

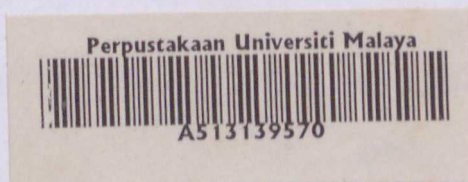
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THE PLANNING SYSTEM AND LAND DEVELOPMENT
IN MALAYSIA: Dominant Town Planning Factors Affecting
Private Housing Development

IBRAHIM BIN MOHD @ AHMAD

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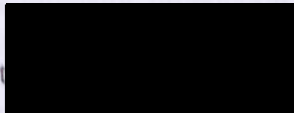
THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS
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DOCTOR OF PHILOSOPHY



FACULTY OF BUILT ENVIRONMENT
UNIVERSITY OF MALAYA
KUALA LUMPUR
MAY 2009



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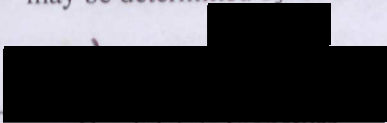
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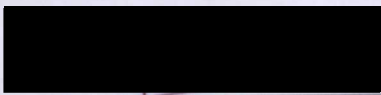
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ABSTRACT

Research from various developed countries has demonstrated that the town planning system affects housing development in terms of location, land use intensity, production costs and house prices, and has led to the emergence of housing problems. The town planning system in Malaysia which has been in practise since the 1920s might possibly have a similar impact on housing development here, but very few studies have dealt with this particular issue. The effects of town planning on housing land development could be related to the way planning authorities implement the planning system, which includes the preparation of development plans, the interpretation of development plans into development control, and planning decision processes.

To ascertain the main causes, this study explores the structure and agency development process model. Accordingly, this study has analysed factors and components of town planning that affected private housing development within a period of thirty years (1976-2005). The secondary data were analyzed to identify housing development issues and problems in Peninsular Malaysia. The primary data gathered through face-to-face interviews were analyzed to identify the main factors and components in town planning affecting housing development. The results of the analyses reveal that the development plan (structure and local plans) was the dominant factor, while the approval process, planning guidelines, land holdings and technical requirements were the main components affecting housing development.

Consequently, this study concludes that firstly, the institutional structures and agencies established in Malaysia have affected housing development based on administrative procedures in the planning approval process and the preparation process of the development plans; secondly, development control activities in local planning authorities are very much tailored to accommodate technical requirements of technical bodies; thirdly, town planning requirements and guidelines are seemed to have ignored changes in taste, demand and technologies; fourthly, there has been a lack of consideration about the impact of planning decisions on housing development; and fifthly, additional costs have indirectly been imposed on housing developers, which will contribute to a certain proportion of the total land development costs.

Therefore, the way that the planning authorities implement the planning system is proven to be one of the factors affecting private housing development leading to the emergence of housing problems in Malaysia.

ABSTRAK

Kajian di negara-negara maju telah menunjukkan bahawa pelaksanaan daripada sistem perancangan bandar terbukti memberi kesan terhadap pembangunan perumahan di segi lokasi, intensiti kegunaan tanah, kos pengeluaran dan harga rumah yang menjurus kepada masalah perumahan. Sistem perancangan bandar di Malaysia yang telah dipraktikkan semenjak tahun-tahun 1920an berkemungkinan besar memberi kesan yang sama terhadap pembangunan perumahan tetapi sedikit sekali jumlah kajian yang dijalankan berkaitan isu ini. Kesan daripada sistem perancangan bandar ke atas pembangunan perumahan boleh dikaitkan dengan pelaksanaan sistem perancangan bandar oleh pihak berkuasa perancangan tempatan, termasuklah bagaimana pelan-pelan pembangunan disediakan, penterjemahan pelan pembangunan kepada kawalan pembangunan dan pembuatan keputusan perancangan.

Bagi mendapat kepastian tentang punca utama kesan-kesan pelaksanaan sistem perancangan bandar, kajian ini merujuk kepada model struktur dan agensi dalam proses pembangunan. Berdasarkan model tersebut, kajian ini telah menganalisa data sekunder and primer untuk mendapatkan faktor-faktor dan komponen yang mempengaruhi pembangunan pembangunan perumahan swasta dalam tempoh tiga puluh tahun (1976-2005). Data sekunder dikumpul dan dianalisa bagi mengenalpasti isu-isu dan masalah pembangunan perumahan di Semenanjung Malaysia dan menonjolkan faktor-faktor yang berkaitan. Data primer yang diperolehi secara tinjauan dengan teknik temuduga bersemuka pula dianalisa untuk mengenalpasti faktor utama dan komponen perancangan bandar yang memberi kesan terhadap pembangunan perumahan. Hasil analisa kajian menunjukkan bahawa pelan pembangunan (pelan struktur dan pelan tempatan) merupakan faktor utama, sementara proses kelulusan, garis panduan perancangan, pegangan tanah, dan keperluan teknikal merupakan komponen-komponen yang memberi kesan terhadap pembangunan perumahan.

Kesimpulan daripada kajian ini adalah: pertama, struktur institusi dan agensi di Malaysia memberi kesan terhadap pembangunan perumahan melalui prosedur pentadbiran dalam proses kelulusan pembangunan dan proses penyediaan pelan-pelan pembangunan; kedua, aktiviti kawalan pembangunan yang diamalkan di pihak berkuasa perancangan tempatan tersangat cenderung untuk menerimapakai keperluan teknikal daripada jabatan-jabatan teknikal; ketiga, keperluan dan garis panduan perancangan didapati tidak mengambilkira perubahan permintaan, cita-rasa dan teknologi semasa; keempat, kurangnya keperihatinan tentang kesan keputusan perancangan terhadap pembangunan perumahan; dan kelima, penambahan kos pembangunan telah dikenakan secara tidak langsung kepada pemaju perumahan yang seterusnya meningkatkan kos keseluruhan pembangunan.

Oleh itu, amalan pihak berkuasa perancangan dalam melaksanakan sistem perancangan bandar telah terbukti sebagai satu daripada beberapa faktor yang memberi kesan kepada pembangunan perumahan dan seterusnya menimbulkan masalah perumahan di Malaysia.

ACKNOWLEDGEMENTS

I am indebted to many people in writing this thesis. My apologies are due if all their names are not mentioned. First, I wish to thank the University of Malaya that gave me the opportunity to undergoing PhD program and provided supports, full paid study leaves with scholarships and facilities during my research. My thanks are due to the Dean of the Built Environment Faculty, University of Malaya, for giving me full encouragements in this study. Greatest gratitude are due to my supervisors Prof. Dr Sr Hj. Ahmad Ramly, Emeritus Prof. Ezrin Arbi, and Associate Prof. Dr. Sr Noor Rosly Hanif who have given most valuable guidance during the research as well as in the writing of the thesis. They have devoted enormous amounts of their valuable time to criticising early drafts of the thesis. Special thanks are due to Dr. Susan Marys who has proof-read and corrected my English, line by line, Prof. Graeme Newell and Prof. Dominique Fischer who gave constructive comments and valuable guidance to the analyses and discussion chapters.

During my field research in Peninsular Malaysia, many people either through direct discussion or through e-mail also supported me. I would like to express my gratitude to Mr Nurazizi Mokhtar, Deputy Director, Department of Master Plan, City Hall of Kuala Lumpur; Mr Lokman Omar, Director, Planning Department, Seremban Municipality, N.Sembilan; Mr. Hj. Azam Hj Abid, Director, Jabatan Perancang Bandar & Desa (JPBD) Kedah; Mr. Mohd. Zaki Ibrahim, Director JPBD Trengganu; Mdm. Zunaidah Yamat, Head Planning Department, Kota Bharu Municipality, Kelantan; Mr. Johari Taharim, Senior Planning Officer, Research and Development Planning Division, JPBD

Peninsular Malaysia; and Mr. Mahadi Ngah, Director of Planning Department, City Hall Kuala Lumpur.

Abstract (English)

I would also like to thank all representatives from housing developers for their full corporations in answering all questionnaires; and also officers from Ministry of Housing and Local Governments, Related Local Authorities and Land Offices for delivering valuable information in this study.

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Finally, I would like to thank my wife and children for the unconditional love, help, support, understanding, patience and devotion they have given me throughout this research, without which this thesis would not have been written.

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ABBREVIATIONS

7MP	7th Malaysia Plan
8MP	8th Malaysia Plan
AAGR	Average Annual Growth Rate
AFTA	Asean Free trade Agreement
ASEAN	Association of South-East Asian Nations
BNM	Bank Negara Malaysia (Central Bank)
DG	Director General
DID	Department of Irrigation and Drainage
DlaPiS	District Land Use Planning Intelligent System
DMG	Department of Mineral and Geo-science
DOA	Department of Agriculture
DOE	Department of Environment
DOF	Department of Forestry
DOS	Department of Statistic
EPU	Economic Planning Unit
ERL	Express Rail Link
ESA	Environmentally Sensitive Areas
FDTCP	Federal Department of Town and Country Planning
FYMP	Five Year Malaysia Plans
GDP	Gross Domestic Product
GIS	Geographic Information System
GNP	Gross National Product
IAP	Integrated Agriculture Development Project
IAPG	Inter Agency planning Group
ICT	Information and Communication Technology
ICU	Implementation and Coordination Unit
IMS-GT	Indonesia-Malaysia-Singapore Growth Triangle
IMT-GT	Indonesia-Malaysia-Thailand Growth Triangle
IP	Indicative Plan
KADA	Kemubu Agriculture Development Authority
KLIA	Kuala Lumpur International Airport
KSN	Chief Secretary to the Government
LaPiS	Land Use Planning Intelligent System
LA 21	Local Agenda 21
LP	Local Plan
LPA	Local Planning Authority
LRT	Light Rail Transit
MADA	Muda Agricultural Development Authority
MASMA	Urban Storm Water Management Manual for Malaysia
MDC	Multimedia Development Corporation
MEWC	Ministry of Energy, Water and Communication
MHLG	Ministry of Housing and Local Government
MICE	Meetings, Incentives, Conventions and Exhibitions
MITI	Ministry of International Trade and industry
MOSTE	Ministry of Science, Technology and Environment

MOT	Ministry of Transport
MOU	Memorandum of Understanding
MRT	Mass Rail Transit
MSC	Multimedia Super Corridor
MyGDI	Malasian Geospatial Data Infrastructure
NAP3	Third National Agricultural Policy
NCLG	National Council of Local Government
NDP	National Development Policy
NDPC	National Development Planning Council
NEP	New Economic Policy
NFC	National Finance Council
NGO	Non Governmental Organization
NLC	National Land Council
NPP	National Physical Plan
NPPC	National Physical Planning Council
NPP Com	National Physical Planning Committee
NPPAC	National Physical Planning Advisory Committee
NVP	National Vision Policy
NWRC	National Water Resources Council
OPP	Outline Perspective Plan
OPP3	Third Outline perspective Plan
PAA	Prime Agriculture Areas
PFE	Permanent Forest Estate
PPG	Planning Policy Guidelines
PTP	Port of Tanjung Pelepas
PUAS	Pejabat Urus Air Selangor (Water Supply)
R&D	Research and Development
RDA	Regional Development Authority
REHDA	Real Estate and Housing Development Association
RGC	Rural Growth Center
RPC	Regional Planning Committee
SA	State Authority
SDO	State Development Officer
SEDC	State Economic Development Corporation
SEPU	State Economic Planning Unit
SLaPiS	State Land Use Planning Intelligent System
SMA	Special Management Areas
SME	Small and Medium Scale Enterprise
SMIDEC	Small and Medium Industries Development Corporation
SP	Structure Plan
SPC	State Planning Committee
TNB	Tenaga Nasional Berhad (Electricity Supply)
TWG	Technical Working Group
UN	United Nation
UNDP	United Nation Development Program
USWM	Urban Storm Water Management
WTO	World Trade Organization

CHAPTER 1

INTRODUCTION

1.1 Introduction

Town and Country Planning, or Urban and Regional Planning refers to a discipline established to safeguard the *public interest*. The definition of the *public interest* includes safeguarding all things needed by habitants and protecting all things endangering habitants (Blowers *et al* 1982). In pursuing the above objective, the practices of town planning have affected land development in many ways which have partly contributed to the increase of land prices and house prices and the limited quantity of houses (Hall, *et al* 1973; Barlow, 1993; Bramley, 1998; Healey, 1991; Harvey, 2002; Adams and Watkins, 2002; Evans, 2004). Therefore, it is very important to have deeper insight into the relationship between town planning and markets to enable town planners and decision makers to better consider the likely impact of planning on these matters, and to tailor town planning practices to achieve desired outcomes.

Town planning practice is normally in accordance with the planning system, which it uses as the framework for forward planning and development control activities. With respect to land development, the local authority in making decisions to approve or disapprove development proposals is required to have regard to the development plans and also the public rights and objections, due to the fact that development plans produced do not always cater for the changes in taste, habit and preference of urban habitants (Ratcliffe and Stubbs, 2003). However, the planning decisions are usually left to highly skilled professionals (town planners) and decision makers of local planning authorities and politicians; this is referred to as the *top-down planning* approach (Blowers *et al* 1982, Guy and Henneberry, 2002; Taylor, 2004).

Despite the aforementioned deficiencies of the planning system, town planning in Malaysia has been practised over the past several decades using a *top-down planning* approach (Lee *et. al*, 1990; Goh, 1997; Bruton, 2007). It is claimed that this approach has partly contributed to the increase in land development costs, which has led to high house prices (Sen, 1991; Lawrence, 1997). It can be said that the effects of town planning practices on land or property development, are related to the implementation of this planning system (Lee, *et al* 1990, Bruton, 2007). These practices, then, clearly constitute an important subject for further investigations. Currently, only few studies have been carried out providing empirical evidence of the effects of town planning control on housing land development in Malaysia.

In the absence of sufficient evidence derived from the experiences of past town planning implementation, town planners cannot deny the accusation that the undesired outcomes are related to the implementation of the planning system.

Moreover, there exists the possibility that existing weaknesses may remain within the system, potentially leading to greater weaknesses in the future. Empirical evidence of the effects of the town planning system on housing land development can provide town planners and related professionals with important matters for consideration in preparing development plans. If the causes of these effects are identified, town planners and decision makers will be able to make the choice to avoid undesired outcomes (Tiesdel and Allmendinger, 2005).

Therefore, the purpose of this research is to investigate how town planning system has an effect on housing land development in Peninsular Malaysia. The findings of this research will provide important input in formulating town planning guidance for preparing future development plans. This kind of guidance is timely, because all states in Peninsular Malaysia have now begun to prepare 'development plans'. For this purpose, this research has examined and analysed important and relevant town planning components related to housing development, so that town planners can play their part in guiding the local planning authorities.

1.2 Overviews of Related Studies

The relation between town planning and property development has already been substantially discussed in housing and land development literatures. These literatures disseminate discussions from studies that have adopted several distinct approaches and views such as classical economy and political economy. Some studies focus on issues of housing and land availability, government intervention, and property market performances (Evans 2004; Henneberry *et al* 2005; Jackson and Watkins 2005). More importantly, some of these studies have sought to provide evidence of

the effects of the town and country planning system on the housing market and an assessment of the scale of the effects on a range of market outcomes (Bramley 1998; Buitelaar 2004). To some extent these studies have shed some light on the costs of planning intervention which might be a price worth paying (Harvey 2002; Bramley 2007). In addition to measuring the price and quantity effects, the studies also consider the extent to which the planning system might affect the density and type of new development (Adams and Watkins 2002).

Adams and Watkins (2002) argue that there is a range of methods used and variations in the focus of these projects but there are some worthwhile insights and interesting debates. Some of these studies were essentially descriptive and were not explicitly grounded in the mainstream economics framework. Among others, Hall *et al* (1973) carried out a survey of developers in the United Kingdom (UK) between 1939 and 1959. Their analysis showed that the land prices per acre increased and houses were constructed on smaller lots and at higher densities due to, in part, the existence of planning control (Adams and Watkins, 2002). Evans (1991; 1998) carried out a more explicit neo-classical economic mode of study that described a number of trends in design, layout and house building which collectively had led to the intensification of land use and the significant contraction of open spaces within the urban environment.

Based on comparative analysis and the hedonic model, Cheshire and Sheppard (1989) suggested that plot sizes and the area of the towns would respectively have been 65% and 50% larger in the absence of the planning controls, because with the lower prices, house purchasers would have been able to buy larger homes and to a

rise in household income. Consequently, a study funded by the DOE (Department of Environment, UK) in the 1990s adopted a more qualitative approach and combined a comparative statistical method with empirical research based on behavioural social science methodology. This study sought to identify whether the planning system had merely constrained supply or whether it had led to a reorganisation of the supply. The results of the study showed that land prices were much higher at the margin of urban areas when compared with agricultural land. Moreover, another study funded by the Joseph Rowntree Foundation suggested that urban land prices were 200 times greater than agricultural land in highly constrained areas compared with 60 times greater in less constrained areas (Monk, *et al* 1996). Bramley (1993), in a study focused on the relationship between the amount of land available for housing, the nature of planning regime and the quantity and price of new housing supplied, suggested that the price and quantity effects were relatively modest, additional land released for new construction, the price effects would be less than the quantity effects. Therefore, the level of land released for private house building does not have a large impact on house prices and does not guarantee that the land will be built on.

Adams and Watkins (2002) pointed out that the mode of analysis employed by the previous researchers placed some limits on the scope of the research. The comparative static model allows a researcher to theorise the impacts of imposing planning constraints on a previously unfettered market. This provides a useful theoretical guide to the likely distributional effects of planning intervention. However, the empirical research cannot replicate this comparative analysis because the planning system was in place throughout the study periods. As such it is difficult to assess the impact of the planning intervention when a researcher cannot do a

'before and after' experiment. Instead, what a researcher can usefully do is to consider 'what if' (Monk, *et al* 1999). A researcher can merely observe the actual market outcomes, in terms of price, output or density, and try to assess the ways in which the implementation of land-use policies might have altered the behaviour of the market institutions and their role in the process of determining these outcomes. This might suggest that behavioural or institutional modes of analysis are more appropriate than the quantitative studies that dominate the economic literature (Adams and Watkins, 2002).

Generally, those studies sought to provide a partial analysis of the distributional effects of planning intervention in the housing market. Although estimates of the magnitude and distribution of the effects differ, it is agreed that planning constraints had led to higher prices and densities of new housing. The planning also caused restriction in the quantity of homes supplied and convergence in the type and design of new homes.

1.3 Urbanization, Housing Problems and Issues in Malaysia

After Malaysia gained independence from the British in 1957, a variety of employment opportunities were offered in new growing towns like Kuala Lumpur, Ipoh, Penang and Johor Baharu. The perpetuation of rural-urban migration coupled with a natural increase in town populations further contributed to the fast growth of towns in Peninsular Malaysia in the period from 1960 to 1980 (Mohd. Yaakub, 1991). By the year 2000, 62 per cent of 18.5 millions population resided in urban areas. For Peninsular Malaysia, the urban population in 2000 was 65.4 per cent of 14.8 millions. A higher urbanization rate is expected when Malaysia becomes one of

the developed countries by the year 2020. The majority of the urban population is expected to be distributed in major conurbation areas in the Peninsula like Kuala Lumpur, Johor Baharu, Penang and Kuantan (Malaysia - NPP, 2005). Therefore, the issues of adequate land to be allocated for housing become more crucial. The most important problem is the inadequate supply of houses to accommodate the existing and increasing numbers of urban families relative to various affordability levels (Mohd. Razali, 1992; Ghani and Lee, 1997). In addition, the government policies in the five-year national plans are aiming to provide "decent housing" for all Malaysians despite the problem of escalating production costs (Malaysia, 1991).

There are several important, interrelated issues in the matter of increasing the supply of housing to meet the need and demand, namely: land ownership, size, price and location; production cost; and house price and affordability level (Murie, *et al* 1976). Here, the land for housing, land size, legislative provisions and unique characteristics attached to its locality are the major issues (Harvey, 2002). In addition, competition over the best use of land would cause the land price to escalate to levels where it can only be affordable for commercial and industrial development, and it is unlikely that housing development will be profitable (Evans, 2004). Without intervention from the government, the location of housing land might then be scattered around the outskirts of the central commercial districts, because land prices in the agriculture areas is lower (Harvey, 2002).

Even though town planning control has been established since the 1920s in Peninsular Malaysia, vast tracts of agricultural land have been converted to housing schemes and other urban economic activities (Lee, *et al*, 1990). There were large

increases in housing supply but were also followed by increase in house prices in the markets. House prices kept escalating. Reasons for the prices increase, according to property market studies, were related to increasing housing demand and increasing production costs (Central Bank, 1992).

Consequently, some studies have been carried out that sought measures to reduce the housing production costs. Of all components of the production costs, management cost was seen as the one that can most easily and effectively be reduced. Delays in planning approvals were also discussed at length (Lawrence 1997; Marbeck, 1997). Generally these studies deal with housing of the 'urban poor', so the emphasis is more on the need for and allocation of low cost housing. Although the low cost housing issue is acute, there were greater effects on the other categories of houses because the practice of 'cross subsidizing' allowed the profits gained from selling of high price houses to subsidise low cost housing (Goh 1997; Mohd. Razali 2002). The over-supply of medium and high price houses was accumulated significantly in 2007 while there were more than 28,827 units of both categories unsold in Peninsular Malaysia. Consequently, housing developers were faced with financial constraints in terms of servicing their loans.

The problem of unsold houses reflects the existence of the mismatch between the supply of and the demand for housing. As Bramley (1993) has argued, more houses built do not guarantee all families can be housed. The ability of a family to pay for a house, which is called effective demand, is the main factor in providing housing for families (Bramley, 1993). In this respect, some are of the view that more government land (state land) should be released for housing development and town planning

control should not be the main constraints on measures perceived to bring down housing production costs (Lawrence, 1997; Goh, 1997; Marbeck, 1997).

Hamzah and Tan (1982) argues that housing production costs are affected by changes in labour wages, in costs of building materials, in costs of management, and in financial interest rates. Moreover, the development costs also include the costs involved in complying with related laws governing housing provisions (Hamzah and Tan, 1982). In this respect, the government has taken several essential measures for housing developers in efforts to curb soaring house prices. Among the significant measures are: reductions in taxes on building materials; classification of vital building materials such as cement as controlled items (lifted in July 2008). In addition, contractors and builders are also allowed to bring in labourers from neighbouring countries to offset the local labour shortage and cheaper wages.

The housing problems are believed to be a part of some of the unintended outcomes of town planning control. Goh (1997) views that the implementation of the planning system may affect housing development in terms of choice of location, amount of land allocated for housing through land use zoning, allowable number of dwelling units, types and quality of buildings, and total environment. His views are seemed to support the claims made by Cheshire and Sheppard (1989), Monk, *et al* (1996), and Evans (1998).

1.4 Identification of research problem

It is claimed that the town planning system has affected land development by limiting the value of an individual site, altering the pattern of land value, weakening

efficiency of economic activities, and causing supplementary effects such as higher costs of travel and delays in approval process that contribute to the increase in development costs (Harvey, 2000; Evans, 2004; Bramley, 2007). These claims can be analysed by examining the implementation process of the town planning system (Healey, 1991).

In Malaysia, the local planning authority is empowered to prepare plans, to control land development and to protect the public rights. However, higher levels of planning authorities, including federal and state government agencies, are also involved in the implementation of planning systems. The planning authority functions are in accordance with the statutory requirements set by all necessary legislative provisions. Therefore, the effects of the town planning system on housing development are related to the way that the system is implemented. For housing development, the planning authority can either grant or refuse to grant planning approval. In cases where planning approval is granted, the features of existing housing schemes in terms of design, quantity and overall environment reflect the influence of the local planning authority.

In relation to the problems of mismatched between the housing demand and supply in Malaysia, the research problem is 'are housing problems caused by factors resulting from the implementation of the planning system?' The implementation of the planning system relating to land development encompasses various planning activities. In order to indicate these activities, the development process model shows the steps in the process of land development activities starting from the acquisition of the site to the disposal of the products (Ratcliffe and Stubbs, 2003). The role of

town planning control can be examined at every step of the development process. As Adams and Watkins (2002) suggested, the actual market outcomes in terms of price, output or housing density should be first observed and then followed by investigations of the ways in which the implementation of town planning control or policies.

The outcomes from the implementation of town planning system can be seen in terms of the locations of housing schemes, that is, whether the locations are desirable or not, whether land identified for housing by development plans has been taken up or not, whether there has been allocation of sufficient land for other types of land uses within the schemes, and whether that land is of reasonable quality. Thus the question is, why and how does town planning control contribute to such outcomes? The subsequent question is, why did developers choose to develop or not to develop the identified land and what are the advantages or shortcomings of the identified sites? In terms of quantity and quality of buildings, the outcomes of town planning control can be observed in the following issues: are housing projects required to reduce their proposed housing densities, to produce quality designs and create quality environments. The next question is, what were the factors taken into consideration in the approval process and what were the implications of the developers' decision-making process and need for profit? Thus, it is assumed that a problem which occurs in land development relating to town planning control, relates to the position and credibility of the development plans (Structure and Local Plans) to provide a reliable guide for the land use planning, development control and decision making choices.

Research into these effects of town planning control requires sufficient quantitative data. The magnitude of the effect of planning is actually difficult to identify and measure, as in practice many other factors also have an influence – for example, developers' decision making could be affected by the market environment (Guy and Henneberry, 2000). In addition, quantitative data and information in Malaysia are often poorly kept by the responsible agencies. For example, amount of housing units approved by location and year, the acreage of land approved for conversion, land transactions and ownership are difficult to trace. Indeed, as an alternative, the researcher could only obtain the information from the housing developers. However, Ghani and Lee (1997) who studied the effect of town planning on development costs found that the data given by housing developers were merely percentages of the estimations and not actual costs. Hence, there are still unknown components in deriving the production costs.

Based on the limitation of information and data as discussed above, this study adopts a research approach which is to look at the factors of town planning control that affect the outcomes. This approach is in line with the views of Adams and Watkins (2002) as discussed in 1.2. The main argument of this research is that the factors of town planning that affect housing land development are the most important point to be looked at, before any effort can be made to measure the effect of town planning. It is believed that if these factors and the components are identified, the effects can be further studied.

Town planning factors consist of components and activities which can be elicited through the town planning system. Based on the Town and Country Planning Act

1976, the planning system comprises development plans (structure and local plans) and development control (procedures and planning decisions); these can be treated as the town planning factors. Thus, there are questions about how the development plans are prepared, interpreted in 'development control' and considered in 'planning decisions'. Consequently, the question is 'do all of these factors affect housing land development?' The subsequent question is 'which are the main town planning factors affecting housing land development?' Moreover, the above factors comprise groups of components relating to town planning activities. By looking at procedures of development control alone, several components can be identified, including the procedures to submit planning applications, the requirements to be fulfilled by applicants, and the conditions that can be imposed upon planning approvals. The following research question is 'which component of town planning factors affect housing land development?' Lastly, the question is 'do all components affect land development negatively?' If the research finds that the factors do not affect development negatively, it is reasonable to suggest that town planning factors affect land development positively.

To seek the answers for the above research questions, it is important to understand the interplay between a local planning authority and a housing developer. For this purpose, their interactions can be analysed and envisaged by using the institutional structure and agency model of development process (Healey, 1992) which is further discussed in Chapter 2. This mode of analysis is, as claimed by Healey (1992), able to provide a broad methodological framework to analyse the relations between structures and agencies in land development irrespective of place and time.

1.5 The aim, objectives and importance of this study

The literature has highlighted that the effects of town planning control on land development are not limited just to the approval process but also encompass various stages in the development process. It is undeniable that there is a knowledge gap about the role of town planning in the land development process in Malaysia. The main aim of this study is to ascertain the dominant factor of the town planning system that affect private housing development in Peninsular Malaysia.

To achieve the above aim, the objectives of the study are to:

- a) examine the roles of institutional structures and agencies involved in planning and controlling land development;
- b) investigate the consideration given by planning authorities in evaluating applications for planning permissions to private housing development;
- c) identify the main factors and components in the town planning process affecting housing development.

The findings of this study could contribute to an enrichment of the current knowledge among academicians, town planners and urban managers. Essentially, the research findings could provide some useful guidance for local planning authorities, in the event of preparing development plans, in formulating development policies and in exercising development control.

1.6 Research Methodology

This study adopts the quantitative methodology which starts with the identification of the research problems, outlining of the hypothesis, the formulation of research objectives and research design, the determination of methods for information and

data collection, and data analysis, and ends with a discussion of the findings, conclusions or generalisations.

To achieve the study objectives, the quantitative method have been chosen because it will enable the researcher to concentrate on the description and explanation of the phenomenon based on theory (Levy, 2006). According to this method, the data can be collected through both of quantitative and qualitative techniques. Thus, the description and explanation of the phenomenon can be derived by analysing the data drawn using certain statistical techniques (Leedy, 2001). The analysis of the data collected through the quantitative and qualitative techniques will be able to answer the questions 'what?', 'where?', 'how many?' and 'why?' (Chua, 2006 & 2008; Nachmias and Nachmias, 2000; Ahmad Mahzan, 2002; Leedy, 2001).

The examination of the roles of institutional structures and agencies involved in the land development process is carried out based on secondary data and information including the background of Malaysian government structures and agencies, development planning, housing policies and problems, legislative provisions in land development that include land laws, town planning laws and other related laws. The information about national housing objectives and policies, housing and economic performance, population, employment, and household incomes is gathered from various sources such as the Ministry of Housing and Local Government, Town and Country Planning Department (Peninsular Malaysia), Written Statements of available Statutory and non-statutory Development Plans (Structure Plans, Local Plans, Draft Local Plans, Report of Surveys, Technical reports), Institut Penilaian Negara (INSPEN), Statistical Reports, Central Bank annual reports, Local

Authorities' annual reports, Five-Year National Plan Documents, National Physical Plan Report and other related published documents. These sources of data are acknowledged in the text, tables and figures. The details of the research method employed in this study are further discussed in Chapter 5.

1.7 Scope of the study

For this study, "town planning refers to intentional government intervention in the land and property development process intended to achieve desired societal objectives" (Tiesdell and Allmendinger, 2005, p.57). There are numerous theoretical debates about the effects of town planning control on land and property development. However, the research models used in other countries can not be replicated in Malaysia due to factors such as availability of data, differences of political institutions, government structures, socio-economic and community cultures. Moreover, some of the data might be contained within confidential, secret and inaccessible documents. Thus, it is reasonable to state that the ideal figures to examine the effects of town planning control on housing land development can not be easily gathered.

Taking into account the above constraints, this research is designed to focus on the practise of town planning control embedded by the planning system in Peninsular Malaysia vis-à-vis housing land development process. The primary data and information are elicited from private housing developers. This is due to the consideration that the private housing developer is the agent which coordinates the interests of other stake holders in housing development (Healey, 1992). Most importantly, the developer is a reliable agent to deliver information or feedback

about the effects of planning system on housing development because it deals with planning authorities and implementing housing development (Harvey, 2002; Millington, 2000; MacLarran, 1993; Healey and Nabarro, 1990).

Housing schemes developments examined under this research are differentiated from that undertaken solely by public sector developers. The private housing developers were reminded in their answers not to take into account the housing schemes involved in government privatisation and joint venture projects. This research is only concerned with housing land development in urban areas and excludes housing schemes built by government agencies such as State Economic Development Corporation (SEDC) and local authorities. In addition, housing schemes for agriculture development and settlements are also excluded.

1.8 Research report structure

This research is divided into eight chapters. The first chapter provides an overview of the main object of town planning and effects on land development process in Malaysia. It is asserted that the implementation of the town planning system has engendered housing development issues in Malaysia that provide the context of the research. Therefore, the discussion continues with the identification of the research problems and hypothesis, the aim, objectives and importance of this research, general research method and scope of research.

The second chapter discusses the existing literatures on the theories and practices of the land development process which explain the roles of institutions and major players in land development and the issues arising from the interplay between the

players. The discussion is then streamlined to focus on the effects of town planning control on housing development which ultimately set the theoretical basis for this research. The governance structures and agencies in Peninsular Malaysia are discussed in the third chapter to allow deeper understanding particularly about the relationships among the institutional structures and agencies involved in land development, as well as their specific roles and functions. Components and items involved in the town planning approval process, together with other related legislative requirements are identified. A brief description of Peninsular Malaysia as the study area is also provided.

The effects of the town planning system, and the resultant housing problems, can be seen in national housing policies, especially with respect to the interpretation of government policies in local planning areas. These aspects are discussed in Chapter four. This chapter also delineates the findings from the analysis of the secondary data, which indicates the effects of the town planning system and the role played by planning authorities; ultimately this may lead to the refinement of the effects of the town planning process in housing land development as practiced in Peninsular Malaysia.

The fifth chapter discusses in detail the research methodology, including theories of research methodologies and the appropriate methodology adopted in this research. This is followed by a discussion of the determination of samples, the questionnaire design, and method of analysis using the computer software used - Statistical Package for Social Science (SPSS).

The characteristics of the primary data obtained by the questionnaire survey are discussed in chapter six. This chapter also highlights problems faced during the data collection and mitigating measures adopted. The most important points in this chapter are the discussions of inferences drawn from the primary data based on descriptive analysis. This chapter ends with conclusions about the identified components and items of town planning control that affect housing land development.

The seventh chapter discusses inferences derived by the factor analysis. The discussions are on the interrelated components and items of town planning that affect private housing development. This chapter ends with a discussion on the important findings that meet research objectives. Lastly, the eighth chapter discusses the overall research findings, the conclusions that can be drawn from this study and suggests some areas for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The term 'land' refers in a general sense purely to the surface of the earth, which cannot be increased or decreased. Therefore land, in its physical form, is considered as already fixed by nature (Harvey, 2002). The view that the supply of land can be increased, takes into account methods such as reclamation and the construction of man-made structures; however, these involve additional capital investments. An increase in land supply could also appear to take place when land for housing, commercial use or industry is expanded by taking over the natural forest or agricultural land. However, these types of land increase are not natural, and occur when there is a demand for such land. Moreover, the demand for land, as well as earning capacity and capacity to pay, will determine the price. However, both earning and paying capacities are also dependent upon the types of properties (Harvey, 2002). It can be said, then, that types of properties are products of land and property development processes that are a set of

cyclical responses to a number of complex changing societal demands and expectations (Millington, 2000). Within the property development process, urban planning roles also have an impact on property development (Ratcliffe and Stubbs, 2003; Bramely, 1998; Monk and Whitehead, 1996, Adams and Watkins, 2002).

Based on the above points of view, this chapter will discuss the main ideas and concepts of land and property development and their relation with urban planning systems. The discussions are based on the theories and practices within the scope of property development and urban planning.

2.2 Land and Property Development

Land is considered as developed when its existing use is changed to another use, such that the land is perceived as being either better or improved; for example, when land which is principally used for agriculture is converted to other uses such as residential, industrial and commercial. In other cases, the existing use (such as agriculture) might be completely displaced from a particular area, so that the land now has potential for redevelopment (Lichfield, 1996). In this respect, Millington (2000) explains that land and property development can change the state of land resources through the erection of new buildings, and improvement of existing buildings for alternative or improved use. This explanation expands the definition of land and property development by including change of use and improvement work to existing buildings.

Millington further argues (2000) that land and property development takes place in order to meet the needs and demands of society in terms of basic requirements for shelter and for economic and social activities. In this explanation, it seems that land development is also carried out to meet requirements with both monetary and non-monetary returns. The non-monetary uses include community playing fields and open spaces. However, the definition of need is different from demand. The term 'need' refers to the assumption that a subject (person or society) requires certain things such as shelter, food, clothing and education, whereas, the 'demand' for something refers to the ability of a subject to pay for it. When the subject is able to pay for his or her needs, it is called effective demand (Murie *et al* 1976). Thus, it is apparent that land and property development perhaps may involve capital investment with both monetary and non-monetary forms of revenue – an example of the latter being a healthy society. In this regard, Harvey (1982; 1985) argued that the principal influence on the decision to proceed with land development largely depends upon the expected return on the capital invested. This argument applies to both the public and private sectors. For the private sector, the land development that includes non-monetary return uses will be included in the calculation of capital invested. For the public sector, however, land development for non-monetary return uses, such as to fulfill social needs, is considered the responsibility of the public sector and the returns are intangible and sometimes worthless. This is because the resources are from the taxes (Harvey, 2002).

The total products of land and property development are meant to satisfy the expressed needs of society, sustain the environment, and promote social accessibility and cultural

value (Healey, 1998; Healey and Nabarro, 1990; Millington, 2000). However, the products do not always bring positive effects to society. Sometimes, the products will benefit entrepreneurs, but concurrently give rise to negative effects on society. All of these effects are called 'externalities' (Harvey 2002).

Since land development can result in negative as well as positive effects, state or government intervention in land development is considered necessary to moderate any potential adverse externalities, to safeguard broader social needs, and to conserve resource and environment heritage values (Healey and Nabarro, 1990; Harvey, 2002). This argument is in line with Tisdell (1993), who states that government intervention is necessary to pursue social improvement. On the other hand, Webster and Lai (2003) argue that government intervention cannot be justified on economic grounds, and may not be effective because of the transaction costs incurred while imposing policies and regulations.

The transaction costs include all costs involved in planning, bargaining, modifying, monitoring and enforcing an implicit and explicit contract (Williamson, 1985; Buitelaar, 2004). Though this transaction cost is positive while preparing contracts and gathering information, as claimed by Rienstra (1988), public intervention is still necessary to reduce the monopolization of information associated with any positive transaction costs (Nijkamp *et al* 2002). Besides transaction costs, there are other costs involved in property development. The costs involved in development can be seen through the development process which is dealt with in the later part of this chapter.

Adams (1994) explains that, to materialize the products of any development, land and property development must undergo a process which is similar in many respects to other industrial and economic production processes. The development requires complex organizational arrangements in order to bring necessary inputs together to the production activities at the correct time. The inputs will also include a wide range of actors to perform specific and clearly defined roles in the process (Kaiser and Weiss, 1970; Bryant *et al.*, 1982; Goodchild and Munton, 1985).

In order to gain more understanding of land and property development, the theory and literature of the development process are discussed in the following section.

2.3 The Development Process

Healey (1992) defines the development process as

“the transformation of the physical form, bundle of rights, and material and symbolic value of land and buildings from one state to another, through the effort of agents with interests and purposes in acquiring and using resources, operating rules and applying and developing ideas and values” (Healey, 1992.p.36).

This definition can apply to the property development process except that the property development process also takes into account the reasons why the process occurs. Barrett and Healey (1985) explain that the property development process is not just a simple process of translating the demand into supply at a given time and place, but also performs a significant role in the national economy, and represents an important sector of macro-economy activity. In line with this argument, Harvey (1985) asserts that there are a number of positive correlations between land and property development and

economic growth. Isaac (1996) further explains that the general activities associated with land and property development also assist in the generating of local and regional economies and consequently engender greater sub-national economic growth, and thus, there is a need to view the development process in the context of this broader economic and financial framework. Therefore, Cadman *et al* (1997) view the development process as a complex and lengthy process.

Since the property development process is so complex, it is necessary to gain better insight into the process by looking at some models that have been devised since the mid 1950s. These models are grouped as follows:

- i) **Equilibrium Models**, which assume that property development is structured by economic signals about effective demand, as reflected in rents, yields etc. These derive directly from the neo-classical tradition in economics.
- ii) **Event Sequence Models**, which focus on the management of stages in the development process. These derive primarily from an estate management preoccupation with managing the development process.
- iii) **Agency Models**, which focus on actors in the development process and their relationships. These have been developed primarily by academics seeking to describe the development process from a behavioral or institutional point of view.
- iv) **Structure Models**, that focus on the forces which organize the relationships of the development process and which drive its dynamics. These are grounded in urban political economy (Ratcliffe and Stubbs, 2003, p.199).

Even though there are four models, as noted above, Gore and Nicholson (1991) argue that only three models (ii – iv) are relevant to explain the development process, and recommend further work to identify the particular institutional, financial and legislative framework or structure of provision for each type of development in question. Hence, the land development process is presented in terms of a structure and an agency component with each having specific interests and objectives (Fothergill *et al.*, 1987).

However, D'Arcy & Keogh (1999) argue that the literature to explain the interrelationship between structure and agency does not offer an adequate theory of institutional formation and understates the role of institutional change. These authors explore property development in the context of a general institutional framework and explain that the political environment will affect opportunities in and expected returns on property development. The social environment generates distinct requirements and influences the purposes of the development. Economic institutions support a pattern of real estate demand in use and investment and create price incentives to supply property via development. Legal institutions have an impact on the development market, most directly by mean of the planning system and in the way property rights are defined.

Ratcliffe and Stubbs (2003) explain that the development process is complex as it involves many agencies, public and private, large and small, undertaking development in a variety of organizational forms and legal entities. Though it is a complex process, it can be viewed more simply by dividing it into four distinct stages: evaluation, preparation, implementation and disposal (Cadman and Austin-Crowe, 1983). For a more detailed view of the development process, Miles *et al* (1991) outline eight stages: inception of an idea, refinement of the idea, feasibility, contract negotiation, formal commitment, construction, completion and formal opening, and asset and property management (cited in Ratcliffe and Stubbs, 2003). However, Ratcliffe and Stubbs (2003) suggest only five phases in the development process: concept and initial consideration, site appraisal and feasibility study, detailed design and evaluation, contract and construction, and marketing, management and disposal.

The development process offered by Ratcliffe and Stubbs (2003) refers to the sequence of events model. In reality, the progression is not that simple (Goodchild and Munton 1985; Adams 1994). Indeed, Barrett *et al* (1978) have suggested that the development process can be articulated as three broad sets of events. They are: development pressures and prospects; development feasibility; and implementation. Fothergill *et al* (1987) describe the development process as a 'pipeline' in which there are various 'barriers' and 'pumps'. Examples of barriers are the acquisition of a site for a proposed development scheme and the obtaining of planning approval from the local planning authorities. The investment and financial decisions are examples of pumps.

For the purpose of this study, it is appropriate to look at the development process from an institutional perspective because government intervention in property development occurs mainly through urban planning control and forward planning (Monk *et al* 1991; Harvey 2002; Evans 2004). Planning control limits the usage of land or lowers the density of land uses that would otherwise be in place. Forward planning identifies land for urban uses, though the sites identified are not always attractive to developers (Harvey 2002). For the institutional approach, Healey (1992) proposes a 'consolidated model' which is intended to combine the key elements of the four types of the development process models: equilibrium, event-based, structure and agency.

The institutional approach seeks to link all the components together as shown by Figure 2.1. The figure shows that links are established between the broader strategies and interests of agencies, the material resources, and the institutional and organizing ideas

involved in the context of land development process. This approach provides a useful way of analyzing the complexities of the land and property development process, as they are shown clearly in the consolidated model.

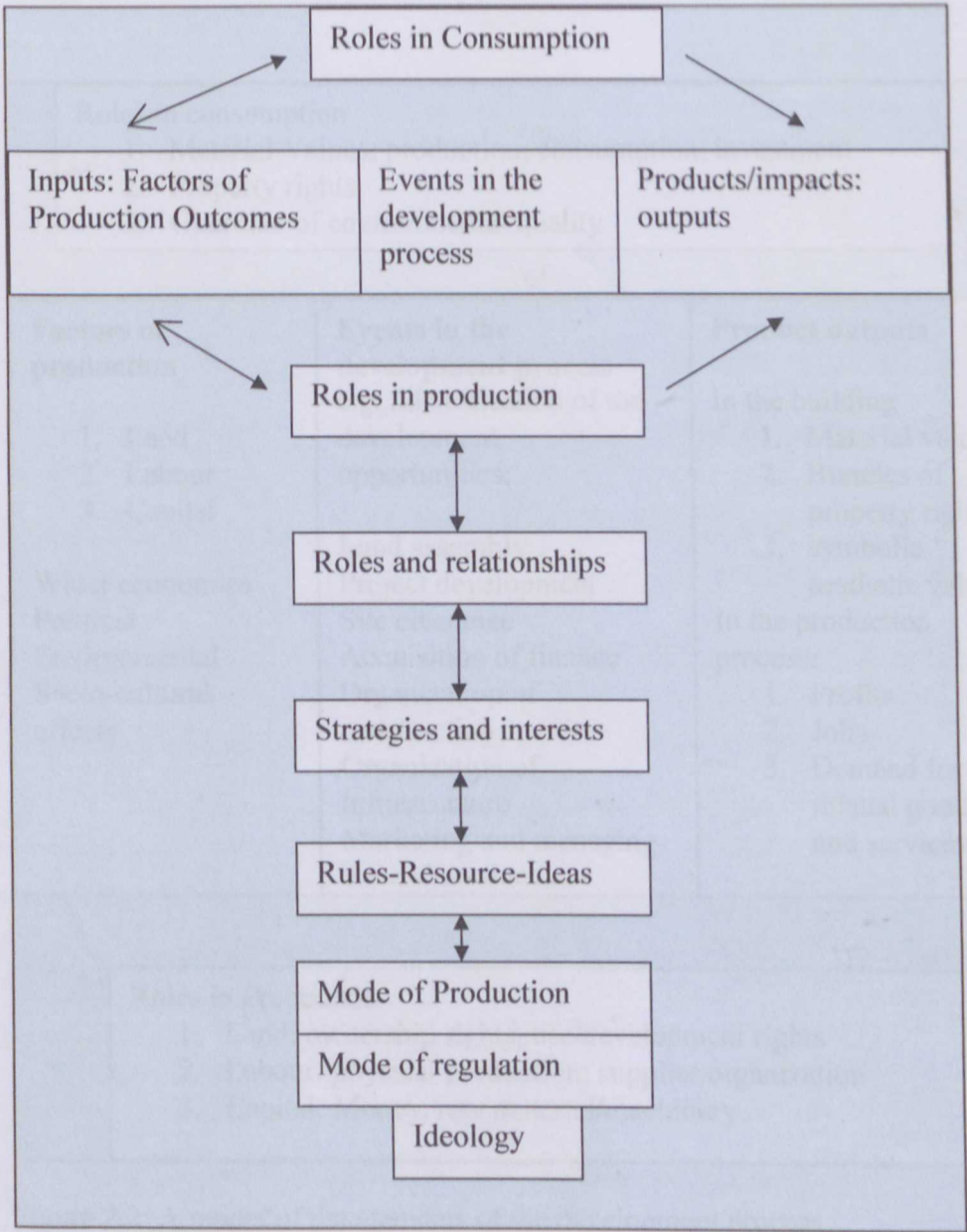


Figure 2.1: An Institutional Model of the development process.
Source: Adapted from Healey 1992, p.37.

In addition, the model focuses on distinguishing levels of analysis rather than placing the analytical emphasis on the specification of the different actors, events and interests involved.

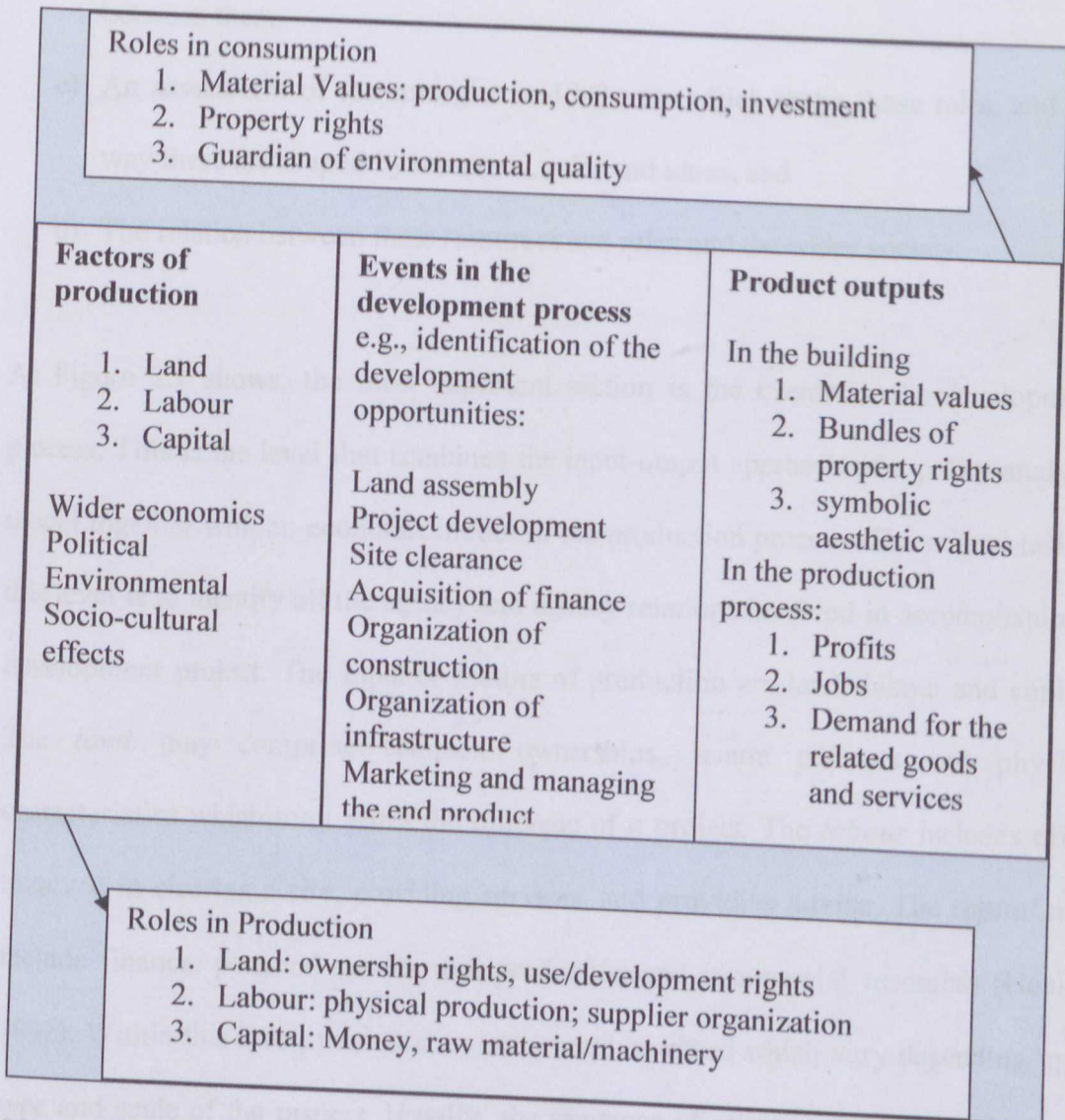


Figure 2.2: A model of the elements of the development process
Source: Adapted from Healey 1992, p. 42.

The models set out above (Figure 2.1 and 2.2) show four levels of analysis:

- a) A description of the events which constitute the process and the agencies which undertake them
- b) An identification of the roles played in the process and the power relations between them
- c) An assessment of the strategies and interests which shape these roles, and the way these are shaped by resources, rules and ideas, and
- d) The relation between these resources and rules and the wider society.

As Figure 2.1 shows, the most important section is the events in the development process. This is the level that combines the input-output approach of a policy-analysis model together with an economic model of the production process. The critical task at this level is to identify all the agency and agency relations involved in accomplishing a development project. The input or factors of production are land, labour and capital. The *land* may comprise complex ownerships, tenure patterns and physical characteristics which may affect the outcome of a project. The *labour* includes effort involved in clearing a site, providing services, and providing advice. The *capital* may include finance, personal wealth, and production and commercial resources (Healey, 1992). Within this level, there are several events involved which vary depending upon type and scale of the project. Usually, the sequence of events is as follows: land and finance come first; then the land is subdivided into plots, followed by land allocation, provision of services, constructing buildings and allocation of completed buildings to occupiers. These events may vary while developing green-fields and brown-fields.

Another important component of the consolidated model, as shown by Figure 2.1, is the roles in production and consumption. Roles in production and consumption may show some indications of the kinds of interests particular agents in production may have in the development process. A specific agent may have more than one role, and these roles may conflict. Agents actively constitute their interests as they perform and develop their roles in practice.

Healey (1992) states that the model is relatively comprehensive in form, is relevant to all types of development projects, is applicable under different economic and political regimes, and at the same time, is able to take into account any spatial and temporal variations. It is also capable of addressing a 'driving dynamic' that produces distinctive patterns of agency relations, and the effects on what is built, how and for whom. Accordingly, the model can be constructed to include events and behaviours of agents, and explain how these events and behaviours are related to broader structural forces in society and the economy.

As usual, the model embraces several criticisms. Hooper (1992) argues that the model fails to define the term 'institutional', which is fundamental to the analysis of land and property development activities. He suggests that the conceptual composition of the term 'institutional' should be more clearly theorized by the generation of simply an abstract model. It is understood that Hooper was seeking to relate the theory to practice. Healey (1992) notes that a model of the land development process should be able to take into account the spatial variation, but Krabben and Lambooy (1993) argue that the

institutional model fails to explicitly link property development to location. Through the model, locational differences in land and property development are not sufficiently explained.

Even though there are criticisms of the weaknesses of the model, Ennis (1997) argues that the institutional model provides an adequate understanding of the land development process. Ennis claims that:

This consolidated model ... provides a means of comparing the capacity of actors in negotiations to utilize the resources and rules to develop negotiating frameworks to be employed in pursuing their strategies and interests. This model is not limited in its application to only one case. It has the benefit of providing a perspective across the political cultures, which have generated the socio-political context within which the actors operate. As the model is not constrained by deterministic presuppositions, we are able to identify the similarities and differences between behaviour patterns and link them back to a single conceptual framework (Ennis, 1997, p.1953).

Based on the above discussions, although there are comments about the model, this study adopts the institutional model because it is able to explain the roles played by all actors which may affect other activities and strategies in the land development process. Particularly, the institutional model is able to explain the link between all players, especially the two main players, namely the planning authority and property developer. However, more components of the model need to be comprehended in order to achieve the objectives of this study. Hence, it is important to view all roles played by the principal agents involved in the development process, as shown by Healey, 1992 model (See Figure 2.1 and 2.2).

2.4 The Roles of Principal Agents

Agents have specific tasks to perform in the land and the property development process, and make defined contributions towards the intended development outcomes. Accordingly, Goodchild and Munton (1985) argue that land and property development will only materialize if a consensus between all actors involved is achieved. There are also arguments that the actions of each agent are constrained by the actions of other actors (Harvey, 1982; Harvey, 1985; Healey, 1991). Normally, in practice, agreement can be reached after facilitating appropriate negotiation processes among those actors involved (Goodchild and Munton, 1985).

Cheshire *et al* (1985) claim that negotiations among actors are the most important precondition to the efficient and effective operation of property development. Wider benefits can be realized if each actor understands the objectives and roles of others, including landowners, local authorities, banks and financial institutions, developers and land use planners.

2.4.1 Landowner

The landowner is the most crucial agent in the development process. The landowner can take a relatively active or passive role. An active landowner may initiate the development of land in question by deciding to sell or entering into partnership with a developer; this has an important bearing on where and when the development takes place (Cadman and Topping, 1995). Conversely, a passive landowner may demonstrate greater passivity by simply holding on to the land in question, or may be manipulated

by others who have an interest in the development process (Goodchild and Munton, 1985).

Based on the above, Healey and Nabarro (1990) argue that landowners are not a homogeneous category. Their interests and strategies are developed in response to a variety of experiences, pressures and values (McNamara, 1988). This view is in line with Goodchild and Munton (1985), who categorize five groups of landowners: the professional landowners (banks and insurance companies), inheritance, farmers, commercial and industrial concerns, and residential owner-occupiers. They further claim that all of these different landowning groups are ultimately land sellers for profits. These groups' sales and release timings are strongly influenced by many other factors such as market conditions and taxation agreements.

Massey and Catalano (1978), on the other hand, group landowners in three broad categories: former landed property, industrial land ownership, and financial land ownership. The former landed property or traditional landowner includes church, landed aristocracy and gentry, and the crown estates. These landowners inherited large 'land banks' from their predecessors. The capital value attached to their properties indicates their wealth. The industrial land ownership category refers to owners who own land incidental to their operational objective or service provision. This category includes farmers, manufacturers, industrialists, retailers, a variety of service industries and public authorities. The motive of ownership in this category is dominated and constrained by legal status. The third category is financial land owners, which includes

banks, financial institutions and property companies. These land owners see their ownership as an investment and thus can be expected to cooperate with development if the return in investment is financially viable. The major groups in this category are the banks and financial institutions, and the property companies.

Massey and Catalano (1978) argue that only landowners with landed property interest generally tend to be in opposition to development. However, Goodchild and Munton (1985) argue that the behaviour of the landowners and motives of their ownership will still affect the time at which the land is released in the market. For example, some owners who have a particular motive for occupation of a given site may sell the property when it is no longer suitable for its existing use. This may be contrasted with land sale for speculative purposes. Conversely, landowners with the primary concern of the use value of their properties may yet continue with the occupation of the properties notwithstanding changing market conditions and opportunities.

Adams (1994) suggests that all landowners whose land has development potential pursue specific land management and development strategies by making decisions: when to develop or to sell land for development. Moreover, landowners may engage with other agents and the management of the land prior to its development. The number of owners involved in any particular development can have important effects with respect to assembling a given property development site: the greater the number of owners, and the smaller their holdings, the greater the difficulty of dealing with them.

Therefore, Adams (1994) asserts that the role and contribution of landowners in the property development process cannot be ignored.

The pivotal role of landowners is also acknowledged by Goodchild and Munton (1985). These authors argue that the main feature which distinguishes land owners from other principal agents is their central position in the development process, as the landowner must decide to release the land in the first place. For example, landowners who have obtained planning permission and decide to sell their land without any outside influence either from developers or planners can be considered as positive contributors to the development process. In contrast, landowners who sell their land following intervention by a developer, without any attempt to sell the land themselves, may be considered as insignificant contributors to the development process. Again, Goodchild and Munton (1985) claim that the landowner's role, revolving around the decisions either to sell or not to sell land, is more crucial in determining the timing of a development than the developer's decision to buy.

2.4.2 Local Authority

Local authority in Malaysia, besides its commonly known statutory functions to provide services for and manage the identified town area, is entrusted to be the local planning authority for the area, and is empowered to carry out development as well as to enter into business activities or business join-venture (Salleh Buang, 1997). However, the functions of a local planning authority may not be similar between states or countries such as in the UK and US (Cullingworth and Nadin, 1996). In the United

Kingdom (UK) local planning authorities can be part of the local authorities, whereas in United State (US) a local authority can prepare the local plan but a separate body will administer the planning regulatory matters. As Ennis (1997) claims, property rights prevail in the United States because it seeks to protect private property rights. In the Netherlands, a local authority is also the main supplier of land for development. A local authority prepares land for development and provides all services required. The land alienated for building plots is dispensed to the appropriate developers either as free hold or lease hold holdings, except for land alienated for services. The associated price setting is then dominated by the way in which individual municipalities develop their specific portfolios of land resources (Ennis, 1997). In contrast, local authorities in the UK may make land available for development by assembling development sites for disposal. This may involve invoking the statutory compulsory purchase power (Cadman and Topping, 1995). Both in The Netherlands and the UK, local authorities may assume the role as landowner by maintaining a long-term interest in a development (Needham et al. 1993; Cadman and Topping, 1995; Ennis, 1997).

Cadman and Topping (1995) argue that local authorities facilitate development by promoting or participating in development opportunities themselves. Millington (2000) suggests that local authorities may undertake development themselves in their area with the following objectives: (1) to carry out development which the market failed to provide such as the development of low-cost housing, public shelters, public buildings and amenities, (2) as an attempt to increase employment and reduce the social costs of unemployment, and (3) to develop 'starter-factories' or areas of industrial estates (since

local authorities can develop them more cheaply). Healey and Nabarro (1990) claim that partnership with the private sector is an attractive option for local authorities in order to initiate development in their areas. The partnership offers a way of securing risk and supporting land for properties development. However, Cadman and Topping (1995) argue that the extent to which the local authorities can venture into economic development is restricted by their financial capabilities, legal powers and central government policies.

2.4.3 Banks and Financial Institutions

The availability of finance is the most crucial part of the development process because any land development scheme requires large sums of capital (Goodchild and Munton, 1985). In line with this, Adams (1994) suggests that the involvement of financial institutions in any development tends to be generally constrained by provisions of conventional mortgages. This happens when developers choose banks and financial institutions as the principal source of finance to cover costs incurred during the development process as well as costs in holding completed projects prior to sale and letting. The banks and financial institutions that provide medium-term and long-term finance consider these loans as their investments. Thus, the financial institutions have rights over the project schemes as stated by the mortgages provisions. Then, financial institutions diminish their subsequent rights to benefit from any increase in capital values. Millington (2000), however, argues that a significant change has taken place in many countries, such that many banks and financial institutions have become property developers in their own right. By carrying out development using their own funds at a

low opportunity cost, they in turn receive both profits from the development and the investment, as well as capital gains. However, Cadman and Topping (1995) argue that the involvement of financial institutions in land development is generally limited to purchasing and dealing with completed development. This is due to their assessment of risks associated with land or property development. Goodchild and Munton (1985) claim that the roles of banks and financial institutions in the development process can vary according to the type of development in question. For example, they do not influence residential development processes because they generally only provide mortgage loans to the house buyers. However, banks and financial institutions play important roles in commercial and industrial development, where they take up some or all of the risks which are conventionally shouldered by property developers.

From the above arguments, it is apparent that banks and financial institutions can play important roles in the development process. They can provide finance, be it as landowner, investor, partner in a property company, or developer of the schemes. Here, Cadman and Topping (1995) conclude that unless a development is self-financed, then financial institutions play very important roles in the development process.

2.4.4 Land and Property Developer

In the land and property development process, developers play a significant role. Thus, developers are considered as primary agents in the process (Goodchild and Munton, 1985, 1988; Millington, 2000). This assertion is in line with the claim made by Craven (1969), Kaiser and Weise (1970), and Drewett (1973) that the developer is the main

catalyst and key co-ordinator of other interests, and enables action in land development process. Craven (1969) concludes that the developer is:

'a catalyst who interprets, albeit inaccurately, major force in the urban environment; an initiator of action based on this interpretation and a challenger of public policies which abstract such action' (Craven, 1969, p. 124).

Drewett (1973) conveyed this approach by offering a model to show the position of a developer as a decision agent in the land development process especially in residential development. The model is shown by Figure 2.3. Healey (1991) is critical of this model because it lacks the time dimension in each activity played by the actor.

MacLaran (1993) argues that the developer is the actor who tends to initiate the development process and seeks to identify development opportunities in a particular location. In practice, a developer negotiates with the land owner for acquiring development rights to the land or enters into joint development with the owner based on a share of any development profits. A developer arranges finance for the development, commissions architects to devise a scheme which will be acceptable to the planning authorities, engages builders for constructions, and consults estate agents to seek prospective tenants or users of the completed development. Overall, MacLaran (1993) regards developers as the *'impresarios'* (agents) of the built environment. A decision to proceed with a specific development project is usually tied to the financial aspects of *management risk* and expected profit to the developer (Harvey, 1982; Harvey 1985; Millington, 2000). This is the main influence on a specific land development project. If there is an assured profit forecast by the developer, then it is expected that the project will commence.

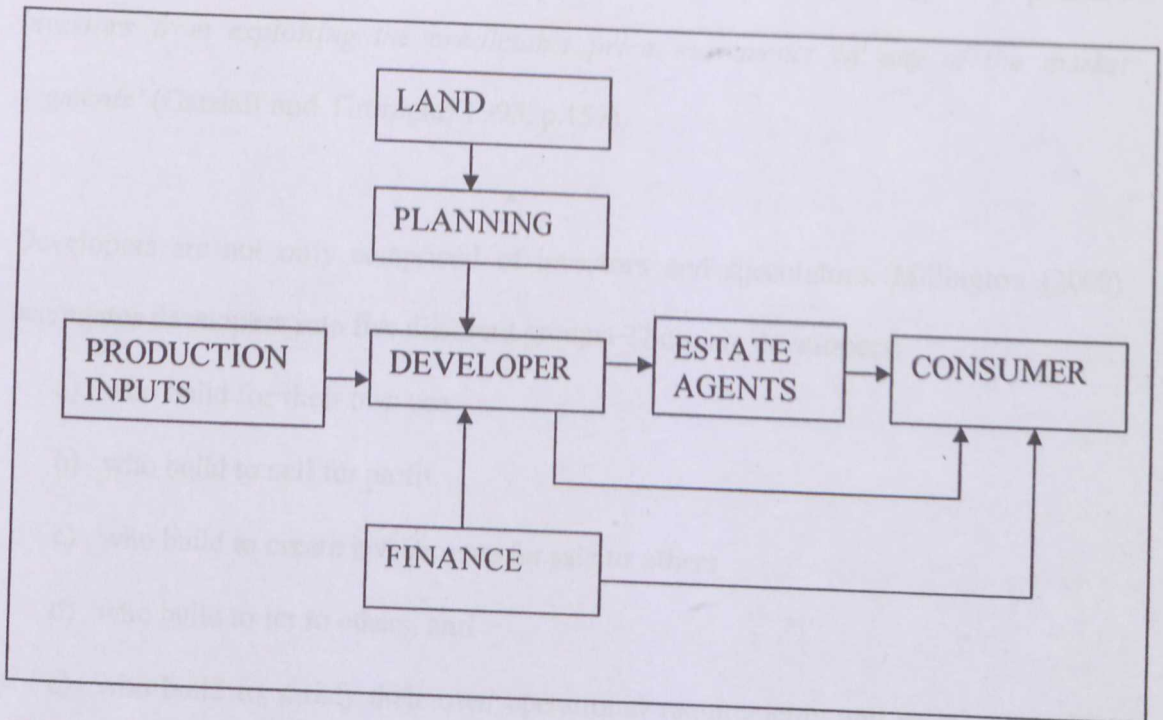


Figure 2.3: Drewett's Model of Decision Agents
Source: Healey, 1991, p.225.

Most developers predetermine their expected profit based on the market conditions, anticipated selling prices and construction cost. In relation to this, Knox and Cullen (1981) assert that:

'The profits to be made from property speculation give developers a strong incentive to insert themselves as key actors at the centre of structures of building provision and this incentive is intensified by their interest in the speed of operation (because they have to finance land preparation and construction long before receiving income from the sale of completed projects)' (Knox and Cullen, 1981, p.886)

Gatzlaff and Tirtiroglu (1995), however, disagree with this argument that developers, investors or speculators could benefit from the volatile movements of the property market in order to increase their profits through the manipulation of the associated transaction costs. This is based on a comprehensive review of United States-based

literature, from which it was concluded that *'transaction cost typically prohibit investors from exploiting the predictable price movements in any of the market segments'* (Gatzlaff and Tirtiroglu, 1995, p.157).

Developers are not only comprised of investors and speculators. Millington (2000) segregates developers into five different groups. These are developers:

- a) who build for their own use
- b) who build to sell for profit
- c) who build to create investments for sale to others
- d) who build to let to others, and
- e) who build to satisfy their own operational requirements and social needs like public bodies.

Developers in the first group tend to be relatively few in number but they are characterized as active agents in local land and property markets. Such developers tend to be individuals who are involved in the property development process in order to build for their own use and occupation. Therefore, their primary objective is to ensure that the development scheme is suitable for their own use, with an associated market appeal and value. Moreover, this group tends to focus on the impact of the surrounding built environment on their individual development scheme. They are also very much influenced by the extent to which any compromise of design will affect their operational or user efficiency. They have a concern with the public amenities and utilities available in the area (Millington, 2000). Developers in this group tend to be landowners but can remain as active players in the ongoing local development process.

The second and third groups represent the majority of developers who search for opportunities to engage with land and property development schemes. They acquire sites for development, arrange the finance for construction, commission architects to devise a scheme which is acceptable to the planning authorities, engage builders, and use estate agents to seek purchasers for the completed development (MacLaran, 1993). Such developers are likely to be very aware of the existing demand conditions and purchasing ability of prospective investors or purchasers, and thus will accordingly build to satisfy anticipated investor and market needs. Their objective is to maximize profit from sale and will be influenced by short term considerations and longer term return. The profit made from a development scheme may be used to fund further developments. Thus, they play a very significant role in the development process (Harvey, 2002). They are interested in the way capital is switched between producing and consuming goods and in producing the space needed for production and consumption purposes (Healey and Nabarro, 1990).

The developers in the fourth group are quite similar in nature to the first group. They tend to be landowners or developers who purchase land with the intention to acquire the property rights and develop it. Unlike the first group who build for their own use, however, this group seeks to develop the property to derive income through rental or lease arrangements. Thus, it is seen that this group falls under the long term investment objective group. These kinds of developers are generally willing to take relatively higher risks by initiating either 'demand-led development' or 'supply-led development'. Types of development constructed and completed will tend to cater to

the perceived specific requirements of specific user groups. Therefore, this group tends to be specialist property developers with strong financial backing, and willing to get involved in speculative types of development. They will only engage in the development process when they identify a development opportunity that is suitable for their specific objectives.

The final group of developers consists of public bodies or government agencies that are involved in land development. This group's objectives are related to the defined and broader societal and government roles, which may involve managing and constructing educational institutions, social welfare facilities such as hospitals, libraries, and other public facilities and amenities. The group's engagement in the property development process is essentially to discharge its defined responsibilities in terms of broader social agendas. In some cases a development may be carried out in order to serve as a catalyst to attract other developers. In certain developments, this group may need to be involved in the earlier phases of the development to provide essential infrastructure needed and supporting amenities. Hence, in the development process this group plays a significant roles as facilitator.

The above grouping of developers shows that different types of developers have different development objectives and forms of development. They definitely have interests in property development, initiating and carrying out development, and accepting full responsibility for financial aspects and risks. Undeniably, the involvement of the developer in the development process is vital to ensure the expected

development can proceed as planned. In Malaysia, Johnstone (1979) finds that the private housing developers can be broken down into two categories namely sole proprietors and subsidiaries. The purposes of these developers' to involve in land development could fall into all purposes as identified by Millington (2000).

2.4.5 Land Use Planners

The term 'land use planners' refers to a group of professionals or persons working in the field of urban planning. This group's main aim is to safeguard the 'public interests' through professional acts and advice to the clients. However, professionals or members of this group can be divided into two broad groups: politicians and professionals (Cadman and Topping, 1995). The first group, the 'politicians', are responsible for approving the development plans in accordance with certain policies and political objectives. In addition, this group is also responsible for considering whether to approve or to reject planning applications. The second group is the 'professional planners' who are responsible for giving advice to the politicians in their planning decisions or administering the system. These professionals also act as technical experts in urban planning and as advisors to developers. Their areas of expertise relate particularly to their competencies in gathering and analyzing information, in designing built environment (including distributing physical structures and land uses spatially), and in appropriating the necessary infrastructures, facilities and amenities (Cullingworth and Nadin, 1996).

However, Millington (2000) argues that land use planners employed in the public sector are not necessarily able to judge what is best for society as they are removed from the market place and are therefore not as conversant as they might be with public demand. Moreover, Millington (2000) alleges that the planners are influenced by a range of ideologies, which results in them not being unprejudiced in terms of what is best in development terms. Here, it is seen that the planners are also likely to make decisions based on their own subjective opinions which are not necessarily in the best interests of society in general. Their views may therefore frequently be strongly influenced by political motives rather than true planning objectives. Indeed, Knox and Cullen (1981) claim that planners conform to the ruling political ideology and are therefore incapable of exerting their objective or professional influence on it. Here, Evans (2003) suggests that planners, in practice, are more interested in the development plan and its implementation, while politicians are more interested in political survival and advancement. Therefore, neither group is focused on maximizing social and economic welfare through the land use planning system.

Goodchild and Munton (1985) also argue that planners always assume a mid-way position between the 'technical role model' by providing advice to decision makers, and the 'political role model' by being committed to their own initiated plans. Ennis (1997) claims that the role of planners could be classified into two categories: first, in terms of the regulatory role, and second, in terms of generating the perceived ideal urban environment. To achieve these two roles, planners seek to ensure implementation *'through science and rationality tied to the constructive use of power in the form of the*

plan' (Fainstein and Fainstein, 1996, 274). Further, Knox and Cullen (1981) argue that planners subscribe to the managerial approach by seeking to balance conflicting interests, to be pragmatic and to follow the appropriate procedural rules. However, they also claim that planners are generally supportive of community rather than of any individual interests. Therefore, in the development process, planners may not be very positive toward developers and landowners (Knox and Cullen, 1981).

In addition, Goodchild and Munton (1985) argue that it is difficult for planners to initiate development scheme themselves. They suggest that the planners' responsibilities are to assist any application made by the landowners or developers to obtain planning permissions. This view is in line with Ward (1994) who claims that the implementation of planners' plans tend to rely on actions that were beyond their control. Land use planners depend on the external investment decisions crafted by developers and landowners. Furthermore, Alexander (1995) asserts that whilst the planner is not the main agent in the development process, planning as a process and outcome seeks to facilitate the broader processes of decision making and policy development.

Based on the above discussions of roles played by the principal agents in the land and property development process, developers are perceived as key players because of their role in buying and developing land. The role of landowners cannot be underestimated either, because they can affect the timing of the development; for example, getting them to release their rights to the property in question could be time consuming.

Notwithstanding the intentions of the developers and the landowners, the local planning authority's consent is the most crucial step in the development process. For this, the role played by land use planners is necessary to ensure the commencement of the development. All technical and supportive arguments provided by land use planners may influence the decision makers in the local planning authorities. If approved by local planning authorities, and of course with adequate support from financial institutions or from the developer's financial resources, the development is able to commence with the tendering process and construction works.

2.5 Planning Theory and Planning System

Ratcliffe (1981 p.6) defines town planning in general as:

... the art of anticipating change, and arbitrating between the economic, social, political, and physical forces that determine the location, form, and effect of urban development. In a democracy it should be the practical and technical implementation of the people's wishes operating within the legal framework, permitting the manipulation of the various urban components such as transport, power, housing, and employment, in such a way to ensure the greatest benefit to all.

Ratcliffe (1981) views town planning as being primarily concerned with taking an objective and rational view of future conditions, assessing what society desires its destiny to be, forecasting the amount of change, estimating the degree of control required, and formulating a policy to take account of this destiny, change and control. It is also concerned with providing the right site, at the right time, in the right place, for the right people.

Klosterman (1985) defines planning as government intervention in property development. The author argues that (as is recognized by both Classical and Neo-classical economists) government actions are still required, even in the atmosphere of a perfectly competitive market, to correct market failures involving: (1) public or collective consumption goods; (2) externalities or spill-over effects; (3) prisoners' dilemma conditions; (4) distributional issues.

Public goods can be defined by two technical characteristics: (1) 'jointed' or 'non-rivalrous' consumption such that, once produced, they can be enjoyed simultaneously by more than one person; and (2) 'non-excludability' or 'non-appropriability' such that it is difficult (in some cases impossible) to assign well-defined property rights or restricts consumer access. Externalities are closely related to the concept of public goods. The externalities can refer to effects revealed by developers who can freely ignore the costs of congestion, noise, and loss of privacy that high intensity imposes on neighbouring owners. 'Prisoners' dilemma conditions' refers to the idea that individual pursuit of its own self-interest does not lead to an optimal outcome for society or for the individual involved (Klosterman, 1985; Harvey, 2002).

Taylor (2004) notes that there have been two paradigm shifts in planning thought after the Second World War: the first 20 years of formal planning could be categorized as a period in which planning theory and practice were dominated by ideas relating to physical design. Planning was effectively viewed as an art, albeit an applied art in which utilitarian or functional requirements of construction had to be accommodated.

Indeed, Reed (1987) claimed that this was a period in which planning was perceived as an attempt to secure a desired location and overall physical patterns by imposing controls over the form, location and timing of private sector development and over public development. The above approach of planning was then influenced by two sets of ideas: (1) the system views approach and (2) planning as a rational process. The system views approach was based on the view that town planning dealt with specific outcomes relating to development and the urban environment. The rational process was based on the view of town planning as a process of rational actions. The sequence of actions is shown by Figure 2.4. Both these ideas signified a departure from the earlier design-based view of town planning (Taylor, 2004).

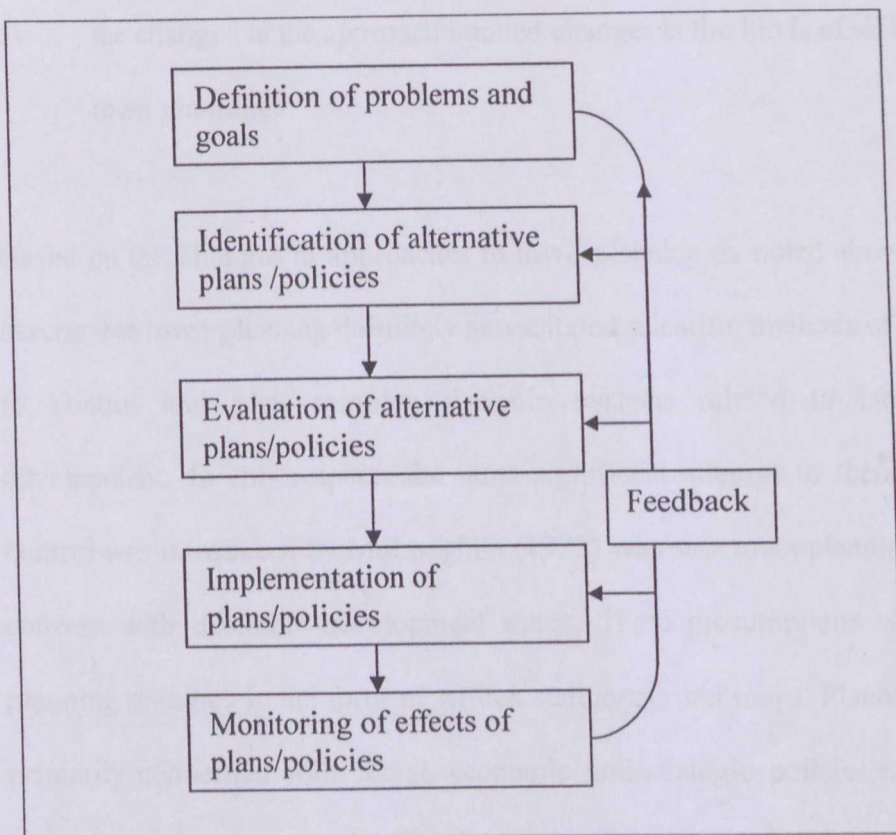


Figure 2.4: Planning as a process of rational action
Source: Adapted from Taylor, (2004).

Following up on this change in approach, Taylor (2004) claims that the changed of town planning thinking has significantly shifting towards viewing town planning as a science. The changes were seen as follows:

- a) an essentially physical view of towns was replaced with a view of town as systems of inter-related activities in a constant state of flux,
- b) town planners examined the urban space in terms of its social life and economic activities, or a sociological conception of space replaced a geographical or morphological conception of space,
- c) town planning was seen as a 'live' functioning thing implying that it is a 'process' rather than as an 'end-state' or 'blueprint' approach, and
- d) the changes in the approach implied changes in the kinds of skills appropriate to town planning.

Based on the changes in approaches to town planning as noted above, Taylor (2004) asserts that town planning definitely necessitated scientific methods of analysis if it was to control and plan complex dynamic systems related to land and property development. In this respect, the most significant attempt to theorize development control was introduced by McLoughlin (1973) who saw town planning in relation to a concern with desirable development states. These presumptions were expressed in planning schemes in the form of written statements and maps. Planning schemes were primarily concerned with social, economic and strategic policies as efforts to solve urban problems. Therefore, the planning system was intended to fulfil a regulatory role to respond to problems of urban industrial growth (Ennis, 1997). Consequently,

development control within the planning system became the mechanism to control land and building uses. All considerations either to approve or refuse planning permissions depended upon adopted planning policies. These planning decisions were left to the empowered local decision-makers and town planners. It seemed that the government fully recognized the ability of town planners to produce appropriate solutions that would result in those desired social ends. In this perspective, the planner assumes the role of a technical expert with the ability to produce the most appropriate plan for the urban environment in question (Christensen, 1985).

Cullingworth (1999) suggests that town planning can be seen as a purposive process in which goals are set and policies are then elaborated. The implementations of those policies will, it is assumed, help to achieve these goals. However, in reality, they may be influenced by other factors such as the complexities of urbanization, which planning is seeking to regulate, and the characteristics of government and governance. Moreover, Cullingworth (1999) further explains that rational planning is simply a theoretical idea, whereas actual planning is the practical exercise of political choices that involves different values. For this process, Healey and Nabarro (1990) claim that many public and private agencies concerns are involved, and that the process must therefore engage with a wide range of potentially conflicting interests.

In relation to the planning process, Healey (1996) sees planning as a process of formulating goals in which solutions to the problems have been taken into consideration, debated and addressed. Thus, planning involves critical assessments of

alternatives of both plans and actions. Analogous to the production of a play, planning involves the coordination of many roles: the actors, the backstage hands, the management, the marketing and others. It is also necessary to decide between divergent interests and objectives: personal gain versus sector advantage or public benefit, short term profit versus long-term gain, efficiency versus cheapness. In sum, it entails mediation among different groups and compromise among the conflicting desires of individual interest. When a plan involves many interest groups, it must incorporate an acceptable way of reconciling differences among the participants (Healey and Nabarro, 1990). This is a significant feature of any type of planning activity. The more numerous and diverse the participants involved, the greater the difficulties will be in the planning.

Literatures of contemporary planning theory indicate that much of the discussion among the participants about their interests should take place at a higher level than development control (Healey et al, 1992; Paris, 1982; Reade, 1987; Hague, 1991). In this respect, Healey (2003) put forward the collaborative planning theory. This theory was developed from four threads of thinking: first, it is based on a perception of planning as an interactive process, which takes place at designated arena in a friendly and supportive environment among interest groups (Healey, 1996). The interaction process produces and reproduces the planning information required for this process (Giddens, 1984). Second, the planning is seen as a governance activity which takes place in complex and dynamic institutional environments, shaped by wider economic, social and environmental forces that structure, but do not determine specific interactions. Governance is defined as the processes by which societies and social

groups manage their collective affairs, and it can occur in many ways. Third, the planning is concerned with maintaining and enhancing quality of places and territories. Fourth, the approach is informed by a moral commitment to social justice in the context of culturally diverse values about local environment and lifestyle. This means that the concern is not merely with the fairness of material outcomes, but also with the processes through which policies about resource allocation and regulation are articulated and implemented.

The main aim of collaborative planning is to get all interested groups involved in the planning process so as to achieve consensual policy outcomes, from information and ideas gathered after debate under conditions of communicative actions (Healey, 1996). To bring all interested groups into the debate, Taylor (2004) suggests that town planners should play roles as 'facilitators' in the debate sessions. In this respect, town planners require skills of interpersonal communication and negotiation. Healey (1996) claims that collaborative planning is fundamentally comprehensive. However, Kumar et al (2000) argue that collaborative planning is a specific articulation of planning theory that has taken a 'participatory turn' in paving the way for a people-centred planning theory.

Healey (2003) also acknowledges the structuration theory associated with Giddens (1984) as the core influence on the development of thinking about collaborative planning. Giddens (1984) argues that the conception of the continual interaction between, and, the mutual constitution of, 'structure and agency' reflects a form of

observing and experiencing research in planning practice. Further, Healey (2003) claims that Giddens's understanding of the dimensions of linkage (authoritative system, allocation systems and frames of reference) through which structures are generated and maintained in the flow of practices has proved a rich framework for the subsequent 'institutionalist' research on planning practices and land and property development processes. This understanding has provided an insight into the way in which power relations are socially embedded. Giddens (1984) draws on Marxism, phenomenology and cultural anthropology, a mix that provides a way of situating the active work of participants in governance process within the structuration process. Moreover, Healey (2003) claims that Giddens's structuration theory focuses attention on the qualities of the interaction and relations involved. These process qualities because the operation of authoritative and allocative 'system' depends on the interplay of actors with specific interests, as well as on the way routine social relations and practices are structured by the deeper values and conceptions of institutional design. For this, Healey (2003) refers to Foucault's argument on power relations which suggests that power is embodied not just in the energy and position of individuals with command over specific rules and resources but instantiated in the way people embody assumptions about appropriate ways of thinking and acting in their daily discourses and practices. These in turn become embedded in institutional practices.

The term 'planning' as explained by Healey (2003) is broader than the practices of regulatory land-use planning. It is also about strategic approaches to the 'governance of place', and involves attention to qualities of place and process, the 'good city' and its

'good governance. She concludes that in a complex urban governance context, with multiple actors, arenas, and struggles over discourses and practices, strategic actors who can make a difference will be those who focus on real opportunities for innovation and who work with the 'grain' of the emergent properties of specific situations. With reference to power relations, Evans (2003) argues that land use planning is the responsibility of two groups of professionals - planners and politicians. He explains that:

'When plans are drawn up and implemented by planners, planning decisions are presumed made by politicians. Planning is therefore a political activity, subject to the power forces and political manipulation. The aim is not the maximization of economic welfare and the balancing of social costs and benefits, as the welfare economic might expect, but the satisfaction of the claims of particular interest groups' (Evans, 2003, p.199)

Thus Evans (2003) claims that planning decisions are subject to the limitation of powers exercised by politicians. Both planners and politicians are interdependent upon each other. The politician depends on the expertise of planners to advise them on planning matters, particularly on planning permission. The planners depend on politicians in that regulations and laws limit their actions. Allmendinger and Tewdwr-Jones (2002) argue that this interdependency is based on the power-relations structured by the existing institutions controlling actions and consensus building. Tewdwr-Jones et al (2002) claim that the planners find themselves in an under-resourced, nationally shaped but locally delivered regulatory practice in which national criteria emphasize decision speed over quality. In addition, Campbell and Ellis (2000) argue that local planners are pressured by local politicians to use regulatory power to raise financial

resources for the local authority rather than give priority to planning objectives developed in reasonably open consultative practices.

The discussions above have highlighted the shift of urban planning theories from the pre-war, which put more emphasis on survey-analysis-plans, towards the post-war theories that emphasise the system approach, followed by structural, behavioural and strategic planning. Towards the end of the 20th century the rational planning approach (which falls within structural planning theory) became dominant. It was further developed into 'communicative planning theory' which is regarded as the 'ideal rational planning' (Taylor, 2004, p.153). The most important implication of this paradigm shift is on the total built environment, particularly on the land development process. The implications of planning on land development are discussed at length in the literature on the effects of urban planning on urban land supply and others (Healey, 1991; Bramley, 1998; Adams and Watkins, 2002; Campbell and Ellis, 2000). The following discussion represents just a portion of these implications – specifically, those which are relevant to the objectives of this study,

2.6 The Effects of Town Planning on Land and Property Development

The effects of town planning on land development are asserted to be significant by assuming the existence of a free-market situation; this situation assumes that in the absence of town planning, land will be used for the purpose that can extract the largest net return over a foreseeable period of time (Ratcliffe and Stubbs, 2003; Evans, 2004). However, evidence has shown that where and when laissez-faire conditions prevail, the

market can consume resources in an ill-conceived and short-sighted way. The private sector developer seeking to maximise its profit often neglects the provision of both social services and public utilities (Ratcliffe and Stubbs, 2003). These undesirable outcomes of the free market situation have led to government intervention in the property market through town planning control (Harvey, 2002).

From the nineteenth century up to the present time, town planning activities have devolved more to the government than to the private sector, although a number of town planners do practise in the private sector (Ratcliffe and Stubbs, 2003; Evans, 2004). However, as Ratcliffe and Stubbs (2003) have pointed out, all town planning activities involve political choice, not just market transactions. As such, public agencies established by the government do plan and control physical land development and the operations of markets in the interests of the community. However, there can also be various views, comments and critiques about the outcomes of planning practices and implementations of town planning laws and regulations (Barlow, 1993). Consequently, town and country planning legislations have undergone several modifications and improvements in terms of contents, approaches, principles and concepts (Cullingworth and Nadin, 1996).

The modifications and improvements of planning legislations have led to two paradigm shifts in the town planning system since the Post World War era, to the new Millennium. Initially, town planning was intended purely to guide the development of towns and cities through the use of simple land-use maps; later, these maps developed

into comprehensive town plans showing details of infrastructures, intensity of uses and land use zoning (Taylor, 2004). Differences in the conditions of the site and local topography, the timing of the development, government policies, and a unique mix of decisions made by individuals, firms and political groups within each urban area fundamentally affects how macro social and economic forces are translated into specific urban patterns (Harvey, 1985). Because of this complexity and the variety of influences, the outcomes of town planning controls cannot avoid critiques and painful comments from academicians, property investors and developers. All comments and critiques about town planning practices are, however, enlightening, leading to the further acquisition of empirical evidence through more research and study (Taylor, 2004). These comments and critiques tend to heavily support the view that town planning outcomes are largely negative, even though there is a lot of factual support for the view that there are many positive effects as well. The negative effects are not actually an intended outcome of town planning in practice (Hall *et al* 1973; Ratcliffe and Stubbs, 2003; Taylor, 2004; Evans, 2004).

Harvey (2002) outlines several rationales as to why should planning intervene land development and the property market. In the context of land development, Harvey (2002) argues that it may involve externalities. The effects of these externalities can spill over into land development, for example by causing loss of some kind to a neighbour, or creating an environment which is harmful to health. The victims of these effects might not be able to be compensated by the initiator, and the affected parties might be difficult to identify. Other effects might be more positive side; for example, an

individual might benefit from land development initiated by a neighbour. The initiator cannot make any claim from the neighbour(s) who benefit from the initiator's land development. Reade (1987) argues that the reason for urban planning to exist is mainly to ensure the protection and provision of public goods. Without urban planning, it would be very difficult to ensure that all necessary public goods are provided, though other regulations are available, because numbers and locality fall within the purview of planning activity.

Based on what has been highlighted by Harvey (2002), there are numerous studies related to the effects of planning on land development. The studies were carried out based on different land development approaches as discussed earlier in this chapter, such as neo-classical, structural, behavioural, institution and agency approaches. Taylor (2004) asserts that the effects of planning on land and property development are related to the planning theories developed during the prewar and post-war periods, and during the 1990s. The planning theories that prevailed during the 1950s, 1960s, 1970s and 1980s were: system view of planning, procedural planning, and rational planning theory. These theories were criticised because they did not say anything about existing planning. They were merely abstract or formal and thus, the theories were perceived as 'contentless', 'empty' and 'vacuous'. Taylor notes that:

'The procedural planning theory was criticized for its abstractness and generality – for offering merely an extended definition of planning and not saying anything about how planning in practice operated and what its effects were, etc'. (Taylor 2004, p.96).

In a similar vein, Michael Thomas (cited in Taylor 1998) claims that:

'the procedural planning theory is essentially 'contentless' in that it specifies thinking and acting procedures but does not investigate what is the content of this...Faludi cannot offer an explanation for the products of planning agencies because he has very little to say about what planning is doing, i.e. effecting particular changes in the environment' (Taylor 2004, p.97).

Taylor (2004) views these criticisms as part of a wider call for theory grounded in the empirical investigation of planning or scientific planning theory. Hall (1974), in his study focusing on the post-World War II British planning system, suggests that the post war planning system had had three main effects down to the 1970s: 'urban containment', 'suburbanization', and an inflationary effect on land and property prices. These effects could be classified into two sectors - physical and economic. Hall observed that the first effect, urban containment, was a result of the drive to prevent urban sprawl. The second effect, suburbanization, was not intended to lengthen people's journeys to work, but to make settlements more self-contained. The third effect, inflation of land and property prices, which hit hardest the poorest members of society, was not an intended effect of the planning system. Rather, the intention was to bring about greater equality within a quality environment. However, the material standards of living had risen for most people. It was seen that 'the effect of planning has been to give more to those that already had most, while taking away from the poor what little they had' (Hall, 1974, p. 407).

After the publication of '*Containment Urban England*' (Hall *et al* 1973), sociologists seriously challenged the outcomes of planning. It presupposed the centrality of the state's role in planning outcomes. The assertions were that the planning system was a

key agent in the process of land development and that planning was responsible for distributive effects which flowed from it. However, in the 1970s some theorists argued that planners and other government officers were less significant as agents of urban change. This was because their powers were heavily circumscribed and constrained by more fundamental and enduring socioeconomic forces and 'structures' (Taylor, 2004). Further, Taylor (2004) argues that 'the activity and effects of planning should not be interpreted as if planning was an autonomous activity, operating separately from the rest of society. One should *situate* planning activity within its political economy'.

A central feature of the political economy of land development is clearly the system of private property rights and a 'free' competitive market in land and development. Taylor (2004) highlights Pickvance's study showing that planning authorities had 'negative powers' to refuse permission and had no positive powers to ensure that the development set out in the plan would take place. Local authorities tend to make plans which reflect what is acceptable to developers. Thus, Taylor (2004) agrees with Pickvance's conclusion (1997) that Hall *et al* (1973) assertion that "planning has been to give more to those that already had most, while taking away from the poor what little they had" was an exaggeration. The distributive effect of post war urban development was more the result of market forces and not planning because "*planning does not lead to the pattern of land uses different from that which would occur in a non-planning situation*" (Pickvance, 1977, cited in Taylor, 2004, p.103).

Researchers also explore the neo-classical economic model that assumes a homogeneous, featureless plain in seeking to explain the patterns of urban land use. However, Adams and Watkins (2002) highlight that the neo-classical model of the land market have some limitations. The weaknesses of the model are related to its divergence from reality and the extent to which the conditions of perfect competition are breached in land and property markets. This argument is supported by MacLennan (1982) who argues that land and property markets do not operate efficiently. Housing markets, for example, are described by imperfect information, high search and transaction costs, and stock heterogeneity. In addition, the housing system reflects high levels of public sector intervention such as in the form of grants and subsidies to both producers and customers. Land markets, meanwhile, usually have public goods characteristics, and specific uses have external effects that spill over into other areas (Keogh, 1985).

Based on the characteristics of land and housing markets and the housing system, Adams and Watkins (2002) argue that the above reasons provide the economic rationale for planning intervention in the market. The planning system that seeks to constrain the activities of individuals by correcting externalities, has unintentionally distorted the pattern of land values that one might expect to arise in a perfectly competitive system. Therefore, the measurement of the extent of the impact and the analysis of its distributional effects has been the subject of considerable research efforts in the UK (Adams and Watkins, 2002).

In relation to the above, Evans (2004) argues that the evidence of the effects of town planning controls on land development could be revealed by more studies of housing scheme developments. This is because a housing scheme touches the sensitive urban planning issues related to 'externalities' and 'public goods'. Therefore, the following subtopics will discuss further the relationship between urban planning and housing development.

2.7 Effects of Town Planning on Housing Development

The effects of town planning control on land development can be in many forms: zoning will limit the supply, intensity and choices of usage and location, policies will affect costs and market uncertainty, while the planning process will delay construction. Consequently, first of all, it is very important to grasp the definition of housing land and to understand arguments about the effects town planning.

Linn defines:

"housing to include not only the shelter structure, but also the lot on which the shelter stands and the services provided to the lot such as water, energy supply, waste disposal, drainage, and fire and police protections" (Linn, 1983, p.120).

Elaborations and discussions of the basic definition can be very involved. In short, the shelter can take many forms. Some are flats, long and clustered. Some shelters contain mixed used and large car parking areas and large roads or highways. The technical problem of calculating the size of the housing area often appears to be too complex. If housing land refers only to land which has a larger percentage of residential use, the identification can be misleading since some pieces of land are allocated for necessary facilities or infrastructures which may cater not only to local needs but also to the needs

of those in other areas. Ratcliffe (1981) defines housing land through layout plans submitted by a developer for a housing scheme. The layout plan shows division of various parcels of land for various categories of uses. The overall land use for the scheme shown by the layout plan is designed using 'neighbourhood' concepts. This concept design displays the allocation of land uses according to number and land area of sites for the necessary facilities and infrastructures depending on the number of housing units or population. The parcels of land shown as housing by the layout plan can be considered as housing land. However, this is not always the case because there are also developers who submit applications to build flats, which include shopping lots on the ground levels. This detail makes it more difficult to determine what is and is not housing land. Therefore, to ease the identification of housing land, this study adopts the definition of the term as given by Linn (1983), above.

Land for housing requires access to employment, infrastructure, and social services (Grimes, 1976. p.42). The location and site of a housing scheme are related to the competitive land uses. The concept of competitive use of land for housing development is clearly explained by Harvey, (2002) and Evans, (2004), as well as in many urban economics text books. Harvey (2002) argues that the explanation about competitive land uses theory by Von Thunen, further developed by Alonso (1964), was too abstract. In Alonso's theory, housing land is located between industrial and agricultural land. As Figure 2.5 shows, the greatest demand is for land in the city centre; this land is used by the most profitable activities, that is for commercial activities and services.

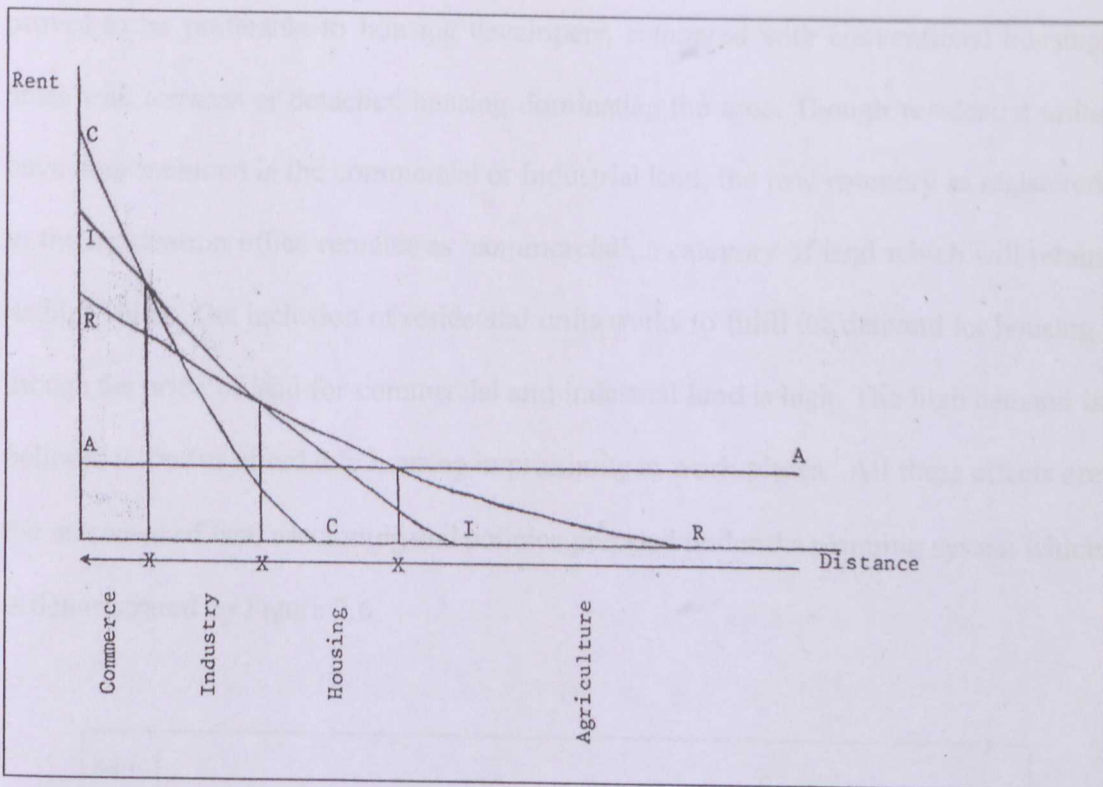


Figure 2.5: Rent Bid Curves for land use categories
Source: Adapted from Harvey, (2002), p.211.

The next greatest demand is for land located slightly further away from the city centre; this is for industry. After this comes the land located even further away from the city centre, which is generally for residential purposes. Agricultural land will be located after the residential area, that is, furthest away from the city centre. This theory is based on the assumption that the land is uniform, and ignores the physical aspects and the value added to the land.

More complicated definitions of housing land appeared when land owners were allowed to include residential units within the commercial and industrial land; under

these conditions, residential land was rendered 'invisible'. This mixed development has proved to be preferable to housing developers, compared with conventional housing areas with terraces or detached housing dominating the area. Though residential units have been included in the commercial or industrial land, the land category as registered in the registration office remains as 'commercial', a category of land which will retain its high value. The inclusion of residential units works to fulfil the demand for housing, though the price of land for commercial and industrial land is high. The high demand is believed to be for affordable housing in proximity to work places. All these effects are the outcomes of land use zoning and policies prepared under the planning system which is demonstrated by Figure 2.6.

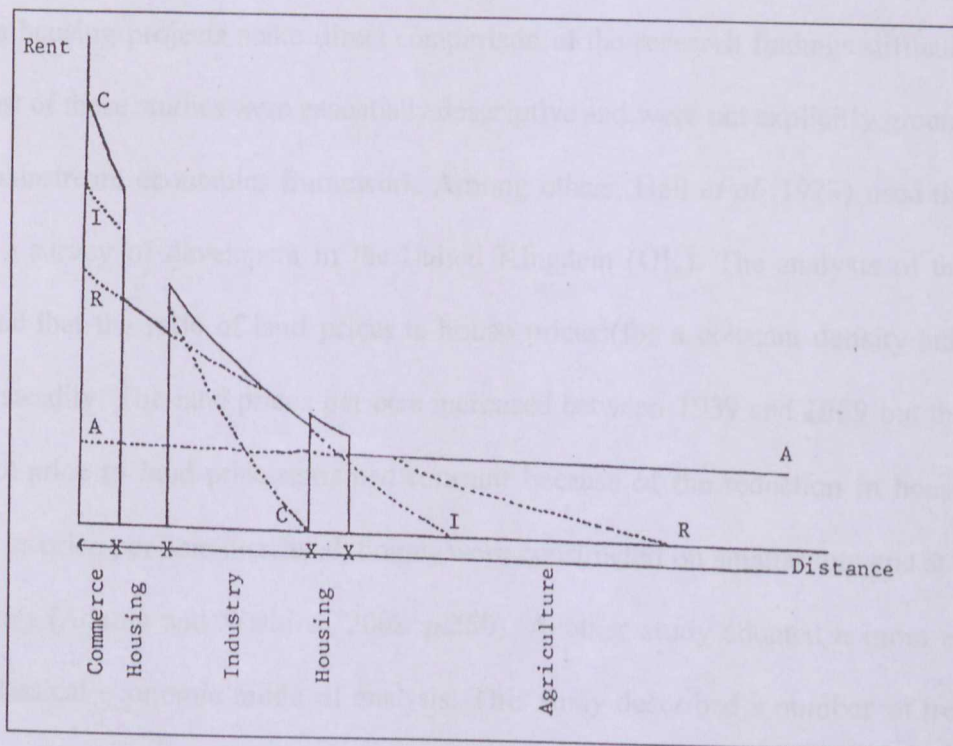


Figure 2.6: The effects of government interventions on the demand for land uses
Source: Adapted from Keogh, (1985) p. 210.

There have been many studies on government intervention in the housing market to provide evidence of the impact of the planning system on the housing market and assessment of the scale of the impact on a range of market outcomes (Evans, 2003). The effects can be seen in the limitation of the availability of land for housing, the increase in production costs, the increase in house prices, and the limiting of choices of location for housing and settlements (Harvey, 2002).

Adams and Watkins (2002) argue that this neo-classical economic analysis ignores distinctions between short-run and long-run market adjustment process, and assumes instantaneous adjustment to any change in demand and supply-side conditions. Adams and Watkins (2002) point out that the range of methods used and variations in the focus of the housing projects make direct comparison of the research findings difficult. The earliest of these studies were essentially descriptive and were not explicitly grounded in the mainstream economics framework. Among others, Hall *et al* (1973) used the data from a survey of developers in the United Kingdom (UK). The analysis of the data showed that the ratio of land prices to house prices (for a constant density unit) had risen steadily. The land prices per acre increased between 1939 and 1959 but the ratio of plot price to land price remained constant because of the reduction in house size. Thus, as price per acre increased, houses were constructed on smaller lots and at higher densities (Adams and Watkins, 2002. p.250). Another study adopted a more explicit neo-classical economic mode of analysis. This study described a number of trends in design, layout and house building which collectively had led to the intensification of

land use and the significant contraction of open spaces within the urban environment (Evans, 1991; 1998).

In defence of planning, Adams and Watkins (2002) question the quality of some of the evidence reported in the previous studies. The nature of Evan's work was such that there was no rigorous investigation into the nature, scale or causes of the post-planning outcomes. The analysis side-stepped the possible impact of a range of other influences including local land and housing market conditions, social and demographic trends, and institutional factors. Furthermore, the analysis also disregarded the extent to which planning regimes would impose different levels of restraint on the operation of the market (Bramley, 1998). However, even though Evan's claims about the effects of planning were supported by fairly selective and somewhat unreliable evidence drawn from a case study, the discussion offered a strong introduction to the debate about the influence of town planning on property development (Adams and Watkins, 2002).

Cheshire and Sheppard (1989) undertook a study based on comparative analysis. The study used the hedonic model to shed light on the impact of the planning system on house prices in two local housing markets in the UK. Using data from 1984, the results suggested that plot sizes and the area of the towns would respectively have been 65% and 50% larger in the absence of the planning controls, because with the lower prices, house purchasers would have been able to buy larger homes. The price effects of the local planning regimes were shown to be between 2% and 12% depending on house type. Cheshire and Sheppard (1996) then used data from 1993 focussing on the

distributional consequences of planning. In particular, their question was 'what might be the consequences for a household in Reading if the planning regime was relaxed to the lower levels of constraint found in Darlington'. The research showed that the reduction in housing costs would lead to a rise in household income of approximately £640 per annum in the urban periphery and approximately £775 per annum in the urban core.

A team of researchers based at Cambridge in the 1990s adopted a more qualitative approach and combined a comparative statistical method with empirical research based on behavioural social science methodology. The empirical work was based on two separate projects: (1) funded respectively by the DOE (Department of Environment, UK); and (2) funded by the Joseph Rowntree Foundation. The first study team sought to identify whether the planning system had merely constrained supply or whether it had led to a reorganisation of the supply. The results showed that land prices were much higher at the margin of urban areas when compared with agricultural land. As a result of land constraints, prices increased by 35% to 45%. The results from the second study team suggested that land prices were 200 times greater than agricultural land in highly constrained areas compared with 60 times greater in less constrained areas (Monk and Whitehead, 1996). This research was seen to support Evan's argument about the negative role of the planning system in determining the development densities and types of dwelling produced (Adams and Watkins 2002). Breheny (1999) observed that there were winners and losers in the property market. These studies viewed town planning in generally negative terms because higher purchase price would force new

buyers to pay more, even though the existing land owners would gain higher returns through inflated selling prices in land and housing markets. Nevertheless, the clear losers when the supply was restricted were from the lower-income groups.

Bramley (1993), in a study funded by the Joseph Rowntree Foundation, developed a purpose built model for his work, which focused on the relationship between the amount of land available for housing, the nature of planning regime and the quantity and price of new housing supplied. The estimated equations were used to provide a framework for a range of policy scenarios that include: supply-side responsiveness and the effect of mortgage tax relief on the housing system; the impact of land release policies and planning agreements on new housing supply; and estimation of the determinants of in-migration and new household formation. The results of this research suggested that the price and quantity effects were relatively modest. With fairly low levels (15%) of additional land released for new construction, the price effects would be less than the quantity effects. Even with a substantial increase in land supply, prices would have fallen by only 5% while the output of new housing would have increased by only 10%. If the land allocated for housing were doubled, the reduction in prices would be less than 10% in the long term. There are two comments from the Bramley's research: (1) the level of land released through the planning system for private house building does not have a large impact on house prices; and (2) simply allocating land for new homes does not guarantee that it will be built on. In reality, the landowners and developers tend to determine the rate of taking-up of land supply with regard to demand

levels, the capacity of market to absorb new development and their own business strategies (Adams and Watkins, 2002).

Most governments have taken the view that they should have considerable presence in their housing markets. The level and nature of intervention in housing has generally been considerable even though housing is an essential item of consumption. In their earlier study, Malpass and Murie (1997) also pointed out that historically the state has intervened in the housing market to break the link between poverty and poor housing, when this was perceived to be damaging to social or political stability or economic competitiveness. Malpass and Murie, (1999) argue that the housing market is probably subject to more policy initiatives than any other market for consumer goods. Intervention in the form of housing policy is common to all countries. It literally means that nowhere has there been a free market in housing in which outcomes are left entirely to the actions of individual suppliers and consumers.

Hill and Bramley (1986) recognize that housing policy is usually thought of in terms of state housing policy, at both national and local levels. State intervention in one form or another pervades the system, regulating and supporting important aspects of the market, such as new housing development, improvement of older houses and neighbourhoods, and the financial burden of house purchase. In a study of Brazil's low-income housing, for example Freire (2002), in a report prepared for the World Bank, outlines the rationale for state intervention, which centres on the fact that the housing market is subject to market failures and externalities:

- a) The housing market generates both positive and negative externalities in neighbourhoods. For instance, empty houses depress the market while well-maintained houses improve it.
- b) In many countries, racial and wealth discrimination prevents minorities from owning a house regardless of whether or not they can afford it.
- c) Housing is a merit good, a good that society views as more important than what would be consumed if left entirely up to individual choices. Providing adequate housing for the poor is an important policy for poverty alleviation in several ways: home ownership improves the opportunity of the poor to increase their assets, provide them with seed capital for future improvements, improves their health and living conditions, and contributes to enhancing their sense of social inclusion.
- d) Housing has a strong impact on human productivity and welfare; it stimulates saving habits, provides a base for economic activity, and improves one's sense of citizenship and participation. For most people, a housing unit will be the single most valuable asset they will own in their lifetime. This creates wealth that can be passed on to subsequent generations.
- e) Housing subsidies or other forms of intervention are often needed to compensate the low-income households for being forced to allocate a larger portion of their income for housing.

Having established the rationale for state intervention, Ambrose (1992) elaborates various stages in the housing provision process where the state may have opportunities

to intervene. Ambrose recognizes the main stages in the housing provision process, through each of which all houses will move from initiation to develop, to use and to the demolition stage. The development stage involves an agent setting up the conditions whereby house construction will take place. This will involve acquiring land and ensuring any requisite development permission, acquiring finance, drawing up plans for the development and engaging a builder. The collection of the basic factors of production is a necessary pre-requisite to the construction stage, which involves assembling the raw materials into a physical shelter. Once built, the dwelling passes a further stage during which consumption takes place. As with the previous stages, this will involve access to finance in the form of savings, income or loans.

At each of these stages, the state may intervene. The interventions may be marginal providing little more than a framework in which a free market operates. There may be more or less strict regulations, for example concerning materials, land development, construction standards, which impose constraints on the actions of market actors. The state may subsidize some activities, and prohibit others. They may themselves substitute private interests altogether by taking on roles, at one or more stages, such as becoming the developer, the builder, or the owner. At each stage, therefore, there may be a different mixture of market play and state intervention. The particular mix varies from country to country, and, within any country, from stage to stage. Thus, the development stage might involve predominantly state actors and collective interest, whilst the construction stage might be the domain of private, profit maximizing

construction companies, with consumption perhaps taking the market forms (Doling; 1999: p. 231).

The above argument has resulted in concern about state intervention. Lundqvist (1992) identified various options that may be considered by the state as reasons to intervene in the market. He argued that the state might influence the dwelling prices through regulation, provision, taxation and subsidy. Lundqvist (1992) claimed that two dimensions could influence the state's options: household purchasing power and dwelling prices. The former will be determined by personal income and wealth apart from state transfers to the individual household. The latter will follow from the factors of production used, which will depend on both technology and the size and quantity of the dwelling. The number of dwellings will affect prices. The state may also influence prices through regulation, provision, taxation or subsidy.

Barlow and Duncan's study (1994) groups the range of possible state interventions in housing provision into three distinct categories. First, they argue that the state can, in a number of ways attempt to bring down the production costs by encouraging system building, or subsidies can be used to bring about a reduction in user costs. The state can also influence the balance between short-run speculative gains and longer-run productivity gains. In general, the state can and does intervene in the market in terms of quality, quantity and location of the product as well as its price and end-user.

Second, Barlow and Duncan (1994) comment that through the land use planning system the state could influence the location and amount of land made available for house building. Planning systems can be classified into three types. In 'negative' or 'reactive' planning, the state operates through development control to approve or reject proposals made by the developers to develop the land. In this system, the initiative rests with the developer and the state simply responds. This is the characteristic system operating in a liberal regime. In corporatist regimes, states are likely to practice a more proactive role. The state determines in advance an agreed land use plan. Developers may still be expected to take the initiative but will be doing so in a context of reasonable expectations of the state's responses. The state in addition may take ownership of land they have identified to be developed and thus benefit from the development gain. Builders can then be invited to tender for contracts to build on the identified parcel of land to be released for house building. This is perceived as characteristic of social democratic governments. Thirdly, the state can intervene by influencing consumption. Barlow and Duncan (1994) assert that demand-side subsidies would affect the price different types of household are able to pay. Furthermore, access criteria can affect the market or the section of the population for which provision has been targeted. On the other hand, legislation can make providers charge prices that reflect production costs rather than current market values.

In particular, state intervention in the housing market can take place on both the supply and demand sides. On the supply-side, the intervention can be in the form of direct provision of housing units and increase of land availability through forwards planning.

On the demand-side, the intervention may involve some form of subsidy to compensate for housing regulations that often make housing unaffordable to low-income groups. In favouring subsidies to influence demand, most economists argue that housing provided directly or indirectly by the public sector is often more expensive than private-sector supplied housing, as evidenced by several experiences worldwide. Barlow and Duncan (1994) further comment that demand-side subsidies are more equitable since the same amount of money when used more effectively can serve more households, and allow households freedom to choose the type of housing and location they prefer.

However, not all land can enter into the market because of town planning controls aimed at making land available in the needed quantities, at the appropriate location, for the appropriate tenure, at the right time and at the appropriate prices, having consideration for efficiency and equity in the allocation of resources in pursuit of targets in urban and regional plans (Ratcliffe, 1981). Monk *et al* (1996) argues that town planning can affect housing land supply by limiting the amount of land available for housing through zoning and increase development costs by imposing necessary technical requirements, delays in approval process, and reducing the profit margin by limiting the density. Moreover, planning makes the market supply less responsive to changes in demand, reduces that supply, and affects the demand by modifying either the value of housing that is produced or the costs of production.

The housing developer's decisions depend upon the housing market in which the high land prices in urban areas will increase the selling prices of new houses; however, they

may end up with facing low demand for such housing. Furthermore, when the market prices are stable, the increase in land prices will reduce the potential profit by the developers (Evans 2004). Nevertheless, not all land can be developed for housing. The definite use of any plot of land is actually left to the decision of the land owner (as mentioned in 2.4.1 above). Normally, not all land owners develop their land themselves, but prefer to sell to developers. A developer may develop housing in the high demand housing market environment which is related to the growth of cities. The most direct relation is the growth in population coupled with the growth in household income will push up the housing demand. The pressure of high housing demands pushes town planning control to consider the expansion of the city beyond the existing boundaries; this may enter into agricultural areas in the urban fringes (green fields). The competition to obtain land for the most profitable uses forces urban land prices higher, while the competitive uses of land will affect choices of housing location or sites (Golan and Blake, 2004). Moreover, in the event of limited number of land transactions, land speculation may further push up the land prices (Linn, 1983, p.128). Therefore, land price will affect house prices because the price of land is one of the items contributing to the total cost in developing housing. (Evans 2004).

Healey (1997) argues that both the demand for and supply of housing are subject to short-term as well as long-term movements. The demand is affected by changes in real income and prices. The supply sometimes changes jerkily, e.g. when new transport facilities are built or new urban districts are developed. Supply tends to respond to demand, although with a lag which can be short or long depending on technical and

administrative factors. Thus, if the demand increases in a given urban area, the immediate effect will be a rise in land prices. If, after a time, new urban areas are developed, land prices will fall.

Pacione (1990) observes that public agencies should play important roles in urban housing land supply and development through the planning system. The author argues that land availability for housing is the crucial issue in achieving the private sector's propensity to participate in urban residential development. Pacione (1990) explores the conceptual framework of public strategies to promote private sector investment in urban residential development as shown by Figure 2.7. Pacione (1990) is able to identify 16 site selection criteria for housing sites applied by housing developers. The criteria are: size of sites, topographic conditions, condition of sub-soil, existing ground cover, clearance grant, neighborhood social class, access to city centre, proximity to local shops, access to employment, access to schools, physical environmental quality, site availability, planning permission, basic services (infrastructures), asking price of land, market factors.

Based on an analysis of these factors in Glasgow, Pacione (1990) suggests that politicians, planners and urban managers need to acknowledge the fundamental importance, and to acquire direct knowledge, of the preferences and perceptions which underlie the site selection behavior of speculative residential developers. This means that the land to be zoned for housing in the development plans must acknowledge the preferences of the private sector developers.

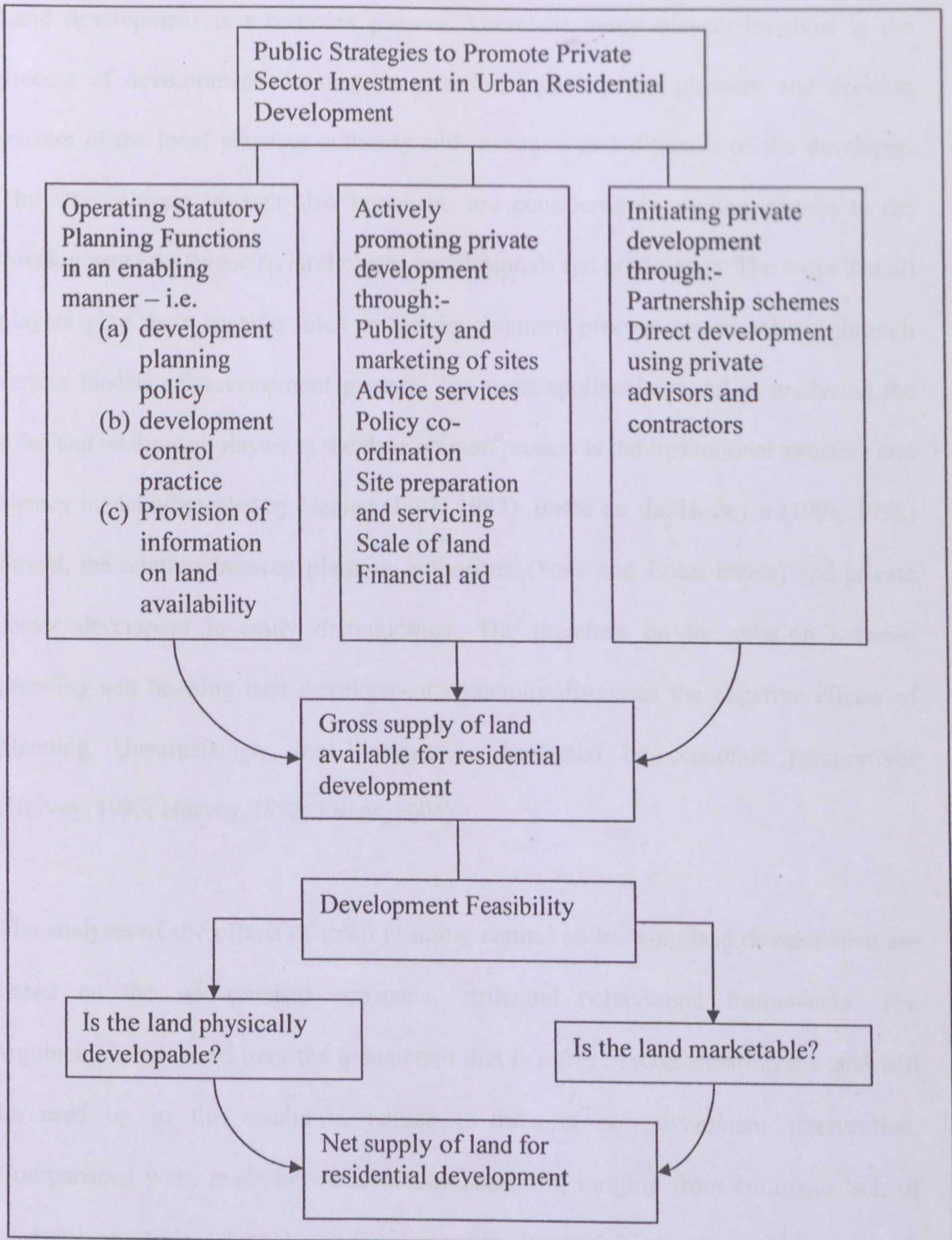


Figure 2.7: Public Strategies to Promote Private Sector Investment
Source: Pacione (1990), p.221.

2.8 Conclusion

Land development is a complex process. There are many players involved in the process of development. Among the prominent players are planners and decision makers of the local planning authority and managers and directors of the developer. The other players, though also important, are considered supporting players to the development i.e., financier, land owner, professionals and contractors. The ways that all players play their specific roles in the development process are visualized through certain models of development process. The most applicable model in analyzing the roles and relation of players in the development process is the institutional structure and agency model advocated by Healey (1991; 1992). Based on the Healey's (1991; 1992) model, the relation between planning authorities (State and Local levels) and private sector developers is easily distinguished. The literature on the relation between planning and housing land development, generally discusses the negative effects of planning. Unsurprisingly, the literature is dominated by economic perspectives (Harvey, 1995; Harvey, 1992; Evans, 2004).

The analyses of the effects of town planning control on housing land development are based on the neo-classical economic, structural behavioural frameworks. The arguments are derived from the assumption that in a free market situation the land will be used up to the maximum returns if there is no government intervention. Comparisons were made between various scenarios, ranging from complete lack of planning controls, through various possible levels of planning or government

interventions, using the static comparative model. This study has examined a range of research on this subject, and has critically commented on them.

Among the most significant effects of town planning controls commented on, were the effects of housing location, quantity and quality of housing, production costs, and house prices. All these aspects reflected the influence of the planning system, where the implementation of town planning control was carried out in accordance with the adopted development plans. The land use zoning, density policies and future infrastructure provisions were embedded in the development plan. Undeniably, the outcomes of the town planning control were also related to the ways in which the planning decisions and other related factors were jointly decided on. Interestingly, lately, there have been arguments that town planning can be an important tool to woo private sector investments to pursue town planning objectives.

Bearing in mind the comments and critiques on town planning, the next chapter will look at the Malaysian institutional structure and agencies related to land development to examine the effects of town planning factors on housing development in Malaysia.

CHAPTER 3

MALAYSIAN GOVERNANCE STRUCTURES AND INSTITUTIONS

3.1 Introduction

The literature reviews in Chapter 2 has provided more insight into the complexity of the land development process, in which a variety of significant players perform their roles at each development stage. The extent to which all development players perform their roles based on their specific functions in the process, determines and shapes the product of land development (Adams and Watkins, 2002). Importantly, developers, town planners and decision makers in local planning authorities are envisaged as the most significant and dominant players. The examination of their roles at all stages of the development process will portray the extent of these players' influences on the product of land development. In order to examine these players' roles, the structural and institutional model offered by Healey (1992) provides a clearer framework for the analysis.

This chapter will discuss how the town planning authority plays the main role in the land development process in Peninsular Malaysia. The town planning authority here includes town planners, decision makers and technical professionals. The discussion starts with a brief background of Malaysia, followed by forms, contents and functions of Town Planning in Malaysia and other related legislations that also deal with land development. The discussions of these legislative provisions will provide deeper insight into how the governance structures and institutions have, over the past several decades and up to the present, become significant underlying factors shaping Malaysian land and property development.

The analysis of relations between the various agents and players will have a wide scope because the three dominant players (developers, town planners and decision makers) fall under two institutions namely the public institution and the property market institution. The public institution comprises planning authorities and government agencies, where town planners and decision makers play their roles; within the property market institution, developers are the main players (Adams and Watkins, 2002).

3.2 Malaysia's Background

Malaysia is a parliamentary democracy whose current governance structures and institutions have been shaped by her history. Therefore, it is very important to look at the country's geographical setting, history and cultures, in order to understand how these structures and institutions were developed.

3.2.1 Regional Setting

Malaysia has a total area of approximately 333,000 square km, consisting of Peninsular Malaysia (132,000 square km.), Sabah (76,000 sq. km), and Sarawak (125,000 square km.). Peninsular Malaysia, also referred to as West Malaysia, was known before 1963 as the Federation of Malaya. Sabah was formerly known as British North Borneo, and together with Sarawak, comprises East Malaysia, which is separated from Peninsular Malaysia by the South China Sea. Peninsular Malaysia is bordered by Thailand in the north and is connected by a causeway to the island state of Singapore in the south. The Strait of Malacca separates Malaysia from the Indonesian island of Sumatra in the west (refer Figure 3.1).



Figure 3.1: Regional Setting of Malaysia
Source: www.yahoo.com

Malaysia's location between 1° and 8° North of the Equator, combined with its nearness to the open sea, gives it a tropical climate with high humidity, plentiful rainfall (average of 250 – 300 cm. annually) and uniformly high temperatures

throughout the year (a mean maximum of $29^{\circ} - 32^{\circ}$ C in the day and a mean minimum of $22^{\circ} - 24^{\circ}$ C at night in the coastal plains).

3.2.2 Malaysia History

Malaysia is said to have its remarkable beginnings in the town of Melaka, which was founded in 1401 by a prince of the royal blood of the Majapahit kingdom (a part of Indonesia). Milne and Mauzy (1986) note that Malaysia was ruled by the dominant Indonesia empires until the rise of Melaka, which was then made Melaka as a focal point of trade in the Malay Peninsular. Due to its advantageous location along an important trade route, Malaysia came into contact with many civilizations that brought in numbers of people with diverse cultures. Islam was made the official religion during the heyday of the Melaka sultanate (1403 – 1511) and was disseminated throughout the archipelago. Melaka was subsequently conquered by the Portuguese in 1511, then by the Dutch in 1641. The British (represented initially by the British East India Company) settled in Penang in 1786 and had a strong influence over trading along the Strait of Malaka; the East India Company was also involved in two states in the Peninsular, namely Perak and Selangor, due to tin mining activities. This foothold allowed them to take control of the whole Peninsular in the 1900s.

The British became interested in the region because of the expanding trade between China and India. The British East India Company, represented by Sir Francis Light, acquired the island of Penang from the Sultan of Kedah in 1786, to allow transshipment and provide a safe navy harbour in the Strait of Melaka (Turnbull *et. al.* 1989). Soon after, Sir Thomas Stanford Raffles acquired Singapore island from the Johor throne. Due to the dissatisfaction of the Dutch, both parties concluded a treaty

in 1824, by which Singapore, Melaka and Penang became Straits Settlements that were administered by the British East India Company. Fifty years later, the crisis and conflict among the Malays, Chinese and secret societies in Perak forced Raja Abdullah, who was a claimant to the Perak throne, to seek assistance from the Governor, Sir Andrew Clarke in 1874. Hence, the Pangkor Engagement was signed in January 1874, marking the beginning of British intervention in the Malay States (Ryan, 1976; Milne and Mauzy, 1986). British intervention did not stop there but slowly expanded over the whole of the Peninsular when four northern states, Perlis, Kedah, Kelantan and Trengganu, attained independence from their Siamese Rulers and sought advisors from the British under the Anglo-Siamese treaty in 1909. These four states were later known as the Non-Federated Malay States. The other states (Pahang, Perak, Selangor and Negeri Sembilan) had taken British advisors earlier, and were known as the Federated Malay States. The Anglo-Siamese treaty of 1909 also created the Northern boundary of Peninsular Malaysia as it stands today (Milne and Mauzy, 1986).

The expansion of colonial rule in Peninsular Malaysia in the early 20th century saw an influx of Chinese immigrants in West Peninsular Malaysia under the encouragement of the British. These immigrants were concentrated in the prosperous tin-mines, ports and town centres. Some of them became owners of tin-mines, commercial and other business properties (Turnbull, 1989). When the world demand for rubber increased, thousands of acres of rubber estates were opened up by the expatriate Britons in Ceylon and Malaya. Most of these workers needed for these estates were brought in from India because the British thought that Native Malays should remain in the food production sector (agriculture). The Indians were also

involved in construction of roads and railways, and were later employed in urban services i.e., rubbish collection and grass cutting (Milne and Mauzy, 1986). Drakakis-Smith (1987) notes that most of urban areas in Peninsular Malaysia were therefore dominated by the Chinese community, who were exploited as a social and economic buffer between the British and the Malay peasantry. This kind of ethnic clustering as encouraged by the British raised dissatisfaction among the Malay elites who asked that the British impose immigration quotas for a better balance in the urban population in the west coast of the Peninsula (Ryan, 1976).

Peninsular Malaysia was occupied by the Japanese in the Second World War (1941 – 1945). Most of town areas, including village settlements, were badly damaged during the war. The British reoccupied the country in 1946 and introduced a new political scheme known as ‘The Malayan Union’ which was perceived to unite all the Malay States including Melaka and Penang. However, Singapore was made a separate crown colony (Andaya, 1982). This political scheme was rejected by the Malays and instead, United Malays National Organization (UMNO) was formed in May 1946. Eventually, this party influenced the British to accept a proposal for a federal rather than a unitary scheme (Milne and Mauzy, 1986).

The Federation of Malaya, including all states and islands of Peninsular Malaysia, was proclaimed independent on 31 August 1957. The constitution prepared by the Reid Commission states clearly that there must only be a single nationality; that all persons in Malaya qualify as citizens either by birth or by fulfilling requirements of residence that include, among others specific language skills and the taking of an oath of loyalty; and that there be a guarantee of Malay privilege. According to the

constitution, the paramount ruler (*Yang Dipertuan Agong*) is given the special responsibility of safeguarding the special position of the Malays, as well as the 'legitimate interests' of the other communities. The paramount ruler is the titular head of state, and is to be elected from among the nine Sultans for a term of five years, by the Conference of Rulers.



Figure 3.2: Peninsular Malaysia by States and Major Towns
Source: www.virtualmalaysia.com/map

The constitution also states that there be a parliament, composed of a wholly elected House of Representatives (*Dewan Rakyat*) and appointed Senate (*Dewan Negara*); that allocation of power be designated in subjects under a federal list, state list and concurrent list; that civil rights be guaranteed; and that there should be a judicial review (Andaya, 1982). Ultimately, the Federation of Malaysia was officially inaugurated on 16 September 1963, consisting of Malaya, Singapore, North Borneo

(Sabah) and Sarawak. However, Singapore ceased to be part of Malaysia in August 1965 (Turnbull, 1989).

Generally, Sabah is a mountainous state that houses the highest mountain in Malaysia which is Mount Kinabalu (4,095 meters height). Historically, the state was part of the Sultanate of Brunei in 16th century which was then ceded to the Sultan of Sulu. Years of 1761 to 1881 saw the significant growth of American and Chinese merchants who then established the rights of the trading company (Sabah's Heritage, 1992). In 1882, the rights were transferred to the British North Borneo Provisional Association Limited. This company was then known as the British North Borneo Company that took over the administration of Sabah until 1942. The Japanese had invaded Sabah in 1942 to 1945. When Japanese surrendered in 1945, Sabah was administered by the British Crown Colony until 1963 (Buckley, 1968). Sabah joined Malaysia on September 1963 and is now headed by the Yang Di-Pertua Negeri and followed by the state legislative assembly and the state cabinet (www.sabah.gov.my).

Sarawak had been administered by the Portuguese in the early 16th century and then governed by Sultanate of Brunei in the early 19th century. However, in 1842 the Sultan of Brunei appointed James Brooke as the Rajah to Sarawak as a reward to his assistance in restoring the chaos between the two Sultan's relatives pertaining to territorial disputes. The Sultan of Brunei was then allowed Brooke dynasty to rule Sarawak until the Japanese invasion in 1941 (Runciman, 1960). After Japanese occupation, in 1945, Sarawak became a British Colony which was then officially granted independence on 22nd July 1963. Consequently, the state was admitted into the federation of Malaysia on 16th September 1963 (Chin, 1997). Sarawak is

presently headed by the Yang Di-Pertua Negeri and followed by the state legislative assembly and the state cabinet (www.sarawak.gov.my).

The most important information to be garnered from the above review is about the advantageous location of Peninsular Malaysia, as shown by Figure 3.2, which has allowed her to progress towards better economic prosperity while maintaining political and cultural stability. Apart from this, the differences of spatial population distribution and economic activities among the ethnic groups (immigrants and Native Malays) encouraged by the British also had some impact on the nature of governance structures, urban planning and development in Peninsular Malaysia in the post-independence era.

3.2.3 Government and Governance

Malaysia is a parliamentary democracy consisting of a federation of states governed by a constitutional monarchy as discussed above. The Federal Constitution distinctly spells out the authority of the federation, as seen in the Legislative Authority, Judicial Authority and Executive Authority (Milne, 1967). The Executive Authority is the power to govern the country which is vested in the Yang di Pertuan Agong and is exercised by Cabinet Ministers headed by the Prime Minister. These Cabinet Ministers are appointed by and responsible to the Yang di Pertuan Agong. With regard to Judicial Authority, the appointment of the Chief Justice is at the discretion of the Yang di Pertuan Agong acting on the recommendation of the Prime Minister (Andaya, 1982). It is the function of the judges to protect citizens against possible abuses of power by agents of the government, and to act as arbiters in disputes between State Governments or between the Federal and State Governments. All

judges shall hold office until the age of sixty-five and their remuneration shall be claimed from the Consolidated Fund. This fund is meant to protect the judges from motions of the parliament such as motion to reduce their salaries, or any interference with the judiciary system (Milne, 1967). Ultimately, Malaysia has a unique hierarchical system of courts in each state (Milne and Mauzy, 1986).

Turnbull (1989) comments that Malaysia's framework of parliamentary government has proved to be relatively authoritarian, reflecting and retaining colonial cultural traditions and emergency regulations, which in practice acted to impose restrictions on the individuals. Turnbull (1989) further notes that the country comprises 13 states, and each state has its own constitution, legislature, State Executive Councils (EXCO) and local officials. Though all these states are under the federal government, they retain their main powers over the development of natural resources including land. In other words, anything about land, including alienation, amalgamation, subdivision and registration of land, is a state matter. In addition, the states also retain their powers over native custom and Syariah (Muslim Law). The federal government is responsible for foreign affairs, defence, internal security, justice, federal citizenship, immigration, public service, finance and major economic sector services i.e., commerce, industry, communication and transportation.

3.2.4 Society and Culture

In 2004 the Malaysian population consisted of more than 23.6 million people, of whom approximately 65.1% were *Bumiputra*, (literally 'sons of the soil', including Malays and other indigenous peoples). Peninsular Malaysia was originally inhabited by some 70,000 peoples of indigenous stock, including Negrito, Senoi, Jakun and

Temelai (Rahman, 2004). The ethnic groups in Malaysia are Chinese, (26%), Indian, (7.7%) and others (1.2%). Based on religious groups, 60% of Malaysians are Muslims, making Islam the dominant religion; 19% are Buddhists and the rest consist of smaller groups of Confucians or Taoists (2.5%), Christians (9%) and Hindus (6%).

The official language is *Bahasa Malaysia* (referred to in Malaysia as *Bahasa Kebangsaan* or the 'national language') and various Malay dialects are also spoken. The Chinese population speaks Hokkien, Cantonese and other Chinese languages and the Indian population speaks a variety of Dravidian and Indo-European languages, predominantly Tamil (Crean, 1996). The indigenous groups usually speak some Malay, in addition to their own tribal languages.

This ethnic diversity has resulted in the emergence of a pluralist society which can be described as a society comprising two or more elements of social orders that live side by side, yet without mingling into one political unit (Furnival, 1956; 304). Moreover, the present Malaysian society has been influenced by various foreign cultures that include: Indian, Chinese, Arabic, Javanese, Buginese, Acehnese, Cambodian, Thai, Portuguese, Dutch, British and Japanese.

Milne and Mauzy (1986) observe that at the time of independence, a small Malay bureaucratic elite as well as the Chinese business class dominated Malayan society. The white-collar middle class was small and overwhelmingly non-Malay, while the majority of people were Malay peasants and other rural workers, Chinese tradesmen and labourers, or Indian plantation workers. By 1990s, the government's New

Economic Policy (NEP) has resulted in the rapid growth of the middle class. However, the rapid growth of the Malay middle class has not been directly at the expense of the non-Malay middle class. The middle class represents one-third of the workforce in Malaysia (Andaya, 2001).

3.2.5 Political and Institutional Structures

The political party that has governed Malaysia from its independence until now is the Barisan Nasional (National Front) which is a coalition of political parties consisting of three principal ethnic communal parties: United Malays National Organization (UMNO) representing Malays, Malaysian Chinese Association (MCA) for the Chinese and Malaysian Indian Congress (MIC) for Indians. In the early years of independence and prior to independence, this National Front party was called Alliance Party. This party has retained its majority in Parliament throughout the eleven elections held since the first parliamentary election in 1955 (Andaya, 2001). In fact, at every election UMNO managed to gain enough seats to form the government by itself. Thus, UMNO has provided every prime minister and deputy prime minister and given itself the majority of cabinet portfolios (Milne and Mauzy, 1986). Moreover, most government policies since independence have been reflective of the ideas of UMNO and the Malay majority (Andaya, 1982).

For the sake of the stability and unity of the country, UMNO shares powers with others in the coalition. Undoubtedly, the country's progress and rapid development is the result of good governance by the Malays themselves through UMNO (Trezzini, 2001). Nevertheless, Milne and Mauzy (1986) argue that the elected opposition in parliament is weak as *Barisan Nasional* holds more than two thirds of the *Dewan*

Rakyat seats. In most cases, the opposition was perceived to be purportedly more keen on delaying proceedings or embarrassing the government rather than offering constructive criticism. Hitherto, the government with a few exceptions has regarded the opposition as obstructionists at best (Milne and Mauzy, 1986). In the 1999 election, *Barisan Nasional* won 163 of the 192 parliament seats contested, and succeeded again in retaining its two-third majority. However, the majority of support at this time came mainly from Chinese voters who were perceived as having fully accepted the politics of accommodation. Unpleasantly, the party had less support from a large number of Malays, partly due to their dissatisfaction with the authoritarian style of the government (Andaya, 2001).

Unlike Indonesia and Thailand, Malaysia's military plays no significant role in the economy and politics although a considerable sum of the national income is allocated to defence (Turnbull, 1989). The armed forces have steadfastly remained out of politics and are there merely for the provision of national security (Milne and Mauzy, 1986). The civil service has the reputation of being among the most efficient and least corrupt in the region (Milne and Mauzy, 1986). There were about 900,000 people employed in the public service in year 2000, which represented about 20 percent of the total workforce. Since independence, the public service has been carefully nurtured toward an effective role in the management of the national economy and in implementing government policies. Therefore, this country is seen as fortunate because it has a strong and dedicated public service. Moreover, the Malaysian public service has been recognized internally and internationally (Mohd. Taib, 2001).

Based on the above discussions and facts, Malaysia seems to have a stable government. Even though there are 14 states with their own rulers and governments, the country has been governed by a single political regime since independence, with the majority of state governments supporting central government policies.

3.3 Malaysia's economic performance

After independence in 1957, Malaysia's economy (as a developing country) was largely dependent on the primary industry sector (agriculture). Gradually the economy has shifted to a more industrial base, as more international-based companies have opened industrial plants, mainly on the west coast of Peninsular Malaysia. Some of the companies represent labour intensive industries such as electronics and computer electrical component industries. These industries were partly attracted by the low labour wages and incentives given by the government. Because of the numerous job opportunities offered by international companies, and also in other service sectors, more rural peasants migrated to town areas. Consequently, the construction industry became more significant in the 1980s as a result of the rapid growth of urban areas and the direct demand for considerable commercial buildings and houses. From 1967 to 1974 the growth rate of Gross Domestic Product (GDP) averaged at 7.7 percent per annum, and increased to 8.3 percent per annum from 1975 to 1981 (Khairudin, 1997).

However, the Malaysia economy is not spared from the influence of the world economic environment. This can be seen, for example, in the past world economic recession periods between the 1980s and 1990s. The economic downturn in 1983 hit most construction-related industries, especially housing developers. There was a

severe economic recession experienced between 1985 and 1986, with a slow recovery in the early 1990s. The effect of this recession was that a large number of unemployed emerged in most urban areas. The most secure employment sector was the Public Sector (Central Bank, 2000).

Although severely hit by economic recession in 1985, the Malaysian economy bounced back into a prosperous economic environment between 1988 and 1996, when it boasted a Gross Domestic Product (GDP) growth rate of 8 percent in nine consecutive years. The incidence of poverty declined from 20.7% in 1985 to 17.15 in 1990 and further down to 11.1% in 1995 (Malaysia, 1996). However, there was another economic crash in 1997, again causing instability in the national economy. To manage the 1997 situation, the government introduced stern monetary measures, including pegging the Malaysian Currency (Ringgit) against selected foreign currencies, particularly US dollars and Pound Sterling. Then, the economy bounced back in 1999 to register a rate of growth in GDP of 5.8 percent instead of negative growth of minus 7.4 percent as in 1998 (Central Bank, 2000).

Besides the GDP, the performance of the Malaysian economy is also indicated by the income per capita. In 1984 the income per capita was US\$2,000; by 1991 the figure was US\$2,520, and at the end of 1996 it was US\$4,442 (RM11239.00 at RM2.53 = US\$ 1.00). However, after the government pegged the ringgit at RM3.80 per US dollar, the income per capita fell to only US\$3,238 in 1999. In addition, the Ministry of Finance (2000) stated that the economy was considered to be at full employment while 61 percent of the population was in the working age group (15-64 years old).

Table 3.1:
Gross Domestic Product by Sector 2005-2007

Sectors	Changes (%)			Share of GDP (%)		
	2005	2006	2007*	2005	2006	2007*
Agriculture	2.5	5.3	4.7	8.2	8.2	8.1
Mining	0.8	2.4	4.5	6.7	6.4	6.4
Manufacturing	5.1	7.3	6.8	61.6	32.0	32.2
Construction	-1.6	0.7	3.7	2.7	2.6	2.6
Services	6.5	5.7	6.0	58.2	58.2	58.1
Less inputted bank service charges	3.6	2.9	3.5	9.3	9.0	8.8
Add import duties	-1.7	-11.9	-2.6	1.9	1.6	1.4
GDP	5.2	5.8	6.0	100	100	100

Source: Central Bank, 2007. Note: (*) Forecast

As Table 3.1 shows, the industrial sector (agriculture, mining, manufacturing, construction, services) seemed to have constant growth between 2006 and 2007. However, the Ministry of Finance (Central Bank, 2006) claimed that the growth momentum in Malaysia remains strong, driven by robust domestic demand and favourable export performance. In addition, the government's decision to move from a fixed exchange rate regime to a managed float was well-received and contributed to further boosting investor and consumer confidence. The government continued its monetary policy to emphasize growth with price stability. As a result, inflation was maintained at below 2% annually between 2000 and 2004. However, price stability could not be sustained long, once the inflation rate increased from 3% in 2005 to 3.9% in 2006. The Ministry of Finance (Central Bank, 2006) maintained its expectation to see the unemployment rate remain below 4 percent, reflecting the full employment situation that has prevailed since 1992.

3.4 Urbanisation and urban problems

Some problems in urban areas have not been satisfactorily solved for decades (Malaysia, 1991- 6thMP). Among the major problems are: areas deemed insanitary, dilapidated buildings and disease epidemics. Moreover, since independence, urban areas have kept on expanding both horizontally and vertically. More new settlement areas and new towns have opened up to settle growing numbers of urban population and economic activities. Urban environmental problems have become more acute than in the period before independence (NPP, 2005).

Prior to independence, the British Colonial Government in the 18th century had formed several measures to control development in Malaya. Under the British, a large numbers of migrant from China working in tin mining activities built high density settlements near their work places. These small settlements, located along the river banks and surrounded by existing Malay settlements, gradually grew to become towns. Today, many towns are found mostly along rivers and main transport routes (Lim, 1978). The settlements expanded as the government of that time provided more roads for greater accessibility. Transportation routes were built with the intention, among others, to transport produce from agricultural areas and from the tin mining areas such as Perak and Selangor. Town areas began facing problems of overcrowding, poor sanitary services, fire-prone buildings and widespread disease. These problems led the government to take steps to control human settlements in order to create a better urban environment, particularly through the adoption of planning regulations and legislations (Mohd. Razali, 1992).

The natural increase in population in Malaya, coupled with the high rate of rural-urban migration, further contributed to the rapid growth of towns. In 1947, about 26.5 percent of people lived in towns with a population of more than 1000, and 18 percent lived in towns of more than 10,000 (Malaya 1947, Census Report). The densely populated areas were found to be more concentrated in the West Coast compared to the East Coast areas, due to tin mining and other economic activities. For example, the average population growth rate per annum for Kuala Lumpur was more than 4 per cent during 1960 to 1970 (CHKL,1981).

Mohd Yaakub (1991) states that Malaysia experienced a rapid rate of urbanisation in the decades immediately after its independence in 1957. The Malaysian urbanisation rate in 1970 was 28.8 per cent and continued to increase yearly. By 1980, the Malaysian urbanization rate as a whole was 34.2 per cent and 37.4 per cent in 1985 (including Sabah and Sarawak) (5thMP). For Peninsular Malaysia alone the urbanization rate was 41.1 per cent in 1985 and continued to increase at an average rate of 4 per cent per annum (8th MP).

By 1990, the urban population for Malaysia was 50.7 per cent from the total population of 18,379,655. The percentage of urban population was further increased in the year 2000, when 62 per cent of the population for the whole of Malaysia resided in urban areas. For Peninsular Malaysia, the urban population was 54.3 per cent in 1991 and 65.4 per cent in 2000, as shown in Table 3.2.

Table 3.2
Urban and Rural Population by census years, Peninsular Malaysia.

Census Year	Urban	Per cent	Rural	Per cent	Total	Percent
1991	7879147	54.3	6452576	45.7	14331723	100
2000	12122090	65.4	6401542	34.6	18523632	100

Source: National Physical Plan 2005 (NPP, 2005).

The fast growth of towns in Peninsular Malaysia rose significantly in the period between 1960 and 1980. This was partly due to high rural-urban migration rates resulting from greater employment opportunities as the major 'pull-factor' to urban areas. The significant growth was seen in new growing towns like Kuala Lumpur, Ipoh, Penang and Johor Baharu.

The National Physical Plan (NPP) 2005 revealed that Malaysia will have an even higher share of urban population if it becomes a developed country by the year 2020. The NPP 2005 Report states that, with the average annual growth rate of 2.53 per cent from 1991-2000 and 1.9 per cent from 2001-2020, the population of Malaysia in the year 2020 will be 26.8 million. This population projection is based on the 2001 population of 24 million people (Department of Statistic 2001). Accordingly, the share of urban population is expected to be greater in the year 2020: at least 75 per cent in the urban areas, with the other 25 per cent residing in rural areas. This high share of urban population will be mainly distributed to major conurbation areas in the Peninsula, namely Kuala Lumpur, Johor Bahru, Penang and Kuantan (NPP, 2005).

The high rate of urbanisation brought more economic opportunities, and improved infrastructures and urban services. The shortage of land supply for various types of urban land uses became apparent. The existing stocks had been intensified to meet

the increasing demand. The subsequent problem was the inadequate supply of conventional types of houses to accommodate the already existing and the increasing numbers of urban families relative to various affordability levels. (Mohd. Razali, 1992; Ghani and Lee, 1997). Even though unconventional housing could partly contribute to meet the housing need and the demands of low-income groups, particularly in urban areas, they were not encouraged to be built on a wide scale because of their basic lack of safety. Undeniably, however, there were still vast numbers of unconventional types of housing found in many Malaysian towns, even though the government emphasized the adequate provision of conventional types of housing in its all the Five Year Malaysia Plans (Johnstone, 1983; NPP 2005).

Kamal Salih (1992) notes that towns and urban areas kept on expanding and creating an ever-widening gap between urban and rural in terms of the proportion of population. When the population in the whole country increased, the proportion of urban population also showed an increase. The pivotal issue faced by all stage governments then became a matter of finding 'suitable land' to cater to the needs of the increasing population and the demand for land for various types of economic uses. Even though Peninsular Malaysia still has ample forest and agriculture land, as shown by Figure 3.3, the designated land for urban areas is nearly fully developed, especially in larger town areas. For example, Kuala Lumpur is now faced with difficulties in finding suitable land to meet its housing needs (KLSP, 2000).

Gradually, rural and agricultural land will be converted into urban areas due to the necessity to provide adequate housing, infrastructures and community facilities. The urbanisation rate will be further stimulated by increases in the demand for housing

driven by increases in household incomes. The Central Bank (2001) stated that the income per capita has shown significant increases between 1990 and 2000 from RM 6,180 to RM 13,418 respectively (Central Bank, 2001). Malaysia aims to become a developed country by the year 2020, in line with Vision 2020; by then it will be expected that all urban habitants will live in decent housing adequately provided with modern facilities. Thus, the existing overcrowded, high-density towns need to be redeveloped and redesigned. Besides providing housing within existing built-up areas, new housing areas also need to be opened up to cope with future increases in urban population. In this respect, even more land will be required, to release pressure on the existing overcrowding urban areas. Ultimately, agricultural land will dramatically be converted into housing areas (Choo, 1997).

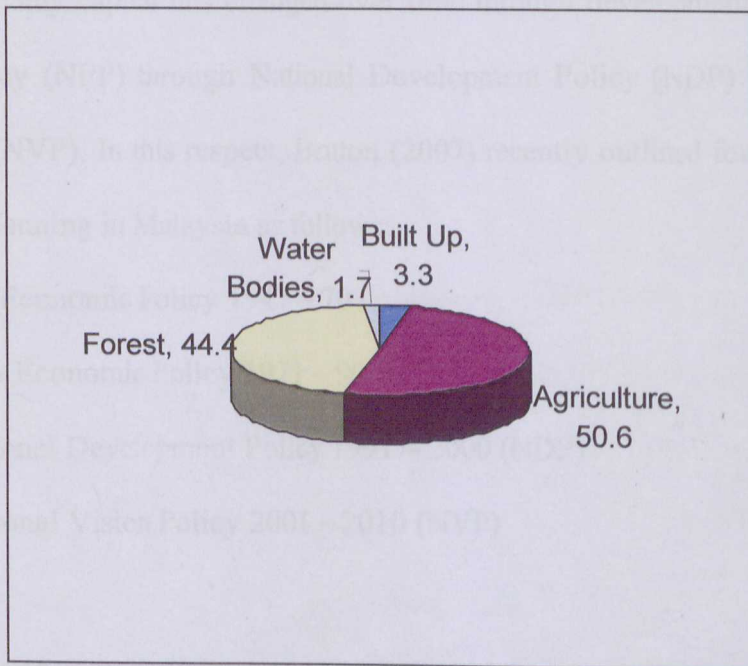


Figure 3.3: Peninsular Malaysia Land Uses 2001 by Percentage
Source: National Physical Plan 2005.

The government's attempts to alleviate these complex urban problems are outlined in all five-year national development plans, and are implemented by its agencies in

accordance with laws and regulations, particularly the legislative provisions related to land development.

3.5 Development Planning in Peninsular Malaysia

The agencies involved in preparing and implementing the plans are many, and are almost entirely under federal control. In the early years, foreign advisors played a key role in preparing the national plans. However, at present, the Prime Minister's department is the key player in preparing the national development plan (Bruton, 2007). Toh and Jomo (1983) divided these stages of planning control into three phases: 1950-1960; 1961-1970; and, beginning in 1971, the promotion of Malay capital by the federal government. The last (third) phase is still operative today but the nature of Malay capital has changed over time through development from New Economic Policy (NEP) through National Development Policy (NDP) to National Vision Policy (NVP). In this respect, Bruton (2007) recently outlined four phases of development planning in Malaysia as follows:

- a) The Old Economic Policy 1947 – 70
- b) The New Economic Policy 1971 – 90 (NEP)
- c) The National Development Policy 1991 – 2000 (NDP)
- d) The National Vision Policy 2001 – 2010 (NVP)

3.5.1 Planning for development 1947 – 1970 (Old Economic Policy)

There were four national plans produced within this period – the Draft Development Plan for the Federation of Malaya 1950-1955; a Plan of Development for Malaya of the First Malaya Plan 1956-1960; the Second Five Year Malaya Plan 1961-1965; and the First Malaysia Plan 1966-1970.

The Draft Plan 1950-55, aimed to define the objectives of social and economic policy, to balance them in relation to each other and to plan them within the range of the resources available to finance them. The First Malaya Plan 1956-60, focused more on development programs that gave priority to agricultural development by emphasizing the need to rehabilitate the rubber industry, and also gave high priority to industrial and manufacturing development (Lim, 1983). The Second Five Year Malaya Plan 1961-65, was more systematic in its approach than its predecessors. The plan showed a strong concern for economic and social development. Among its objectives was to provide facilities and opportunities for the rural people, to provide employment to the working age population, to raise the per capita output, to increase the variety of Malayan production, and to improve and expand the social services needed. These objectives were seen as necessary for the government to mediate between the various capitalist factions in Malaya and the compromises which underpinned the 'Alliance Party' arrangements (Toh and Jomo, 1983). Moreover, Bruton (2007) argues that the plan was concerned with creating a high rate of economic growth; loosening the ties between Malaya and the needs of the British market; and enhancing social justice. The main emphasis of these plans was on economic development concentrating on investment in infrastructure, agriculture and rural development. Although development policies in the three previous plans had ties with the British Colonial Office in London, with the development policies of the First Malaysia Plan 1966-1970 these ties were being loosened (Bruton, 2007).

3.5.2 The New Economic Plan 1971 – 90 (NEP)

The riots of 13th May 1969 pushed the government to review the causes of the riots. A set of socio-economic policies was established to provide for a viable and

equitable participation of all races in the development process. These policies were set out in the NEP, which covered the period 1971-1990. The major objectives of the NEP were to achieve national integration and unity. The main strategies were to eradicate poverty irrespective of race by raising income levels and increasing employment opportunities for all Malaysians, and to restructure Malaysian society through the elimination of economic imbalances between races. Thus the NEP saw the abandonment of *laissez-faire* economics in favour of greater intervention by government over resource allocation and the ownership and control of business enterprises (Bruton, 2007). Within the NEP period, there were four development plans produced – the Second, Third, Fourth and Fifth Malaysia Plans.

The Second Malaysia Plan 1971-1975 set the objectives for social restructuring and economic change. The plan was concerned to promote and sustain national unity, eradicate poverty, achieve rapid economic growth, and to streamline government administrative procedures and personnel policies. Pryor (1975) comments that the plan was sectoral in emphasis and largely ignored the locational aspects of development. However, Bruton (2007) argues that the plan did incorporate proposals for extensive regional projects involving land development and improvement, the development of rural infrastructure and the spreading of “urbanisation”.

The Third Malaysia Plan 1976-1980 firmed up the objectives for social restructuring and economic growth. It reaffirmed the concerns to sustain national unity and to eradicate poverty. It set out policies and programmes fully and clearly. The plan also proposed urban strategies for the four major regions – Northern Region, Eastern

Region, Central Region and Southern Region. Bruton (2007) comments that the plan was more sophisticated than any of its predecessors.

The Fourth Malaysia Plan 1981-1985 continued the strategies adopted in the previous two plans. It also set out the macroeconomic framework and objectives for public and private sector investment and sectoral development programmes. Most importantly, the plan recognised the role of town and country planning systems in facilitating development. It stated that "The Structure Plans will focus on key areas ... such as ... environmental protection and the provision of adequate housing and utilities. By 1990, the majority of state capitals will have structure plans to guide their future spatial and economic expansion" (Malaysia, 1981-4thMP. 184).

The Fifth Malaysia Plan 1986-1990 formalised a move away from central direction of the economy to an approach that reduced the role of the government, gave a greater role to the private sector and promoted human resource development. Moreover, the policies to eradicate poverty and restructure society were to be continued whilst the strategies for regional development and urbanisation were set out in some detail (Malaysia, 1986-5thMP). Bruton (2007) comments that overall, the ambitious targets set for restructuring society were not met. Problems associated with environment and urbanisations have not been addressed, and continue to deteriorate.

3.5.3 The National Development Policy 1991 – 2000 (NDP)

The main aim of NDP was to attain a balanced development in order to establish a more united and just society. The basic strategies of NEP were to be maintained, but the focus of the anti-poverty strategy was to shift towards the eradication of hardcore

poverty. Moreover, the Bumiputra participation in the modern sectors of the economy was to be enhanced by increasing employment opportunities and making human resource development a fundamental requirement. Unfortunately before the NDP was adopted, the government announced the launching of Vision 2020 on 28th February 1991; this vision was also sustained by the philosophy underpinning NDP and NVP (National Vision Policy). Within the period 1990 – 2000, then, two development plans were produced.

The Sixth Malaysia Plan 1991-1995 was concerned to create a united and just society, to enhance human resource development, to promote technological advances, and to reduce sectoral imbalances. The plan was also concerned to continue to reduce disparities in social and economic development between states and regions. Its proposals were to diversify the economic base of the less developed states and to encourage people to migrate from rural areas to locations where new jobs were being created. For the environment, the plan highlighted major issues such as increasing air and noise pollution in urban areas, constraints on the supply of affordable housing, and the sustainability of the water supply (Malaysia, 1991-6thMP).

The Seventh Malaysia Plan 1996-2000 aimed to accelerate the attainment of balanced development as envisaged in the NDP. It continued with the policies of the Sixth Malaysia Plan to maintain high economic growth with stability; alleviate poverty and restructure society; enhance competitiveness through human resource development and development of IT and technologically based industries; and achieve sustainable development and improve quality of life. In order to improve the

balance of regional development, the plan proposed complementary strategies that include the acceptance and management of rural-urban migration; provision of low-cost housing; and encouragement of the dispersal of urban growth (Malaysia, 1996-7thMP).

For both the Sixth and Seventh Malaysia Plans, Bruton (2007) observes that Malaysia achieved rapid economic growth despite being affected by the 1997-1998 financial crisis. This was accompanied by significant improvement in the level of income, enhancement in the quality of life and reduction in the incidence of poverty.

3.5.4 The National Vision Policy 2001 – 2010 (NVP)

The National Vision Policy is guided by the strategies set out in Vision 2020 for Malaysia to be a fully developed country. The NVP aims to develop an economy that is competitive, dynamic, robust and resilient. It incorporates the strategies of NEP and NDP, especially on the eradication of poverty, restructuring of society and the attainment of balanced development. There are two Malaysia plans for this 10 year period – Eighth Malaysia Plan 2001-2005 and Ninth Malaysia Plan 2006-2010.

The Eight Malaysia Plan 2001-2005 was prepared after the financial crisis of 1997-2000. The plan was concerned to develop economic and social resilience by identifying clearly new initiatives and approaches that have to be adopted. Policies and strategies were focused on achieving sustainable growth with resilience. Most importantly, the plan placed great emphasis on private sector initiatives with the public sector providing an institutional service intended to facilitate the work of the private sector. For regional development, the plan's objectives were to diversify the

economic structure of the less developed states; improve the quality of urban services; accelerate development in rural areas; and promote growth triangle cooperation (Malaysia, 2001- 8thMP).

The Ninth Malaysia Plan 2006-2010 amplifies the policies and objectives of the National Mission's (NM) five main thrusts, namely: economic growth; the quality of human capital; the quality of life of all Malaysians; and strengthening institutional and implementation capacity. In terms of economic growth, the plan is concerned to ensure that the private sector invests more in achieving economic growth. In respect of the quality of human capital, the plan proposes improvements to be undertaken at all levels of the education system. With regard to quality of life, all sectors that include housing, health care, transportation, energy, water and environment protection are addressed. The most important of these thrusts is the last one – strengthening institutional and implementation capacity. The plan indicates the need to enhance the level of integrity in both the public and private sectors with: regulatory bodies striving to inculcate and improve good corporate governance by reviewing rules, regulations and legal framework; improving the public services by reducing bureaucratic red-tape especially at local authority and district levels; and streamlining work processes and procedures to ensure speedy decision making (Malaysia, 2006-9thMP).

Bruton (2007) argues that all the policies contained in all the Malaysia Plans were experimental in that it was not known whether they would work. Ultimately, however, the privatisation policy has worked and the policies for handling the financial crisis also worked. More evidence will emerge in time.

3.6 Legislative Framework for Land Development

The institutional and legislative framework for land development in Malaysia is based on a number of legislations and regulations. All these legislations are introduced by the parliament even though the states have power over land matters as conferred by the Constitutions. Since, the parliament is also given the power to exercise the function of introducing regulations and legislations for the purpose of uniformity, all states have to adopt the regulations and legislations passed by the parliament.

Historically, Town and Country Planning in Malaysia was introduced in early 1920s, when the country was known as Malaya (Peninsular Malaysia) under the British Colonial administration. The regulations of town planning in this period were developed based on planning legislations for various countries; significant influence came from the South Australian Town Planning and Development Act, 1920; American Laws (districting and zoning); the Housing and Town Planning Act, 1909 and 1919, United Kingdom (UK). After independence in 1957, the changes and evolutions of town planning principles, approaches and contents in the UK in 1968 influenced the town planning system in Malaysia (Lee *et al* 1990). By 2007, after 50 years of independence, town planning legislation had undergone several exercises to include necessary changes to attain the present Town and Country Planning Act 1976 (Act 172).

The first amendment was made in 1995 to include provisions for environmental considerations that should be considered by planning authorities in forward planning and development control activities. The latest amendment made to Act 172 was in

2001; this is referred to as Act 1129, and it introduced a three-tier planning system (National Physical Plan, State Structure Plan and Local Plan (for local planning authority area)).

Briefly, the TCP Act 172 including its amendments (Act 1129) spells out the delegation of powers among the state and local authorities with regard to the preparation and the adoption of development plans, development control, planning appeals and enforcement. Moreover, state and local planning authorities are provided with all the procedures relating to the preparation and approval of the development plan, to consider an application for planning permissions, planning appeals and to carry out planning enforcement. The public, meanwhile, is provided with procedures to submit applications for planning permissions, to raise objections and to appeal for planning decisions (TCP Act 172, 1976 & Act 1129, 2001; Federal Territory (Planning) Act or Act 267, 1982).

The changes in planning legislations have inevitably affected the landscape of towns and cities (Goh, 1997). Most importantly, these changes have affected the behaviour and choices of investors and owners of landed property (Saleh Buang, 1997). However, as Adams and Watkins (2002) argued, the effect of town planning in this respect was unable to be easily measured because there were many factors influencing land development that shaped towns and cities. The product of land development was not solely influenced by town planning control. Thus, it is necessary to observe the effects of how the town planning system is implemented.

Moreover, there are several remarkable legislations, regulations or ordinances passed by the respective states and central government during the British Colonial Government. These colonial era legislative provisions have had some influence in the formulation of current legislations (Lee Lik Meng, 1990). Recently, there have been a number of legislations relating to land development in Malaysia that are currently in force besides Town and Country Planning Act (TCP) 1976. These legislations include National Land Code (NLC) 1965, Land Acquisition Act 1960, Local Government Act 1976, Street, Drainage and Building Act 1974, and Environmental Quality Act 1974.

The Survey Settlements were the first provisions to adopt the Torrens system.

Under the National Land Code, 1965 (NLC, 1965), all land transactions, changes in usage, alienations, subdivisions and partitions in Peninsular Malaysia must accord to the NLC, 1965. The system of land dealings follows the Torrens System, which includes the survey and permanent marking of the individual boundaries of land to be held under title with permanent record of those boundaries on a government map, and with the government offering guarantees of both boundaries and title. However, the right of land ownership is not virtual or absolute. Hence, owners have no claim to a right to develop (Lee *et al* 1990).

The 1977 Ordinance was then replaced by The Municipal Ordinance 1977.

In addition, there are several related legislations empowering technical agencies to be involved in and to have similar impact on controlling land development. The employment of the requirements from these related legislations within town planning approval process depends on the interpretation of the provisions and the discretion of the state and local planning authority (Salleh Buang, 1997).

The Ordinance of Building in Towns by Local Authorities (1996).

3.6.1 Earlier Urban Land Use Planning Regulations and Legislations

Town planning regulation and legislation in Malaya was adopted in different times by two groups of states during the British administration in Malaya. The first group was the Straits Settlements (Penang, Malacca and Singapore) and the Federated Malay States (FMS) comprising Pahang, Perak, Selangor and Negeri Sembilan; the second group was the United Malay States comprising Perlis, Kedah, Kelantan, Trengganu and Johor.

The Strait Settlements were the first territories to adopt the regulation of the construction of buildings due to the government's concerns about fire safety and public health (Athi Nahappan, 1968). The Committee of Assessors, which was an *ad hoc* body, was formed in 1801 in George Town, to administer the town. Its function, among others, was to lay out the town in a manner most suitable to the requirements of the inhabitants (Jansen, 2001). The committee was replaced by the establishment of a Municipal Committee in 1848 that was responsible for the provision and maintenance of public facilities including basic building control. The Municipal Ordinance 1887 provided more building control powers to the Municipal Committee. The 1887 Ordinance was then replaced by The Municipal Ordinance 1913 that empowered the Municipal Commissioner to control development and to prepare planning schemes. This Ordinance did not, however, provide provisions for preparing and enforcing the town plan but importantly it introduced development control concept that affected the evolution of planning laws in the Peninsular. The development control concept gave the Commissioners the power to make by-laws for the erection of buildings or rules for land use classes (Bristow, 1996).

The Municipal provisions were then introduced in the F.M.S between 1881 and 1890 to ensure health, safety and public order (Bristow, 1996). Kuala Lumpur became the first town to adopt two sets of planning measures, namely *sector of activity* and *regulation for building construction*, which was adopted in the aftermath of a big fire in 1881 that largely destroyed the town. The *sector of activity* was understood as simple zoning and the *regulation for building construction* was meant for building control (Tan Soo Hai, 1972). During the period when the ordinance was in force, the British Resident was responsible for planning and development of towns including the provision of basic amenities. The Ordinance was later replaced by Sanitary Board and Town Board in 1890. Eventually, the responsibilities of the British Resident in this respect were assigned to the Sanitary Board (in F.M.S.) and Town Board (in U.M.S.).

The Sanitary Board was seen as an attempt by the government to establish a uniform system of local administration in town areas, which would then lead to the adoption of the Sanitary Board Enactment 1907. However, the Sanitary Board Enactment 1907 was repealed and re-enacted by a more comprehensive Sanitary Board Enactment 1916 that outlined the duties of the Boards. Among others, the duties were concerned with the provision of basic local services, public health, sewerage, drainage, refuse disposal, cleaning and lighting of streets and upkeep of roads and houses. The Board was also responsible for: the regulation of building and building operation; the laying out and maintenance of reserves for recreation, conservancy and improvement of town and villages; and controlling building development by adopting the Building by-laws.

The responsibilities of the Board were, however, concerned only with areas within its boundaries. Thus, rural and agricultural areas were left without local government intervention even though urban growth was affecting agricultural areas (Reade, 1923). As towns expanded, more problems were encountered. The Sanitary Board was empowered under the Town Improvement Enactment 1917 (for F.M.S) to enforce six types of improvement schemes: General Improvement, Redistribution, Rebuilding, Street, Back lane, and Building. After Charles Compton Reade (1923) was appointed in 1921 as the first Town Planner for the F.M.S., he convinced the government of the need for planning legislation and the establishment of town planning organization. He was faced with many difficulties due to the inadequacy of the existing powers and machinery, method of valuing land, exchanges and redistribution of ownerships. Reade (1923) stressed that town planning services must be free for landowners, who 'in exchange' should surrender part of their land for public use. Further, Reade (1923) also highlighted that there were needs for: the Draft Town Planning legislation; the permanent and continuous planning administration; the preparation of General Town Plans; and the effective control on the use of state land and development. His recommendations were then incorporated in the Preliminary Town Planning and Development Bill 1923. After the Bill was debated on its contents and objectives, namely the Sanitary Board's powers and procedures, the Bill was passed by the Federal Council as the Town Planning Enactment, 1923 (No.19).

The Town Planning Enactment 1923 was concerned with the layout and securing of public safety, sanitary conditions, public health, convenience and amenity. The enactment also provided for development control and enforcement of town

improvement schemes. The British Resident could declare any area to be Town Planning Area, and could then form a Town Planning Committee for the area. The duties of the Committee were concerned with the adoption, the modification, the carrying out and enforcing of any "General Town Plan" and of any lay out plans, the advisory duties to the Resident and the power of inquiry upon any matters relating to town planning or housing (Lee, *et al* 1990). The main objective of the General Town Plan was to better order, improve and develop the area.

Under the 1923 Enactment, land and building operations, including the erection, removal, demolition, alteration, use of buildings, lay out, land use and sub-division of land must be in conformity with the provisions of the Enactment or of an approved General Town Plan. In the approval process, the Committee could also take into consideration any prescribed requirements to approve or to disapprove the lay out plan or the proposed use of land or the erection of a building. The Enactment also provides for private property owners to claim compensation if they were found to be 'injuriously affected' by the planning decisions (Section 27 (i) and 28). However, the right for compensation excluded any proposed road, reserves or other open spaces shown on the plan. Also excluded from compensation were any land or property affected by the closure or alteration of roads. These provisions reflected that Reade (1923) had embedded the ideology of the *Public Interest* in the Enactment.

The Enactment 1923 was claimed to have significant weaknesses, particularly in terms of institutional arrangements such as the separate body of planning approval from the Sanitary Board, the content of the general town plan and the delays in the implementation of the planning system. These were among the factors leading to the

repeal of the Enactment in 1926 and its replacement by the Town Planning Enactment 1927 (Jansen, 2001). Under the Enactment 1923, the Town Planning Area was defined between 1924 and 1925 as including Kuala Lumpur, Klang, Port Swettenham, Seremban and Ipoh between 1924 and 1925; Town Planning Committees were established in each area.

The Town Planning Enactment 1927 that was passed on 28.3.1927 conferred the town planning authority to the Sanitary Board. Under this Enactment, the Sanitary Board was required to prepare a general town plan for its area and to apply development control measures as stated in the Enactment. The content of the General Town Plan was quite simple; it showed major land use zones, roads, reserves for government purposes and parks or open spaces. The land acquisition provisions were embedded in the Enactment 1927 and applied only to roads, railways and other communications elements as shown in the approved Town Plan. The exercises of the provisions were vested in the state or the British Resident.

The content of Town Planning Enactment 1927 was then incorporated in the Sanitary Boards Enactment 1929 as Part IX. Subsequently, the Enactment 1929 was replaced by the Town Boards Enactment 1930 (CAP 137) and town planning provisions as Part IX. The extension of Part IX CAP 137 was passed by the Federal Legislative Council in 1949 to include Penang and Melaka. For Penang, more detailed categories of zoning were added: flats, public housing, low cost housing, special purposes, public open spaces, schools, religious uses, cemeteries, state land, council land, car park, vegetable gardens, and light industry. The Part IX CAP 137 (planning

provisions) was used until the Town and Country Planning Act 1976 (Act 172) was adopted by local authorities.

In Kuala Lumpur, the Part IX CAP 137 was used until the Kuala Lumpur (Planning) Act 1973 or Act 107 was enacted. With similar requirements as CAP 137, the Board prepared a draft town plan for Kuala Lumpur. After the riots in 1969, the draft town plans were examined and approved by the National Operation Council (NOC) administering the country under the Emergency Laws. The Draft Town Plan for Kuala Lumpur was known as the Comprehensive Development Plan and the planning legislation was titled the Emergency (essential Powers) Ordinance No 46, 1970. This planning legislation was based on the Draft Town and Country Planning Ordinance 1966. The three sets of plans previously approved in 1967 were then renamed, from gazetted Plans L886, L887 and L888 to Comprehensive Development Plans 1039, 1040 and 1041 respectively. With the restoration of the Parliament, the Emergency Ordinance No 46 was reenacted as the City of Kuala Lumpur (Planning) Act, 1973 (Act 107). It appears that the term “comprehensive” carries no particular significance in the system of town planning (Lee, *et al.* 1990). For planning control, Act 107 provides that for land on which “development” is to be carried out, the commissioner shall prepare a lay out plan. This lay out has to be published and subjected to public scrutiny and objections. In considering an application for planning permission, the planning authority is required to have regard to the provisions of the development plan, objections of adjoining owners and any “other material considerations” (Act 107, 1973). The provision for “other material considerations” is an important element, providing flexibility in the town planning system to possibly deal with non- planning matters (Lee *et al* 1990).

Having the statutory requirement for the general town plan and the exercise of building operation controls, the boards must prepare lay out plans reflecting the object of the town plan. The lay out plan must be subject to objection and approval under Section 137 – 140 (Sanitary Boards Enactment 1929). These Town Plans were useful until they were repealed by the 1976 Act. It is seen that the development plan system set by the 1929 Act carries two levels of planning, i.e., General Town Plan and Layout Plan. The General Town Plan indicates zoning for the entire area while the Layout Plan shows the details of how land within the zoning plan is to be developed. One of the earliest gazetted Town Plans was for Ipoh (Kinta) - Plan B3 (1931). Notably, this plan is still in force. Interestingly, other local authorities, apart from in Kuala Lumpur, kept their plans 'non-statutory', in order to avoid claims for compensation, and to keep the plans flexible (Lee *et al* 1990).

For the town plan, Goh (1997) argues that the content of the plan may have some implications for the planning practices. Based on the Ipoh Town Plan, it was more than just a layout plan, as there was an attempt at a comprehensive exercise of land management for a certain area. Goh (1997) argues that the land use zoning system would have problems in its implementation, much like the town plan for Kuala Lumpur.

The above discussions have highlighted that the planning legislation, from its early years, underwent many changes aiming to ease administrative problems as well as to provide guidance for development control procedures. The changes in planning legislations inevitably influenced planning decisions that shaped the urban land use structures of the past. Besides provisions for planning and development control, the

planning legislations and regulations of pre-independence Malaysia set the hierarchy of decision making structures pertaining to town planning.

3.6.2 Federal Territory (Planning) Act 1982 or Act 267

Kuala Lumpur was conferred city status in 1972 when the city boundary, encompassing an area of 94 square miles, gained Federal Territory State status. Formerly the city was the capital town of Selangor State. Later, Shah Alam was chosen as the new capital of Selangor. Responsibility for the capital city, Kuala Lumpur, was transferred to the Federal Government under the Federal Capital Act 1960, which at the same time imposed a unique administrative structure on the federal capital.

The administration of Kuala Lumpur was and is entrusted to a Commissioner – Datuk Bandar Kuala Lumpur or Lord Mayor – with the intention of achieving efficiency. Act 267 specifies that the Mayor shall, subject to this act, have or may exercise all the powers and perform all the duties conferred or imposed upon the municipal councillors of Kuala Lumpur, the President and any councillor or officer thereof immediately before the commencement of this act (Subsection 12(1) of the Act 267).

The Mayor is appointed by the King, on the advice of the Prime Minister, for a period of five years, which can be extended or terminated before the end of the five year period if he is considered to be failing in his duties (Section 4, Act 267). He is advised by an Advisory Board of the City of Kuala Lumpur consisting of 13 members appointed by the King on the advice of the Prime Minister. Two of those

members are nominated by the ruling council of Selangor State (Section 6-8 Act 267).

The Mayor is directly responsible to the Minister of the Federal Territory on behalf of the Federal Government. The Minister can issue directions to the Mayor in relation to the duties imposed on him (Section 15). The Mayor may act in opposition to his Advisory Board but only after consulting with the Minister, and recording his reasons for not accepting the Board's advice in writing (Section 10). This responsibility is handled differently when the Prime Minister or a Deputy Minister in the Prime Minister's Department becomes the Minister for the Federal Territory.

Unlike other states in the Peninsula, the Federal Territory functions through a highly centralized system of control, with an appointed Mayor but no elected Council. Act 267 was introduced primarily to implement the Structure Plan system in the Federal Territory in line with the system adopted by other States in Peninsular Malaysia. However, the provisions in Act 267 differ in certain areas from Act 172; for example, planning approval is vested in the Lord Mayor, while the approval authority for the Development Plans (Structure and Local Plans) is the Minister for the Federal Territory.

Gnarajah (1997) summarizes the unique status of the Federal Territory (Planning) Act as follows:

- a) making the Minister for the Federal Territory responsible for the general policy for the planning and development of all land in the Federal Territory (Section 3);

- b) establishing the Federal Territory Advisory Board to advise the Minister on the draft structure plans, draft local plans, the setting up of action areas, the declaration of development areas and any other matters the Minister may refer to the Advisory Board (Section 4);
- c) providing the Minister to appoint a committee of not less than three persons to consider and report on objections laid against the draft structure plan;
- d) requiring the Federal Territory Advisory Board to forward the report of the committee in conjunction with its comments on the report, to the Minister for the Federal Territory who then is to approve with or without modification or reject the development plan;
- e) providing for the alteration, addition, revision or replacement of the Structure Plan which can be taken at any time at the instance of the Minister or the Mayor subject to the directions of the Minister;
- f) allowing the Mayor, within the constraints imposed by the Structure Plan, to prepare, alter, repeal, or replace local plans, which, when finalised are opened for public scrutiny and objections or representations. All objectors who request a hearing are given one by the Mayor who can adopt the plan with the approval of the Minister;
- g) providing for the Minister to suspend the whole or part of the development plan for such period or part of the plan and at his own instance or on the recommendation of the Mayor as may be deemed expedient; and
- h) introducing a system of development control and development charges similar to that contained in the TCPA 1976.

3.6.3 The Town and Country Planning Act 1976 (Act 172) and Act 1129 - amendment 2001

The TCP 1976 (Act 172), the Principal Act, was amended in 1993, 1995 and further in 2001. The Act 172 was prepared to apply to all states in the Peninsula except City Hall of Kuala Lumpur (CHKL) and Putrajaya. Act 172 was introduced in accordance with the requirements of Article 76 (4) of the Constitution that states the need for planning acts “for the purpose of ensuring uniformity of law and policy for the proper control and regulation of town and country planning in local authority areas in the States of Malaya”. The states were able to introduce the entire Act for all of the state, or part of the Act for all of the state, or part of the Act for part of the state. The State Authority has responsibility for general policy in respect of the planning of the development and use of all land and buildings within the area of every local authority in the State and can issue directions to local authorities which, if not inconsistent with the Act, have to be followed.

The TCP Act 1976 empowers the State Authority to establish a State Planning Committee to consider the preparation of the structure plan. With respect to the development control, the Act empowers every local authority to function as local planning authority for its area. The prime functions of the local planning authority are to regulate, control and plan for the development and use of all land and buildings within its area and to perform such other functions as the State Authority or Committee might from time to time assign to it.

Before Act 172 was amended, the planning system introduced in the TCP Act 1976 (Act 172), is similar to the Town and Country Planning Act 1968 England and Wales

(Lee *et al* 1990). Act 172 introduces the Structure Planning System that is more concerned with strategic actions and guidance. The planning system consists of two levels of development plans: Structure Plan and Local Plan. However, Act 172 also allows local planning authorities to continue using the town plans prepared under the FMS CAP 137, when dealing with planning applications which fall within the town plan area. This is in accordance with Section 59 (6) of FMS CAP 137 that states: *“any planning permission, approval for development, or approval of building plan will continue to have force and effect”*; this includes the approval of town plans.

The Structure Planning System is believed to be effective in guiding the planning authorities in exercising planning functions. In addition, Act 172 also creates an administrative set up, namely, the Federal Town and Country Planning, State Planning Authorities and Local Planning Authorities, and specifies their functions respectively. The content of the Act refers to the approving authority, the preparation of development plans, the development control, the tree preservation order, and special areas (Act 172, 1976). Several problems which occurred in administering physical development between Federal, State and Local Authority led to the amendments of Act 172 with Act A933-2001 and Act 1129 - 2001. The latest amendment is called Act 1129 (TCP 2001), produced pursuant to Article 74 (1), Article 76 (4), and Article 80 (2), that is, to make provision for an executive role for the Federal Government.

TCP 2001 allows the states to decide when the Act comes into operation, and whether all or part of the Act is used. It also provides for the establishment of the National Physical Planning Council (NPPC) consisting of a Chairman (the Prime

Minister); a Deputy Chairman (the Deputy Prime Minister); the Minister responsible for Town and Country Planning; and other Ministers as in Subsection 2A(1). The TCP 2001 formally establishes the position of Director-General of Town and Country Planning and identifies his functions including that of being Secretary to the NPPC (Subsection 2B (1) and (2)). Most importantly, the TCP 2001 makes the state responsible for the regulation, control, planning and coordination of all development activities in their respective areas (Section 8). With regard to development plans, the TCP 2001 provides for: the preparation of a National Physical Plan (NPP) which in general forms shall be a written statement of strategic policies for the purpose of determining the general directions and trends of the physical development of the nation; the preparation of state Structure Plan that take account of the NPP and other relevant national policies; the preparation of Local Plans that conform generally to the state Structure Plan; and the preparation of Special Area Plans which can be designated to areas for special treatment, improvement and re-development.

With respect to development control, TCP 2001 amends the development control system to require that the state committee seek the advice of the National Physical Planning Council on applications for new township with a population exceeding 10,000 or covering an area of more than 100 hectares or both; for the construction of any major infrastructure or utility; and for the development affecting hill tops or hill slopes in environmentally sensitive areas. TCP 2001 also extends the scope of the development proposal report to include an analysis of the social implications of the development for the area; gives the development plan precedence over building by-laws in the event of any inconsistencies between the two; and increases the penalties incurred for offences related to unauthorised development.

The levels of planning authorities and amendments made to the Act are discussed in the following subheadings.

3.6.3.1 The Federal level

Since 1966, the government has been continuously drawing up 5-year Malaysia Plans. Up to the present, eight 5-year plans have been introduced. Among others, the 5-year plans also have a consistent objective of spatial planning that is meant to promote balanced regional development. However, there is no provision for the planning authorities to take the 5-year plans into account when considering planning applications. Therefore, it would appear that the objectives of the plans are applied on an *ad hoc* basis by the Regional Development Authority, State and Local Planning Authorities. In 2001, Act 172 was amended by including the National Spatial Planning Council in the Federal Government. However, the new role does not supersede the role of implementing the 5-year Malaysia Plan. In Act A1129, the National Spatial Planning Council is to be established with the Prime Minister as Chairman and the Deputy Prime Minister as Deputy Chairman. The Director General of Town and Country Planning will be the Secretary to the Council (Part II, Act A1129). Among other functions, the Council will give advice to the Federal Government or the Government of any State on matters relating to the Town and Country Planning required under this Act. The Act is also concerned with the regional planning which will cover an area of two or more states and will be identified by the Regional Planning Committee. This Committee comprises members as specified by Act A1129 under Part IIA. The most important person in this Committee is the Chairman, who will be appointed by the Prime Minister. The functions of the Committee are to give advice and assistance to the State Planning

Committee and local planning authorities regarding the appropriate Development Plan for the region, to plan and co-ordinate the provision of infrastructure and facilities and to establish uniform processes and procedures to be used by the Federal Government and the State Government and local authorities concerned with the region.

The pivotal product of the National Spatial Planning Council is the National Physical Plan, that is prepared by the Director General of Town and Country Planning and reported to the Council. This plan is only for Peninsular Malaysia and is to be reviewed every five years in tandem with the review of the 5-year Malaysia Plan. However, Act A1129 does not mention the approval process, but states that it shall be the general duty of the Federal Government and the Government of every State to assist in ensuring that the objectives of the National Physical Plan are achieved.

3.6.3.2 State Planning Authorities

Act 172 specifies the members of the State Planning Authority, which comprises the Chief Minister as the Chairman, and also includes the State Secretary and all Heads of government departments in the state. The State Planning Authority is responsible for the general policy in respect of planning and use of all land within the local authority area and may even give directions to the local planning authorities.

The Constitution provides that both land and land-related subjects such as forests, agriculture, hills and mines as well as local government fall within the State list. This explicitly empowers the state to play a more significant role in town and country planning than the Federal government. The way in which the states can play a central

role in town and country planning is clearly seen in the Planning Act 1976 and the National Land Code 1965.

The National Land Code vests authority in the State Authority in respect of conversion and subdivision of land. The State has to be satisfied that the necessary approval of the planning authority has been obtained and that it is not contrary to any plan approved by the state authority. However, under the Act 172 (1976), the state had no State Development plan to guide development. This is one of the shortcomings in coordinating planning at local authority level. Therefore, the amended Act 1129 in 2005 states that the structure plan applies to the whole state, replacing existing structure plans that are only prepared for a part of the state. The state level structure plan will provide only one development plan to guide all local planning authorities in a state. Thus it seems that the State Planning Committee is a central component of the statutory urban planning system and has powers to influence local planning authority decisions.

3.6.3.3 Local Authority

Historically, town planning in Malaysia is primarily tied into the local authority administration. There is a clear statement in the TCP Act 1976 that states that the local authority is the local planning authority for its area and responsible to prepare the development plans for the area. In this respect, the local planning authority is responsible to prepare local plans within its area. In addition, Act 172 also explicitly specifies that the local authority has to prepare planning rules and, implicitly, the non statutory development plans (TCP Act 1976) as well. If there is no local authority in certain areas within the state, the State Authority has to declare a designated planning

area and to appoint a Local Planning Authority (LPA) under Section 5(3), TCP Act 1976. Usually, the LPA is selected from the nearest local authority – either the District Office or the State Development Agency (Jansen, 2001).

A Local Planning Authority (LPA) is required to initiate and perform specific functions related to urban planning. The functions can be summarized as below:

- a) To regulate, control, and plan development and use of all land and buildings within its area;
- b) To undertake, assist in, and encourage the collection, maintenance, and publication of statistics, bulletins and monographs, and other publications relating to town and country planning and its methodology; and
- c) To perform such other functions as the State Authority or the Committee may from time to time assign to it.

3.6.4 National Land Code, 1965 and its amendments

Land is defined clearly in the national land code and in the Town and Country Planning Act as the surface of the earth and anything made up the surface of the land (see the TCP Act 172 and the NLC 1965). Based on the constitution, all land belongs to the state. The alienation of land to private or public bodies is the prerogative of the state executive council (under the State List). The land office is to be responsible to register all land alienated to the private or public. Under Article 13, the owner of the land is ensured the right to use the land and the air space without any 'deprivation'. The Town Planning practices in the country do not contravene any rights conferred to the land owners either by planning decisions or by preparing and adopting any development plan (Lee *et al* 1990).

How the NLC 1965 facilitates land development can be seen in Section 43, which gives the state the authority to dispose of land to an eligible body or person by way of alienation of state land (sections 76-92); temporary occupation license (65-69); permit to extract rock material (70-75); permit to use air space (75A-75G); disposal of underground land (92A-92 I). Before the land can be made available for development, it is important to ascertain the facts about the land tenures.

3.6.4.1 Land Tenure (Title and ownership)

Land is still considered as state land until a land title is registered by the state authority. The state authority may alienate land for a lease of 99 years or in perpetuity (freehold) under section 76 of the National Land Code. The land title also shows a number of other particulars such as the amount of quit rent, conditions and restrictions, and categories of land use. However, there are still certain conditions not stated on the title that are stated in the law only. These are called 'implied conditions', with which the proprietor needs to comply. Security land tenure in Malaysia is one of the fundamental aspects of the democratic system of government (Nik Mohd. Zain, 1997). Besides land lease and freehold, there is also land alienated only for the Malays. This is called Malay Reservation land, and it carries pivotal restrictions over transaction to non-Malays. In Sabah and Sarawak (East Malaysia) it is called Natives Reserves (Article 161 A (5) of the Federal Constitution). This reserved land is unfavourable for housing development due to restrictions against dealing with non-Malays/Natives, and would therefore not be good mortgage collateral for banks or financial institutions (Marbek. 1997).

There are six pieces of legislation concerning Malay Reserve land in Malaysia today. For the former Federated Malay States (Selangor, Perak, Negeri Sembilan and Pahang), the law is contained in a uniform legislation – the Malay Reservation Enactment (Cap 142), which has been in force since 1913, and has been amended and updated from time to time. In addition to that, there are five other state enactments – one enactment for each of the former unfederated Malay states: Kelantan (1930), Kedah (1931), Perlis (1935), Johore (1936), and Trengganu (1941). There is no equivalent law for Melaka, Penang, Sabah and Sarawak. Although Melaka does have its Malay Customary Land (MCL), it is estimated to be about a quarter of all alienated land in the state under MCL. However, the MCL was abolished when National Land Code (Penang, Malacca Title) Act 1963 Part VIII – only for Malays - came to force (<http://ptg.melaka.gov.my> accessed July 2007)

While there are differences in several aspects of the law, they cannot be regarded as fundamental in nature. Generally there are common threads running through the fabric of the law in Cap 142 and the other five states enactments. Salleh Buang (1997) summarizes these similarities as follows:

- a) There is a blanket prohibition against alienating Malay reserve land to non-Malays. While the National Land Code 1965 gives wide powers to the state authority to alienate land to whomsoever it wishes, whether in perpetuity or for a term of years (not exceeding 99 years), the enactment categorically states that no Malay reserve land can be alienated to non-Malays.
- b) There is also a blanket prohibition against all forms of land ‘dealing’. While the NLC 1965 empowers the proprietor to enter into any ‘dealing’ in respect of his land (such as transfers, leases, charges, liens, and easements), the

enactment clearly states that he cannot do so if the other party is non-Malay.

Any dealing entered into with non-Malays with regard to Malay reserve land is null and void.

- c) The enactment also prohibits certain actions affecting the land, covering restriction on dealing by attorneys, on caveat based on lien by deposit of titles, on other caveat, on attachments in execution, and on trusts being created in favour (or for the benefit) of Malays.

Table 3.3:
Total Malay Reserve Land by States of the Peninsular Malaysia

States	Total Area (Hectares)	Malay Reserves (Hectares)	Percent of Malay Reserve Land
Perlis	79311	37483	47.26
Kedah	940201	830683	88.35
Perak	2095364	877254	41.87
Selangor	791284	173599	21.94
Negeri Sembilan	662714	209881	31.67
Johor	1893837	278170	14.69
Pahang	3587698	518022	14.44
Trengganu	1292357	226	0.017
Kelantan	3507992	1493130	42.56
Kuala Lumpur	24287	787	3.24
Melaka	24287	Na	Na
Pulau Pinang (Penang)	164580	Na	Na
Total	13124222	4419245	33.67

Source: Ministry of Land and Development Corporation, 2000.

The common aspects of the enactments are: a blanket prohibition against alienating Malay reserve land to non-Malays; all forms of dealing with non-Malays; and actions affecting the land. These are different from the NLC, where the state authority can alienate land to whoever it wishes and the proprietor can enter into any dealing with respect to his land. Salleh Buang (1997) argues that the impact of this provision is in

terms of the amount of land that the private housing developers can deal with, with regard to housing developments meant for open selling (that is, irrespective of the race of the buyers).

3.6.4.2 Land transaction

A land transaction occurs when agreement is reached between two parties, the seller and the buyer. This transaction has to be registered in the land office. Though this seems to be simple event, the time taken is usually longer than expected (Salleh Buang, 1997). There might be an individual owner of the land, or multiple owners. In certain cases interested parties are easily contactable; in other case, they are untraceable. Upon application for transaction, that is, an application to transfer the registration from the former to the new owner, the land office has to carry out investigation among the interested parties. In the case of untraced interested parties, the land cannot be transacted. Therefore, not all land can be transacted. Land with restrictions on transactions is clearly outlined by the NLC. The land office will impose stamp duty of 0.01% of the land value or the land price on the transaction. If the land can be transacted, the developer will face fewer problems. The definition of housing developer may include land owners without any transaction before the development.

3.6.4.3 Procedures for land development

There are several sections of the NLC dealing with land development. If the proposed development only involves horizontal types, the NLC Sec.124 (land conversion), Sec.137 (boundary subdivision), Sec.142 (ownership subdivision), Sec.148 (amalgamation), Sec.204D (surrender and re-alienation), and Sec.124A

(simultaneous application for conversion and boundary subdivision) are applied. If the proposed development involves underground construction, NLC Part V (A) is applied. The new provisions are Sec. 92a – 92i under the Amendment Act A752/1990. If the development is vertical, the Strata Title Act is applied.

a) Application for conversion

The land owner or the agent has to submit the application for land conversion to the land office concerned. If the land is to be for housing, an application has to be made to convert the category of agricultural land or other uses to 'building'. In some cases, the land does not have category of uses shown on the land title, so an application should be made to the land office to have it put in the 'building' category. Simultaneously, the application can also include an application to revoke the condition previously imposed, such as 'rubber' or 'paddy field'.

b) Application for 'partition'

This application is made when the land owner proposes a subdivision of a large piece of land into several small plots. Each small plot will then have an individual title. The title can be registered under the same person or different persons. This application is required for housing development involving terraced, detached and semi-detached houses. In other circumstances, the plot for flats can also be placed under this type of application. However, the applicant must first obtain planning permission from the Local Planning Authority. This puts the local planning authority at a higher level of authority than the State, because it gives approval before the State Planning Authority. This sometimes raises issues relating to the level of the authority

– the proper procedure should be: an applicant must obtain approval from the state first, then get approval from the local authority.

c) Application for Subdivision

The subdivision of land allows the land owner to subdivide his land for the purpose of selling it or distributing shares to all sharing owners or all portions to a single owner. It could allow for land owned by many stake holders to hold individual portions. In such a case, all stake holders will have to submit a joint application for subdivision to the land office for approval. If approved, for example, a person may hold one sixteenth of the total land area.

d) Application for Amalgamation

Land can be amalgamated by combining several adjoining lots into one single lot. For this purpose, all land lots must be held by the same owner. This means that if the land intended for amalgamation belongs to another person as well, the intended owner should buy the adjoining lots from that person beforehand in order to be able to amalgamate the land under his or her name. However, this can only be done subject to the condition that the land is under 'permanent title', within the same district/town/city, and must share at least one side boundary.

d) Surrender and re-alienation

Several lots of land with adjoining boundaries and owned by one owner can be surrendered to the State; the State will then alienate the land to the owner with individual titles. If the title of land is 'free hold', the individual titles derived will also be 'free holds'. If the title of land is 'lease hold', the individual title derived will

be 'lease holds' and the period of lease will be not less than the balance of lease period of the former. This application is usually done by land owners who wish to develop the land into housing developments, in accordance with the approved housing layout plan. This means that the land owner must first obtain approval from the local planning authority for the housing layout. This provision can cause dilemmas for the local planning authority, because the approved layout plan might not be agreed to by the state planning authority. Land owners with temporary titles such as Qualified Title (QT) cannot apply for surrender and re-alienation.

e) Strata Title

The application for strata title can only be made in the case of multi-storey buildings (flats) sitting on 'permanent title' lots which have already been given the Certificate of Fitness (CF). The strata title will be given to the individual units in the building. Therefore, this application does not concern housing land. The strata title can also apply to other types of multi-storey buildings.

In sum, it can be stated that the NLC 1965 provisions pertaining to planning and use of land empower the State Authorities to alienate land and to reserve state land; to declare any area to be a town or village under S.11.NLC; and to determine categories of land uses, i.e., agriculture, building, and industry.

3.7 The Town and Country Planning in Practice

Changes in the practice of town planning in Malaysia can be portrayed in three phases: before Act 172 (1976), the period between Act 172 and Amended Act 1129

(2001) and the period after 2001 up to the present. The changes are discussed under the following sub-topics.

3.7.1 The Development Plan

The planning system in Malaysia has three levels of operation. The relation between these levels is shown by Figure 3.4. Under the amended TCP 2001, the development planning system comprises three sets of development plans.

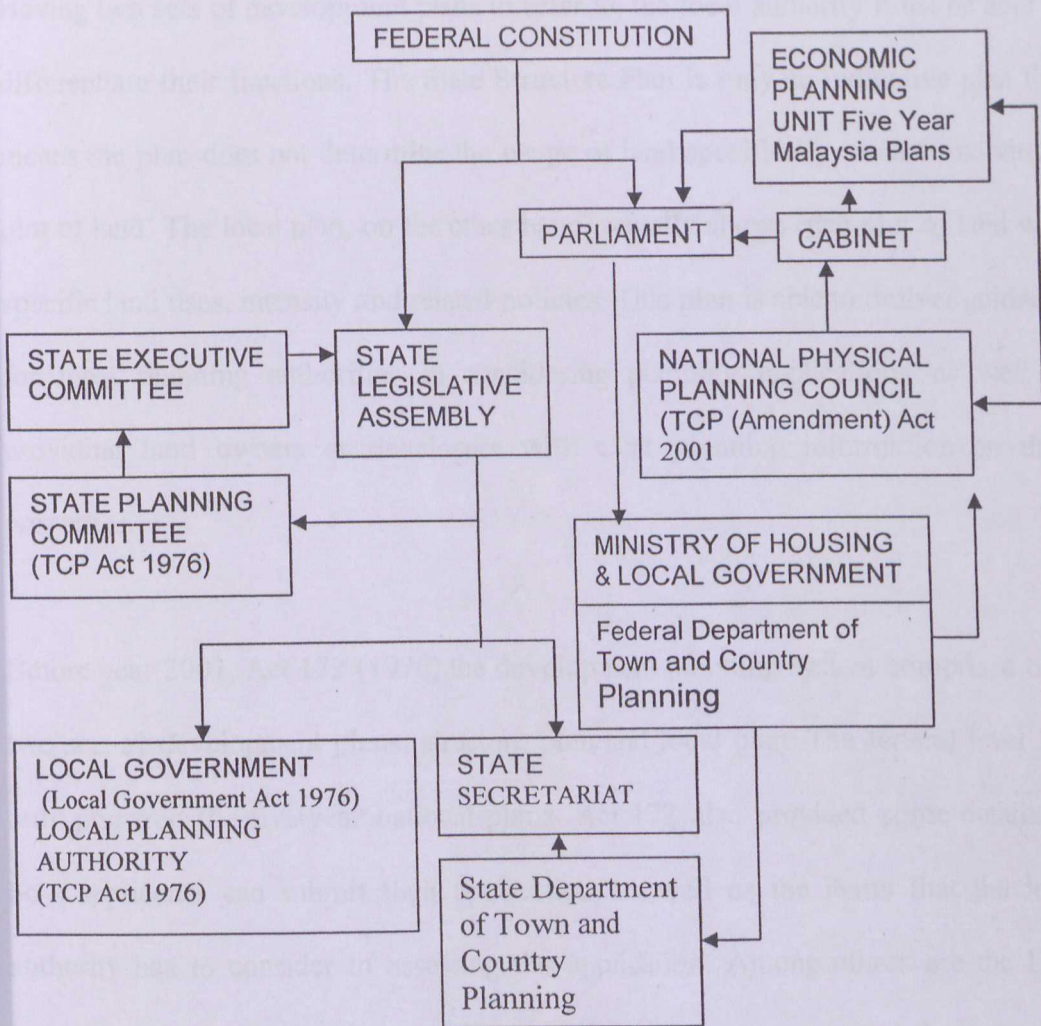


Figure 3.4: The relation between state planning authority and the federal planning department.

Source: Bruton (2007).

The Federal level has the National Physical Plan (NPP) as well as the Five Year Malaysia Plan. The state level must first have the State Structure Plan (SSP) and the local authorities have Local Plans (LP). Since the local authority has the leeway either to adopt the whole part of the Act or only a part of the Act (wholly or partly), some local authorities may not have development plans in accordance with the Act 172, but might still use the old Town Plans (Bruton, 2007).

Having two sets of development plans to refer to, the local authority must be able to differentiate their functions. The State Structure Plan is only an indicative plan that means the plan does not determine the usage of land specifically to each individual plot of land. The local plan, on the other hand, actually shows each plot of land with specific land uses, intensity and related policies. This plan is able to deliver guidance for local planning authorities in considering planning applications as well as providing land owners or developers with clear planning information on their properties.

Before year 2001, Act 172 (1976) the development planning system comprised only two sets of development plans: structure plan and local plan. The federal level had only prepared the five-year national plans. Act 172 also provided some details on how applicants can submit their application, as well as the items that the local authority has to consider in assessing the application. Among others are the DPR (Development Proposal Report).

The Act 1976 has been twice amended, once in 1995 (Act A933) and the latest amendment, Act A1129. Both the amendment Acts aim to settle the problem of

procedures involved in preparing the Structure Plan and the Local Plan. The approval body of the Structure Plan is the Chief Minister of the state concerned. The authority to approve the local plan is conferred on the local authority. It was found that the body that prepares the plan, also has the power to approve what it has done. Therefore, the act had to be amended to give power to the higher level of authority. The second amendment caters for the National Physical Spatial Plan, which also faced similar problems in terms of the approval authority.

3.7.1.1 The Structure Plan

The scope and content of the Structure Plan spelled out by Act 172 is very clear. It must have a written Statement and such diagrams, illustrations and descriptive matters as the Local Planning Authority thinks appropriate. The scope of the written statement is to formulate the local planning policy and general proposals in respect of the development and other use of land; to state the relationship of those proposals to general proposals for the development and other use of land in neighbouring areas which may be expected to affect the area; and to contain such matters as may be prescribed or as the State Committee may direct (TCPA, Sec. 7(1) & 8 (1)).

To comply with the requirements of the Act, the process of preparing the Structure Plan may take a long time. Among the time-consuming matters are: public participation; approval from the minister; and a detailed socio-economic survey. The survey, however, is not strictly necessary as it is only indicative, and helps in the formulation of long-term policies (15 – 20 years). The long time taken to prepare the structure plan will result in the plan being outdated by the time it is implemented, as has happened in England (Bruton 2007). This view is certainly relevant in the

Malaysian context, as can be seen by looking at what has happened in Kuala Lumpur. Though the Kuala Lumpur Structure Plan is a statutory document, the development of Kuala Lumpur City Centre (KLCC) is not actually in line with the stated control figure for the development of the Kuala Lumpur City Centre.

Therefore, City Hall Kuala Lumpur, as the local planning authority, has learnt that changes in economy and physical environment imply that the Structure Plan is subject to review (CHKL, 1990). The period of review is usually left to the local authority to decide; generally, it is ten years after the adoption of the plan. During the revision of the Structure Plan, the development on the ground still continues, guided by the local plan. The issue of outdated structure plans will continue to recur. The structure plan studies for the whole Peninsula are as in Table 3.4, which shows that 97 structure plan studies have been carried out, but only 66 per cent of them have been deposited.

Table 3.4:
Structure Plan Study in Peninsular Malaysia up to 1999

Status	Num. of S. Plan	Percentage
Gazetted	64	65.98
Completed	33	34.02
Under Study	0	0
Total	97	100

Source: Peninsular Town and County Planning Department 1999.

The gazetted structure plans before year 2001 have covered the areas identified by the study teams. A structure plan may cover an area of several towns or several local planning authorities. Usually, a structure plan only covers a town area under a local authority. Therefore, the size of the area covered by the structure plans varies. With the introduction of the Amendment Act A1129, future structure plans will cover the

whole state. Consequently, all structure plans that have been prepared under TCP Act 1972 before its amendments have to be reviewed again. For the time being, areas that already have gazetted structure plans will remain as guides for the local plan study as well as for the development control exercises for that particular area because the existing structure plans have outlined wider policies for that area. In contrast, the local planning authority in areas without any gazetted structure plan will have to wait until the state structure plan is gazetted.

3.7.1.2 Local Plan

The local plan can be prepared during the preparation of the structure plan or after the adoption of the structure plan (Act 172). The local plan has to show in detail what the structure plan indicates. For example, if a certain area has been earmarked in the structure plan for immediate improvement or development, a local plan must be prepared to elaborate on how the area can be developed or improved. The time taken for the local plan preparation should be shorter than the structure plan because it covers a smaller area than the structure plan. However, due to the amount of detail that it has to show regarding land use categories and the intensity of uses for each piece of land, the local plan is hardly produced.

Table 3.5:
Local Plan in Peninsular Malaysia until Sept 2003

Status	Num. of Local Plan	Percentage
Gazetted	42	24.45
Completed	78	47.27
Under Study	34	20.61
Under planning	11	6.67
Total	165	100

Source: Peninsular Town and Country Planning Department, 2003

As Table 3.5 shows, 42 local plans out of 165 have been deposited while 78 local plans are waiting to be deposited through government gazette. This implies that the development control exercise in areas without statutory local plan would have been based on the old general town plan, non-statutory development plan and structure plan.

Although the local plan will provide guidance on local development and planning control, difficulties and barriers to development may be caused by the fact that the broad categories of land uses employed in urban planning are slightly different from those identified by the National Land Code, 1965 (NLC). Planning land use categories show housing, industry, commercial, limited commercial, parks, open spaces, roads, utilities, community facilities, drain and river reserves, forest reserves, government reserves and burial grounds, whereas the NLC identifies only four categories: building, industry, agricultural and nil. As noted by Klosterman (1999), the zoning imposed by town planning may hinder the appropriate use of the land to recover the cost and value of the land; entrepreneurs may choose other land and leave the earmarked land idle.

In addition, town planning is unable to identify the best land use on a particular land plot; it shows a broad category land uses for each land plot as needed for a particular time period based on past trends (KLSP, 1984). Land owners have the right to decide land uses for their own land, and get endorsement for that use from the registrar of titles (NLC, 1965). Town planners, however, can still ensure that they get the type of land uses needed through the cooperation of the registrar of titles; for example, when a land owner applies for land conversion, the planning office can suggest to the land

office to refuse permission. This strategy is allowed by the procedures set by the Land Office; it will be further discussed in the sub-topic on application for land conversion. Most cases of applications for conversion occur when the local plan indicates a piece of land as residential, while the land title is still agricultural; the land owner is required to apply for conversion.

Not all areas within the local authority boundary have local plans. Some local authorities may have their Structure Plan but may not have local plans. Local planning authorities may face difficulties in using the Structure Plan as a guide, since policies stated in the structure plan may indicate certain amounts of development including type, floor spaces and density (quantum) of the development. However it is not enough to merely state how much is allowable on each particular lot. In addition the structure plan does not indicate where the infrastructure is to be laid out. Therefore, the local planning authority still needs a detailed plan showing the possible usage of each corner of the land concerned, the possible types and designs of development, the buildings that need to be conserved or preserved, the areas needed for community facilities and reserves and the proposed infrastructures.

The preparation of the detailed local plan may take several years before it is finally agreed upon by the planners and the decision makers in the State Planning Authority. There are three types of local plans: (1) District wide plans; (2) Action Area Plan; and (3) Subject plans. Act 172 only mentions the Action Area local plan that must be prepared when the structure plan has identified an area as an Action Area. Act 172 does not, however, mention the other two types of local plans at all. It is believed to be understood based on the guidance provided by the British planning system (Lee *et*

al, 1990). The local plan, like the structure plan, has to have a written statement and diagrams. For the district wide local plan, the area covered should be identified but must be smaller than the structure plan area. This means that more than one local plan can be prepared to cover the whole area of the structure plan. The District Wide local plan may show the broad categories of existing and proposed land uses, physical protection areas, traffic circulations and others as mentioned in Section 12 (3)(a-b). The Action Area local plan may be in more detail, showing how each piece of land is to be developed or improved. For example, there will be policies in place to protect, improve and restore buildings of particular architectural interest.

The subject plan refers to any local issues such as squatter housing. Any proposal put forward by the subject plan shall be taken into consideration in the preparation of both the District Wide Plan and the Action Area plan. Based on the above brief description of the types of local plan, much work must be done to fulfil the requirements apart from the statutory requirement. Moreover, monetary factors will influence the preparation as well as the implementation of the plan. Recently, a rural development plan has been introduced as a local plan, including District Centre Development Plan and Indigenous Resettlement Plan. These plans are seen as similar to the district wide plan but emphasizing the rural areas, that is, areas outside urban areas and comprising predominantly agricultural areas.

The local plan is also subject to revision especially once the structure plan has been reviewed. The rationale for revision is simply that as time passes, so do physical development needs as well as the political masters who ultimately make decisions. Because preparation of the local plan is so time consuming, most local authorities

prefer to keep local plans as un-statutory document, meaning that the local authority may use it as development control guidance only in dealing with planning applications. In this way the local authority can solve the problem of the rigidity of the plan in relation to the ever changing urban environment. The flexibility of the local authority may have been guided by the policies in the structure plan.

The Federal Territory Kuala Lumpur, as it applies Act 267 1982 for planning, has three sets of land use zoning and density plans and Central Area Plan (Comprehensive Development Plan 1041, 1040 and 1039 respectively). These plans are prepared under the Act 107 (1972) and yet are still in force until such time they are replaced by the new gazetted local plan. The Kuala Lumpur Structure Plan (KLSP) was gazetted in 1984 but merely functioned as the strategic planning and could not replace the position of those Comprehensive Development Plans. Even though City Hall Kuala Lumpur (CHKL) has prepared several draft local plans until year 2000, the process for adopting the plans has not been materialised due to time consuming and political influences (CHKL 2000). Due to rapid changes in economic and physical development factors, CHKL has reviewed the KLSP in year 2000 and the draft local plans are treated as non-statutory documents or development guidelines. The new KLSP was gazetted in 2004. By year 2007, CHKL has prepared a new local plan for the whole city boundary and been in the process of adoption.

The Comprehensive Development Plans are being referred to in evaluating planning proposals within the area concerned. The 1041 plan shows clearly the boundary of land uses types and the 1040 plan shows density zones ranging from 10 persons per acre to 400 persons per acre. The 1039 plan shows more details about the uses of

each plot of land together with their building lines and intensities (building height, plot ratio and density). One of the advantages of the zoning system is that it could give land owners or developers some degree of certainty about whether or not they will be able to carry out development. Conversely, among the disadvantages of the zoning system are the rigidity in terms of allowable land uses types and intensity and also the rigidity of planning decisions. Moreover, the out-dated zoning plans do not cater for the current changes in technology and demand (Bruton, 2007). According to economic theory, the zoning system limits the maximization of the capital on certain sites and affects the revenues to land owners (Harvey, 2000). For instance, the site could be developed for higher density; if the site is designated as lower density by the local planning authority, this limits the amount of potential capital investment in the site in question. Conflict of interests also may occur when the land use zoning shows a particular site for housing; a proposed commercial development can not be carried out until the application for converting the residential land into commercial is approved by the local planning authority. Any change to the land use zone is considered an amendment of the town plan and is thus required to undergo a similar process to the preparation of a town plan. Inevitably, the process of amending the town plan will take several years and cause delays in planning decisions (Sen, 1991).

3.7.4 Development Control

Any 'development' to be carried out in urban areas or within the local authority boundary has to obtain planning permission. The definition of 'development' has been spelled out in TCP Act 172 as "the carrying out of any building, engineering, mining, industrial, or other similar operation in, on, over, or under land, the making of any material change in the use of any land or building or any part thereof, or the

subdivision and amalgamation of land; and “develop” shall be construed accordingly’ (Sec.2, TCP Act 172, 1976). Thus, all physical changes made on the land need planning permission. The provision for development control is found in the National Land Code, 1965 (NLC1965) and Town and Country Planning Act 1976 (TCP Act 1976). However, the TCP Act 172 (1976) provides a clause for exception for certain activities stated in Section 19 (2) such as maintenance or improvement works within a building without causing external effects, erecting temporary structures for religious ceremonies, the resettlement of workers, and excavation works. A housing project, however, (which usually constitutes subdivision and amalgamation of land) clearly requires planning permission.

Table 3.6:
Adoption of Parts of Act 172 by States and Dates

States	Parts of the Act	Date Gazette
Perlis	I – III	22.12.1983
	IV - IX	3.12.1992
Kedah	I – III	20.11.1986
	IV - IX	31.5.1990
Penang	I – IX	8.11.1984
Perak	I – III	31.8.1989
	IV - IX	27.6.1991
Selangor	I – II	23.11.1978
	III	4.12.1986
	IV – IX	25.4.1996
Negeri Sembilan	I – III	-
	IV - IX	26.9.1996
Melaka	I – III	19.12.1985
	IV - IX	8.12.1994
Johor	I – III	27.12.1984
	IV - IX	27.2.1986
Pahang	I – IX	3.8.1995
Trengganu	I - III	18.12.1986
	IV - IX	1.1.1987
Kelantan	I – III	29.4.1987
	IV - IX	28.11.1988

Source: FDTCP, Sept.2003.

The Act 172 (1976) spells out the procedures for development control in Part IV. Since the state has the choice whether to adopt the Act wholly or partly, some of the states adopted Part IV only in the 1990's; prior to that, they had been using individualistic procedures for more than 20 years. This has resulted in different procedures for planning applications and consideration among state planning authorities (Sen, 1991).

As Table 3.6 shows, local planning authorities took a long time to adopt Part IV for development control; furthermore, different states adopted Part IV at different times. The recent date of adoption implies that there was a long period of time when the local planning authorities used the old planning legislations and regulations in dealing with planning applications. Moreover, it also means that changes in land uses were handled without proper guidance. Consequently, some land owners gained windfalls, while developers and investors faced uncertainty. Act 172 (1976) also has adequate provision for planning practices. They can be discussed under the following sub-headings.

3.7.4.1 Planning application

Application for planning permission has to be made to the local planning authorities. There are 101 local planning authorities, comprising 1 City Hall, 4 City Councils, 28 Town Councils and 68 District Councils (FDTCP, 2003). The Act states that the land owner shall submit the application for planning permission. If the application is not submitted by the land owner, consent in writing shall be obtained by the applicant. For an application to build buildings, the applicant can be asked to provide information on level of land, building line, building design, building set back, access

to the land and other matters as the local planning authority thinks appropriate. For applications in areas without local plan, the local planning authority will ask the adjoining land owners to state their objections, if any, within 21 days upon receipt of the notice. If there are objections, the local planning authority will conduct hearing sessions before making a decision. The process of planning approval is shown in Figure 3.5, 3.6 and 3.7. It is noticed that several steps in housing development are involved in planning permissions or approvals but in different planning terms. There are applications for: land use conversion; lay out approval with proposed densities and component of various types of land uses in the project; development order; and amendments to the approved plan.

3.7.4.2 Application for conversion

The power to approve land conversion lies with the State Authority while the power to approve subdivision plans lies with State Director of Land and Mines, whereas planning permission is given by the Local Planning Authorities (usually the local authority).

The application for conversion only applies if the proposed development is in a different land use category from the stated land use category in the title. The land title only states agriculture, building, commercial, and industry. The application for conversion can be made at the respective Land Office. For agricultural land to be converted to residential land, one has to apply for conversion from agriculture to building. The Land Office, upon receiving the applications, will refer them to various technical departments including the planning department of the local authorities concerned (HDA, 1995). Although there is a procedure, however, the application to

convert the land use category or to amalgamate land can be made simultaneously to the Land Office (INSTUN, 2001).

In dealing with applications for conversion, the planning department of the local authorities has to take into account existing development plans: either the Structure Plan or Local Plan of the area. In this situation, the process of getting views from the planning department as well as other technical departments is also time consuming, and time is crucial to developers. Because of this, the sheer length of the planning process, from the moment the application is received to the point when a decision is made, may result in some applicants losing interest (Lawrence, 1997).

The number of processing officers may also be a major cause in the delay of planning approvals in local authorities (Mohd. Razali, 2002; Goh, 1997). Besides the number of staff, another issue is the number of *qualified* staff. The lack of qualified staff to process planning applications may have several implications on housing development, besides the delays this lack causes. Common complaints made in housing studies are: the unhealthy housing environment; poor location of housing areas; and improper setting of infrastructures and facilities such as uncovered storm drains and disconnected residential roads. All these matters should be evaluated by qualified town planners when the proposal is submitted by the developers. Developers usually appoint Architects to be their designers on large housing projects, without consulting town planners. Though the architect can draw beautiful layouts, these other vital details are overlooked because architects do not take into account the overall planning area. Because of this, the problem comes back to the applicant,

while the submission plan always faces amendments to the plan before it can go forward in the process.

Amendments to the approved plan also commonly occur during the processing planning application. Developers frequently change their minds when the market changes (Goh, 1997). For example, 1990 saw a big demand for condominiums; the subsequent glut of condos made the unit prices drop sharply, and the possibility of sales of new units was slim. Developers therefore realised that new types of housing would be more profitable. They therefore changed their approved plans, and resubmitted their applications for amendment. The process for these kinds of applications can be as time-consuming as the first application.

In the processing application, several steps have been identified. Starting with the receipt of the application, the second step will be the file charting, then the evaluation by the technical assistants and cross checking by the town planning officers. The application is then forwarded to the department meeting and then to the technical meeting; at this stage, various comments are made, and a decision is made about the application. As mentioned earlier, the types of development also determine the steps in processing step. If the development involves change of land use, increase in density, amalgamation of land and subdivision of land, the procedures set up by the national Land Code 1965 are applicable and must be followed. In this case, it may be possible to obtain approval for the application from the land office, before the application for the development order is made. The land office, of course, will refer to the planning department for comment on the change of land use, amalgamation and subdivision (this will be discuss in the application made at Land

Office). The application for increase in density and the increase of Plot Ratio for commercial uses have to be made at the planning office. These applications sometimes require 'approval in principle' first before the application for the Development Order can be made. The evaluation of this kind of application may need to refer to the local plan for guidance; where there is no local plan, the structure plan policies may be useful. Due to lack of skilled officers to interpret the relevant policies, the developer has an opportunity to influence the technical report and planning evaluation (Mohd. Razali, 2002). The method of determining the number of units for the parcel area depends on the efforts of the developers to include many kinds of dwelling sizes in order to get to the targeted number of units. However, the number of persons per unit is also sometimes a matter for discussion or argument. In certain towns, the number of persons per unit may be three and in other towns may be five. The statistical department data on population and residential units may help the evaluation process. However the adoption of the number of persons per unit dwelling must be made known to the public through government gazette. Without this gazette the decision on the density to be applied to the respective developers may not be valid (CHKL, 1981).

3.7.4.3 Lay out plan approval

The application for housing layout approval may be more complex than just a single housing unit application. In the layout plan approval, a plan area of more than 5 acres (2 hectares) must first be prepared by a qualified person (town planner or someone with another acceptable qualification). This requirement is, however, causing dissatisfaction among architects because formerly, they were allowed to draw up the

plans without town planners. According to Mahesan (1990), the procedures, which are generally adopted by many states, are as follows:

- a) Application for lay out approval can be made to the City and Municipal Council in some states, and to the land offices in others.
- b) Application can be submitted by the land owner or his agent
- c) The lay out plan should show the following in detail
 - i) Number and types of building proposed
 - ii) Usage of different types of building
 - iii) Open spaces where required
 - iv) Schools and community reserves where required
 - v) TNB sub-station reserves
 - vi) Water supply reserves
 - vii) Sewerage disposal reserves
 - viii) Existing contour lines and proposed formation levels
 - ix) Existing water courses and drainage proposals
 - x) Others as required by the authority
- d) In the cases referred to the land offices, the registrar will refer the application to various technical departments besides the planning office for comments.
- e) The town planning department will incorporate all comments to the lay out plan and forward the lay out plan to the Full Council Meeting for approval.
- f) The Land Office will request the land owner's consent which is indicated by signature on the plan and then the layout plan will be returned to Planning Office to be signed by the President of the City or the Municipal Council.
- g) Upon the return of the plan to the land office, the Registrar will prepare a Memorandum to the Director of Land and Mines.

- h) The Director of Land and Mines will forward the plan together with the Memorandum to the State Executive Council for a decision.
- i) If approved, the Director of Land and Mines will inform the Collector of land and inform the land owner.
- j) The land owner will resubmit the approved layout plan in an application for individual lot number.

The lay out plan also contains areas to be surrendered for public purposes such as roads, utilities, schools, religious uses and open spaces. The application to surrender these categories of land must be made to land offices. For the lay out plan that shows the subdivision of land, the applicant (developer) must employ a qualified land surveyor to prepare a proper survey plan. This plan is then to be resubmitted to the planning office to get its endorsement before the application can be made to the land office for individual title. This plan is called Reviewed Sheet Plan (RS Plan). With this RS plan, a developer may be able to stagger its development in phases, and apply for the 'development orders' for the selected phases. When the application is made to the land office, the RS plan is used for allocating the individual temporary titles. With the individual lot title, developers can start selling their components of the project.

3.7.4.4 Planning Permission/Development Order

The application for the development order (final stage) made to the local planning authority has to be in more detail. Sometimes a developer is asked to provide a perspective drawing or 'model'. The cost to prepare the 'model' is borne by the developer. The 'model' is sometimes returned to the developer but occasionally is

kept by the local authority to be used for purposes such as exhibitions. Usually, the developer uses the model for marketing their projects: the model allows the prospective buyer to have a look at location, sites and available units in the project.

The detailed submission includes various types of building plans and sketches. On the site plans that show land allocated for greens and building sites, the greens and building sites have to be clearly demarcated. Information on the intensity of uses, including total floor area, total number of units, types of units, residential density, and facilities such as car parking lots and utilities, has also to be reported. All calculations must be in accordance with the adopted planning guidelines and standards. All technical drawings such as circulation plan, landscaping plan, fire safety plan and sewerage plan should also be attached with the application. These requirements are meant to aid the planning department in the process of gathering comments from related technical agencies responsible for water supply, electricity supply, sewerage, roads and traffic and fire brigade.

The planning standard used by most local authorities is provided by the FDTCP. However, there will be some modification made to the planning standard to suit local characteristics. The differences in the planning standards used may cause difficulties for developers because they can not foresee the profit margin in their feasibility study if the planning standard is uncertain. For example, land requirement for community facilities might be so great that it leaves only a small plot for residential development. Developers may test their luck by submitting proposals which provide for potential shortage in the provision of various components, in case of differences in planning standards, but they may then have to face long delays in implementing

the project because of further scrutiny by the decision makers and the technical departments. Sometimes, the planning office asks for amendments to be made before the application reaches the decision makers (the state planning committee). The planning officers are responsible to prepare reports and recommendations for consideration and approval. Therefore, they have to be careful in recommending applications for approval.

Because town planning officers are so important to this process, the actual number of planning officers available can be one of the causes of delays in approval: if there are insufficient planning officers in the local authorities, more time will be taken for the approval process, e.g., two years (Mohd. Razali, 2002; Lawrence, 1997). This factor was evident during the economic boom, when numbers of applications rose, and it took longer than usual for applications to be approved. The inadequate number of planning officers in local planning authorities was a main factor (Mohd. Razali, 2002). The other factors that might cause delays in the approval process are the schedule of planning committee meetings in a week and the number of items discussed per meeting (Goh, 1997).

In addition the local authority may refer the application to the state planning office for consideration, resulting in the process taking a longer time than necessary. This happens to local authorities lacking qualified planning officers, who depend on a semi-professional planning officer (Assistant Planning Officer). The Assistant Planning Officer's lack of qualifications can result in there being insufficient analysis of applications recommended for approval, as well as misinterpretation of the intention of the development plan. Though a qualified planner might also

misinterpret the development plan, the probability of error is smaller compared to inexperienced and unqualified officers. The problems might also occur in local authorities without qualified planning officers, when the present requirement is to include the Development Proposal Report (DPR) and Environmental Impact Assessment (EIA) with the application. The decision maker with authority to approve or disapprove must have regard to the development plan and to other matters based on the provision of Section 22(2) of Act 172. The Section states that the Local Planning Authority has to consider:

such matters as are in its opinion expedient or necessary for proper planning particularly provision of the development plan (if any), provision of the under study development plan, provisions of Sewerage Services Act 1993, Proposed Development Report and Objections (if any) made under Section 21 (TCP Act 172, 1976).

‘Objection’ here refers to objections which might be made by adjoining land owners in areas without any development plan (Section 21). Although the Act does not spell it out clearly, the definition of ‘adjoining land owners’ is understood as the land owners who share common boundaries of the land in question (FDTCP 2003). The ‘provision of the development plan’ that has to be considered by planning authorities can be either the local plan or structure plan. However, the Amendment Act A933 (1995) clarifies this situation by stating that local authorities still have to notify adjoining land owners for objections unless there is a local plan for the area concerned. This requirement would lead to a longer time taken for the approval.

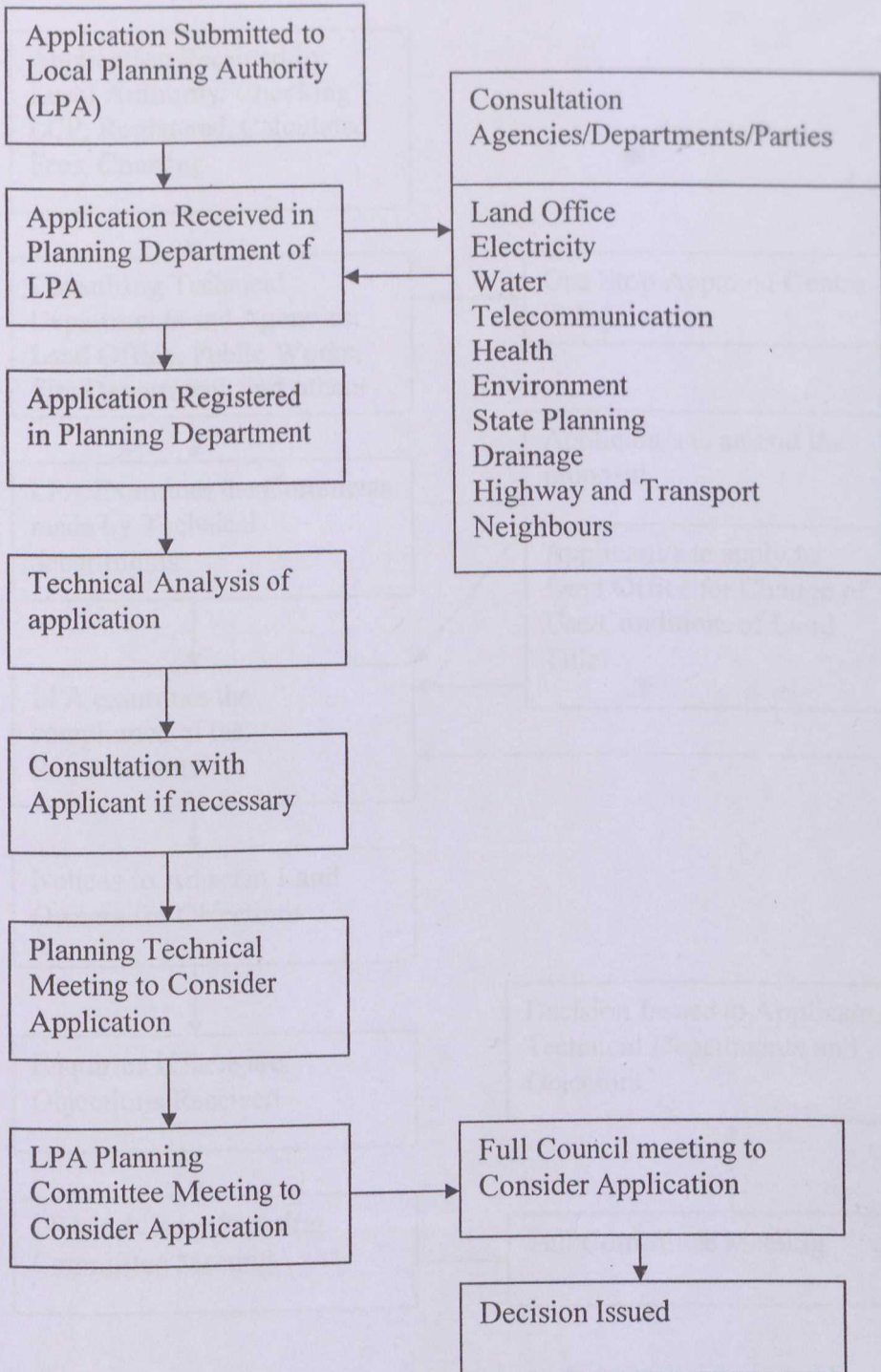


Figure 3.5 : Planning Application process State of Johor
Source: Department of Town and Country Planning, State of Johor, 2000.

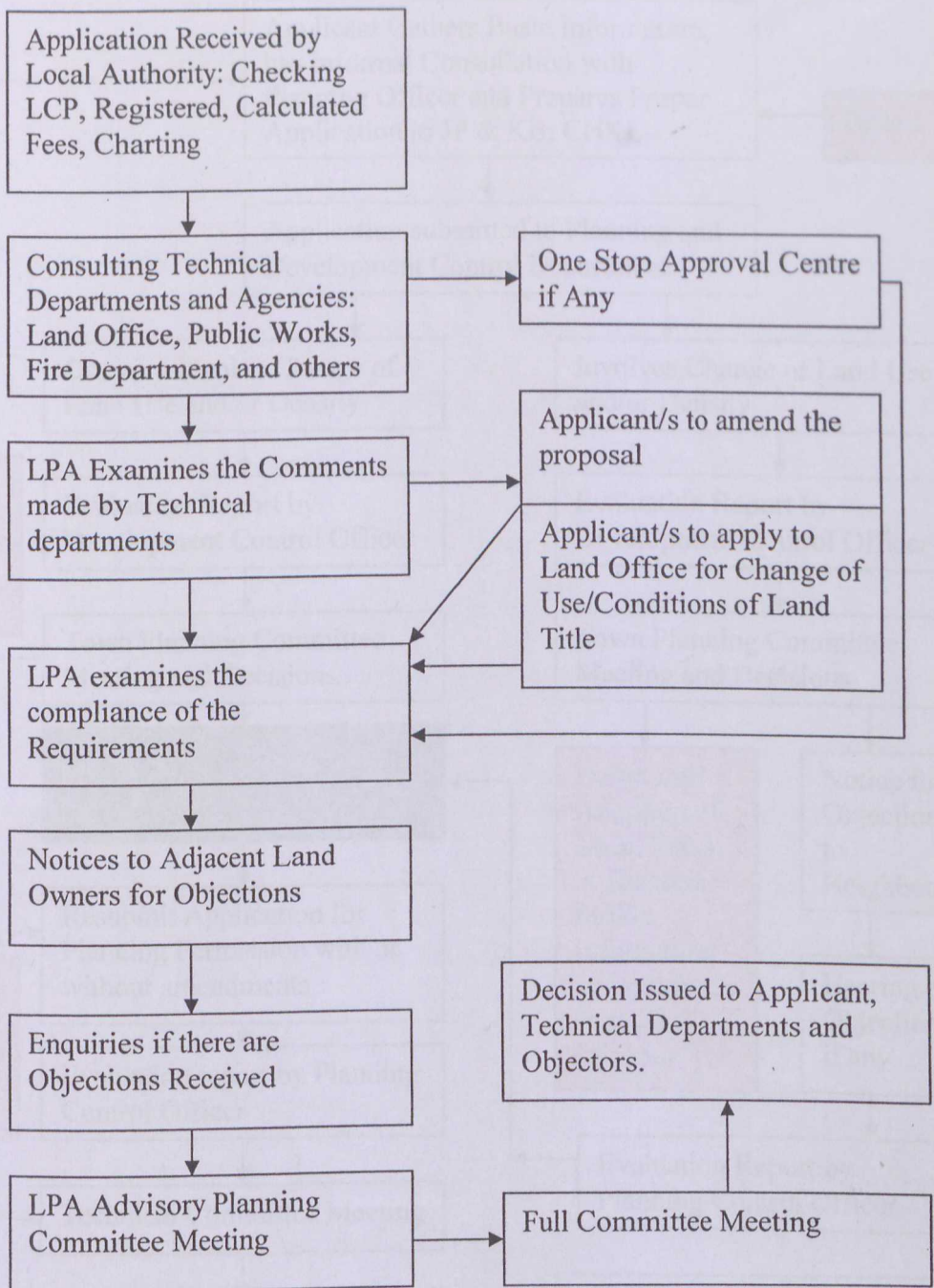


Figure 3.6: Planning Application process State Planning Kedah (1998)
Source: Director of State Town and Country Planning, Kedah, 2000

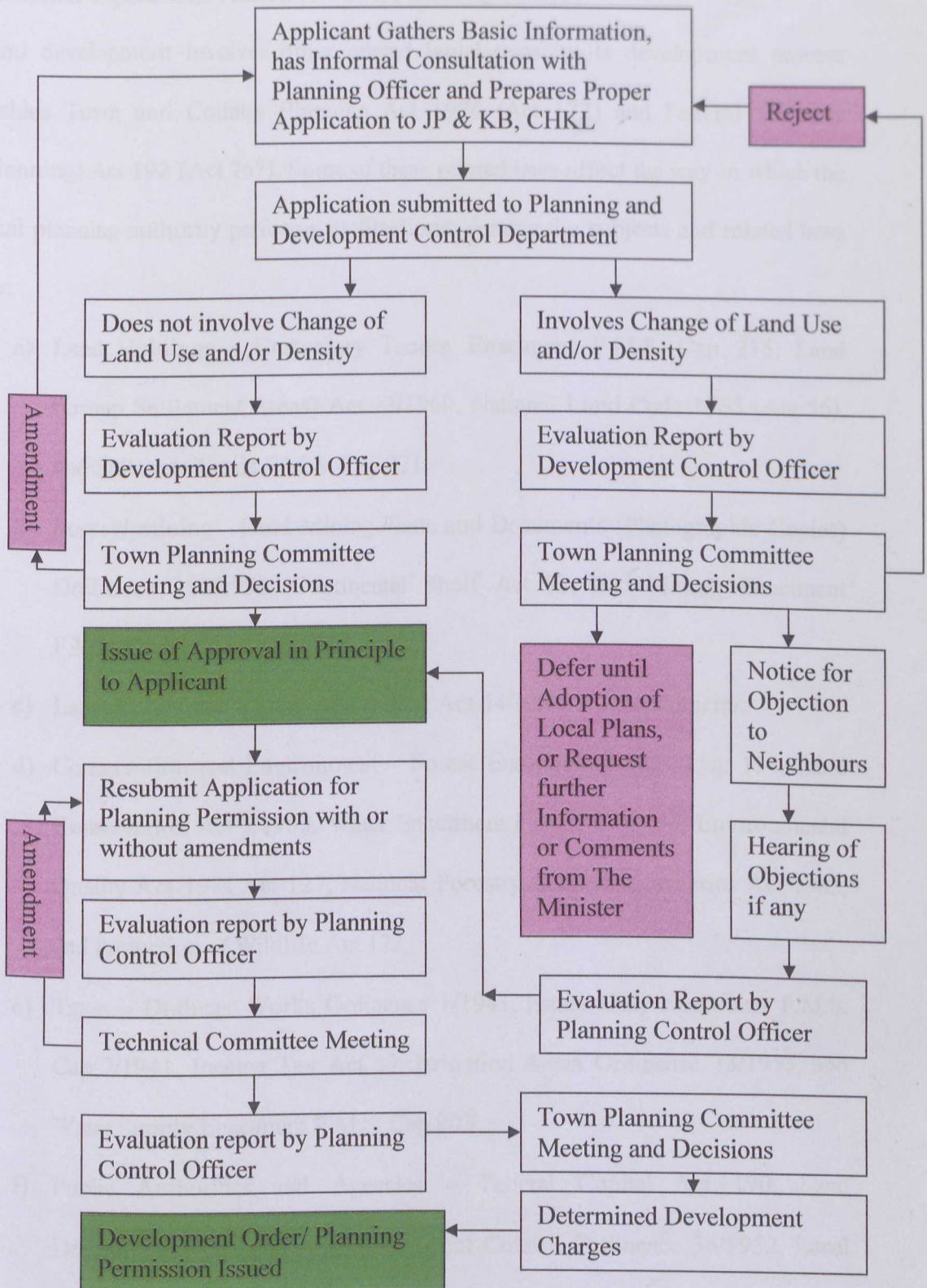


Figure 3.7: Planning Application process – City Hall Kuala Lumpur
Source: Planning and Development Control Department, CHKL, 2005.

3.8 Other legislations related to Town Planning Control

Land development involves other related legislations in its development process besides Town and Country Planning Act 1976 (Act 172) and Federal Territory (Planning) Act 192 (Act 267). Some of these related laws affect the way in which the local planning authority performs its functions. Among the subjects and related laws are:

- a) Land Holdings – Customary Tenure Enactment F.M.S. Cap 215, Land (Group Settlement Areas) Act 13/1960, National Land Code 1965 (Act 56), and Sultanate Lands F.M.S. Cap 221.
- b) Survey/ mining – Land Mining Plans and Documents (Photographic Copies) Ordinance 198/1950, Continental Shelf Act 83, and Mining Enactment F.M.S. Cap 147.
- c) Land Acquisition – Land Acquisition Act 34/1960 and amendments.
- d) Conservation and Environment – Forest Enactment F.M.S. Cap 153, Land Conservation Act 3/1960, Water Enactment F.M.S. Cap 146, Environmental Quality Act 1974 Act 127, National Forestry Act 1984, Fisheries Act 1985, and Protection of Wildlife Act 172.
- e) Taxes – Drainage Works Ordinance 1/1941, Estate Duty Enactment F.M.S. Cap 7/1941, Income Tax Act 53, Irrigation Areas Ordinance 33/1953, and Water Supply Enactment F.M.S. Cap 203.
- f) Public Authorities and Agencies – Federal Capital Act 190, Land Development Ordinance 20/1956, Local Council Ordinance 36/1952, Local Government (temporary) Act 124, Local Government Act 1976 (Act 171), Municipal Ordinance S.S. Cap 133, National Land Rehabilitation and Consolidation Authority (incorporation) Act 22/1966, Petaling Jaya Authority

Ordinance 36/1954, Town Board Enactment F.M.S. Cap 137, and Federal Land Commissioner Ordinance 44/1957.

- g) Burial – Burials Enactment F.M.S. Cap 189.
- h) Reservation of Land – Aboriginal People Act (Act 134), and Malay Reservation Enactment F.M.S. Cap 142.
- i) Land Development – Land Development Ordinance 20/1956.
- j) Financial Management – Government Contract Act 134
- k) Islamic Laws – Administration of Muslim Laws (varies among states)
- l) General – The Federal Constitution, Housing Developers (Control and Licensing) Act 118 and amendments, Federal Roads F.M. Ordinance 42/1959, Street Drainage and Building Act 1974 (Act 133).

Although the above list comprises all related laws and regulations, besides the NLC 1965, the Environmental Quality Act 1974 has been given more emphasis by local planning authorities. The Act provides 19 categories of development proposals that have to prepare EIA reports. The list of the said categories includes housing, infrastructure and industrial development. Another popular act is the Land Acquisition Act 1960 that is applicable when the local planning authority felt that the private land has to be taken for development to serve the 'public interests'. The applications of the others are where and when they are relevant.

3.8.1 Building and Infrastructure Plan Approval

Planning permission must first be obtained before application for building and infrastructure can be made to the local authority. All plans should show in detail the building's external and internal designs and infrastructure layouts, for example the

layout for sewerage system. All plans submitted to the local authority must conform to the Street, Drainage and Building Act 1974 and the Uniform Building By-Laws, 1984. Inevitably, these plans have to be prepared by qualified professionals such as architects and structural engineers. Upon receiving the application, the local authority then distributes the plans to related technical agencies that include water and electricity bodies. The local authority may also impose necessary requirements based on guidelines such as for energy efficient buildings, storm water storage, harvesting rainwater and handicapped access. The building and infrastructure approval process will take several months since the plans must be scrutinized by various technical bodies. The late delivery of building plan approvals could affect the overall schedule of the land development (Lawrence, 1997). Procedures to expedite the approval process are being formulated by the Ministry of Housing and Local Government. For the time being, earthworks are allowed to be carried out while waiting for the building approval.

3.9 The establishment of One Stop Centre (OSC)

In 2007, beyond this study period, the government (Ministry of Housing and Local Government) has introduced One Stop Centre (OSC) that is to deal with application for planning permissions, building plan approvals and certificate of fitness for occupation. The main objective is to reduce time consuming in approval process. Thus, the OSC will act as a coordinator in planning and building approval process. Consequently, all applications must be channelled to the OSC which then will be distributed to respective departments. Each technical department, including planning department, is given 14 days to give comments if application is made in areas that have local plans, and given 40 days for areas that have no local plan

(www.townplan.gov.my accessed July 2007). Upon received the comments from the respective department, OSC officers will reply to the applicant. If the department concerned did not respond after lapsed of the time frame, the OSC will keep monitoring the application. With optimistic views that this mechanism will reduce time consuming, local planning authorities all over the states are asked to establish the OSC to deal with planning and building plan approvals. However, the effectiveness of the OSC to reduce the delays in the planning process is still too early to comment here.

3.10 Conclusion

Malaysia is a parliamentary democracy. The political parties have been given administrative powers through their elected members by the public. The National Front Party has been governing Malaysia since 1957, but officers are appointed through either the Public Service Department or Agencies. The government structures and institutions were established with certain responsibilities and specified functions. In respect to land development, the government structures can be seen clearly at the federal level, state level and local authority levels. At the federal level, the Ministry of Housing and Local Government (MHLG) is the most important agency, playing a major role in determining policies and regulations. At the state level, the state government controlled by the Chief Minister with its Executive Council Members plays roles in the decision making as well as in giving out directives to the lower level agencies such as local authorities and state economic development corporations. For the local level, a local authority is the last agency in the government structure to carry out the state directives as well as to enforce the provisions of the laws. The institutional set up significantly regulates land

development, through legislative frameworks (land laws, planning laws, environment laws and other related laws) and financial institutions, either public institutions like the Central Bank (Bank Negara Malaysia), or private financial institutions like Commercial Banks and Finance Companies and Cooperative Banks. The developers as a whole can be considered as an institution and similarly the consumers as a whole can also be considered as an institution.

The prominent government players in land development are the planning authorities at three levels (Federal, State and Local). The outputs of the roles played by these three players have been tailored to the changes of the Town Planning Laws. Thus, the TCP, which was introduced in Malaya in the early 19th Century by the British, has had much influence in shaping most of the land use in urban areas in Malaysia right up to the present day. The General Town Plan adopted in the 1923 Planning Act is still in force through the FMS Cap 137 and FMS Cap 133, by which Town Plans that show land use zones are still the main guide in land development, particularly in considering planning applications and land conversions. The new Planning Act 1976 does provide for the preparation of the development plan to repeal the previous plan but until the present time, only 64 out of 97 structure plans have been adopted and only 42 out of 165 local plans are in the process of adoption. The Act 172 has been amended twice to strengthen the planning legislation in terms of its operating system and matters for considerations. Besides environmental considerations and the introduction of the National Physical Plan (NPP), the amendments introduce additional procedures for planning applications. Most importantly, the new act does not repeal the provision that the local planning authorities must take into account the

development plans as well as the Town Plans, if the plan does not contradict the proposal and policies in the new development plans.

Based on the TCP 1976, a local planning authority, in considering the application for change of use, may exercise its planning duty according to the guidance provided by the old general town plan because some towns do not have new development plans or have not adopted new development plans. Moreover, some local authorities do not have local plans to cover all of their areas. This means that there are areas without any local plan. However, the new amended TCP Act 172 in 2001 considers such areas as being covered by the State Structure Plan, if any. Thus, the structure plan provides flexibility in planning decisions, because the structure plan only provides strategic and broad policies. For areas without development plans, all proposed development and layout plans in the area concerned must undergo a process of public objections due to changes of the detailed land utilization in the area. The implication of this situation is that the total amount of land needed for housing would have been overlooked while application for converting agriculture and residential land to other uses are recommended for approval. Consequently, there is a possibility that the amount of potential land to be zoned for housing may unintentionally be reduced.

The Planning set-up in Malaysia has been seen to affect housing provision through the land development planning and control. The housing policies set up by the government in various Five-Year Plans are able incorporated into the long term planning, that is, the structure plan, which usually plans for 15 – 20 years ahead. Before Independence, housing policies were implicitly implemented by the government through the General Town Plan under the category 'land for building'

but this provided only for government quarters, with the rest going to villages and settlements. Through the new Town Planning Act, the housing policies can be more easily interpreted and adapted for the local circumstances (what is called the local plan). The local plan is what the local authority must take into consideration in dealing with planning applications.

Local authorities may face problems when matters within the Structure Plan are misinterpreted by local plan study groups, or when certain concerns may have not been able to be addressed. The structure plan preparation may take a long time to be adopted and therefore changes in the market and economy (such as economic booms and recessions) may affect the implementation of the housing policies outlined by the structure plans. Lack of adequate information and of skilled professionals in the process of formulating policies may raise questions as to the credibility of the structure plan policies; at a practical level, the people concerned might not trust these policies. A change of political masters might change certain policies; for example, areas originally targeted for housing might be changed to industrial use. Clearly, the effects of planning control over land development can take various guises. Land and house prices are affected by matters such as: less housing land being allocated by planning tools; high cost of developing land zoned for housing; the protection of agriculture and reserve land. This will be discussed further in Chapter 4.

Besides the development plan, the planning approval process also results in delays in timing of housing development, though depending upon the scale of the project. The statutory requirement provides that the authority in planning matters is the local planning authority, but most land matters will actually be referred to the state

authority. Inevitably, this will cause further delays and may result in problems such as: an increase in production cost; the product is unable to find its market; prolonging of housing problems; disruptions in the increase in the supply of housing land. Though the government has introduced the One Stop Centre, the effectiveness of the system to reduce time consuming is doubtful if the nature of the local planning authority implementing the planning system does not improved. The supply of housing land is affected because the land owners may not release their land for residential development until such time as the property market becomes attractive to the land owner and housing developers (Harvey, 2002). The effort of planning authorities to expedite the approval process by using a non statutory local plan, local plans in drafted forms, as a guide engenders uncertainties to developers. The non statutory plan is not legally binding and is subject to change without public notification. There is a possibility that the local authority may incorporate the just-approved development into the non-statutory plan.

The shortage of processing officers in the local planning authority will result in less attention being given to the planning application, and the authorities at the higher levels will have to deal with the consequences of this lack of professional attention (Mohd. Razali 2002). As a result of the lack of experience and professionalism, a small housing project might offer a large amount of commercial spaces, fewer residential units and even less community facilities. This would be favourable to the developer, who would be able to sell shop-houses at higher prices compared to residential units. Though the land is zoned for housing, due to the inattention or inexperience of the processing officers, eventually the area will become a commercial area with only a small plot land designated for residential use.

CHAPTER 4

HOUSING POLICIES, DEVELOPMENT AND PROBLEMS

4.1 Introduction

The land development process, as discussed in Chapter 2, stipulates that the roles of town planning control start from the submission of applications for planning permissions up to the granting of planning approvals. The developer's roles start from the search for suitable sites to the completion of the intended development. Besides town planning control and housing developers, as discussed in Chapter 3, technical departments and governing bodies also play their parts during the planning approval process. For housing development, particularly, the extent to which these development players play their roles is governed by the national housing policies either directly or indirectly (Marbeck, 1997; Lawrence, 1997; Mohd Razali, 2002; Bruton, 2007).

The government through its ministry and agencies, particularly the Ministry of Housing and Local Government (MHLG), the National Housing Department, and the Federal Town and Country Planning (FTCP) also monitors the performance of housing industries relating to the housing policies. Based on Seventh and Eighth Malaysia plans, private developers are expected to play a greater role to meet the needs and demand for housing in the country. The outcomes of both Five-year Malaysia Plan are reported in the Bank Negara Annual Report 2002-2006 which states that housing development has achieved more than the target of 800,000 units within the 8thMP (2000-2005), of which 28,827 units in the medium and high house price categories were still unsold. However, the report also claims that there was strong demand for housing in the Eighth Malaysia Plan period. This seems to signify that there was a mismatch between the supply of and the demand for housing, and that the oversupply of high price houses was due to the increase in production costs. The increase in production costs was believed to be the outcome of town planning control including requirements imposed by various technical agencies (Goh, 1997).

This chapter, therefore, discusses national housing policies that influence housing land allocation and performance of housing development. The discussions continue with national housing development issues particularly related to the implementation of town planning system in years before year 2001, that is before the Act 172 (1976) was amended, where the effects was up-to year 2005. When National Physical Plan was adopted in 2005, all state planning offices started preparing State Structure plans. Most importantly, components of town planning factors that affect housing development as

important variables for further analyses to answer the research questions are summarized.

4.2 National Housing Policies

The evolving formal housing policies in Malaysia can be reiterated by examining all the Five Year Malaysia Plans. The early significant housing policies are related to the government's intention to deal with the proliferation of squatter housing in major urban areas after independence in 1957. At that time, the federal government asked local authorities to be involved in constructing public housing as one of the measures to resettle squatter households, the majority of whom were from the low income group and were therefore unable to afford to buy houses in the market. At the beginning, however, state governments and local authorities only implemented these policies by providing public housing units which were rented out below market rates. Over time, the government shifted its strategies by developing measures to increase participation from the private sector. To achieve this objective, the government further arranged financial assistance to the private sector and to house buyers. However, housing for other income groups also continued to be a problem, with the middle income group also facing problems in buying houses in the open market.

Up to the period covered by the Eight Malaysia Plan, housing problems still persisted though the government has introduced several strategies and measures to remedy the housing problem. The main objective of the housing policy in Malaysia, that is to provide adequate housing to all Malaysians, is still in place. Therefore, this chapter will

look at the housing policy, housing finance and housing problems before it closes with the summary and key issues.

4.2.1 Housing policies in the Five Year Malaysia Plans

Prior to independence, the government's (Malaya's) main concern was for public health and safety. To this end, a series of municipal and local council housing ordinances had been introduced. There was no overall official policy for housing and the private housing construction in town areas but the subject was entirely controlled by town planning ordinances.

The Housing Trust was created in 1952 to carry out public housing for the low income group. The Housing Trust's role was to assist state governments to develop low cost housing by providing technical and supervisory services. However, its role in housing was limited because the implementation of housing programs was dependent on the request of state governments. When the Housing Trust was abolished in 1975, its role was taken over by the National Housing Department, which was established in 1976. The National Housing Department aimed to assist state governments in implementing public housing programs. These programs had been implemented through federal and state government co-operation where the federal government allocated state governments with loans at subsidized rates of interest on condition that infrastructures were developed on the project sites. This intervention of the public sector in the provision of housing, with modifications in financial and administrative arrangements, has remained and become more visible in all Malaysian development plans.

The 1stMalaya Development Plan (1956-1960), which was also called General Development Plan, was not meant to solve particular problems; it merely allocated RM17 million for government department projects such as opening up of land to construct government offices. Only in the 2ndMalaya Plan (1961 - 1965) did the government pay special attention to solving economic problems such as unemployment and poverty. One of the main objectives of the plan was "to assist in large measure in the provision of housing and to provide more adequately for rural and urban utilities" (Malaya, 1961; p.16.). When the country's name changed, the name of the national development plan was also altered. The 1stMalaysia Plan (1966 to 1970) emphasized the objectives of the 2ndMalaya Plan and consequently the Ministry of Housing and Local Government was created. This Plan also adopted the principle of minimum standards for low cost quarters.

In the 2ndMalaysia Plan (1971 to 1975) the government considered the issue of squatter settlements for the first time. The policy was clearly stated as the following:

Public housing constitutes a major element of the national housing program. Basically this program caters to the needs of the low income groups of all communities, irrespective of race. It is designed to eliminate slum dwellings and squatter living, as well as resolve other socio-economic problems associated with rapid growth urban centers in the country. The government will place emphasis on housing for low income groups as such ventures do not appeal to private developers whose activities cater mainly for the middle and higher income groups (Malaysia, 1971; p.257).

The government used public housing as an instrument to eradicate slum dwelling and squatter housing. In addition, the Second Malaysia plan introduced the New Economic Policy (NEP), introduced in the aftermath of May 13th 1969, to remain in force until the

year 1990. The government stance and NEP were reinforced by the 3rd Malaysia Plan (1976- 1980). The main thrust of the plan was to eradicate poverty and restructure society while the NEP aimed to increase the Malay and indigenous group (*Bumiputra*) participation in various enterprises. On this basis, the government felt that the provision of housing was an important component to increase Malay participation in urban economic activities. So, the government imposed stricter licensing laws for private developers, under which they were required to provide a quota of 30 per cent of all sales to *Bumiputra* purchasers.

The 3rd Malaysia Plan (1976-1980) also emphasized the need to supply dwellings at reasonable standards and affordable prices to the low income group. This policy was followed by initiatives such as sites and services schemes, squatter settlement upgrading projects and joint ventures with private enterprises. Measures were established to reduce costs involved in housing construction. These measures include: attempts to reduce the cost of land; flexibility in application of infrastructure and building standards; rationalization of the supply and demand relationship for major building materials; the use of public agencies involved in housing and construction to influence the price of houses; and the streamlining of bureaucratic and administrative procedures involved in residential development.

Revolving funds of \$5 Millions for each state government was created to speed up the construction of low cost housing. State governments used these funds to pay in advance the land acquisition cost and contractors. For Federal Territory alone, the allocation for

public low cost housing was \$156 million. For house buyers, the government allocated \$400 million in the form of loans through the Malaysia Building Society Berhad (MBSB) to purchasers who bought houses up to the price of \$20,000 at 5.5 per cent interest per annum. In addition, contributors to the Malaysian Employees Provident Funds (EPF) and those earning below \$500 a month were eligible for this scheme.

In the 4th Malaysia Plan (1981-1985), measures outlined in the 3rd Malaysia Plan were again re-emphasized with the aim of increasing housing stock. The revolving fund was increased from \$5 million to \$20 million. In addition, other measures were introduced in the plan. These measures included:

- a) Setting up monitoring committees in each state to monitor the low cost housing programs;
- b) Fixing the maximum house price of low cost housing for sale at \$25,000;
- c) Controlling the sale of low cost houses in urban areas in that these houses had to be purchased by MBSB who would release them for rental;
- d) Imposing a condition on private developers to set aside 30 to 50 per cent of housing areas for low cost housing;
- e) Instructing all commercial banks through Central Bank (Bank Negara) to allocate 10 per cent of total loans for housing with the rate of interest fixed at 10 per cent rather than 12 and 14 per cent previously;
- f) Allowing contributors to the EPF to withdraw up to 45 per cent of their savings, or a maximum of \$20,000, in order to reduce the burden on house buyers.

The 5th Malaysia Plan (1986-1990) incorporated policies and strategies of the previous five year plans but introduced some improvements. These improvements included:

- a) encouraging the development of a large number of low cost and medium cost houses in urban areas;
- b) greater participation of the private sector in construction of low cost houses by providing assistance where necessary to developers;
- c) more houses for rent in urban areas;
- d) the introduction of the concept 'decent and viable human settlement' which means the adequate provision of basic infrastructure and social facilities in housing areas.

Within the 5th Malaysia Plan also, the government introduced the Special Low Cost Housing Program (SLCHP) which required the private sector to build 240,000 units of low cost housing within the period of 1986 to 1989. This program was put under the control of the Ministry of Housing and Local Government. However, the program failed to achieve the targeted number of units.

The objectives of the 5th and 6th Malaysia Plans (1991-1995) encouraged more low cost housing schemes to be developed through 'privatization' which aimed at greater involvement of the private sector. So, state governments were encouraged to identify possible projects for privatization within their area and select capable developers. Several other low-cost housing measures were introduced by the government such as 'joint-venture projects' between government and private developers and the launching of urban housing rental in 1994 for low income groups.

In the 7th Malaysia Plan (1996-2000), the government proposed 800,000 housing units to be built. Of this, 35,000 units would be for the poor, 200,000 units of low cost houses, 350,000 units of low-medium cost houses, 130,000 units of medium cost houses, and 95,000 units of high cost houses. The private sector or developers were expected to play more significant role in this venture, by constructing 71 per cent of the total. Accordingly, the private sector would construct 140,000 units of low cost, 240,000 of low-medium cost, 110,000 of medium cost and 80,000 units of high cost housing (Malaysia, 1996). That is, the public sector would construct 230,000 units and the private sector would construct 570,000 units.

In 1998, the Ministry of Housing and Local Government carried out a study to revise the price of low cost housing units; the price had been in use since 1982, and did not take into account the increasing costs of building construction. As a result of the revised study, four categories of low cost unit prices were proposed.

Table 4.1
Four Price Categories of Low Cost Units

Price Category (RM)	Location	Land price/sq. meter.	Targeted Income Group (monthly)	Suitable types of houses
42 000	Cities and big towns	45 and more	1,200 – 1,500	Flats of more than 5 storeys
35 000	Big towns and their fringes	15 - 44	1,000 – 1,350	5 storey flat
30 000	Small towns and their fringes	10 - 14	850 – 1,200	Terraces and Clusters
25 000	Rural areas	Less than 10	750 – 1,000	Terraces and Clusters

Source: MHLG, 1998

The government had observed that there was a problem in the distribution of low cost units, with non eligible buyers buying the low cost units. Therefore, the Department of National Housing under the Ministry of Housing and Local Government passed stricter guidelines for states and local authorities to follow when selecting buyers for low cost units. The steps to be taken in selecting eligible buyers include selecting applicants listed by District Offices and State Housing divisions.

The 8th Malaysia Plan (2001-2005) stated the objective of the housing development program as to increase accessibility to adequate, affordable and quality houses for all income groups. Priority continues to be given to the development of low- and low-medium-cost houses. To meet this objective, it is expected that the public and private sectors will intensify their efforts to meet increasing demand. The categories of houses were further reviewed to focus on the low-medium category as shown by Table 4.2.

Table 4.2
Four Price Categories of Medium Low Cost Units
(Effective from August 2000)

Price Category (RM)	Land price/sq. meter.	Targeted Income Group (monthly)	Suitable types of houses
70,000	45 and more	1,700 – 2,600	Flats of more than 5 storeys
60,000	15 - 44	1,500 – 2,500	5 storey flat without lift
53,000	10 - 14	1,350 – 2,000	Terraces and Clusters
48,000	Less than 10	1,200 – 1,800	Terraces and Clusters

Source: MHLG, 1998

From this overview of the various Malaysia Plans, it is apparent that the Federal Government is encouraging a free market and promoting conventional housing. It places emphasis on the role of the public sector to give necessary assistance to the private sector in achieving their objectives. The public sector only involves itself in housing construction by providing low cost housing for sales and for rental. The responsibility was taken mostly by municipalities and state government agencies such as the State Economic Development Corporation (SEDC), and Urban Development Authority (UDA), which was abolished in September 1999. However, there is some degree of regulation as well as intervention involved in overall housing policies.

4.2.2 Financial Assistance to developers and house buyers

Financial institutions play an important role in the provision and occupation of housing. In Malaysia, there are various financial institutions which provide loans to finance housing development and housing loans for individuals. These financial institutions can be classified in 8 groups as shown in Table 4.3. Over the years, the commercial banks have played a major part in giving out housing loans to house buyers. They are followed by the Treasury Housing Loans Division (THLD). As Table 4.3 shows, all finance institutions have seen an increase in outstanding credit for housing over the years.

The increase in the amount of outstanding housing credit can be interpreted in two ways: (1) the increase in number of units taken up by house buyers using loans, and (2) the increase in house prices, leading to an increase in the amount of loans taken by house buyers. However, as Table 4.4 shows, house prices declined from 1998 to 2001. Hence,

the former possibility is more likely; that is, the increase in the amount of outstanding credit can be related to the increase in number of housing units bought. Table 4.3 also shows that financial institutions played a significant role in providing end-financing to house buyers. Their roles can be described under the following subheadings.

Table 4.3
Sources of Housing Credit and the amount of
Outstanding Credit in RM millions.

Financiers	2000	2001	2002	2003	2004	2005	2006
Commercial Banks	61,773.0	73,925	86,246	101,829	125,824	148,329	162,291
Finance Companies	12,433.8	13,052	14,042	14,645	7,009	795	N.A
Treasury Housing Loans Division	17,903.3	19,474	22,172	24,754	25,051	25,395	25,709
Malaysia Building Society Berhad	1,141.6	1,248	1,236	1,206	1,874	487	779
Borneo Mortgage Finance Berhad	609.4	625	650	680	705	713	721
Sabah Credit Corporation	298.2	296	293	252	239	221	204
Bank Rakyat	966.0	1,273	1,108	1,371	2,519	3,592	4,741
Bank Simpanan Nasional	1,174.7	1,283	1,133	1,058	1,059	1,372	2,207
Total	96,300.0	111,176	126,880	145,795	164,280	180,109	196,652

Source: Central Bank (Bank Negara) Annual Reports 2000 - 2006

The developers would have maintained the selling prices even though house prices in the market dropped in the year 2001. They were willing to hold completed houses waiting for better prices.

Table 4.4
House Price Indicators (MHPI, 1990=100)

	1994	1995	1996	1997	1998	1999	2000	2001
Annual Change (%)	8.0	18.4	12.9	1.9	-9.4	-2.3	4.7	-0.6
By Type								
Terraced	8.7	13.1	10.2	10.0	-4.8	-3.5	11.2	0.3
S-Detached	6.5	9.8	8.1	2.9	-8.1	-4.4	10.6	1.6
Detached	10.0	15.7	14.1	4.3	-13.6	-6.7	9.8	-0.6
High-rise	6.1	4.2	-1.0	-4.8	-6.2	-3.7	10.6	-3.4
By Region								
Klang Valley	10.4	15.9	15.7	4.4	-14.5	-4.0	12.4	-0.3
J. Bahru	15.6	16.6	14.3	0.1	-25.3	3.7	2.8	-6.0
Penang Island	8.8	11.2	4.3	4.3	-12.9	-3.7	8.3	-5.2
Seremban-Sepang	3.1	11.4	18.6	7.8	-4.9	2.7	3.8	3.8
Ipoh-Kinta	3.8	6.7	6.8	5.0	-4.2	8.4	1.2	3.4

Source: Central Bank Annual Report 1994 – 2001.

Note: From year 2002 to 2007, the reports do not show the raw figures.

4.2.2.1 Commercial Banks

Commercial banks provide loans to finance housing development and individual house purchasers. For financing housing development, commercial banks provide short term loans in the form of ‘bridging finance’ and charge interest rates based on the market rates which subsequently affect house prices and types of houses in a housing project. For individual house purchasers, these banks also provide long terms loan which is called ‘end financing’.

For end financing, commercial banks charge an interest rate of 9 per cent for loans to buyers who buy a house not exceeding RM 100,000. These banks have also maintained their interest rates at 5.5 per cent per annum for low cost housing since 1981, in accordance with the government's guidance. The housing repayment period was extended from 15 to 20 years, to 30 years, based on the Central Bank guidelines in 1986. However, these measures do not indicate the amount of monthly repayments that should be paid by a house buyer. Therefore, the amount of monthly housing repayments depends upon a house buyer's choices and capability. For example, a house buyer could pay RM 158 a month for the period of 20 years for a low cost unit of RM 25,000. The buyer also could pay smaller amounts if the period were extended to 30 years and could pay a bigger monthly amount if the period were shorter than 20 years.

In addition, commercial banks impose eligibility criteria for individual housing loans. These banks follow basic government guidance: (a) an applicant must be at least 25 years old and (b) neither the applicant nor spouse should have any previous mortgage. The additional criteria imposed by these banks are: (a) an applicant must have a stable income; and (b) the monthly repayment should not exceed 30 per cent of the monthly income (MHLG, 1987). Even with these criteria, the amount of individual housing loans increased greatly. The amount increased from \$584 million in 1981 to RM 3,961 million in 1991 (Malaysia, 1981 and 1991). Though the country was hit by an economic recession, the amount of housing loans kept on increasing from RM24 billion in 1997 to RM74 billions in 2001 (Bank Negara Annual Reports 2002). This shows that there was a group of households who could comply with the requirements, leading to a steady

demand for housing. Conversely, there would have been a group of households who could not comply with the criteria.

4.2.2.2 Malaysia Building Society Bhd. (MBSB)

MBSB is the financial institution which is favored by the government to channel housing funds for state governments, local authorities and housing development agencies such as State Economic Development Corporation (SEDC) and Urban Development Authority (UDA). Besides the funds provided by the government via the Central Bank, the government directed the Employees Provident Funds (EPF) to channel some of its funds to MBSB in December 1976. This directive was to disburse housing loans of not exceeding RM20,000. Interest rates stand at 5.5 per cent per annum, with the loan being payable within 20 years. Therefore individuals can also apply for housing loans from MBSB based on eligibility criteria similar to those used by commercial banks.

For individual housing loans, the amount of loans declined from RM591.2 million in 1980 to only RM403 million in 1991. This shows that many applicants chose commercial banks rather than MBSB. This is partly due to the unsatisfactory performance of MBSB. The performance of MBSB in the period of 1981 to 1991 was indicated by the small amount of loans taken to finance low cost housing. The amount remained at RM275 million until 1991, since the launching of the low cost housing program in 1986. For loans to finance public low cost housing, only RM59 million was approved to finance 14 projects (Malaysia, 1981b and 1991c). Table 4.3 shows that the

amount of outstanding credit decreased slightly during the period from 1997 to 2003 and significantly decreased from 2004 to 2006. This reflects the lower number of new loans given out, as well as constant lapses on repayment.

4.2.2.3 Treasury Housing Loans Division (THLD)

THLD provides housing loans for low cost housing purchasers and for government employees. This financial institution plays a significant role in boosting housing demand among government employees as well as low cost housing purchasers. For low cost housing purchasers, the buyers are required to repay the loan over a period of 25 years at an interest rate of 5.5 per cent per annum. The basic requirement is that an applicant must be above 25 years old. For government employees, the amount of loan depends on grade and salary earned. An employee must also have served at least 5 years in the government service. The interest rate is charged at 4 per cent per annum with a maximum repayment period of 25 years (MHLG, 1987).

In 1980, THLD gave out RM256.3 million for individual housing loans to government employees and the amount increased to RM 11,657 million in 1991. This shows that the government employees have partially boosted housing demand (Malaysia, 1981b and 1991c). The amount of outstanding credit increased from RM15 billion in 1997 to RM 25.7 billion in 2006.

4.2.2.4 Other financial institutions

Other financial institutions comprise co-operative banks and finance companies. These institutions provide housing loans to their members and also to builders through building societies. The interest rate imposed by these institutions to housing loans below \$100,000 and low cost housing units is similar to that imposed by THLD that is 4.0%. However, these institutions impose above 9 per cent interest rates for loans to finance other categories of housing, i.e., RM 100,000 and above. The amount of housing loans given by these institutions has increased. For example, Bank Rakyat, a cooperative bank, is a popular source of housing loans. It has the amount of outstanding credit increased from RM 465 million in 1997 to RM 1.2 billion in 2001 and to 4.7 billion in 2006. This is shown by Table 4.3. The increases in outstanding credit show that many people have been using facilities from the co-operative banks and are subsequently able to convert their housing need to the housing demand.

4.3 Housing Problems

Even though the government has formulated housing policies from the beginning of the country's independence, as well as making arrangements for housing finance, housing problems still persist. These problems can be discussed by separating them into demand and supply factors. However, as the government's objective is to provide a decent house for every family, the housing problem can also be discussed under 'housing need' and 'housing demand'. 'Housing need' refers to the belief that every family requires its own shelter. Since the need for housing not only concerns families but also individuals, the term 'family' is interchangeable with 'household'. Specifically, a household refers to

one or more persons living under one shelter and sharing the same food and living space (CHKL.1981; Murie *et al*, 1976).

The housing need in the country has increased rapidly because of an increase in overall population, high urban growth rate, and changing trend of household formation (MHLG.1987). With availability of housing and accessible financial assistance, households may be able to transfer their housing need into effective demand more easily, resulting in great demand for all categories of houses. This will inevitably affect the land requirement for housing in most urban areas.

4.3.1 Housing need

Between 1970 and 1980, the population grew at 2.3 per cent; there was higher growth between 1980 and 1991 at a rate of 2.64 per cent, and a slight decrease between 1991 and 2001 with a rate of 2.60 per cent (Malaysia, 1991). An increase in population will be followed by an increase in number of households, which will lead to an increase in the demand for houses. The issue of satisfying the housing needs in Malaysia was more crucial in urban areas because the rate of urbanization rose from 27 per cent in 1970 to 37 per cent in 1980 and 45 per cent in 1990. The level of urbanization is expected to increase to 74 per cent in the year 2020 (Kamal Salih, 1992). This rapid growth of urban population was due to three main factors: 56 per cent from natural increase; 39 per cent from re-classification of urban boundaries; and 5 per cent from net migration (Mohd. Yusof Kasim, 1991).

The increase in population was not followed by an increase in household size. The household size gradually decreased from 5.2 in 1970 to 4.91 in 1991 (Malaysia, 1991) and dropped to 4.52 in 2000 (Malaysia 2000). These changes in household size are related to changes in household formation. The traditional extended family pattern was changing in favor of nuclear families. There were also more singles migrating to urban areas and forming new households. For example, in 1980, 51 per cent of households in urban areas were nuclear families, and another 20 per cent were singles and couples without children (MHLG, 1987). As Table 4.5 shows, even though the number of households increased when the population increased, households per house have decreased from 1.3 in 1970 to 1.04 in 1991 and slightly increased to 1.1 in year 2000. This situation signifies that nearly every household lives in an individual dwelling. Thus, this trend had pushed up the need for housing in the past 30 years.

Table 4.5:
Population, Households and Dwellings in Malaysia 1970 to 2000

Facts	1970(1)	1980	1991	2000
Population	10,811,547	13,745,241	17,566,982	22,202,614
Population Growth		2.3%	2.64%	2.60%
Number of Households	1,890,276	2,516,295	3,580,016	4,910,921
Household Size	5.21	5.22	4.91	4.52
Households Per House	1.3	1.1	1.04	1.1
Number of Dwelling	1,626,230	2,632,561	4,091,790	5,662,680
Occupied Dwellings	n.a	2,363,451	3,447,597	n.a
Occupied Dwellings (Peninsula)	1,463,790	1,990,690	2,817,123	n.a

Source: Malaysia (1991b), Department of Statistics Malaysia, October 2000, Kuala Lumpur. Notes: (1) The 1970's census excludes Sabah and Sarawak

4.3.2 Housing demand

The demand for housing of middle income groups increased in the 3rd Malaysia Plan and 4th Malaysia Plan periods. This demand was stimulated by the facilities provided by financial institutions. The facilities included easier mortgage loans to house buyers with interest rate of 9 per cent a year for loans not exceeding \$100,000. The interest rates are further reduced in the following years as shown in Table 4.6. There was also increased demand from the lower income groups. Low income groups were given priority in housing loans by commercial banks with an interest rate of 5.5 per cent and minimum down payment of 10 per cent and no down payment for *Bumiputra* (MHLG, 1987). In addition government servants who had served more than ten years and were aged more than 25 years received 4 per cent interest rates and 25 years for the repayment period. Government servants comprise the majority of the middle and low income groups. The above requirements still apply.

In the 5th and 6th Malaysia Plans, the demand for housing was considered stable (Central Bank, 1998). When the economic recession hit the country in 1997 (7th Malaysia Plan), the signs of a slowdown were indicated by the property sector. A home ownership campaign was launched in December 1998 up to December 1999. During the campaign, housing developers provided 5 per cent discounts to non-*Bumiputra* purchasers and 10 per cent discounts for *Bumiputra*.

Some developers were willing to give subsidies for legal fees, reduce the deposit money to RM500, and provide assistance for housing loan arrangements. As a result of the

above benefits to home buyers, demand for housing was stimulated. The Central Bank reported that sales performance was 44 per cent during the first half of 2002 compared with 56 per cent in the first half of 2001 (Central Bank, 2002) as shown by Table 4.7. Between 1980 and 1989, the level of household income had improved. So, only 27 per cent of the overall population was below the poverty line (Robinson and Goodman, 1996). Based on data provided by the Department of Statistics recently, the average gross household monthly income had increased from RM 2,589 in 1995 to RM 3,357 in 1997 and slightly dropped to RM 3,103 in 1999. Households in rural areas also experienced the increase as shown by Table 4.8.

Although monthly household incomes have steadily increased, this has not resulted in a steady increase in house price. The house price indicators provided by the Valuation and Property Services Department shows fluctuation of prices within the period of the 7th and 8th Malaysia Plans (refer Table 4.4). The indicator also shows a drop in house price during the economic recession at end of 1997, with a slow recovery by 2001. House buyers were believed to be more cautious in buying properties. This factor led to the launching of the House Buying Campaign in 1999. The houses offered were, however, in the higher price categories, unreachable by low income groups. If one third of gross monthly income is allocated for house repayment (assuming a monthly repayment of RM1,000), low and middle income households in urban areas may only be able to purchase houses priced below RM 100,000.

Table: 4.6
Lending Rate for New Housing Loans (% Per Annum) of prices above RM100,000
According to Source of Financial Institutions and Years

	96	97	98	99	2000	01	02	03	04
Commercial Bank	14.0	14.3	14.8	10.5	8.3	7.8	4.4	4.5	3.1
Treasury Housing Loans Division	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Malaysia Building Society Bhd	9.3	9.3	10.4	10.8	9.0	8.8	8.5	8.5	8.5
Borneo Housing Mortgage Finance Bhd	10.0	10.0	13.0	9.3	9.0	8.9	8.9	8.5	8.5
Sabah Credit Corporation	10.5	10.5	11.0	10.5	10.5	10.5	10.5	10.5	10.5
Bank Rakyat	10.1	10.1	11.0	10.8	9.6	8.4	7.1	7.4	7.3
Bank Simpanan Nasional	10	10	9.5	8.1	6.6	6.3	4.7	6.5	4.8

Source: Central Bank (Bank Negara Malaysia) Annual Reports.

Therefore, until 2001, the overhang units of the high price categories were still in large numbers (this is discussed in the supply side). As Table 4.6 shows, financial institutions have reduced the interest rate for housing loans of more than RM100,000. For houses priced below RM100,000, Central Bank reports say that commercial banks are willing to give out loans with interest rates less than 4% (Central Bank, 2004). This effort would have been considered in relation to the lessening of the number 'overhang' units.

Table 4.7
The Demand for Housing 2001-2005

Subjects	2001	2002	2003	2004	2005
Residential transactions	176308	162269	164,723	195,241	181,762
Property Numbers	22.2	21.1	23.0	29.3	28.4
Value (RMb)					
Approval of developers licenses	227260	198970	203,372	174671	169,960
New	1095	1170	1062	1071	1209
Renewals	413	397	436	353	407
Sales and Advertising permits					
New	1014	1134	1103	1038	1203
Renewals	1461	1666	1707	1510	1726
Loans by banking systems (RMb)	87.1	100.4	116.6	132.9	149.2
Outstanding	27.0	29.2	30.0	35.7	36.6
Approvals					

Source: Central Bank (Bank Negara Malaysia), 2002 – 2005. Note: Central Bank Report 2006 does not give these figures.

Table 4.8
Monthly Household Income by Areas

Areas	1995	1997	1999	Average annual growth rate
Urban - RM	2,589	3,357	3,103	4.6
Rural - RM	1,326	1,704	1,718	6.7

Source: Department of Statistics Malaysia, June 2002.

Besides the demand for home ownership, there was also demand for rental properties by households in the process of buying a house. Since, the house prices had increased, landlords set the rent at the level of monthly housing repayments (CHKL. 1981). The burden of high rental in the existing housing areas would have been heavier to the lower income group. For example, in 1976 households earning less than RM400 a month, or some 70% of the urban population, could not afford to purchase or rent most housing units constructed by various housing agencies (3rdMP, p.339). Consequently, the

demand for public housing was very high between 1970 and 1980, based on level of income in the low income group. These households were actually in the poverty category that requires public housing rather than houses in the market. The public sector had to bear the burden of providing housing for the poor. This problem remains unsolved.

Since 1995, the local authority has shifted the concept of 'renting unit' in public housing to 'hire purchase unit'. The concept is easily translated as the monthly rents paid to the local authority are considered as the house deposit. After five years living in the unit, the tenant will be offered the opportunity to buy the house and continue to pay the house repayment on the balance of the price determined by the local authority. By implementing this concept, gradually the number of public housing units will decrease. Though this concept will reduce the burden of financial pressure and services on the local authority, it will generate more pressure on the demand for rental of low cost units.

4.3.3 The supply factor

During the world economic recession, the housing industry in Malaysia was also affected; the signs began to show in the period of the 4th Malaysia Plan. The industry has slowly recovered, from the middle of the 5th Malaysia Plans until 1997 when the economic recession hit again. The housing problems still persist particularly in meeting the targeted quantity of houses at affordable house prices.

In the 4th Malaysia Plan, there was a great shortfall in the number of houses compared with the targeted figures. For all types of houses, only 43.98 per cent were completed out of the targeted figure of 923,300 units. For low cost housing, the public sector could only construct 40.4 per cent of the targeted 176,500 units while the private sector constructed 21.3 per cent of the targeted figure of 90,000 units (Malaysia 1986, p.522). In the 5th Malaysia Plan, although the public low cost housing program only achieved 49.4 per cent of the targeted figure (Table 4.9), this rate of achievement was higher than the achievement in the 4th Malaysia Plan.

Table 4.9:
Housing Completed in 5th MP (1986 to 1990).

Programs	Targeted	Total completed	Per cent of completed
The Public Sector			
Low cost housing	42,880	21,172	49.4
The Private Sector			
Low cost housing	370,000	88,877	24.0
Medium cost housing	146,000	89,741	61.5
High cost housing	23,600	17,701	75.0
Total	582,480	217,491	37.33

Source: Malaysia, (1991a), p.365.

The private sector achieved less than the public sector for low cost housing but had greater achievement in other types of houses especially high cost housing. Nevertheless, this sector had better performance than in the 4th Malaysia Plan for low cost housing.

For all type of houses, the public and private sectors achieved 33.2 per cent of the targeted figure of 495,000 units in 5th Malaysia Plan, but this was lower than the rate in the 4th Malaysia Plan. The public sector had achieved 61.5 per cent of the targeted figure

of 120,900 units, including other type of houses, while the private sector had achieved 58 per cent of the targeted figure of 374,100 units (Malaysia, 1991a; p.365).

Based on these two Malaysia Plans (the 4th and the 5th), the public and private sectors had improved their rate of completion for low cost housing. However, there were also quite large numbers of targeted houses that could not be constructed. Thus, this shortfall greatly affected housing needs. It also pushed up the demand for housing especially for low cost housing.

This result reflects the effectiveness of the housing policies and measures introduced. The shortfall can be related to many factors such as: labor shortage, shortages of building materials imported from foreign countries, lack of buildable land in urban areas and cumbersome bureaucratic procedures (Hamzah and Tan, 1983). The labor shortage added costs in construction work and slowed down the completion of housing projects. Increasing the number of housing projects means that a larger number of workers is required. To overcome the shortage of local workers, the industry had to employ foreign workers in housing construction. The shortage of workers was due to the outflow of construction workers to Singapore between the 1970s and 1980s (Hamzah and Tan, 1983).

The shortage of building materials was due to the inability of local producers to increase production while the government had restricted the importation of materials partly to protect the local producers. The problem became more severe when there was higher

demand from commercial and industrial developments. These problems resulted in higher prices of building materials and consequently increased the cost of production (Goh, 1997).

In urban areas, some pieces of land for new housing development required additional construction costs because of existing uses such as squatters and physical constraints such as steep slopes, proneness to flooding, deep ex-mining ponds, and lack of infrastructures (CHKL, 1981). In addition, bureaucratic procedures caused projects to be delayed because housing developers had to go through over 40 separate technical and government departments when applying for approvals and licenses for plans. All these factors contributed to higher costs of production (Hamzah and Tan 1983, p.73).

Factors that increased construction costs and caused difficulty in meeting the target price for low cost housing projects, as above, still persisted in the 5th Malaysia Plan period.

Those problems are articulated in the 6th Malaysia Plan as follows:

The slow progress in the implementation of housing programs, ... was attributed to several factors. These included unsuitability of sites or locations, financial and management problems of developers, misuse of funds collected from house-buyers, incompetent contractors and delays in getting plan approvals" (Malaysia 1991, p.364).

The 8th Malaysia Plan (2001 – 2005) reported the achievement of the target number of units set out in the 7th Malaysia Plan.

Table 4.10
Housing Completed in Mid-7th MP (1996-2000)

Programs	Targeted	Total completed	%	Expected to be completed	%
The Public Sector		A		B	A + B
Housing for the poor	35000	12592	36	17172	85
Low Cost housing	60000	26774	45	58574	142
Low Medium cost	110000	10780	10	7856	17
Medium Cost	20000	24017	120	18146	210
High Cost	5000	9245	184	6967	324
Sub total	230000	83408	36	108715	83.5
The Private Sector					
Low cost housing	140000	63258	45	45422	78
Low Medium Cost	240000	33503	14	15574	20
Medium Cost	110000	112186	102	90508	184
High Cost	80000	110588	138	79281	237
Sub total	570000	319535	56	234785	97.2
Total	800000	402943	50.4	343500	93.3

Source: Real Estate and Housing Developers Association (REHDA), 2001.

As Table 4.10 shows, both sectors concentrated on building medium and high cost houses though the targeted units have been clearly stated. The Public Sector would have been able to achieve the target of low-cost units if the expected units in the 'pipeline' were completed; the Private Sector, however, seemed unlikely to achieve the target for low cost housing. The Mid Term review of the 7th Malaysia Plan has also shown that there would be more high-cost houses than expected.

The above problems are reiterated by the 8th Malaysia Plan report as the report says that 859,000 units of houses were completed (107.4 per cent achievement). This means that there were more units built than targeted. According to type or category of houses, the low cost housing was 95.3 per cent of the target and the low medium cost achieved 20.7

per cent of the target built by Public and Private Sectors. The private sector built 737,856 units or 129.4 per cent of the targeted 570,000 units but concentrated on medium and high cost units, of which 554,458 were medium cost units. It became obvious that there was a surplus in medium and high cost housing when there were 93,000 units unsold until 1999, though the home ownership campaign ran from December 1998 to December 1999. However, the unsold houses in all price categories were still about 45,500 units up to June 2000 (BNM. 2001).

Table 4.11
Overhang Completed Houses

Year	Overhang	House prices RM below 100,000	House prices RM above 100,000
2004	15,162	56.5 %	43.5 %
2005	19,577	49 %	51 %
2006	28,827	42 %	58 %

Source: Central Bank (Bank Negara) Malaysia, 2004-2006

The number of overhang units has decreased from 2002 to 2004. This can be related to the new definition of overhang unit. According to Central Bank (Bank Negara) Annual Report 2004, the property overhang was reclassified to cover only completed property with certificate of fitness for occupation (CFO) issued, but remaining unsold for more than nine months after it was launched for sale. Formerly, all properties were defined as overhang if it was launched and remained unsold for more than nine months irrespective of whether the CFO was issued (Central Bank, 2004, p.25). As Table 4.11 shows, total number of overhang houses is increasing and the share of high price category is increasing compared to the house prices below RM100,000.

Table 4.12
Achievement in 8th MP (2001-2005)

Programs	Targeted	Total completed	%
The Public Sector			
Housing for the poor	16,000	10,016	62.2
Low Cost housing	192,000	103,219	53.8
Low Medium cost	37,300	22,826	61.2
The Private Sector			
Low cost housing	40,000	97,294	243.2
Low Medium Cost	94,000	61,084	65

Source: MHLG (KPKT) 2007: <http://www.kpkt.gov.my/jpn/> access July 2007

Table 4.13
Public and Private Sector Housing Targets: 2006-2010

Program	For the poor	Low Cost	Low Medium Cost	Medium Cost	High Cost	No. of Units	% of Total
Public Sector	20,000	85,000	37,005	27,100	28,700	197,805	27.9
Low Cost	-	67,000	-	-	-	67,000	9.5
Hardcore Poor (PPRT)	20,000	-	-	-	-	20,000	2.8
Commercial Agencies	-	13,500	31,005	8,200	4,700	57,405	8.1
Land Schemes	-	4,500	500	-	-	5,000	0.7
Institutional Staff Quarters	-	-	5,500	18,900	24,000	48,400	6.8
Private Sector	-	80,400	48,500	183,600	199,095	511,595	72.1
Private Developers	-	77,700	42,400	178,000	194,495	492,595	69.4
Cooperative Societies	-	2,700	6,100	5,600	4,600	19,000	2.7
TOTAL	20,000	165,400	85,505	210,700	227,795	709,400	100
%	2.8	23.3	12.1	29.7	32.1	100	

Source: KPKT (MHLG) 2007 – <http://www.kpkt.gov.my/jpn/statistic5.htm> access July 2007.

The Public sector achievement of the targeted number of units in 8th Malaysia Plan was still less than 65%. For the Private sector, the achievement for the low cost categories was far beyond the target. Yet, the low medium cost category was still below the target. Although there are many completed houses still unsold, the MHLG has put forward another target to be achieved in the 9th Malaysia Plan. As the table 4.13 shows, 709,000 units still need to be developed by the Public and the Private sectors. The Private sector is entrusted to build 72% of the targeted units of which 15.71% of 511,595 will be low cost houses.

4.4 Housing development issues

Despite measures that had been outlined by the government in housing policies, housing problems still persisted even in the 8th Malaysia Plan. It seems that the provision of low cost housing to remedy the problem of squatter housing is difficult to achieve. Squatter households in the whole country continue to increase especially in major urban areas and the majority of them will remain in squatter areas for a long period. As Table 4.14 shows, there are still large numbers of squatter families in the whole towns of Peninsular Malaysia in 2006 though the government has implemented the 'zero-squatter policy' starting from 2005 (MHLG, 2006). The 'zero-squatter policy' has resulted significant reduction in the number of squatter families especially in Federal Territory Kuala Lumpur, Labuan and Selangor. However, this achievement is actually as results of enforcement actions taken upon them and not as results of movement of squatter families naturally.

Table 4.14

Squatter Housing in Malaysia, 2006

States	Number of families - 1999	Number of Families - 2006	Differences (2006 – 1999)	Percent (%) of differences
Federal Territory, K. L	23,970	11,969	-12,001	-50
Federal Territory, Labuan	1,315	1,068	-247	-18.8
Selangor	35,355	2,811	-32,544	-92
Johor	7,280	11,411	4,131	56.7
P. Pinang	1,803	5,835	4,032	223.6
Perlis	1,002	2,266	1,264	126.1
Kedah	2,824	3,443	619	21.9
Perak	3,540	14,282	10,742	303.4
Melaka	42	52	10	23.8
N.Sembilan	196	346	150	76.5
Pahang	869	918	49	5.6
Trengganu	632	846	214	33.8
Kelantan	1,654	1,793	139	8.4
Sarawak	7,377	9,618	2,241	30.3
Sabah	30,079	25,525	-4,554	-15.1
Total	117,938	92,183	-25,755	-21.8

Sources: www.kpkt.gov.my/jpn/setinggan.htm accessed July 2007

The arrangement of financial assistance to low income and middle income groups benefited only a part of households in needs. To those who can afford to buy a house, competition to obtain a house as well as to get loans from the banks is inevitable. Thus, the difficulty in obtaining a house in the market is not only to house buyers but will be experienced by those who wish to rent because of great competition, the high level of rents and the limited number of vacant units.

On the demand side, there was a high demand for housing due to the increase of household incomes when households were able to convert their housing needs to become effective demand. The effective demand seemed to increase due to the availability of housing loans from financial institutions which provided loans with low interest rates and longer-term housing repayments.

From the supply side, there were problems faced by the housing industry. The housing need to be fulfilled by the year 2020 is enormous. The traditional nuclear family will reduce, with the increase in the number of young couples with fewer children, bachelors, widows and single mothers. Among the problems in meeting future housing needs is the basic issue of availability of suitable land in terms of price, location and possibility of getting planning approvals (Lawrence, 1997; Mohd. Razali, 1986; Marbeck, 1997). These problems generate higher cost in housing production which will then lead to higher house prices in the market. The limited acreage of land will inevitably affect the number of units which can be built. The housing need as targeted by the government cannot be achieved. What has been shown by the short fall of completed houses as reported in all Malaysia Plans may be related to these land issues. The public sector has fewer problems in terms of land issues because it can acquire land through Land Acquisition Act 1960, yet the performance of the public sector was unsatisfactory because there were management problems, lack of co-ordination and misuse of budget and allocation. Thus, the Private sector was entrusted to play a bigger role in meeting the country's housing needs (6th Malaysia Plan).

However, there are many obstacles faced by the private sector in carrying out housing projects especially in providing low cost housing or in providing affordable housing. Lawrence (1997) argues that the private sector encountered various obstacles relating to urban planning control, which led to increase in production costs. From the literature review, it was seen that housing developers had to face various kinds of constraints, not least those imposed by urban planning rules and considerations. The identified constraints include the cumbersome process and the variety planning requirements, which result in delays in constructing a housing project (Ghani and Lee, 1997; Mohd. Razali, 2002).

Developers may have put their programs in place very much earlier in order to pursue the high demand during boom periods. But if there is any obstruction during the development process, housing developers may not be able to catch the market because they can not respond promptly enough to the housing market (Guy and Henneberry, 2000). The housing development has to follow the development process as described in Chapter 2. Thus, developers who plan to complete projects on schedule should not be delayed by the planning process if the government sector wishes to ensure reduction in numbers of unsold houses, to meet housing needs, and to provide adequate affordable housing.

Based on the above discussions, it is doubtful that the government can solely rely upon the housing market to provide affordable housing for all Malaysians. This is because the demand for various types of houses according to affordability level has increased over

the years but the supply of housing does not meet the demand of the medium and low-costs categories. The government could acquire private land to increase land stock for housing development and subsequently develop this land to increase the supply of housing (Bramley, 2005). However, this approach will only be effective as a long-term measure because in the short-term, the level of house prices and rents of existing housing will increase as a result of limited amount of land for housing and low stock of housing.

Alternatively, the government could also rely on the town planning system to achieve the national housing objectives especially by regulating and controlling housing development carried out by the private sectors; government agencies can play roles to reduce land price and other matters related to housing development costs (Goh, 1997; Salleh Buang, 1997; Healey, 1992). However, there are issues of housing development with regard to the planning system as discussed in Chapter 2.

4.5 Players in housing development

Housing development comprises various stages in a process. To make it simple, the process starts with the acquisition of land and then is followed by application for conversion, subdivision or amalgamation of land, applying for layout approval, applying for building plans approval, construction works, launching sales, applying for certificate of fitness for occupation and applying for strata titles for flats or multi-storey buildings (Lawrence 1997, REHDA 2001). In the development process as above, it is seen that there are many players involved in housing land development. The relationship between

developers and the other players involved may last for a period of time and be determined by contracts or by law. For this study, it is necessary to look at the relationship of housing developers with players, in relation to land transactions and development.

First, it is important to look at the land owner and the developer. If the land owner is not the developer, it will likely sell the land to the developer. The developer then looks at the title and conditions imposed by land office. Then, the developer will examine the potential of the land and the possibilities of development with regards to the planning permissions. The higher the density allowed, the more attractive it will be to developers. Due to the lack of transparency in planning, the developer may take a high risk if it buys land where allowable types of development will not be permitted. Though there is a town plan, the amendments made to the original plan are not disclosed to the public due to certain reasons such as to avoid land speculation and compensation (Lee *et al* 1990).

The second stage is to look at the developer and the professionals. Many professionals are appointed by the developer to give advice and assistance in the development process. The land surveyor conducts a survey of land, the planner prepares layout plans, architects prepare building designs and plans, engineers prepare structural designs and earth-work drawings, landscape architects prepare beautification plans and estate professionals conduct feasibility reports for bridging finance. These professionals employed or engaged by developers carry heavy responsibilities and may increase construction costs.

The third stage concerns the Ministry of Housing and Local Government. This Ministry controls developers' licenses in order to ensure that they are genuine developers, so as to ensure accountability of housing delivery and protection of unit purchasers. The purchaser may lodge complaints to the Ministry for any default made by developers. Among the common complaints are delays in delivering vacant possession and required compensations.

Fourth, a developer and the local authority need to observe several elements. Besides the planning permissions as required by TCP 1976, the local authority may request a developer to provide adequate roads, drains, open areas, schools, religious use sites, and playing fields, that are to be surrendered to the local authority free of charge. Some of this surrendered land will be alienated to the respective agencies, such as schools for Education Department while the remaining land will be maintained as local authority properties. Upon completion of the housing project, a developer needs to apply for the certificate of fitness for occupation for each dwelling unit. At this stage, the local authority has to be satisfied that the developer has complied with all necessary requirements agreed at the planning permission and building approval stage. Additional requirements may delay the delivery of units and affect purchasers or breach the Sales and Purchase Agreements.

Fifth, a developer and the state authority are seen to have relationship at the initial stage of the development because a developer needs to know the allowable land for conversion, amalgamation and subdivisions. The state authority may specify the number

of low cost dwelling units and the allocation of *Bumiputra* Units to be developed by a developer. Sometimes, a developer is asked to subsidize or contribute towards the building of certain social facilities. These are also social obligations specified by the state authority to be carried out by a developer before the land concerned can be considered for approval. These kinds of requirement are similar to the planning obligations and negotiations practiced in the UK (Cullingworth and Nadin, 1996).

Sixth, a developer has to deal with the federal authority; thus a developer may be required to submit an Environmental Impact Assessment (EIA) report and get approval from the Ministry of Science, Technology and Environment. This exercise is only applicable when a developer proposes to develop 'sensitive areas' such as steep slopes, swamps, near air ports or near botanical gardens of more than 2 hectares sites.

Seventh, a developer, if it is not a contractor, can select the contractor to build the buildings, construct roads and lay down infrastructures such as water, electricity and telecommunication lines. The contract will be awarded to the contractor with the lowest bid, though there might be implications for the output quality (Marbeck, 1997).

Eighth is the relationship between the developer and the financier. A developer can approach a single bank or a number of banks and finance companies to raise bridging finance for the development. This may include the money for acquiring land. Usually a developer may make arrangements with a number of financial institutions for housing loans to respective house buyers. The bankers require all necessary documents

especially the feasibility and viability reports. By having the financial institutions give out loans to the house purchasers, a developer can ensure its cash flow. A developer can collect the progress payment based on the sales and purchase agreements. Usually, the architect will certify the status of development when the claim is submitted to the financiers.

Ninth is the relationship between the developer and the lawyers. Lawyers are responsible to ensure that the rights of the developer are protected. Thus, lawyers may be involved in the acquisition of land, deal with financiers, draw up agreements, and hold the money paid by unit purchasers.

4.6 Conclusion

As mentioned in Chapter 2, the identification and determination of housing zones is clearly described as being under the purview of the local authorities activities; the local planning authorities were conferred the power to indicate housing land besides other uses, under TCP Act 172, 1976. Thus, the activity to indicate housing zones has been incorporated in the preparation of a local plan. If the local plan is adopted, it becomes a statutory document that must be taken into consideration in planning decisions. Knowing the important role played by town planning, especially in local authorities, it is important to understand the underlying factors used by local authorities to determine the housing zones in a particular land area. Consequently, national housing policies and housing problems would serve as the main guide for local planning decisions. In all the Five-year Malaysia Plans, housing problems have been clearly emphasized and

measures to remedy the problems have been outlined but the problem still persists up to the Eighth Malaysia Plan (8thMP). In all Malaysia Plans, squatter housing in urban areas is a fundamental concern. However, there is no sign that this problem can be easily solved; while there are surplus housing units (28,827 units), there are still large numbers of squatter families (92,183). Clearly, past and current approaches used by local authorities do not satisfactorily deal with this problem, since they are concerned with land requirements to fulfill housing needs. The squatters remain in large numbers because of high house prices, caused by expensive land.

The availability of the financial assistance, based on the lending rates to the house buyers, is presumed to boost housing demand. However, the number of houses sold actually dropped in all states in year 2001. Central Bank reported that housing loans vary among commercial banks. Monthly household incomes have shown an increase, but effective demand is actually based on the families' disposable incomes. The disposable income also varies among families, depending on the basic needs of the family. In the event of recession, fewer families will be able to buy a house in the market.

Specific government actions to reduce conflicts between incompatible land uses, coordinate private development and public infrastructure, preserve open spaces and historic buildings, and examine the long-range impacts of current actions can similarly be justified as needed to correct market failures revealed in the physical development of the city, and have been carried through the urban planning legislations formulated from the early 1920s up to 2005. The government is also able to play a role in determining

housing development to meet the objective to provide all Malaysians with decent housing as well as to satisfy households' housing needs. However, the persistent housing problems from the 1960s until Eight Malaysia Plan (2000 – 2005) is related to the unsatisfactory performance of the necessary players and agencies involved in housing land development.

Primarily, town planning system and tools as practiced by all levels of planning authorities, particularly the local planning authorities, are seen to have imposed constraints and problems on housing developers. Consequently, the desired types and categories of housing as targeted by the government could not be met, despite passing more of the responsibility to meet national housing needs to private housing developers. The core subject of the current research, therefore, is an analysis of the problems and difficulties faced by private developers in dealing with the planning authorities in Peninsular Malaysia to depict the effects of the implementation of the town planning system. Chapter 5 will discuss the method used for the extraction of empirical evidence and Chapter 6, 7 and 8 will discuss inferences and findings from the data analysis.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 Introduction

Discussions on the relation between town planning and land development, as discussed in the literature review, demonstrated that town planning has had various effects on housing development. Besides political, economic, social and cultural factors, many researchers acknowledge that the implementation of the town planning system has partly contributed to the occurrence of housing problems (Monk and Whitehead, 1996; Evans, 2004; Harvey, 2000). In order to explore the nature of relations between town planning and housing land development practices specifically in Malaysia, it is necessary to determine the most relevant research approach; this approach will then be used as a basis for identifying the required data, ascertaining the appropriateness of research techniques and deciding on the form of analysis. This study was organised according to a number of stages and engaged a series of research methods. As has been briefly discussed in Chapter 1, this chapter will discuss the research methodology in more detail.

According to Nachmias and Nachmias (2000, p.13), the research methodology is:

a system of explicit rules and procedures upon which a researcher is based and against which claims for knowledge are evaluated. Rather the rules and procedures are constantly being improved; scientists look for new means of observation, analysis, logical inference, and generalisation.

Due to the complexity of the research methodology, this chapter starts with an overview of the research theories. This overview includes types of research approach, the rationale behind the research method selection, and the research process. The discussion continues with the research design, that is, types of data, methods used for data and information gathering, sampling method and sample size, questionnaire design and selection of respondents, and data analysis method.

5.2 Overviews of the research theory

Collis & Hussey (2003) have denoted that research is a process of enquiry with systematic and methodical investigation to increase knowledge. Similarly, Sekaran (2003) explains that research refers to an organised scientific inquiry or investigation into a specific problem that is undertaken with the purpose of finding answers or solutions.

The term 'scientific investigation' implies that the research approach normally begins with an investigation of a theory that summarises and organises knowledge by proposing a general relationship between events (Robson, 2001). The investigation must undergo thorough and rigorous methodology stages defined by logical rules and procedures (Collis & Hussey, 2003; Neumann, 1997).

According to Collis & Hussey (2003), there are four main classifications of types of research. The relation between the classification and types of researches are shown in Table 5.1.

Table 5.1
Classification and main types of research

Basis of classification	Types of research
Purpose of the research	Exploratory, explanatory (analytical), descriptive
Research approach	Qualitative or quantitative research
Research Logic	Deductive or inductive
Research Outcome	Applied or basic research

Source: Adapted from Collis & Hussey (2003)

5.2.1 Purpose of research

The purpose of research can be classified into three types: exploratory; explanatory (analytical); and descriptive.

Exploratory research is conducted to find out what is happening or to seek new insights (Robson, 1993). This purpose occurs when there have only been limited research tackling particular issues or problems (Sarantakos 2005; Collis & Hussey 2003). Sekaran (2003) also describes this type of research as a correlation study. The research techniques used in exploratory research include case studies, using quantitative data, and observation or historical analysis, using qualitative data. However, most of the data collected is usually qualitative, such as through case studies or expert consultation (Sarantakos 2005). Quantitative data gathered through questionnaire surveys can also be useful (Robson, 1993). Sekaran (2003) emphasizes that a prior exploratory study needs to be undertaken to gain familiarity with the phenomena in the situation under study,

before the real research begins. However, the main weakness of this type of research is that the results are rarely 'conclusive' in answering the issues or problems; generally, they only provide suggestions, or guidance for future research (Sarantakos 2005; Collis & Hussey 2003). Explanatory or analytical research is conducted to analyse and explain why or how a particular situation exists or to explain the situation or problem by examining the causal relationships between variables (Collis & Hussey 2003; Robson 1993; Sarantakos 2005). Sekaran (2003) has noted that this type of research usually engages hypothesis testing to explain the nature of causal relationships. Most of the data analysed to explain a particular situation is quantitative, usually obtained through questionnaire surveys. Respondents are selected using the sampling theory, to best represent the whole population (Chua, 2006).

Table 5.2
Example of the application of research types

Types of research	Example
Exploratory research	An interview with companies to find out what might motivate them to select their staff in job interviews
Explanatory research	An analysis of the relationship between academic qualifications and success in job interviews
Descriptive	A description of how the job candidates are assessed and what measures are used to select successful candidates

Sources: Adapted from Sarantakos 2005.

The main purpose of descriptive research is to provide an accurate profile of persons, events or a situation which requires knowledge prior to the beginning of the investigation. This type of research often uses quantitative and statistical techniques to describe certain situations (Collis & Hussey 2003). Sarantakos (2005) describes

descriptive research as a preliminary study to provide a background to certain situations. Respondents are drawn from the total population (Chua, 2006). Descriptive research might result in a list of criteria fulfilled by successful job applicants in an interview. These findings might be used as a guideline for future recruitment by the company involved.

5.2.2 Research approaches

There are two types of research approach commonly used in social science as described by King (1996). They are shown in Table 5.3.

Table 5.3
The two schools of research approach in the social sciences

Methods	Approach	Concepts
Quantitative (Hypothesis testing)	Positivism	Social structures Social facts
Qualitative (Hypothesis generation)	Interpretive social science (phenomenological)	Social construction Meanings

Sources: Adapted from King, 1996.

The main objective of quantitative research is to test a theory or specific hypothesis, or to explain a situation or problem. Sarantakos (2005) describes the theory as a set of systematically tested and logical propositions that have been developed through research and explained social phenomena. The hypothesis is a proposition that may take the form of asserting a causal relationship (Sarantakos 2005). The primary data used in the quantitative approach are obtained by the survey method either through postal questionnaires, face-to-face interviews, and telephone interviews or combinations of these methods. Probabilistic samples are drawn from a proportion of the population; this

constitutes a large sample size based on sampling theory (Chua, 2006). The common computer software providing statistical tools and techniques used to analyse quantitative data are: Statistical Package for the Social Sciences (SPSS), Minitab and Microsoft Excel. The data can be presented in the forms of tables, bar charts, histograms, scatter plots, line graphs, and pie charts. Qualitative research places more emphasis on insight into and understanding of human and social activities than on generalisation. It is more subjective in nature. Sarantakos (2005) compares and contrasts the essential features of quantitative and qualitative studies, as shown by Table 5.4.

Table 5.4
Comparison between
Quantitative and Qualitative research

Quantitative research	Qualitative research
To explain social life	To understand social life
Theory testing	Theory building
Objective approach	Subjective approach
Closed and strictly planned	Open and flexible
Research process is pre-determined	Research process is influenced by the respondents
Researcher is distant from respondents	Researcher is close to the respondents
Uses a static and rigid approach	Uses a dynamic approach
Employs a deductive approach	Employs an inductive approach
Employs high levels of measurement	Employs low levels of measurement

(Source: Sarantakos 2005)

The difference between quantitative and qualitative research is not clear because there is no consensus among researchers about the meaning of qualitative research (Mason 2002) and methods of qualitative data analysis. Collis & Hussey (2003) state that there is no accepted set of conventions for analysis corresponding to those observed with

quantitative data. Chua (2006) explains that the purpose of qualitative research is to elaborate facts and to state natural events. The primary data are elicited from non-probabilistic small sample sizes drawn from the population. The instruments used for the interviews are informal and unstructured. There are several qualitative research techniques in the social sciences (Sarantakos 2005). Among the qualitative research techniques mostly used in the social sciences are: case study, ethnography, grounded theory, and action research.

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Case studies involve in-depth and contextual analysis and often relate to exploratory studies (Collis & Hussey 2003; Yin 2003; Sekaran 2003). An ethnographic method requires a researcher to be involved with the group under study for long period of time. Ethnography implies the application of multiple sources of evidence such as interviews, observation, document review, detailed notes, etc (Remenyi *et al.* 1998; Collis & Hussey 2003). The grounded theory approach develops theory from data. This means that the researcher needs to collect a substantial amount of evidence prior to constructing and establishing the theory (variables, concepts and relationships) which is then expressed in terms of hypothesis, and tested in survey. The process moves from the specific to the more general (Dencombe 2003; Collis & Hussey 2003; Remenyi *et al.* 1998). The main aim of grounded theory is not to focus on the amount of data collected, but more on the insight, thought, understanding and experience of the researcher during the period of study (Sarantakos 2005). The action research method

requires a researcher to be actively involved in the situation under investigation. The main advantage of action research is that it addresses practical problems and direct solutions in the workplace within a continuous cycle of development. However, its limitation lies in the applicability of the solutions derived, since they might be relevant only for the particular organisation under study (Aguinis 1993; Remenyi *et al* 1998; Dencombe 2003).

5.2.3 Research logic

The logic of research, as shown by Table 5.1, can be broken down into two types of research: deductive and inductive. The difference between these two approaches can be seen from the steps taken by researchers from the beginning to the end of the research process. Mason (2002) states that a research can be carried out in three ways as follows:

- i) Theory comes first, before empirical research and analysis, and is tested or measured against data.
- ii) Theory comes last and is developed from or through data generation and analysis
- iii) Theory, data generation and data analysis are developed simultaneously in a dialectical process.

In the first case, the process begins with the researcher reviewing a range of literature such as journals, books, manuscript etc., and seeking the experts' opinions and ideas about the topic of interest. Findings are extrapolated from the combination of literature and expert opinion analysed, and then the theory is generated. In other words, the process moves from the general to the specific (Collis & Hussey 2003). This process is

called 'deductive' research. In the second case, the theory appears last, as it is generated from the data, experiences or phenomena that might be encountered in the preliminary study. The process moves from specific to general (Collis & Hussey 2003). The last approach is called 'inductive' research; data is generated and analysed at the same time as the theory is generated, in a combination of deductive and inductive research (Sekaran 2003).

5.2.4 Research outcome

Research to seek a solution to a specific problem for one situation or organisation is known as applied research. For example, a laboratory experiment to find a specific vaccine for a disease is considered as applied research. If the aim of research is to make a contribution to theory and knowledge, it is known as basic research. Thus, the terms 'applied' and 'basic' research refer to the outcome or aim of the research (Collis & Hussey 2003).

5.3 Research Process

The process of scientific research can be divided into two distinct stages: first, the process of developing the conceptual framework and the research question; and second, research design, which involves the planning of the actual study, dealing with location of the study, the selection of samples, data collection and analysis (Sekaran 2003; Leedy 2001; Ahmad Mahzan 2002).

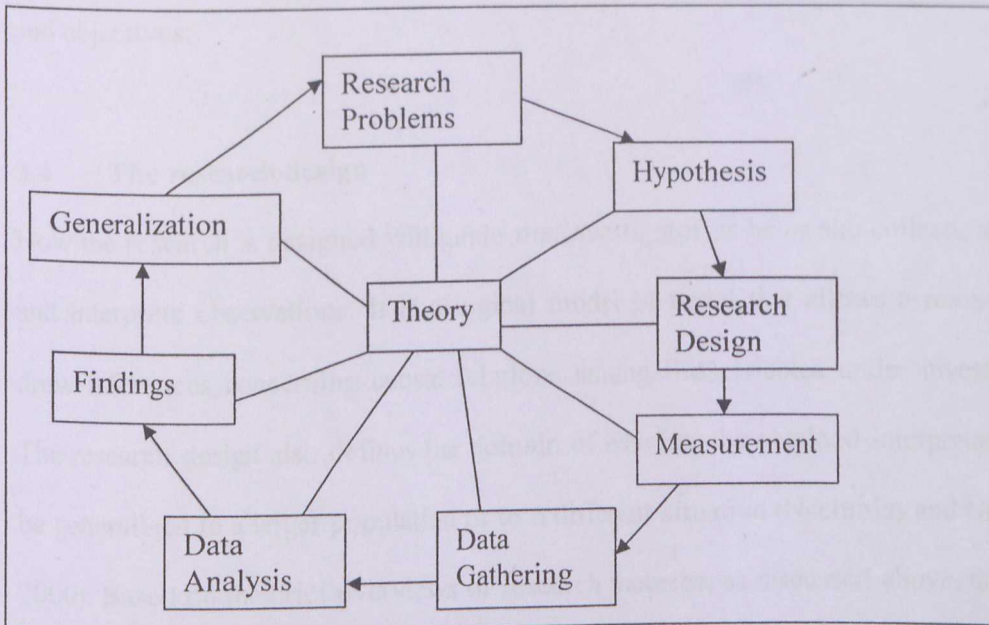


Figure 5.1: The Research Process Map
(source: Nachmias & Nachmias 2000).

Nachmias and Nachmias (2000) provide a broad overview of how quantitative research is undertaken. The process comprises seven major steps. Each step is affected by the theory and the theory also affects the step in the process. The research is portrayed as a cyclical process because the generalisation drawn from a particular research will be re-evaluated by another research and the generalisation will be rethought. This process is shown in Figure 5.1.

For this study, this quantitative type of research approach is the most suitable, for reasons which will be discussed in part 5.4. Thus, all research activities in this study are carried out according to the steps in the quantitative research process. In addition, some of appropriate methods or techniques used to collect and analyse the information and

data are further considered in relation to the part they play in achieving the research aim and objectives.

5.4 The research design

How the research is designed will guide the investigator as he or she collects, analyses and interprets observations. It is a logical model of proof that allows a researcher to draw inferences concerning causal relations among the variables under investigation. The research design also defines the domain of whether the obtained interpretation can be generalised to a larger population or to a different situation (Nachmias and Nachmias 2000). Based on the brief overviews of research theories, as discussed above, this study adopts the explanatory and descriptive types of research purpose, the quantitative type of research approach, deductive type of research logic and basic type of research outcome. These research types are selected on the basis of the nature of data required and technique of analysis used to achieve the research objectives (Nachmias and Nachmias 2000; Chua 2006; Leedy 2001).

5.4.1 Required data

Housing development is carried out to meet housing needs and demand resulting from urban growth, where the increasing number of people results in an increase in number of buildings, economic activities, community facilities, public utilities and length of roads. Examples of community facilities are schools, community halls, playing fields and religious premises. Examples of public utilities are premises or landed spaces to provide routes, water and power supplies, drains and sewerage plants. In order to meet the

housing need, more land is acquired either by redeveloping existing built-up areas (brown field) or by developing agricultural land or undeveloped areas (green field). Housing development within the 'brown field' is considered urban regeneration or renewal and is also known as 'infill development'. This type of development does not increase the amount of housing land available, and does not require the development of a significant number of community facilities or public utilities. The opening up of new housing areas in the 'green field', however, requires additional community facilities and public utilities to be created. This type of development is influenced by political, economic, social and cultural factors, and particularly by the roles of institutions, agencies and players as discussed in Chapter 2. Any attempt to examine the involvement of institutions, agencies and players in land and housing development requires data and information about the population; quantity, category and types of existing and future housing; roles and functions of government agencies; legislative provisions and statutory requirements for land development; property market and economic environments. Most of these types of data and information are available in documented forms such as reports, journals, books, pamphlets, magazines, government gazettes and newspapers.

Focussing on factors affecting housing development resulting from the implementation of the planning system, as discussed in Chapter 1 and 2, information and data are required about how planning authorities prepare development plans, evaluate planning applications and consider planning matters. New housing locations are affected by the town planning system through policies of forward planning and development control. The planning authorities may determine desirable types of urban land uses, such as for

new housing zones, together with policies and guidelines. The housing zones and development policies are partly determined through the development plan system, and disseminated in the respective development plan documents. Some policies and guidelines are partly implemented or enforced through development control (Monk *et al* 1999; Bramley 1999, 2005; Healey 1991, 1992; Guy and Henneberry 2000; Adams and Watkins 2002; Evan 2004). The information that can be elicited from these documents, such as national policies, socio-economic profiles, and economic base study components, are all relevant planning matters. In relation to development control, the central issues are delays in approval planning process; density control, that is, number of persons or residential units per hectare (acre); allocations for commercial and industrial land within a housing scheme; quantity and land area for community facilities and public utilities; fees, charges and procedures.

In Peninsular Malaysia, as discussed in Chapter 3, the implementation of the planning system is divided by three phases: before 1976, between 1976 and 2005, and after 2005 to present. Due to the TCP Act 1976 (Act 172) came into force in 1976, the implementation period of the planning system to be examined by this study is between 1976 and 2005, that is before the adoption of the National Physical Plan 2005. Thus, all the required data are limited to be within the time frame of 1976 to 2005. However, the quantitative types of data that relate the above factors and to the process of housing development are difficult to retrieve. This problem became apparent during preliminary investigations with relevant government departments i.e., state planning department, local planning authorities and land offices. These departments do have the data but it is

poorly kept; no information management system is in place. In addition, files containing relevant required data are inaccessible to public or students due to their classification as 'restricted documents'. Where planning decisions are made to give out approvals or impose extra conditions upon approval, there are likely to be underlying planning reasons. Matters underlying planning decisions on proposed housing layouts and development are normally recorded in the respective planning application files. However, the public as well as students are unable to access the files concerned.

Table 5.5:
Information required from private housing developers.

Development plans		Development control		Planning decision
Structure Plan	Local Plan	Administrative procedures and Planning evaluations	Technical comments	Planning policies
Development strategies, Development policies, Major infrastructures outlined, New infrastructures, New residential areas	Local policies, Local infrastructures, Land use zone, densities, and intensities, Road improvements	Procedures, Processing fees, Processing time, Planning standards, Rules, Guidelines, Other matters, Assistances, Correspondence	Requirements, Comments, Conditions imposed, Correspondence of technical departments.	Duration, Conditions imposed, Consistency, Appeals

Due to the unavailability of quantitative data from secondary sources, this study sought the data from the primary source, that is, directly from the private housing developers. The information requested from the private housing developers is shown in Table 5.5. All this information was gathered through a questionnaire survey which involved

sampling methods to select the respondents, questionnaire design, data processing and analysis method. However, the researcher also faced difficulties in interpreting these primary data. For example, where respondents gave reasons such as 'unreasonable gross and net density in a housing scheme', the researcher had difficulty grasping the precise meaning, because the calculated residential density area may include roads, playing fields and other uses. For this purpose, the researcher had to consult several senior planning officers in state and local planning authorities for further clarification and explanations. This consultation was carried out after all matters that required further clarification from the local planning authority were assembled.

5.4.2 The study area

This study was carried out in Peninsular Malaysia, which consists of 12 states. As discussed in Chapter 3, eleven states have adopted the Town and Country Planning Act 1976 (Act 172), while the Federal Territory Kuala Lumpur adopted the Federal Territory (Planning) Act 1982 (Act 267). Although the two Planning Acts have different names and prerogative of making planning decisions lies with different authorities in each case, they are homogeneous in terms of the planning system, particularly before year 2001, and the planning approval process (Lee *et al* 1990; Goh 1997). As also mentioned in Chapter 3, the Town and Country Planning Act 1976 (Act 172) was amended in 2001 to include the National Physical Plan and Regional Plan in the planning system, but Act 267 remained unchanged.

This study does not cover the planning system in East Malaysia because the two states use different regulations. Sarawak uses the Town and Country Planning Ordinance CAP 87, 1952 which empowers the municipal council to exercise development control, while land matters are dealt with under Land (Control of Subdivision) Ordinance CAP 82, 1954. Sabah uses Land Ordinance (Sabah CAP 68) 1930, and Land Rules 1930. The local authority also functions as the local planning authority within its administrative boundary, which can be of various sizes. The distribution of local planning authorities and private housing developers in Peninsular Malaysia is shown by Table 5.6. In Peninsular Malaysia, there are 99 local planning authorities and about 1009 registered private housing developers.

Table 5.6
Number of local planning authorities and
Private housing developers by states

State	Local planning authorities	Registered Private Housing Developers
Perlis	1	93 86 122 343 89 63 83 119 62 13 25
Kedah	11	
Penang	2	
Perak	14	
Selangor	13	
W.P	2	
N. Sembilan	8	
Melaka	3	
Johor	15	
Pahang	11	
Trengganu	7	
Kelantan	12	
Total	99	1,009

Source: FDTCP, 2004 and REHDA, 2004/2005

5.4.3. The questionnaire construction

This sub topic discusses the construction of the questionnaire as the main survey instrument, using factual and attitude scale of measurements for some questions. Taking into consideration that this survey involves large numbers of respondents from many locations, the questions tend to be fairly straightforward. The survey was also conducted within an environment of good social relations, and respondents were given ample time to understand the objective of the survey and to answer the questions. Based on the main variables derived from the literature, the questions were drafted and arranged according to events of planning approval and development process.

The final set of questionnaires used in this study was tested in two pilot surveys; pilot surveys assist researchers to improve their questionnaires for better analysis (Nachmias and Nachmias 2000; Ahmad Mahzan 2002; Chua 2006). For this study, the main purposes of the pilot survey are to evaluate:

- a) suitability of questions to elicit the expected answers without confusing wording and sensitive questions that may embarrass respondent,
- b) smooth flow of delivering the questions to respondent,
- c) time taken for each interview, to estimate total time for the whole survey, and
- d) the ability to analyse answers to the questions.

In the first pilot survey, the questionnaire was tested on nine respondents from private housing developers. In this questionnaire, all questions were 'open-ended' questions according to the variables discussed in 5.4.2. The main expectation was to obtain as many answers as possible from the respondents, on various items of town planning

control that affect housing development. However, several questions did not elicit answers as expected. For example, the question 'what are the problems faced in submitting applications for planning permission?' elicited a wide array of answers encompassing the respondents' problems, right from filling up the forms to the completion of the housing project. For the question 'in which housing projects was the problem experienced?', respondents answered that they are involved in several types of housing projects, including condominiums, terraced houses, town houses, apartments, country-homes and others. Some of the projects involved less than 2 hectares land. Thus, some of their answers were not relevant to the purpose of this study, since the researcher is actually concerned with problems faced by housing developers in obtaining planning approvals for the development of a housing scheme comprising various types of houses and various types of community facilities and public utilities.

Results from the first pilot survey helped the researcher to design a better questionnaire. For the second pilot survey, except for factual questions, some questions had to be answered using the Likert scale. Respondents were asked to check seven scales of attitude from the lowest to the highest (Nil, lowest, lower, low, high, higher, highest). The sequence of questions was based on the event sequence of the planning approval and development process. Variables in the planning approval process at the stage of application for planning approval were included. The results from the second pilot survey revealed several problems related to wording of questions, time taken to fill up the questionnaire, interrupted sequence of questions, unchecked scales in most investigated questions and uncertainty as to the reasons for the given answers. For

example, the researcher could not grasp why, in certain cases, the respondent chose the 'higher' or 'highest' scales, which imply the greatest number of problems in getting planning permissions. Nevertheless, the data obtained by using the Likert scale is easily tabulated and analysed.

After two pilot surveys, the questionnaire was amended and revised to make it understandable and more focused on answers related to the research questions. Amendments were also made to English grammar, wording and syntax. The final version was designed as a semi-structured questionnaire that contains several types of questions. The first part comprised factual questions to obtain background information of the respondents, experience, position in their organization, characteristics of their organization, and experience in carrying out housing development. The data in this part is of the 'nominal' type. The second part comprised questions relating to the development plan, development control, planning decisions and other factors. These questions were designed to measure 'attitude' or 'opinion' by providing the 'Likert' scale from 1 to 5, that is, from the least to the most (least, less, moderate, more, most). The respondents could use their experience to indicate appropriate scale and to give reasons for their selection of scales. It is found that the range of scales used by this study is the easiest way for respondents to make reasonable judgements. The data obtained here is 'ordinal'. In addition, the semi-structured questionnaires allow the researcher to obtain more information from a particular item especially about underlying reasons for the chosen scale. An example of the questionnaire can be found in Appendix A.

Besides helping the researcher to do necessary amendments to the questionnaire, the pilot interview helps to foresee possible problems that might be encountered in carrying out actual interviews. Several respondents of the pilot surveys mentioned that some housing developers have ceased operation, changed address and shifted to different types of property development. This information is very important to the determination of sampling size and to the carrying out of actual interviews.

5.4.4 Sampling design

Due to the limited time, financial resources and manpower, this study employs the 'inference research design' under the quantitative research method, which does not require a census survey but relies instead on statistical analysis of the primary data from the sample; from this analysis, the findings can still be generalised to the 'population' (Chua 2006. p.8). However, the sample must be drawn according to the sampling theory.

Based on the sampling theory, the accuracy of the sample to represent the whole population is determined by the values of standard deviation and the standard error (Chua 2008; Nachmias and Nachmias 2000; Leedy 2001). The bigger the sample size, the more accurate the results will be (Ahmad Mahzan 2002; Rahman 2000). The formula to estimate the sample size is:

$$\text{S.E.} = s / \sqrt{n} \text{ therefore } n = s^2 / (\text{S.E.})^2$$

where S.E. is the standard error,

's' is standard deviation,

'n' is the sample size.

A sample size of more than 30 ($n > 30$) is considered large, where the arithmetic mean of the sample will be closed to a mean of the whole population, as long as the population size is at least twice the sample size (Spiegel *et al* 2000; McClave and Sincich 2006). After determining the sample size, Leedy (2001) states that the actual sample can be drawn from the population by simple random sampling method. The most frequently used method for the random selection of samples is 'the table of random numbers method' (refer to Appendix B). The table shows horizontal and vertical numbering. The researcher needs to select the number starting from any horizontal or vertical column, selected purely by chance - for example, by opening a text book and then looking at the page number; the two digits of the page number depict the point of intersection between the horizontal and vertical columns. In a case to select 10 samples from a population of 100, the researcher has to look at the two digits of a series of numbers below 100. For example, the researcher can choose number 61, 20, 07, 31, 22 and so on until the required total sample size is achieved.

However, the sample to be drawn from the 'population' can be based on any other sampling technique chosen by the researcher. Leedy (2001) summarises the sampling techniques appropriate for each population characteristic as shown in Table 5.7. For 'simple random sampling', the sample is derived by means of a simple randomization process. In 'stratified random sampling', the population is composed of layers (strata) of different types of individual units. The samples need to be drawn from each of the strata randomly. With respect to 'proportional stratified sampling', a random sample is selected proportionately from the numerical strength of each of the components within

the entire population structures. For example, the population comprises three religious groups and the numerical strength of each group is in the proportion of 3:2:1. If the population comprises 30 Muslims, 20 Buddhists and 10 Hindus, the sample would be 3 Muslims, 2 Buddhists and 1 Hindu. For 'cluster sampling', each cluster should be as similar to the other cluster as possible and yet within the clusters the individuals should be heterogeneous. A 'cluster' can be a state, city, area, building block or precinct. The samples are drawn from each cluster using the proportional stratified sampling technique (Ahmad Mahzan 2002; Nachmias and Nachmias 2000; Leedy 2001).

Table 5.7:
Population Characteristics and Sampling Techniques

Population Characteristics	Appropriate Sampling Techniques
Population is generally a homogeneous mass of individual units	Simple random sampling
Population consists of definite strata, each of which is distinctly different, but the unit within the stratum is as homogeneous as possible	Simple stratified sampling
Population contains definite strata with differing characteristics and each strata has a proportionate ratio in terms of numbers of members to every other strata	Proportional stratified sampling
Population consists of clusters whose cluster characteristics are similar yet whose unit characteristics are as heterogeneous as possible	Cluster sampling

Source: Leedy, 2001, p.101.

Based on the above discussions, the selection of the most appropriate sampling technique for this study is dependent upon characteristics of the sampling population and the area where the population is established. The 'sampling population' in this case is private housing developers; in general, housing developers are homogeneous because

they hold licences under the Housing Developers Act 1966, they are directly involved in housing development, and they have dealt with the planning approval process. Their organizations are located in all states in Peninsular Malaysia. Based on individual characteristics, they have differences in terms of their organization size, capabilities, experience and location (REHDA, 2004/2005).

All states in Peninsular Malaysia are considered as homogeneous subjects in terms of public administration and town planning systems. Though there are differences in the implementation of town planning systems that are related to different planning policies and decisions, the functions of the planning authorities are homogeneous (Bruton, 2007; Lee *et al* 1990). Therefore, the most appropriate sampling technique used in this study is 'cluster sampling'; the sample is drawn from each state (stratum) according to the proportional stratified sampling by using the Table of Random Numbers. Consideration was also given to the requirement that the sample size to represent each 'stratum' should not be less than 10 samples for satisfactory statistical analysis (Nachmias and Nachmias 2000).

According to the identified sampling technique, the sample should be drawn as a number proportionate to the total population of each stratum. Here, each state in Peninsular Malaysia can be considered one stratum. Thus, all registered housing developers in each state, as recorded by REHDA 2004/2005, are given a number; then the sample from each state is drawn according to the Table of Random Numbers. By applying the cluster sampling technique, a total of 110 samples was drawn from each stratum, constituting

approximately 10 per cent of total population. Due to the possibility of non-responses, an allowance of 30% was made. This finally led to an adopted sample size of 160. The selected housing developers were then traced by their addresses, based on the names of their establishments recorded by REHDA 2004/2005. The sample drawn from each stratum is shown in Table 5.8.

Table 5.8
Number of Registered Housing Developers and Sample drawn

State	Registered Housing Developers	10% Sample	Adjusted Sample
Kedah/Perlis	93	9	10
Penang	86	9	12
Perak	122	13	15
Selangor	343	34	45
W.P	89	9	12
N. Sembilan	63	6	10
Melaka	83	8	12
Johor	119	12	14
Pahang	62	6	10
Trengganu	13	1	10
Kelantan	25	3	10
Total	1,099 (N)	110	160 (n)

Source: REHDA, 2004/2005. Note: (N) = population; (n) = samples

5.4.5 Data and information collection

There are two categories of data used in this study – secondary and primary data, as mentioned in Chapter 1. Secondary data was gathered through documents as discussed in 5.3, in tandem with the writing up of Chapters 1, 2, 3 and 4. When new data was found, it was included in the respective chapter. Non-published documents that provided valuable information were acknowledged whenever relevant.

The primary data was gathered by 'face-to-face interviews' using semi-structured questionnaire. The interviews were carried out by the researcher personally during working days and hours and in the English language. However, Malay language was used occasionally in some cases when respondents could not communicate well in English and required further explanation of the questions in the Malay language. The selected respondents were contacted through telephone and electronic mail before the visits. The selection of respondents was highly discriminating, restricted only to high level managers or professionals in housing developers' organizations. They were assumed to have sufficient knowledge of housing development and the planning approval process. The important factor in choosing which private housing developers to be surveyed is that they must have experience in developing housing schemes irrespective of project sizes and have a valid developers' license. Although large housing schemes have been imposed with many planning requirements and rules compared to the development of an individual house (detached), an apartment, or a housing scheme of less than 50 acres, the experience in dealing with planning approval would be similar. The referred housing scheme includes commercial and industrial uses but the proportion of housing land must be larger than that of both the commercial and industrial land.

This study adopts the personal interview (face to face technique) because it has some advantages. Most importantly, the personal interview technique will ensure higher response rate than sending questionnaires through the mail. This technique also enables interviewers to explain the objective and the purpose of the survey verbally, and to

clarify unclear questions. In addition, interviewers are able to probe for additional information or details, to ensure that the respondent answers the questions as they are put in sequence, and to collect supplementary information, if any (Nachmias and Nachmias 2000; Chua 2006). The time spent for an interview was about 30 to 40 minutes. All filled up questionnaires were processed to extract the data as discussed in Chapter 6.

However, the personal interview technique has its disadvantages in terms of costs, interviewer bias and lack of anonymity. There are costs involved in the travel and time required to conduct interviews (Nachmias and Nachmias 2000; Ahmad Mahzan 2002). For this study, the researcher incurred extra costs for lodging and travelling when respondents were not available on the date and time of appointments. Interviewer's bias was expected to be minimised because respondents fully understood all questions and were happy to speak about their unsatisfactory relations with planning authorities. There is a possibility of bias in the way the researcher records verbal responses given by respondents, and in translations from Malay to English. The lack of anonymity was not an issue in this study because the interviewer was the only person who kept all respondents' particulars (names, addresses and telephone numbers) and promised to maintain the information as strictly confidential.

5.4.6 Data Processing and cleaning

This study uses Statistical Package for the Social Sciences (SPSS) for Windows version 13 for the data analysis. Thus, the data obtained from the questionnaire survey had to be

prepared according to the requirements of the SPSS. All sets of completed questionnaires were examined in terms of their contents and responses to questions. Since the questionnaire was semi-structured, there were answers in Likert scales and answers in verbal forms. All answers had to be given field numbering or coding to make it easier to key in data into the SPSS Spreadsheet. Data on respondent particulars and the experience of their organisation was classified as 'nominal measurement'. For example, code 1 is for director, code 2 managing director, code 3 for project manager and so on. Answers to the likert scale questions were easily coded because they were based on the scale used, i.e., 1,2,3,4 and 5. Reasons given by respondents for choosing particular scales encompassed many categories of answers. Thus, the identification of relevant categories took a long time. The researcher's time was spent on searching for appropriate categories based on the purpose of the study. These answers are known as 'strings' in the SPSS spreadsheet. The code for the string data was based on the identified categories. For example, if the respondent checked scale 4 on the likert scale for procedures in submitting an application for planning permission and the reason given was 'many particulars required', the category for this reason would be 'information requirement'. If the reasons did not fit any particular categories, they were categorised as 'others'.

Even though all data was successfully keyed-in into the SPSS spreadsheet, the researcher had to do data editing (Nachmias and Nachmias 2000, Ahmad Mahzan 2002). It was found that the scores for all scales still required data cleaning, including corrections to wrong entries, omissions, missing values and errors in the SPSS

spreadsheet. The missing values were given the code '99'. The researcher needed to refer to the questionnaire concerned in doing this editing work on the data spreadsheet. This exercise was helped by having the questionnaire serial number which was then replaced by 'ID' in the SPSS spreadsheet.

5.4.7 Data analysis method

This study explores statistical tools to analyse, represent, and interpret relationships between variables of the data. Data that has been coded and prepared for SPSS processing is ready for analysis. This study uses three types of analysis techniques: descriptive, non-parametric correlation, and analytical.

a) Descriptive analysis

In order to analyse the data according to techniques of descriptive analysis, the first task is to construct the frequency and percentage distribution to examine the pattern of response to each of the variables and to make comparisons between variables. These comparisons can be displayed in bar charts and pie charts. The most important measurement after observing the percentage distribution is the 'measure of central tendency'. There are three measurements commonly used in social sciences: the mode, the median and the arithmetic mean. The mode indicates to point in the distribution with the highest density, the median is the distribution's midpoint, and the arithmetic mean is an average of all the values in the distribution. However, Nachmias and Nachmias (2000) states that the median is more suitable for analysing data measured at ordinal level. The mean and the median will indicate the location of the majority of respondents'

attitudes. Since five likert scales were used for investigated variables, the mean or the median of more than 3 depicts the existence of 'problems' to that respective variable. For cases where the mean and median are less than 3, the problems to the respective variables are relatively fewer.

Prior to detail analysis, the data are tested for 'internal reliability' which will determine the robustness of the results. For this purpose 'Cronbach's Alpha' is used after ensuring all component variables are coded in the same direction. SPSS for Windows provides a tool for reliability analysis. The value of Alpha ranges from 0 to 1. The value of 0.7 and more for each variable is considered acceptable for further analysis (Jackson and Watkins 2005; Chua 2008, Nachmias and Nachmias 2000).

b) Non-parametric correlation

For 'ordinal' data, the measure of relationships among variables is meant to examine whether the ranking of observations on each variable is identical, similar or different (Nachmias and Nachmias 2000; Chua 2008). For this purpose, the 'spearman rho' correlation technique is used to examine the magnitude of relations between variables. This correlation technique is commonly used in non-parametric analysis which has its counterpart in the parametric analysis known as 'pearson correlation'. The non-parametric analysis is carried out on data measured in nominal and ordinal levels. The parametric analysis is carried out on data measured in intervals and ratios (Leedy 2001; Spiegel *et al* 2000; Chua, 2008). The result from spearman rho' correlation will exhibit the existence of agreement among respondents to two or more variables. The spearman

rho' correlation technique can be carried out using SPSS for Windows. Strong relations with 0.05 and 0.01 significant values indicate confidence intervals of 90% and 99% respectively. The category of correlation coefficient values is shown in Table 5.9. Correlation values close to 1.0 indicate the strong agreement of respondents to the ranks or scale given to those variables of interest. If the variables are given lower ranks or scales, the magnitude of relationships also shows that respondents have strongly similar attitudes to the lower ranks or scales. To draw these conclusions, the researcher must refer back to the mean and the median of each variable. It is expected that a higher degree of problems (in planning components) is indicated by strong correlation coefficient values (0.71 – 0.99) among variables of interests that have the median and the mean values at 3.0 and above (3.0 – 5.0).

Table 5.9
Categories of correlation coefficient values

Category	Correlation coefficient value
Very strong	0.91 – 1.00
Strong	0.71 – 0.90
Moderate	0.51 – 0.70
Weak	0.31 – 0.50
Very weak	0.01 – 0.30
No relation	0.00

Source: Chua, 2008. p.246

In order to examine the differences among respondents' attitudes, the One-way ANOVA statistical technique is used in this study. This technique is also provided in the SPSS for Windows package. The results from this technique of analysis will indicate differences between variables of interests.

The significant Tukey's comparison values are determined at 0.05 and 0.01 with the confidence interval of 90% and 99% respectively (Chua 2008; McClave and Sincich 2006; Zulkarnain Zakaria and Hishamuddin Md. Som 2001).

c) Analytical analysis

An analytical statistical technique to extract the dominant factors and components is the Factor Analysis or is known as PFA (Principal Factor Analysis). The use of PFA is well established in property and planning studies (Watkins, 1999; Bramley, 1998; Malpezzi, 1996; Jackson and Watkins, 2005). Therefore, this study employs the PFA technique to extract the dominant factors and components of the town planning system that affect housing development. The factor analysis is able to classify a large number of interrelated variables into a limited number of dimensions or factors (Nachmias and Nachmias, 2000). The researcher can simplify the measurement of dependent variables (planning considerations) by identifying a number of underlying dimensions. In this study, the equations used in PFA are as follows:

The planning factors affecting housing development = development plan + development control + planning decision + other planning factors.

The correlation between an item and a factor is represented by a factor loading which is similar to correlation coefficient; it varies between zero and one and can be interpreted in the same way. Loading items with values of 0.3 and below are considered weak indicators of the factor. The technique assumes that items representing a single

dimension will be highly correlated with that dimension (Nachmias and Nachmias 2000, Ahmad Mahzan 2002). The extent to which the factor is explained by the items' loading is reflected in the percentage of explained variance. Most importantly, *the factors with the highest percentage of explained variance provide the most parsimonious representation of the items* (Nachmias and Nachmias 2000.p.472). Therefore, the factor with the highest percentage of the explained variance is the dominant factor. However, the working of PFA depends on the specific procedure.

Ahmad Mahzan (2002. p.266) outlines the steps that need to be taken in this technique as follows:

- a) Prepare correlation matrix of all the variables to be analyzed under FACTOR that will be done by a computer (SPSS package)
- b) The computer will give output of initial factors
- c) The computer will process all the initial factors to obtain the final factors for interpretation by the researcher.
- d) The researcher gives names to the factors comprising variables that have coefficient correlation of more than 0.3 (factor loading).

5.5 Conclusion

The overviews of the research theories provide the most important basic knowledge for the researcher to rationalise and identify the appropriate research approach and design. Based on research theory, this study adopts the quantitative research approach for methods of data gathering and techniques of data analysis. The data to be collected and

analysed are pertaining to components of the three main town planning factors that constitute the planning system: development plan, development control, and planning decisions. It is expected that the results of the analyses will be able to explain on how the implementation of the planning system affect housing development. Therefore, the next two chapters will discuss the descriptive and analytical analyses of the primary data, followed by discussions on the research findings.

CHAPTER 6

DATA ANALYSIS

6.1 Introduction

The housing development issues in Peninsular Malaysia, as discussed in Chapter 4, are related to land suitable for housing, higher production costs and a large number of unsold houses in the market which indicates the mismatched between the housing supply and the demand. These issues are assumed to be associated with the implementation of the planning system. Since the government have given 72.1 percent share to the private housing developers to meet the targeted 709,400 units from 2006 to 2010, the burning question is which town planning components are affecting private housing development. As has been highlighted in Chapter 3, town planning components can be identified based on major planning activities involved in the implementation of the planning system. To answer the question, the data gathered by questionnaire survey are analysed based on the descriptive analysis techniques as discussed in Chapter 5 that include the arithmetic mean, the mode and the median that are used to indicate the central tendency of data

distribution (Nachmias and Nachmias, 2000). By presenting attitudes of the problems based on the 'likert scale' from 1 to 5 levels in percentages form, housing developers problems related to the respective planning components are distinguishable. Ultimately, results of the analyses in this chapter will reveal the town planning components that have been partly contributed to the housing development issues in Peninsular Malaysia.

The discussions in this chapter follow closely the steps in the Event Sequence Model, as highlighted in Chapter 2, whereby the relation between town planning components and activities in the development process can be analysed starting from the land acquisition stage until the planning approval stage. Prior to the analyses, the data are examined of their validity and reliability and followed by characteristics of the data, detail analysis for each town planning components and ends with the conclusion.

6.2 Characteristics of the Data

Based on lists of registered housing developers in the REHDA Annual Report 2004-2005, housing developers were contacted through E-mail, phone and facsimiles. The successful contacts were followed by personal visits purposely made to get appointments for the interviews using semi-structured questionnaires. Therefore, it is important to portray the characteristics of the data before further analysis can be carried out. The characteristics of the data can be portrayed through the examination of the rates of responses, the respondents' particulars, and the reliability and validity of the data.

6.2.1 Response rates

The number of samples drawn from each state is shown by Table 6.1. Although the designed sample from all housing developers through the random table is 160 out of 1,009, the actual sample is only 137 or 85.6 per cent. The other 14.4 per cent is considered as 'non-response' even though after fourth attempts made. The respective respondents could not be interviewed because of various reasons such as reasons of their priority works. However, this sample size is more than the expected responses of 70 per cent (refer Chapter 5). The small percentage of non-responses (14.4 %) is beyond the researcher control because usually the businessmen do not welcome the non-money meeting or discussions.

Table 6.1:
Total Sample for Questionnaire Survey

States	Design Sample	Actual Sample
Kedah/Perlis	10	10
Penang	12	10
Perak	15	15
Selangor	45	40
W.P KL	12	10
N. Sembilan	10	10
Melaka	12	10
Johor	14	14
Pahang	10	10
Trengganu	10	3
Kelantan	10	5
Total	160	137

Bad experiences are unavoidable especially when the respondents were not available at the appointment dates and times. Thus, after fourth attempts, they are considered as no response. Even for the successful interviews, there were cases when the respondents for

the interviews were suddenly changed from the 'contacted respondent' to a new respondent who was selected by the company while the researcher was under way. For this nature of occasion, the researcher was taking cautious step to ensure that the replaced respondents had also ever handled housing project development. Fortunately, in this study, the replaced respondents' were among managerial levels and able to answer all questions satisfactorily. All answers given were based on their experiences in the field of housing development. Their positions in housing developers' companies are as shown by Figure 6.1. Of all respondents, 47 percent of them are project managers who normally being recognized as persons who have actually involved in the process of housing development (Ratcliffe and Stubbs, 2003). The other 53 percent of respondents are not project managers but they are managers who involve in housing development. Perhaps, their positions depend on types and categories of companies' establishment which are not usually called project managers.

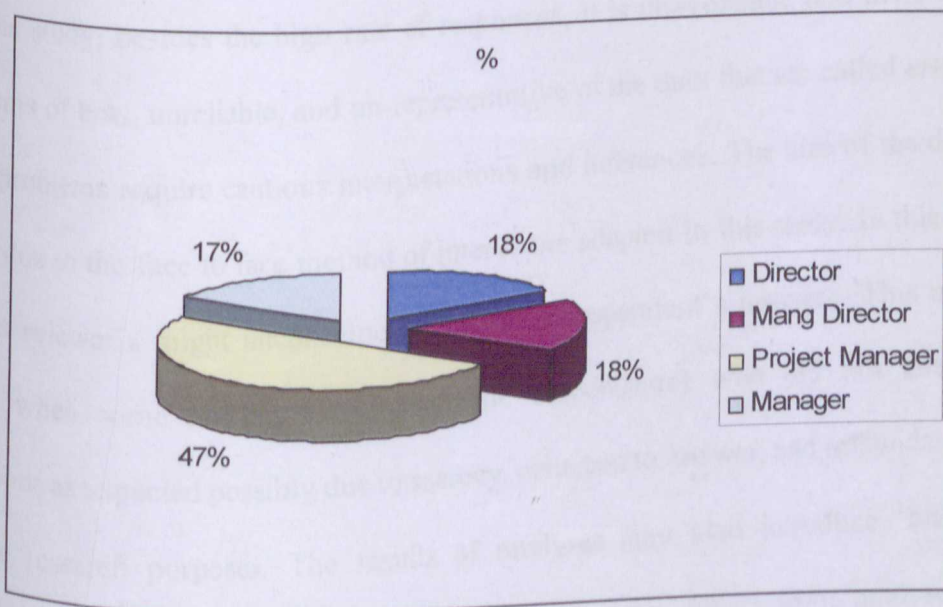


Figure 6.1: Respondents Positions in Respective Developers Companies

The sample size of 137 is considered more than adequate for the analysis because it is considered as a 'large sample' that will be able to display the normal curve distribution (Spiegel 2000, Mc Clave and Sincich 2006). In addition, the sample size that consists of more than 10 responses for each variable fulfilled the requirement for satisfactory statistical analysis (Nachmias and Nachmias, 2000).

6.2.2 Data Validity and Reliability

Data validity and reliability can be discussed under the content validity that includes 'face validity' and 'sampling validity'. The face validity is the subjective evaluation of a measuring instrument. The concern of sampling validity is whether a given population is adequately sampled by the measuring instrument in question. The 'reliability' refers to the extent to which a measuring instrument contains 'variable errors' (Nachmias and Nachmias, 2000).

For this study, besides the high rate of responses, it is unavoidable that there are also problems of bias, unreliable, and un-representative of the data that are called *errors*. All these problems require cautious interpretations and inferences. The bias of the data may occur due to the face to face method of interviews adopted in this study. In this respect, the interviewer's might unconsciously influence respondent's answers. This may also occur when some housing developers (the respondents) who did not answer the questions as expected possibly due to secrecy, reluctant to answer, and misunderstanding of the research purposes. The results of analyses may also introduce 'bias' when inferences of a small sample size (less than 30) were drawn from analyses which

employed a large sample size statistical technique. Statistically, the bias of the data is portrayed as *errors* (Ahmad Mahzan, 2002; Leedy 2001, Nachmias and Nachmias 2000).

In this study, the bias is unavoidable even though the sample size is considered adequate for exploring the large sample statistical analysis technique. However, the bias is minimised because the sample drawn from each stratum is strictly carried out according to the statistical probability theory that is using 'the Table of Random Numbers'. There is also unavoidable bias to appear in the data since the interviewer or the researcher explained the questions and giving an example to the answer. This situation occurred because respondents do not fully understand about types of development plans, local and national policies, planning matters, non-planning matters, and planning conditions and requirements. Thus, the researcher had to give explanations towards answering the questions without embarrassing the respondents with the intention to get further corporations and favour. However, the researcher was fully cautious about the possibility of the bias. Therefore, it is learnt that the wording of the question in the questionnaire is very important in order to obtain the right answer to the question written in the questionnaire. Fortunately, in this study, the researcher conducted the interviews personally through which the misunderstood wording could be explained immediately.

Based on the data, the possibility of analyzing the relations among variables is tested by using the 'Cronbach's Alpha' technique. Out of 36 variables tested, the total Alpha value

for 30 variables is 0.95 which is within the acceptable range of between 0.7 and 0.99.

This is shown by Table 6.2.

Table 6.2
Reliability Statistics

Cronbach's Alpha	N of Items
,950	30

According to Chua (2008), the acceptable Alpha value for reliable analysis should not be more than 0.95 because the value at above this level will indicate the overlapping scales leading to errors in interpretation. Based on this view, all 30 variables can be analyzed using the Factor Analysis, Spearman Rho correlation coefficient and One-Way ANOVA techniques.

6.2.3 Categories and Characteristics of Housing Developers

A private housing developer is the main player in housing development (Goodchild and Munton, 1988). Developers can be divided into several groups based on their intentions in housing development. The majority of developers fall under two main groups: build for their own uses and build for sales (Millington 2000). However, irrespective of which group they are in, they need to deal with planning permissions because all types of land development have to apply for planning permissions except the exempted development (Act 172 and Act 267). This study finds that private housing developers who involved in housing development are focused on 'build and sell for profit' and do have sometimes 'build for their own uses', but the later is seldom. In Malaysia, developers can be divided into a subsidiary and a sole proprietor company (Johnstone, 1979). A subsidiary

company has less authority in dealing with housing land development in many ways such as in choosing housing location and proposed housing lay out. The category of establishments may affect the capability of a developer in performing housing development such as sufficient financial capital to run the projects as well as to acquire housing land, to provide expertise and manpower, and to engage with related consultants (Johnstone 1979). Even though the subsidiary companies have their limitations, this study considers all information delivered by the respondents in full confident that they are also representing the parent companies.

Based on the objectives of this study, the most important information required from the private housing developers are about the factors derived from the implementation of the planning system that affect housing development. Therefore, the representatives from either subsidiary companies or sole proprietor are considered as the reliable respondents who could provide all required information on conditions that they had ever involved in 'build and sell' houses.

Table 6.3:
Housing Developers Experiences
in Housing Development by years

Years of experiences	N	Percent	Cumulative percentage
Below 3 years	18	13.1	13.1
4-6 years	83	60.6	73.7
7-9 years	18	13.1	86.9
10 and more years	18	13.1	100.0
Total	137	100.0	

In this study, the data are delivered by 56.2 per cent out of 137 respondents representing sole proprietors companies and the rest are from subsidiary companies. In addition, the

information disclosed in this survey is also delivered by the experienced developers. As Table 6.3 shows, there is high percentage of housing developers that have experienced of more than 4 years in housing development. Since respondents who delivered information in this study has ever experienced and involved in housing development or projects, all information are considered reliable.

6.3 Housing Developers Problems with Town Planning Components

The housing developers may encounter problems in dealing with planning approval starting from acquiring land until obtaining planning approvals. The problems can be analysed under components of development plans, of development control and of planning decision (see Chapter 2 and Chapter 5). Consequently, the results of the analyses are discussed under the following subtopics.

6.3.1 Components of the development plans

The development plan refers to Structure Plan and Local Plan (see Chapter 3). These both types of development plans contain policies for controlling and encouraging development together with maps showing categories of land uses, density and related development guidelines. With regard to land for housing, the private housing developers could earmark land within the alienated residential zone for their projects but faced problem at the land acquisition stage. As Harvey (2002) has argued, the problems occurred when they could not find land suitable for housing development to meet their objectives. As Table 6.4 shows, there are 52.6 percent of private housing developers who prefer agriculture land (green field). This means that they try to get cheaper land

prices to reduce development costs as argued by Adams and Watkins, 2002. Another 47.3 percent of developers are looking for vacant or redevelop-able land. This group sought housing development on ex-mining land and within existing built up areas such as under-developed areas or squatter areas. Both the above groups can choose land within or outside a development plan boundary (structure or local plan).

Table 6.4
Private developers preferred
land for housing development

Preferred Land	Within Development Plan Boundary	Outside Development Plan Boundary	Percent
Agriculture Land	31	21.6	52.6
Vacant and Redevelop-able Land	34	13.4	47.3
Percentage Total	65	35	100

However, the percentage of private developers who prefer land outside the development plan boundary is 35 percent. These developers are willing to take risks; if they are unsuccessful to secure planning permissions, they will keep the land in their land bank (Evans, 2004).

Within a development plan boundary, an agriculture land is either zoned for residential or to remain as agriculture or for other uses. Outside the development plan boundary, an agriculture land is definitely not identified for residential development and to remain as agriculture unless the area is identified for new growth centres. However, development plans could not always identify agriculture land for housing development because not all

urban areas in Peninsular Malaysia have ample agriculture land within local authority boundary and some agriculture land outside local authority boundary have to be preserved as agricultural areas (NPP, 2005; CHKL, 2000). Private housing developers mentioned that their problems to acquire land can encompass many aspects. As the Table 6.5 shows, the higher percentage (56.2%) goes to the problem of 'unreasonable land price' while only 17.5 percent goes to the 'uncertainty of getting planning approvals' and 8.8 percent for the 'insufficient infrastructures'. The land that the landowners refused to sell (17.7 percents) reflects the landownership constraints on housing development that will affect the targeted number of houses within the respective areas as argued by Goodchild and Munton, 1985.

Table 6.5
Private developers problems in acquiring
land for housing development

Problem Subjects	Within development plan boundary	Outside development plan boundary	Total (%)
owner don't want to sell	15 (10.9)	9 (6.6)	24 (17.5)
unreasonable land price	62 (45.3)	15 (10.9)	77 (56.2)
uncertainty of getting planning approvals	5 (3.6)	19 (13.9)	24 (17.5)
insufficient infrastructures	7 (5.2)	5 (3.6)	12 (8.8)
Total	89 (65%)	48 (35%)	137 (100%)

The 'unreasonable land price' is the problem related to the willingness of respective land owners to release their land which requires negotiations between developers and land owners (Harvey, 2002). There are also 45.3 percent (out of 56.2 percent) of these problems involved land within the development plan boundary. Eventhough, there is a

suggestion for the government to acquire these such land (Lawrence, 1997), the planning authority would only acquire land under the Land Acquisition Act 1960 if the local authority felt that the land acquisition was deemed necessary to serve the public interests such as to develop public housing or schools. Otherwise, the development plan will indicate the area for housing development and let the normal process takes its own course (Salleh Buang, 1997). During the booming economy, developers are able to offer higher prices but will not be the case during economic recession because higher land prices will result higher house prices (Evans, 2004). Therefore, the local planning authority in preparing development plan is urged to identify land suitable for housing as preferable to housing developers with the intention to achieve the objectives of meeting the targeted number of housing categories in all National Development Plans (Lawrence, 1997).

The uncertainty of getting planning approvals and insufficient infrastructures are, indeed, problems related to town planning (Adams and Watkins, 2002). This problem is related to the location factor that the land chosen for housing has either been identified for housing or not been identified for housing. As Table 6.5 shows, out of 17.5 percent, 13.9 percent of the problems are due to the land located outside the development plan area (boundary). The insufficient infrastructures problem is related to the implementation of the development plan and the boundary identified for a development plan. By taking 5.2 percent out of 8.8 percent for this problem, there is an indication that the respective development plan has not considered the area to become residential zone. Therefore, the responsible agencies did not provide the area with necessary

infrastructures such as roads, sewerage, water and power supplies. These agencies are the Public Work Department for roads, Indah Water Consortium for sewerage system, Pejabat Urus Air Selangor (PUAS) for water supply and Tenaga Nasional Berhad (TNB) for electricity power supply.

The housing developers' problems as shown by these data are associated with matters arising from the way of the planning authority prepared and implemented the development plans. The conflict of interests may appear between the planning authority and the private developers; when developers identified the land as a potential land for housing development, the planning authority did not identify it as a suitable land for housing in the development plan (Monk *et al* 1996). Moreover, if land embraces with all kinds of limitations, the developers would have left with less choice in acquiring land for housing (Bramley *et al* 1995). Therefore, housing developers may be left with land of higher prices and higher development costs.

For the problems concerning housing land as indicated by development plan, 43 percent of private developers have problems to meet their objectives because of insufficient land acreage identified for housing within urban areas and being left with land of high prices or high development costs. In addition, the land identified to be future housing by the development plan cannot ensure the reduction in the development costs due to the land explicit and implicit attributes. The explicit attributes are related to physical characteristics of the land that are: hilly with steep slope, water bodies with deep ponds, swampy and hard rocks, locality and accessibility (location of land plot and the

availability of access roads). The implicit attributes are: the land owners, the restrictions imposed on grants, land tenures (freehold or leasehold) and underground laid down infrastructures such as water supply and sewerage system. Therefore, housing developers may have limited choices in choosing land if they intend to develop the low price category housing within an urban area (Bramley *et al* 1995; Marbeck, 1997).

The problem with land characteristics, as shown by Figure 6.2, is also related to the location and existing land uses. In terms of location, the respondents revealed that the site located far from existing towns and from existing housing estates make the land to be more difficult to develop because either the access road must be widened or new road must be constructed (73 percent). Hence, the longer the distance from existing roads, the higher costs will be born by developers in constructing necessary access to their projects (Buitelaar, 2004).

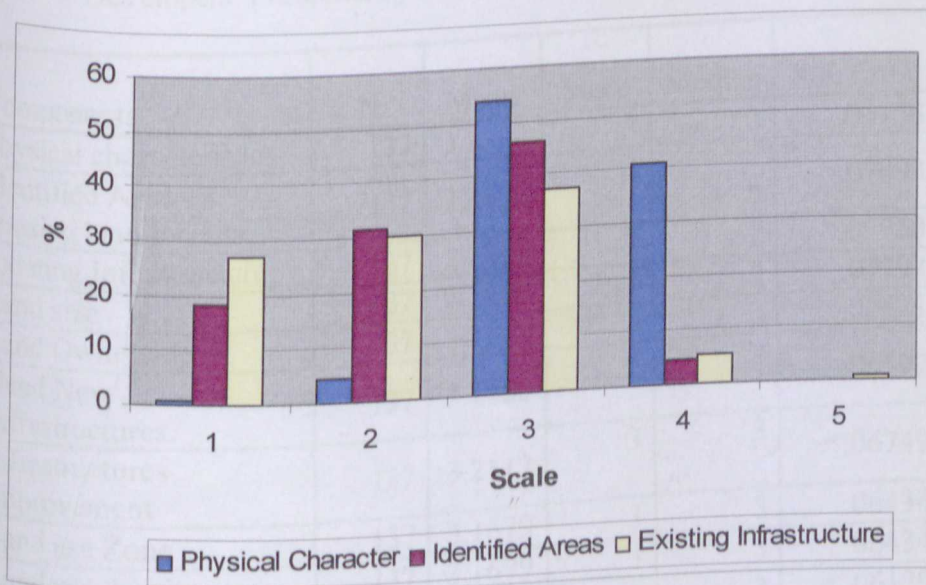


Figure 6.2: Problems in choosing housing land

As Figure 6.2 shows, there is a large proportion of private developers inclined towards 'problem' and 'more problems' levels (scale 3 and 4) in respect to the land physical characteristics; 52 percent for scale 3 and 40 percent for scale 4. Compared with the existing infrastructure components, they are divided by 50 percent for 'less and least' problems scale while a balance of 50 percent go for 'problem and more problem' scale. Based on 'the mean, the mode and the median', as shown by Table 6.6, the mean for the physical characteristic is 3.3, the mode is 3 and the median is 3. The mean for the problems with the existing infrastructure is 2.2 and the median is 2 while the mode is 3. This shows that developers have faced higher level of problems relating to land physical characteristics than the problems relating to existing infrastructures. However, these results are related to the respondents' answers that they normally proceed with the proposals and provide all required infrastructure even though the development costs would be high.

Table 6.6:
Developers' Problems by Development Plan Components

Components	N	Mean	Mode	Median	Std. Error
Physical characteristics	137	3.3504	3	3	.05138
Identified Area – housing land location	137	2.3650	3	2	.07093
Existing Infrastructure.	137	2.2263	3	2	.07958
Land size	137	2.5839	3	2	.07798
Land Ownership	137	3.2117	3	3	.05621
Need New Infrastructures.	137	3.1460	3	3	.06597
Infrastructures Improvement	137	3.2117	3	3	.06749
Land use Zone	137	3.1679	3	3	.06434
Land use density	137	3.1679	3	3	.06434
Development Guideline	137	3.2263	3	3	.06129

The company's main concern is to make profits while having good market sentiments where total sales exceed the production costs. Therefore, the costs related to physical characteristics and infrastructure requirements are normally included in total development costs. Consequently, all costs will be transferred to consumers through higher selling prices (Evans, 2004). The respondents who answered at lesser problems level to the 'identified housing land' were referring to sites of ex-mining lands which they applied to the respective state government to alienate the land to them. Problems with existing land uses within the 'identified housing land' are referring to the existence of squatter housing and illegal structures or illegal industries. The developers always face problems either to negotiate with existing illegal land occupiers to vacate the land or to determine the reasonable value for compensation.

Besides the land physical characteristics, the developers also have problems in respect of land ownership especially when the developers had to acquire private land. Usually, a piece of land with multiple land owners may involve cumbersome series of negotiations that caused more problems to make the land available for development including time consuming and project delays. In addition, this matter was difficult to be solved especially to satisfy individual land owners' interests unless referred to the High Court for the decisions. The interests could be in the form of proportion, caveat and ownership claims by third parties i.e., financial institutions (Salleh Buang, 1997). Under this instance, the private developers will need to bear the related costs. Under the NLC 1965 (Act 56), few numbers of land owners on a piece of land may appear on various land size.

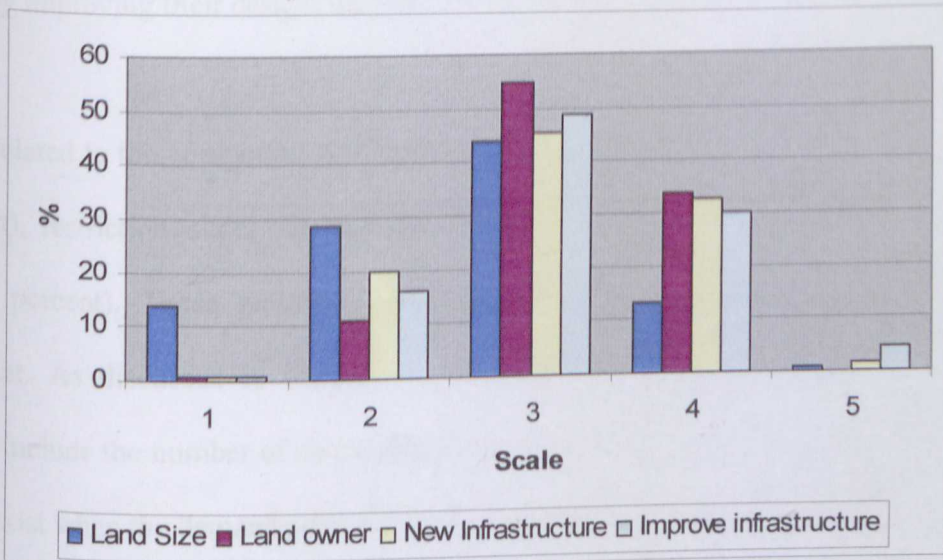


Figure 6.3: Problems of land size, ownerships and infrastructures

With regards to the land size for housing projects, as the figure 6.3 shows, developers inclined towards the lesser problem levels compared to the other three components: 'Land owner', 'new infrastructure' and 'improvement to the existing infrastructure' that are under the 'problem' and 'more problems' levels. By referring to Table 6.6, the mean, the mode and the median for the land size problems is 2.5, 3 and 2 respectively, while the mean, the mode and the median for the problem with 'land ownerships' is 3.2, 3 and 3 respectively. The mean, the mode and the median for the problem with 'new infrastructure' is 3.1, 3 and 3 respectively. The mean, the mode and the median for the problem with the 'improve infrastructure component' is 3.2, 3 and 3 respectively. Though these three items have differences in terms of the mean and the median, private developers do have problems with regards to these three items because all items have mode 3. The private developers who revealed that they have lesser problems with the

'land size' component can be related to their answers that they could solve the land size problems by improving their designs and their project scale (quantum).

Problems related to the component of 'land owner' encompass the multiple ownerships (64 percent), restriction under the land title (56 percent), land categories and tenure status (71 percent). These problems are 'aggregated and exaggerated' in housing development. As discussed in Chapter 4, the aggregated problems related to land ownership include the number of ownership claims on a piece of land. The exaggerated problems exist when the demand price for the land cannot be met (Marbeck, 1997).

The infrastructure issues are related to the works need to be carried out by the housing developers such as for sewerage (83 percent), water supply (54 percent) and drainage systems (76 percent). These kinds of works might involve with high development costs if these infrastructures have not been laid down by the government. In addition, the distance from the connection point would also contribute to high development costs (84 percent). In the case where existing infrastructures are found on the site, the improvement is unavoidable if the existing infrastructure is unable to adjust to cope with the future capacity. As argued earlier in this study, the development plan can be used as the main guidance for all technical agencies to arrange their program; except in areas that do not have any development plan. Therefore, this information is indicating the lack of coordination between planning authorities and technical agencies. Furthermore, this shows that the development plan documents are not fully used as relevant guidance.

The possibility of carrying out the infrastructure improvement depends on the corporation from the government agencies and the responsible suppliers (i.e., Indah Water Consortium for sewerage and PUAS for water supply). The difficulties occurred when such works involved private properties especially to get permissions, agreements or acquisition, to improve and to lay down new infrastructures (73 percent). Therefore, the interferences of local planning authority are deemed necessary to solve the problems (Goh, 1997).

The identified housing development areas by development plans (Structure and local Plans) are assigned with some planning policies (Chapter 3). These policies are either written on the maps or coded. Various problems faced by housing developers with respect to these written policies. Developers are aware about land use zoning, densities and guidelines or policies. Respondents revealed that all these three components have caused problems to housing developers.

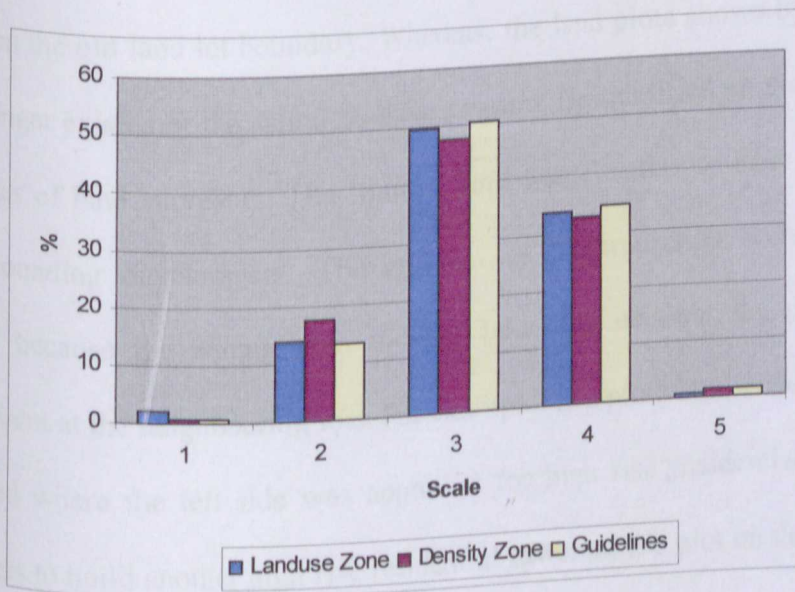


Figure 6.4: Problems related to the development plans

As Figure 6.4 shows, the three subjects are identical. The mean for the three items are more than 3 while the mode is 3 and the median is 3. Reasons given on how these three items caused problems varies. The summary of all reasons given related to the development plans is as shown by Table 6.7.

Table 6.7
Development Plans' Components and Developers Problems

Development plan components	Problems faced	freque ncies	%
Zoning	Unclear boundary	89	65
	Limited land usage	92	67
	Contradicting with the potential sites	107	78
Density	Limited number of units	105	77
	Less potential profits	104	76
Guidelines	Difficult design	101	74
	Increase production costs	103	75

N = 137

The respondents' answers, as shown by Table 6.7, are based on their own interpretations. The 'unclear boundary' refers to the zoning plan that shows yellow colours on the old land lot boundary. Whereas, the land plots shown by yellow colours are no longer existed or the actual boundary cannot be identified on the ground without assistances of land surveyors. The 'limited land usage' refers to land size, topography and surrounding development. The problem of 'contradicting with potential sites' occurred because the zoning plan did not take into account the present approved development at the neighbouring lots. For example, two plots land divided by a 13 meter wide road where the left side was approved for high rise residential which attracted developers to build another high rise residential tower on the plot on the right hand side, but the land use zoning was shown as 'institution'. 'Less potential profit' refers to the

perceived potential profits based on the developers' project appraisals. 'Difficult design' refers to priority given to all necessary requirements to be provided such as size and alignment of the storm drains. The 'increase in production costs' refers to the costs involved in implementing the necessary requirements under the guideline concerned.

Table 6.7 also shows that all reasons given are at 65 percent and above. This data reflect that the majority of private developers had faced problems with the land use zoning, density control and development guidelines. Thus, these three components are seemed to be the dominant components. However, these components are part of the important planning tools applied in a development plan to achieve overall planning objectives. Perhaps, changes in times and technology, in social and cultural environments reflect the weaknesses of the respective development plans in place to provide effective guidance for housing development (Almendinger and Tewdr-Jones, 2000).

6.3.2 Aspects of development control

Aspects of the development control can be divided into planning administration (for application), planning evaluation, technical requirement and planning recommendation.

6.3.2.1 Planning administration

Some housing developers do have problems in dealing with planning authorities starting from submitting planning application up to planning approval (Sen, 1991; Mahesan, 1990). The planning approval process, *inter-alia*, includes submission procedures, correspondence, consultations, preparing agendas for technical and council meeting,

tabling in the technical meeting, and tabling in the Council Meeting or for the case of City Hall Kuala Lumpur is Town Planning Committee Meeting for making decisions.

As discussed in Chapter 3, the procedure at the submission stage includes: the number of plans, correct plan title and scales, complete fill up application forms by using the correct forms and payment of submission fees. In this respect, there are various problems faced by developers even at this early stage. These problems can be related to the way the local planning authorities entertain applications for planning permission. As Figure 6.5 shows, the respondents gave higher scales to the application procedure indicating ‘problem and more problems’ (scale 3 and 4) and listed out many reasons related to the planning application procedure. For site location, the respondents pointed out that the project site should be located within residential zone or areas identified as housing by the structure and local plans. If there is no structure or local plans, the project site should be located within the area identified by the development guideline.

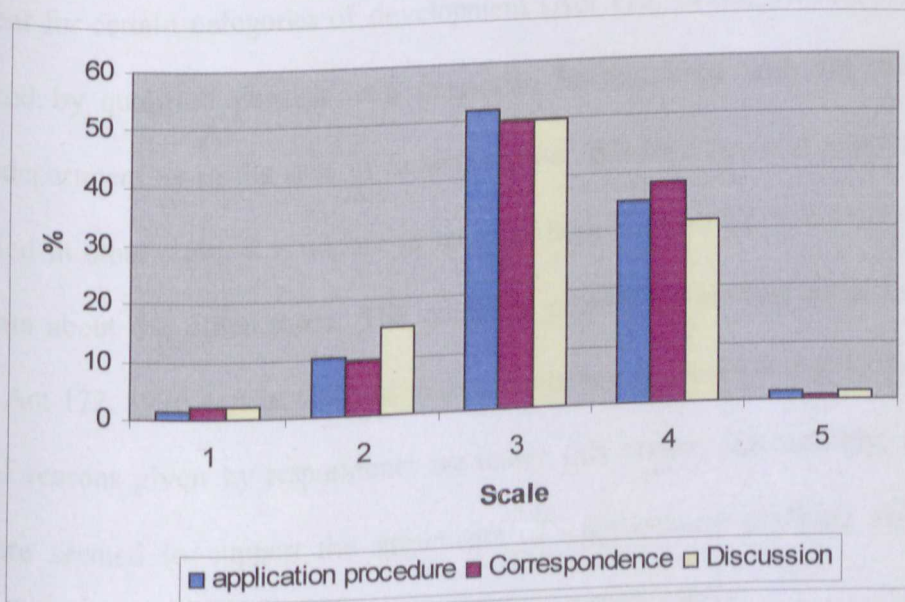


Figure 6.5: Application procedures, correspondence and discussion.

The applicant will be notified promptly while submitting planning application especially on how to fill-up the necessary documents and comply with the guidelines or the development plan. Unfortunately, the application forms were too complicated and difficult to gauge the required types of information for a particular local planning authority (73 percent). In addition, the number of plans that should be attached with an application also varies in scales, formats and paper sizes as case by case basis (66 percent). Some of the plans should be prepared with different paper sizes and printing materials of which all sketches and drawings should also be compiled according to the planning submission guideline (54 percent). Site photographs should also be in different sizes and angles (43 percent). However, these requirements are varied among local planning authorities. Since respondents were able to give more than one reason for a question, as discussed in Chapter 5, the percentages of each reason are based on the total sample (N=137). The Development Proposal Report (DPR) should also be submitted together with planning applications. The local planning authority may specify this requirement for certain categories of development (Act 172, 1976). This report should be prepared by qualified persons who must also be registered with the state town planning department as in the case in Selangor state. Whether the later requirement is also applied in other state, it is unable to mention here because of no comments from respondents about the other states. The qualified persons as mentioned in the Town Planning Act 172, 1976 can be referred to Architects and Town Planners. However, 47 percent of reasons given by respondents are under this matter. Interestingly, all these reasons are seemed to support the arguments of cumbersome planning application procedures raised by Sen (1991), Lawrence (1997) and Goh (1997).

The interesting point is that the application which contravenes the land use zone was not rejected at the submission stage but only reminded of the implication. If the applicant still insisted to submit and to take risks, the application was processed after all procedures for submissions were fulfilled. Although the planning applications are successfully submitted, housing developers have to monitor their applications regularly. The problems raised by respondents at this stage are about the discussion and correspondence subjects. The attitude of problems under the 'discussion' subject inclines towards 'problems' and 'more problems' (scale 3 and 4) that are chosen by 82 percent of respondents. The reasons given are difficulties to meet and discuss with the officer in-charge (51 percent) and difficult to make appointment (63 percent). Moreover, their appointments do not guarantee that they can meet the officer concerned.

For the correspondence subject, 88 percent of respondents' views are inclined towards 'problem' and 'more problems'. Reasons given to this subject are related to the late of posting or delivery of the feedback to developers (41 percent), less friendly communication (34 percent), no answers to telephone calls (23 percent) and no reply to e-mail and facsimiles (15 percent). This information indicates that the transparency of the planning procedures in the planning department is still lacking as well as the correspondence attitudes. Moreover, these reasons reflect the delays in the application process that are on the part of the planning authorities. Thus the time consuming is involved costs (Buitelaar, 2004). Undoubtedly, the developers' problems in correspondence and discussions subjects are seemed to support the argument raised by Mohd Razali (2002).

6.3.2.2 Planning evaluation

After the planning application was successfully submitted to the planning authority, the overall problems faced by housing developers at the evaluation stage are shown by Table 6.8. All components are given with the mean of more than 3, the mode of 3 and the median of 3. These data show that all respondents have faced 'problems' and 'more problems' to the components of interests. For the problems of town planning standards and lay out plan design, 82 percent of respondents inclined towards 'problem' and 'more problems' levels.

Table 6.8
Developers' Problems with Aspects of Development Control

Components	N	Mean	Mode	Median	Std. Error
App. procedure	137	3.2482	3	3	.06110
Correspondence	137	3.2555	3	3	.06219
Consultation and Discussion	137	3.1460	3	3	.06597
Plan. Standard	137	3.1387	3	3	.06057
Lay out design	137	3.2117	3	3	.05990
Duration process	137	3.2336	3	3	.06409
Planning require	137	3.1460	3	3	.06515
Traffics require	137	3.2482	3	3	.06197
Landscape	137	3.1825	3	3	.06061
Sewerage	137	3.1971	3	3	.06373
Water supply	137	3.1878	3	3	.06366
Electricity	137	3.2190	3	3	.06611
Building design	137	3.2336	3	3	.06239
Environment	137	3.2555	3	3	.05582

As Figure 6.6 shows, the category of 'problem' related to 'town planning standards' component is 52 percent and 30 percent for the 'more problems'. For the lay out design components, the 'problem' is 50 percent and 30 percent to 'more problem'. Reasons

given for the problems related to town planning standard are in terms of the applicability of the standard when all land in urban areas is of high prices (44 percent). Respondents felt that the requirement to provide a few number of school sites with 2 hectares (5 acres) each have caused insufficient land left for residential development (33 percent). They also faced problems with the requirement of community facilities that alternatively should be considered based on the demand and possibly be located within the buildings rather than of its own sites (43 percent).

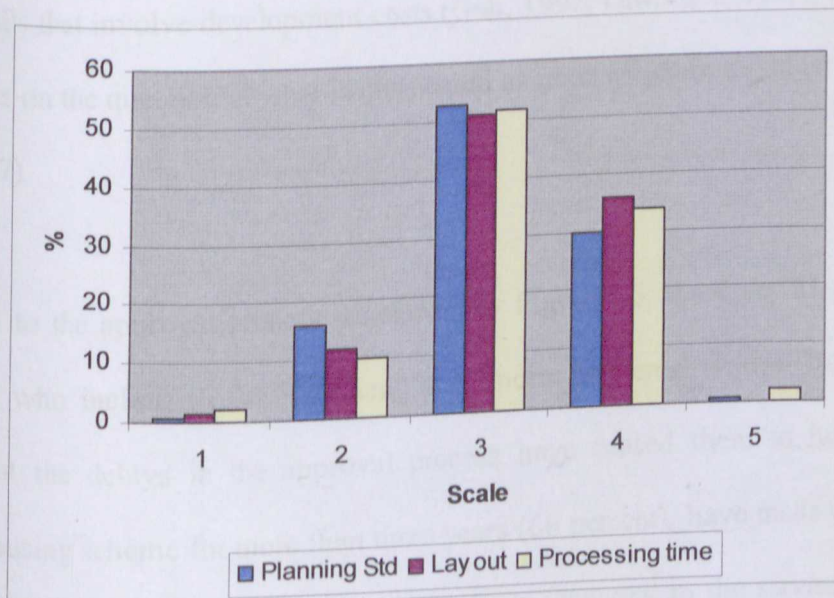


Figure 6.6: Problems with Planning Standard, lay out designs and time consuming in approval process.

Moreover, the parking requirement in high rise residential buildings were taking large spaces of which sometimes over provisions (34 percent); complying with the hierarchy of roads caused more than 30 percent of land to road reserves (45 percent); and sites for playground had been excessive (25 percent). Reasons given to problems of the lay out design are mostly related to the planning standards and the most problem to developers is concerning the location of community facilities (67 percent) and public utilities (58

percent). For example, the primary school site was requested to be far away from shopping centres and major roads of more than 20 meters wide. These reasons are seemed to support the claim made by Monk *et al* (1996) that the town planning affect housing development by limiting the amount of land available for housing. However, the good residential designs comprising adequate community and infrastructure facilities are among the *public interest* items that the town planning attempts to safe-guard (Blowers *et al*, 1982). The disputes here are concerned about the quantity, location and sizes of those facilities that involve development costs (Goh, 1997; Lawrence, 1997). Moreover, the dispute is on the question of what is considered as good neighbourhood environment (Reade, 1987)

With regard to the approval process, as shown by Figure 6.6, there are 83 percent of respondents who incline to the 'problem' and 'more problems' scales. Respondents revealed that the delays in the approval process have caused them to hold up the proposed housing scheme for more than three years (66 percent), have made difficulties to adjust with the housing market (55 percent), have increased in the service costs (45 percent), in the management costs (67 percent), and in the maintenance costs (35 percent). Hence, the high percentage of the problems and coupled with significant percentages of each reason, the results are seemed to suggest that the delays in planning approval process have partly contributed to the increase in production costs as argued by Evans (2004), Harvey (2002), Guy and Henneberry (2000).

For the problems relating to planning conditions, traffic requirement and landscaping, respondents inclined towards 'problem' and 'more problems' levels, as shown by Figure 6.7. Reasons given for their scale chosen to planning condition component are related to the implementation problems. With regards to planning conditions, 83 percent of respondents inclined towards 'problems' and 'more problems'. Respondents reveal that some of the imposed conditions require specialist or expert service such as 'geo-technique study' (45 percent), ambiguous requirements such as 'minimum cutting of matured trees' (36 percent) and strictly control of development on steep slope $20^{\circ} - 30^{\circ}$ (33 percent).

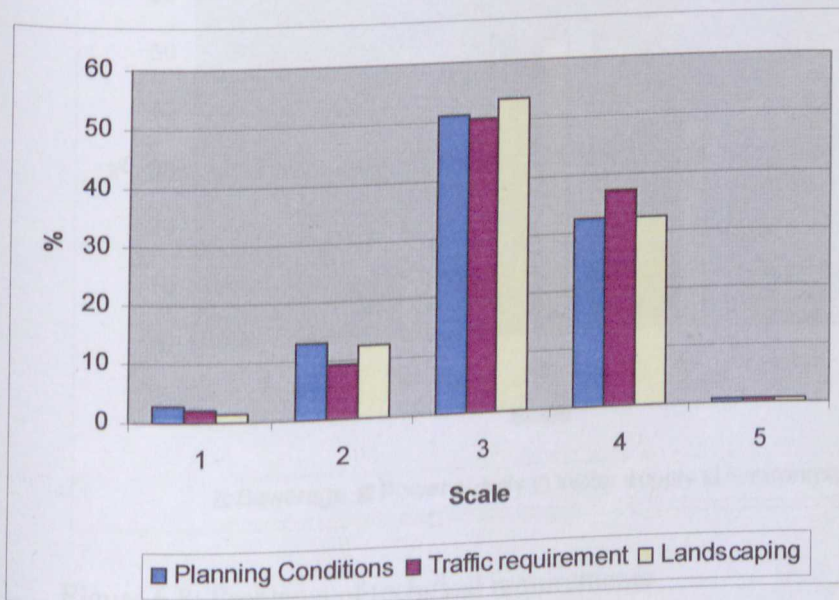


Figure 6.7: Problems of planning conditions, traffic circulation and road requirements, landscaping requirements

For the planning conditions related to traffic circulations, 86 percent of respondents inclined towards 'problem' and 'more problems'. Reasons given are that the imposed conditions have caused problems in terms of road hierarchy (36 percent), entrance and exit points (45 percent), direction of traffic flows (38 percent) and road intersections (47

percent). For the requirements concerning landscaping, 85 percent of respondents inclined towards ‘problem’ and ‘more problems’. Respondents reveal that these imposed requirements have caused problems in terms of species of trees and flowers (44 percent), lay out (23 percent), spaces and locations (15 percent). This information is indicating that the decision makers in planning authorities are aware of the externality effects (Harvey, 2002) and taking advice from professionals to minimise the effects (Goodchild and Munton, 1985) but are unavoidable to impose additional costs to developers (Taylor, 2004).

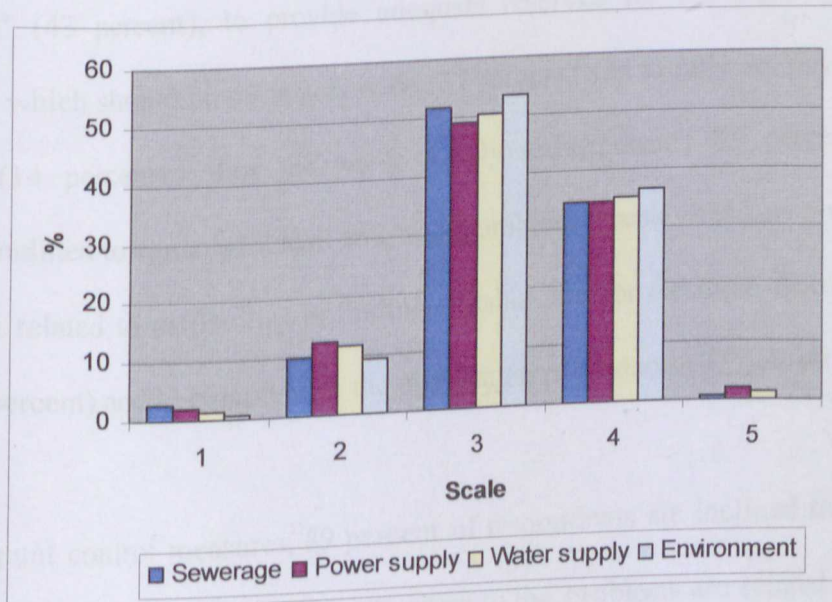


Figure 6.8: Problems of technical requirements

Private housing developers have been facing problems with technical requirements from the utilities agencies. These technical requirements are incorporated in the planning approval process as discussed in Chapter 3. In this respect, respondents’ answers are significantly identical. They are inclined towards ‘problem’ and ‘more problems’ levels. As Figure 6.8 shows, 82 percent of respondents feel that the sewerage requirements have

caused problems to housing development. Reasons given to the scale of the problems are related to the installation and connection works between the new and the existing system (43 percent), to engineering report preparations (34 percent) and to fully comply with the procedures (26 percent).

With regards to the electricity power supply requirements, as Figure 6.8 also shows, there are 84 percent of respondents inclined towards 'problem' and 'more problems' scale. Reasons to the problems are related to building site chosen for the 'power exchange station' (43 percent), to provide adequate reserves for the high voltage transmission line which should be 40 meters wide (37 percent) and to fully comply with the procedures (14 percent). For the water supply requirements, 85 percent of respondents are inclined towards 'problem' and 'more problems' scale. Reasons given to the problems are related to difficulties in finding suitable site for the main distributor water tanks (63 percent) and to comply with the application procedures (23 percent).

For the environment control measures, 89 percent of respondents are inclined towards 'problem' and 'more problems' scale. Reasons given to the problems are related to the controlling noise levels (43 percent) and to prevent land erosions (42 percent) during the construction period. All these technical requirements, though imposed by technical agencies, have imposed additional costs to developers and reduced land for buildings. In addition, there are arguments of their needs and relevance. For example, Goh (1997) suggests to reconsidering the need of several numbers of electricity power substations in a housing estate; and Lee *et al* (1990) suggest to reconsidering the legality of the 'private

sector' requirements in planning considerations because electricity and power supply as well as sewerage provisions are no longer part of the Public Agency.

6.3.2.3 Planning Recommendation

Based on the data shown by Figure 6.5 to Figure 6.8, there are less than 30 percent of respondents who chose the 'least and lesser' problems scale to components related to the development control. Thus, there are more than 70 percents of respondents who inclined towards 'problems' and 'more problems' levels with respect to the development control components. As discussed in Chapter 3, planning officer's report and recommendations may influent the decision maker in granting planning approvals. However, the lacking of skilled among planning officers in evaluating the planning proposals might cause more problems to housing developers; as argued by Mohd. Razali (2002). Moreover, these unskilled officers may simply adopt technical requirements as suggested by technical agencies or may allow planning decisions to be made by politicians entirely; as argued by Guy and Henneberry (2002) and Taylor (2004).

6.3.3 Planning Decision

As discussed in Chapter 3, there are two stages of planning decisions in the planning approval process. Pertaining housing scheme development, the first stage is the process to grant lay out approval and the second stage is the process to grant planning permission or development order. At both stages, the planning authority may approve with conditions or without conditions.

The problems faced by housing developers pertaining to planning decisions are reflected by the mean, the mode and the median for each component. As Table 6.9 shows, the mean values for all components are more than 3.0. These data show that housing developers do have problems with respect to planning decisions made by planning authorities. However, not all respondents are inclined towards 'problem' and 'more problems' scales.

Table 6.9:
Developers Problems Relating to Planning Decisions

Components	N	Mean	Mode	Median	Std. Error
Extra condition	137	3.0730	2	3	.08457
Specific condition	137	3.2336	3	3	.05410
Improve layout	137	3.1825	3	3	.07044
Reduce density	137	3.1971	3	3	.07015
Additional land use component	137	3.2190	3	3	.06363
Extra requirement	137	3.2920	3	3	.05595
Appeal	137	3.2263	3	3	.06552

As Figure 6.9 shows, about 83 percent of respondents are inclined towards 'least and lesser problems' to the component of 'extra condition'. The extra condition refers to the condition imposed in the later planning approval that differs from the previous approvals. For example, the condition states "the applicant is required to carry out the project in accordance with the new urban storm water management manual" which previously stated "the applicant is required to conform to the necessary requirement of the storm water management". Reasons given to scale are due to the changes of

infrastructure requirements (67 percent), improvement needed to meet the up-to-date technology (65 percent), negligible differences in terms of costs (43 percent), and 'manageability' (25 percent). In contrast, reasons given by respondents who inclined towards 'problem' and 'more problems' with regards to 'extra conditions' are due to the increase in production costs (46 percent), difficulties to comply with the conditions (23 percent), and time consuming (35 percent).



Figure 6.9: Problems of extra condition; lay out improvement; and amendment.

For housing lay out, the extra conditions are related to traffics design, planning standard, building designs and technical requirements. For traffic circulation, the extra conditions include any matters of road widening, type of intersection and pedestrian reserves. For planning standards, the extra conditions encompass the types of facilities such as sport complexes, increase number of religious uses, play grounds and functional green spaces. For building design, the extra conditions include any matters of the type of roof design, facade, building floors or basement, and building orientation.

The planning decisions with regards to the 'improvement to layout' encompass the requests to improve road circulation system and pedestrian network; the request to propose new sites for playgrounds and recreational facilities. However, 65 percent of respondents inclined towards 'less problem' and 'least problem' scales. This group of respondents felt that the requested improvements could be fulfilled by redesigning the proposed lay out (65 percent) and they were necessary but overlooked by designers (23 percent). Indeed, there are 35 percent of respondents inclined towards problems scale. The reasons given to the problems refers to the time consuming (37 percent), the increase in development costs (42 percent) and the reduction of potential profits (34 percent).

The 'specific condition' refers to 'the special request' such as to provide bus stop shelter and overhead pedestrian crossing which imposed in the planning approval. This request is often imposed to housing development in major urban areas like Ipoh, Penang, Shah Alam and Kuala Lumpur. In this respect, respondents are inclined towards 'problem' and 'more problems'. Reasons given are that the developer needs to redesign the lay out plan (34 percent), must recalculate the potential profits (29 percent) and have to reappoint relevant consultants (32 percent).

The condition of 'additional land use component' refers to the request made by the planning department for example "low cost housing units should be provided in the housing project". Reasons given to this problem are relating to the project management

(36 percent), redesigning the scheme (24 percent), potential profits (26 percent) and financial implication (42 percent).

Developers faced several problems due to planning decisions with regard to reduce the proposed residential density. As Figure 6.10 shows, respondents inclined towards 'problem' and 'more problems'. The reasons to the problems of 'reduce density' include: redesigning the project (27 percent); project feasibility and viability (32 percent) and time consuming (41 percent). In many occasions, the planning decisions to reduce the density are applied to the proposed multi-storey flats because the intensive development will accumulate side effects such as overuse community and educational facilities and existing infrastructures. More often than not, the applicant or developer was not agreeing with these requirements.

Planning decisions sometimes imposed additional technical requirements that refer to the requirement specifically for the project concern besides the normal requirements outlined in the guidelines. For example, the developer was asked to upgrade the entrance and exit points and main drains adjacent to the proposed development site.

As Figure 6.10 shows, respondents' answers inclined towards 'problem' and 'more problems'. Reasons for their answers are: increase development costs (28 percent), require additional professional services (32 percent), difficult to get the required materials (27 percent) and difficult to get skilled labourers (35 percent).

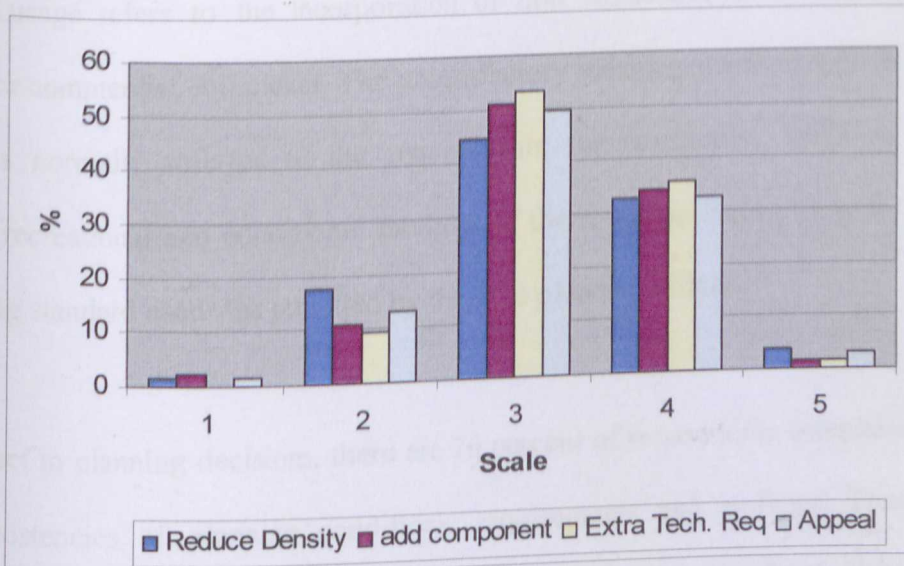


Figure 6.10: Problems of reduce density; additional component; extra technical requirement; and planning appeals

Applicant who aggrieved with planning decisions has a right to submit an appeal to the Appeal Board by reasons of refusal to grant or conditional grant of planning permission (Act 267, 1982; Act 172, 1976). Respondents felt that the process and procedures of planning appeal are not yet apparent. As Figure 6.10 shows, respondents' answers inclined towards 'problem' and 'more problems'.

After the planning committee meeting has made a decision, the applicant will be given a notice of the refusal or grant of approval. Mostly, reasons for refusals are related to the development plan (structure and local plan), planning policies and guidelines including planning standards. The structure plan policies include the identified growth area, new development area or potential sites for housing. The local plan policies include the intensity of uses such as density and the infrastructure provisions, the design of the

proposed development includes the height, building types and space arrangement, the unsuitable usage refers to the incorporation of non residential uses such as light industries or commercial complexes. The unsatisfactory planning standard applied in the proposal is normally referred to the requirements for community facilities, basic amenities, recreational and educational facilities. If there was no local plan to the area, the planning standard used was provided by the state planning offices.

With respect to planning decisions, there are 76 percent of respondents complaining on the inconsistencies of planning conditions, requirements and policies. Thus, this information reflects some possibilities of misinterpretations of the development plan objectives and policies; or the decisions are influenced by politicians.

6.4 Conclusion

The primary data collection through the quantitative method makes the analysis using statistical techniques easier. The data in this study are reliable for analysis because the Cronbach' Alpha value is within the acceptable range. By employing SPSS for Windows the Alpha value is 0.95 for all 30 variables of interests. The validity of the data is convinced by applying the cluster sampling method to draw represented sample to each population in the stratum. In addition, the respondent was chosen by the probability technique using the 'Table of Random Numbers method'. Since the question is the effects of town planning system on housing developers, the respondent is a representative of housing developers and has wide experiences in housing development. However, the primary data gathered through questionnaire survey must be treated with

full cautious of errors and bias. Errors would occur in sampling design, questionnaire design, method of interviews and responses (Leedy, 2001). Based on the sample size of 137 the estimated errors in this study are likely to be below 10 percent. Table 6.8 shows evidence of the Standard Errors ranged between 0.6 to 0.8 that depict the errors of the data by 6 percent and 8 percent respectively.

Since this study measures the attitude of problems faced by private housing data using Likert scale, the data are of ordinal scale and best to be displayed by bar charts and table of the mean and the median. Based on the descriptive analysis, the majority of investigated components reveal positive results that town planning system affects private housing development. Out of 30 components (variables), only 4 components (identified residential area, existing infrastructure, land size and extra conditions) are found to be in the 'least and lesser problem' levels. Various reasons were given by respondents to support their chosen 'Likert scale' as an answer to a particular question. However, the researcher has summarized and categorized their reasons based on matters relevant to town planning only.

With respect to development plan factor, seven components are found to affect private housing development. The components are: land ownership; need new infrastructure; infrastructure improvement; land use zone, density zone; and development guidelines. Therefore, these evidences reflect the way of the development plan was prepared which lack of consideration given to land ownership constraints within the identified area for housing development, the obstructions of new and proposed improvement to

infrastructures, limitations related to land use and density zoning and restrictions of the development guidelines.

Under the development control factor, fourteen components are found to affect private housing development. The components are: application procedure for planning permission; correspondence of planning departments or local planning authorities; consultation and discussions with planning officers; planning standards; proposed housing lay out design, duration of approval process (time consuming), planning requirements; traffic engineering requirement; landscaping requirements; water supply, electricity (power) supply and sewerage system; building designs; and environmental control. Of all the components that affect private housing development, three sub-factors can be identified based on the values of the mean that are: planning administration; planning evaluation process; and requirements of external technical agencies. Therefore, the occurrence of planning delays, as the issue raised by several researchers, especially from submission planning application until getting approvals are undeniable based on the information given by respondents. In addition, additional costs have been indirectly imposed in housing development through various technical requirements.

With regard to the planning decision factor, six components are found to affect private housing development. The components are: amendment to the proposal; improvement to the lay out plan; asking to reduce the proposed density; imposed additional land use component, extra technical requirement; and appeal. Except for the appeal, the components are indirectly imposed additional costs to housing development on top of

the requirements that have been determined at the technical department level. This also reflects the planning authority prerogative powers that are being applied in the planning system.

From this descriptive analysis, town planning components that affect the private housing development have been identified but the main component is not apparent. Similarly, the three planning factors are found to have affected private housing development but the dominant factor is unable to be identified by this level of analysis. Therefore, further analysis in Chapter 7 will reveal the main planning components and the dominant planning factors affecting private housing development.

CHAPTER 7

PLANNING FACTORS AND COMPONENTS AFFECTING HOUSING DEVELOPMENT

7.1 Introduction

The results from the descriptive analysis in Chapter 6 show that 26 out of 30 town planning components have affected private housing development. Since the main components and the dominant town planning factors could not be identified the analysis in Chapter 6, the analyses in this chapter are focused on the objective of the study that is to identify the main town planning components and the dominant planning factor affecting housing development. Consequently, the analysis employing the factor analysis technique provided in SPSS for Windows is carried out to extract the dominant town planning factor. Prior to this analysis, several important procedures and steps have been followed based on the requirements of SPSS for Windows and Factor Analysis technique.

The factor analysis technique reveals the correlation coefficient values for all 30 independent variables and displays the factors. Even though results from the factor analysis can be interpreted in various ways, this study merely interprets the results toward answering the research question and to achieve the study objective. As mentioned in Chapter 5 (Research Methodology), the answers to the question can be elicited by analysing the relationship between components of the planning factors that can be expressed as follows:

Planning factors affecting housing development = P (development plans) + P (development control) + P (planning decisions) + P (other planning factors).

Where P = problems

Nachmias and Nachmias (2000) and Ahmad Mahzan (2002) mention that the most important work for non-statistician is to interpret the outputs of the factor analysis rather than to worry about its formula. Consequently, the results from the factor analysis are further analyzed to examine the interrelated components (variables) based on the occurrence of similarity views among respondents by employing the spearman rho correlation technique. The differences of views among respondents to the identified factors are analysed by employing the One-Way ANOVA technique.

7.2 Main output of the factor analysis

The variables comprise town planning components and other components that have Crombach's Alpha values of more than 0.7 are used as the data input into the process. Output from the principal factor analysis (PFA) as shown by Table 7.1 is the result from the rotation of initial component factors.

Table 7.1
PFA Rotated Components

Planning Items or components	Factors					
	F1	F2	F3	F4	F5	F6
Land holding - dp	.888	.177	.126	.129	-.037	.079
Application procedure -dc	.885	.204	.151	.057	-.129	-.017
Appeals for planning decisions - pd	.863	.047	.015	.072	-.093	.016
Specific conditions -pd	.859	.147	.131	.074	-.180	.049
Impose new component -pd	.840	.195	-.008	.045	.074	.082
Correspondences - dc	.839	.192	.142	.017	.095	.003
Planning Standard compliance - dc	.830	.064	.010	-.050	.032	-.069
Traffic requirement - dc	.824	.051	.249	-.031	.092	-.016
Amendments during evaluation - dc	.822	.129	.081	.005	.147	-.027
Duration of approval -pd	.815	.191	.103	.088	.046	.077
Planning guidelines - dc	.810	.158	.032	.247	-.064	.142
Extra planning requirements - pd	.800	.196	.152	.014	-.227	-.028
Electricity supply requirement - dc	.782	.102	.096	-.130	.039	-.172
Layout design -dc	.773	.190	.302	-.120	.063	-.007
Discussions with LPA - dc	.698	.099	.389	-.048	.161	.068
Planning requirement -pd	.692	.081	.335	-.049	.196	-.007
Infrastructure improvement - dp	.681	.017	-.046	.294	-.121	-.296
Density zone - dp	.674	.107	.162	.331	-.151	-.245
Amendment to proposed layout plan - dc	.658	-.115	-.204	.024	.359	.074
Land use zone - dp	.650	-.174	-.142	.331	.069	.341
Density reduction -pd	.633	-.015	.326	.009	-.072	.134
New Infrastructure -dp	.610	-.072	-.104	.326	-.116	.170
Environment control requirements - dc	.610	-.086	.025	-.098	-.092	-.141
Physical characteristic -dp	.147	.878	-.051	.025	-.050	.045
Landscaping Requirement - of	.426	.467	.112	.162	.035	-.037
Water supply & Indah Water requirements -dc	.236	-.022	.818	.126	.017	-.010
Extra conditions - pd	-.139	-.138	.119	.238	.686	.066
Existing infrastructure - dc	.120	.193	-.083	-.195	.637	-.398
Land subdivision - of	.028	.060	.008	-.038	-.075	.857
Eigenvalues	14.58	1.56	1.32	4.72	4.42	4.40
% of explained variance	46.19	4.95	4.89	60.75	65.17	69.57
Cumulative %	46.19	51.14	56.03			

Note: F = factor loading
Factor 1 = development plan (structure and local plans)
Factor 2 = environmental control under other planning factors
Factor 3 = technical requirements
Factor 4 = planning evaluation under development control,
Factor 5 = planning guidelines
Factor 6 = land administration (Land Law).

The PFA output shown in the Table 7.1 can be interpreted in many ways. The bold figures in italic show the high factor loading where the relationship between the item and the factors is considered strong because the coefficient or called 'loading' are more than 0.3 (Nachmias and Nachmias 2000; Ahmad Mahzan 2002; Jackson and Watkins 2005). The rest of item loadings are weak to be considered as good indicators of the factor. Therefore, the most parsimonious factor is Factor 1 because the percentage of explained variance is 46 percent compared to other factors that is the dominant factor. The 23 items that have high factor loading can be considered as the items of having strong relation with Factor 1. These items constitute the assigned factors: development plan (Structure and Local Plan); development control; planning administration; technical requirements and other planning factors.

The sign to each item helps to identify the items under which factor such 'dp' depicts development plan, 'dc' for development control, 'pd' for planning decisions and 'of' for other planning factors. Interpretations to the relations of these items with the factors (F1 to F6) are discussed in the following sub-headings.

7.2.1 Development Plan (Structure and Local Plans) Factor

Majority of housing developers are aware about the existence of development plans in their chosen area for housing projects. However, their answers toward the requirements and

policies of the structure and local plans are indistinguishable. Thus, this study has to combine all answers pertaining to the structure and local plan requirements and policies under a term 'development plan'. As Table 7.1 above shows, private housing developers have faced problems relating to policies and development concepts outlined by respective development plans. Since the main function of development plans is to guide development control and planning decisions, the development plan emerges as the dominant factor in housing development. There are 23 planning components constitute the dominant factor. To explain the relationships of these components with the factor, it is important to discuss the functions of the development plan in housing development.

With regard to the location of new housing estate, the development plan policy states that the location of housing sites chosen must be within the proposed new growth areas and within residential zones. Housing developers' attempts to develop other areas than identified by the development plan are very risky even though they have chosen the potential development areas where the availability of land, low construction costs and high demand exist. The successful housing estates outside the identified growth areas were the lucky groups when the location chosen had merits for housing and also those under the special projects such as to provide houses for the hard-core poor group, resettlement schemes and government quarters.

Based on the descriptive data analysis in Chapter 6, there are problems faced by the developers with respect to housing location and sites. The sites identified for housing in the development plan to them do not guarantee the housing development will be able to meet the

demand. The demand for housing as referred by housing developers is the capability of households to pay for housing that are built in that particular area. Other problems are the site distances from the existing access roads and inaccessible to the existing infrastructure lay down such as electricity, water supply and sewerage line. Without the existing basic infrastructures laid down in the area, the housing developers have to provide them for their housing development. In this situation, developers have sometime engaged with the problems of dealing with the private land owners. This occasion appeared when there was no alternative route to connect the new with the existing infrastructures. Therefore, when asked about land preferred for development in these areas, they said that they preferred the road frontage lands to be developed first before they approached the following inner land (second lot from the road side).

The private housing developers have ever experienced that there were sites suitable for housing development but the access roads had to be erected through private lands. In some cases, the access roads had to be erected wide enough according to hierarchy of roads. By complying this requirement, constructing main collector 66 feet wide roads for example, leaves the balance of that such private land with smaller plot. In such circumstances, the respective land owner refused to negotiate either for sale or for rent and rejected the discussion about possible compensation. This problem usually makes prospective developers have to abandon the project although they have obtained planning permissions. There is also similar problem for the case of land use zoning. Although the development plan has shown a housing zone, the land is not actually easily to become housing if the infrastructures have not been laid down by the authority concerned.

Besides the new roads needed, there was also a case where the prospective housing developers have to negotiate with the frontage land owners for the sharing provision of community facilities and utilities. Therefore, the land zone for housing is seemed to be easily coloured on papers but actually land matters were not sorted out at the planning stage. This shows that the planning policies concerning access and infrastructure provisions can not be simply implemented. The highest factor loading for land holding as shown by Table 7.1 above, is clearly shown that the land ownership should be the main component of planning considerations in identifying a potential new housing area within a development plan.

With regards to the development plan policies particularly to housing development, miss understanding occurred between housing developers and local planning authorities particularly about objectives, strategies and status of development plans. The developers thought that the new structure plan strategies to reduce housing density in a particular area opened up opportunities for them to develop housing in agricultural areas. Their applications for planning permissions were rejected based on the planning authorities' reasons that the proposed housing development was not within the housing zone as identified by the existing local plan. The developers intended to develop agriculture land based on the new structure plan objectives without referring to the status of existing local plans.

The technical terms used in development control have caused problems to developing a housing scheme. The allowable housing density in terms of 'net density' and 'gross density' for a housing scheme as stated in the development plans are confusing. Local planning authorities have used different formula in calculating residential density. Some local

planning authorities include major roads and local play grounds in the gross housing density calculation whereas some local planning authorities exclude either one of the items in the calculation.

In attempts to achieve the development plan objectives, most local planning authorities employ the 'planning standards' in evaluating proposals for housing development. These planning standards are mostly provided by the Federal Town and Country Planning Department (Headquarter) in Kuala Lumpur. The problems to comply with these planning standards are highlighted by private housing developers especially in applying for layout plan approvals. The main problems are related to the quantity and size of community facilities required. The large land acreage required to provide community facilities is directly limiting the quantity of houses that can be built. Moreover, the land allocated for community facilities must be surrendered for free of charge to the government or local authority concerned.

Besides the community facilities, the problems also occurred in complying road designs and road widths. The road design depends upon the location, shape and size of neighbourhood unit to be created. However, the policies to ensure an efficient traffic circulation in the area in question will defeat the objective of residents to secure their safety residential area. In terms of road widths, the developers' problem is concerned on a large percentage of land to be allocated for road reserves compared to a percentage of land left for housing in a housing scheme. In addition, the land costs involved in providing wider roads become the developers' major issues. The other problem is about environmental control measures. The main technical agency for ensuring the compliance of these measures is the department of

environment. Based on the descriptive analysis in Chapter 6, most of private housing developers raise higher level of problems with this subject. However, most of the detail requirements for these measures are imposed in construction period. In planning approval process, the main concern is on the proposed housing lay-out plan where environment aspects are exhibited by the land and building uses, arrangement of buildings, the access to buildings, the distance between buildings, building heights, green areas and landscaping.

Time consuming in planning approval process starting from the date of application until the State Planning Committee meeting and decision made either approve or disapprove. The time consuming in the approval process also depends upon the individual applications attributes. The complex types of proposed development may take longer time than the simple type of development. The charter advocated in the planning department is merely for the average cases. Various factors are associated with the time consuming that include the time spent by an applicant to take action such as to resubmit the amendments, by corresponding activities, by the process of preparing development concept or lay out plan to the area concerned, by the process of adopting the development plan, by the process of obtaining neighbouring owners' objections and by administrative actions. The shortage of man power in local planning authorities that refers to the inadequate number of technical and professional staff to do site inspections, to scrutinize the application and to give written comments, make the time consuming causing serious financial implications to housing developers.

For planning decisions, the approval without 'subject to fulfillment' is commonly referring to the small scale housing development such as less than 5 acres sites. The major types of

development have been imposed with several conditions. The standard condition used by the local planning authority is foreseen by housing developers. Majority of them said that the conditions to be satisfied in getting planning permission have been estimated in the proposed development. However, there are still rooms for them to appeals if there is a condition that hardly caused the increase in construction costs. The appeal for the planning permission granted is normally taking another 3-6 months. Among the local planning authorities, as experienced by housing developers, there were unsatisfactory conditions imposed to housing development. To them, the same types of housing development should have a similar condition. However, they found that there were some other matters need to be satisfied such as size of play ground, road width and number of community facilities. Consequently, the comments from the housing developers are well explained by looking at the year of the projects carried out. The different year of the application may not be the same nature in decision making process. The great possibility is that there are changes in the planning standards used, changes in the administration of the local planning authorities and changes in planning policies. Therefore, various problems in housing development process are associated with the implementation of the development plans starting from the identification of housing land until the planning decision and appeal stages.

7.2.2 Environmental consideration as other planning factors

Physical characteristics of land and landscaping requirements are two components or items of having higher factor loading to constitute Factor 2 as shown by Table 7.1. The physical characteristics of land as referred by private housing developers include the shape of land area and topography. For the shape of land area, the developers' problems are related to lay-

out plan designs to meet the planning and technical requirements. For example, land of hexagon or rectangular shapes caused difficulties in designing to maximise the land usage where sometimes the developer has to negotiate with other private landowner to provide better road circulation system. With respect to the topography, the problems are related to earth works, development on slope of just above 30%, embankment works to realign deep examining ponds, development on higher land of 400 meter above average mean of sea level, realignment of existing river bank or drainage system, and fill-up small ex-mining ponds. Some of these subjects are strictly controlled by planning authorities or by other responsible agencies such as Public Work Engineering department and the department of environment. All requirements to protect or safeguard the environment are incorporated in the requirements of the planning permission. With regard to landscape requirements, the developers face problems in landscape designs and in identifying suitable species of trees, shrubs and flowers. The planning requirement for landscaping is pertaining to the space allocation and site location. The space for landscaping is related to the plinth area control such as 60% plinth area imposed to high rise residential development such as for apartments and flats. The location for landscaping sites depends on the site lay-out plan as long as the site is located within the proposed land plot.

7.2.3 Technical requirement factor

The sites for sewerage treatment plant and electrical power supply station are among the problems faced by housing developers. The land required to erect these public utilities is the main issue concerned because the quantity and size of these public utilities depend on the requirement of the private companies and yet, these requirements have been included in the

planning standard. This issue arises due to the current position of these both responsible bodies as private companies established under the government 'privatization concept'. Thus, their prerogative powers are continued to be in force. The incorporation of their requirements into the planning standard was made when these private companies were being the responsible government technical department agencies. However, a proposed housing scheme might not be given a planning permission by the planning authority if public utilities and their requirements are insufficiently fulfilled. Unfortunately, the developers have to surrender the sites to these technical bodies after the housing scheme is completed.

7.2.4 Development control factor

The housing developers' problems associated with density, housing zone and new infrastructure development occur in the planning evaluation process where detail planning requirements and policies are applied. The problems related to density zone are the limitations faced by housing developers to raise their profit margins and to meet housing choices. Developers' profit margin is limited due to high land prices in urban areas that cause higher production costs within the stable housing market environment. In addition, residential density is affected by the erection of new embassy premises, new flight paths and new army camps. The problems with regard to residential zone are related to the delineation of residential zone boundaries where the developers would not be permitted to amalgamate plots of land in agriculture category with land plot in residential zones.

The application for the land use conversion from 'agriculture' to 'building' has little chance to be recommended by planning authorities in order to avoid precedent case. Industrial

premises within residential zones even to provide more employment opportunities and to subsidise low-cost housing projects are prohibited. The proposed petrol filling station in residential zones must be in accordance with the guideline controlling the distance between the station and residential buildings and service activities meant as fire prevention and safety measures. The problems with new infrastructure development include new drains, sewerage pipes, sewerage treatment plants, bypass roads, tunnels, bridges, pedestrian overhead crossings and viaducts. These new infrastructure requirements are depending upon the merits of an individual housing scheme because, normally, the local planning authority will not simply spend its financial allocation solely to assist the private housing projects.

7.2.5 Planning guideline factor

Planning guidelines are prepared to supplement the local plan policies or to provide details for implementing local plan policies and development control. Some of these guidelines include the non-statutory documents such as non-gazetted development plans. In simple word, they are call 'development guidelines'. For examples, there are guidelines for safe city, city centre conservation, and small works for addition and alteration to existing residential buildings. The extra conditions imposed by planning authorities upon planning permissions will involve in additional costs above the initial estimated costs by developers. The problems associated with the existing infrastructures and planning guidelines include the design of pedestrian networks, residential buildings and community facilities.

There are problems in submitting planning application even though the planning authorities have prepared 'guidelines for planning application'. The submission for an application for

planning permission has to be submitted by a registered town planner or the allowable professionals. This requirement is however left to the discretion of the local planning authority. Since year 2000, most of local planning authority in peninsular Malaysia adopted this requirement in the opinion that a professional like town planners will take into account the effect of the development on the surrounding physical environment. In addition to the above requirements, housing developers have to prepare cumbersome of plans and numbers of Development Proposal Reports just for planning application alone left aside for other applications. Sometimes the application is rejected because of technical errors such as typing error or overlooked figures in technical calculations.

7.2.6 Land administration factor

The private developers highlighted that they have problems with land subdivision that include problems of obtaining individual titles for housing schemes and problems with land surveys. The problems in obtaining individual titles, the developers have to deal with the land office concerned if the problem is related to the procedures. However, the approval of individual titles depends on the consent from planning authorities to the proposed lay out plan. The developer also must prepare a surveyed plan and submit to planning office for endorsement and followed by the submission to the land office for individual titles. There are cases of dissimilarities between the lay out plan approved by the planning authority and the surveyed plan prepared by land surveyors. Therefore, the problems encountered in this factor are time consuming, tedious works and cumbersome procedures.

7.3 Interrelated planning components

The interrelated components can be extracted by employing the Spearman's rho correlation statistical technique for the nonparametric analysis. The spearman's rho correlation is also known as 'rank correlation' (Spiegel *et al* 2000) and has its counter part in the parametric analysis technique known as 'Pearson correlation'. The relation between two or more variables is indicated by the significant values of 0.05 and 0.01 (refer Chapter 5: Table 5.9). The coefficient correlation values will indicate the degree of the relation between two or more variables either weak or strong (Zulkarnain dan Hishamuddin 2001; Chua 2008). For this study, the strong values between 0.71 – 0.90 and very strong values between 0.91 – 1.00 of correlation coefficients will depict the similarity of respondents' views toward the planning components in question. Thus, if the developer faced problem to a component, it might faced a similar degree of problems in an associated component.

7.3.1 Development plan components

Variables that have significant correlation coefficients are: land holding (ownership); new infrastructure; infrastructure improvement; land use zone; density zones; and development guidelines. As Table 7.2 shows, the level of significant value and correlation coefficients values between variables under the development plan factors varies significantly. Although some of the correlation values among variables are significant at 0.05 and 0.01, the strong relation is only noticed between land holding and development guidelines ($r = 0.85$, $p < 0.01$) and the rest are considered moderate and weak. The 'development guideline' here includes 'a non-statutory document including non-gazetted development plan'.

By referring to the central tendency measures (Likert scale: 1-5, from least to the most), the mean and the median for land holding is 3.2 and 3 (n=137) respectively while the mean and the median for development guideline is 3.2 and 3 (n=137) respectively. The mean and the median values incline towards 'problems' and 'more problems' in housing development.

Table 7.2
Spearman Rho' correlation coefficient Values
by development plan components

Development plan components	Physical characteristics	Growth area	Existing infrastructure	Land size	Land holding (ownership)	Required new infrastructure	Need infrastructure improvement	Land use zone	Density zone
Growth area	0.03								
Existing infrastructure	-0.00	-0.10							
Land size	-0.03	0.01	-0.07						
Land ownership	0.06	0.01	-0.03	-0.06					
Required new infrastructure	-0.02	0.01	-0.06	-0.04	0.63**				
Need infrastructure improvement	0.06	-0.14	-0.00	-0.11	0.61**	0.45**			
Land use zone	-0.07	0.10	-0.12	-0.13	0.64**	0.54**	0.50**		
Density zone	0.12	-0.06	-0.01	-0.17*	0.62**	0.51**	0.63**	0.36**	
Development Guidelines	0.05	0.05	-0.04	-0.11	0.85**	0.62**	0.59**	0.60**	0.52**

* Correlation is significant at the 0.05 level (2-tailed) – 95% confidence

** Correlation is significant at the 0.01 level (2-tailed) – 99% confidence

Therefore, respondents strongly share similar views that land holding and development guidelines are among the town planning components causing problems to private housing development. The underlying reasons for the strong relation between land holding and development guidelines can be elicited from respondents' answers. Respondents explained that they have faced problems in constructing access roads according to development guidelines due to resistances from landowners especially in the existing built up areas. This problem also shared by respondents who have to comply with road widening requirements

under the local planning authority's development guidelines. For example, the respondent answer is "very difficult to negotiate with the adjoining land owners in road widening work".

7.3.2 Development control components

The degree of relations between components under the development control factor is shown by correlation coefficients values as in Table 7.3. The relation between correspondence and application procedures is within the strong category ($r = 0.78, p < 0.01$). By using the similar likert scale (1-5, from least to the most), the correspondence component holds the mean 3.2 and the median 3. The application procedure holds the mean 3.2 and the median 3.

Therefore, all respondents share similar opinions that correspondence and application procedures are among the main planning components causing problems to housing development under the development control factor. These both components can be classified as the planning communication and administrative procedures. If developers have problems with correspondence component, the effect is on the application procedure component. From the questionnaire survey, for examples, respondents mentioned that the information is insufficient and to get access to the responsible officers is difficult. In another case, the number of plans required as stated in the application form is only 30 site plans but in reality the planning authority needs 42 copies.

Table 7.3
Spearman Rho' correlation coefficient values
by development control components

Development control components	Appl. Procedures	Correspondence	Discussion	Planning standards	Layout design	Duration of approval	Amendments	Planning conditions	Traffic circulation requirements	Environmental measures	Landscape	Water supply
Correspondence	0.78*											
Discussion	0.69*	0.70**										
Planning standards	0.71*	0.71**	0.62**									
Layout design	0.68*	0.68**	0.70**	0.56**								
Duration of approval	0.74*	0.74**	0.64**	0.72**	0.60**							
Amendments	0.75*	0.75**	0.71**	0.71**	0.69**	0.73**						
Planning conditions	0.65*	0.65**	0.68**	0.60**	0.68**	0.56**	0.66**					
Traffic circulation requirement	0.73*	0.73**	0.70**	0.71**	0.73**	0.70**	0.72**	0.62**				
Environmental control	0.92*	0.92**	0.74**	0.77**	0.73**	0.82**	0.83**	0.72**	0.81**			
Landscape requirement	0.78*	0.78**	0.68**	0.64**	0.69**	0.67**	0.66**	0.71**	0.66**	0.84**		
Water supply requirement	0.65*	0.65**	0.69**	0.57**	0.65**	0.63**	0.63**	0.66**	0.60**	0.71**	0.56**	
Electricity requirements	0.73*	0.73**	0.64**	0.68**	0.60**	0.67**	0.68**	0.60**	0.71**	0.78**	0.68**	0.57**

* Correlation is significant at the 0.05 level (2-tailed) – 95% confidence

** Correlation is significant at the 0.01 level (2-tailed) – 99% confidence

The planning standards component has strong relation with application procedures and correspondence components ($r=0.71$, $r=0.71$ respectively, $p<0.01$). All of these components have the mean and the median as shown by Table 7.4 where the mean is between 3.1 and 3.25 and the median 3 for all components. Respondents have similar views that these three components caused problems to housing developers. Therefore, these three components caused problems to housing development. Housing developers have problems with various

planning standards used by planning authorities. Various information and numbers of plans are required in submitting their application for planning permissions. Moreover, communication and responses to inquiries are unsatisfactory.

Table 7.4:
Mean and Median of Development Control Components

Development control components	Mean	Median	Sample = n
Application procedure	3.24	3	137
Correspondence	3.25	3	137
Discussion	3.14	3	137
Planning standards	3.14	3	137
Layout design	3.21	3	137
Duration of approval	3.23	3	137
Amendments	3.23	3	137
Planning conditions	3.14	3	137
Traffic circulation requirement	3.24	3	137
Environmental control	3.25	3	137
Landscape requirement	3.18	3	137
Water supply requirement	3.19	3	137
Electricity requirements	3.21	3	137

The duration of planning approval process has strong relation with application procedure, correspondence and planning standard ($r=0.74$, $r=0.74$, $r=0.72$ respectively, $p<0.01$). The amendment to the proposal has strong relation with application procedure, correspondence, discussion, planning standard and duration of approval. The values of correlation coefficient to these components are within the strong category ($r=0.75$, $r=0.75$, $r=0.71$, $r=0.71$, $r=0.73$ respectively, $p<0.01$). The mean and the median for the amendment to the proposal is 3.2 and

3 (n=137) respectively, Therefore, all respondents have similar views that these components are among the main planning components causing problems to housing development. Except the correspondence component, the other two components can be classified as planning technical requirements. The relation between the amendment to the proposal and correspondence is due to the nature that the plan can be made according to the written document or verbal information given to the developer or applicant. The amendment to the proposal also related to unsatisfactory compliance of the planning standards. The problems occurred when developers received ambiguous instructions.

The relation between traffic circulation and application procedures, correspondence, planning standard, lay out design and amendment component is also under the strong category ($r=0.73$; $r=0.74$; $r=0.71$, $r=0.73$, $r=0.72$ respectively; $p<0.01$). The traffic circulation has the mean 3.2 and the median 3 (n=137). The mean and the median for other components are shown by Table 7.4. Thus, all respondents have similar views on these components that traffic circulation requirements have caused problems to housing development. These components are under planning technical requirements. The problem to comply with traffic circulation design is due to several reasons such as the location of the site, land plot shape and the proposed development concept. The planning standards concerning the traffic circulation design, for examples, are road hierarchy, service roads, intersection and car parking layout. Thus, the strong relation between these two components has indicated that the problems of designing traffic circulation will have problems in efforts to comply with the planning standards, unsatisfactory with correspondence and problems with the amendments to the plan.

The component of environmental control has very strong relation with application procedures, correspondence ($r=0.92$, $r=0.92$ respectively, $p<0.01$), while within strong relation category with planning standard, amendment to proposal, planning condition, traffic circulation, water supply, and electricity supply, and landscaping requirement ($r=0.74$, $r=0.77$, $r=0.73$, $r=0.82$, $r=0.83$, $r=0.72$, $r=0.81$, $r=0.84$, $r=0.71$, $r=0.78$ respectively, $p<0.01$). Thus, all respondents given their similar opinions that the environment control with its related components are causing problems to housing development. This result of the relations shows that the town planning in practice is protecting and safeguarding physical environment and usually insists the developer to submit plans showing all requirements and measures are complied with. However, soil erosions, land contamination and chemical effluence in the existing water bodies are specifically controlled by the department of environment.

7.3.3 Planning decision components

There are seven components under planning decisions factor. The duration of approval component is included in this discussion again because the planning decision and the development control process is an overlapping process. Any decision made by the planning authority, the follow up actions will be dealt with under the development control process which also contributes to the time consuming in planning approval process.

As Table 7.5 shows, the component of specific condition has strong relation with the duration of approval, the imposed land use component in the proposed housing scheme, the extra requirements and the planning appeals ($r=0.73$, $r=0.74$, $r=0.84$, $r=0.81$ respectively; $p<0.01$). The specific condition refers to 'the special request' such as to provide bus stop shelter and

overhead pedestrian crossing which imposed in the planning approval will require the developer to redesign the lay out plan, recalculate the potential profits and reappointment of consultants. These works will lead to other problems in land use components, extra requirements and planning appeal.

Table 7.5
Spearman Rho' Correlation Coefficient values by
Planning's decision components

Planning decision components	Duration approval	Extra conditions	Specific condition	Amend Layout	Reduce intensity or density	Impose land use component	Extra requirement
Duration approval	1.0						
Extra conditions	-0.14						
Specific conditions	0.73**	-0.14					
Amend layout	0.52**	-0.01	0.45**				
Reduce intensity or density	0.57**	-0.08	0.68**	0.35**			
Impose land use component	0.67**	-0.08	0.74**	0.55**	0.52**		
Extra requirement	0.68**	-0.20*	0.84**	0.42**	0.62**	0.69**	
Appeals	0.73**	-0.20*	0.81**	0.55**	0.62**	0.82**	0.77**

* Correlation is significant at the 0.05 level (2-tailed) – 95% confidence

** Correlation is significant at the 0.01 level (2-tailed) – 99% confidence

The planning appeals component has strong relation with duration of approvals, specific condition, imposed land use component, and extra requirements ($r=0.73$, $r=0.81$, $r=0.82$, $r=0.77$ respectively; $p<0.01$). Based on the mean and the median of these components shown by Table 7.6, respondents share similar views that these components caused problems to carry out housing development.

The strong relation signifies that problems due to imposed land use components, extra requirements and specific condition in planning approval will lead to the problems of planning appeal. The time consuming in and problems of the planning appeal will lead to delays (duration of approvals) of housing development.

Table 7.6
Mean and Median by Planning Decision Components

Components	Mean	Median	Sample = n
Extra condition	3.07	3	137
Specific conditions	3.23	3	137
Improve layout	3.18	3	137
Reduce density	3.19	3	137
Additional component	3.21	3	137
Extra requirement	3.29	3	137
Appeal	3.22	3	137

7.4 Differences between components

The analysis of the differences between components is to investigate, firstly, the way of town planning system that was implemented in each state, and secondly, the different views of developers' groups by their experiences vis-à-vis the town planning system. This analysis is carried out by employing the One Way-ANOVA technique.

7.4.1 Differences between states by components

The out-put from the One-Way ANOVA is shown by Table 7.7. Several components have differences of the mean between states. The rest of components are not detected by the techniques which signify the occurrence of similarities among the states. As Table 7.7 shows,

three states (Selangor, Melaka, and Pahang) have higher mean score compared to Kelantan state in terms of the land holding component, under the development plan factor. The Kelantan state respondents inclined towards 'least and lesser problems' while the three states inclined towards 'problem' and 'more problem' levels.

Table 7.7
Differences of the mean between states by components
Using One-Way ANOVA
Post Hoc Tests

Components	State (Mean)	State (Mean)	Mean Difference	Significant value
Land holding Or ownership	Selangor (3.20)	Kelantan (2.20)	1.00	0.034
	Melaka (3.50)	Kelantan (2.20)	1.30	0.008
	Pahang (3.50)	Kelantan (2.20)	1.30	0.008
Correspondence	Melaka (3.6)	Kelantan (2.22)	1.38	0.023
	Pahang (3.5)	Kelantan (2.22)	1.28	0.049
	Perak (3.5)	Kelantan (2.22)	1.28	0.020
	Terengganu (4.0)	Kelantan (2.22)	1.80	0.034
Extra requirements	Johor (2.9)	Pahang (3.8)	- 0.9	0.047
	Kelantan (2.6)	Pahang (3.8)	- 1.2	0.031
Electricity supply	Melaka 3.7	Johor 2.7	1.00	0.050
	Melaka 3.7	Kelantan 2.2	1.50	0.010
	Perak 3.5	Kelantan 2.2	1.30	0.021

For the correspondence component, under development control factor, Melaka, Pahang, Perak and Terengganu states have higher mean score compared to Kelantan state. Kelantan

state respondents revealed the 'least' and 'lesser' problems level while the four states respondents inclined towards 'problem' and 'more problems' levels. For the extra requirement, under the planning decision factor, respondents of Johor and Kelantan states share similar views which the mean scores are 2.9 and 2.6 respectively lower than the mean score of Pahang state. Thus, Johor and Kelantan states respondents inclined towards 'least and lesser problems' levels while Pahang state respondents inclined towards 'problems and more problems' levels.

Under the development control factor, the electricity supply requirements drawn differences of the mean scores among Melaka, Perak, Johor and Kelantan states respondents. Respondents of Melaka and Perak shared similar views by the mean scores 3.7 and 3.5 respectively indicating 'problem' and 'more problems' levels. In contrast, respondents of Johor and Kelantan share similar views by the mean scores 2.7 and 2.2 respectively indicating 'least' and 'lesser problems levels'.

7.4.2 Differences between groups by components

Differences among groups of developers are extracted by the One-Way ANOVA statistical technique. Out of 30 components tested, only two components are extracted by this technique, as shown by Table 7.8. Therefore, the other 28 components are considered as the components of having similarity views among groups of respondents. For the land physical characteristic, under the development plan factor, the differences of views between 4-6 years and 7-9 years groups are within the similar levels of 'problem' and 'more problems'. The differences of views between 4-6 years and 10 and more years' groups concerning the extra

condition component reveal a bit different meaning. Respondents of the 4-6 years group inclined towards 'least and lesser problems' while respondents of 10 and more years group inclined towards 'problem' and 'more problems'.

Table 7.8
Differences between groups by components

Components	Groups (Mean)	Groups (Mean)	Mean differences	Significant value
Physical Characteristics	4-6 years (3.54)	7-9 years (3.20)	0.340	0.038
Extra Conditions	4-6 years (2.75)	10 & more (3.20)	- 0.457	0.018

7.5 Town Planning Officers Views

Town planners in planning authorities were interviewed to elicit more explanation with regards to the problems faced by private housing developers. Due to limited times for this study and difficulties to arrange appointments with planning officers, only seven planning officers were successfully interviewed; one was from the Federal Department of Town and Country Planning (FDTCP), two were from City Hall Kuala Lumpur (CHKL Master Plan Department and Planning Control Department), two were from state planning offices (Trengganu and Kedah), and two were from municipalities (Seremban and Kota Bharu).

7.5.1 Development Plan

Several components of the development plans are identified to affect private housing development leading to high land prices. With respect to the land identified for housing, town planners felt that the structure plan is only as an 'indicative plan' which shows the potential land for future urban expansion or for new growth area. The detail land use zone and density particularly for housing development is shown by the local plan. The questions of how the

land was identified and how the land was zoned are the subjects of the development plan study process by which the decisions are made after consideration given to public objections.

Mohd. Zaki (interview, 2006) mentions that most of planning authorities had lack of skill officers in the past two decades. This situation, as agreed by Johari (interview, 2006), had forced planning authorities to outsource the development plan studies (structure plan and local plan). Hence, the appointed consultants were entrusted to employ competent professionals to carry out development plan studies while planning authorities were merely playing roles as advisory bodies. Thus, in implementing the development plan, especially for housing development, the planning authorities consider that developers are the professional companies that are able to consider and to choose land wisely to meet their objectives. Moreover, developers are the experts in the housing market (Johari Tahrir, interview, 2006). In respect of the developers' problems associated with land holdings, the planning authority anticipates that the problems should be solved by the developers or the land owners themselves. The planning authority does realize that, of course, some of land may not be developed due to land ownerships constraints of which will lead to the unmet of targeted housing units within the targeted period (Bramley *et al* 1995). However, the planning authority will revise the plan in every five years and forward new recommendations (Nurazizi Mokhtar, interview 2006). Unfortunately, this practice may accumulate further housing backlog.

With regards to the planning policies, town planning officers noted that the policies were formulated to encourage and to control development by which to achieve the objectives of

the plans. Most commonly, policies with regard to residential density, amount of commercial floor spaces and number of community facilities applied to a particular area are derived from the overall future projection figures which are then distributed to the whole development plan area. Perhaps, developers may not aware of the control figures as the underlying factors leading to that related policies (Nurazizi, interview, 2006). Therefore, the problems faced by developers relating to development plan policies can not be viewed in isolation but can be taken into consideration in the respective future development plan review (Nurazizi, interview, 2006).

7.5.2 Development control

Under the development control factors, private housing developers have highlighted several components from the planning application process, planning evaluations, technical comments and planning recommendations as discussed in Chapter 6. Consequently, the planning officers' views on the problems can be further discussed in the following sub-headings.

7.5.2.1 Attaining Planning Applications

As stipulated in NLC 1965, local authorities have no final says in determining the actual usage of land since it was alienated to private ownership (Lee *et al* 1990). The land owner or an agent on his behalf can submit an application for planning permission. Usually, housing developers are represented by their agents such as an architect or a town planner. Other professionals such as engineers who work with the housing developers or as their consultants can also submit the application for planning permissions. In this study, the problems concerning applications for planning permissions appeared to be on the completeness of the

submissions and complying with all necessary requirements (Chapter 6). The main problem faced by the developers is to meet the first requirement that is the application for planning permission must be made by the land owner or its agent. If the application was to be made by his agents, the written consent must be attached to the application (Act 172, 1976).

Under the planning administration, an application for planning permissions should be made to the respective local planning authorities. For an area outside local authority boundary, the Land Office is empowered to be the local planning authority (Act 172, 1976). However, not all local planning authorities have town planning departments. Some local authorities may have to rely on a group of multi-disciplinary employees to carry out the planning functions. In certain occasions, local authorities have separated planning sections that are led by planning officers or by just technical assistants (Diploma Degree holders). In small local authorities, the "Local Authority' Secretary" is also responsible to act as the planning officer (Mohd. Razali, 2002). Therefore, there are differences among planning authorities in terms of procedures, client charters, delegation of powers, time consuming in approval process and staff attitudes.

An application for planning permissions, irrespective of its types, has to undergo a normal recording process. According to Madam Zunaidah Yamat (interview, 2006), the applications are referred to the development control officers only after the applications have been recoded and filed. The recording process is carried out by clerical staffs in the administration section and would take several weeks. After the recording process, the planning evaluation process is another time consuming stage. The development control officers upon receiving the

application will first look at the area earmarked for the proposed development. The proposals must fall within the definition or categories of allowable land uses in accordance with the respective local plan. After the file has been viewed by the officer concerned, the instruction will be given to the technical assistants who then will be distributing the file to area control technicians for charting, recording, and comments. The respective technician will prepare site plans, fill up all necessary forms and do necessary calculations. The process looked simple but spent weeks and depending upon numbers of files on technician's table and types of the proposed development. After all necessary forms and calculations made, the file concerned will be examined by technical assistants. Here the proposals will be evaluated based on various planning and technical matters. The technical assistant will prepare the draft planning comments which should be written on the specific forms. If the development control officer found that the calculation was wrong, the technical assistant will make the necessary corrections. Then the file will be sent to the planning officer for endorsement and then the file will be sent to the secretary of technical committee meeting and queuing up for the meeting to commence. Therefore, the duration of time consumed by the planning application process depends on these aspects (Mohd. Razali, 2002). Furthermore, the planning and technical matters to be considered as conditions in planning approvals are definitely depending on the nature of the proposed development and planning office capability (Mahadi Ngah, interview, 2006).

The above process is merely to the application made to local planning authorities. However, the planning application for an area outside the local authority boundary has to be made to the Land Office and is subject to its procedure. The process and time consuming in the

approval process are entirely without any interference of the planning offices. Some land offices may take one year while others may take a bit longer. Based on the information given by the Chief Assistant District Officer in Alor Gajah Melaka (Roslan Ismail, interview, 2005), the process varies depending upon the size of the area, the number of applications, the number of officers in-charged and the computer literacy. He gave the example in Alor Gajah which the respective land office can process land transactions within half an hour whereas in Kuala Lumpur the same process may take a month. This fact may give some idea of time consuming for the Land Office to consider housing development proposals which again depend upon many variables such as size, land category, land tenures, survey plans and planning matters. Undeniably, therefore, the government agencies empowered by the TCP 172 to conduct duties as planning authorities could also affect the housing development process.

7.5.2.2. Planning evaluation

In evaluating planning application, the planning officer firstly refers to the land use zoning plan either local plan or non-statutory plans. Then, the officer gives comments to the proposal that may disregard the potential or merits of the land for future development. This is because the identification of land for housing is so far left to the appointed consultant that prepares the development plan. Mr. Mohd. Zaki (interview, 2006) explained that, normally, the Federal Department of Town and Country Planning (FDTCP) is the coordinator for preparing development plan. This means that the planning officer, at local planning authority, merely follow the guideline or the plan in 'holistic' way without questioning what factors have been considered in the determination of land use zoning on a particular land plot.

Planning officers are confident the local plan that has been presented before the technical committees and the public is the best plan to the area. However, problems still occur in implementing the plan due to changes in economy, physical development and political leaders (Barlow and Duncan, 1994).

The common feature of a local plan is the land use zoning where the future land for housing is shown in yellow colour. The existing housing is shown by light brown colour. In case of a large acreage of land located within the housing zone, the lay out plan actually determines types of land uses for each land plot. After the lay out plan was approved by planning authority and each plot land was obtained individual title, the land can be sold. The buyer or new owner may or may not develop the land if the return over the land will not bring profit as expected. Thus, the planning permissions will be dealt with individual land owner's application within an approved housing estate. Hence, the plot that has been shown as shops in the approved lay out plan is considered as 'commercial' even though the local plan shows the area generally as residential zone.

As explained by Mr. Mohd Zaki (interview, 2006), the second subject examined by planning officer is the category of land whether it is under 'building' or 'agriculture'. The third subject is the approval for the conversion as well as the amalgamation of land granted by the Land Office. If the proposed housing development involved 2 hectares of land and above, the fourth subject is to look at the proposed lay-out plan. For the lay out plan, the evaluation involves various aspects against the adopted planning standard. Among others, the most common, are the proposed number of dwelling units, type and price categories, proposed

densities, community facilities, amenities, and traffic circulation system. Mahadi Ngah (interview, 2006) insisted that the proposed density in housing lay out is of great concerned. However, there is always a flexibility of planning consideration adopted by CHKL because the Federal Territory (Planning) Act 1982 has empowered the Lord Mayor to impose development charges, as he may think fit, on the increased of density based on excess of dwelling units. According to Mohd Zaki (interview, 2006) and Lokman Omar (interview, 2006) this provision is not practiced in their states. Thus, the local planning authority in other states is seemed to be strictly followed the development plans because they do not impose development charges on excess in residential density. However, the way they calculated the density is a bit different from the CHKL. In other state, the number of persons per unit dwelling varies as well as among the local planning authorities. In Kuala Lumpur, the number of persons per unit has been gazetted as 5 persons per unit dwelling (Nurazizi, interview, 2006). Thus, the inconsistencies of the planning control measures appeared to be significantly affected the development process as argued by Sen (1991).

Based on the views of interviewed planning officers, cases of delays in planning approval process are majority caused by the delays of actions taken by the applicants (developers), delays in planning evaluation and delays in waiting for the Planning Authority meeting. On the part of the developers, the proposals that agreed for amendments were only to a minor layout design, but the developer re-submitted the proposal plans with a totally new designs or new proposed types of development. For example, the site which was formerly intended for single storey terraces was changed to become high rise residential towers; the design of road circulation was changed and the site which was formerly intended for community facilities

was relocated to the other corner. The developer may think that the resubmission of planning application was only as amendment to its previous application, but these kinds of changes made by the developers after the planning consideration given to the first attempt are considered as a new submission for planning approval (Mahadi Ngah, interview, 2006). On the part of planning offices, delays are due to several factors that include: filing activities; planning evaluation process; schedules of technical meetings, council and planning authority meetings; report writings after decisions; and waiting for adjoining land owners' objections (Lokman Omar; Mahadi Ngah; Mohd. Zaki Ibrahim, interview, 2006).

7.5.3. Planning Decisions

The inconsistencies of planning conditions and requirements derived from planning decisions may cause problems to housing developers to estimate development yields from their feasibility and viability studies (Harvey, 2002). Mohd. Azam (interview, 2005) from the Kedah State Planning Authority highlighted several relevant reasons to the issue. He gave an example that the land near Alor Star air port was formerly zoned for residential in the local plan to the area. Several housing estates had been developed over the years. After the Alor Star air port was undergone upgrading to cater for the increase in domestic flights, the Flight Aviation department required a 'flight path' of three kilometers long from the air port fences across hundred acres of private agriculture land. Indeed, the intended 'new flight path' covered several new housing estates plus agriculture land. Consequently, from that date to present, any new proposal for housing development under the flight path was rejected due to the new planning policy. Therefore, the previous housing developers would have lesser problems in obtaining planning approvals but the later developers would have more

problems. Within the period of writing this thesis, the issue is not yet solved since the applicant brings the matter to the appeal board.

In the city of Kuala Lumpur, the Comprehensive Development Plan 1041 shows some areas as residential zone with the certain degree of residential density. For example, the residential density of 30 persons per acre means for six dwelling units on an acre based on 5 persons per unit. In practice, the planning department will not recommend any proposed residential development to be higher than the residential density shown by the density zoning plan. However, planning decisions could overrule the planning recommendations. Mahadi Ngah (interview, 2006) pointed out that the residential density determined by the Comprehensive Development Plan 1041 can be interpreted differently by decision makers; they could interpret that several condominium housing blocks on a large area could result similar density figure. In addition, the planning decision is flexible to the nature of land development. For instance, if the developers could ensure that their projects will not cause harmful effects to surrounding areas such as on the traffic and community facilities though with high residential density, the planning decision may be granted.

In respect to planning conditions and requirements, the developers' problems are related to discretions used by local planning authorities' in imposing the conditions and requirements while granting the planning approvals. Lokman (interview, 2006) views that the planning requirements, as put by the planning standard, can easily be applied by developers depending upon the number of houses proposed. Normally, the proposed housing development consists of several types of land uses on several categories of land. The land applied for housing

development may consist of small lots, large lots, odd lots and irregular lots. In the case of the large lot of more than 100 acres development, the developer may have lesser problems. For the small lot development, the developers concerned should consider the possibilities to comply with the planning requirements before they decide to develop the land. Perhaps, by aggregating all small lots residential development as a housing area, thousands of residential units built require various types of community facilities and infrastructures. Therefore, the land surrendered by individual small lots development for the infrastructure, for example, may be inadequate to cater for the overall development to that area. The impact of this kind of development requires full awareness of planning officers. There are cases where, the application has to be "keep in view" until the local plan for the area is adopted and the applicant is notified promptly. This issue causes the planning authority under pressures and asked to quickly adopt the local plan without giving due consideration for the future outcome.

7.6 Conclusion

The data obtained through questionnaire survey have shown some indication of the relation between the implementation of town planning system and the private housing development problems. However, precautions must also be placed in the interpretation of the data because there would be hidden agendas of the private sector. Based on the Principal Factor Analysis technique using SPSS for Windows, the development plan is appeared to be the dominant town planning factor affecting private housing development. This result reflects the main function of the development plan as the main guidance in development control and planning decisions (Bramley *et al* 1995). By employing the Spearman Rho Correlation Coefficient

technique, the main town planning components affecting private housing development are apparent. These components can be grouped under the three main town planning factors as follows:

- a) Development plan's components comprise land holding or ownership, and development guidelines.
- b) Development control's components comprise planning administration, planning evaluation, and technical requirements.
- c) Planning decision's components comprise specific conditions and planning appeals.

However, the above findings are not exclusive because the One-Way ANOVA test reveals some differences among the states. The components that have differences of views are: land holding or ownership; correspondence; extra requirement; and electricity supply requirements. The further test on groups of developers based on their experiences in housing development, only two components are extracted, that are: physical characteristics of land and extra conditions. These differences exhibit the occurrence of variations in the implementation of the planning system in Peninsular Malaysia that lead to different degree of problems faced by private housing developers in carrying out housing development.

The results of these analyses, as discussed with the planning officers, reflect the weaknesses on the both parties: planning authorities and the developers. On the planning authority part, the development plan was not solely as the main guidance in planning decisions while other factors like political objectives, economic situation and cultural changes supersede the planning objectives. In addition, planning officers are still bounded by the planning control administrative system in attaining planning application, planning evaluation and

recommendation system within which the technical requirements have significant effects. On the part of the private developers, the land chosen for housing projects and delays of planning approval process are partly due to their misunderstanding of the planning requirements, profit motivated and risks taking behaviours (Blowers *et al* 1982; Harvey 2002, Evans 2004).

CHAPTER 8

RESEARCH FINDINGS AND CONCLUSION

8.1 Introduction

There are various studies conducted elsewhere concerning the relation between the planning system and the property market. The most interesting argument highlighted in the literature is that the private housing developers' decisions and considerations on land development are affected by significant influencing factors that include town planning system, finance, users, legislative provisions and aspects of property rights (D'Arcy and Keogh, 1999). Moreover, the focused argument inspired this study is that the town planning control may affect developers considerations and decisions on aspects of housing location, quantity, type, prices category and quality products. Consequently, the outcomes of developers' decisions can be analyzed quantitatively by using these variables (Guy and Hennebery, 2000; Adams and Watkins, 2002; Healey, 1991). Though

the quantitative evidences had been extensively discussed in the literature within neo-classical economic analyses, there is the knowledge gap existed to explain on the forces or influential factors shaping the products (Adams and Watkins, 2002). Therefore, this study attempts to partially fulfill the knowledge gap by examining the relation between the planning system and land development process. However, this study merely focuses on the effects of the planning system on the private housing development because the private housing developers are entrusted to play major role in housing delivery system. Since the main housing problem in Peninsular Malaysia is concerning the existence of the mismatched between the housing demand and supply in the past two and a half decades (1980 – 2005), it is assumed that the problem has been partly contributed by the implementation of the planning system. Based on this assumption, the main aim of this study is to ascertain the town planning factors and components affecting the private housing development in Peninsular Malaysia.

By employing the development process model introduced by Healey (1991, 1992), it is not surprising to observe that planning authorities and development agencies under the public institution have affected the land development product especially in urban areas through the implementation of the planning system outlined by the Town and Country Planning Act or Act 172, 1976 for the whole Peninsular Malaysia and Federal Territory (Planning) Act or Act 267, 1982 for Federal Territory Kuala Lumpur. Interestingly, this study is able to identify the main town planning factor and components affecting the housing development based on the analyses of data obtained from private housing developers. Therefore, this research has enshrined evidences of how the implementation

of town planning system affect housing development which ultimately brought an improved conceptual understanding about the relation between town planning system and development process. Significantly, this research has also contributed to the institutional and agency analysis of the built environment in general and in particular to the understanding of Peninsular Malaysia land development process.

Since changes in the factors will affect the products or outcome (Ratcliffe and Stubbs, 2003), findings of this study will provide some valuable materials for town planners and decision makers to consider in preparing development plans, evaluating applications for planning permissions and making planning decisions in the future. Accordingly, this chapter is now to discuss the findings of this research in more details.

8.2 Roles of institutional structures and agencies involved in planning and controlling land development.

Property owners, entrepreneurs and investors rights are protected by the country Constitution (Chapter 3). However, all property development must be in conformity with related regulations and legislations. In addition, the existence of three tier government – Federal, State, and Local Authority – has engendered the complex and dissimilarity land and property development process in which each level of governments may introduce different guidelines and requirements. Under each level of governments, there is government agencies conferred with specific roles which in part to be involved in and to control land development. The inter-relationships between levels of governments and their agencies causing the complex land development process are shown by Figure 8.1.

As Figure 8.1 shows, the Federal Government is responsible to prepare Five-year National Plans and the National Physical Plan. The responsibility to implement the plans is ascribed to several ministries. However, the ministry concerned has to consult the respective state governments. Then, the state government will give directions to local authorities.

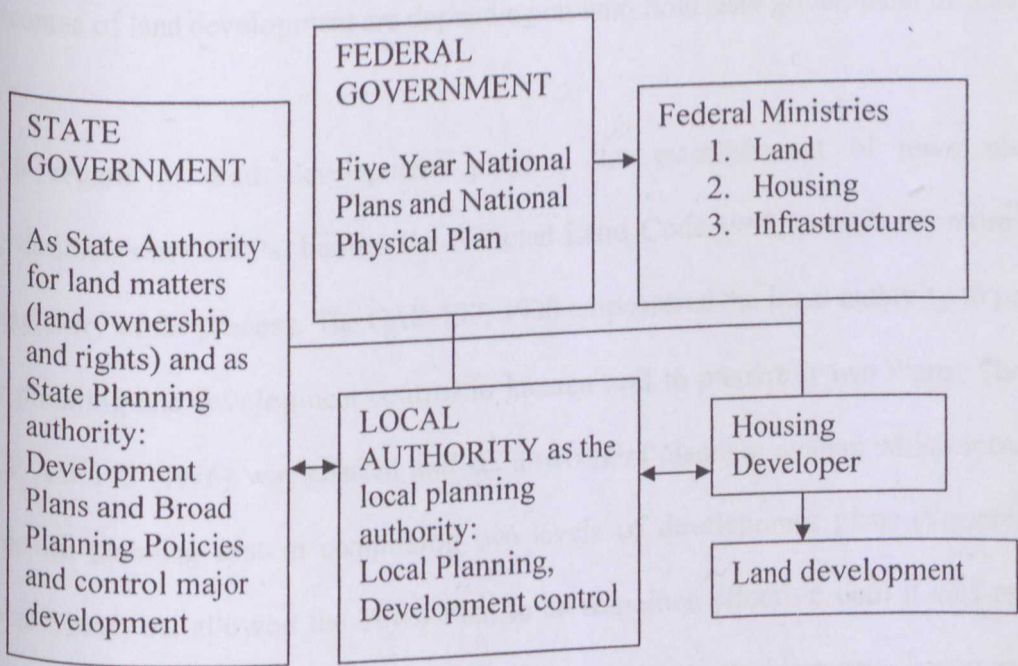


Figure 8.1: Relations between developers and three tier government agencies

Although, the local authorities are the planning authorities to their area, the land matters that are put under the state list have made the state authority to have absolute authority to deal with land alienation, land uses and development (Lee, *et al*, 1990). This power is vested by The National Land Code, 1965 which stipulates the scope and functions of the states to exercise their powers. The land development process becomes more complex when decisions can be made by intertwined functions among politicians and public

officers. This is due to, from the administration point of views, the decision makers within the federal and state governments can be appointed from the politicians while the government officers are appointed merely to be administrators, technical and supporting staffs who should carry the responsibilities to serve the federal and state decision makers and the public as a whole. Since the powers are vested to state decision makers, the outcomes of land development are depending on who hold state government offices.

With regard to land development process, the establishment of town planning legislations, since 1920s, besides the National Land Code 1965, contributes more to the complexity of the process. The CAP 137, 1930 empowered the local authority to perform the planning and development control in its area and to prepare Town Plans. Then, the TCP Act 172 (1976) was enacted and set a two tiers planning system which introduced structure planning system comprising two levels of development plans (Structure and Local Plans) but allowed the Town Plan to be remained effective until it was replaced with the new Local Plan. Hence, the development control process becomes more confusing while there were approvals for housing development in 1980s granted under the CAP 137, 1930 even though TCP Act 172 (1976) was in force. Therefore, some issues on planning approvals raised by developers based on land use zoning such as too rigid, did not flexible to adopt the changes in technology and culture perhaps were referred to the year of the local authority adopted the new local plans or structure plans. This is because the new planning system may have allocated some rooms to adopt such changes but the local plan to replace the old town plans is not simply adopted due to

rapid growth of urbanization, national economy and conflict of interests among decision makers (Chapter 3).

Though there are three laws (National Land Code 1965, TCP Act 1976 and the Federal Territory (Planning) Act 1982) concerned on land development, the coordination between provisions of the Town Planning Act and the National Land Code is carried out by the state level (State Authority and the State Planning Authority). The local planning authority either under the local authority or the land office is empowered to deal with the preparation of local plans and development controls except the final and 'important' decisions are to be made by the State Planning Authority. Therefore, states and local planning authorities play very significant roles in land development. Their roles start from the earliest stage of the process until the approval stage.

With respect to housing developers, besides to deal with the state and local planning authorities, they also have to deal with some federal ministries. Moreover, there are several departments and agencies under the ministries concerned that involved in land development where a housing developer has to fully comply with all requirements of these government agencies. As evidences in this study, the Ministry of Housing is concerned with the category of houses to meet the national housing target (low cost, medium costs), while the Ministry of Public Work is concerned with the provision of adequate infrastructures including roads and highways; of which may affect the total housing development costs. Undeniably, the housing developers which are performing under the market institution must regard to the decisions and controls by the government

agencies and decision makers. Thus, developers must play their roles within the legislative frameworks and have to take their own risks in dealing with land development (Ratcliffe and Stubbs, 2003; Evans, 2004). They are entrusted to provide decent housing for all Malaysians and to commit with social obligations that include contributions towards sustainable and healthy environment (7th Malaysia Plan). However, besides responsibilities to deliver completed housing to house buyers under the Developers Licensing Act 1966, housing developers are also affected by the country economic performance. During economic recession periods, some housing developers had to leave their project abandoned. The changes of housing demand made housing developers to be more cautious in their attempts to pursue profit maximization objectives. Their levels of profits are determined by the difference between the selling price and the production costs. Therefore, problems and additional costs imposed by planning approval process, as discussed in Chapter 6, would reflect certain degree of detrimental roles played by planning authorities in the part to pursue the national housing objectives even though they are meant to safeguard the public interest (Harvey, 1985; Harvey, 2002; Taylor, 2004).

8.3 Considerations given by planning authorities in evaluating private housing development

In pursuing the goal and objectives of the country's development planning (all Five-Years Malaysia Plans), a certain degree of the government intervention in the property market is seemed unavoidable particularly in urban housing market. The government intervention in the property market is partly being carried out through the implementation

of related legislations and particularly the Town Planning Act since 1920s. Although the planning legislations had been amended several times, the nature of the government intervention in the property market has not changed. How the government could intervene land development is provided in Town Planning 1976 (Act 172) and its amendments in 2001 (Act A1129) and as well as in the Federal Territory (Planning) Act 1982. These Acts state responsibilities of the three levels of the governments. Under the current planning system as stipulated under Act 172, 1976 (after 2005), the Federal Government is responsible for the formulation of Five-year Development plans and the National Physical Plan (NPP). Under the Federal Government, there are ministries to be responsible for specific functions such as Ministry of Housing and Local Government and Ministry of Transport. The state government is responsible for the preparation of State Structure Plan and to hold all land within the state. The local authority is responsible to be the local planning authority as well as to prepare all local plans within its boundary. Significantly, the current planning system introduces three-tier development plan system – National Physical Plan (NPP), State Structure Plan (SSP) and Local Plan (LP).

The relationship between three types of development plan is also elaborated by the Act 172, 1976. The State Structure Plan (SPP) must interpret the National Physical Plan (NPP) objectives and policies that are relevant and suitable to be implemented at respective state level. The Local Plan (LP) which is the second layer of the development plan system must interpret policies and objectives of NPP and SSP in more details. However, it is felt that the examination on effects of this current planning system is

premature (too early) because the NPP was gazetted in 2005, while this research is underway. Thus, this research is focused to examine and analyze the effects of the previous planning system (between 1976 and 2005) rather than the newly adopted planning system.

The previous planning system provided two tiers development plans that were: (1) Structure Plan; and (2) Local Plan. The state planning authority in preparing structure plans was subjected to have regards to *material consideration* that inter-alia should take into account aims, objectives and policies of the five year national plans. Since the state authority did not prepare and adopt structure plans to cover whole area within the state boundary, there was a possibility of leaving an area without any plan. This situation allowed the state and local planning authority to impose planning conditions and requirements based on merits and locality of the projects. In contrast, there are cases where more than one structure plan were prepared and adopted within a state. This situation had made planning officers and private housing developers confused about the relevant planning policies and requirements to be complied with. For example, as discussed in Chapter 3, facts and figures for the future population and employments were often overlapping among the structure plans by which certain requirements for community facilities in a particular location were doubled counting.

In the case where the structure plan was adopted, local planning authorities were asked to prepare local plans. With the intention to make a local plan as a useful guidance in making planning decisions, local plans were prepared in very detail manner that include

building uses, height, intensities, internal circulation and building designs. This kind of efforts had resulted numerous draft local plans to become non-statutory documents because they were believed to be rather too restrictive than flexible to suit with socio-economic changes (Lee *et al*, 1990). These non-statutory documents have no legal binding and given more rooms, perhaps, for decision makers to pursue their objectives. Moreover, several local authorities like Kuala Lumpur, Ipoh and Penang were still using the old gazetted town plans under Federated Malay State (F.M.S) Cap 137, 1930; meant to guide their planning decisions. However, the planning evaluation based on these old town plans was allocating a loophole that is to be simply overruled by some decision makers on grounds that they are of out-dated plans (Bruton, 2007). Therefore, the previous planning system attributes significant weaknesses to guide development control process. Nevertheless, claims about the weaknesses of the previous planning system are never challenged. The system had induced uncoordinated and disjointed structure plans coupled with small covering areas compared to the UK structure plans (Bruton, 2007). Similarly, local plans were also not prepared to cover the whole structure plan area and if existed, they were being uncoordinated and disjointed among the plans. Thus, the state and local planning authorities were left with a space (leeway) to make discretionary decisions to applications for planning permission in that such areas of which had caused more problems in housing land development process.

In the Federal Territory Kuala Lumpur, the first development plan prepared for the whole Kuala Lumpur was the Kuala Lumpur Structure Plan 1984 (Gazetted in October 1984). However, City Hall Kuala Lumpur (CHKL) as the local planning authority still used the

Comprehensive Development Plans (numbered 1039, 1049 and 1041) covering an area of 36 square miles. These plans are considered as the local plans to the central area of Kuala Lumpur (36 square miles). For the outer areas, CHKL has prepared several local plans but none of them are gazetted until year 2005. Since the Lord Mayor is empowered to use his discretions in planning decisions, housing development can be approved with or without advice from his staffs and advisory board members. Therefore, the practices in CHKL have raised certain degree of uncertainties among housing developers especially in applying for planning permissions or approvals (Bruton, 2007).

The issue of the scarcity of available land for housing development to meet housing needs and demand, as discussed in Chapter 4, was the main concerned by development planning. The housing supply contributed by both the public and the private sector was not meeting the expected category of houses built while more than 28,827 units are unsold (Central Bank, 2005). As Malaysia experiences rapid population growth rates especially in major urban areas, the inadequate decent and affordable housing will continue to be one of the main issues raised in the five year development plans (7th MP – 9th MP). The private sector developers pointed out various reasons for the outcomes, among others were the increases in land prices due to limited available land within urban areas, increases in construction costs and management costs and changes in housing demand in tandem with changing national and international economy.

Possible attempts to reduce production costs which would directly affect the house prices were seen on the part of the public agencies particularly the town planning authority. The

reduction in production costs were perceived to be achieved by having available housing land in the appropriate location, possessing flexibility of the planning requirements and relaxing in enforcing planning policies, rules and regulations (Marbeck, 1997; Lawrence, 1997; Goh 1997). These perceptions are due to the high rates of urbanization in the Peninsular Malaysia that pressure development further out from an existing town as an urban expansion and require the intensification of development in central town areas. Responding to these views, the development plans prepared by states and local planning authorities in the past indeed have identified new housing land outside built up areas as provisions for urban expansions. However, the identified areas and quantity of residential units planned by both levels of plans (the National Development Plan and Structure Plan) were not fully developed (Chapter 4). This result reflected the way of town planning control was being implemented either in positive or negative positions. From the negative side, the stricter town planning control in identified areas forced housing developers to seek other areas where they could meet their objectives in terms of housing quantity and location. From the positive side, town planning control was flexible and relaxed toward housing development by granting approvals to new housing development even in unidentified areas.

Besides the development plans as the main guidance for planning decisions, planning authorities also have various technical requirements and procedures to be complied by every housing land development. These requirements are discussed in the factors and components affecting private housing development as in the following sub-topics.

8.4 Town planning factors and components affecting private housing development.

The town planning factors are divided into three main factors that are Development Plan, Development Control, and Planning Decision. Each factor comprises several components. Based on the literature (Chapter 2), 30 components were identified for investigations. The primary data were then gathered through questionnaire survey using the face-to-face interviews technique as discussed in Chapter 5. From the descriptive analysis method, 26 out of 30 investigated components are indicating the occurrence of private housing developers' problems in relation with the way state and local planning authorities implemented the planning system (Chapter 6); of these identified components, the town planning factors are identified by exploring the Principle Factor Analysis technique (Chapter 7). Findings from these analyses can be discussed in detail under the following sub-topics.

8.4.1 The main town planning factors affecting private housing development

The factor analysis results show the existence of strong correlations among town planning components in six dimensions. The first dimension comprises a group of components that are associated with the development plan that indicates the influences of the development plan on those components. Therefore, the problems faced by private housing developers in the identified planning components are associated with how the development plan (structure and local plans) are prepared and interpreted in exercising development control process and in planning decision process. The planning authorities would have affected the private developers' decisions in developing housing by imposing

problems with housing location, designs, intensity and quality. Obviously, this finding supports the theory that the implementation of town planning system affects housing development in terms of housing location, quantity, house types and prices as highlighted by Evans (2004), Harvey (2000), Cheshire and Sheppard (1989), Monk and Whitehead (1996) and Bramley (1993).

However, the implementation of planning system was incorporated with non town planning matters such as administration, engineering, political ideology, legal and social issues. By employing the Spearman Rho' correlation technique, various related problems of private housing developers are emerged. Based on the significant components derived from the analysis, the results can be classified as planning administration, technical requirements and land laws. Under the planning administrations, problems of delays in planning approval process found in this study apparently support the claims made by Lawrence (1997), Sen (1991), Mohd. Razali (2002) and Goh (1997).

Under the land laws, the problems of dealing with land ownerships highlighted the ownership constraints in land development which support the claims made by Salleh Buang (1997), Goodchild and Munton (1985), and Masey and Catalano (1978). The private developers' problems with technical requirements are related to the increase in production costs and the delays in housing development. This particular finding supports the claims made by Goh (1997), Sen (1991) and Lee *et al* (1990).

8.4.2 The main town planning components affecting private housing development

Land holding is identified as the main components affecting the land use planning of which will affect the developers choices to develop the identified housing location, to determine the size of the projects and house prices.

Table 8.1:
Developers' problems by investigated components

Component	Related problems	Related Quantitative effects
Housing Land a) identified area b) land use & density c) environment	Land ownership constraints. Application procedures to land office Different market value	Choice of location, size of project, laid down infrastructures, and overall lay out design and costs
Development Guidelines	Compliance Uniformity Details	Limited land for building Resubmission Redesign and Costs
Development Control a) Planning administration b) Planning evaluation c) Planning requirements	Correspondence & Procedures Amendments to proposal Compliance	Time consuming and Costs
Technical requirement	Procedures Compliance	Time consuming and costs
Planning Decisions	Uncertainty Imposed conditions Extra conditions	Profit estimation Technical and compliance Additional Costs

The reluctant of land owners to release their land make developers to change their location or to slim down their projects sizes. Thus, the size and shape of the projects affect development costs and make developers to find other solutions from technical and social aspects such as by reducing streets and drains construction costs. In addition, the free hold land and the lease hold land titles avoid developers to amalgamate the land plot

to merge the housing scheme because the different land holding status involve different land administrative procedures and land values (Marbeck, 1997; Salleh Buang, 1997).

In summary, the problems of private housing developers associated with the main town planning's components are shown by Table 8.1. These findings are not exclusive because the analysis using One-ANOVA technique reveals some differences among states and experience groups of developers.

8.5 Implications of the main town planning factors and components

The analyses of this study reveal that the development plan is the dominant town planning factor affecting private housing development. This result is expected because the development plan strategies, objectives and broad policies are translated into development controls and planning decisions. The implementation of the development plan affects the developers' considerations and decisions in housing development. This is because a developer must comply with decisions and requirements made by the local planning authority besides to comply with other requirements made by other government agencies under their rules and specified regulations.

8.5.1 The Development Plan

The development plan main function is to guide development control and planning decisions. The way it was prepared and implemented can engender positive and negative effects on housing development (Monks *et al* 1996). Since the development plan is one of the main components of the planning system, the implementation of any development

plan proposal reflects the implementation of a partial of the planning system. The requirements of the TCP Act 172 (1976) and Act 267 (1982) have partly made the planning decisions to conform to the policies, strategies and proposals of the respective development plans. However, under the provisions of *material considerations* the planning decisions makers have been provided with rooms to make decisions differ, at certain degree, from the development plans. The implications of these concepts in planning decision making created uncertainties to land development agents and players. Therefore, the 'plan led development' principle as propagated by planners is arguable in the planning practices while the provisions of the TCP Act 172 for planning decisions are remained. For housing developers, the land chosen for development may not be in the form of uses as what are intended by the plans and may not be profitable at all, and the initial estimation of development costs may not be reliable. The outcome would be that the planned and targeted number of houses including the acreage of land for housing as the translation of National Five-year Plans can be merely remained as good and beautiful colours on the plans but not to be in reality – immaterialised. Even though the development plans are in placed, the evidence in this study shows that the development plans prepared within 1976 to 2005 were not facilitating private housing development.

Based on the analysis of the primary data, the results also show that the effecting factors on land development include components of the development plans (Chapter 7). Therefore, the planning authorities should reconsider the components of the development plans in attempts to meet the national and local planning objectives. Although, the differentiations of components of Structure Plans and Local Plans are difficult to be

distinguished because majority of the local planning authorities would have been using town plan prepared under the F.M.S. Cap 137, or either only structure plan or structure plans and local plans prepared under TCP Act 172 (1976), planning authorities are advised for not to continue to include the components that caused difficulties to private housing developers including the possible impacts on development costs. It is also found that some of local planning authorities were using non-statutory planning documents as their guidance in paying considerations for planning approvals. This occasion will significantly defeat the objective to provide transparent planning decision process to trigger desired housing development (Allmendinger and Tewdwr-Jones, 2000).

8.5.2 Development Control

The urban planning activities under the scope of development control encompassing the activities starting from receiving the planning applications until the planning approvals are granted. As discussed in Chapter 3, types and category of planning applications determined the length of the process and activities involved. Therefore, this process is also time-consuming.

The submission procedures to an application for planning permissions are found to be cumbersome and cause problems to private housing developers. There are sets of procedures to an application for lay-out approvals, for planning permissions, for change of building uses, and for amendments to approved lay out plans. All these type of applications also require variety of information and technical reports. Therefore, planning

authorities should revisit all these procedures to find better solutions such as through electronic-filing and other mode in IT technology.

Besides the application procedures, planning evaluation activities are significantly affecting the private housing development progress. In planning evaluation, an application was examined on the compliant policies of the development plan, if any, or the non-statutory plans and strictly on the planning and technical requirements that are outlined in the planning standards and related guidelines. However, it is evident that the planning standard is not updated and causing problems to housing development due to changes in technology and trends. Apparently, requirements of traffic and civil engineering, environmental control, and landscaping have made the private housing developers to bear all the costs incurred besides time-consuming in efforts to master the approval process. In addition, technical requirements from public utility servicing bodies are heavily incorporated in the planning approval as necessary conditions to be complied with. Therefore, planning authorities may request further clarification from these bodies to ensure that the requirements or conditions, as they asked, are rationally or deemed necessary for such development.

8.5.3 Planning decisions

The planning authority for 11 states in Peninsular Malaysia is known as the State Planning Authority (Act 172, 1976). For the Federal Territory Kuala Lumpur, the planning authority is vested to the Lord Mayor who chairs town planning committee. Based on the analyses in Chapter 6 and Chapter 7, the major problems faced by housing

developers are delays of approvals, specific conditions, imposed land use components in lay out plans, and extra requirements. Moreover, the decisions of imposing specific conditions, additional land use components and extra requirements have indirectly caused additional costs to the proposed housing development. Though the planning decision makers would have prerogative powers in making decisions, the implications of their decisions on housing development costs would be great. Therefore, planning officers in local planning authorities must prepare proper reports and recommendations of which may include the alternatives for decisions. The delays of planning approvals are due to the queuing-up files waiting for planning committee meeting. Therefore, the length of delays for these instances would have been better reduced if the secretariat for planning committee meeting employed the current IT technology.

8.6 Conclusion

The relation between the public institution and the property market institution is shown by the roles played by their agents. The degree of the relations would result the negative and positive effects. In this research, the local planning authority is the agent of the public institution. Thus, it could influence the property market institutions by employing instruments provided by the legislative provisions. The outcomes of the interplay between local planning authority and the private housing developers as the property market agent are found to be as similar as the assertions made by various researchers acknowledged in the literature.

Evidences in this study show that the products of land development particularly the urban housing in Peninsular Malaysia are partly affected by the way planning authorities implement the planning system in which the development plan (structure and local plan) was the dominant factor together with its associated town planning components. The results of the analyses reveal that the identified land for housing, approval process, planning guidelines, and technical requirements were the main components affecting housing development. Other factors affecting housing development are conditions and limitations imposed by the land offices under the National Land Code 1965

Consequently, this study concludes that firstly, the institutional structures and agencies established in Malaysia have affected housing development based on administrative procedures in the planning approval process and the preparation process of the development plans; secondly, development control activities in local planning authorities are very much tailored to accommodate technical requirements of technical bodies; thirdly, town planning requirements and guidelines are seemed to have ignored changes in taste, demand and technologies; fourthly, there has been a lack of consideration about the impact of planning decisions on housing development; and fifthly, additional costs have indirectly been imposed on housing developers, which will contribute to a certain proportion of the total land development costs.

8.7 Recommendation for further research

This research is identified town planning components and factors that have affected private housing developers' decisions in developing housing land. The decisions made by

developers will affect the way housing products to be materialized. The housing location, size, prices and designs are the effects related to town planning factors. However, there are still rooms for further research because the effects of town planning are not exclusively focused on housing land but can be of other types and category of land uses. For example, the effects of town planning are observed by Campbell and Hennebery (2004) on office and commercial development. The similar studies can also be carried out on industrial and small scale industries. With regards to the increase in development cost related to planning factors, the detail analyses of town planning factors will possibly answer the questions of which components cause the increase in the production costs and the magnitude of the costs but provided that all required information are available. In addition, it is also important to investigate the man-powers within a housing developer establishment on the issue of their competency and capability to manage and carry out housing development because the development process is a complex process. Also important is the study on the adequacy of local planning authority's man power and level of their skills in dealing with land development. For example, town planners' skills, knowledge and competency in dealing with land development are arguable because public raise objections to the local plan proposed by the local planning authority.

Since this research has focused on the previous town planning system in the Peninsular Malaysia, there is a room for another research employing the similar approach to examine the extent to which the current planning system affects housing land development. At the time of writing this research, the current planning system is only three years old. There

are puzzles for town planners as well as other interested parties on questions of whether the current planning system will be better than the previous system or otherwise.

8.8 Contribution to existing knowledge

The relation between town planning and housing development have been extensively discussed in the literature. The research within the 'neo-classical economic' framework has shown the degree of effects on housing development from the implementation of the planning system. However, the town planning factors that influence the outcomes are rarely explained (Adams and Watkins, 2002). Therefore, this study has been conducted within the 'neo-classical economic' framework and managed to contribute to the existing knowledge by identifying the town planning's factors and components that affect private housing developers' decisions in developing housing schemes of which leading to the outcomes of land development.

In addition, this study also explores the Institutional Model of development process, advocated by Healey (1992), which proved to be applicable in identifying the related roles of land development players and influential factors. By the application of relevant statistical techniques, this study is able provide a basic knowledge on how to rationalized from possible interpretations of the statistical techniques used. Most importantly, the findings of this study reflect the way planning authorities implement the planning system as stipulated by the town planning laws, rules and regulations which affect the private housing development. In general, the legislative frameworks for land development in Malaysia provide legitimate conditions for actors and players from both the public and

market institutions to play their roles to secure their interests. For land development, particularly, the market institution is affected by the public institution because the market agents' roles have been bounded by the public sector agents' roles on the basis of legitimate authority. The effects of public sectors decisions on private sector's interests are indirectly exhibiting outcomes of the top-down planning approach which was embedded in the planning system during the evolution of town planning in Malaysia.

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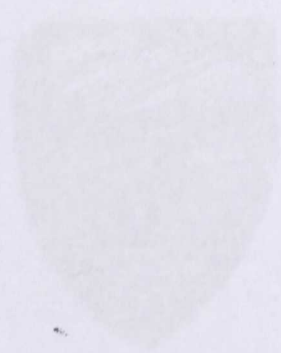
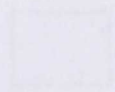
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Serial Number



International Center for Private Housing Development
June 2005

Project Name
MUSLIM MOHOJ ALYAD

Project Site Area

APPENDIX A : QUESTIONNAIRE

Project Name, Participant Name

Project Address

All data and information collected by respondents will only be reported in aggregate form and used for research purposes and a final summary report will be prepared. This individual form will be kept strictly confidential.

Project Description

Project Type ☐

Project Type ☐

Project Type ☐

Project Type ☐

Project Type ☐

Serial Number



Questionnaire for Private Housing Developer

May-June 2005

Researcher Name

IBRAHIM BIN MOHD @ AHMAD

Objective of the survey:

The main objective of this questionnaire is to obtain views from the housing developers/agents with regards to matters in the land development process particularly in obtaining approvals from local planning authorities for housing estate development in urban areas, Peninsular Malaysia.

Confidentiality:

All data and information delivered by respondents will only be reported in aggregate format and used for academic purposes and a thesis leading to my Ph.D. Most importantly this individual form will be kept strictly confidential.

Attempts of interviews

1st appointment ☐

2nd appointment ☐

3rd appointment ☐

4th appointment ☐

Refused to be interviewed ☐

PART 1: RESPONDENT PARTICULARS

1. Gender

Male

☐

Female

☐

2. May I know your age-group

☐

25-30

☐

35-40

☐

45-50

☐

51 and above

3. What is your position in the present company

☐

Director

☐

Managing director

☐

Project Manager

☐

Manager

☐

Supervisor

☐

Other _____

4. May I know your employment status in the company?

☐

Temporary

☐

Permanent

5. How many years have you been working in the present company?

☐

_____ (in words)

PART 2: COMPANY'S PARTICULARS

6 Please give the company address

Postcode

7 This company is

- a sole propriety

- a subsidiary

If subsidiary, please give the name of the parent company

8 How long has this company been established ?

Less than 5 years

Between 5 – 10 years

10 years and more

9 Has your company employed professionals for housing projects?
Yes or No _____

If yes, please give the number of each professional

Town Planners

Architech

Valuers

Engineer

Quantity surveyor

Land Surveyor

Accountant

Others

Exercises

PART 3: HOUSING PROJECT/S EXPERIENCE/S

Thick ✓ in the right box

10 Have your company ever handled housing schemes or projects?

Yes/ No _____

If yes! Please give details:

Year start: _____

Completion year for all Phases: _____

Approval period from submission until getting approval for each phase _____

and for all phases _____ - Years.

Land size (acre): _____

Component of projects (Residential +): _____

Types of residential _____

Price category _____

Conversion Category of Land from _____

Current Progress (e.g. Earth work): _____

Local Planning Authority's Name: _____

11 Does your company carry out project by developing on:

- Own land (stock) for the project ☐
- land bought and develop ☐
- allocated (given) state land and develop ☐
- site for Joint Venture with the public bodies ☐

12 How long your present company involve in housing development as developer?

(written in number of years) _____

PART 4: DEVELOPMENT PLAN AND POLICIES

Note:
Likert Scale is used in the following questions: from the lowest point to the highest point - 1,2,3,4,5 indicating the degree of difficulties for each subject.

The interviewer reads the following subjects and asks the respondent to indicate the scale to the problems and specify or give reasons -

13 Do your company face or have the following problems with land allocated for housing
Yes ☐ No ☐

- If Yes,
- | | Scale |
|---|--------------------------|
| Amenities infrastructure (specify) _____ | <input type="checkbox"/> |
| Physical constraints (Rocks, Swamp) _____ | <input type="checkbox"/> |
| Existing squatter huts/buildings (specify) _____ | <input type="checkbox"/> |
| Ex-mining ponds (Deep ponds) _____ | <input type="checkbox"/> |
| Reserves land for utility uses (TNB) _____ | <input type="checkbox"/> |
| Existing roads and Highways _____ | <input type="checkbox"/> |
| Public transport _____ | <input type="checkbox"/> |
| Location of land within urban centre _____ | <input type="checkbox"/> |
| Location of land at the fringe of urban centre _____ | <input type="checkbox"/> |
| Location of land in new identified growth areas _____ | <input type="checkbox"/> |
| Size of land lot _____ | <input type="checkbox"/> |
| Shape of the land lot _____ | <input type="checkbox"/> |

14 Are the following development policies caused problems
Yes ☐ No ☐

- If yes, please give the scale to the problem and reason why
- | | Scale |
|-------------------------|--------------------------|
| Density _____ | <input type="checkbox"/> |
| Type of buildings _____ | <input type="checkbox"/> |
| Building uses _____ | <input type="checkbox"/> |

Category of house prices _____ ☐

Development guideline, planning standards _____ ☐

Infrastructure improvement _____ ☐

New infrastructure _____ ☐

15 Does land holding cause problems to carry out housing projects?

Yes ☐ No ☐

If yes, please give the scale of the problems and specify

Scale

_____ ☐

PART 5: APPLICATION FOR PLANNING PERMISSION /APPROVAL

Do you have problems with – (interviewer reads the following)

Yes No Scale

16 Application Forms
(e.g. Particulars required are understandable
And the language is simple)
Give reasons

☐ ☐ ☐

17 Submission fee
(e.g. easier to settle and reasonable)
Give reasons

Yes No Scale
☐ ☐ ☐

18 Consultation prior to submission
(e.g. Easy to get appointment
Friendly officers)
Give reasons

☐ ☐ ☐

19 Additional information after submission
(e.g. Neighbors particulars)
Reasons:

☐ ☐ ☐

20 Applications procedures for ☐ ☐ ☐
 a) Principle approval
 b) planning permission (Dev. Order) ☐ ☐ ☐
 Give reasons: _____

21 Comments given after submission, about:
 technical ☐ ☐ ☐
 non technical (no. of plans) ☐ ☐ ☐
 matters to amend, ☐ ☐ ☐
 Reasons _____

22 Correspondence (call, letters, fax) ☐ ☐ ☐
 Reasons: _____

23 Development Charges (reasons) ☐ ☐ ☐

24 Counter services (reasons) ☐ ☐ ☐

PART 6: PLANNING EVALUATIONS / DEVELOPMENT CONTROL PROCESS

Likert scale 1 to 5 (from least to the most)

25 Do you have problems in complying the following subjects,
 if yes, give reasons and scale

	Yes	No	scale
Planning standards, give reasons _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning guidelines for application _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning guideline for lay out design _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning guideline for building design _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic circulations _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power (electricity) supply _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sewerage _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Drainage ☐ ☐ ☐

Fire prevention ☐ ☐ ☐

26 Have you ever been asked to amend:

Yes No Scale

Approved lay out plan prior to Development Order ☐ ☐ ☐

Reason: _____

Proposed new lay out plan prior to Lay Out Approval ☐ ☐ ☐

Reason: _____

Building plans and designs prior to Development Order ☐ ☐ ☐

Reasons: _____

Site plans ☐ ☐ ☐

Reasons: _____

PART 5: PLANNING DECISIONS

Likert Scale 1 – 5 (From the least to the most)

27 Do you have problems with the: (interviewer reads the following)

Yes No Scale

☐ ☐ ☐

Time length of getting decisions from
the date of submission until approval given (Duration)

Reason _____

Amendment asked after submission
before tabling for planning approval ☐ ☐ ☐

Conditions imposed upon planning approval ☐ ☐ ☐

Amendments asked by
the approving committee or authority or Lord Mayor ☐ ☐ ☐

Validity period of planning approval

☐ ☐ ☐

Extension of validity period of planning approval

☐ ☐ ☐

Appeals for waiver the conditions in the approval

☐ ☐ ☐

Discussion with the decision maker
(the Lord Mayor or Planning Committee Chairman)

☐ ☐ ☐

New land use component imposed after
the previous lay out approval given

☐ ☐ ☐

Extra requirement – beyond planning standard

☐ ☐ ☐

Density / Intensity reduction

☐ ☐ ☐

Specific requirement - Contribution

☐ ☐ ☐

PART 6: OTHER FACTORS

Likert Scale 1 – 5 (From the least to the most)

28 Do your company also have problems in dealing with
the land office for the following matters ?

Yes No Scale

Submission Application for approvals

☐ ☐ ☐

Amalgamation of land

☐ ☐ ☐

Conversion from agriculture to building

☐ ☐ ☐

Subdivision of land

☐ ☐ ☐

Caveat release

☐ ☐ ☐

Disposals of land/property

☐ ☐ ☐

29 Do your company have problems in dealing or negotiating the project site with land owners?

Particularly on the following matters:

Transaction

Yes	No	Scale
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sharing

☐ ☐ ☐

Renting

☐ ☐ ☐

30 Do your company have problems in raising initial capital?

☐ ☐ ☐

31 Financing the projects through 'bridging-finance' facilities

☐ ☐ ☐

32 Financing the buyers through 'end-financing facilities'

☐ ☐ ☐

33 Do you have problems with proposed landscaping

☐ ☐ ☐

34 Do you have problems with existing infrastructure
(What? And Why?)

☐ ☐ ☐

THANK YOU VERY MUCH FOR YOUR COOPERATION
RIBUAN TERIMA KASIH DI UCAPKAN KERANA MELUANGKAN MASA UNTUK
MENJAWAB SOALAN SERTA KERJASAMA BAGI KAJI SELIDIK INI.

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90 96 23 70 00	39 00 03 06 90	55 85 78 38 36	94 37 30 69 32	90 89 00 76 33

From Ronald A. Fisher and Frank Yates, *Statistical Tables for Biological, Agricultural, and Medical Research* (New York: Hafner, 1963).

**APPENDIX C : SPEARMAN RHO' CORELATION
AND ANOVA COMPUTER OUTPUT**

Correlations

Physical Characteristic	Physical Characteristic	Growth area
Physical Characteristic	Correlation Coefficient	1.000
	Sig. (2-tailed)	.031
	N	.722
Growth area	Correlation Coefficient	.031
	Sig. (2-tailed)	.722
	N	.137
Existing Infrastructure	Correlation Coefficient	-.002
	Sig. (2-tailed)	.985
	N	.137
Land Size	Correlation Coefficient	-.039
	Sig. (2-tailed)	.654
	N	.137
Land ownership	Correlation Coefficient	.067
	Sig. (2-tailed)	.438
	N	.137
New Infrastructure	Correlation Coefficient	-.025
	Sig. (2-tailed)	.768
	N	.137
Infrastructure improvement	Correlation Coefficient	.062
	Sig. (2-tailed)	.473
	N	.137
Landuse Zone	Correlation Coefficient	-.072
	Sig. (2-tailed)	.404
	N	.137
Land Density	Correlation Coefficient	.127
	Sig. (2-tailed)	.138
	N	.137
Guideline	Correlation Coefficient	.059
	Sig. (2-tailed)	.495
	N	.137
Application procedure	Correlation Coefficient	.107
	Sig. (2-tailed)	.213
	N	.137
Correspondence	Correlation Coefficient	.110
	Sig. (2-tailed)	.200
	N	.137
Discussion	Correlation Coefficient	.026
	Sig. (2-tailed)	.763
	N	.137
Planning Standard Compliance	Correlation Coefficient	.084
	Sig. (2-tailed)	.326
	N	.137
Layout Design	Correlation Coefficient	.105
	Sig. (2-tailed)	.222
	N	.137
Duration of approval	Correlation Coefficient	.153
	Sig. (2-tailed)	.074
	N	.137
Amendments	Correlation Coefficient	.107
	Sig. (2-tailed)	.213
	N	.137
Planning Conditions	Correlation Coefficient	.040
	Sig. (2-tailed)	.646
	N	.137

Correlations

			Physical Characteristic	Growth area
an's rho	Traffic Requirements	Correlation Coefficient	.025	-.060
		Sig. (2-tailed)	.771	.485
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.088	-.008
		Sig. (2-tailed)	.305	.923
		N	137	137
	Landscape requirements	Correlation Coefficient	.048	.042
		Sig. (2-tailed)	.578	.625
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.029	.010
		Sig. (2-tailed)	.735	.905
		N	137	137
	Electricity requirement	Correlation Coefficient	-.003	-.117
		Sig. (2-tailed)	.975	.173
		N	137	137
	Extra Condition	Correlation Coefficient	.001	-.035
		Sig. (2-tailed)	.993	.685
		N	137	137
	Approve subject to	Correlation Coefficient	.066	.002
		Sig. (2-tailed)	.440	.983
		N	137	137
	Additional amendment layout	Correlation Coefficient	-.087	-.049
		Sig. (2-tailed)	.315	.571
		N	137	137
	Reduce density	Correlation Coefficient	.052	-.024
		Sig. (2-tailed)	.547	.778
		N	137	137
	impose component	Correlation Coefficient	.084	-.043
		Sig. (2-tailed)	.327	.622
		N	137	137
	Extra requirements	Correlation Coefficient	.013	-.060
		Sig. (2-tailed)	.881	.488
		N	137	137
	Appeals	Correlation Coefficient	.006	-.009
		Sig. (2-tailed)	.942	.914
		N	137	137

Correlations

			Existing Infrastructure	Land Size
Pearson's rho	Physical Characteristic	Correlation Coefficient	-.002	-.039
		Sig. (2-tailed)	.985	.654
		N	137	137
	Growth area	Correlation Coefficient	-.108	.011
		Sig. (2-tailed)	.210	.899
		N	137	137
	Existing Infrastructure	Correlation Coefficient	1.000	-.079
		Sig. (2-tailed)	.	.360
		N	137	137
	Land Size	Correlation Coefficient	-.079	1.000
		Sig. (2-tailed)	.360	.
		N	137	137
	Land ownership	Correlation Coefficient	-.031	-.063
		Sig. (2-tailed)	.719	.462
		N	137	137
	New Infrastructure	Correlation Coefficient	-.068	-.049
		Sig. (2-tailed)	.431	.573
		N	137	137
	Infrastructure improvement	Correlation Coefficient	-.008	-.112
		Sig. (2-tailed)	.930	.193
		N	137	137
	Landuse Zone	Correlation Coefficient	-.124	-.135
		Sig. (2-tailed)	.148	.115
		N	137	137
	Land Density	Correlation Coefficient	-.015	-.174*
		Sig. (2-tailed)	.862	.042
		N	137	137
	Guideline	Correlation Coefficient	-.042	-.110
		Sig. (2-tailed)	.622	.199
		N	137	137
	Application procedure	Correlation Coefficient	-.027	-.018
		Sig. (2-tailed)	.758	.834
		N	137	137
	Correspondence	Correlation Coefficient	.071	.000
		Sig. (2-tailed)	.409	.997
		N	137	137
	Discussion	Correlation Coefficient	.056	-.018
		Sig. (2-tailed)	.518	.832
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.092	.006
		Sig. (2-tailed)	.286	.948
		N	137	137
	Layout Design	Correlation Coefficient	.113	.049
		Sig. (2-tailed)	.190	.573
		N	137	137
	Duration of approval	Correlation Coefficient	.007	-.047
		Sig. (2-tailed)	.935	.587
		N	137	137
	Amendments	Correlation Coefficient	.061	-.047
		Sig. (2-tailed)	.481	.589
		N	137	137
	Planning Conditions	Correlation Coefficient	.066	-.027
		Sig. (2-tailed)	.442	.756
		N	137	137

Correlations

		Existing Infrastructure	Land Size
Traffic Requirements	Correlation Coefficient	.105	.013
	Sig. (2-tailed)	.221	.882
	N	137	137
Fire Protection requirements	Correlation Coefficient	.012	-.063
	Sig. (2-tailed)	.889	.462
	N	137	137
Landscape requirements	Correlation Coefficient	.042	.003
	Sig. (2-tailed)	.626	.971
	N	137	137
Water supply requirement & Indah W	Correlation Coefficient	-.039	.069
	Sig. (2-tailed)	.652	.420
	N	137	137
Electricity requirement	Correlation Coefficient	.032	.074
	Sig. (2-tailed)	.708	.391
	N	137	137
Extra Condition	Correlation Coefficient	.072	-.074
	Sig. (2-tailed)	.406	.393
	N	137	137
Approve subject to	Correlation Coefficient	-.041	-.071
	Sig. (2-tailed)	.636	.411
	N	137	137
Additional amendment layout	Correlation Coefficient	.113	-.041
	Sig. (2-tailed)	.190	.635
	N	137	137
Reduce density	Correlation Coefficient	-.087	-.012
	Sig. (2-tailed)	.312	.888
	N	137	137
impose component	Correlation Coefficient	.042	-.031
	Sig. (2-tailed)	.624	.720
	N	137	137
Extra requirements	Correlation Coefficient	-.044	-.043
	Sig. (2-tailed)	.611	.617
	N	137	137
Appeals	Correlation Coefficient	-.024	-.078
	Sig. (2-tailed)	.781	.365
	N	137	137

Correlations

			Land ownership	New Infrastructure
Spearman's rho	Physical Characteristic	Correlation Coefficient	.067	-.025
		Sig. (2-tailed)	.438	.768
		N	137	137
	Growth area	Correlation Coefficient	.012	.011
		Sig. (2-tailed)	.894	.895
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.031	-.068
		Sig. (2-tailed)	.719	.431
		N	137	137
	Land Size	Correlation Coefficient	-.063	-.049
		Sig. (2-tailed)	.462	.573
		N	137	137
	Land ownership	Correlation Coefficient	1.000	.635**
		Sig. (2-tailed)	.	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.635**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.615**	.453**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.645**	.540**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.625**	.514**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.853**	.623**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.872**	.540**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.801**	.504**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.730**	.437**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.719**	.438**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.685**	.425**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.794**	.492**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.781**	.449**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.664**	.405**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Land ownership	New Infrastructure
Spearman's rho	Traffic Requirements	Correlation Coefficient	.744**	.477**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.925**	.593**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.786**	.548**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.697**	.358**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.740**	.458**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.126	-.077
		Sig. (2-tailed)	.141	.373
		N	137	137
	Approve subject to	Correlation Coefficient	.865**	.565**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.503**	.401**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.650**	.417**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.766**	.524**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.821**	.547**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.841**	.554**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Infrastructure improvement	Landuse Zone
Spearman's rho	Physical Characteristic	Correlation Coefficient	.062	-.072
		Sig. (2-tailed)	.473	.404
		N	137	137
	Growth area	Correlation Coefficient	-.142	.101
		Sig. (2-tailed)	.098	.239
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.008	-.124
		Sig. (2-tailed)	.930	.148
		N	137	137
	Land Size	Correlation Coefficient	-.112	-.135
		Sig. (2-tailed)	.193	.115
		N	137	137
	Land ownership	Correlation Coefficient	.615**	.645**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.453**	.540**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	1.000	.506**
		Sig. (2-tailed)	.	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.506**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Land Density	Correlation Coefficient	.631**	.369**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.595**	.604**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.652**	.589**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.624**	.603**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.483**	.502**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.558**	.518**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.484**	.435**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.577**	.526**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.576**	.572**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.513**	.478**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Infrastructure improvement	Landuse Zone
an's rho	Traffic Requirements	Correlation Coefficient	.551**	.541**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.686**	.636**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscaape requirements	Correlation Coefficient	.547**	.565**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.443**	.450**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.632**	.463**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.124	-.066
		Sig. (2-tailed)	.148	.444
		N	137	137
	Approve subject to	Correlation Coefficient	.622**	.630**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.370**	.466**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.454**	.506**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.569**	.621**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.577**	.522**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.640**	.620**
		Sig. (2-tailed)	.000	.000
		N	137	137

			Land Density	Guideline
Spearman's rho	Physical Characteristic	Correlation Coefficient	.127	.059
		Sig. (2-tailed)	.138	.495
		N	137	137
	Growth area	Correlation Coefficient	-.060	.052
		Sig. (2-tailed)	.487	.545
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.015	-.042
		Sig. (2-tailed)	.862	.622
		N	137	137
	Land Size	Correlation Coefficient	-.174*	-.110
		Sig. (2-tailed)	.042	.199
		N	137	137
	Land ownership	Correlation Coefficient	.625**	.853**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.514**	.623**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.631**	.595**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.369**	.604**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	1.000	.525**
		Sig. (2-tailed)	.	.000
		N	137	137
	Guideline	Correlation Coefficient	.525**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Application procedure	Correlation Coefficient	.681**	.799**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.570**	.723**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.457**	.632**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.504**	.686**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.511**	.620**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.553**	.752**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.567**	.688**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.495**	.566**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Land Density	Guideline
Pearson's rho	Traffic Requirements	Correlation Coefficient	.567**	.684**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.671**	.844**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.530**	.727**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.427**	.627**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.558**	.638**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.083	-.176*
		Sig. (2-tailed)	.338	.040
		N	137	137
	Approve subject to	Correlation Coefficient	.592**	.787**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.360**	.502**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.489**	.560**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.477**	.717**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.580**	.730**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.581**	.762**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Application procedure	Correspon dence	Discussion
Spearman's rho	Physical Characteristic	Correlation Coefficient	.107	.110	.026
		Sig. (2-tailed)	.213	.200	.763
		N	137	137	137
	Growth area	Correlation Coefficient	.037	-.018	-.077
		Sig. (2-tailed)	.665	.832	.368
		N	137	137	137
	Existing Infrastructure	Correlation Coefficient	-.027	.071	.056
		Sig. (2-tailed)	.758	.409	.518
		N	137	137	137
	Land Size	Correlation Coefficient	-.018	.000	-.018
		Sig. (2-tailed)	.834	.997	.832
		N	137	137	137
	Land ownership	Correlation Coefficient	.872**	.801**	.730**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	New Infrastructure	Correlation Coefficient	.540**	.504**	.437**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Infrastructure improvement	Correlation Coefficient	.652**	.624**	.483**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Landuse Zone	Correlation Coefficient	.589**	.603**	.502**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Land Density	Correlation Coefficient	.681**	.570**	.457**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Guideline	Correlation Coefficient	.799**	.723**	.632**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Application procedure	Correlation Coefficient	1.000	.785**	.697**
		Sig. (2-tailed)	.	.000	.000
		N	137	137	137
	Correspondence	Correlation Coefficient	.785**	1.000	.700**
		Sig. (2-tailed)	.000	.	.000
		N	137	137	137
	Discussion	Correlation Coefficient	.697**	.700**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	137	137	137
	Planning Standard Compliance	Correlation Coefficient	.716**	.713**	.624**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Layout Design	Correlation Coefficient	.689**	.659**	.705**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Duration of approval	Correlation Coefficient	.745**	.762**	.646**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Amendments	Correlation Coefficient	.756**	.742**	.711**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Planning Conditions	Correlation Coefficient	.651**	.683**	.684**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137

Correlations

			Application procedure	Correspon dence	Discussion
man's rho	Traffic Requirements	Correlation Coefficient	.738**	.711**	.708**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Fire Protection requirements	Correlation Coefficient	.923**	.879**	.747**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Landscape requirements	Correlation Coefficient	.784**	.719**	.683**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.655**	.695**	.696**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Electricity requirement	Correlation Coefficient	.730**	.745**	.648**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Extra Condition	Correlation Coefficient	-.141	-.135	-.090
		Sig. (2-tailed)	.099	.116	.298
		N	137	137	137
	Approve subject to	Correlation Coefficient	.883**	.788**	.691**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Additional amendment layout	Correlation Coefficient	.463**	.553**	.426**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Reduce density	Correlation Coefficient	.636**	.621**	.531**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	impose component	Correlation Coefficient	.741**	.761**	.640**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Extra requirements	Correlation Coefficient	.799**	.756**	.686**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Appeals	Correlation Coefficient	.798**	.767**	.659**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137

Correlations

			Planning Standard Compliance	Layout Design
Pearson's rho	Physical Characteristic	Correlation Coefficient	.084	.105
		Sig. (2-tailed)	.326	.222
		N	137	137
	Growth area	Correlation Coefficient	-.075	-.081
		Sig. (2-tailed)	.385	.347
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.092	.113
		Sig. (2-tailed)	.286	.190
		N	137	137
	Land Size	Correlation Coefficient	.006	.049
		Sig. (2-tailed)	.948	.573
		N	137	137
	Land ownership	Correlation Coefficient	.719**	.685**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.438**	.425**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.558**	.484**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.518**	.435**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.504**	.511**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.686**	.620**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.716**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.713**	.659**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.624**	.705**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	1.000	.563**
		Sig. (2-tailed)	.	.000
		N	137	137
	Layout Design	Correlation Coefficient	.563**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Duration of approval	Correlation Coefficient	.721**	.607**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.710**	.693**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.604**	.687**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Planning Standard Compliance	Layout Design
Spearman's rho	Traffic Requirements	Correlation Coefficient	.710**	.733**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.778**	.738**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.644**	.695**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.573**	.652**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.680**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.136	-.132
		Sig. (2-tailed)	.114	.123
		N	137	137
	Approve subject to	Correlation Coefficient	.749**	.643**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.445**	.463**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.562**	.547**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.623**	.631**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.687**	.670**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.681**	.665**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Duration of approval	Amendments
Spearman's rho	Physical Characteristic	Correlation Coefficient	.153	.107
		Sig. (2-tailed)	.074	.213
		N	137	137
	Growth area	Correlation Coefficient	.005	-.108
		Sig. (2-tailed)	.952	.208
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.007	.061
		Sig. (2-tailed)	.935	.481
		N	137	137
	Land Size	Correlation Coefficient	-.047	-.047
		Sig. (2-tailed)	.587	.589
		N	137	137
	Land ownership	Correlation Coefficient	.794**	.781**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.492**	.449**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.577**	.576**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.526**	.572**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.553**	.567**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.752**	.688**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.745**	.756**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.762**	.742**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.646**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.721**	.710**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.607**	.693**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	1.000	.733**
		Sig. (2-tailed)	.	.000
		N	137	137
	Amendments	Correlation Coefficient	.733**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Planning Conditions	Correlation Coefficient	.566**	.664**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Duration of approval	Amendments
man's rho	Traffic Requirements	Correlation Coefficient	.703**	.723**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.824**	.833**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.679**	.667**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.630**	.639**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.677**	.682**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.143	-.055
		Sig. (2-tailed)	.095	.521
		N	137	137
	Approve subject to	Correlation Coefficient	.730**	.766**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.521**	.507**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.574**	.552**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.675**	.720**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.684**	.724**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.730**	.741**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Planning Conditions	Traffic Requirements
Spearman's rho	Physical Characteristic	Correlation Coefficient	.040	.025
		Sig. (2-tailed)	.646	.771
		N	137	137
	Growth area	Correlation Coefficient	-.086	-.060
		Sig. (2-tailed)	.317	.485
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.066	.105
		Sig. (2-tailed)	.442	.221
		N	137	137
	Land Size	Correlation Coefficient	-.027	.013
		Sig. (2-tailed)	.756	.882
		N	137	137
	Land ownership	Correlation Coefficient	.664**	.744**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.405**	.477**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.513**	.551**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.478**	.541**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.495**	.567**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.566**	.684**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.651**	.738**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.683**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.684**	.708**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.604**	.710**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.687**	.733**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.566**	.703**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.664**	.723**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	1.000	.624**
		Sig. (2-tailed)	.	.000
		N	137	137

Correlations

			Planning Conditions	Traffic Requirements
Spearman's rho	Traffic Requirements	Correlation Coefficient	.624**	1.000
		Sig. (2-tailed)	.000	
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.720**	.816**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.713**	.663**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.667**	.603**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.609**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
Spearman's rho	Extra Condition	Correlation Coefficient	-.038	-.172*
		Sig. (2-tailed)	.660	.044
		N	137	137
	Approve subject to	Correlation Coefficient	.644**	.755**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.459**	.470**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.560**	.618**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.677**	.635**
		Sig. (2-tailed)	.000	.000
		N	137	137
Spearman's rho	Extra requirements	Correlation Coefficient	.612**	.699**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.652**	.708**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Fire Protection requirements	Landscape requirements
Spearman's rho	Physical Characteristic	Correlation Coefficient	.088	.048
		Sig. (2-tailed)	.305	.578
		N	137	137
	Growth area	Correlation Coefficient	-.008	.042
		Sig. (2-tailed)	.923	.625
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.012	.042
		Sig. (2-tailed)	.889	.626
		N	137	137
	Land Size	Correlation Coefficient	-.063	.003
		Sig. (2-tailed)	.462	.971
		N	137	137
	Land ownership	Correlation Coefficient	.925**	.786**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.593**	.548**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.686**	.547**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.636**	.565**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.671**	.530**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.844**	.727**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.923**	.784**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.879**	.719**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.747**	.683**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.778**	.644**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.738**	.695**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.824**	.679**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.833**	.667**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.720**	.713**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Fire Protection requirements	Landscaping requirements
Spearman's rho	Traffic Requirements	Correlation Coefficient	.816**	.663**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	1.000	.843**
		Sig. (2-tailed)	.	.000
		N	137	137
	Landscaping requirements	Correlation Coefficient	.843**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.715**	.569**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.785**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137
Spearman's rho	Extra Condition	Correlation Coefficient	-.150	-.159
		Sig. (2-tailed)	.080	.064
		N	137	137
	Approve subject to	Correlation Coefficient	.921**	.773**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.557**	.540**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.680**	.621**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.817**	.777**
		Sig. (2-tailed)	.000	.000
		N	137	137
Spearman's rho	Extra requirements	Correlation Coefficient	.871**	.755**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.890**	.782**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Water supply requirement & Indah W	Electricity requirement
Spearman's rho	Physical Characteristic	Correlation Coefficient	.029	-.003
		Sig. (2-tailed)	.735	.975
		N	137	137
	Growth area	Correlation Coefficient	.010	-.117
		Sig. (2-tailed)	.905	.173
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.039	.032
		Sig. (2-tailed)	.652	.708
		N	137	137
	Land Size	Correlation Coefficient	.069	.074
		Sig. (2-tailed)	.420	.391
		N	137	137
	Land ownership	Correlation Coefficient	.697**	.740**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.358**	.458**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.443**	.632**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.450**	.463**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.427**	.558**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.627**	.638**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.655**	.730**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.695**	.745**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.696**	.648**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.573**	.680**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.652**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.630**	.677**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.639**	.682**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.667**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Water supply requirement & Indah W	Electricity requirement
man's rho	Traffic Requirements	Correlation Coefficient	.603**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.715**	.785**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.569**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	1.000	.578**
		Sig. (2-tailed)	.	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.578**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Extra Condition	Correlation Coefficient	-.078	-.116
		Sig. (2-tailed)	.364	.177
		N	137	137
	Approve subject to	Correlation Coefficient	.633**	.705**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.395**	.505**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.511**	.515**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.606**	.650**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.596**	.700**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.647**	.698**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Extra Condition	Approve subject to
Spearman's rho	Physical Characteristic	Correlation Coefficient	.001	.066
		Sig. (2-tailed)	.993	.440
		N	137	137
	Growth area	Correlation Coefficient	-.035	.002
		Sig. (2-tailed)	.685	.983
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.072	-.041
		Sig. (2-tailed)	.406	.636
		N	137	137
	Land Size	Correlation Coefficient	-.074	-.071
		Sig. (2-tailed)	.393	.411
		N	137	137
	Land ownership	Correlation Coefficient	-.126	.865**
		Sig. (2-tailed)	.141	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	-.077	.565**
		Sig. (2-tailed)	.373	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	-.124	.622**
		Sig. (2-tailed)	.148	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	-.066	.630**
		Sig. (2-tailed)	.444	.000
		N	137	137
	Land Density	Correlation Coefficient	-.083	.592**
		Sig. (2-tailed)	.338	.000
		N	137	137
	Guideline	Correlation Coefficient	-.176*	.787**
		Sig. (2-tailed)	.040	.000
		N	137	137
	Application procedure	Correlation Coefficient	-.141	.883**
		Sig. (2-tailed)	.099	.000
		N	137	137
	Correspondence	Correlation Coefficient	-.135	.788**
		Sig. (2-tailed)	.116	.000
		N	137	137
	Discussion	Correlation Coefficient	-.090	.691**
		Sig. (2-tailed)	.298	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	-.136	.749**
		Sig. (2-tailed)	.114	.000
		N	137	137
	Layout Design	Correlation Coefficient	-.132	.643**
		Sig. (2-tailed)	.123	.000
		N	137	137
	Duration of approval	Correlation Coefficient	-.143	.730**
		Sig. (2-tailed)	.095	.000
		N	137	137
	Amendments	Correlation Coefficient	-.055	.766**
		Sig. (2-tailed)	.521	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	-.038	.644**
		Sig. (2-tailed)	.660	.000
		N	137	137

Correlations

			Extra Condition	Approve subject to
man's rho	Traffic Requirements	Correlation Coefficient	-.172*	.755**
		Sig. (2-tailed)	.044	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	-.150	.921**
		Sig. (2-tailed)	.080	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	-.159	.773**
		Sig. (2-tailed)	.064	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	-.078	.633**
		Sig. (2-tailed)	.364	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	-.116	.705**
		Sig. (2-tailed)	.177	.000
		N	137	137
	Extra Condition	Correlation Coefficient	1.000	-.140
		Sig. (2-tailed)	.	.104
		N	137	137
	Approve subject to	Correlation Coefficient	-.140	1.000
		Sig. (2-tailed)	.104	.
		N	137	137
	Additional amendment layout	Correlation Coefficient	-.015	.453**
		Sig. (2-tailed)	.865	.000
		N	137	137
	Reduce density	Correlation Coefficient	-.085	.682**
		Sig. (2-tailed)	.324	.000
		N	137	137
	impose component	Correlation Coefficient	-.085	.740**
		Sig. (2-tailed)	.323	.000
		N	137	137
	Extra requirements	Correlation Coefficient	-.208*	.843**
		Sig. (2-tailed)	.015	.000
		N	137	137
	Appeals	Correlation Coefficient	-.207*	.810**
		Sig. (2-tailed)	.015	.000
		N	137	137

Correlations

			Additional amendment layout	Reduce density
Spearman's rho	Physical Characteristic	Correlation Coefficient	-.087	.052
		Sig. (2-tailed)	.315	.547
		N	137	137
	Growth area	Correlation Coefficient	-.049	-.024
		Sig. (2-tailed)	.571	.778
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.113	-.087
		Sig. (2-tailed)	.190	.312
		N	137	137
	Land Size	Correlation Coefficient	-.041	-.012
		Sig. (2-tailed)	.635	.888
		N	137	137
	Land ownership	Correlation Coefficient	.503**	.650**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.401**	.417**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.370**	.454**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.466**	.506**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.360**	.489**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.502**	.560**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.463**	.636**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.553**	.621**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.426**	.531**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.445**	.562**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.463**	.547**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.521**	.574**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.507**	.552**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.459**	.560**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Additional amendment layout	Reduce density
man's rho	Traffic Requirements	Correlation Coefficient	.470**	.618**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.557**	.680**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.540**	.621**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.395**	.511**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.505**	.515**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.015	-.085
		Sig. (2-tailed)	.865	.324
		N	137	137
	Approve subject to	Correlation Coefficient	.453**	.682**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	1.000	.355**
		Sig. (2-tailed)	.	.000
		N	137	137
	Reduce density	Correlation Coefficient	.355**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	impose component	Correlation Coefficient	.556**	.524**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.424**	.625**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.552**	.625**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			impose component	Extra requirements
Spearman's rho	Physical Characteristic	Correlation Coefficient	.084	.013
		Sig. (2-tailed)	.327	.881
		N	137	137
	Growth area	Correlation Coefficient	-.043	-.060
		Sig. (2-tailed)	.622	.488
		N	137	137
	Existing Infrastructure	Correlation Coefficient	.042	-.044
		Sig. (2-tailed)	.624	.611
		N	137	137
	Land Size	Correlation Coefficient	-.031	-.043
		Sig. (2-tailed)	.720	.617
		N	137	137
	Land ownership	Correlation Coefficient	.766**	.821**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	.524**	.547**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.569**	.577**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landuse Zone	Correlation Coefficient	.621**	.522**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.477**	.580**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.717**	.730**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Application procedure	Correlation Coefficient	.741**	.799**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.761**	.756**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.640**	.686**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.623**	.687**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.631**	.670**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.675**	.684**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.720**	.724**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.677**	.612**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			impose component	Extra requirements
Spearman's rho	Traffic Requirements	Correlation Coefficient	.635**	.699**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.817**	.871**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.777**	.755**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.606**	.596**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.650**	.700**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra Condition	Correlation Coefficient	-.085	-.208*
		Sig. (2-tailed)	.323	.015
		N	137	137
	Approve subject to	Correlation Coefficient	.740**	.843**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.556**	.424**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.524**	.625**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	1.000	.698**
		Sig. (2-tailed)	.	.000
		N	137	137
	Extra requirements	Correlation Coefficient	.698**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Appeals	Correlation Coefficient	.823**	.773**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Appeals
Spearman's rho	Physical Characteristic	Correlation Coefficient	.006
		Sig. (2-tailed)	.942
		N	137
Growth area		Correlation Coefficient	-.009
		Sig. (2-tailed)	.914
		N	137
Existing Infrastructure		Correlation Coefficient	-.024
		Sig. (2-tailed)	.781
		N	137
Land Size		Correlation Coefficient	-.078
		Sig. (2-tailed)	.365
		N	137
Land ownership		Correlation Coefficient	.841**
		Sig. (2-tailed)	.000
		N	137
New Infrastructure		Correlation Coefficient	.554**
		Sig. (2-tailed)	.000
		N	137
Infrastructure improvement		Correlation Coefficient	.640**
		Sig. (2-tailed)	.000
		N	137
Landuse Zone		Correlation Coefficient	.620**
		Sig. (2-tailed)	.000
		N	137
Land Density		Correlation Coefficient	.581**
		Sig. (2-tailed)	.000
		N	137
Guideline		Correlation Coefficient	.762**
		Sig. (2-tailed)	.000
		N	137
Application procedure		Correlation Coefficient	.798**
		Sig. (2-tailed)	.000
		N	137
Correspondence		Correlation Coefficient	.767**
		Sig. (2-tailed)	.000
		N	137
Discussion		Correlation Coefficient	.659**
		Sig. (2-tailed)	.000
		N	137
Planning Standard Compliance		Correlation Coefficient	.681**
		Sig. (2-tailed)	.000
		N	137
Layout Design		Correlation Coefficient	.665**
		Sig. (2-tailed)	.000
		N	137
Duration of approval		Correlation Coefficient	.730**
		Sig. (2-tailed)	.000
		N	137
Amendments		Correlation Coefficient	.741**
		Sig. (2-tailed)	.000
		N	137
Planning Conditions		Correlation Coefficient	.652**
		Sig. (2-tailed)	.000
		N	137

Correlations

			Appeals
Spearman's rho	Traffic Requirements	Correlation Coefficient	.708**
		Sig. (2-tailed)	.000
		N	137
	Fire Protection requirements	Correlation Coefficient	.890**
		Sig. (2-tailed)	.000
		N	137
	Landscape requirements	Correlation Coefficient	.782**
		Sig. (2-tailed)	.000
		N	137
	Water supply requirement & Indah W	Correlation Coefficient	.647**
		Sig. (2-tailed)	.000
		N	137
	Electricity requirement	Correlation Coefficient	.698**
		Sig. (2-tailed)	.000
		N	137
	Extra Condition	Correlation Coefficient	-.207*
		Sig. (2-tailed)	.015
		N	137
	Approve subject to	Correlation Coefficient	.810**
		Sig. (2-tailed)	.000
		N	137
	Additional amendment layout	Correlation Coefficient	.552**
		Sig. (2-tailed)	.000
		N	137
	Reduce density	Correlation Coefficient	.625**
		Sig. (2-tailed)	.000
		N	137
	impose component	Correlation Coefficient	.823**
		Sig. (2-tailed)	.000
		N	137
	Extra requirements	Correlation Coefficient	.773**
		Sig. (2-tailed)	.000
		N	137
	Appeals	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	137

Correlation is significant at the 0.05 level (2-tailed).

Correlation is significant at the 0.01 level (2-tailed).

Parametric Correlations

Correlations

			Physical Characteristic	Growth area
Spearman's rho	Physical Characteristic	Correlation Coefficient	1.000	.031
		Sig. (2-tailed)	.	.722
		N	137	137
	Growth area	Correlation Coefficient	.031	1.000
		Sig. (2-tailed)	.722	.
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.002	-.108
		Sig. (2-tailed)	.985	.210
		N	137	137
	Land Size	Correlation Coefficient	-.039	.011
		Sig. (2-tailed)	.654	.899
		N	137	137
	Land ownership	Correlation Coefficient	.067	.012
		Sig. (2-tailed)	.438	.894
		N	137	137
	New Infrastructure	Correlation Coefficient	-.025	.011
		Sig. (2-tailed)	.768	.895
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.062	-.142
		Sig. (2-tailed)	.473	.098
		N	137	137
	Landuse Zone	Correlation Coefficient	-.072	.101
		Sig. (2-tailed)	.404	.239
		N	137	137
	Land Density	Correlation Coefficient	.127	-.060
		Sig. (2-tailed)	.138	.487
		N	137	137
	Guideline	Correlation Coefficient	.059	.052
		Sig. (2-tailed)	.495	.545
		N	137	137

Correlations

			Existing Infrastructure	Land Size	Land ownership
Spearman's rho	Physical Characteristic	Correlation Coefficient	-.002	-.039	.067
		Sig. (2-tailed)	.985	.654	.438
		N	137	137	137
	Growth area	Correlation Coefficient	-.108	.011	.012
		Sig. (2-tailed)	.210	.899	.894
		N	137	137	137
	Existing Infrastructure	Correlation Coefficient	1.000	-.079	-.031
		Sig. (2-tailed)	.	.360	.719
		N	137	137	137
	Land Size	Correlation Coefficient	-.079	1.000	-.063
		Sig. (2-tailed)	.360	.	.462
		N	137	137	137
	Land ownership	Correlation Coefficient	-.031	-.063	1.000
		Sig. (2-tailed)	.719	.462	.
		N	137	137	137
	New Infrastructure	Correlation Coefficient	-.068	-.049	.635**
		Sig. (2-tailed)	.431	.573	.000
		N	137	137	137
	Infrastructure improvement	Correlation Coefficient	-.008	-.112	.615**
		Sig. (2-tailed)	.930	.193	.000
		N	137	137	137
	Landuse Zone	Correlation Coefficient	-.124	-.135	.645**
		Sig. (2-tailed)	.148	.115	.000
		N	137	137	137
	Land Density	Correlation Coefficient	-.015	-.174*	.625**
		Sig. (2-tailed)	.862	.042	.000
		N	137	137	137
	Guideline	Correlation Coefficient	-.042	-.110	.853**
		Sig. (2-tailed)	.622	.199	.000
		N	137	137	137

Correlations

			New Infrastructure	Infrastructure improvement
Spearman's rho	Physical Characteristic	Correlation Coefficient	-.025	.062
		Sig. (2-tailed)	.768	.473
		N	137	137
	Growth area	Correlation Coefficient	.011	-.142
		Sig. (2-tailed)	.895	.098
		N	137	137
	Existing Infrastructure	Correlation Coefficient	-.068	-.008
		Sig. (2-tailed)	.431	.930
		N	137	137
	Land Size	Correlation Coefficient	-.049	-.112
		Sig. (2-tailed)	.573	.193
		N	137	137
	Land ownership	Correlation Coefficient	.635**	.615**
		Sig. (2-tailed)	.000	.000
		N	137	137
	New Infrastructure	Correlation Coefficient	1.000	.453**
		Sig. (2-tailed)	.	.000
		N	137	137
	Infrastructure improvement	Correlation Coefficient	.453**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Landuse Zone	Correlation Coefficient	.540**	.506**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Land Density	Correlation Coefficient	.514**	.631**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Guideline	Correlation Coefficient	.623**	.595**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Landuse Zone	Land Density	Guideline
Spearman's rho	Physical Characteristic	Correlation Coefficient	-.072	.127	.059
		Sig. (2-tailed)	.404	.138	.495
		N	137	137	137
	Growth area	Correlation Coefficient	.101	-.060	.052
		Sig. (2-tailed)	.239	.487	.545
		N	137	137	137
	Existing Infrastructure	Correlation Coefficient	-.124	-.015	-.042
		Sig. (2-tailed)	.148	.862	.622
		N	137	137	137
	Land Size	Correlation Coefficient	-.135	-.174*	-.110
		Sig. (2-tailed)	.115	.042	.199
		N	137	137	137
	Land ownership	Correlation Coefficient	.645**	.625**	.853**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	New Infrastructure	Correlation Coefficient	.540**	.514**	.623**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Infrastructure improvement	Correlation Coefficient	.506**	.631**	.595**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Landuse Zone	Correlation Coefficient	1.000	.369**	.604**
		Sig. (2-tailed)	.	.000	.000
		N	137	137	137
	Land Density	Correlation Coefficient	.369**	1.000	.525**
		Sig. (2-tailed)	.000	.	.000
		N	137	137	137
	Guideline	Correlation Coefficient	.604**	.525**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	137	137	137

Correlation is significant at the 0.05 level (2-tailed).

Correlation is significant at the 0.01 level (2-tailed).

Parametric Correlations

Correlations

			Application procedure	Correspon dence	Discussion
Spearman's rho	Application procedure	Correlation Coefficient	1.000	.785**	.697**
		Sig. (2-tailed)		.000	.000
		N	137	137	137
	Correspondence	Correlation Coefficient	.785**	1.000	.700**
		Sig. (2-tailed)	.000		.000
		N	137	137	137
	Discussion	Correlation Coefficient	.697**	.700**	1.000
		Sig. (2-tailed)	.000	.000	
		N	137	137	137
	Planning Standard Compliance	Correlation Coefficient	.716**	.713**	.624**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Layout Design	Correlation Coefficient	.689**	.659**	.705**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Duration of approval	Correlation Coefficient	.745**	.762**	.646**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Amendments	Correlation Coefficient	.756**	.742**	.711**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Planning Conditions	Correlation Coefficient	.651**	.683**	.684**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Traffic Requirements	Correlation Coefficient	.738**	.711**	.708**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Fire Protection requirements	Correlation Coefficient	.923**	.879**	.747**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Landscape requirements	Correlation Coefficient	.784**	.719**	.683**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.655**	.695**	.696**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137
	Electricity requirement	Correlation Coefficient	.730**	.745**	.648**
		Sig. (2-tailed)	.000	.000	.000
		N	137	137	137

Correlations

			Planning Standard Compliance	Layout Design
Spearman's rho	Application procedure	Correlation Coefficient	.716**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.713**	.659**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.624**	.705**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	1.000	.563**
		Sig. (2-tailed)	.	.000
		N	137	137
	Layout Design	Correlation Coefficient	.563**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Duration of approval	Correlation Coefficient	.721**	.607**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.710**	.693**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.604**	.687**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Traffic Requirements	Correlation Coefficient	.710**	.733**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.778**	.738**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.644**	.695**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.573**	.652**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.680**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Duration of approval	Amendments
Spearman's rho	Application procedure	Correlation Coefficient	.745**	.756**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.762**	.742**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.646**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.721**	.710**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.607**	.693**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	1.000	.733**
		Sig. (2-tailed)	.	.000
		N	137	137
	Amendments	Correlation Coefficient	.733**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Planning Conditions	Correlation Coefficient	.566**	.664**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Traffic Requirements	Correlation Coefficient	.703**	.723**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.824**	.833**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.679**	.667**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.630**	.639**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.677**	.682**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Planning Conditions	Traffic Requirements
Spearman's rho	Application procedure	Correlation Coefficient	.651**	.738**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.683**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.684**	.708**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.604**	.710**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.687**	.733**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.566**	.703**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.664**	.723**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	1.000	.624**
		Sig. (2-tailed)	.	.000
		N	137	137
	Traffic Requirements	Correlation Coefficient	.624**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.720**	.816**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.713**	.663**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.667**	.603**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.609**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Fire Protection requirements	Landscape requirements
Spearman's rho	Application procedure	Correlation Coefficient	.923**	.784**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.879**	.719**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.747**	.683**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.778**	.644**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.738**	.695**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.824**	.679**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.833**	.667**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.720**	.713**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Traffic Requirements	Correlation Coefficient	.816**	.663**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	1.000	.843**
		Sig. (2-tailed)	.	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.843**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	.715**	.569**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.785**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137

Parametric Correlations

Correlations

			Water supply requirement & Indah W	Electricity requirement
Spearman's rho	Application procedure	Correlation Coefficient	.655**	.730**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Correspondence	Correlation Coefficient	.695**	.745**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Discussion	Correlation Coefficient	.696**	.648**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Standard Compliance	Correlation Coefficient	.573**	.680**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Layout Design	Correlation Coefficient	.652**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Duration of approval	Correlation Coefficient	.630**	.677**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Amendments	Correlation Coefficient	.639**	.682**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Planning Conditions	Correlation Coefficient	.667**	.609**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Traffic Requirements	Correlation Coefficient	.603**	.711**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Fire Protection requirements	Correlation Coefficient	.715**	.785**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Landscape requirements	Correlation Coefficient	.569**	.689**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Water supply requirement & Indah W	Correlation Coefficient	1.000	.578**
		Sig. (2-tailed)	.	.000
		N	137	137
	Electricity requirement	Correlation Coefficient	.578**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137

*. Correlation is significant at the 0.01 level (2-tailed).

Nonparametric Correlations

Correlations

			Extra Condition	Approve subject to	Additional amendment layout
Pearman's rho	Extra Condition	Correlation Coefficient	1.000	-.140	-.015
		Sig. (2-tailed)	.	.104	.865
		N	137	137	137
	Approve subject to	Correlation Coefficient	-.140	1.000	.453**
		Sig. (2-tailed)	.104	.	.000
		N	137	137	137
	Additional amendment layout	Correlation Coefficient	-.015	.453**	1.000
		Sig. (2-tailed)	.865	.000	.
		N	137	137	137
	Reduce density	Correlation Coefficient	-.085	.682**	.355**
		Sig. (2-tailed)	.324	.000	.000
		N	137	137	137
	impose component	Correlation Coefficient	-.085	.740**	.556**
		Sig. (2-tailed)	.323	.000	.000
		N	137	137	137
	Extra requirements	Correlation Coefficient	-.208*	.843**	.424**
		Sig. (2-tailed)	.015	.000	.000
		N	137	137	137
	Appeals	Correlation Coefficient	-.207*	.810**	.552**
		Sig. (2-tailed)	.015	.000	.000
		N	137	137	137

Correlations

			Reduce density	impose component
Spearman's rho	Extra Condition	Correlation Coefficient	-.085	-.085
		Sig. (2-tailed)	.324	.323
		N	137	137
	Approve subject to	Correlation Coefficient	.682**	.740**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.355**	.556**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	1.000	.524**
		Sig. (2-tailed)	.	.000
		N	137	137
	impose component	Correlation Coefficient	.524**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137
	Extra requirements	Correlation Coefficient	.625**	.698**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Appeals	Correlation Coefficient	.625**	.823**
		Sig. (2-tailed)	.000	.000
		N	137	137

Correlations

			Extra requirements	Appeals
Pearman's rho	Extra Condition	Correlation Coefficient	-.208*	-.207*
		Sig. (2-tailed)	.015	.015
		N	137	137
	Approve subject to	Correlation Coefficient	.843**	.810**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Additional amendment layout	Correlation Coefficient	.424**	.552**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Reduce density	Correlation Coefficient	.625**	.625**
		Sig. (2-tailed)	.000	.000
		N	137	137
	impose component	Correlation Coefficient	.698**	.823**
		Sig. (2-tailed)	.000	.000
		N	137	137
	Extra requirements	Correlation Coefficient	1.000	.773**
		Sig. (2-tailed)	.	.000
		N	137	137
	Appeals	Correlation Coefficient	.773**	1.000
		Sig. (2-tailed)	.000	.
		N	137	137

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Key HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Physical Constraints	Below 3 years	4-6 years	-,11197	,18556	,931
		7-9 years	,22857	,17703	,570
		10 and more years	,07373	,19043	,980
	4-6 years	Below 3 years	,11197	,18556	,931
		7-9 years	,34054*	,12574	,038
		10 and more years	,18570	,14399	,571
	7-9 years	Below 3 years	-,22857	,17703	,570
		4-6 years	-,34054*	,12574	,038
		10 and more years	-,15484	,13282	,649
	10 and more years	Below 3 years	-,07373	,19043	,980
		4-6 years	-,18570	,14399	,571
		7-9 years	,15484	,13282	,649
Land Location	Below 3 years	4-6 years	,25676	,25984	,756
		7-9 years	,20909	,24789	,834
		10 and more years	-,08065	,26665	,990
	4-6 years	Below 3 years	-,25676	,25984	,756
		7-9 years	-,04767	,17607	,993
		10 and more years	-,33740	,20163	,342
	7-9 years	Below 3 years	-,20909	,24789	,834
		4-6 years	,04767	,17607	,993
		10 and more years	-,28974	,18598	,406
	10 and more years	Below 3 years	,08065	,26665	,990
		4-6 years	,33740	,20163	,342
		7-9 years	,28974	,18598	,406
Existing Infrastructure	Below 3 years	4-6 years	,15830	,29443	,950
		7-9 years	,24675	,28089	,816
		10 and more years	,26728	,30215	,813
	4-6 years	Below 3 years	-,15830	,29443	,950
		7-9 years	,08845	,19951	,971
		10 and more years	,10898	,22847	,964
	7-9 years	Below 3 years	-,24675	,28089	,816
		4-6 years	-,08845	,19951	,971
		10 and more years	,02053	,21074	1,000
	10 and more years	Below 3 years	-,26728	,30215	,813
		4-6 years	-,10898	,22847	,964
		7-9 years	-,02053	,21074	1,000
Land Size	Below 3 years	4-6 years	-,04054	,28499	,999
		7-9 years	-,26364	,27188	,767
		10 and more years	,14516	,29246	,960
	4-6 years	Below 3 years	,04054	,28499	,999
		7-9 years	-,22310	,19311	,656
		10 and more years	,18570	,22114	,835
	7-9 years	Below 3 years	,26364	,27188	,767
		4-6 years	,22310	,19311	,656
		10 and more years	,40880	,20398	,192
	10 and more years	Below 3 years	-,14516	,29246	,960
		4-6 years	-,18570	,22114	,835
		7-9 years	-,40880	,20398	,192
Land Holding	Below 3 years	4-6 years	-,10039	,20745	,963
		7-9 years	-,00260	,19791	1,000
		10 and more years	-,17972	,21289	,833

Multiple Comparisons

key HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Land Holding	4-6 years	Below 3 years	,10039	,20745	,963
		7-9 years	,09779	,14057	,899
		10 and more years	-,07934	,16098	,961
	7-9 years	Below 3 years	,00260	,19791	1,000
		4-6 years	-,09779	,14057	,899
		10 and more years	-,17713	,14848	,632
	10 and more years	Below 3 years	,17972	,21289	,833
		4-6 years	,07934	,16098	,961
		7-9 years	,17713	,14848	,632
New Infrastructure	Below 3 years	4-6 years	-,16216	,24177	,908
		7-9 years	-,05455	,23055	,995
		10 and more years	-,35484	,24811	,483
	4-6 years	Below 3 years	,16216	,24177	,908
		7-9 years	,10762	,16383	,913
		10 and more years	-,19268	,18761	,734
	7-9 years	Below 3 years	,05455	,23065	,995
		4-6 years	-,10762	,16383	,913
		10 and more years	-,30029	,17305	,310
	10 and more years	Below 3 years	,35484	,24811	,483
		4-6 years	,19268	,18761	,734
		7-9 years	,30029	,17305	,310
Infrastructure Improvement	Below 3 years	4-6 years	-,18147	,24917	,886
		7-9 years	,01558	,23771	1,000
		10 and more years	-,11521	,25570	,969
	4-6 years	Below 3 years	,18147	,24917	,886
		7-9 years	,19705	,16884	,649
		10 and more years	,06626	,19335	,986
	7-9 years	Below 3 years	-,01558	,23771	1,000
		4-6 years	-,19705	,16884	,649
		10 and more years	-,13079	,17834	,884
	10 and more years	Below 3 years	,11521	,25570	,969
		4-6 years	-,06626	,19335	,986
		7-9 years	,13079	,17834	,884
Land Category	Below 3 years	4-6 years	,31274	,23565	,547
		7-9 years	,08571	,22482	,981
		10 and more years	-,00461	,24183	1,000
	4-6 years	Below 3 years	-,31274	,23565	,547
		7-9 years	-,22703	,15969	,488
		10 and more years	-,31735	,18286	,310
	7-9 years	Below 3 years	-,08571	,22482	,981
		4-6 years	,22703	,15969	,488
		10 and more years	-,09032	,16867	,950
	10 and more years	Below 3 years	,00461	,24183	1,000
		4-6 years	,31735	,18286	,310
		7-9 years	,09032	,16867	,950
Density	Below 3 years	4-6 years	-,24324	,23679	,734
		7-9 years	-,09091	,22590	,978
		10 and more years	-,29032	,24300	,631
	4-6 years	Below 3 years	,24324	,23679	,734
		7-9 years	,15233	,16046	,778
		10 and more years	-,04708	,18375	,994

key HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Density	7-9 years	Below 3 years	,09091	,22590	,978
		4-6 years	-,15233	,16046	,778
		10 and more years	-,19941	,16949	,643
	10 and more years	Below 3 years	,29032	,24300	,631
		4-6 years	,04708	,18375	,994
		7-9 years	,19941	,16949	,643
Guideline	Below 3 years	4-6 years	-,10039	,22717	,971
		7-9 years	-,05714	,21672	,994
		10 and more years	-,14747	,23313	,921
	4-6 years	Below 3 years	,10039	,22717	,971
		7-9 years	,04324	,15394	,992
		10 and more years	-,04708	,17628	,993
	7-9 years	Below 3 years	,05714	,21672	,994
		4-6 years	-,04324	,15394	,992
		10 and more years	-,09032	,16260	,945
	10 and more years	Below 3 years	,14747	,23313	,921
		4-6 years	,04708	,17628	,993
		7-9 years	,09032	,16260	,945
Application procedure	Below 3 years	4-6 years	-,32432	,22437	,473
		7-9 years	-,20000	,21405	,786
		10 and more years	-,35484	,23025	,416
	4-6 years	Below 3 years	,32432	,22437	,473
		7-9 years	,12432	,15204	,846
		10 and more years	-,03051	,17411	,998
	7-9 years	Below 3 years	,20000	,21405	,786
		4-6 years	-,12432	,15204	,846
		10 and more years	-,15484	,16059	,770
	10 and more years	Below 3 years	,35484	,23025	,416
		4-6 years	,03051	,17411	,998
		7-9 years	,15484	,16059	,770
Correspondence	Below 3 years	4-6 years	-,01158	,23071	1,000
		7-9 years	,06753	,22011	,990
		10 and more years	,02765	,23676	,999
	4-6 years	Below 3 years	,01158	,23071	1,000
		7-9 years	,07912	,15634	,958
		10 and more years	,03923	,17903	,996
	7-9 years	Below 3 years	-,06753	,22011	,990
		4-6 years	-,07912	,15634	,958
		10 and more years	-,03988	,16513	,995
	10 and more years	Below 3 years	-,02765	,23676	,999
		4-6 years	-,03923	,17903	,996
		7-9 years	,03988	,16513	,995
Discussion	Below 3 years	4-6 years	-,27027	,24336	,684
		7-9 years	-,14545	,23217	,923
		10 and more years	-,06452	,24974	,994
	4-6 years	Below 3 years	,27027	,24336	,684
		7-9 years	,12482	,16491	,874
		10 and more years	,20575	,18884	,697
	7-9 years	Below 3 years	,14545	,23217	,923
		4-6 years	-,12482	,16491	,874
		10 and more years	,08094	,17419	,967

Multiple Comparisons

Key HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Discussion	10 and more years	Below 3 years	,06452	,24974	,994
		4-6 years	-,20575	,18884	,697
		7-9 years	-,08094	,17419	,967
Community Facilities	Below 3 years	4-6 years	-,03668	,22399	,998
		7-9 years	-,03766	,21370	,998
		10 and more years	-,18664	,22987	,849
	4-6 years	Below 3 years	,03668	,22399	,998
		7-9 years	-,00098	,15178	1,000
		10 and more years	-,14996	,17382	,824
	7-9 years	Below 3 years	,03766	,21370	,998
		4-6 years	,00098	,15178	1,000
		10 and more years	-,14897	,16033	,789
	10 and more years	Below 3 years	,18664	,22987	,849
		4-6 years	,14996	,17382	,824
		7-9 years	,14897	,16033	,789
Layout Approval	Below 3 years	4-6 years	-,53089	,21607	,072
		7-9 years	-,19870	,20613	,770
		10 and more years	-,26498	,22173	,631
	4-6 years	Below 3 years	,53089	,21607	,072
		7-9 years	,33219	,14641	,111
		10 and more years	,26591	,16767	,390
	7-9 years	Below 3 years	,19870	,20613	,770
		4-6 years	-,33219	,14641	,111
		10 and more years	-,06628	,15465	,973
	10 and more years	Below 3 years	,26498	,22173	,631
		4-6 years	-,26591	,16767	,390
		7-9 years	,06628	,15465	,973
Duration of approval	Below 3 years	4-6 years	-,06564	,23648	,993
		7-9 years	,14026	,22561	,925
		10 and more years	,05991	,24268	,995
	4-6 years	Below 3 years	,06564	,23648	,993
		7-9 years	,20590	,16025	,574
		10 and more years	,12554	,18351	,903
	7-9 years	Below 3 years	-,14026	,22561	,925
		4-6 years	-,20590	,16025	,574
		10 and more years	-,08035	,16926	,965
	10 and more years	Below 3 years	-,05991	,24268	,995
		4-6 years	-,12554	,18351	,903
		7-9 years	,08035	,16926	,965
Amendments	Below 3 years	4-6 years	-,15444	,23115	,909
		7-9 years	-,05714	,22053	,994
		10 and more years	-,11521	,23722	,962
	4-6 years	Below 3 years	,15444	,23115	,909
		7-9 years	,09730	,15664	,925
		10 and more years	,03923	,17937	,996
	7-9 years	Below 3 years	,05714	,22053	,994
		4-6 years	-,09730	,15664	,925
		10 and more years	-,05806	,16545	,985
	10 and more years	Below 3 years	,11521	,23722	,962
		4-6 years	-,03923	,17937	,996
		7-9 years	,05806	,16545	,985

Multiple Comparisons

ukey HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Planning Conditions	Below 3 years	4-6 years	-,13514	,24135	,944
		7-9 years	-,16364	,23026	,893
		10 and more years	-,19355	,24768	,863
	4-6 years	Below 3 years	,13514	,24135	,944
		7-9 years	-,02850	,16355	,998
		10 and more years	-,05841	,18729	,989
	7-9 years	Below 3 years	,16364	,23026	,893
		4-6 years	,02850	,16355	,998
		10 and more years	-,02991	,17275	,998
	10 and more years	Below 3 years	,19355	,24768	,863
		4-6 years	,05841	,18729	,989
		7-9 years	,02991	,17275	,998
Traffic Requirements	Below 3 years	4-6 years	-,16409	,22871	,890
		7-9 years	,03247	,21819	,999
		10 and more years	-,01152	,23471	1,000
	4-6 years	Below 3 years	,16409	,22871	,890
		7-9 years	,19656	,15498	,585
		10 and more years	,15257	,17747	,826
	7-9 years	Below 3 years	-,03247	,21819	,999
		4-6 years	-,19656	,15498	,585
		10 and more years	-,04399	,16370	,993
	10 and more years	Below 3 years	,01152	,23471	1,000
		4-6 years	-,15257	,17747	,826
		7-9 years	,04399	,16370	,993
Fire Protection requirements	Below 3 years	4-6 years	-,15444	,20649	,877
		7-9 years	-,07532	,19700	,981
		10 and more years	-,17972	,21191	,831
	4-6 years	Below 3 years	,15444	,20649	,877
		7-9 years	,07912	,13993	,942
		10 and more years	-,02528	,16024	,999
	7-9 years	Below 3 years	,07532	,19700	,981
		4-6 years	-,07912	,13993	,942
		10 and more years	-,10440	,14780	,894
	10 and more years	Below 3 years	,17972	,21191	,831
		4-6 years	,02528	,16024	,999
		7-9 years	,10440	,14780	,894
Landscape requirements	Below 3 years	4-6 years	-,19884	,22396	,811
		7-9 years	-,05584	,21366	,994
		10 and more years	-,15438	,22983	,908
	4-6 years	Below 3 years	,19884	,22396	,811
		7-9 years	,14300	,15176	,782
		10 and more years	,04446	,17379	,994
	7-9 years	Below 3 years	,05584	,21366	,994
		4-6 years	-,14300	,15176	,782
		10 and more years	-,09853	,16030	,927
	10 and more years	Below 3 years	,15438	,22983	,908
		4-6 years	-,04446	,17379	,994
		7-9 years	,09853	,16030	,927
Water supply requirement & Indah W	Below 3 years	4-6 years	-,31467	,23490	,540
		7-9 years	-,28961	,22410	,569
		10 and more years	-,29724	,24106	,607

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Water supply requirement & Indah W	4-6 years	Below 3 years	,31467	,23490	,540
		7-9 years	,02506	,15918	,999
		10 and more years	,01744	,18228	1,000
	7-9 years	Below 3 years	,28961	,22410	,569
		4-6 years	-,02506	,15918	,999
		10 and more years	-,00762	,16813	1,000
	10 and more years	Below 3 years	,29724	,24106	,607
		4-6 years	-,01744	,18228	1,000
		7-9 years	,00762	,16813	1,000
Electricity requirement	Below 3 years	4-6 years	-,04633	,24525	,998
		7-9 years	-,09351	,23398	,978
		10 and more years	-,11521	,25168	,968
	4-6 years	Below 3 years	,04633	,24525	,998
		7-9 years	-,04717	,16619	,992
		10 and more years	-,06888	,19031	,984
	7-9 years	Below 3 years	,09351	,23398	,978
		4-6 years	,04717	,16619	,992
		10 and more years	-,02170	,17554	,999
	10 and more years	Below 3 years	,11521	,25168	,968
		4-6 years	,06888	,19031	,984
		7-9 years	,02170	,17554	,999
Extra Condition	Below 3 years	4-6 years	,74324	,30042	,069
		7-9 years	,53636	,28660	,245
		10 and more years	,04839	,30829	,999
	4-6 years	Below 3 years	-,74324	,30042	,069
		7-9 years	-,20688	,20357	,740
		10 and more years	-,69486*	,23312	,018
	7-9 years	Below 3 years	-,53636	,28660	,245
		4-6 years	,20688	,20357	,740
		10 and more years	-,48798	,21503	,110
	10 and more years	Below 3 years	-,04839	,30829	,999
		4-6 years	,69486*	,23312	,018
		7-9 years	,48798	,21503	,110
Approve and Comments	Below 3 years	4-6 years	-,12741	,19988	,920
		7-9 years	-,03896	,19069	,997
		10 and more years	-,17972	,20512	,817
	4-6 years	Below 3 years	,12741	,19988	,920
		7-9 years	,08845	,13544	,914
		10 and more years	-,05231	,15510	,987
	7-9 years	Below 3 years	,03896	,19069	,997
		4-6 years	-,08845	,13544	,914
		10 and more years	-,14076	,14306	,759
	10 and more years	Below 3 years	,17972	,20512	,817
		4-6 years	,05231	,15510	,987
		7-9 years	,14076	,14306	,759
Additional amendment layout	Below 3 years	4-6 years	,09846	,25752	,981
		7-9 years	-,23766	,24568	,768
		10 and more years	-,18664	,26427	,894
	4-6 years	Below 3 years	-,09846	,25752	,981
		7-9 years	-,33612	,17450	,222
		10 and more years	-,28509	,19983	,485

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Additional amendment layout	7-9 years	Below 3 years	,23766	,24568	,768
		4-6 years	,33612	,17450	,222
		10 and more years	,05103	,18432	,993
	10 and more years	Below 3 years	,18664	,26427	,894
		4-6 years	,28509	,19983	,485
		7-9 years	-,05103	,18432	,993
Reduce density	Below 3 years	4-6 years	,07915	,25832	,990
		7-9 years	,08701	,24645	,985
		10 and more years	-,17281	,26510	,915
	4-6 years	Below 3 years	-,07915	,25832	,990
		7-9 years	,00786	,17505	1,000
		10 and more years	-,25196	,20046	,592
	7-9 years	Below 3 years	-,08701	,24645	,985
		4-6 years	-,00786	,17505	1,000
		10 and more years	-,25982	,18490	,498
	10 and more years	Below 3 years	,17281	,26510	,915
		4-6 years	,25196	,20046	,592
		7-9 years	,25982	,18490	,498
impose component	Below 3 years	4-6 years	,02510	,23618	1,000
		7-9 years	-,00390	,22532	1,000
		10 and more years	-,04378	,24237	,998
	4-6 years	Below 3 years	-,02510	,23618	1,000
		7-9 years	-,02899	,16004	,998
		10 and more years	-,06888	,18327	,982
	7-9 years	Below 3 years	,00390	,22532	1,000
		4-6 years	,02899	,16004	,998
		10 and more years	-,03988	,16905	,995
	10 and more years	Below 3 years	,04378	,24237	,998
		4-6 years	,06888	,18327	,982
		7-9 years	,03988	,16905	,995
Extra requirements	Below 3 years	4-6 years	-,18147	,20652	,816
		7-9 years	-,11169	,19702	,942
		10 and more years	-,24424	,21193	,658
	4-6 years	Below 3 years	,18147	,20652	,816
		7-9 years	,06978	,13994	,959
		10 and more years	-,06277	,16025	,980
	7-9 years	Below 3 years	,11169	,19702	,942
		4-6 years	-,06978	,13994	,959
		10 and more years	-,13255	,14782	,807
	10 and more years	Below 3 years	,24424	,21193	,658
		4-6 years	,06277	,16025	,980
		7-9 years	,13255	,14782	,807
Appeals	Below 3 years	4-6 years	-,12741	,24272	,953
		7-9 years	-,03896	,23156	,998
		10 and more years	-,14747	,24908	,934

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
Appeals	4-6 years	Below 3 years	,12741	,24272	,953
		7-9 years	,08845	,16447	,950
		10 and more years	-,02005	,18834	1,000
	7-9 years	Below 3 years	,03896	,23156	,998
		4-6 years	-,08845	,16447	,950
		10 and more years	-,10850	,17373	,924
	10 and more years	Below 3 years	,14747	,24908	,934
		4-6 years	,02005	,18834	1,000
		7-9 years	,10850	,17373	,924