Car Parking in City Centre

Case Study Of Georgetown CBD

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1980


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CAR PARKING
in
City Centre.
Case Study : Of Georgetown CBD

To,

Mum, Dad &

Beloved Ones.

ACKNOWLEDGEMENT

The success of this dissertation would not be met if not for the guidance and cooperation given by some individuals. However, first and foremost I would like to thank my supervisor, Encik Wan Salleh for his supervision and guidance throughout the course of work.

Besides it would be near impossible for me to thank individually all those individuals who have in one way or the other contributed to the success of this study. But however I still take the honour of conveying my sincere thanks to all those individuals concerned.

Last but not least I would like to thank Cik Zarifah Hassan for her constant dedication in helping to type this dissertation. And not forgetting also I would like to thank all the various department and agencies that have contributed something during the course of the study.

Ahmad Suhaimi Ismail

15th May, 1980

PREFACE

The purpose of the study is to find out the extent of the parking problems in Central Areas and at the same time attempt to find soluble means to overcome the parking problems of the study area. The problems of providing facilities and managing the arrangements for stationary vehicles in urban areas, particularly in the central business areas, have become apparent in this motor age. The motor vehicle appears to have thoroughly established itself, and is likely to be with us for many many years to come. Therefore, the use of motor vehicles in Central Areas have to be properly planned. And it is fundamental to our planning that we accept the motor vehicle as a beneficial invention with an assured future; considering it as the best form of door to door transport in all weather conditions; the passengers may be dressed up for any occasion and travel in comfort. Therefore the objectives were set up to achieve the aim of the study. The study will generally cover the existing parking problems of the study area with regards to the fundamental provision and the legislative control. The study findings will attempt to provide a comprehensive planning approach in solving the parking problems. The programme will include a formulation of a comprehensive parking policy and also the recommendation of a general parking concept of the Central Area. If all these are workable and applicable, then the parking facilities of the area would give vast opportunities for motorist to travelito Central Areas. Such opportunity would lead to a better and controlled traffic flow of the central area, besides providing a satisfactory channel to the Central Area.

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By:

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A dissertation submitted in partial fullfilment for the award of Diploma in Town and Regional Planning, to the Department of Town and Regional Planning, MARA Institute of Technology, Shah Alam, Selangor.

May, 1980.

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PART 1

1. INTRODUCTION

A. GENERAL OVERVIEW

Parking is an integral and vitally important part in a comprehensive road network system. The motorist with reason for visiting the Central Area within the Inner Ring Road must have a parking place readily available. The length of time for which vehicles require to be parked falls into two broad categories - long stay and short stay. Generally, commuters[1] require long stay car parks and shoppers short stay facilities adjacent to their desired destination. Business callers may be in either category. The amount of car parking space within the central area is limited and in order that maximum usage is obtained from it, generally short term parking only should be encouraged.

However there are very few towns in today's highly developed countries - and in many newly developing ones as well, which do not experience traffic congestion and car parking problems. Parking, in particular, is much a sensitive issue that parking policies in many countries often appear to be both conflicting and inde-

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1. R.S. Belhouse; A Feasibility Study For An Inner Ring Road in Relation To The Future Road Network For York, December 1967 page 63.

cisive. Nevertheless, there is no doubt but that the general public is becoming reconciled to the need to grapple firmly with the parking problem which traffic engineers, in turn, are coming to appreciate the need to develop parking policies in the context of the land use and transport policies for the urban area as a whole.

The importance of this latter point cannot be over-emphasized. Parking policy must always be considered in the light of its effects on land use and transport policy. Parking control is, in many towns, the key to proper traffic control. And when discussing the parking problem and means of tackling it, one must inevitably touch upon certain 'political' aspects of the problem as well as the technical ones.[2] Thus, the approach to the parking problem is first to describe some of the detriment known to be associated with the parked vehicle such as inadequacy of stalls, improper location and other appurtenances of parking which most often are not proper managed.

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2. OFLAHERTY, C.A. - Highways: Highways and Traffic, Vol. 1 Second Edition, 1974; Edward Arnold Press, London. Page 129.

Parking is a broad-natured urban traffic problem, which is becoming overwhelmingly defiant to major cities all over the world. The fact is that, this subject could lead itself to hasty and often contradictory opinion when it comes to prescribing remedies. This is evidently clear that even amongst traffic planners, the opt to derive a unanimous answer is seldom achieved due to the varying encumbrances. So that more could it be with the road-users which are mostly comprised of the local people who have a little or as good as no knowledge on the subject matter.

However some are persistent that the motor car does not have a long term future at all and therefore there is no need to do anything about it. While others belief that the town and cities as they have existed for centuries are ruined, and it is better to recognise this fact. Besides some say that the problem is insoluble and it would be a waste of time and money trying to do anything. However the more conservative ones will consider that the growth in number will itself solve the problem, because traffic will then become so thick that users will tend to stay off the roads. But on the contrary some opinion would ban all cars from city centres' but yet others would say that more parking spaces is needed. Above all there still others who would declare

it as impossible to gauge the problem unless the road-user is obliged to pay the full economic cost of running a vehicle.

Besides people are not even consistent from hour to hour; this is obviously true that a person at one moment, when driving, can be intolerant of pedestrians, but a few minutes later, as a pedestrian himself can fulminate against motorist. So generally it would be better for planners to look at these problems in light with the environment pertaining these parking problems.

B. HISTORY OF PARKING

Parking is not a new phenomenon. History tells us that in Rome special off-street parking facilities were provided to get chariots off the travelled way, and that Julius Ceaser forbade vehicles from entering the business districts of large cities in the Roman Empire during certain hours of the day because of traffic congestion. The following is a translation of an extract from Tabula Heracleensis.[3]

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3. ABBOT, F.F. and JOHNSON, A.C., Municipal Administration in the Roman Empire, Princeton University Press, 1926.

"Concerning those roads in the city of Rome which are or will be within well populated places, no one after the first of the Kalens of January, in the daytime, after sunrise or before the hour of 10 of the day, is to drive or lead a cart, unless that which is necessary to be carried or transported for building dwelling places of the immortal gods, or for doing public works, or things which by order of the State, are scheduled to be demolished, and for these reasons, this law permits carts to be driven or lead by particular men, and for special reasons.

On those days, for the furtherance of the common religion of the Roman people, when it is fitting to carry priestess of Vesta, and priest into the City, and when it is fitting that triumphal carts on the day of a triumphal procession, or game carts which happen to be at Rome, or near to the City of Rome, on State occasions should be led, or if there is need of circus revels to be led or driven into the procession, only by reason of these things on these days may carts be led or driven in the city in the daytime, and by this law nothing is to be questioned.

That carts may enter the City by night, but only empty carts or ox-carts for carrying out dung are allowed to be in the City or Rome, or within a mile of

the City after sunrise or before the hour of 10 of the day, and this law is not to be questioned."

C. THE IMPORTANCE OF PARKING

The importance of parking can hardly be over-estimated. The fact is that, there 8760 hours in a year, and John Brierley[4] in his book assumed that the average mileage per year per car to be about 16,000 km (10,000 miles). He proposes the average speed to be about 40 km (25 miles) per hour thus resulting in a total travelling time of 400 hours. Therefore this leaves 8360 hours per year when the car is parked, and most probably the greater part of this time the car will be parked in a private garage. So this illustrates the fact that the period over which a car is parked is very great compared with the time it is in motion.

Besides this he also states that the average parking space to be about 14.0m^2 (150 sq. ft.). And taking the average number of people using a car to be not more than two, thus giving rise to an average of 7.0m^2 (75 sq. ft.) of parking space per person. Also taking into account that the motor car is a mobile and

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4. BRIERLEY, John; Parking of Motor Vehicles, Second edition, Applied Science Publishers, 1972. page 6.

personal vehicle, therefore it requires two parking spaces, one where it is normally housed when not in use and the second in town when temporarily out of use, leaving the former space vacant when it is in use.

In addition to this point, he also assumed that a man standing will occupy a space of about $0.18m^2$ (2 sq. ft.) and when walking or sitting he will occupy about $0.55m^2$ (6 sq. ft.). And considering a house that will accomodate five people very comfortably to have an area of $140m^2$ (1500 sq. ft.) divided between floors. Therefore the actual ground space taken per person for living accomodation is $14m^2$ (150 sq. ft.) which is a generous allowance. An instead of a subsidised house is taken as an example with $93m^2$ (1000 sq. ft.) floor area thus the space per person will be reduced to $9.3m^2$ (100 sq. ft.) of ground space. Besides a single deck omnibus when parked will occupy an average space of $33.5m^2$ (360 sq. ft.) which gives an average space of $1.02m^2$ (11 sq. ft.) par person, and this figure would be reduced to almost half for a double deck omnibus.

Therefore it will be seen that a motor car when measured against the service it provides and the space it occupies is one of the most extravagant inventions in land use modern transport. However that the motor car has come to stay there can be no doubt, and

it must be accomodated. Considering the advantages that it offers in convenience, comfort, speed, conservation of energy and effort are so great that they outweigh the disadvantages. Moreover all aspects of the modern life ranging from the administrative, business and social life has now been integrated with the use of motor cars so much so that it has become an essential part of this life.

D. THE GROWTH OF MOTOR VEHICLES

The invention of the 1886 Benz was the root to the growth of motor vehicles. This invention was stirred up to provide a far better service than the other modes of transport which existed then; being less flexible than the motor car which can provide door to door service.

On the other hand the growth of motor vehicles owe its factor to the social influence of the motor vehicle which stems from its usefulness as a means of personal and family transport. At the other extreme the motor car is making itself well-nigh indispensable for a thousand and one domestic purposes, from taking children to school daily marketing and weak-end shopping and etc.

It was in the carriage of goods, however, that the motor vehicle exerted its greatest influence. Not only could it offer the flexible door to door service but it was itself adaptable to a multitude of specialised purposes. Thus, for personal and family use, for movement of people in mass, and for use in business, commerce and industry, the motor vehicle has become indispensable. Even an efficient mass transport system can never challenge the supremacy of the motor car.

However, the vast increase of industrial and commercial activities today have contributed to the increase in prosperity; thus the population will increase

Plate 1: The beginning of it all; 1888 Benz

tremendously and hence, will call for increase in business and office accomodations in city centres which in turn bring about increase in motor vehicles.

In Peninsular Malaysia itself the total number of all motor vehicles till the 31st August 1979 was at 1,928,594. However out of this grand total, 30% are motor cars and this amounts to 579,727 as shown in figure 1.1a. The average percentage increase per year is around 10.15% for the last ten years. In other words motor cars alone increases at an average number of 33,106 per year. However from fig. 1.1b it can be seen that there has been a slight drop in the cumulative percentage increase of motor cars during the year 1979. This inconsistency is due to the difficulty in obtaining a driving license arising from the newly introduced system of driving test. Anyway this disruption is only considered to be incidental and it is expected that the motor car will continue to increase as Malaysia is still in its developing stage.

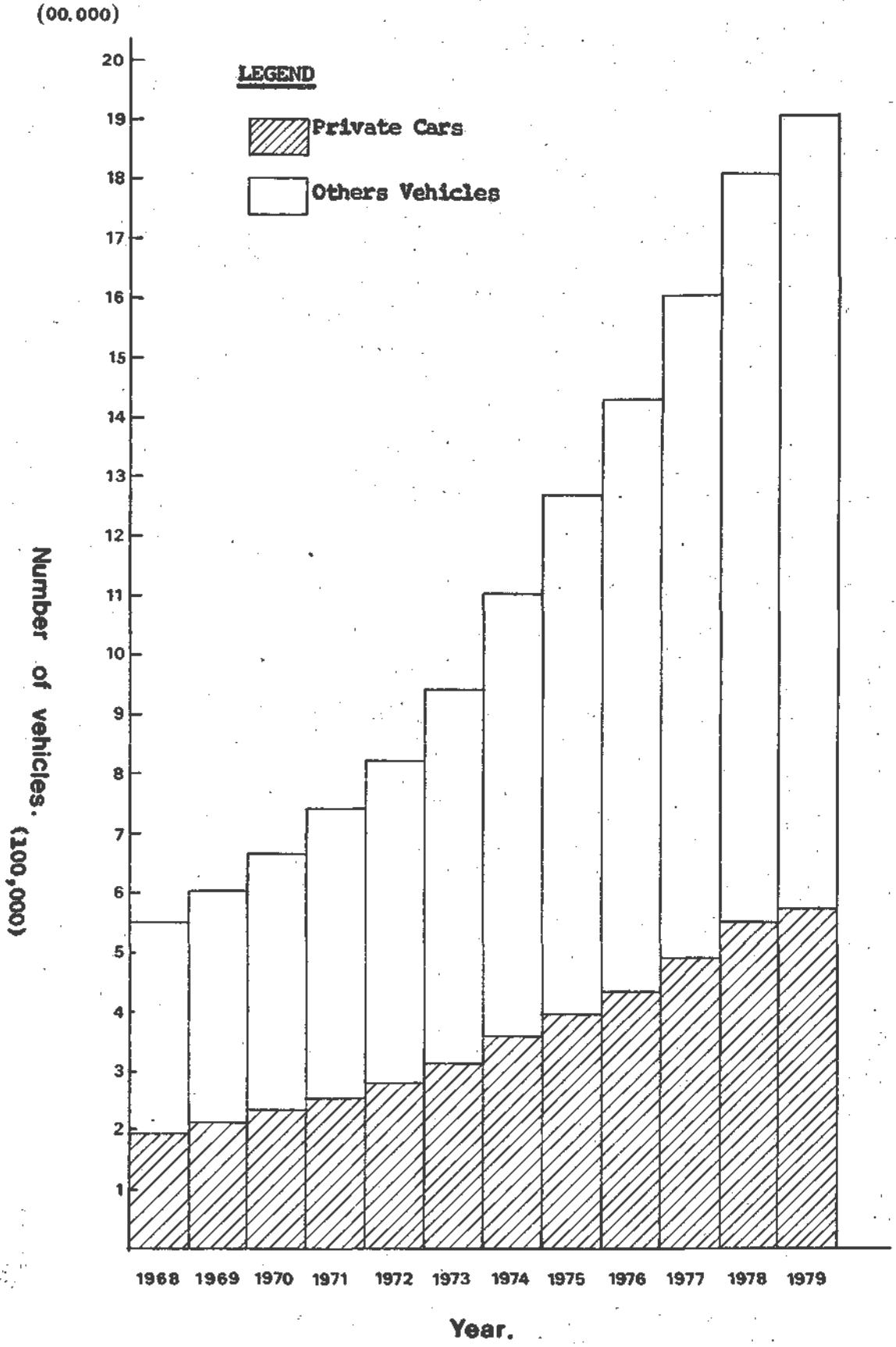
2. FUNDAMENTALS OF PARKING

INTRODUCTION

There are several ways in which parking supply is made available. The two basic types of parking terminals are the kerb space (on-street parking) and the

Fig. 1.1a GROWTH OF MOTOR VEHICLES IN PENINSULAR MALAYSIA*

Source : Road Transport Department (Appendix A)



*Figures are cumulative till 31st August, 1979

Fig. 1.1b PERCENTAGE INCREASE OF PRIVATE CARS IN PENINSULA MALAYSIA