapidly in new growth centres such as Palmerston and Casuarina. It was concluded that an additional 1,600 spaces will be required within the next ten years.

Strategies aimed at reducing this requirement and thereby minimising commuter traffic in the CBD, such as fringe parking facilities, increased use of public transport and car-pooling (currently over 80% of CBD employees travel to work by car, with an average of 1.3 persons per vehicle), and pricing were investigated but rejected as either ineffective or an unnecessary intrusion into a lifestyle that understandably revolves around the use of the private vehicle to a greater extent than other cities. An inadequate parking supply could possibly act as a disincentive for certain types of development in the CBD. It was therefore concluded that the demand for all-day casual parking be satisfied for the foreseeable future.

2. It was necessary to estimate what proportion of this required additional parking would be provided in public parking facilities by the Council, and more importantly for financial planning what would be the nature and location of these facilities. This required the formulation of policy for on-site parking provisions in private developments and an assessment of future development patterns for the CBD.

The rationale behind a long-term parking strategy for the CBD is that the provision of parking be coordinated by a central body (recommended to be the Council) in order to best serve the parking needs and other environmental objectives for the CBD. An essential element of the strategy is the need to control the amount of parking provided on-site by developments to achieve:

- .. a more efficient utilisation of the total parking pool;
- .. desirable traffic conditions and circulation patterns within the CBD; and
- .. a desirable pedestrian environment.

This approach conforms with common practice in virtually all major cities in Australia where restrictions are placed on the provision of parking within private developments in the CBD, to the point that in some cities off-street parking can only in normal circumstances be provided by the local government authority. This extreme approach attempts to control the CBD environment in accord with other CBD objectives by minimising traffic volumes and controlling traffic movement within the CBD.

In addition to satisfying the above objectives on-site parking provisions must be compatible with the nature and intensity of development within the applicable area. The Strategy Plan identifies a preferred pattern of development, including the maximum plot ratios shown in Figure 2. It proposes that intensive development continue to focus on the Mall area, tapering off with increasing distance from there (though less pronounced towards Daly Street). Tourist facilities such as hotels are expected to be concentrated along the Esplanade to take advantage of ocean views.

Based on all the above factors on-site parking policy areas were recommended as depicted in Figure 3. These guidelines in conjunction with anticipated development trends led to the conclusion that of the 1,600 additional parking spaces required in the CBD within the next ten years, approximately 1,050 will be the responsibility of the Council.

- 3.. A detailed investigation was undertaken to identify suitable sites for additional public parking facilities. Factors considered included (1) the spatial pattern of current and future demand for parking; (2) walking distances tolerated by employees and visitors in the CBD (determined from surveys conducted to determine parking generation rates and recognising Darwin's tropical climate); (3) accessibility of potential sites to major roads and compatibility with desired traffic circulation patterns (investigated as part of this study); and (4) ownership of land. It was concluded that within the next ten years a multi-storey public carpark with approximately 560 spaces will be required at a current cost of

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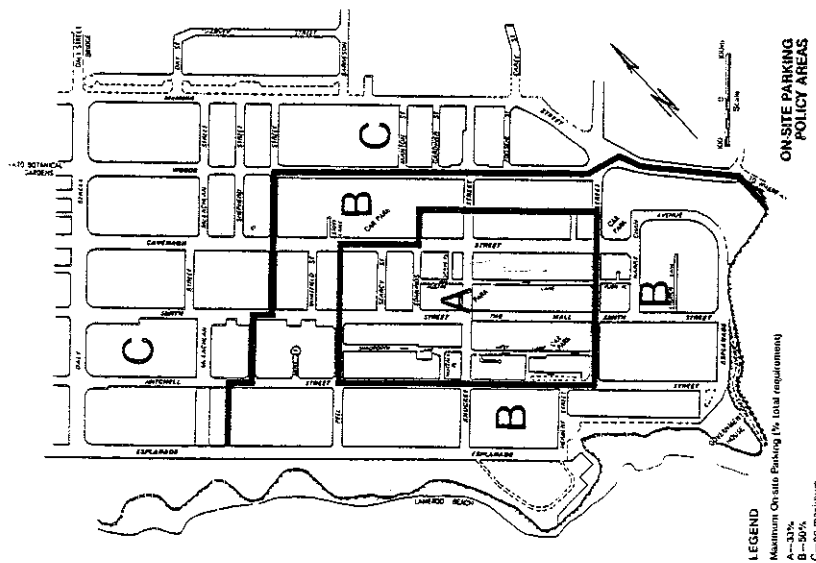


Figure 3

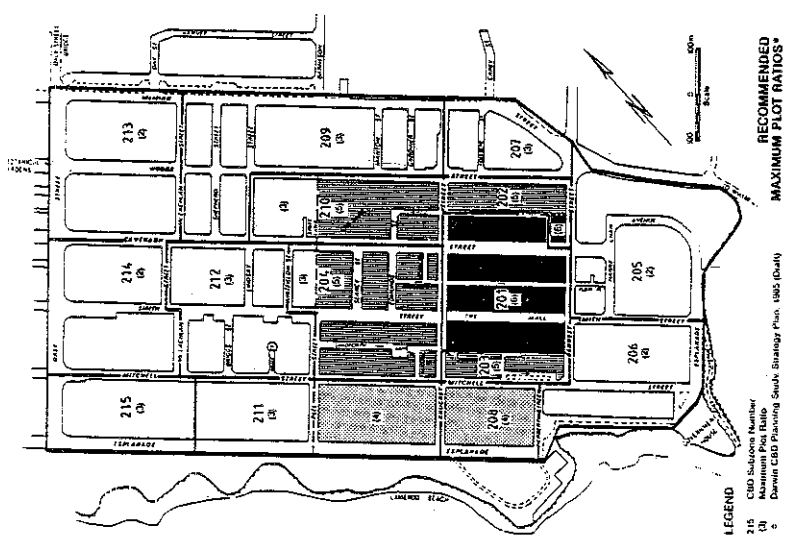


Figure 2

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approximately \$6 million (excluding the land which is under Council ownership or control). The remaining demand for public parking can be absorbed in cheaper surface lots on council controlled or owned land.

4. The shortfall in on-site parking in new developments over the same period was projected to be approximately 1,750 spaces, resulting in a cash-in-lieu payment of \$3,500, to be reviewed every two years according to the above procedure. This amount is substantially less than payments required in other major cities, mainly because there is presently a net surplus of parking spaces even at periods of peak demand and opportunities exist to provide additional surface facilities.

CONCLUSION

The financial strategy was only one component of the parking management strategy that was developed. However, because the levy was a controversial and emotive issue, wide-spread acceptance and successful implementation of the strategy required that a financial framework comprising defined rules and procedures be established for servicing the existing debt and accumulating funds for future capital-intensive parking facilities. While the financial burden remains essentially with the building owners and developers, the management strategy attempts to minimise this burden by maximising revenues from all parking functions under the control of the Council and identifying future parking facilities that minimise capital investment. More importantly for the first time a strategy exists that clearly and formally identifies the extent of the financial responsibilities of building owners and developers. In that respect the establishment of the parking and traffic management strategy is as significant as the content of that strategy.

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