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**HAMILTON EAST : INTERPRETATION OF
HOUSE STYLES AND INFILLING
THE ONE ACRE SECTIONS**

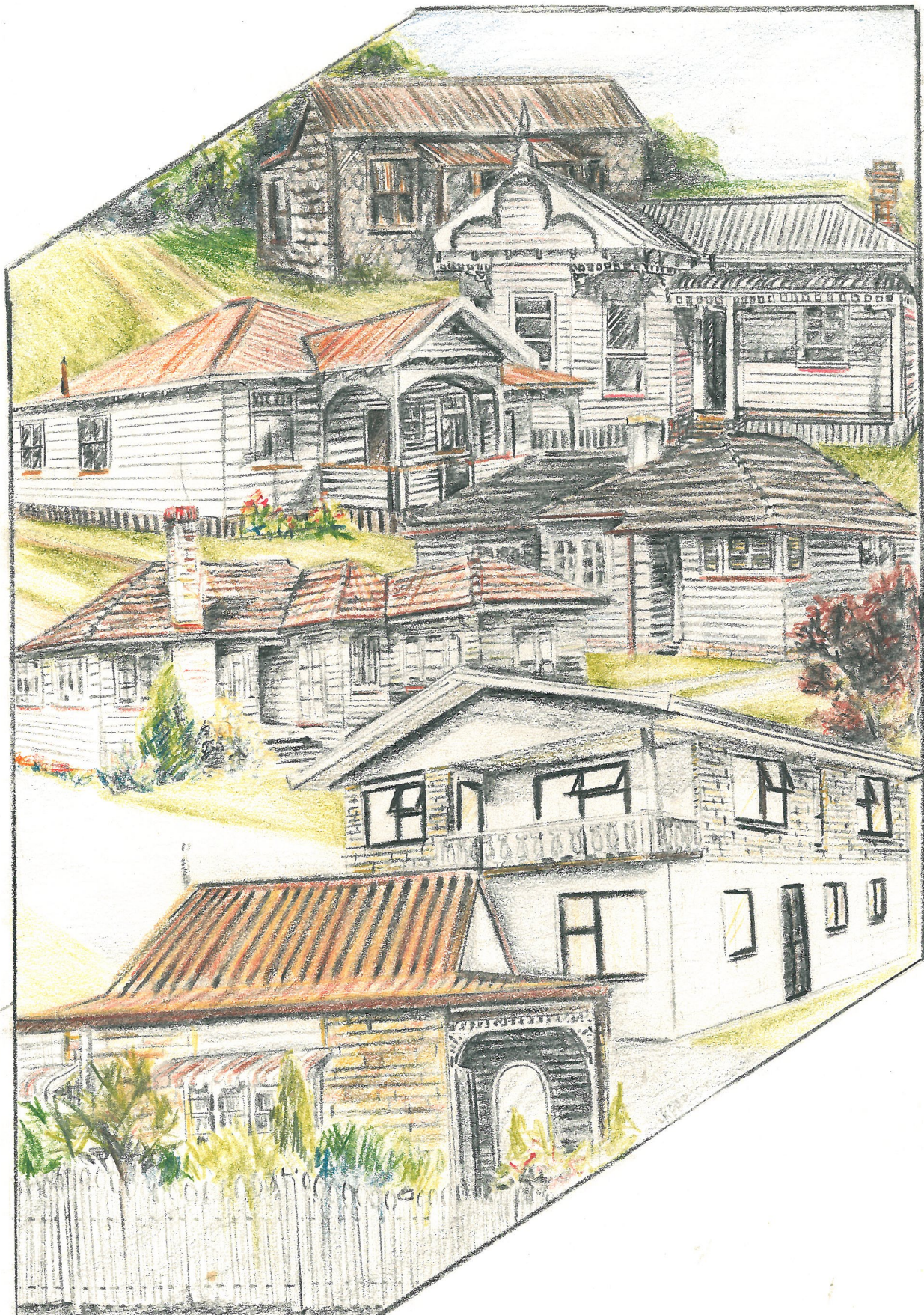
DIANA LESLEY PORTEOUS

**HAMILTON EAST: INTERPRETATION OF
HOUSE STYLES AND INFILLING
THE ONE ACRE SECTIONS**

A thesis
submitted in partial fulfilment
of the requirements for the Degree
of
Master of Social Sciences in Geography
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DIANA LESLEY PORTEOUS

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KERRI-ANN MEAD 1990.

ABSTRACT

This thesis elucidates and interprets the social construction of an inner city suburb of Hamilton. Hamilton East was originally surveyed as a military settlement in 1864. The provenance of house styles is examined in the context of particular periods of time, and six commonly constructed period-styles are identified. These are nineteenth century houses, villas, bungalows, standard New Zealand houses, flats, and variations on old themes. In the context of changes in subdivision design since the original survey, three questions related to the location of these houses are addressed. These are: why, where and how was a tiny township infilled with houses to the density of the present suburb? This thesis focuses on the identification and interpretation of meanings implied in house styles and infilling processes.

The conditions which determined and contributed to the period-styles in popular housing are explored in detail. The significance of meaning in the built environment is a vital and recurring theme. Housing acts as a form of non-verbal communication. Each period-style functions as a set of symbols. The sign value of a house style is its meaning as a symbol of something else. The meaning functions like a code, shared by the people of the community, and changes over time.

Socio-cultural influences include practical and economic considerations. Fashion, demands for decorated or non-decorated architecture, trends in high style architecture, changing lifestyles, changing attitudes to families, and households are identified as determinants of style. The importance of cultural diffusion from the Old and the New Worlds, and increasing and accelerating internationalism are clearly evident in the human landscape. Local and national State intervention in the provision of housing contributed significantly to specific period-styles. Technical innovations have not determined, but have influenced housing styles. They include the available construction materials, and developments associated with the 'machine age' and the production of new materials.

The infilling of the original one acre rectangular allotments, with new housing between the settler cottages is explored under five period headings. These are the nineteenth century, the villa period, the bungalow period, the standard New Zealand house period, and the last two decades. Infilling brought a gradual intensification of housing with time and an interesting pastiche of juxtaposed houses. The evolution of the pattern of survey and subdivision is traced from the 1864 surveyed design to the present day pattern. Based on tradition and statute, concerted division created smaller and smaller rectangular sections.

The research has drawn upon four forms of data: literature, field data, maps photographs and files, and informal contact with members of the local community. Every one of the more than 2 000 houses and flats in the suburb was surveyed for age, style, and other characteristics. Valuation New Zealand files, survey plans, many other historical and contemporary maps, aerial photographs, old photographs, statutes and trade directories were used to compile a detailed record about each of the more than 50 residential blocks, comprising nearly 400 acres (162 hectares) of land.

Hamilton East may be seen as a microcosm of New Zealand experience in its subdivision design, road patterns, the processes of infilling and house styles. The provenance of the stylistic and spatial characteristics of housing and sections is articulated as human constructions, determined not by physical circumstances but by people.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

This thesis explores the geographical landscape of an inner city Hamilton suburb. Hamilton East was originally established as the military township of East Hamilton in 1864. Much of the historical geography of the last 126 years can be read in the present landscape. The buildings and surveyed parcels of land are used to explore the ways in which this landscape was moulded by several generations of Hamilton East residents.

Hamilton East had modest beginnings. As a result of confiscation of Maori land in the Waikato (Roll Plan B43, 1927), the government planned, surveyed and administered the settlement of several military townships. East Hamilton and West Hamilton were two of these townships settled by Europeans, and now part of the Waikato Raupatu or confiscation land claim, which has been lodged with the Waitangi Tribunal. The Maori people of the area are seeking the return of the land, presently held by the Crown, confiscated under the New Zealand Settlements Act 1863.

In 1864 in Hamilton East, 10 and 12 acre (4.0 and 4.9 hectare) blocks of individual one acre allotments were surveyed prior to the arrival of the military settlers, members of the Fourth Waikato Militia and their families. Each received a farm allotment in the country of 50 acres or more depending on rank, and one residential section of one acre in Hamilton East, allotted as a result of a ballot. Today Hamilton East is a residential suburb of over 6000 people, with its own commercial centre. Hamilton city has an estimated population of between 95,000 and 100,000, and is the main centre of the Waikato Region

(Department of Statistics, 1990; *New Zealand census of population and dwellings*, 1986).

The thesis concerns the identification and elucidation of the physical expressions in the landscape, which have resulted from the decisions and the actions of many individuals and groups of people. It explains the present mix of house ages, their random demolition and preservation, and the constant adjustments made to the pattern and design of sections. Changing economic, social, demographic, institutional, political and technical conditions are explored within local, regional, national and global contexts. These have determined the nature of the housing and the sections in part of a typical New Zealand settlement.

The two research questions are outlined in Chapter Three. The first examines the several generations of styles of houses built in Hamilton East. The factors that determined and contributed to these styles are considered in depth, and six period-styles of dwellings are identified. The second examines a process referred to as 'infilling', the construction of new housing in an already established residential area. The reasons why infilling has occurred are considered. The spatial distribution of the houses is discussed. Finally the patterns of subdivision are explored.

The word 'style' refers to the architectural design of a house, even though few of the houses were designed by architects. Style is determined by people and so the interpretation of the period-style must be from a human perspective. It involves physical design, but more importantly style is a social construction, incorporating the required elements which communicate through signs and symbols the meaning of the house. The style holds the key to the social meaning of the house, comprising within its physical components those intangibles which constitute meaning. Style is commonly recognisable from the street, by the facade or front elevation which acts as a mask or veil covering the interior. "The image of the house that we cultivate and carry has

a pictorial face. It is the street view" (Mitchell and Chaplin, 1984, 24). Style is determined by people, by the use of a myriad combinations of the physical and intangible features of a group of dwellings having similar form, roof, walls, windows and doors. For any specific house its roof may be flat, gabled or hipped, simple or complex. It may even contain dormer windows. The roof-wall junction may be plain or decorated, have the eaves boxed in, or open with rafters exposed. The front door may be at the front or the side, be a ranch slider or formally bounded by coloured glass panels. Style is not whether a door will be present but its form, placement and orientation (Rapoport, 1969). It may be approached via a verandah, porch, conservatory, sun room or just from the front path or patio. The windows may be double hung, casements or hinged, with many small panes or one large picture window. There may be a plain chimney, or a decorated corbelled chimney, or no chimney. These characteristics of the design act as signs and symbols whereby a house performs the task, on behalf of the designers, users and observers, of non-verbal communicator. 'Style' is synonymous with fashion, and many houses contain components of more than one style.

The word 'infilling' is used in its broadest sense to mean fitting houses between other houses, filling the garden spaces between houses with other dwellings. The term is used in the same way as the term 'infill housing' is applied in the contemporary housing scene, the construction of one or two additional dwellings on sites already with at least one dwelling (Auckland Regional Authority, 1986). Infilling is a universally recognised social and physical phenomenon. It has occurred in cities for thousands of years. It can take place in a piecemeal fashion as an individual negotiates the construction of a new house. It can also be more systematic, where developers or people working on behalf of companies or institutions, negotiate to subdivide land and fill larger spaces with houses. The more widely spaced the original houses the greater the capacity to infill. The more restricted the residential area, and the greater the pressure for

the land and housing the faster and more intense the consolidation.

Roads act as a morphological frame inside of which subdivision and infilling can occur. 'Subdivision' is the term used to explain the legal division of land into parcels by registered surveyors, for the purposes of establishing either freehold or leasehold title. Legal subdivision allows settlement, and commodifies land for monetary exchange. It is also undertaken to facilitate infilling, to maintain geometrical symmetry and order in the landscape, but especially on cadastral (property boundary) plans. Fashion in subdivision pattern or design reflects intangible meanings which can result in straight, grid plan roads, right angled corners, and standardised rectangular sections, perpendicular to the roads. Alternately it can result in curved roads, culs de sac, and non-rectangular sections. The original subdivision of Hamilton East resulted in numbered sections, referred to as 'allotments'. The term allotment is used in this thesis when referring to these one acre sections.

The thesis is organised in six chapters. Chapter Two takes up some issues of theoretical consideration used to interpret the house styles and infilling processes. The chapter concentrates on how selected scholars have demonstrated their ideas with respect to theory and research into residential neighbourhoods. First is a review of the influence of the work of historical geographers who have drawn upon classic, empirical, positivist methods, and used theoretical perspectives to interpret their data. Theoretical perspectives which are humanistic in character are reviewed. Theoretical approaches which place people at the centre of research are fundamental to human geography. People-environment and people-centred perspectives are considered along with a discussion of the work of two architectural geographers for whom the human dimension of the built environment is paramount. Meaning in research into the built environment is also an important part of this chapter.

Chapter Three describes the research methodology. A number of methods were used, and a range of data collected. A major fieldwork exercise involved surveying every house in the suburb for age and style. The records held at Valuation New Zealand's Hamilton East office were searched for the dates of first occupation and style of every house. Old and contemporary maps and air photographs were scrutinised with particular emphasis on survey plans which show property boundaries. Legislation relating to housing and subdivision of land was consulted to place these and other sources of data into legal context. Other methods included the use of a wide range of literature, studying old photographs, searching early Trade directories, and talking to residents.

Chapter Four is the first of two chapters in which research findings are presented. The chapter takes the form of an interpretation of house styles from 1864 to the present day. The concept of house styles is used in connection with the specific periods of time in which that style was popular, and each is referred to as a 'period-style'. This term is used spatially specific to Hamilton East, because different styles of houses were constructed in different parts of the country at different dates. The dates used throughout the thesis are to guide the reader and not to show that particular styles began to be built or stopped being built in that specific year. That would not be possible, nor is it necessary. Johns (1965, 8) uses the terms 'period-design' and 'architectural region' to discuss something similar to period-style. Rickert (1967) discusses 'eras' in housing in the United States. The 'period-style' concept has been developed specifically for this thesis. The six period-styles identified are: the nineteenth century houses to about 1900, the villas to about 1918, the bungalows to the mid late 1930s, the standard New Zealand houses from World War Two to 1969, the flats 1970 to 1976, and the variations on old themes for the most recent period-style.

Chapter Five is the second chapter in which the results of the research are presented. It demonstrates how Hamilton East's original 387 residential one acre residential allotments were infilled with houses. Imperial measurements, particularly the 'acre', are fundamental to the study and are not replaced by metric measurements. An acre is 4048 square metres or 0.4048 hectares, but the conversion will not be given throughout the chapters. Roods and perches are imperial measurements of area once commonly used in land survey. There are four roods in an acre and 160 perches to the acre.

Chapter Five begins with an explanation of the original subdivision design, and the grid pattern of the surveyed roads. The remainder of the chapter is divided into five sections: the nineteenth century when Hamilton East was a village, the villa period from 1900, the bungalow period of the 1920s and 1930s, the standard New Zealand house period from World War Two to 1969, and the last two decades. Each section of the chapter comprises an explanation of why, where and how the infilling occurred. The spatial distribution of the houses is shown in maps and explained. There was originally one house on each acre. Then some acres were subdivided to allow the construction of two separate houses, perhaps each on one half an acre section. Later a total of four or more separate houses or blocks of flats were constructed on each one acre sections. Finally, the form of the subdivision design pertaining to each period is explored. This includes an explanation of how the infilling was constrained by legislation and tradition.

The final chapter considers some of the research findings and reflects on the research process.

The following chapter is a discussion of the theoretical perspectives used in the interpretation and explanation of the geographical landscape of the case study area.

CHAPTER II

THEORETICAL PERSPECTIVES

An enquiry of this nature requires that several paradigms or traditions be reviewed to consider the theoretical approaches which might be drawn upon. Within geography such traditions include regional studies, townscape analysis, urban morphology, urban geography, cultural landscape analysis, person-environment studies and social geography, but most importantly urban architectural geography and historical geography.

The nature of the research questions has meant that the works of geographers have been consulted, along with the works of architects, historians, planners and surveyors. Urban geographers must equip themselves with appropriate knowledge for their particular work, with knowledge available from other disciplines (Smailes, 1955). Accordingly the theoretical perspective should not be imposed on the data but should arise out of the situation studied (Burgess, 1984).

Several perspectives legitimately raise a number of significant questions relevant to this study. It is a traditional study in historical geography, in that it has involved substantial field work with much searching out of historical data. The study draws upon the classic, conventional, empirical and positivist methods of the historical geographer who draws on theoretical constructs for interpretation. Because it is clearly based in human geography so it must consider those people who designed and shaped Hamilton East. All the physical 'artifacts' (houses and sections) are meaningless if explained away by all encompassing processes. The processes discussed here - for example infilling

processes - are human or social processes or constructs. Those processes depended on human decision makers - people whom Samuels (1979), referred to as 'key individuals', and thousands of lesser figures, even though their names may not be known.

Along with some theoretical works by historical geographers (Baker, 1982; Carter, 1983; Conzen, 1960; and Meinig, 1979) the works consulted includes those by scholars who have emphasised the human contributions to the physical landscape. They are referred to here as people - centred philosophies. Leonard Guelke (1982a; 1982b), favours an idealist approach to research, and his advice has been considered. Peirce Lewis' work (1975; 1979) in cultural landscape analysis is appropriate for a study of this type. Larry Ford (1984) and Jon Goss (1988) are architectural geographers whose work has been strongly influential, even though they favour different perspectives. Ford (1984) is more a mainstream analyst of architectural juxtapositionings, like those found in Hamilton East. He favours research which is carried out at the street level - building by building, and recommends close co-operation between geography and architecture. Goss (1988) agrees that geographers and architects have much to offer each other, but proposes a reconstituted architectural geography within the Marxian interpretation of the built environment.

Amos Rapoport (1969; 1977; 1980; 1984) is not a geographer, but is closely aligned with the behavioural geography tradition. His work in the field of people-environment studies has evolved from his classic text on house form (1969), when culture was seen as the major determinant of style in the built environment, to 1980 and 1984 when he took a wider view of influences on the built environment. His work has been influential in piecing together a very diffuse jigsaw puzzle, and in interpretation of the available material, especially with regard to meaning in architecture.

The other most influential perspective has been that proposed by David Ley (1983). He uses many examples from large American cities but some of the social issues he raises are very relevant to the Hamilton situation. Some sections of *A Social Geography of the City* could have been written about Hamilton East, and yet his first visit was in 1988 (Ley, pers. comm., 1988). His generalisations obviously have wide international relevance, and some of the interpretations and explanations made in this thesis have application beyond the local context.

This thesis, therefore, draws together separate and diverse perspectives regarding the built environment. The rest of this chapter is devoted to looking at how the scholars who have been consulted demonstrated their views with respect to theory and research in urban and especially residential environments.

Historical geography

Probably Michael Conzen's (1960) classic morphological study of Alnwick, Northumberland is the most useful of all the literature consulted with regard to the geography of subdivision design. It showed that infilling plots of land with new houses, or 'being filled in' (Grant, 1987) or 'repletion' (Conzen, 1960, 59) is a phenomenon which is probably as old as cities have existed. The recognition of this phenomenon assists this study of Hamilton East in terms of the understanding it brings to the universality of the process of infilling.

Conzen (1960) discussed many of the kinds of changes that have occurred in Hamilton East. No New Zealand based study of a similar nature has been located. Conzen (1960, 57) identified significant morphological changes like those that have occurred in Hamilton such as "accumulation" (build, build, build), "transformation" (houses are transformed into flats, shops or offices), and "replacement" (houses are replaced by new houses,

flats or other buildings). But Conzen tended not to ask why. His emphasis was not on buildings but on the sections, which he referred to as 'plots'. There was no mention of any of the people who brought about the changes. Adding the people is more intellectually challenging and regarded as important in today's geography. At first, the data appears impersonal. The houses are in the streets, but from the street few people are seen. The maps and air photographs are in map drawers, the plans and records are in filing cabinets. Locating the human dimension is more subtle. The people are 'hidden', in spite of the landscape being such "an enormously rich store of data about people and societies which have created it" (Meinig, 1979, 44). The researcher has to learn how to 'see' the details of the landscape and the people who created it.

Donald Meinig's 1979 edited volume could have been written for a study of this type, since it is entitled *The interpretation of ordinary landscapes*. Ford (1984) claimed that that edited volume added depth and sophistication to landscape/architectural geography. Meinig (1979, 43) demonstrates how studies in historical geography benefit from the researcher functioning as a detective who reconstructs "from all sorts of bits and pieces the pattern of the past". This research in Hamilton has involved the putting together of pieces from a jigsaw, gleaning a piece of information from here, frustration for the researcher at not gaining access to a data source there. Holdsworth's (1984) study of house and home in Vancouver appears to be a classic example in which detective work in data searching in a multi-disciplinary framework is clearly very successful.

Every house had its particular builder or builders and each has been lived in by particular individuals and households and "something of that, too, may perhaps be read in the landscape" (Meinig, 1979, 43). So the interpretation of a landscape like Hamilton East must be revealed to the researcher with time, following careful analysis and synthesis. "It is not enough to

see a house as an architectural type we should try to see it as an exhibit of social history and geography" (Meinig, 1973, 58).

Historical geographers are often accused of disregarding theory. Carter claimed in 1983 that geographers were no nearer to the establishment of a theoretical basis for historical geography than they were in 1960 (Carter, 1983). Recognising that historical geography has focussed upon landscape transformation, Baker (1982) noted there was an emphasis on artifacts instead of ideas, actions instead of attitudes, external forms not internal processes. In this thesis consideration is given to ideas, attitudes, and internal processes - or in other words, the people behind the facades. As an historical geographer, Baker (1982) proposed a *détente* with contemporary human geography, and in this study that *détente* occurs. Herein lies a fascination with artifacts but also with the thoughts of past and present Hamiltonians and their ideas about houses and gardens. "It makes little sense to study historical geography from any viewpoint other than a humanistic one" since "...historical geography - must first and last be about people" (Baker, 1982, 238).

Present conditions are used to throw light on past conditions, for example old houses and old boundaries between properties are the extant vestiges of earlier landscape. This is because certain houses have been randomly preserved and others randomly demolished. Historical geography, like this study, relies on evidence of human made features of the landscape, as well as on randomly preserved maps and written sources inherited from past generations (Jager, 1972) of, for example Hamiltonians. The interpretation of the "observable landscape features" (Jager, 1972, 56) and the historical records is aided by humanistic theory. The investigation of settlement patterns, which change rapidly with time, must give consideration to the elucidation of "changes in economic, social, demographic, political and technological factors" (Jager, 1972, 56). These changes will be shown to be of local, regional, national and global proportions,

and concern new social and spatial distributions, colonisation, migration and the spread of innovation, or cultural diffusion (Baker, 1972).

People-environment relationships

Geographers have been closely involved with developing various approaches to people-environment relationships. People's actions in an environment like Hamilton East are carried out on the basis of the image that they have of the environment as a whole, or parts of it, such as individual houses. Amos Rapoport is an architect-anthropologist who has been working since 1967 in this field of study, which he refers to as 'man-environment studies' - the mutual interaction of people and their built environment (Rapoport, 1977). His classic work *House form and culture* (1969) is essentially an anthropology text about vernacular housing in many parts of the world, but he claimed the topic overlaps architecture, geography, history and city planning.

Rapoport (1969) proposed a conceptual framework in which he concentrated on buildings and their creation, and he sought the forces that affected house types and forms. Seeking to bring order to a complex field, he claimed that house form was "the consequence of a whole range of socio-cultural factors seen in their broadest terms" (Rapoport, 1969, 47). In making this claim, he generalised on a global basis.

Rapoport (1969) did not treat houses as 'artifacts', nor did he talk of 'processes'. He recognised the significance of symbolic values in housing and continuously looked for meanings in popular, (not high culture) architecture, and claimed the houses of popular tradition (as in Hamilton East) reflect the needs, values, desires and dreams of the culture of the people. Houses reflect fashion and taste and express meaning by communicative and symbolic properties (Rapoport, 1977). All cities contain the

same components, houses, streets and gathering places, but it is the nature of the meaning and the principles of their organisation and relationships which differ (Rapoport, 1977). All places have been designed as a result of many human decisions and choices by individuals and groups from the past and in the present (Rapoport, 1977; 1980). People have socially shared images of how a house should look, which exerts pressure for conformity and changes with time, (Rapoport, 1977) since buildings are a form of non-verbal communication.

Rapoport's definition of culture can be applied directly to housing in Hamilton East. He claimed that the culture of the people resulted in specific house types, the use of urban space, types of streets, facades, space round the houses and the placement of houses in relation to each other. A group of people who share the same culture have a set of values and beliefs (for example many Hamiltonians, or the cultural majority of New Zealanders). These beliefs lead to a world view, a characteristic way of looking at the world, and shaping the world by design. These ideals create a system of rules and habits leading to systematic and constant choices. The rules reflect an ideal and create lifestyles (such as those lived in Hamilton East), and built environments (such as Hamilton East) (Rapoport, 1980).

The elucidation and interpretation of meaning is becoming more important in geography. In discussing the significance of meaning in the built environment Rapoport (1982) referred to the works of geographers Edward Relph and Yi Fu Tuan. He also claimed that meanings are 'in the people' not in objects, or things, or houses. Meanings are socially constructed and so this study considers people, houses and sections, not just physical objects. Rapoport's work is 'basically humanistic', because it is about the products of human culture. "Its method is interpretive", using "many small pieces of information from diverse sources to show how they interact" (Rapoport, 1982, 198).

People-centred philosophies

For David Ley geography has been too concerned with material phenomena (Ley, 1977). The logical positive methods which were favoured in the 1960s, led to studies in spatial analysis which emphasised morphological enquiry, but left "unanswered the questions of underlying social process and meaning in terms of human experience" (Ley, 1983, 6). Logical positivism does not recognise a distinction between the physical world of objects and the human world, which is the "realm of meanings" (Ley, 1983, 6). The "geography of human experience" (Ley, 1983, 7) must be fundamental to this thesis. It is not possible to consider the spatial forms (houses in allotments) in a vacuum, devoid of social processes, because spatial form is "an expression, a consequence of something else - the prevailing forces in society" (Ley, 1983, 7).

Ley favours humanist philosophies which emphasise commitment to empirical research and seek "the relevant social contexts that permit the understanding of an action or the interpretation of a place" (Ley, 1983, 8). The meanings of the people who live in the particular places are significant for the researcher. Studies of the built environment and the ideas of the people that characterise human life, go together (Ley, 1983). The social context and the social process are emphasised, because the spatial form of a city like Hamilton is the product of choices and constraints.

Ley (1983, 67) wrote a good blueprint appropriate for this study of Hamilton East, claiming that geographers have had an abiding interest in analysing the visible form or morphology of cities. However as a humanist he believed that the *purpose* of the classification of a house as for example, a 'pre-villa cottage', 'villa', 'bungalow', or 'townhouse', is more important than the classification. In other words, in this thesis the map showing

the classification the houses according to period-style is a means to an end, not an end in itself. It is the purpose of the classification of the housing in Hamilton East to aid the understanding and the interpretation, which is the end product. The classification and the data searching must be used to answer a myriad of questions. As Ley (1983) suggested, the classification must lead to:

- the art of morphological analysis;
- rigorous scholarship; and
- an emphasis on both the architectural, and the social fabric of the area studied.

Traditional historical geographic practice of mapping the houses and the subdivision design would have led to detailed descriptions of morphological form and land uses. In humanistic historical geography the maps are interpreted along with the other information. A major objective is then to explain the intentions of the people who made decisions about, for example, residential zoning, building State houses, or selling their land (and an adjoining old joinery factory) for the construction of townhouses. One of the aims of this thesis is to explore the decisions behind the architectural facades, and the cadastral patterns.

Ley (1983) claimed that meaning in the built environment is socially contingent and liable to change. The meanings of houses in Hamilton East have changed with time. For example:

- the huge villa in Von Tempsky Street changed its function and its meaning when it became a private hospital;
- the family villa in Coates Street changed its meaning when it became obsolete and was transformed by internal

changes made to the house, and was occupied as 'flats' by several households; and

- the meaning of the 1920s house, which occupied a whole acre changed when a new owner made the decision to construct five new houses in the garden.

Mainstream geographers have assumed the urban landscape resulted from the outcome of anonymous forces in the marketplace. A

more complete analysis would view the urban landscape as the *negotiated outcome* of a complex series of perceptions, options and interaction between a variety of urban actors including landowners, speculators, developers, financiers, planners, politicians and real estate agents, each of them operating under constantly changing degrees of freedom (Ley, 1983, 281).

Referring to these decision makers as 'development agents', Ley (1983) could have been writing about the Hamiltonians who left their legacy etched not so much "in brick, asphalt and concrete for later generations" (Ley, 1983, 281), but in timber, iron and brick. These decision makers, individuals and groups, have had different functions, economic opportunities, organisation, decision making skills and experience, values and objectives, but have all contributed to, and determined the built environment under consideration here. They have negotiated, used and socially constructed Hamilton East, as well as physically constructed it. Nothing about the built form of this suburb was accidental, nor was it inevitable.

The land use changes noted in the chapters that follow are therefore regarded as resulting from social processes rather than physical. Invariably, some change in the housing styles, the

morphology, the density of Hamilton East implies some transition in the social composition of the neighbourhood. For example:

- as cottages gave way to villas, the people had more money and higher aspirations;
- as 'flat' roofed so-called 'Spanish bungalows' (Valuation New Zealand (VNZ) Files, 1989) were scattered through the suburb, there was diffusion of ideas from the rest of New Zealand and abroad (Moderne or International style architecture), as a result of increased travel, wars and improved communications;
- as obsolete villas were replaced by two storey blocks of flats, and a teachers' college and a university were established, low cost accommodation was required for the young and mobile; and
- as market gardens were replaced by domestic sections and home units and townhouses were built, there was a big demand for low maintenance small houses from smaller, affluent households.

A researcher studying this kind of physical material, in the 1950s and 1960s, would have recorded observations and data search results and carefully classified the results as was done in this study, but would not have asked the same questions about the data, nor attempted to include the human component. In 1978, Guelke wrote that geographers in the 1960s did not ask questions like: how much insight does this study give us? Is my understanding of this phenomenon enhanced? Does this study contribute to geography? (Guelke, 1978). He claimed that geographical explanations should be based upon a careful analysis of available data, be interpretative, in the sense that the causes behind phenomena are investigated, and be not unduly influenced by preconceived theories (Guelke, 1978).

He warned of the dangers of an empirical approach, but claimed description and classification must be the first steps towards theory building, that is, stating what it all means. It is the "inside of an event rather than its outside that holds the key to understanding its historical meaning" (Guelke, 1982a, 194). Guelke's work illustrates the importance of the human dimension in historical geography. This study of in Hamilton East is an attempt to 'rethink the thoughts' (or meanings), of those people who settled in Hamilton East, subdivided the land and built their homes. Guelke (1982a, 190) referred to such people as "historical agents". Of course, it is impossible to think all the relevant thoughts, but in trying to understand the objectives and strategies in historical situations "...in rethinking, an investigator seeks to uncover the human purpose behind an action" (Guelke, 1982a, 190). The researcher may impute her own thoughts to historical agents because a "good interpretation needs someone with imagination and a critical attitude to evidence" (Guelke, 1982a, 190). He claimed that "...all historical geography is the history of thought with a bearing on human activity on the land" (Guelke, 1982a, 193). Because the real events in the historical geography of Hamilton East cannot be reconstructed, it is necessary in this study to be concerned with elucidating the historical meaning of the settlement patterns. These past events are "only of importance insofar as they are endowed with human meanings" (Guelke, 1982a, 191).

Guelke confirms that attention be directed to the meaning of human actions of geographical interest, not merely their geographical expressions (Guelke, 1982b). It is necessary to consider what historical conditions led to the creation of houses and subdivision patterns like those in Hamilton East, so as to understand the meaning of their geographical significance and expression.

Peirce Lewis's (1975; 1979) contribution to this study is more methodological than theoretical. He argued that landscapes can be

read like books, even though the meanings may not be self evident. Human landscapes represent much investment in time, effort and money, and human landscapes look as they do for many reasons. Landscapes are like great documents spread out around us. This is how the landscape of Hamilton East has been used in this study. The 'cultural landscape' is a geographer's name for the common vernacular scene (Lewis, 1979). Lewis suggested that questions to ask about a suburban landscape like Hamilton East should include: what does it look like? Who designed it? When and why? He claimed "visible evidence is plentiful" and there will be less in books (Lewis, 1979, 27), which is true of Hamilton East. He also cautioned that authors disagree about fundamental questions like, why do houses look the way they do? His answer was to go back and look at the real object, the house, because visual evidence is important. Certainly, much observation was done for this study and yet "many authors have never looked closely at what they write about" (Lewis, 1979, 27). One can literally teach oneself to 'see', and neither reading alone nor looking alone will give "very satisfactory answers to the basic cultural questions that landscape poses" (Lewis, 1979, 27). He believed that alternation of looking, reading and thinking, and then looking, reading and thinking again could yield remarkable results, if only to raise new questions (Lewis, 1979). The 'common landscape' (Hamilton East) was built by people in the past whose tastes, habits, technology, wealth and ambitions were different from ours today. We live amongst "old fashioned houses" in "obsolete cities". To understand them, it is necessary to "understand the people who built them - our cultural ancestors - in their cultural context, not ours" (Lewis, 1979, 23).

Larry Ford (1984) considered the relationship between geography and architecture. Geographers have developed skills that involve monitoring landscape change and the value of mapping cultural artifacts like houses has become much clearer with the rising interest in historic preservation. Ford believed that "in urban geography, much of our understanding of such processes is far too

'macro'" (Ford, 1984, 17). In interpreting change in cities for example, rejuvenation of a residential area may be viewed in terms of large hunks of territory, so that only a very superficial knowledge of exactly what has happened at street level is the result. The research for this thesis was carried out at street level, and by examining processes like infilling the one acre sections of Hamilton East at a micro scale "as they impact particular architectural contexts we can better understand the details of urban change" (Ford, 1984, 17).

Ford did not so much discuss theory as the involvement of the geographer in the subject - the architectural juxtapositioning, monitoring landscape change, mapping cultural artifacts like houses, having insights into conservation and preservation of historic places, monitoring of the cultural landscape, at the building-by-building level, recording the historic evolution of the cityscape, evaluating how individual buildings or assemblages of buildings adjust to changing conditions ('staying power'), providing insights into environmental ageing, and the diffusion of styles and features from place to place, country to country, continent to continent (Ford, 1984).

Ford asks the same kinds of questions posed in this thesis. Most architects are concerned with tastemaking architecture. "Geographers want to know exactly where things are and exactly why they are there" (Ford, 1984, 16). The skill geographers have in landscape interpretation make surveys "much more than simple enumerations of styles" (Ford, 1984, 17), and monitoring at the street level makes academic generalisations of this kind much sharper and more meaningful than studies at a macro level.

Jon Goss (1988), an architectural geographer, aims to establish a theoretical basis for the study of architecture within geography and contemporary social theory. He rejects current architectural geography and presents a framework within a reconstituted architectural geography combining a Marxist interpretation of the

built environment, semiotics (the science of signs), and structuration theory. He examines buildings conceived as cultural artifacts, objects of value, signs, and as part of a spatial system. He writes of buildings in general, which he regards as:

- physical expressions of a way of life,
- reflecting culture,
- engaged in reproduction of social relations,
- prosaic signs and symbols in communications of social meaning,
- invested with ideology,
- structures of purpose,
- artifacts,
- objects of material culture,
- produced by a society to perform a particular function,
- determined by the productive forces of that society, and
- embodying and reflecting the social relations and level of development of the productive forces of that society (Goss, 1988, 392).

All these criteria apply equally to houses and equally to the houses in Hamilton East. Goss (1988) claims that the meaning of buildings cannot be read without considering the people who are the sources of all the functions and meanings:

- the intent of the producers of the buildings;
- the requirements, demands, and limitations of production of the buildings;
- the process of consumption; and
- the perception, satisfaction, and criticisms of the consumers (Goss, 1988, 400).

Goss discusses the meanings of buildings in the language of the geographer, dismissing the structural grammar of the architect. Geographers he believes, should study:

the image and activity in the mental and material life of the inhabitants or users rather than focussing on the individual buildings and the complex interpretation of the semiotic content of its facade (Goss, 1988, 298).

He claims that "the promise of an architectural geography failed to materialise as a result of the particularism of the ideographic regional/historical method" (Goss, 1988, 393). Some of that work was narrow in focus, and lacked theoretical development and social relevance. For Goss, it is necessary to move beyond the uncritically assumed correlation of architecture and a given culture, to explain three fundamental questions which form the theory of architectural geography:

- why and whereby architecture becomes cultural artifact?
- how are cultural and architectural institutions interrelated? and
- why are some forms reproduced and others remain only as relics? (Goss, 1988, 394).

This research asks those kinds of questions; why, where and how the land parcels created in Hamilton East, were filled with houses.

The "mapping-of facades" approach (Goss, 1988, 394) reveals shortcomings. For example, historical descriptive studies are often ungeneralised and rarely theoretical. In such studies there was a tendency to explain the historical descriptive sequence of architectural styles by only technological and socio-economic conditions. The features of housing are not 'caused' by a single event. Houses are not just commodities. That is why this study must explore all the influences reflected in the present accumulated housing stock. Houses are invested with social meaning and architectural geography should be more than descriptions of historically contingent patterns. Researchers must explain architecture as a social product. Architecture is

the spatial configuration of the built environment incorporating economic, political and ideological dimensions (Goss, 1988, 394). Some of Goss' proposals for an architectural geography are revealed in this study.

In Hamilton East, houses have been and are designed and built by architectural (in the broadest sense), financial and construction interests. They are then presented and packaged for exchange at a currently determined rate of profit. Today "they are commodities at the outset" (Goss, 1988, 394). There is no doubt that both capitalist and socialist ideas have played a part in Hamilton East's housing history. Goss shows how the State has intervened in the property market both nationally and locally. In Hamilton East for example, interventions took several forms: the introduction of property taxes (rates); State loans to home buyers; the construction of State built housing for rent and later for sale; and State promotion of the ideal of home ownership, the nuclear family ideal and the single family house image. Then intervention in the form of building codes and regulations, and land use zoning, have profoundly affected "both the nature of use and the form of the built environment" (Goss, 1988, 396). Central and local government has strongly influenced the housing stock and subdivision design of Hamilton East, and other other New Zealand suburbs.

Goss (1988) therefore also helps to illustrate the potential universality of this study, a study at a micro scale, of a very small part of one small city, but the questions it raises and its analysis and interpretation have value across the whole country.

The issue of meanings in architecture as signs and symbols in the built environment of Hamilton East are considered very important, but major works on semiotic theory have not been consulted. Eyles (1987; 1988), Goss (1988), Ley (1977), Rapoport (1969), and Tuan (1971) have considered houses as signs and symbols. A phenomenon has meaning because it is a sign of something beyond itself, its

past or future or other objects (Tuan, 1971). Appearance "is not merely reducible to a price, for each building conveys a meaning as a sign, a function which confers upon it a sign value - its value as a message of social difference or status" (Goss, 1988, 397). Buildings are invested with ideological meaning. The suburban residence "may legitimise domestic property, private accumulation of wealth, the nuclear family and class/age group segregation" (Goss, 1988, 397). There is wide recognition of the linguistic function of architecture for it "constitutes a language which communicates social meaning" (Goss, 1988, 397).

In this study, the house styles of Hamilton East are interpreted subjectively by a new Hamiltonian, using a range of geographical perspectives which allow the physical artifacts to be interpreted in a geography of human experience (Ley, 1983). The social processes of local, regional, national and international origin are used to explain how the scattered village of Hamilton East came to be infilled to the density of the 1989 Hamilton East suburb. The work has been guided by Conzen's traditional studies of urban morphology, Baker, Carter and Meinig's research in historical geography, and person-environment relationships favoured by Rapoport. At the same time, Guelke's advice has been heeded, while Lewis's work on the cultural landscape has been considered with what Ley refers to as social geography, and the architectural geography practised by Ford and Goss.

In the next chapter, the research methodology is described.

CHAPTER III

RESEARCH METHODOLOGY

Formulating the research questions

The research for this thesis began with an informal survey of the suburb of Hamilton East in the summer of 1988. This involved observing the houses and subdivision patterns as indicated by fences, hedges, walls and driveways. I walked along every street, sometimes more than once. This allowed me to form impressions about the potential of the project. The boundaries between the properties proved to be an endless source of interest and are referred to here as the 'subdivision pattern', a phrase commonly used in geography, or 'subdivision design' a surveyor's term. I had also begun to learn how to "contemplate the landscape" (Meinig, 1973, 59) that constitutes an area known as Hamilton East, and to identify the period-styles of the houses. I knew that this would not be easy, observing the essential and obvious features of typical houses from each period. I realised that many houses were of mixed period-styles, and thus difficult to classify. I looked specifically at the juxtaposition of houses of different ages and styles. I could already see evidence of the original sections, the layout of these one acre 'allotments' and thus endeavoured to trace their subdivision through time. The term 'allotment' has been used in the Waikato to describe the parcel of land allotted to each military settler (McRae, 1984).

I was interested to discover if it was possible to locate the original houses on each of the one acre sections, and attempted to identify those features of the present and past urban environment. I wanted to know why the present mix of period-

styles was juxtaposed. Why were houses built in particular periods in particular locations? Why was an inner suburb like Hamilton East so different from the outer suburbs where all the houses were built at about the same time? I also sought an explanation why certain districts of Hamilton East contained different standards of housing, and why the streets are so straight, and so wide. I became aware of the paucity of material in New Zealand contributing to historical and contemporary analyses of suburban landscapes. An investigation of this kind seemed highly appropriate and overdue, both in the New Zealand urban context and locally in Hamilton East.

The physical objects which could be observed directed the initial focus of the potential research. Any identification of the possible research question began with those physical objects, the houses and the gardens. From the beginning, however, I recognised that the explanations were all in the human realm. There appeared to be a novelty in pursuance of the concept called 'infilling', a process which appeared to be very significant in Hamilton East for many decades. The first infilling occurred the very first time that subdivision resulted in a second house being constructed on what had previously been someone else's one acre property. It was clear that infilling was not a process confined to the last two decades. The term 'infilling' has been used in the research literature on housing in New Zealand since the 1970s when town planning regulations allowed more than one house on each subdivided section. These new houses were placed in the gardens of older houses. I had encountered the same term used in Britain to describe the filling of a bomb site with a new house following World War Two. The newer house could be commonly, but not always, identified from the street as built in a later period than adjacent houses. In many cases the newer house was constructed to blend with its neighbours. I decided to incorporate the concept of 'infilling' in the selected research questions because that is precisely what has occurred here, not in bomb sites, but in garden spaces.

At the same time as I carried out my initial informal survey I began to formulate the research questions and selected two. These are questions that only a geographer would ask (Ley, pers. comm., 1988), relating to the stylistic and spatial characteristics of the urban landscape and the reasons why it looks the way it does. These have remained constant throughout my study. The first question is simply: why do the houses in Hamilton East look the way they do? In other words what have been the influences that have determined or contributed to the characteristics of Hamilton East's housing. I therefore planned a geographical interpretation of the house styles, which is documented in Chapter Four.

The second research question is: why, where and how were the one acre sections cumulatively infilled with houses and flats? This enabled me to both interpret the housing styles and to examine progressive infilling of the subdivided sections conjointly. I studied the reasons for the shapes of the sections; reasons why people came to live in Hamilton East, increasing the population, necessitating subdivision of land; reasons why some of the one acres were subdivided at a particular time; the siting of the houses on the sections; and the way in which new houses have been accommodated in front of, behind, and beside the older ones. I considered the houses that have been demolished, the housing transition in Hamilton and sites that have been occupied by more than one generation of houses.

Defining boundaries

The original boundary of East Hamilton township, as surveyed in 1864 on survey map SO 201 by William Australia Graham, was selected as the research area (SO 201 Plan of East Hamilton, 1864). This has proved to be an excellent choice of boundary because it is also a natural one. Figure 1, the location of Hamilton, also shows the location of the case study area in

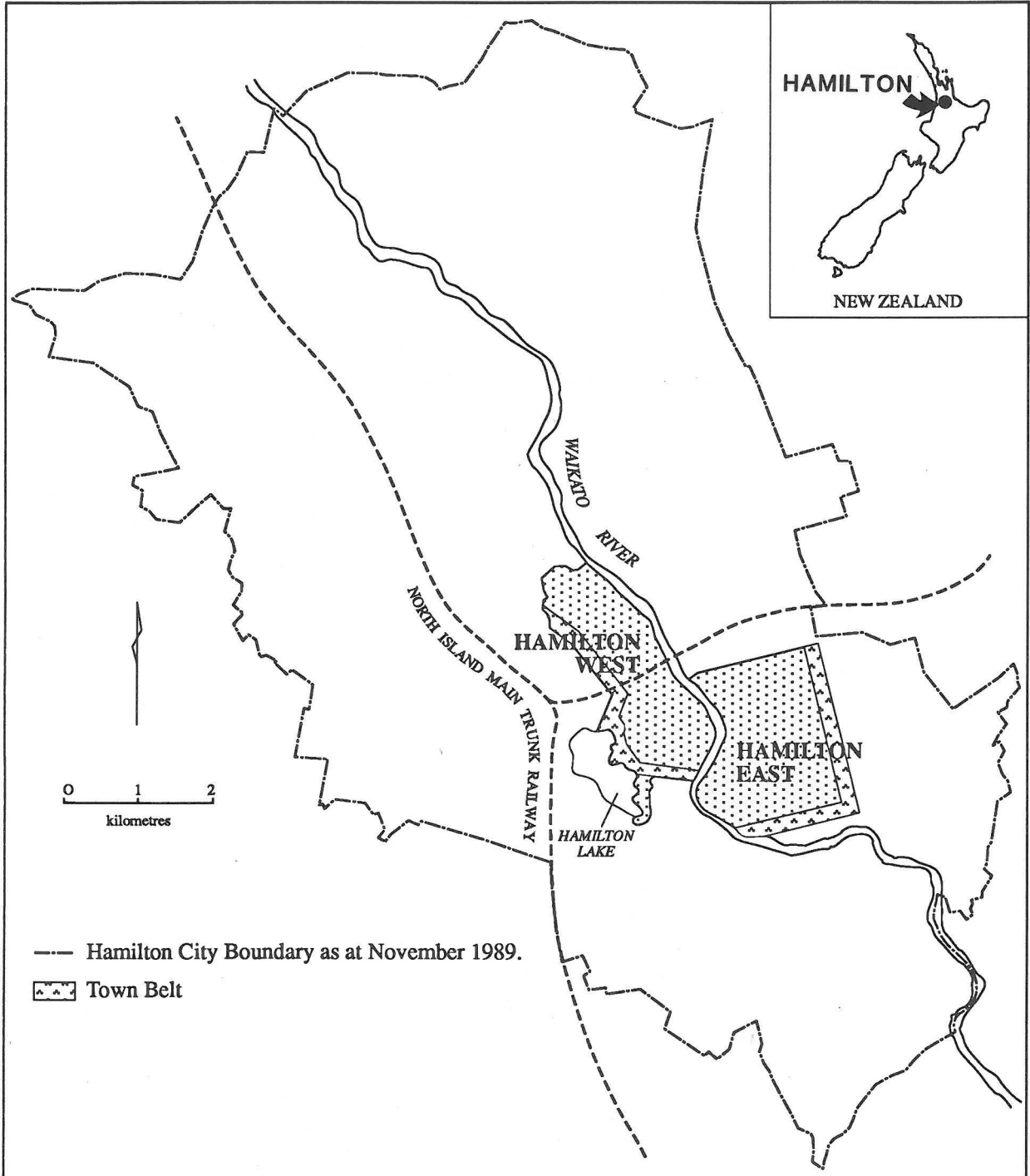


Figure 1 A map to show the location of Hamilton East
Source: HCC, 1990

relation to Hamilton. The case study area is shaded and labelled as Hamilton East. Figure 4 is located in Chapter Five, accompanying the discussion of the original subdivision and grid plan of roads. It shows the detail of the case study area most clearly. To the west is the Waikato River. To the south, is a strip of river terraces and gully system designated Town Belt and now occupied by part of State Highway One and a major recreation area, Hamilton Gardens. To the east lies some open ground also surveyed as a ten chain wide (220 yards, 201 metres) Town Belt, which also remains essentially as open parkland today. To the north, the boundary is less easy to describe - it zig zags from the Town Belt north of Clyde Street, skirting a major gully system (Gibbon's Gully) joining the Waikato River near Hamilton East Primary School. In effect this modern suburb is separated from the rest of Hamilton by the river, the Town Belt and a gully. The grid pattern town, surrounded by open parkland Town Belt is known as the Adelaide Plan, following the use of this design extensively in South Australia in the mid nineteenth century (Williams, 1966a; 1966b). The Adelaide Plan was used in all the Waikato military settlements of the 1860s (Allen, 1969).

The case study area will be referred to as Hamilton East throughout the thesis. Elsewhere, that name is used to refer to a smaller area, for administrative purposes (the census) or a larger area for parliamentary electoral purposes (the constituency). The study concerns only that land within Hamilton East originally surveyed as one acre residential allotments.

Identifying period-styles

During 1988 I learned to identify the period-styles of houses by a combination of informal and increasingly more formal field work in Hamilton East and by reading a wide range of literature about New Zealand houses, New Zealand architecture and some American texts about housing. Hamish Keith's (1983a; 1983b) television

programmes entitled *The city and the suburb*, assisted me in this task.

"Any research on the built environment depends on fieldwork" (King, 1984, 12) and during January-April 1989, I completed a detailed survey of all Hamilton East houses. Each house was recorded on a cadastral (property boundary) plan in colour, using the facade to interpret the period-style, as elaborated by Rickert (1967). Other characteristics recorded were the houses built by the Crown for rental, pairs and rows of flats, the blocks of two storey flats, very recent 1980s infill housing, and houses that are used for non-residential purposes. This map proved to be invaluable. It was used to assist with research on other maps, air photographs, in the field, at the Department of Survey and Land Information (DOSLI) and at Valuation New Zealand (VNZ) where specific dates of the original occupation of each house were added.

At the same time, a major research exercise was undertaken at VNZ. The field slips for every building in the case study area were examined. Field slips are paper record cards, used in the field by Valuers to record data. The regional office of VNZ is in Hamilton East. The date of the first occupation of each of the present buildings was recorded, because the specific date of construction is not available. Most of the field slips contained other relevant data - notably a generalised description of the house type like 'pre villa cottage', 'villa type,' 'early gable roof bungalow', 'Spanish bungalow', 'modern bungalow', 'contemporary architect designed home'. Those houses constructed as 'Crown rental' were noted, as were the Crown rental houses subsequently privately purchased. A plan of each property was examined. Where houses have been demolished or removed from the present site during the 1970s and 1980s many of the record slips noting the demolition have been retained as an invaluable historic record. This record of houses reported as 'gone' from Hamilton East, proved to be an unexpected bonus, especially since

the date of original occupation, style and plan were also available.

I did not expect to be able to record so successfully many of the houses which have been demolished or moved away, but using this evidence from VNZ and visual sitings on air photographs, and old photographs, I was able to compile a map of houses lost from the accumulated housing stock. This reconstruction is a much more complete housing history than would be possible using just the present housing stock. It can be found in Chapter Five as figure 17. The VNZ data was particularly useful in areas that are not presently residential, for example the present commercial area of the suburb which once contained many houses (Cassidy pers. comm., 1989; Johnston pers. comm., 1989). It also allowed a complete reconstruction of the types and ages of the housing stock demolished to make way for the transition to a higher density zone of apartment blocks and houses, in part of Hamilton East in the early 1970s. Unfortunately those houses observed only on the air photographs cannot be recorded according to date of construction or style. A number were demolished between 1943 and the 1970s. There is also no record of the many houses demolished before the first air photographs, and before VNZ's policy of retaining the obsolete field slips was initiated in the 1970s.

The VNZ records contained other information which would not have been obvious from the street. A number of houses were not built on their present site but were transferred from elsewhere, at a later date. Some very old houses have been thoroughly remodelled around the original structure, but were never demolished. Renovation can be so comprehensive that a pre-villa cottage can look like a much more modern house. In the 1960s the obsolescence of some larger houses, usually villas, was noted in the records. The result was that two or more households occupied a single dwelling which was altered to provide separate accommodation, and then referred to as 'flats'. A rash of demolitions followed and replacement by blocks of 1970s two storey flats completed a

transition from single family dwellings to multi unit dwellings. The quality of the construction, or the present maintenance is recorded for many properties. Valuers use the term 'bach' to describe a small, perhaps substandard cottage, generally of no particular period-style, and thus difficult to classify and date, from the street. Such properties in Hamilton East can appear older than the true date of construction. During the 1980s some older houses which were converted into flats in the 1960s, but not replaced, have today been reconverted to single household dwellings.

By the time I made my formal survey in the field and at VNZ, I was able to account confidently for the reasons for the appearance of the houses. These are numerous, complex and interdependent and will be discussed and interpreted in Chapter Four. A wide range of written sources were used for the interpretations made. These included New Zealand and North American academic journal articles and books (Banham, 1971; Chase, 1981; Fearnley, 1986; Ford, 1986; Fowler and Van de Voort, 1983; Gebhard, 1958; Gowans, 1984; Griffiths, 1979; Harvey, 1981; Hayden, 1984; Hill, 1976; 1985; King, 1980; 1984; Kniffen, 1965; Lewis, 1975; 1979; McAlester and McAlester, 1984; Mitchell and Chaplin, 1984; Murton, 1984; Rapoport, 1969; Rickert, 1967; Rubin, 1977; Salmond, 1986; Saunders, 1987).

The specifically theoretical literature cited in Chapter Two was consulted in another effort to interpret the data collected. The research ostensibly involved physical objects - houses and sections - but it was really all about people - the people of Hamilton East, the 'designers' and users of houses and sections. Putting the people and the houses together involved the use of a wide variety of evidence, both empirical and theoretical.

Available sources

Vernacular housing in Hamilton and the Waikato has not been the inspiration of much literature. There have been some feature articles in the newspapers about historic buildings (*Waikato Times*, 4 February 1959; 17 February 1988). Otherwise there are occasional comments about housing in books devoted to a variety of local issues (Anon., 1957; 1958a; Brander, 1964; Coates, 1962; Day and Day, 1986; Drummond, 1964; Gant, 1974). The Historic Places Trust of New Zealand (HPT) Files (1990) contain details of all listed buildings. Only five of the listed houses are located in Hamilton East. These are all recorded in the proposed review of the district scheme (HCC, 1989, Appendix 11).

In the absence of directly relevant literature, one way to put the houses together with the people of Hamilton East, and into historical as well as contemporary context, was to read a range of literature, and ask many questions about Hamilton. I sought all the possible information from other printed sources - all the maps and air photographs listed under the heading 'Primary sources', after the bibliography. Using the original survey plan as a base map I divided the case study area into 52 blocks and made written records, block by block, as new information came to light. Each map and each air photograph was carefully analysed block by block, in an attempt to understand why, where and how successive generations of East Hamiltonians subdivided land and built houses on the one acre plots. This was painstaking work but constantly rewarding. Kevin Walsh, the Chief Surveyor of the South Auckland Land District, DOSLI (pers, comm., 1989), prepared for me a chart matching the legal description numbers with dates, so that I could use cadastral maps to date subdivision across the whole case study area. The VNZ cadastral plans (VNZ Survey Plans, 1989) contained useful data, and the DOSLI record sheets (DOSLI Survey Plans, 1989), showed "the current cadastral subdivision of all land within the sheet boundary" (McRae, 1984, 4-19). These are amended as each plan of subdivision (Deposited Plan) is

approved and deposited. Just as it is possible to trace the history of one particular property through maps and documents it is possible to trace the cadastral history of whole blocks. Not only was it possible to discover when land was subdivided and infilled, it was also possible to discover details about:

- past land uses other than housing, where houses exist today;
- the amalgamation of former domestic sections where larger lots were required for non-residential purposes, such as the Regional Council Offices;
- the spread of the commercial and professional offices areas of Hamilton East at the expense of housing;
- the perceived obsolescence and removal of single family housing and the transition to other house forms; and
- the appearance of Hamilton East from the air in 1943 (Air photograph, 1943), before the period of most sustained growth following World War Two.

A large volume of material was collected in this way. I carefully scrutinised maps, photographs, records and files which are cited at the end of the bibliography. It would have been possible to spend much more time at the Hamilton offices of DOSLI analysing the past records for every land parcel, but it would not have added significantly to the results of this study in terms of possible generalisations.

Personal communications

I also mailed letters seeking further information, to the heads or managers of establishments in Hamilton East - all the

kindergartens, rest homes, motels and the churches. This met with mixed success, but led to contact with some long term residents who made useful personal contributions. I learned about how the opening of these establishments, often displaced houses. For example, a house and land was bequeathed in the early 1970s, and with the purchase of other property it was possible to build facilities for the the National Foundation for the Blind (Reay, pers. comm., 1989). A 1922 house in Cook Street became a church in the late 1960s (Booth, pers. comm., 1989; Johnston, pers. comm., 1989). Doug Payne (pers. comm., 1989) lent me some literature about the Methodist Church in Hamilton East which recorded the buying and selling of sections and houses (Oldfield, 1960; Longbottom, 1985). Elizabeth Hughes (Waikato Regional Council) allowed me access to the former Waikato Valley Authority accommodation files which explained the history of the former Warwick Private Hotel and other domestic properties near the river (Waikato Valley Authority Accommodation Files 24/1). These properties were built between the retail area of Grey Street and the Waikato river. The Community Constable for Hamilton East (Paterson, pers. comm., 1989) referred me to a local history of the Waikato police, which included insights into events and buildings in Hamilton East (Walters, 1986). Information about other properties including motels, rest homes, a private hospital and garages was included on VNZ field slips (VNZ Files, 1989). The people consulted are cited under 'Personal communications' at the end of the bibliography.

Statutes

In trying to explain the former subdivision of land it was necessary to understand the relevant legislation, because 'subdivision design' has been strictly controlled by statute since the middle of the last century (see under 'Statutes cited' in the bibliography). Over time a large number of statutes proved to be relevant. Literature was also consulted, mainly from the

New Zealand Surveyor (for example Basire, 1948; Blake 1938; and Bogle, 1960), the Otago University Surveying Course Handbook (Baldwin, 1988), and McRae's (1984) *The surveyor and the law*.

Trade directories

The matching of data about housing and sections, with information about the people of Hamilton, has therefore been achieved by persistence and detective work. Understanding of the vitally important human component of the research was greatly assisted by the use of six Trade directories, four in detail (Cleave, 1916; 1920; Leightons, 1930; 1940). These are listed under the heading 'Trade directories' after the bibliography. For all the streets of Hamilton East the heads of households and their occupations were recorded. This information was then transferred to four maps for 1916 (the first year in which Hamilton heads of households were recorded on a street by street basis, not simply in alphabetical order), 1920, 1930 and 1940. This information was compared with data from my 1989 survey of house styles and VNZ Files (1989) dates of occupation. A good, but not perfect and complete match was possible, yet the exercise was rewarding.

The directories illustrated interesting social features. The occupations and residences of some local characters, noted in the local history literature, were revealed. It was possible to see how some families moved house. For example, the Greenslade family moved as a result of financial problems from a very large, single family 'townhouse', to a modest bungalow across Wellington Street in 1934. Greenslade house then became a boarding house (HPT File, 1990; Leightons, 1930; 1940). The range of occupations in which the residents were employed in 1916, 1920, 1930 and 1940 was quite different from today. The transition from horse drawn transport to motorised transport could be traced in the occupations and the businesses. The importance of the

Experimental Farm at Ruakura in providing work for the residents of Hamilton East was indicated. The numbers and occupations of other members of each household were, of course, not recorded. If the household head was female she was recorded simply as "McKenzie Mrs", except in rare cases where she was a "ladies nurse", "draper", "private hotel keeper" or "music teacher" (Cleave, 1920). The ethnic background of the residents was almost exclusively British and Irish judging from the surnames. The matching of Trade directory information with other data could have been developed further using more directories and matching them with certificates of title to properties and other documentary evidence available from DOSLI. For the purpose of this study, the Trade directory analysis allowed some useful insights into the Hamilton East that existed before the first street maps (NZMS 17, 1953) and before the first air photographs (1943). It was also useful in allowing a 'new' Hamiltonian to understand some of the atmosphere of pre World War Two Hamilton.

Some of the dilemmas I encountered when using Trade directories were noted by Harold Carter (1983) who warned of self-evident difficulties. The accuracy of compilation cannot be assumed. There must have been a delay between the collection of data and its publication. Nevertheless, it seems clear that Trade directories with care, "provide a resource of inestimable value for the consideration of urban characteristics" (Carter, 1983, 88).

Newspapers

I decided against a wholesale newspaper search for information about houses in Hamilton because of the magnitude of such a task. The newspaper files in the Department of Geography, University of Waikato, did prove useful, particularly from the early 1970s when the debate about two storey blocks of flats was well documented

in the *Waikato Times* (1973-1974). Relevant articles are listed in the bibliography under 'Newspaper articles'.

Real estate literature

Collecting advertisements for houses 'for sale' in Hamilton East during 1988-1989 in *The Property Press*, *Property News*, and *Waikato Times*, proved useful initially in learning how to identify specific styles. It also aided in the appreciation of the asking price of individual houses in the present housing stock, and showed that for some of the period-styles, there has been a range of quality - from the simplest bach or low cost house, to much more expensive architecturally designed housing. Hamilton East was not a one class suburb - it has been home for people in a range of occupations and from most socio-economic groups. The descriptions associated with the advertisements assisted in assessing Hamilton East's image and the image of individual period-styles of houses, at least as portrayed by real estate agents.

Images

Throughout the research I have been seeking actual images, photographs and descriptions of the past appearance of the village (plate 1), and later the early town of Hamilton East (plate 2). I therefore scrutinised old photographs at the Waikato Museum of Art and History, the source of most of the photographs used in literature about the Waikato.

There are contemporary models, which provide live images, real places in the Waikato today, which can be considered very similar to Hamilton East in layout and morphology, as it was in the past. Pirongia, originally Alexandra, Kihikihi and Cambridge are settlements in the Waikato which provide living images of how

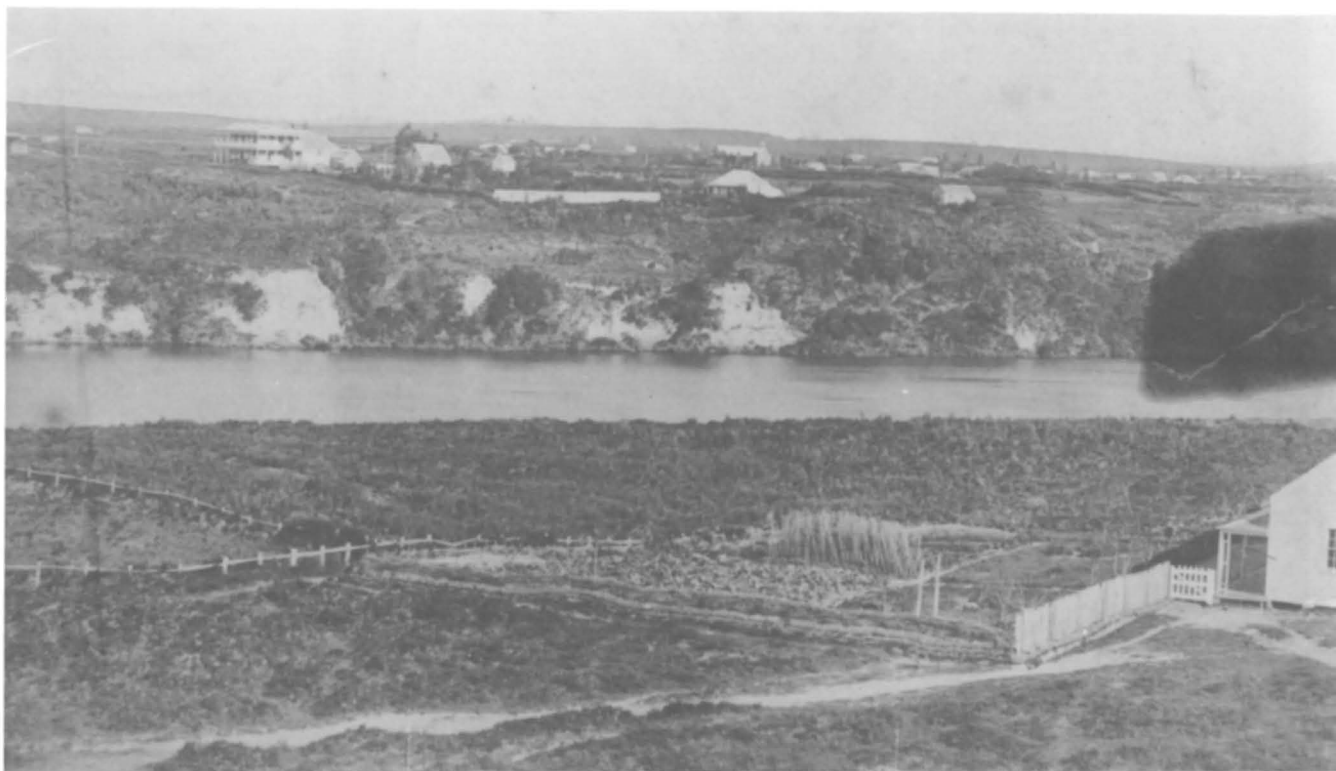


Plate 1 A view of Hamilton East from the west bank c. 1870s
Waikato Museum of Art and History (WMAH), Hamilton



Plate 2 A view of Hamilton East from the west bank c. 1907 WMAH

Hamilton East may have once appeared, if the styles of some of the latest buildings are ignored. They were military settlements founded at the same time as Hamilton West and Hamilton East (Allen, 1969). Observation of cadastral plans of Cambridge and Kihikihi, and some fieldwork suggest that many of their features are the features exhibited by Hamilton East in the past (Borough of Cambridge Map, 1969; NZMS 189 Kihikihi, 1971). Pirongia is like Hamilton East when it was "a stragglng village" (Norris, 1963; *Waikato Times*, 24 August 1974). There are very small paddocks, 'sprinkled', with the occasional house or few houses, and wide boulevard type streets, like those of a metropolis like Paris. Kihikihi is like township or small town Hamilton. There are many empty sections, farming and urban features in close proximity, a peri-urban fringe environment without the urban core, farm animals grazing, orchards and a small row of business premises separated by empty sections. It compares with Hamilton East during the early years of this century. Cambridge is a comfortable and spacious suburb, still semi-rural but with all, or almost all of its sections filled with single family homes, similar to Hamilton East in the 1940s and 1950s.

This research has drawn upon and used four major forms of data; literature, field data, maps photographs and files, and informal personal contact with some members of the Hamilton East community. "There can be multiple sets of data requiring different methods", and "it is possible to obtain different data relating to different phases of the research process" (Eyles, 1988, 5). Researchers need to take a "situation into account and to approach substantive and theoretical problems with a range of methods that are appropriate for their problems" (Burgess, 1984, 143).

The first research question is addressed in the next chapter. The nature of this question meant that the explanations required the cumulative knowledge of other researchers in the field. It was

necessary to use written evidence to build up a picture of the relevant past, to "obtain statements, views and meanings unobtainable through interaction" (Eyles, 1988, 10). None of the authors of the literature located, claimed that they attempted to answer precisely this type of question, yet each made a contribution to this work. The insights gained from the fieldwork and the data searching at VNZ proved to be fundamentally important to the writing of Chapter Four, but tend to be 'hidden' from the reader. Informal fieldwork in San Diego and Riverside, California in 1988 contributed to the interpretation of the section on bungalows.

CHAPTER IV

INTERPRETATION OF HOUSE STYLES

This chapter discusses and interprets the housing styles found in Hamilton East. The styles will not be described in detail, photographs are included instead of descriptions. Each of the six sections of the chapter is devoted to a discussion of an individual period-style. In chronological order these are nineteenth century houses, villas, bungalows, standard New Zealand houses, flats, and variations on old themes. The present housing stock, as of 1989, has been classified according to period-styles. These are shown in figure 2 which is located inside the back cover of this volume. Readers may usefully refer to this map when reading Chapters Four and Five. Except when viewed at the street level, this figure best illustrates the juxtaposition of the six period-styles in the landscape. The map enables the reader to assess how many houses occupy each surveyed section for the first five period-styles, one house per section. The map does not show how many houses occupy each section in period-style six, variations on old themes. The scale of the map will not allow this information to be recorded.

At the beginning and end of each period there was a tendency for styles to evolve from one to another. For example 'villas' and 'bungalows' are considered separate period-styles and yet an intermediate, a hybrid called a 'villa bungalow' can also be recognised. Likewise, before and after World War Two, houses of very similar appearance were built, even though the war period acted as the 'boundary' between period-styles. In other words, the concept of a boundary, a point in time when styles changed, is an artificial concept but useful here for interpretation

purposes. When a new style was introduced it was not picked up immediately by all Hamiltonians who were involved in the housing industry, or by all prospective new house owners. The timing of the acceptance of a new style depended on a number of factors including different perceptions of what was an appropriate style, what constituted a 'proper' house, the meanings inherent in each style, and what was considered fashionable. Some builders and some new house buyers were conservative and chose styles they knew. Others were interested in contemporary trends and constructed the latest fashion in housing. So at any time near the clear recognition of a change in period-style those houses under construction would range along a continuum between the two period-styles.

In Hamilton East there was variation in the size and the quality of houses in each period. A few houses were architecturally designed in each period. The majority were designed by their builders, 'carpenter-architects', or more recently draftspeople, or by the writers of commercially produced plan books from overseas or New Zealand. People from different socio-economic groups represented in the case study area could afford more or less decoration, and more or less luxury features, many of which affected the appearance of their houses. Hamilton East's houses have been designed to respond to different income level demands.

This chapter will show that a new fashion, or a new period-style in housing seems to be apparent about every two decades. Settler cottages and pre-villa cottages gave way at about the turn of the century to villas, which gave way after World War One to bungalows. Before and after the Second World War, with strong influence from the newly founded State housing sector, the bungalow evolved into the post-war style which is now the standard New Zealand house or post-war bungalow. By the 1960s, 1970s and 1980s there were many more variations on this basic theme, including new forms, semi-detached flats, blocks of flats, units and townhouses.

Because there are many influences responsible for house styles, particular collections of influences have been selected as more important in each particular period. These will be considered only once, as an example, in the interpretation of one period-style. Recognition that a particular influence may have been significant in another, or in most period-styles is assumed, but not discussed again to avoid repetition. The cultural traditions of the population, their economic circumstances, and the contemporary stage of technology at the time, for example, were important influences in all period-styles. The main influences identified in nineteenth century houses are practical. These include the economic status of the settlers, the universality of the settler house in British-based colonial or ex-colonial lands, the evolution of styles one to another, and the use of indigenous materials on familiar house forms 'imported' with the settlers, to create new indigenous styles. The villa is considered in relation to image and symbolism, fashion, the formality of the Victorian social system, etiquette, and the sharing of ideas about housing, and diffusion within the English speaking world. The section on the bungalow concentrates on cultural diffusion of ideas about styles and technology from the 'core' land - Southern California. It also includes a discussion of house plan books, improved communications and the influence of a new medium, the cinema, a technological leap into the machine age and the new social conditions which prevailed in the inter-war period. The standard New Zealand house or post-war bungalow was strongly influenced by the technical standards developed for the State houses before and after the war, building codes, town planning regulations, standardisation, the detached nuclear family home principle, affluence, and the post-war life style.

The standard New Zealand houses are the post World War Two versions of the bungalows. There was no big break between the two period-styles, which evolved one to the other. The major influences on this period-style, which dominated the whole period from the late 1930s to 1969, produced what is commonly considered

the typical house. The State houses, first occupied in 1939, influenced the form and the high standard of construction of much of the housing in the private sector built following the war. The cessation of building in the war added to a major shortage of housing. This was compounded by shortages of skilled labour and construction materials. The equation of the word 'family' with the word 'household', and the large number of nuclear families established post-war resulted in the construction of housing for these families. The discussion also focuses on the standardised nature of the houses, in their suburban 'dream' setting, mythologised throughout the 'Western' world.

The flats built in Hamilton East were a response to local government calls for increased population density, as a result of predictions of continued substantial population growth. Political and economic decisions were fundamental to this period-style. The discussion also focuses on the image of the flats which caused so much criticism.

The variation on old themes section comprises the housing built from the late 1970s onwards and characterised by eclecticism. Two major influences are identified. First, fashion has been significant, related to heritage revival in new and renovated houses, and in post Modern architectural features. Secondly, there has been a consolidation of development with the popularity of infill housing, smaller sections, kitset housing and innovative townhouses added to Hamilton East. Urban consolidation is local government policy, and peripheral development is given a lower priority. This has led to increased interest in housing developments in Hamilton East, adding to the variety of house types and styles in the housing stock.

NINETEENTH CENTURY HOUSES

From their inception as military settlements in 1864 to the turn of the century East Hamilton and West Hamilton were small villages. The people were scattered over a wide area and so the density of population was very low. In effect, it was a rural area, pre-urban (Smailes, 1966) which encompassed two tiny 'townships'.

The total area of the new township on the East of the Waikato River was about 500 acres. Out of this total, 387 one acre sections (SO 201, Plan of East Hamilton, 1864) were surveyed for allocation in East Hamilton to the new settlers, militiamen of the Fourth Waikato Regiment and their families. They were accommodated first in tents they brought with them, erected around the redoubt. Redoubts are isolated fortified strongholds. Pre-fabricated huts, 20 feet wide by 60 feet long, brought from Auckland, were erected, in advance of the arrival of most of the regiment, two for officers and eight for other ranks. These huts were "ready for their reception at Hamilton" (*Appendices to the Journals of the House of Representatives (AJHR)*, E-No 2, 3, 1864). The use of tents to accommodate settlers on initial arrival before the construction of houses was common practice at that time (Wilkes and Wood, 1984).

The settlers next set about building houses for themselves, with the ten pounds worth of timber supplied to each man, and repaid later out of their wages. They constructed simple wooden slab cottages with low pitched shingle roofs and earthen floors and an external wood or earth chimney, because no bricks were available (Allen, 1969). By the end of 1865, there were 300 houses (Norris, 1963), in the twin Hamilton settlements. Many of the people built their own houses because only 28 carpenters and 10 cabinet makers were on the regimental roll (Norris, 1963). These people, experienced in dealing with timber, were able presumably to

assist their less experienced neighbours with house construction. These first houses were also of a temporary nature, built to provide shelter for families as quickly as possible. Initially, the acquisition of shelter was a matter of life or death, and so the influences on the house form were almost all practical. There were no hidden meanings and subtle images, because aesthetic considerations did not arise.

The population fluctuated considerably during the years to 1900 when many militiamen sold their town acre for what they could obtain, having completed their three year term of duty (Allen, 1969; *New Zealand Gazette*, 5 August 1863). Many, if not all of these cottage shelters, were replaced later in the 1860s or 1870s to accommodate newcomers and those initial settlers who decided to remain in Hamilton East. The next generation of houses was probably very similar in style and form to the huts. Built as permanent houses, weatherboard walls, replaced the walls made of slabs of timber. This was the easiest building to construct and in virtually every part of New Zealand, the first style of proper house which was built (Fearnley, 1986). It was common in farming and mining areas and examples can still be seen today in Waihi, and Huntly. It was recognised as the dominant dwelling in Gisborne, a basic two roomed cottage, often with a verandah along the front (Murton, 1984), because it was the classic New Zealand vernacular dwelling from about 1860. From "...this little wooden cottage the forms of other ordinary New Zealand houses developed" (Salmond, 1986, 60). Because many of these settler cottages were built by amateur builders using simple construction methods it meant the roof could only span five metres, and that is why they were only one room wide. "The do-it-yourself tradition of New Zealand was born of necessity in the early days" (Salmond, 1986, 71).

A number of simple cottages remain in use in Hamilton East, but may date from about 1900. Only one early cottage definitely recorded as from about 1876 survives (plate 3). It is the single



Plate 3 Hawkins house, Nixon Street built c. 1876

relict element, known as Hawkins house, and an HPT Category 2 listed building (Hamilton City Council, (HCC) 1989, Appendix 11; HPT Files, 1990). A 1972 memo discussed Hawkins house. It was sent from the Waikato Museum to the Town Clerk. With regard to historic buildings in Hamilton and their preservation it claimed:

There would appear to be quite a number of these small cottages in Hamilton East and further investigation could well reveal that the preservation of such a structure is not yet a pressing problem (Gorbey, 1972).

Just three years later, an article in the *Waikato Times* (19 July, 1975) revealed that Hamilton's domestic landmarks (old houses) were the casualties of so called 'progress', and that "old Hamilton was fast disappearing", so that very little of pre-1900 Hamilton remained.

British and American origins

The early cottages recalled the familiar forms brought from the home country by immigrants, but it was the unfamiliar materials and the verandahs which transformed them. They were quite suddenly a distinctive local style (Salmond, 1986). It is widely recognised that migrants to a new land "will carry their house-types with them" (Lewis, 1975, 3).

Though the heart remained in the 'home country' the home lay in the New World of the Pacific, and the building forms, materials, and techniques have more in common with those colonial brothers - Australia and West Coast America - than with the mother of all, Victorian England (McLintock, 1966, 58).

Certainly, the nineteenth century photographs of Hamilton are of the New World (New Zealand), rather than the Old World (Britain). The early buildings were functional, simple, logical and unpretentious (McLintock, 1966). Their meaning was all practical,

but they were also culturally appropriate. The cottages common in nineteenth century Australia (Boyd, 1968) were the same in plan and in appearance to those in Hamilton East. Interestingly some of Hamilton's pioneer militiamen were recruited to the regiment in Australia (Allen, 1969). A photograph of a North American cottage which strongly favours Hawkins House appears in Ley (1983, 146), the source of which was the Vancouver City Archives.

Many of Hamilton East's nineteenth century residents had personal experience of working class housing in Britain and Ireland. The housing they occupied in Hamilton East was probably equally modest but possibly provided much more outdoor living space and land on which to keep livestock, grow food or set up businesses. The one storey two rooms, one room deep cottage was a "traditional British folk form" which when it was expanded with a front verandah and a lean-to back, "became the dominant pre-railroad folk housing over much of the south eastern United States" (McAlester and McAlester, 1984, 94). The McAlesters' photograph of such a cottage is clearly similar to Hawkins House in Hamilton East. The domestic architecture of two Hamilton villages was therefore in good company. Yet the predominant house style was "designed without a conscious attempt to mimic current fashion" (McAlester and McAlester, 1984, 95), by the builders of Hamilton as well as North America. These settler cottages were therefore of a transnational house style and Hamilton was already part of the global village. The people were clearly part of the world community. 'Internationalism' (Relph, 1987) was at work in this pre-urban landscape.

Colonisation

Hamilton East's origins and first houses result from "the universal process which has been identified as one of occupation and colonisation" (Carter, 1983, 61). There was expansion from the European core lands which involved people crossing oceans to

new lands and taking their cultures with them. A number of European countries with an urban tradition were involved in this social process, resulting in the migration of people to lands with no urban tradition. The first militia settler Hamiltonians were very much part of an Empire building movement of the British to North America, Australia, South Africa (Carter, 1983) and New Zealand. Had the Hamilton East militiamen been originally, for example, French or Spanish, rather than English, Scottish, Irish and Welsh, the settler cottages would have reflected the tastes of those cultures. Carlisle (1982, 13) shows how French houses have many differences, externally and internally, from Anglo-American houses, and "mirror French attitudes". In France an inward looking house, surrounded by high protective walls is considered safe and *chic* (Carlisle, 1982).

Housing reflected prosperity

Beale house, Hamilton East (plate 4) is one of only four HPT Category 1 houses in the whole of Hamilton City. It is listed in the register of buildings, objects, *Waahi Tapu*, and areas of special value in Hamilton, in the 1989 proposed review of the district scheme (HCC, 1989, Appendix 11; HPT Files, 1990). Built in 1872 for a doctor and coroner Charles Bernard Beale and his family, it is more substantial than the cottages discussed above (Gorbey, 1972). It is still a reasonably modest house and is probably the oldest surviving house in Hamilton. Its appearance seems to be directly related to the middle class status of the original owners. There may have been other similar houses occupied by military officers. This house is difficult to photograph in spite of an elevated position. It has survived because it was built of kauri and heart rimu, and has been the home of only four households in nearly 120 years. Much is known about it and it attracts considerable interest (HPT File, 1990).



Plate 4 Beale house, Beale Street built c. 1872
(i) *Hamilton Press* photograph 7 September 1977, (ii) in 1990

One reason why there are not more surviving nineteenth century houses in Hamilton East is that they succumbed to borer and rot because they were built of kahikatea (HPT Files, 1990). This was true of most modest houses and two more substantial houses, the details of which were recorded by Isaac Coates, a prominent Hamilton East businessman and farmer, originally from Yorkshire (Coates, 1962). The finest New Zealand residences built during the last century were of two storeys with bedrooms upstairs, because the single storey house was considered suitable only for the poor (Fearnley, 1986). Such fine houses were very rare in Hamilton and the Waikato and none has survived in Hamilton East. Just as Hawkins house was modest and Beale house was less modest, a few residents could afford to aspire to more style and "set about achieving some cultural standards" (Fearnley, 1986, 21).

The elaborately decorated 'colonial' architecture known in the four main centres and other early towns (Fearnley, 1986) was extremely rare in Hamilton. This is probably as a result of the lack of employment opportunities. Because Hamilton was not prosperous and did not appear to have good economic prospects, many of the residents were not committed to their houses or the two townships long term. Certainly, a number of the 1864 pioneers remained in Hamilton East all their lives and some present residents can trace their ancestry back to the first settlers. Yet Hamilton's long term future was always in doubt during that century. Many of the militiamen sold their grants of land to "officers of the militia, or Auckland purchasers, and disappeared to the Coromandel goldfields" (Stokes, 1984, 282). With no commitment to the place people did not invest in high quality homes. For many of those who did settle permanently larger cottages cost extra money which was simply not available. The best most residents could afford was to increase accommodation by adding a fashionable lean-to room at the back. This method of house extension was used well into the twentieth century on pre-villa cottages and villas and can be seen today on many of the houses that have survived. Where the initial house had a high

ceiling it allowed two or even three lean-to extensions at the rear, falling in steps toward the back garden.

Isaac Coates' family out-grew their four roomed cottage, built in 1874 and he consulted an architect to design their new house overlooking the river in Wellington Street (Coates, 1962). Built of kahikatea, the house had eight rooms including a 22 feet by 16 feet (6.7 by 4.4 metres) dining room and an office, plus a bathroom and larder. A two storey house in the Carpenter Gothic style with Italianate windows (plate 5), it must have been considered a substantial 'mansion' in the Waikato of the 1880s. Early this century, the house called Wairere, was in a bad state, the borer having practically destroyed it (Coates, 1962), and it was replaced when the Coates' family sold it to move next door to a new house. That their house was given a name perhaps reveals something about their attitude to housing.

Use of timber

Philip Le Quesne's fine residence in Hamilton East with a slate roof was destroyed by borer, pulled down and burnt. It was "a fate that befell many of the early residences in Hamilton" (Coates, 1962, 100). The clear grain of kahikatea timber was popular because it was easy to work and yet it rapidly decayed in the wet (Salmond, 1986). The use of timber as the major construction material in New Zealand can be easily explained by its availability. The people who settled New Zealand "showed no awareness of the need to conserve resources, whether renewable or non-renewable. Rather, resources were treated as if their supply was infinite" (Dixon, 1991, 2). However, timber was not plentiful close to Hamilton. Interestingly, Salmond (1986) claims that the early emigrants expressed surprise at the number of timber buildings when they wrote home. He claimed that the first New Zealand houses were built in wood as a method of acquiring temporary shelter, until it was possible to build something more

permanent in brick or stone. The planned brick houses did not appear in Hamilton East until the late 1930s, and then only rarely. By the time the first generations of New Zealand born Europeans required their own houses, timber was so common that it was culturally acceptable and considered the norm. It continued to be the supreme construction material well into the twentieth century.

The first Hamiltonians were urgently in need of bricks for chimney construction. Timber houses are very vulnerable to fire hazard and so early in the history of the villages at least two brick making works were set up to supply the local needs. One of Isaac Coates' business enterprises was a brick making works in Hamilton East, and Philip Le Quesne was involved in a similar enterprise (Norris, 1864). Then the Huntly Brick Company was founded in 1884 (More, 1976) at which time more substantial quantities became available.

Pre-villa cottages

Another listed house (HPT Category 2) in Hamilton East (plate 6) is the Police Station house (HCC, 1989, Appendix 11), built in Grey Street in 1880 to accommodate Police Constable William and Mrs Murray. In the *Waikato Times* (27 April, 1880) this five roomed gabled cottage with a verandah half front, was claimed to provide "lavish accommodation" (Walters, 1986; original 1880 newsclippings in HPT Files, 1990). A fair amount is known about this undecorated but substantial house which has been a police 'barracks' or station for part of, and a police house for all of its 110 years. It was obviously a more complex building and considered much more luxurious in 1880, than the much more common settler cottage. Built for the government it represents a good quality pre-villa cottage, now the oldest surviving of that generation of house in Hamilton East. It has survived because it has been well maintained and was well built.



Plate 5 Wairere, Wellington Street home of the Coates family from the 1870s to c. 1911 WMAH



Plate 6 Police station house, Grey Street built 1880

The police station house represents one of the earliest forms of specialised State houses, the later forms of which have also been commended for their high quality.

As time went on Hamilton residents experienced several peaks and troughs of fortune. In 1874, Hamilton's 666 people occupied 127 houses, but by 1878, 1243 people occupied 220 houses. The railway had reached Hamilton from Auckland in 1877 and boosted the township's fortunes (Norris, 1964). With the major economic depression of the 1880s, Hamilton's fortunes fell with New Zealand's fortunes. Toward the end of the century the next generation of houses began to appear. Gradually Hamilton East gained its quota of 'pre-villa cottages' (plate 7), a valuers description (VNZ Files, 1989), or 'villa cottages' (Anon., June 1958b). These evolved from settler cottages - were larger, often no longer rectangular, had higher ceilings as fashion began to demand, and formed an intermediate stage between settler cottage and villa. A number of pre-villa cottages in Hamilton East are still occupied today. Some are frail, while others are quite bold, robust houses (plate 8). They were simple, not decorated, and utilitarian in character. There was no effort to establish a town of character. The struggle to make a living in hard conditions was enough for most people (HPT Files, 1990).

Relict forms and stylistic mixtures

Only about eight houses with a nineteenth century facade remain today, although a few houses dated tentatively from '1900' (VNZ Files, 1989) may be older. Apart from the three listed buildings already discussed, and a few pre-villa cottages from the later part of the century there are one or two other houses. A discrete early villa, circa 1891 can be spotted behind the elaborate fence and mature garden on the corner of Naylor and Firth Streets. Julian's Restaurant in Grey Street is a renovated early square villa dating from 1896.



Plate 7 Pre-villa cottage, Galloway Street built c. 1886

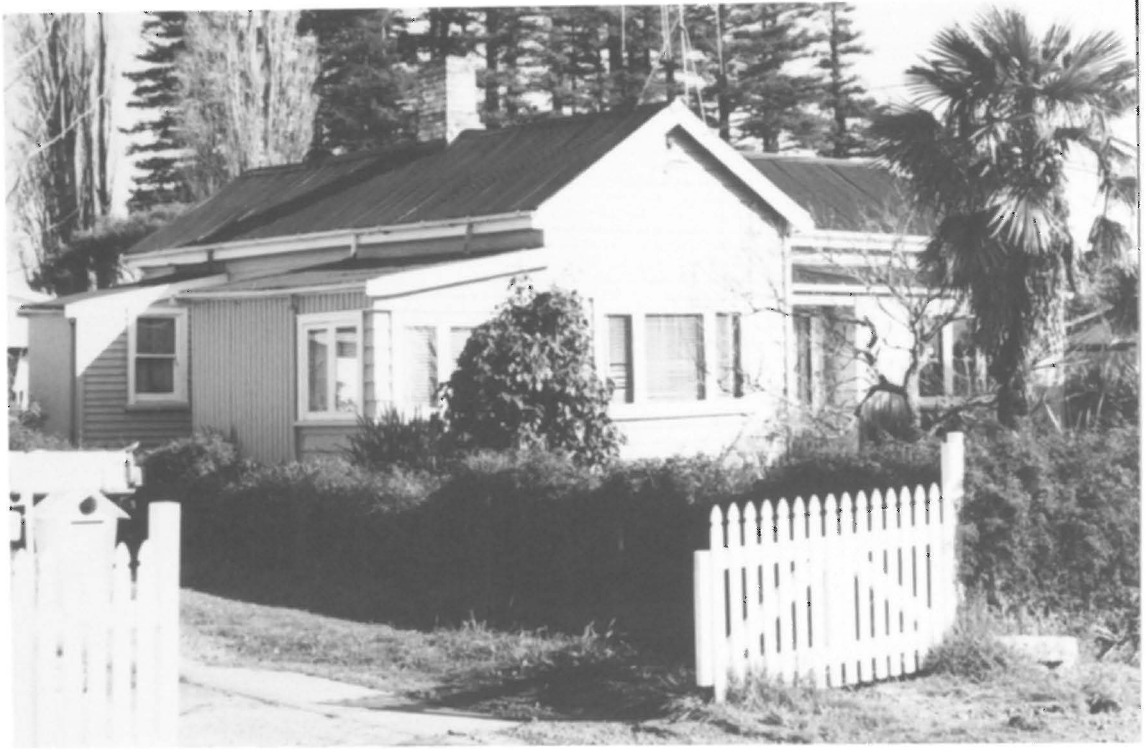


Plate 8 Pre-villa cottages, Wellington and Clyde Streets built c. 1900

Yet another is a house in Nixon Street which has been renovated, but it is very old, and probably constructed pre-1900 (VNZ Files, 1989).

Even in the mid 1970s it was difficult to see unchanged pre-1900 houses in Hamilton East. Most of the "dwellings have been so altered or renovated that the original structure is hard to recognise" (*Waikato Times*, 19 July, 1975). Stylistic mixtures, or the refashioning of structures (Conzen, 1960) are a common feature in Hamilton East, which result from residents remodelling older houses. The facade may have distinct components of two or more styles. This makes identification of period-style very difficult, but VNZ Files (1989) now record such remodelling. Very substantial remodelling can amount to rebuilding because the older house is buried in the new one. Changes "occur when a smaller earlier house is incorporated into a larger, later house of a different style" (McAlester and McAlester, 1984, 14). At least two nineteenth century houses have been totally remodelled in this way, and cannot be identified as pre-1900, using their facades. One faces Steele Park across Cook Street and one on the Von Tempsky and Beale Street corner (VNZ Files, 1989).

Housing forms in Hamilton East during the 35 years to 1900 were typical of rural and village housing in New Zealand after 1860. There is also considerable visual evidence that these local house forms were typical of rural housing in other countries colonised by mainly British and Irish migrants. Hamilton and the Waikato tended to lag behind other towns in New Zealand in terms of middle class and upper class house styles. Hamilton East did not acquire its decorated Victorian houses until after Queen Victoria died in 1901. The nineteenth century styles represented were unprepossessing, unconscious expressions of those times (Lewis, 1975). They resulted from a variety of influences including the use of local initiatives, New Zealand resources and the overseas experiences of the people. The house forms were suitable for the social patterns (lifestyles) at the time of their creation

(Johns, 1965), but even in Hamilton East different social classes were reflected in different house forms.

By 1900 some of the original one acre allotments had been the site of three generations of houses; slab cottage, weatherboard settler cottage, and pre-villa cottage. Plates 9-12 show some women and children outside four houses from the period. None of these houses now exist. There are just enough 'relict forms' still extant, to be observed, but the physical remnants of pre-1900 styles are really very fragmented in the present Hamilton East townscape.



Plate 9 Vercoe house, Hamilton East c. 1899 WMAH



Plate 10 Pearson house, Nixon Street c. 1900. House built 1874? verandah added later. WMAH



Plate 11 Holloway house, Grey Street c. 1890s-1900s WMAH



Plate 12 Mrs Nunn and daughters Firth Street, outside a pre-villa cottage WMAH

THE VILLAS

The second major period-style identified in Hamilton East is the villa. It is a style known to some members of the New Zealand public by name and is used in the real estate industry (*New Zealand Herald*, 14 December 1988). Yet individuals and Hamilton estate agents sometimes use the word 'villa' incorrectly when referring to 1920s bungalows. It cannot therefore be considered a term in common usage today. In Auckland real estate publications accurate use is made of the term.

In Hamilton East, there was not much building activity in the 1890s, given the economic depression. Villas were built from about 1900 or a little earlier to about the end of World War One. In Auckland, the villa became fashionable earlier, in the 1890s (Anon., June, 1958b). At the end of the villa period transition styles, villa-bungalows, evolved, and there are even some examples of early bungalows from the time of World War One (VNZ Files, 1989). The occupants of these first bungalows must have considered that their houses were the height of fashion in Hamilton, and yet it was only at the turn of the century that the proud residents of the first villas were in the same position. Just as the pre-villa cottage was an early simple house form out of which the villa developed (Anon., June, 1958b; Hill, 1985) the villa-bungalow was a stage in the housing transition that saw the end of the villa.

Each period-style became popular at different times in the provincial towns and townships from the main centres of population (Murton, 1984). Hamilton has never been at the cutting edge of architectural fashion, having always been behind Auckland (Bell, pers. comm., 1989). Hamilton's peak year for the construction of villas was probably about 1910, which Murton (1984) claims was the same for Gisborne.

The villa was a sign of the times, the archetypal Victorian town house (Salmond, 1986) even though Queen Victoria died in 1901. It was a Victorian house built in Edwardian times, as a result of New Zealand's remote position from the centre of Victoriana in Britain. Observation of British houses from the last decades of the nineteenth century illustrate the significant influence they had on the New Zealand villa. The basic characteristics are virtually identical notwithstanding the different building materials and the different number of storeys. Just as each period left its distinctive material residue in the townscape (Conzen, 1960), Hamilton East has a good scattering of villas in which 'house watchers' can observe the results of decisions made 80 or 90 years ago. Observation of this physical legacy in the urban landscape left by past generations of Hamiltonians is useful when interpreting the sources of influence. The villa was very distinctive but it actually amounted to a range of variations on the theme 'villa': square villa, bay villa, centre gutter villa, corner or return verandah villa. Some were substantial houses, while others were very modest (plates 13-19).

Fashion

Villas were built in Hamilton East because they were the fashionable house in New Zealand. Everyone who built a new house in that period conformed to the popular style of the period, except those who employed an architect. The notion of a proper shape in a house was and still is governed by taste, a nebulous compound of morals and aesthetics (Johns, 1965). Conforming to conventionally accepted standards was very important in Victorian and Edwardian society and even humble houses embraced some of the prevailing ideas of what constituted 'good taste' (Johns, 1965).

While house styles are determined by taste, different cultures and subcultures have different tastes (Rapoport, 1977). People



Plate 13 Renovated 1916? square villa, Albert Street



Plate 14 32 Albert Street built c. 1912

often claim that their tastes are based on practical grounds. That is "ludicrously untrue in most instances" (Lewis, 1979, 17). To trace the path of taste, fad and fashion across geographic space and historic time tells much about the culture of the residents. During all of this century the rural and suburban landscape of Hamilton East has been dictated by the vagaries of fashion, as has happened all over the 'Western' world (Lewis, 1979, 17). Fashion is much more central and important than is generally assumed and operates in many diverse areas (Griffiths, 1979; Rapoport, 1977). Just as the McAlesters' report from the United States of America, all this century Hamilton East's houses have been designed consciously to mimic current fashion.

As such, they show the influence of shapes, materials, detailing, or other features that make up an architectural style that was currently in vogue (McAlester and McAlester, 1984, 5).

The word 'style' is synonymous with the word 'fashion'. Most people avoid building eccentric houses just as they avoid eccentric hair cuts or clothes, because they are each a basic expression of unspoken cultural values (Lewis, 1975). What is known as style is the outcome of systems of consistent choices. Building styles and lifestyles result from consistent inclusions and exclusions of possible alternatives (Rapoport, 1980). Taste in housing can be an expression of lifestyle and used to stress identity (Rapoport, 1977). During those early years of the century, status and identity were expressed by the residents of Hamilton East using their houses as symbols. The larger the house, the higher the stud (that is the floor to ceiling height), and the more decorated the house, the greater the status of the people. The smaller, older, plainer the house, the lower the status of the residents.

Status

Because villas were and still are relatively common they have not been listed for their historical or architectural qualities by the HPT. Two Hamilton East houses from the period have, however, been listed at the two extremes of status. One of these is an unusual 'cottage' villa at 32 Albert Street (plate 14). Now well maintained it was described by a valuer as "one and a half storey design, not attractive" (VNZ Files, 1989). The other is one of the most prestigious houses in the Waikato, which was built for a Member of Parliament and journalist and his family about 1911-1912 (plate 15), and named after them, Greenslade house (HPT Files, 1990). An Edwardian brick 'townhouse', it probably is the best known house in Hamilton East. Built on the site of Isaac Coates' demolished house, it was used by its owners and architect to express identity and status, and to be seen from a distance, from the Victoria Street bridge and the western side of the Waikato River.

The northern area of Hamilton East was developed during this period with the high status of its residents, reflected in their houses (Johnston, pers. comm., 1989; VNZ Files, 1989). Von Tempsky Street was newly built in 1904 (Leitch, 1981). Here a "premium was placed on view sites" (Ley, 1983, 20), and expensive villas and later substantial bungalows were built above River Road overlooking the Waikato River. The area had a much more open aspect then, before the maturing of so many trees (see plate 2). Professional residents (Cleave, 1916; 1920) selected these prime sites including the area where Parklands Private Hotel now stands (a converted villa). One enormous villa with a verandah 62 feet (19 metres) long, was occupied by the Wardell family (VNZ Files, 1989), but converted into the Opoia Private Hospital in 1920. These favoured sites, and the high quality houses, expressed personal success and a commitment (Rakoff, 1977) to Hamilton, not seen in earlier times.



Plate 15 The rear view of Greenslade house, Wellington Street built 1911-1912, undergoing renovation 1988



Plate 16 Decorated bay villa, Coates Street built c. 1908

Good taste dictated that villas faced the street (Department of Internal Affairs, 1940; Keith, 1983a) just as was the custom in Britain (Salmond, 1986) and America (Smith, 1965). Laundries and kitchens were 'hidden' at the back, being the realm of servants and women. The 'best' rooms faced the street. The parlour and main bedroom were designed to be looked at from the street, and were considered the rooms from which to view the street and the neighbours (Fearnley, 1986; Smith, 1965). None of Hamilton East's remaining villas stands in a rear section, although some were closer to the road than others.

Appearances

Because every house faced the street the layout did not take into consideration of the position of the sun. This was in spite of the early settlers' knowledge that the best aspect for a New Zealand house was facing north and east (Keith, 1983a; Penman, 1965; Salmond, 1986). Sun, and health and outdoor living and sporty informal activities did not play a big part in the Victorian or Edwardian lifestyle. Middle class morality dominated every facet of life. It was high minded, demanding good manners, hard work, good posture and much importance was attached to appearance, or "putting on a show" (Salmond, 1986, 89). This, of course, was extended to housing, and fundamental to the favoured house designs.

Contemporary real estate advertising reflected typical housing:

- "House (new) 6 rooms, bath and scullery, hot and cold water; Hamilton East" (*Waikato Times*, 10 July 1908).

- "Five-roomed house on quarter acre section, Hamilton East, 70 foot frontage £295" (*Waikato Times*, 4 August 1908).

Fashion was reflected in contemporary products advertisements. Hamiltonians were encouraged to invest in the latest metal ceilings which, "transforms the old-fashioned dwelling into a beautiful modern home, that will be a source of comfort to you and future generations" (*Waikato Times*, 10 July 1908). The latest newly imported fashion accessory, the Marseilles roof tile allowed Hamiltonians to "Modernise the old house...realise the advantages of up-to-date living...how infinitely superior to your own galvanised roof" (*Waikato Times*, 10 July 1908). These tiles were an expensive alternative to corrugated iron, commonly used in France and Britain.

An octagonal shaped villa may have been the first purpose built 'flats' in Hamilton East (plate 17), and it is still occupied by more than one household. It was built about 1904 on the corner of Dawson and Von Tempsky Streets as a revolutionary house form, in more than one sense. It was designed to rotate on rollers, but the plan was reluctantly abandoned and it was built as a fixture. As early as 1906 it was occupied as "two apartments of four rooms each" according to Geoffrey Roche, Curator of the Waikato Historical Society, who as a child witnessed its construction (*Waikato Times*, 4 February 1959).

Decoration and symbols

The Victorian passion for display in housing (Wilson, 1950a) led to bold, imposing and prominent decoration which could be viewed from a distance (Fearnley, 1986). Even today villas tend to be the tallest of the single storey houses. Salmond (1986) claimed the finials, the narrow pointed finishing features at the peak of the gables were included to prevent witches landing on the roof. The villa's predecessors owed most to function, but during the villa period, 'style' was thought of as something distinct from function. The corollary of the concentration on style was that

external decoration was fashionable, at least on the front elevation (facade).

'Western' culture in the mid to late twentieth century has put a premium on originality and independence (Rapoport, 1969). During the villa era, originality did not extend beyond the decoration on the house, and all houses contained the same elements in similar places. There was a formality about Victorian life which meant the internal layout of the houses was also formal, almost standardised. The formal villas suited the formal social patterns (lifestyles). Both the external and internal features showed how the people lived (Meinig, 1979). Everyone conformed to the rules of dress and behaviour, at least on the surface. If the codes of behaviour were broken it was in secret. Etiquette was everything. Just as there were manners in behaviour there were manners in housing, gardening, soft furnishing and wall coverings. The so called colonial period of formality, lasted in Hamilton East until World War One, "influenced by our Victorian background" (Fearnley, 1986, 83).

Architectural forms were used by Victorians for symbolic rather than functional reasons (McLintock, 1966). The symbolic meanings of the facades, the form, and the layout of villas all functioned like a code which all the residents understood. It was not a cryptic, subtle code but public knowledge. Respectability came with conformity to the code, in which status was shown by decoration. The villa, or Victorian town house stressed status and public appearance more than any other value (Keith, 1983a). In Hamilton East there was a range of decoration. The older houses, pre-villa cottages were plain and lacking in decoration. Other modest and plain houses from the villa period, and from the later periods, tend also to reflect obvious economic constraints on their owners. From the street such houses are difficult to classify in terms of a period-style, and are described as 'baches' in the VNZ Files (1989).

Hamilton East also had its share of villas which reflected symbols of affluence and higher status and were highly decorated on the door and window openings, the verandah and the roof wall junction. The total stock of villas still occupied does not appear to be as exuberantly patterned as the houses shown in texts about colonial architecture (Fearnley, 1967; 1986; Hill, 1985). This is probably because Hamilton East's carpenter architects were typical of the country as a whole, not exceptionally artistic, and Hamiltonians were able to afford, typical rather than exceptional houses (plate 16). Hamilton villas conformed more to the range of photographs shown in Salmond (1986).

The timber industry in New Zealand was large and highly mechanised by this time, and turned out a variety of components for villas and cottages (Salmond, 1986). The villa was essentially "the New Zealand carpenter-designed house" (Fearnley, 1986, 70) but using mass produced, standardised components which were portrayed in the merchants' lavish catalogues. These products were purchased by enterprising carpenter architects of the villas who were the "leaders of popular housing fashion" (Salmond, 1986, 10).

Unlike their predecessors these were "self conscious houses" (Department of Internal Affairs, 1940). Villas reflected how the people perceived a house should look. In the people's image of the proper house, fashion, conformity and, paradoxically, independence demanded a verandah, for its appearance, not its use in terms of shelter from the climate or to store belongings. The verandah was too narrow to be of practical use, but as the main approach it made the first impression on the visitor. The verandah was always positioned facing the street, not to shelter the occupants from the sun. By its decorative character it made "a statement about the house and the status of the owners" (Fearnley, 1986, 103). Where a house occupied a corner site, the most prestigious, there was invariably a return verandah along

both of the sides of the house facing the street. In Hamilton today, there remain several corner villas designed specifically for their prominent sites at cross roads (plate 18), with two decorated facades. Their owners paid to make them more prominent, and even today they cause comment from members of the public who are interested in houses.

Cultural diffusion

People normally draw their ideas from other people, choosing what they consider to be proper and desirable (Newton and Napoli, 1977). Cultural diffusion is the transportation of ideas and objects from one group to another. Information is diffused or spread spatially by a number of media. It can be diffused today by satellite so that the latest architectural innovations are available simultaneously world-wide. In considering the sources of inspiration for Hamilton East's period-styles, cultural diffusion looms large as a determinant of architectural characteristics.

Cultural diffusion was significant in the design of villas. It is certainly distinct and typical of New Zealand. The name 'villa' does not appear to have been applied to similar houses in other parts of the world at that time, although it is a word that has been applied to houses in various parts of the world at other times. Influences on vernacular architecture, the housing of the ordinary people, appears to have crossed the oceans in both directions at that time, particularly between the English speaking countries of the Old and New World. Grey (1984) researched the provenance of New Zealand's human geography and culture, and concluded that Victorian British heritage was partial, diluted, and changed by Australian, North American and indigenous influences. A diffusion of ideas related to the villa period-style can be demonstrated between New Zealand, Australia, Canada, the United States and Britain.



Plate 17 Octagonal shaped villa, corner Von Tempsky and Dawson Streets
built c. 1904



Plate 18 Corner villa, Clyde and Galloway Streets built c. 1906

- The villa has identical features to the 1880s 'boom' house, the ornamental miniature mansions of California, described and pictured by Barbara Rubin (1977, 524).

- There was a similarity between American houses and the New Zealand villa (Hill, 1985; Murton, 1984).

- Hamilton's one storey villas had much in common with houses of the North Eastern United States built between 1880 and 1900. Rickert (1967) described tall houses with high ceilings, and corner towers like European castles (and Greenslade house). As in Hamilton East the status of the owners was increased by the height of the house, the amount of facade decoration and the ornate corbelled (patterned brickwork) chimney.

- The features of villas were copied from Australian and Canadian architectural features (Department of Internal Affairs, 1940).

- There was a Gothic revival in British housing 1880-1900 (Johns, 1965). Without the second storey, and using timber not brick the New Zealand villa had many features in common with the late Victorian British house (Hill, 1985).

- The boom style small house popular in Australia at the end of the last century shared many extravagant features with the villa of New Zealand, according to Robin Boyd's description (Boyd, 1968, 61).

When considering the villa in retrospect, critics' views have varied through time. The villa period was characterised by a "multiplicity of style and the taste for excessive ornamentation" (Department of Internal Affairs, 1940, 14), because the decoration was simply a false facade, a sentimental veneer on the functional cottage (McLintock, 1966). Such critics failed to

recognise that those Edwardian residents of Hamilton East and elsewhere in New Zealand were perfectly entitled to believe that an appropriate, acceptable and 'proper' house had to be imposing and ornate. The world view of the working and middle class culture required that the people conformed to the norms of the time.

A number of Hamilton East's villas were demolished in the early 1970s (VNZ Files, 1989) and since (plate 19), including one early in 1990, causing some residents to be disappointed at a further loss of local heritage. Time has mellowed the critics. Villas were well built and exuded solidity, security and self esteem (Fowler and Van de Voort, 1983; Griffith, 1979). Restoration of villas has been big business in Auckland in the late 1980s (*New Zealand Herald*, 14 December 1988), and some restoration has occurred in Hamilton East. Most of the remaining villas have been reasonably well maintained. In the past there were attempts to 'modernise' villas, but today renovation undertaken 'wisely' (Hill, 1985), in keeping with their original period-style image, is more common.

Salmond summarises the essence of the villa's imagery and provenance:

The New Zealand villa did not obey the rules of taste dictated by English trained architects. Instead, it followed the inclination of the 'carpenter architects' who liberally re-interpreted ideas circulating around the colonial countries of the Pacific Basin. They took the simple Georgian cottage and added American Gothic bargeboards, the Anglo-Indian verandah, Australian cast iron or its wooden equivalent, Welsh slates, French tiles and classical stone details reproduced in timber. From this exotic mixture they produced the first mass-built New Zealand houses (Salmond, 1986, 12).



Plate 19 A 1970s photograph of a Clyde Street villa, demolished in the 1980s

THE BUNGALOWS

The villa had "resisted all other challengers until war, austerity, more confident public taste and the bungalow finally overcame it" (Keith, 1984, 85). For the whole period between the two World Wars the bungalow ruled supreme in Hamilton East, elsewhere in New Zealand and was the dominant house style in Australia. The bungalow is the third period-style identified. This account concentrates on the influence of the inter-war lifestyles, the importance of detached housing, technological changes, improving communications and travel times, and the diffusion of the style from its Californian origins.

A great deal has been written about the bungalow, including complete books (King, 1984). It was the first truly twentieth century house in New Zealand, and the style was popular in so many parts of the world that King (1984) believes it was the first example of global diffusion of a house type.

In Hamilton East there are many variations on the theme 'bungalow' (plates 20-23), or what Rapoport (1969, 134) refers to as "model, and variations", but the varieties do not have well known technical or common names. There is certainly evidence of very utilitarian models reflecting the economic woes associated with the depression in the late 1920s and early 1930s, for Hamiltonians suffered severely in the depression (Gibbons, 1977). It seems there have always been some residents of Hamilton East, however, whose income did not stretch to the classic version of a style and who built baches or cottages with some features of the in vogue period-style. Bungalows were exuberant, informal, spacious and well built during the good years of the early 1920s. In the depression they were sober, severely simple, austere, dour and withdrawn to match the bad times (Salmond, 1986).



Plate 20 Bungalow in Albert Street built c. 1924



Plate 21 Bungalow cottage in Albert Street

The word 'bungalow' is rarely used in New Zealand. Anthony King's (1984) explanation for the infrequent use of the term 'bungalow' in Australia is that as the majority of houses are detached, single storey and occupy a whole section - internationally identified as the model bungalow - what use is there for the term bungalow? Perhaps his explanation applies equally to New Zealand where most of the houses are bungalows, and so they are simply called houses. In the 1920s, 'bungalow' was a buzz word used by members of the real estate and building industries for any detached houses that were 'not villas', including the transitional, 'semi villa' or 'villa bungalow' style (Keith, 1984; Salmond, 1986).

Changing lifestyles

The bungalow reflected a changed lifestyle with an emphasis on practicality (Keith, 1984). The residents of the bungalows had rejected Victorian values and standards and their new houses represented new twentieth century, future-orientated standards. Every person who occupied a bungalow was promised a new kind of lifestyle, the Californian lifestyle, which was modern, sun loving, individualistic and 'cushy' (Chase, 1981). The imagery used to attract the migrants to California was reflected in the houses they built (Rubin, 1977). In the 1920s, life in Hamilton East was quite different from life in the pre-war period. Houses and lifestyles were more casual and the bungalow was considered an important part of that image. There was an informality in housing, furnishings, and furniture as well as in the wider fields of clothing, music, dancing and in behaviour, reflecting a new freedom. The new generation of Hamiltonians were more relaxed, more mobile in their cars, more worldly wise in their comfortable houses.

Suddenly Hamiltonians discovered the merits of the climate for indoor-outdoor living, which their new bungalows encouraged, with

the inclusion of porches, to be used not just looked at, outdoor living areas and French windows. They valued this indoor-outdoor living in a way the culture could not have 'allowed' in Edwardian times before World War One. The promoters of the bungalow claimed it was a holiday home to be lived in all the year round (Chase, 1981), integrating house and garden, health and aesthetic benefits. It was an artistic house. Health, sun and sport "as an idea" in housing constituted a new symbol (Rapoport, 1969, 132).

"The bungalow style was not just a way of building, it was also a new way of life" (Salmond, 1986, 185). For the first time, the front door was not required to face the street, because the people allowed the house to stress private rather than public values. They could concentrate on living their lives inside the house and garden, not on the public values of status and class (Keith, 1983a).

The inside of the bungalow was less symmetrical than the villa, the space being available to use more flexibly. Rooms had new names, new shapes and new positions.

The very names of the rooms suggested a different lifestyle - 'living room' for parlour, 'breakfast room' for dining room, 'kitchenette' for kitchen (now combined with scullery), 'laundry' for wash-house. Verandahs became 'porches' and there might be two, three or even more of these (Salmond, 1986, 206).

In the villa there were no built-in cupboards. All the belongings were displayed, to stress the status of their owners, but also creating additional housework. Inside the bungalow, concentration was on convenience and practicality. The bungalow was full of fitted cupboards, and many products were becoming available to assist with housekeeping. The same problems of hygiene have always existed, but the importance attached to hygiene and to the form of kitchens and bathrooms greatly increased at this time (Rapoport, 1969). Knowledge of germ theory lead to this concentration on domestic cleanliness (Wright, 1975), but these

changes are also related to changes of values, attitudes and images, not only utilitarian and practical considerations (Rapoport, 1969). There were some practical considerations. In North America, a major reason why the bungalow was preferred to Victorian housing was because it was easier to clean, paint, roof and maintain, and for the occupants of bungalows it was easier to avoid the health hazard related to dirt and decay (Ford, 1986). Just as home cleanliness became important, so did personal hygiene. The bathroom became a more important room, comfortable and placed at the centre of the house, not relegated in the lean to. The bathroom had acquired the social status it retains today (Salmond, 1986).

All villas and all bungalows were detached (plates 20-21). Rapoport (1982) claimed that it was the meaning of the 'detached' feature of the house that was even more important than the reality of the house style. The detached house has consistently been the most favoured in English-speaking former colonies. The individuality of the California bungalow contrasted strongly with much of the housing in Britain at that time, and before. In his study, Holdsworth (1984) showed that migrants to Canada were seeking a quasi-rural suburbia with the ownership of a detached bungalow on a separate section. That is precisely what was also available in New Zealand. Hamilton East was, and still is in the main, classic suburbia (plate 22). It is an inner suburb geographically, but it has never been urban. Southern California in the 1920s was the primary basis of the symbol of a suburban landscape (Meinig, 1979). The houses built in the former British colonies are "the forms of dwelling and property which British people have chosen when given the greatest economic and political freedom" (King, 1984, 224). Even at home it is the single storey detached bungalow to which a large majority of British people aspire, in spite of much housing being joined in pairs and rows.

The 1930 - 1935 recession paralysed Hamilton and there was great distress. From the beginning of 1935 to the start of 1938 there

were signs of return to prosperity with an upsurge in building activity (Gibbons, 1977). Some very comfortable bungalows with typical 1920s characteristics were built in Hamilton East. Today the better maintained late 1930s bungalows compete very favourably with post-war houses in terms of style and quality of appearance. Often built of brick, with elaborate brickwork patterns and unusual arched windows there are some in Dey, Naylor and Grey Streets.

Changing technology

Major changes in technology have influenced housing style but not determined it. Many innovations introduced in the 1920s have not been superseded, so that 1920s houses have not become technologically obsolete. Ford (1986) claims that bungalows in San Diego have not dated nor become obsolete. Superior craftsmanship at that time may mean that present day buyers consider bungalows superior to newer houses. In North America many features of these houses allowed them to remain popular. These included built-in bookcases, fireplaces, and formal dining rooms. Perhaps it is this "romantic past" (Ford, 1986) that Hamilton's estate agents refer to when describing these sought after houses today as, for example

- 'a character home',
- 'a mature and mellow home',
- 'the elegance of yesteryear',
- 'unique city character',
- 'character cutie', or
- 'character in styling' (plate 20).

The words 'California' and 'bungalow' do not appear in the advertisements but invariably the word 'character' is included. The word 'character' is part of the image of this period-style deliberately presented to the public. The real estate industry



Plate 22 Members of the Winter family outside their 1922 bungalow in Cook Street about 1925. This house has been converted into church premises. Phyllis Johnston photograph



Plate 23 Bungalow now used as the Hearing Association premises, Wellington Street

in New Zealand, as in North America, has contributed to the perceived meanings of the various house types, through time, by effectively conveying messages about them in the practice of advertising (Samuels, 1979).

The 1920s houses were built after a great technological leap (Ford, 1986). Hamilton was supplied with electricity from Hora Hora power station on the Waikato River from 1921 (Cassidy, 1984; Young, 1964). New houses were provided with indoor plumbing, hot water systems, gas and electricity when they were constructed (Keith, 1983a; Salmond, 1986). Electrical appliances were available for purchase. Hamiltonians, like other New Zealanders, enjoyed the benefits of the wireless, the vacuum cleaner, and other labour saving devices, as the early fruits of the consumer society (Keith, 1983a). Their houses were cleaner, and promoted in the advertising as more efficient than earlier housing because 'science' and technology had entered the domestic realm (Salmond, 1986). Many of the new household appliances resulted from the miniaturisation of early hotel equipment after World War One (Hayden, 1984). These were the first houses built to accommodate the car, but as in North America, these were the last houses to be constructed by old fashioned high quality crafts methods (Ford, 1986). One of "the social effects of technology" (Lewis, 1979, 31) is that the use of the products of the consumer society has contributed toward changes in house styles, as well as to the lifestyles of the residents.

Relph (1981) also recognised that between about 1900 and 1920, there was a period of great technological and cultural change. This was when the quaint, floral covered, decorated Victorian period was separated from what he called the "machine age". "The new aesthetic evolved rapidly" (Relph, 1981, 66), partly self consciously through the work of artists and architects. Ornamentation was eliminated, for in the new aesthetic the people came to consider it superfluous. No longer was the past looked at for inspiration. People looked to the future. Everything was

thrown open to admit fresh air, daylight and sunshine (Relph, 1981).

It was during the bungalow period that alternative building products also became available which changed the appearance of houses. "New Zealand settlers had ready access to an enlarging pool of technical resources and adaptive examples from nearby Australia and North America, as well as from mother Europe" (Grey, 1984, 67). The once plentiful supplies of native timbers were scarce and a number of products became available from abroad and at home, which were the basis of stucco (cement plaster) - a common and fashionable external wall covering in the inter-war period. It was the basic wall covering for the Spanish Mission style discussed below (Salmond, 1986).

Cultural diffusion

In New Zealand, Australia, Canada and South Africa, the bungalow struck the same sympathetic note for those seeking a suburban alternative, that motivated their migration from Europe (Holdsworth, 1984). Hamilton East was just one suburb, where an added attraction of the California bungalow style was that it had come straight from fashionable, advanced, West Coast United States of America, which could be seen in the movies. The Californian lifestyle was first depicted to the American public by this unprecedentedly powerful propaganda medium. Then all the other countries which acquired access to the cinema were shown the glamour of California. Mostly subconsciously, Hollywood put before the eyes of the world a selective, idealised California landscape, as if it were the best in American life. It was the obvious standard to strive for and a model for the future (Meinig, 1979). Hamiltonians read about the world of Hollywood in the *Waikato Times*. The brave new world of the imported culture was disseminated through the written word, films, radio, dance halls and bands (Gibbons, 1977).

This diffusion of the bungalow ideal world wide took the form of "information diffusion about architectural styles and building methods between areas and groups" (Rickert, 1967, 213). It also spread information about the new technology (Wright, 1975). In Hamilton East, it can be demonstrated that Rickert (1967) was correct when he claimed that diffusion of architectural styles has become increasingly rapid through time. Today, new ideas arrive at the same time as they reach the public in the country of their origin. Southern California was the source region of the new lifestyle and Pasadena was where the architects Greene and Greene designed the original California bungalows (Chase, 1981; McAlester and McAlester, 1984; Rubin, 1977). The Hamilton East versions and the majority of bungalows in New Zealand, California itself, and world wide were probably only the "distant cousins" of the influential architecturally designed original houses (Keith, 1984,85).

The New Zealand version favoured strongly its American counterpart (Salmond, 1986). The Hamilton East bungalow was typical of the style as it developed all over New Zealand, Canada, Australia and the United States. "In the architecture of New Zealand cities and towns, more than simple parallels with North America are found" (Grey, 1984, 75). This diffusion of housing styles was part of an altogether larger twentieth century phenomenon, referred to as 'internationalism' (Relph, 1987). New building technologies and faster travel and communications have contemporaneously assisted in the dispersal of ideas. People have travelled more, carrying with them and borrowing designs to work equally well everywhere. For those who did not travel there were professional journals and commercial products that had been "exported, imported, copied and deliberately designed for international consumption" (Relph, 1987, 9). This process has been accelerating through the century and is still resulting in the diffusion of architectural forms like the post Modern

architectural features of the 1980s townhouses constructed in Hamilton East. (See the final section of this chapter.)

Alan Grey (1984) explained diffusion in this way. External influences depend on the range and frequency of outside association, and internal perception of the need for, and appropriateness of foreign ways and things. He also discussed the range of media through which the widening exchange of people, goods and ideas have been transported through the mediums of telegraph, telephone, high speed printing press, radio, television, cinema and aeroplane. With the bungalow, wherever "plans and designs could be mailed the style could be found" (Holdsworth, 1984, 196).

New Zealanders have used the enlarging field of information and trade to draw upon the experiences of other pioneer communities, Australia and North America. As the principal destination for British emigrants, the United States exerted a strong influence (Grey, 1984). The introduction of cheaply printed books and magazines allowed New Zealanders to copy the style (Hill, 1985) and made it possible for everyone to see what everyone else was building (Lewis, 1975).

A form of deliberate diffusion was the publication of thousands of bungalow plan books and magazines. Rubin (1977, 526) refers to these plan books as "vehicles for proliferation of the style". Grey (1984, 75) claimed that published sources may have "been a primary means of the introduction of bungalows to New Zealand". The first plan books were American but soon they were printed in New Zealand. The Los Angeles Investment Company published bungalow booklets in New Zealand from 1913 (McLintock, 1966). These books were cheap and contained plans, photographs and descriptions. They spread a kind of social propaganda (Chase, 1981; McIntock, 1966). In effect, the culture of one group, Americans or Californians, was deliberately transmitted to members of another group, New Zealanders or Hamiltonians through

enculturation. This led to a world view shared by the two groups. People in both groups then made the same consistent choices in choosing bungalow style houses (Rapoport, 1984).

Spanish Mission style

There are a few examples of the 'Spanish Mission Revival' style scattered through Hamilton East (plate 24). This was another revival (Department of Internal Affairs, 1940) style which was influenced by trends on the West Coast United States of America. It had only a minority following in New Zealand, perhaps because the bungalow was so ubiquitous. It was a style that probably introduced only external elements, and the internal layout remained similar to the bungalow. It was a style in which colour was significant, and perhaps essential. Preferably walls were white and roof tiles were red clay. There is little reference in the literature to this style except in passing (NZCIH, 1971). In Southern California "Mission Stucco" (Meinig, 1979, 126) was a significant style. The style was a fashion imported into New Zealand via Australia in the 1930s, which with the new materials like stucco, common in the 1930s, indicated an "increasing concern with domestic symbolism" (Reynolds, 1977, 81).

These houses brought novelty to the depressed and conservative market of the 1930s. They did not appeal to all tastes, and were "often built on leftover sites in earlier bungalow subdivisions" (Salmond, 1986, 217). At the end of the depression, private house builders turned to this novel and exotic form; the inspiration having come from the movies, or "film-set facades covering old plans" (Salmond, 1986, 185).

Clearly, the changes that occurred between the villa and the bungalow, and between bungalows and later period-styles are "not due to changes in physical needs, but rather to changes in the image, the symbol and the fashion" (Rapoport, 1969, 134). The



Plate 24 Spanish Mission style house in Grey Street, built in the 1930s

villa and the bungalow were different both externally and internally, but the methods of construction remained the same - simple and reasonably inexpensive. The two period-styles were really of different centuries in spite of both being built this century. They were of different generations of people, different lifestyles, almost of different worlds. In Hamilton, the two period-styles were separated by the Great War, an 'event' of great consequence which symbolised the going out of the old and the coming in of the new. In came optimism, freedom and affluence (short lived); out went Victorian morality and the artifice characterised by the villa.

Anthony King (1984) wrote of a wider definition of the word 'bungalow' than the house form which was constructed in Hamilton East. It is nevertheless clear that the Hamilton East bungalow style was representative of the transnational house which resulted from global diffusion from a number of core areas to an even wider periphery. The bungalow was probably "... *the*, first common house type...to break national boundaries and become part of an international, though capitalist urban culture..." (King, 1984, 259). This diffusion represented the transfer of institutions, images, ways and models of living, and a particular kind of material and non-material culture (King, 1984). The result was an artistic house achieved using imagination, but the 'bungalow aesthetic' was more than just a house.

The bungalow period-style produced in Hamilton an enthusiasm for the bungalow and for the comforts associated with it. The first truly twentieth century style of house constructed in Hamilton, has never gone out of fashion. Up-dated versions of the bungalow have continued to be built in every decade. Some of the late twentieth century townhouses owe much to the bungalow - the same type of image, the same proportions, comfortable, uncluttered, people-oriented houses, but without some of the 1920s definitive external characteristics.

THE STANDARD NEW ZEALAND HOUSES

This is the fourth period-style identified in Hamilton East. It evolved from the California bungalow and the so called 'Arts and Crafts' movement in high style architecture (McAlester and McAlester, 1984). Built between about 1938 and 1969, this period-style comprises about 56 per cent of the total housing stock of Hamilton East in 1989 (calculated from VNZ Files, 1989). It has neither a common name nor a technical title, hence the phrase the 'standard New Zealand house' used by the New Zealand Commission of Inquiry into Housing (NZCIH, 1971) and by Mitchell and Chaplin (1984). It could also be considered the post World War Two 'bungalow', but that term "has little place now in the New Zealand vocabulary" (Fearnley, 1986, 103).

This account considers the influences which contributed to the State houses built in Hamilton East and the 'flat' roofed houses, distinctive but not common in Hamilton East. The rest of the discussion focuses on the stock detached post-war house. The majority of Hamilton East's approximately 320 State houses were first occupied between 1939 - 1942 (VNZ File, 1989). The influences that determined the style of the State house are explored. In their turn the State houses are identified as influential, in both a negative and a positive way, on the period-style as a whole. The rest of this section of the chapter is devoted to an analysis of the significant influences relating to the period-style, recognised as:

- the depression and the war,
- choice of construction materials,
- standardisation and the myth of variety,
- ideal myths about households, and
- the tidy suburban model.

This period-style is identified as resulting in the construction of virtually identical houses in Hamilton East over a prolonged period of more than thirty years. These are the stock or traditional single family detached dwellings, in which only superficial characteristics changed with time (Reynolds, 1977). The result has been that the house at the end of the 1960s was similar to that built in 1945, except for 'featurism', or accoutrements achieved by varied construction materials, roof lines and sizes of windows (NZCIH, 1971).

The State house

The State house or Crown rental house is the standard New Zealand house funded by public money, initially for rental. Modelled on the brick bungalows built in the 1920s for the rich, the State housing developments were initiated in the late 1930s all over New Zealand as part of the first Labour Government's housing policy (AJHR, 1937/1938, B 13A; AJHR, 1939, B 13A). The inadequate and over-crowded housing conditions in New Zealand which came to light in the mid 1930s led to a number of housing initiatives including the National Housing Survey (AJHR, 1937/1938, B 13A; Mills, 1985; Housing Survey Act 1935), the introduction in 1936 of the Housing Construction Department, and government recognition of the need for at least 20,000 houses nationwide (Horsley, 1986; Keith, 1984). In Hamilton East, the State housing developments took several forms:

- A large estate, or tract was developed on land formerly used as recreation reserve and known as Hayes Paddock. About 210 houses were built between 1939 and 1942. This is the only continuous area of one style of house in the whole suburb.

- Individual houses built amongst privately owned houses in various parts of the suburb between 1940 and 1961 (VNZ Files 1989).
- Clusters of houses, usually built along one road frontage or around a newly constructed cul de sac. These clusters comprised 8, 12, 16 or 19 houses, built 1946-1948 (VNZ Files, 1989).
- A group of four two storey terraced houses built in 1957 on public land next to the police station house (VNZ File, 1989).
- Groups of Crown rental pensioner housing, the first of which was built in 1951 (HCC, 1979; VNZ Files, 1989).

The style of State houses was determined by economic considerations. As part of a national initiative a large number of houses were built from public funds in a short time 1938-1942 and 1945-1948. Diversity was not permitted in times of economic stringency following the depression, and so a small range of standard models was built all over New Zealand. Plate 25 shows three styles including two pairs of semi-detached State houses. State houses have "formed the basis of ordinary one-storey New Zealand housing for several decades" (Murton, 1984, 116). Designed by architects working for the Housing Construction Department, the introduction of the Department altered the outlook of the building industry. The improvement in the standards of house design and suburban planning were fundamental to the Department's work. The result was "the familiar State house with its tiled roof and weatherboard walls" (Hill, 1976, 28). The government aimed to provide high quality housing for all, using the best quality materials, produced or manufactured in New Zealand (AJHR, 1937/1938, B 13A). The "current requirement to use indigenous materials strictly limited the range of finishes available to the designers" (Housing Corporation, 1981,

3). The first State house was occupied in 1937 (Keith, 1984), and in Hamilton East in 1939 (VNZ Files, 1989). The high quality of the construction has been widely recognised (VNZ Files, 1989), so that in 1989 the permanent preservation of an area of the Hayes Paddock estate has been considered as part of heritage preservation proposals. (See the sixth period-style.)

In terms of style, "like all good mass houses they were in no way remarkable. But they combined the minimum of utility with the minimum of dignity" (Mitchell and Chaplin, 1984, 31). The houses in Hayes Paddock estate and the cluster along Cobham Drive, a major arterial route, could be perceived as remarkable, because of their location, with regard to views. Built on public land perceived as prestige sites even at the time of their construction (Gibbons, 1977), they have continued ever since to attract comment about their amenity value. On the open market such land would have been expensive because of the value of views as "status indicators" (Ley, 1983, 161). Occupying elevated positions many of these houses face the Waikato River frontage or Hamilton Gardens, respectively. Elsewhere public housing is frequently constructed in less desirable neighbourhoods (Ley, 1983). Indeed, the ideal of prestige in selecting house sites changes with time, but tends to depend on social rather than physical factors (Rapoport, 1969).

State housing is the basis of the whole period-style. Much of it has now been purchased by the residents (VNZ Files, 1989) and so it cannot be separated from other lower cost housing of that period (plate 26), on the grounds of tenure. For example: of the original 16 houses in Newell Street, only six were Crown rental in 1989, but in Freyburg Street, eight of the original 12 were still Crown rental (VNZ Files, 1989). Neither can it be separated from private sector housing in terms of the facilities provided (Mitchell and Chaplin, 1984). In terms of quality, it is highly superior to some 'bach' type housing built at the time in the private sector (VNZ Files, 1989). For example, VNZ Files record:



Plate 25 Semi-detached State houses, Plunket Terrace, Hayes Paddock, built 1940-1942



Plate 26 Privately owned ex-State house, Jellicoe Drive, Hayes Paddock, built 1940-1942

- Former State house; "built 1942, early type State house, well built, good materials sold November 1954" (VNZ Files, 1989).

- Privately owned house; 1945 house "built of fibrolite, cheap in construction, shoddily built, a shocker!" (VNZ Files, 1989).

State houses are "characteristically New Zealand" designs (Johnston, 1976, 56). Indeed there is no clear evidence of cultural diffusion having a significant influence on the standard New Zealand house, except the 'flat' roofed style. In spite of several designs being used, so that no two adjacent houses looked the same (AJHR, 1937/1938, B 13A), *en masse* they are unmistakably Crown rental. Scattered through the suburb they are difficult to identify (VNZ Files, 1989). The Housing Corporation now has a policy of building in clusters, not in large estates (Grey and Davey, 1986), but the only example in Hamilton East is a group of four townhouses built in 1979 (VNZ Files, 1989).

The design and standards set by the Housing Corporation and its predecessors have had a "significant impact on the nation's building philosophy and practice" (Housing Corporation, 1981, 3). The private house builders tried to mimic State house standards, but not the small standard windows built near the roof line, the high window sills and the three foot square porches (Mitchell and Chaplin, 1984). The private house builder was forced to consider the appearance of their houses from the street, while State house planners could ignore appearances.

The 'flat' roofed style

In about 1938 an interloper 'crept' into New Zealand (plates 27 and 28). The 'flat' roofed style "must have seemed outrageous to



Plate 27 'Flat' roofed house Grey Street, built 1941



Plate 28 'Flat' roofed house, Nixon Street, built 1942, infilled with flats 1973

the owners and builders of traditional houses" (Keith, 1984, 85). The 'flat' roofed style was "just a fad" (Johnston, pers. comm., 1989) in Hamilton East, but it was the outcome of a very important trend, begun early in the century, in which the architectural *avant-garde* advocated simple lines, low maintenance and restrained facades (Wright, 1975). This was the Modern, Moderne, or International in high style architecture which took the form of "a full scale reaction against all previous architectural tradition" (McAlester and McAlester, 1984, 10). Hamilton East's 'fad' was a very delayed form of cultural diffusion, and even included several examples in the State sector. The hallmark was an absence of all non-functional decoration, and smooth wall surfaces were favoured.

Rickert (1967), an obvious anti-functionalist, noted the promotion of this style in the 1930s and recorded that only a small number were built in North America. The McAlesters (1984) claimed the style was of architectural significance, but never common in America or Europe. The same is true of New Zealand, but there are about 45 examples in Hamilton East, first occupied from about 1939 to 1955, (VNZ Files, 1989). It was therefore a pre-war style, built mostly during or after the war. The Berescourt area of Hamilton has some noteworthy examples of this style, but most Hamilton East examples are particularly weak architecturally even as vernacular housing. Some are essentially baches, built in this 'style' for economic reasons (VNZ Files, 1989).

The differences between this and other styles were all in the external features. The plan was little different from the more conventional houses (Keith, 1984). The roof of a house is a symbol of home. The pitched roof is said to be symbolic of shelter, and while the 'flat' roof is not pitched, it is unacceptable on symbolic grounds (Rapoport, 1969). The characteristics are so unusual that examples are easily identified, but in Hamilton the examples are so 'bach' like that they can be confused with the Spanish Mission style. As a result,

valuers tended to describe examples of both as 'Spanish bungalows' (VNZ Files, 1989).

The consequences of depression and war

The people of Hamilton East had much in common with the people of every town world wide who had been subject to shortages of housing, as a result of recession in the 1930s and a complete cessation of building construction during World War Two. Lewis (1979) claimed that social and cultural change does not occur gradually but in 'leaps', often provoked by major events like wars, depressions and major inventions. For example, the introduction of electricity to the domestic realm influenced housing styles and lifestyles in the 1920s. The cultural landscape looks different after the event, "however a lot of 'pre-leap' landscape will be left lying around, even though its reason for being has disappeared" (Lewis, 1979, 23). This was true of the Hamilton experience, and the war years marked the boundary between the bungalow and the social patterns of the 1920s, and the 'leap' into a new, mid-century post-war world. The houses do not show evidence of a major change of style. In Hamilton East, careful observation of the houses built immediately before and after the war show an evolution one to the other and no revolutionary break (VNZ Files, 1989).

The literature abounds with reports of a dramatic demand for inexpensive houses caused by the return of service personnel (Relph, 1987). In New Zealand, Australia, Canada, the United States and Britain, houses were built in a climate of shortages. This housing was planned to be fit for war heroes (Hayden, 1984). Along with the shortage of materials there was also a shortage of skilled labour and workers were urgently trained in Hamilton and elsewhere at home and overseas in schemes to rehabilitate the returned servicemen (Gibbons, 1977; Relph, 1987). The form the house took resulted from a mammoth attack on

the post-slump shortages with "a single solution, regarding New Zealand as a monolithic society in which one repeated house type would solve most problems" (Mitchell, 1977, 96). The housing shortage in Hamilton was so great that some people lived in transit camps (Gibbons, 1977) and one was in Naylor Street Hamilton East (Crichton, pers. comm., 1989; Air photographs 1943; 1953; 1967). Plan books of designs were available from bookshops, for example *Economical house planning in New Zealand*, by John Sowerby. These emphasised economy and practicality (Keith, 1984). There was no use of the word 'luxury'. Known as the 'rehab' years, the Rehabilitation Department (1946) published advice and plans of houses.

Choice of construction materials

"The availability and choice of materials and construction techniques will greatly influence and modify the form of the building" (Rapoport, 1969, 104). This period-style is characterised by the combined use of brick and tile and timber and corrugated iron (plate 29). It was the first period-style in which the use of brick and tiles was significant. The late 1930s saw the first impact of the use of large quantities of clay bricks in Hamilton. Immediately before and after the war, bricks were often used in more than one tone, to produce design features on the houses in Hamilton East. There was a shortage of corrugated iron during the war, and after the war for a prolonged period (Bell, pers. comm., 1989; Gibbons, 1977). The post-war period of chronic shortage of building materials influenced the construction materials used (Gibbons, 1977). Locally made asbestos cement sheeting was produced in quantity. The supply of native timber was insufficient to meet demand and some timber was imported. Radiata pine began to be used in the construction industry (Anon., June, 1958b).



Plate 29 Standard New Zealand houses, Galloway Street

Materials and technology however, do not determine form but modify it, they make certain forms possible and others impossible, for the same materials can produce very different forms (Rapoport, 1969, 108). The external roof and wall materials influenced the appearance of the local houses but the standard house from the 1950s looks basically very similar whether it is brick and tile or timber and iron. The brick versions of the 'flat' roofed house, however, do have a completely different appearance from the stucco or timber versions, and probably greater lasting qualities.

In the United States, the post-war house was criticised for its flimsy appearance and use of what was perceived as cheap building materials. It has been called "the plastic-Formica-carport-aluminium window-flat roof esthetic (sic) of the 1950s" (Ford, 1986). This kind of description may apply to some of the internal features of Hamilton East's houses, but many of these American features were not particularly fashionable here in the 1950s. Status can be communicated in materials used (Rapoport, 1982). In Hamilton East the elite quality of some construction materials was, and still continues to be recognised. New Zealanders have been perceived as naturally conformist and in the 'rehab' years the "brick and tile bungalow was the most popular housing goal of the middle class" (Mitchell and Chaplin, 1984, 31). Indeed in 1990, brick and tile townhouses, units, bungalows, and houses are again popular (see figure 3). Even in 1946 a brick veneer house cost £75 - £100 more than weatherboard in the North Island (Rehabilitation Department, 1946). Brick was highly regarded in the 1980s and cheaper artificial brick cladding widely publicised in the 1970s and early 1980s did not have long lasting appeal partly because of its poor quality and artificial appearance (VNZ Files, 1989). Fibrolite fibre cement has never had a high status.

Standardisation, "the conformist 1950s"

(Relph, 1981, 90).

In spite of the apparent differences between houses as observed from the street the reality on close observation is a considerable amount of standardisation, or what Castells (1977) refers to as "conformism". Each house had an 'off the peg' trademark of culture, so that "almost everyone could sustain their self-respect if they lived in a three bedroomed bungalow" (Mitchell, 1977, 96). Even the size of the rooms and the internal and external fittings were standardised. The NZCIH (1971) description of the typical house from the period could be of any house from anywhere in New Zealand, right down to the 'divider', a device to separate the kitchen area from the dining area.

Housing was a profit orientated industry like other industries operating in a capitalist system. Building companies made greater profits by building standard units, than by experimental designs (McRae, 1977; Mitchell, 1977). New Zealand had "developed, out of trade practices now codified in modal bylaws, a standard technique for enclosing residential space" (NZCIH, 1971, 127). The Standards Act 1941 and the Housing Improvement Act 1945 provided for and required high minimum standards. These were achieved, but at the cost of variety and spontaneity (Pawson, 1987b). For example the Housing Improvement Act 1945 (Section 4) recommended the Minister of Works and the Minister of Health could make regulations with respect to the construction of houses, and the dimensions and heights of rooms. On the grounds of health the maintenance of high minimum standards was considered particularly important on two counts. First, the poor housing conditions discovered as typical in many parts of the country. The survey that followed the Housing Survey Act 1935 revealed this information and resulted in a backlash (Horsley, 1986). Secondly, the provisions of the Town-planning Act 1926 Section 3 (1) stated that the town-planning scheme's general purpose was the development of the city or borough in such a way

as "will most effectively tend to promote its healthfulness, amenity, convenience, and advancement". The aims and objectives were further reiterated and emphasised in the Town and Country Planning Act (TCPA) 1953. The purpose of planning

will most effectively tend to promote and safeguard the health, safety and convenience, and the economic and general welfare of its inhabitants, and the amenities of every part of the area (TCPA, 1953, Section 18).

The emphasis in legislation was therefore on high minimum standards of construction related to health, safety and convenience, not on style, originality of design or encouragement of ingenuity. This was understandable given the shocked awareness of the country's health services following an outbreak of bubonic plague at the turn of the century (Wilkes and Wood, 1984, 198), and the pandemic in 1918 (Chapman and Malone, 1969).

Paradoxically, many New Zealanders did not recognise this lack of variety. Neither did they identify that internally there was considerable standardisation. Because the houses were not built in great tracts as in North America or estates as in Britain, for both New Zealanders and visitors the houses appeared to be individually unique. In reality, they were almost as much alike as if they had been built by the same builder at the same time. It suited the sense of independence of the people to believe all the houses were different. The main reason for the apparent variety was because of the structure of the building industry and their methods of doing business. A plethora of small building firms and sub-contractors operated at the level of the individual house, rather than building several at a time. They or their customers bought a section from the subdivider, then one house was constructed (Johnston, 1976). The data obtained from VNZ Files (1989) illustrates how in any subdivision the frontage along a particular road was gradually filled with houses over a period of a whole decade or more. This partly accounts for the apparent changes of styles. Other reasons include the superficial

differences achieved by changing the position of the house on the site, reversing rooms from side to side and the use of square, rectangular and later boomerang plans. Because of a conservative attitude to housing everyone was locked into the system of standard plans which resulted in virtually the same houses being built from Cape Reinga to Bluff (Mitchell and Chaplin, 1984; NZCIH, 1971).

It is not surprising that there was so much standardisation. In every country the house of the ordinary person is a "staple item simply repeated" (Mitchell and Chaplin, 1984, 14). The elements of these houses were "predetermined by traditional patterns of behaviour and association, modified by economic limitation and social class" (Mitchell and Chaplin, 1984, 14). There was also a tendency for the members of the building and real estate industries to claim that because the houses sold they must have been what the people wanted (McRae, 1977).

Standardisation had its benefits, not only economies of scale. Because of strict control and national standards the quality of construction was reasonably high. Fittings, servicing, materials, manufacture and performance, plumbing, drainage and electric installation were all controlled, and the features of the traditional house owed a great deal to the standard controls (NZCIH, 1971). Structurally they were well engineered and the health authorities were satisfied, but they may not have provided such satisfactory environments for living (Pawson, 1987b).

As early as 1971, the NZCIH made some very astute comments about this period-style. It is usually easier to make critical judgements in retrospect. For example, from the present day it is possible to consider how an older period-style has stood the test of time. In this instance, the shortcomings were identified some time ago. Common practices were so rigid that:

those concerned with housing construction may
continue in the complacent belief, by no means

rare, that our houses are without fault and offer an exceptional standard of environmental comfort (NZCIH, 1971, 133).

The houses were constructed with little design attention and without any design skills applied, other than those of a competent draughtsperson who made the most attractive job of a thoroughly standardised concept. The competition between builders discouraged more than superficial variations in design (NZCIH, 1971, 136). The house was a "work of folk art", since the form was "determined largely by custom and precedent, offering little opportunity for development or innovative design" (NZCIH, 1971, 134).

Ideal myths about households

One of the most significant influences was that just about everyone in New Zealand believed that virtually all the houses should be built to accommodate a nuclear family, which comprised a working father, a homemaker mother and about three children (Buck, 1988; Keith, 1983b). Men were to return to the workforce, and women were to return to the home. This was as much a spatial prescription for married bliss in New Zealand, as Hayden (1984) reported from the United States. It was why virtually all the houses had three bedrooms. Boarding houses for single people or transient workers were the only other form of accommodation. For many years, nuclear family housing was 'normal' housing. In Hamilton at that period, there were no tertiary students, and no household types except families were recognised. In New Zealand and elsewhere political forces were very important in this promotion of housing for an apparently homogenous population of families. The role of local and national governments in the construction of social areas and in influencing residential morphology has been very significant in 'Western' countries (Ley, 1983). Planning and design had been toward recognition of a norm, nuclear families and middle class values (Rapoport, 1969).

The nuclear family and the single family dwelling were closely interwoven, and not new. The nuclear family had long been the norm and the Australian, American and New Zealand dream home freestanding, and for a single family. This may not have been practical but it was real and represented a world view and an ethos (Rapoport, 1969). Likewise, discussing the Canadian experience before World War Two, Holdsworth (1984) described the city of Vancouver as comprising all single family houses. Pawson (1987b, 124) in New Zealand, claimed that "by 1910 the model of the nuclear family was firmly established". In the United States, Rubin (1977) recognised the single family home as a cultural ideal. Chase (1981, 29), identified a "fascination with the single family house" and Hayden (1984) described as a simplistic prescription the designing of housing for nuclear families. In 1945 across many countries involved in World War Two, millions of new nuclear families were confronted with a shortage of houses (Hayden, 1984, 41). The houses in this period-style were built to suit their needs and the social patterns of the time (Johns, 1965), for one of the most obvious and pressing problems of the time was accommodating nuclear families. In 1974 over 48 percent of Hamilton households were of the non-nuclear type (HCC, 1974b).

In the late 1960s in Australia, Boyd (1968) forecast that the long term future of a single detached dwelling for each family could not be guaranteed. He saw this ideal receding, as the grossly overgrown suburbs were threatened by flats, terraces, cluster housing and other multiple dwelling types (Boyd, 1968). His predictions have been proved correct in New Zealand as well as Australia.

Before the war the California bungalows were designed for single families and detached, despite the presence of other households. From 1935 the State's housing policies had in mind one kind of family and it set the pattern for the stereotype of domestic bliss; marriage followed by the new house with the State as partner (Keith, 1983b). There was and still is a tendency to

equate 'household' with 'nuclear family', allowing little variety in the housing stock (Pawson, 1987a, 35). There is a common misconception even today that the words 'household' and 'family' are interchangeable. The two words are confused by advertisers, the press, television and radio, leading to perpetuation of the apparent ideal in the minds of the people. This is not surprising, since it has been in the suburbs that the expression of the values of individualism, yet conformism has led to the assumption that all societies must be based on the nuclear family (Castells, 1977).

Governments encouraged home ownership, and State assistance with mortgages could be acquired when purchasing new houses. New households tended to be the source of new children and "so the almost standard three bedroom living dining room house became the unit of new dwelling production" (Reynolds, 1977, 83). This had a profound effect on the social production of urban space (Pawson, 1987), including the style and form of the housing. Hamilton East was not alone, but part of a system in which national and international emphasis was placed on the nuclear family and private ownership.

Paradoxically, in spite of prescribing these houses for families, they were not ideally suited to family living. As the post-war years passed the houses designed in 1945 proved less than ideal in 1971 with regard to:

- less formal family relationships,
- changing patterns of entertainment,
- watching television,
- members of families being involved in prolonged education programmes,
- the use of new household equipment, and
- a more mobile and gregarious youth.

The NZCIH (1971, 135) claimed that the changes in social habits and household structure were "only faintly reflected in present stereotyped low-cost houses".

"The tidy suburban model" (Keith, 1983b)

This period was the heyday of the suburb in Hamilton East. The houses in this period-style were the fundamental building blocks of the New Zealand version of the suburban dream, planned by the people of many of the nations involved in World War Two. The symbolic dream home was ideally surrounded by trees and grass in Hamilton East just as much as it was in Australia or North America. The symbol was of a freestanding house, for the "ideal of home is aesthetic, not functional" (Rapoport, 1969, 133), single storey, and in the wide open spaces of suburbs like Hamilton East. It was a middle class ideal image of home, where the typical house was separated from the public world of streets, by lawn (Tuan, 1974b) and horticultural display. Privacy was the characteristic most valued by the middle class. It was believed that privacy could best be provided in the ideal of the suburb. The suburb was also evidence of nostalgia for rural ways, the gardens and lawns taking the place of the farm. Suburbs provided the best of rural life without its defects, according to the image, which was partly myth and partly reality (Tuan, 1974b). In Hamilton the concept of the suburb was reinforced by the 1977 district scheme which used the word 'urban' to describe typical suburbia. Residential One (low density) zones

are intended to cater for family living in the traditional New Zealand urban style, with a reasonable amount of private open space for each unit and an open character for the whole (HCC, 1977, 19).

The British 'garden suburb', initiated at the turn of the century (Ross, 1974), became a major policy of the New Zealand government (Keith, 1986), exemplified in Hamilton East. The 'garden suburb'

was an ideal of design which reaffirmed traditions of private property, and individuality, where the house acted as a symbol of independence and a symbol of social prestige (King, 1984). Hamilton even took up the name 'The Garden City'.

A house in the suburbs was important to many people, since housing was the main source of capital investment for many in the middle and lower income groups (National Housing Commission, 1988). Hamiltonians were just as committed as Americans to a "landscape of low-density subdivision with high levels of home ownership" (Ley, 1983, 53). Public money financed this suburban lifestyle, directly by construction of State housing and indirectly by providing cheap mortgages for home ownership (Keith, 1983b; Pawson, 1987a). Behind this policy was a simple philosophy that if people owned their own homes they had a stake in political stability (National Housing Commission, 1988). As governments changed, Labour's 'state idealism' was converted to National's 'self reliance', as State tenants were encouraged to buy their own homes (Horsley, 1986; Keith, 1983b). State suburbs like Hayes Paddock estate were converted to mixed private and rental suburbs (Keith, 1983b; VNZ Files, 1989).

With the completion of the construction work in Hamilton East and the filling of most of the sections with houses, the suburban dream was finally achieved in the post-war period, following big strides made toward that goal in the 1920s. The housing constructed in Hamilton East was in the low to low-medium price range with no elite areas of the suburb identified (VNZ Files, 1989). Hamilton East and many New Zealand suburbs had now achieved the citrus grove suburbia ideal imitation of Southern California, the original and primary basis of the symbol of a suburban landscape (Chase, 1981; Meinig, 1979). Post-war suburbs world wide have been repeatedly criticised for their uniformity and blandness. For Relph (1981, 84) the real problems with the suburbs has been "the paternalistic humanism of planning" which was "hyperplanning" by State government producing policies and

legislation that affected every detail of housing, dramatically reducing the opportunities for individuality. Until the 1960s New Zealand was one of the wealthiest countries in the world, providing full employment and a high level of material opportunities for the people (Horsley, 1986; Pawson, 1987a) including those of Hamilton East. Prosperity and mobility accelerated the pace of change, and yet "for most of the 1950s and 1960s this had been an apparently contented society, complacent in an illusion of economic success" (Pawson, 1987a, 305).

The introduction of local government planning

The planning of the housing in this period-style was therefore mainly by legislation, at the central government level. Planning was not new in Hamilton East, since it had been a formally planned settlement in 1864. However, formal town and country planning was not established early in Hamilton. At the turn of this century formal planning was first developed to protect people from their worst tendency to exploit others and to realise Utopian ideals (Relph, 1987). Land use controls were introduced at different times in different countries. Parts of California had land use zoning in 1909 (Rapoport, 1969), and interest in planning in New Zealand before the 1920s led to the Town-planning Act 1926. This placed local authorities under a legal obligation to control development with long term planning in mind.

In Hamilton the City Engineer J.R. Baird, designed the first ten year plan which was shelved in 1947. The first permanent town planning officer J.W. Mawson was appointed in 1948, and in 1950 commenced preparation of a town planning scheme for Hamilton (Gibbons, 1977). Before that, Hamilton had "grown without any conscious design or preconceived plan" (Mawson, 1952, 7). The Town and Country Planning Act 1953 provided authority for zoning of areas to be used exclusively, or principally for specific

purposes. Section 19 placed legal responsibility on every local authority to prepare and maintain a district scheme by 1 January 1971. Mawson was the first honorary secretary of the first New Zealand Town Planning Institute formed in 1929, and honorary editor of *Community Planning*, the first official journal of the Institute (Ross, 1974). He also initiated the founding of the New Zealand Planning Institute, a professional body of town and country planners, in 1946.

The creation of land use zones and regulations as safeguards against incongruity (Rapoport, 1969) were therefore political decisions. The management role of local and national governments in urban development have resulted in two kinds of policies. Policies of regulation include code enforcement, compilation of bylaws and preparation of zoning maps. Policies of incentive include supply and maintenance of urban services, state housing and subsidised housing (Ley, 1983). Urban planning is now so completely established that it is hard to realise that before World War Two, it was little more than an exotic concern of a group of idealists on the fringe of local government (Relph, 1987). Zoning is now a conventional regulatory instrument of local government policy, to regulate uncontrolled market forces at the local level (Ley, 1983). It has been significant in Hamilton East and has influenced the styles of housing constructed. Zoning is experienced in the lives of the people, as the zones created by local government gatekeepers have been "translated into real effects in the landscape" (Ley, 1983, 297).

Following the introduction of the Town and Country Planning Act 1953, J.W. Mawson continued with the preparation of the first town plan for a projected population of 100,000 people (Young, 1964). The first effects of local body planning were experienced in Hamilton East in the 1960s, following the publication of the first district scheme (HCC, 1967). By the 1970s "the process of planning had gradually become a very significant exercise" (Gibbons, 1977, 294). Hamilton mirrored national and

international experience. The scope of planning standards and regulations has increased to include community planning, population density planning and spatial design of whole neighbourhoods (Relph, 1981). The results of planning practice as experienced in Hamilton have made an impact in the 1970s and 1980s. The initial work was done in the early post-war period, but the results of the work of professional local body planners and effective planning legislation did not directly influence this period-style in Hamilton East. It was determined by central government policies. The influence of local government planning was experienced in the construction of the fifth and sixth period-styles.

Hamilton became a city, when its population reached 21, 982 at the end of World War Two (New Zealand Official Year-Book, 1946). This milestone heralded a boom in suburban residential construction, transforming Hamilton East first into a dusty building site, then into the suburban dream, characterised by the ubiquitous three bedroom detached house (Nahkies, 1981). The State versions of this period-style were constructed prior to the war, and the State planned, legislated for, and then financed the private sector versions of the standard house by the provision of subsidised mortgages. The houses built in this period-style are now the stock items of the New Zealand landscape (Pawson, 1987a), the basic form of which evolved out of the 1920s bungalow and its 1930s counterpart. There was a remarkable consistency in suburban areas throughout the whole country (NZCIH, 1971). Behind the lawns and standard set-backs each house was only slightly different from the neighbouring dwellings. The small gestures made to show passers by an independence of attitude were purely cosmetic (NZCIH, 1971). The Hamilton East versions of mass housing, New Zealand style, rivalled yet reflected the experience in suburbs in Canada (Holdsworth, 1984) the United States (Hayden, 1984; Rubin, 1977), Australia (Boyd, 1968) and Britain (Relph, 1981). These standardised houses, were detached and almost universally intended for fathers in paid employment and

mothers caring for about three children. No other types of households were considered in the provision of housing. The suburb of Hamilton East epitomised "the ideology of the nuclear family" as it was "reproduced in New Zealand's built environment" (Pawson, 1987, 125).

THE FLATS

The fifth period-style identified in Hamilton East is the 'flats'. This new concept and style of construction dominated the late 1960s and early 1970s. The popular definition of a flat is a horizontal dwelling attached to other horizontal dwellings (Reynolds, 1977). In a global context however this term 'flat', as used in New Zealand, is something of a misnomer (Johnston, 1976). The three forms of flats built in Hamilton East are considered in this section:

- single storey pairs of dwellings,
- rows of three to eight single storey dwellings, and
- double storey blocks of between four and ten dwellings.

This account concentrates on when and why flats were built in Hamilton East, population predictions and, political and economic decisions which determined the period-style. It also considers the obsolescence of the villas demolished to make way for flats, the image of the flat, and the constraining effect of the shape and size of sections. A number of factors, therefore, determined the appearance and subsequent public and institutional criticisms of this period-style.

In the public-sector the building of 'flats' began before World War Two in the late 1930s. Semi-detached flats (see plate 26), comprised about 23 per cent of Hamilton East's very substantial total State housing (calculated from VNZ Files, 1989). Purpose built flats were rarely constructed for private buyers. In 1948, one pair of flats was built, and in the 1950s another fifteen were built in Hamilton East (VNZ Files, 1989). That does not mean that households did not share dwellings. In periods of economic depression like the early 1930s, or of acute housing shortage in the late 1940s, two or more households commonly shared one house.

In the 1960s, households shared some of Hamilton's larger old houses which were expensive to maintain for one household. These houses were divided internally into dwellings for several households (HCC, 1974b), and thus referred to as 'flats' in VNZ Files (1989). The external appearance tended to be unchanged. VNZ Files (1989) show that some of these houses have now been returned to their original single household dwelling status, as a result of the new interest in heritage buildings. Other old houses proved uneconomic to maintain even as flats. Gradually, they were replaced by new houses, and more recently by new home units and townhouses (VNZ Files, 1989; Air photographs, 1943; 1953; 1967; 1979). The 1967 district scheme encouraged flat building near the commercial centre of Hamilton East. Consequently, sections occupied by old houses increased in value, and some of the older houses were demolished (see section entitled 'obsolescence', below). This was a common situation in other countries "where economic pressures overcome the obsolescence of inherited forms" (Conzen, 1960, 7).

Single storey flats

Although it is discussed here under the heading 'the flats', the single storey flat is essentially part of the standard New Zealand house period-style. The form, characteristics and image of the semi-detached flat make it a separate house type, but in the same mould as its larger detached neighbours.

Between 1948 and 1969, 65 blocks of flats were constructed in Hamilton East (plate 30), with a total of 191 dwellings (at an average three per block). Fifty per cent of these flats were built in pairs (VNZ Files, 1989). Pairs and rows of flats were constructed throughout the suburb where vacant sections remained. These were the sections that failed to sell in Hamilton East's housing boom years following the war. In the 1960s newer suburbs were perceived and promoted as more fashionable for house buyers.

The construction of the standard house was rare in the late 1960s in Hamilton East. Flats were built in clusters of several small blocks in the outer parts of the suburb, including two L-shaped blocks, but otherwise long and rectangular shaped, fitting straight along the section, with the narrow side toward the road. This was because the shape and size of sections did not allow any other layout. If an appropriate front section was available, perhaps on the corner of a street, flats were built facing one road (plate 30), like conventional, standard houses. These flats acquired a superior image to their more modest counterparts in back sections.

Influence and image

The main determinants of the shape and form of single storey flats were; economics, the shape of the sections, district scheme provision which required that two separate dwellings were not permitted on one section (HCC, 1967), and the ubiquitous standard house, built since the war. The flat was cheaper than the house for it was the standard house in miniature, without the 'frills' or image building devices, such as two tone bricks, elaborate entrances, and variety of design or position on the section.

Flats were not designed to impress the neighbours or passers-by, but to be practical. Flats were plain in appearance and tended to look identical. Often occupying the less popular rear sections, they were normally provided with two bedrooms instead of the standard three. The status of the occupants of flats was lower than the status of the occupants of houses, even when they were all owner occupiers. This was partly because flats were not detached, nor did they occupy a full section, as in the Quarter Acre Syndrome, "the long held belief of New Zealanders to live on their own quarter acre section" (Fowler and van de Voort, 1983, 27).

Flats were practical for new owners. A lower initial cost resulted in lower mortgage repayments than the mortgage paid on a house. They suited people on lower than average incomes or who had major financial commitments other than housing. Flats suited those people on fixed incomes, and those who did not 'need' the status of a house to recognise their own self worth, that is people who did not require the "status symbol of the house" (Rapoport, 1969, 130). Housing can be a means of social display, like the villa for Edwardian Hamiltonians. The 1960s flat provided comfortable accommodation for a household of one or two or even three. The privately-owned flat provided an initial step for young people moving out of their parents' home or from rented accommodation. For such people the flat was not the dream home, but the means to a dream home.

Single storey flats were even more standardised in their building materials, features and plan, than houses. Built conventionally of brick they are immediately recognisable as having been constructed during the 1960s. Even the three panel front door, and patio with frosted glass screens, are standard. Well planned, there was no wasted corridor space because all rooms were built round an approximately one square metre sized central 'hall'. The two bedrooms, bathroom and living room doors occupied the four sides of the 'hall'. An excellent plan, used throughout the country did not justify variation. Once inside the flat the residents occupied a conventional house in miniature. These dwellings filled a gap between what had gone before, standard houses and what was to come, two storey flats, home units and townhouses. They were the semi-detached prototype home unit without the variety of styles, building materials and the more up-market image of the home unit.

Obsolescence in housing stock

Dubbed a "flat building boom" (*Waikato Times*, 13 November 1974) this period of change between about 1970 and 1976 was a response to obsolescence in the housing stock, market demand, political decisions by the Hamilton City Council and economic decisions by individual investors. Above all it was a response to sustained high rates of population growth and to predictions of further population growth.

In the 1960s, the "shadow of obsolescence" (Conzen, 1960, 97) fell on some of Hamilton East's older houses. Johnston (1969) identified five forms of obsolescence; direct deterioration, and style, technological, locational and site obsolescence. "Adaptive redevelopment" (Conzen, 1960, 71) or "residential transition" (Ley, 1983, 46) in Hamilton East took the form of selective demolition and replacement by two storey apartment blocks, and construction of other apartments occurred in large rear sections. In some cases flats were attached to older houses as in plate 28. Obsolescence and demolition did not involve large tracks of land being cleared. The obsolescence probably resulted from a combination of the types identified by Johnston (1969). The large and impressive Greenslade house had been converted into a boarding house in the 1950s (HPT Files, 1990). Older houses tended to be juxtaposed with other period-styles so that all houses in a neighbourhood did not fall from favour at the same time. Ford (1986, 21) discussed the same kinds of districts overseas where houses from various period-style have a wider appeal to a range of people, than those suburbs which comprise all one period-style. Obsolescence of Victorian houses was recognised in North America, where for instance, the cost of painting such houses was calculated as one fifth of their market value, every five years (Rickert, 1967). In such circumstances adaptive redevelopment made economic sense and housed many more people.

Heritage protection had not yet become fashionable in Hamilton East and the land on which villas stood was perceived by some people to be ripe for development. In one short street, Coates Street between 1968 and 1976 a number of villas were demolished, and eleven blocks of flats constructed between the bungalows and villas that remained (VNZ Files, 1989). Altogether 60 blocks of two storey flats (402 flats in total) were constructed in Hamilton East (plate 31), and 40 of the suburb's older houses were demolished to make way for flats (VNZ Files, 1989). Meanwhile, demolitions and flat construction occurred in the other older suburbs, Claudelands and Hamilton West, so that substantial redevelopment took place over a wide area of Hamilton. The "housing conversion" (Ley, 1983, 33) saw housing stock in Hamilton East converted from all single family detached housing, to a mixture of three forms of multiple occupancy dwellings and individual houses. In Hamilton East the flat building boom peaked about 1972, a similar boom occurring in other New Zealand cities.

Similar medium density housing was constructed overseas, as Boyd (1968) and Rubin (1977) have shown. Boyd (1968, 302-303) reported that Australia's capital cities had virtually no flats in 1952, only about one dwelling in forty was a flat. In 1967 more than one dwelling in every four built was a flat, most of which were privately owned. The flats were in blocks of a dozen or so tightly fitted on to allotments of modest dimensions, with most of the free land concreted for car parking. Unlike Hamilton East, they were three storeys high and the end which faced the road was windowless. Usually the building ran the length of the section with its windows looking across the dividing boundary fence to the plumbing side of another block.

Rubin (1977) discussed dingbats, rectangular box structure, multi-unit housing complexes, common since the 1950s in Los Angeles. The word 'dingbat' is American slang for any unnamed



Plate 30 Three single storey flats in Nixon Street, built 1963



Plate 31 Two storey blocks of flats, Wellington Street

object. They comprised a complex of apartments which each had direct access to the outside, just like the New Zealand two storey blocks. The dingbat however, preserved a street facade appearance of a two storey single family house. Rubin (1977) claimed that these apartment blocks proved to be a remarkably successful transitional solution between low and high density housing, but she gave no indication of possible diffusion of the dingbat to other parts of California, North America or elsewhere.

Population predictions for Hamilton city

In the 1960s, an urgent answer was required to the question of where and how to accommodate all the people, if Hamilton's population continued to rise rapidly. In the past, the answer had always been to build out, by extending the city boundary. This is what Conzen (1960) termed "accretions", or new suburbs like Silverdale, added to the edge of the city. Boundary extensions had been made regularly since 1912 including one in 1962 which added 7113 acres (2879 hectares) to the 6613 acres (2676 hectares) already existing (HCC, 1977). In the 1960s, the other option of extending the capacity of the city by building upwards was explored and made City Council policy. This meant increasing density in the older inner suburbs. Sustained consolidation involving blanket coverage of exclusively multi-unit housing development, would have seen the complete replacement of single family houses. Such a proposal could have transformed parts of Hamilton West, Claudelands and Hamilton East into a true urban core, of two or three storey apartments. Even in 1975 the eventual blanket replacement of all single family housing by two and three storey apartment blocks, in parts of the central suburbs was still being seriously considered by the City Council (HCC, 1975). In the event, this has not yet occurred, in spite of the provisions of the 1977 district scheme encouraging a conversion from single family to multi-unit housing (HCC, 1977).

There was, however, good precedent for urgent action because "particularly rapid population growth took place in Hamilton following the Second World War as the city expanded from a population of 22,000 in 1945 to 88,000 in 1976" (HCC, 1989, 41). With a high birth rate and high in-migration, the opening of the Hamilton Teachers' College and the University of Waikato, predictions of further growth were very reasonable. These have, however, proved to be highly exaggerated. At the 1986 census, the population of Hamilton was 95,388 (Department of Statistics, 1990). A sample of predictions illustrate City Authorities' reasons for advanced planning for, and encouragement of increased population density.

- In 1963, the population of Hamilton was increasing at the rate of about four per cent per year and was "expected to reach 107,000 by 1981" (HCC, 1963).
- The Hamilton Transportation Study used an anticipated population projection of 133,000 by 1988 (HCC, 1969).
- In 1972, there were official estimates that Hamilton's population could treble within fifty years. There were estimates of 144,000 (Elam, 1972) and 160,000 (Elam, 1972) by 1991.
- The *Hamilton City comprehensive development plan*, the planning blueprint designed in 1974 for a 20-30 year period, predicted 100,000 by 1980 and 200,000 by the turn of the century (HCC, 1974b).
- In 1981 it was assumed that the population would rise to 104,000 in the late 1980s and 124,000 in the late 1990s or beyond (HCC, 1981).

These estimates and predictions had a direct influence on the kinds of housing produced in Hamilton East in the early 1970s. It was no wonder the Hamilton City Council made provision for increased housing and population density. In retrospect, it does appear that there was a sense of panic in some of the proposals.

Political decisions

As a response to population predictions and to other factors discussed, the 1967 district scheme zoned about one fifth of Hamilton's residential area 'B', high density, where flats and hostels were not just permitted but were encouraged (HCC, 1967).

In preparing the 1967 scheme, two proposals were considered for the density of population in residential 'B' zones, those areas nearest to the city centre in Hamilton East, Hamilton West and Claudelands. A decision was made that:

- 20 flats or 60 persons per acre (150 persons per hectare), be encouraged (HCC, 1963); and
- on sections larger than half an acre, a density of 40 flats or 120 persons per acre (300 persons per hectare), was considered (HCC, 1963).

These were revolutionary proposals for a city with a blanket low density in 1963 of four, five or six houses per residential acre. Ten years later in 1973, only eight to ten persons per acre (20-25 persons per hectare) was a typical density of New Zealand's major urban areas. The 1973 density of population in Hamilton was still only 6.05 persons per acre (15 persons per hectare) after a number of years in which flat construction had been taking place (HCC, 1974b).

In the event the first district scheme permitted a maximum density of 100 persons per acre (247 persons per hectare) in Residential 'B' zones (HCC, 1967). By 1974 this density was not even closely approached and there was more land zoned residential 'B' than demand warranted (HCC, 1974b).

Just one detached house, or a pair of semi-detached houses, or a block of apartment houses was allowed on each 'site'. A 'site' was defined as an area of land permitted by the scheme to be used as a separate unit; minimum area 24 perches (600 square metres) for front sites and 28 perches (700 square metres for rear sites (HCC, 1967). Ordinance 15 stated: "Not more than one residential building shall be erected on any site in a residential zone" (HCC, 1967, 27). The only way to increase density was, therefore, to acquire an empty section, by demolition of the house and building a block of flats. Ordinance 15 more than simply contributed toward the style of dwellings constructed. Hamilton City Council and other local authorities all over New Zealand were responsible for making the political decisions which influenced the generalised location and the form of a period-style of housing. More than any other determining factor political decisions influenced the housing which was constructed.

Economic decisions

Decisions made on the basis of economic considerations contributed toward the period-style which dominated the early 1970s.

Because of increasing population and the demand for housing the provisions of the 1967 district scheme resulted in increased land values in Hamilton East. A sound, but old fashioned house could be demolished and replaced by a number of new small dwellings, reducing considerably the land cost of each dwelling. The construction of this higher density housing was "financially

attractive to building contractors, investors, real estate agents and finance companies" (HCC, 1974b, 47). The City Council depended on private enterprise to build flats. In the *Waikato Times* (3 March 1973) the geographer Tom Fookes claimed that the Council was therefore limited in the action it could take "to improve the quality of the flats". The Council was concerned that if it changed the ordinances the cost of developments would rise, and rents would also rise. The construction work was financed by private investors. They were not motivated by fashion, or style, or architectural quality or the prospects of occupying the housing personally. Their interests were purely financial, in reaping profits from the investment of their money. The investments depended on the return on capital for the provision of new rental accommodation. It seemed to some people that the "quality of living was sacrificed to economic return on capital" (Fookes, in the *Waikato Times*, 3 March 1973).

The flats were therefore built legally with regard to the district scheme and to building regulations. Regulations allowed the property developers and business associates to build cheaply and very profitably. By the time effective criticism of their enterprise was articulated, "the 'ticky-tacky' suburbs had been created" (Gibbons, 1977, 292). For economic reasons, staircases were built on the outside of some flats and continuous outdoor corridor balconies gave access to upper storey flats. Such economies led to problems of privacy and noise (Mitchell and Chaplin, 1984). The basic construction material was also chosen on the basis of economics. Twentieth century technology had introduced the hollow concrete block to the repertoire of masonry materials. These were as strong as fired brick or stone and were lighter and cheaper (McAlester and McAlester, 1984). The strength and economy of concrete blocks meant that they were an ideal construction material for flats, as perceived by the builders and investors. For the users of the flats, the concrete block presented an acceptable, practical, but utilitarian image, yet it

did not provide good insulation. The flats tend therefore to be cold in winter and hot in summer.

The flats were quickly occupied in the early 1970s and demand has continued, from people requiring reasonably priced rental and in the case of some blocks, ownership accommodation. Young workers, students, small households, new arrivals in the city, people who require accommodation short term, have always created a demand for this accommodation. Its availability has allowed young people to go 'flatting', leaving their family home to set up a household with friends. Although these dwellings are considered low cost, the continued acceptance of 'flatting' by much of the New Zealand community reflected an affluence within some sections of that community which did not exist overseas at that time. It was only twenty years earlier that two or three generations of the same family had had to share one small house, because of a housing shortage. It was only forty years earlier that Hamiltonians shared very poor accommodation because of severe economic shortages, related to the world wide depression. In the 1970s young people in their late teens could afford to leave their parents home, which contained three or four bedrooms, to live separately with friends in an inner suburb of the same city, or another city. Not all would have occupied new flats in two storey blocks, but the provision of such flats freed up other accommodation and added greatly to the housing stock. In Hamilton East about 400 two storey flats were constructed, in about six years, for the loss of 40 villas and bungalows (calculated from VNZ Files, 1989).

By 1974, the demand for flats had shifted from single people to families. A newspaper headline read "Family emerges as new breed of flat-dweller" (*Waikato Times*, 13 November 1974). Some households which included children now occupied flats because of the increasingly prohibitive cost for some people, involved with setting up a home (*Waikato Times*, 13 November 1974). So while affluence in one group of people, lack of money in another group

led to a demand for flats. Families rented flats because they could not afford to become house owners.

The image and the criticisms

This period-style was never fashionable. An unsuspecting Hamilton public was presented with it, in spite of their objections. Two storey dwellings would have been accepted more readily if the design, layout and position with regard to other housing, had been planned more sensitively. An unfortunate mixture of circumstances and decisions resulted in a period-style that no one wanted. A double standard was created between houses and flats, with a quite different set of meanings for each, on the basis of the assumed temporary occupancy of flats (*Waikato Times*, 12 September 1974).

A double standard also existed between owner-occupied and rented accommodation. The style of dwellings can depend on the form of tenure for which they are intended. The flats provided mainly rental accommodation, designed without any kind of involvement of its future occupants. Exterior design does not seem to have been given much consideration. The exterior design is a crucial factor for privately-owned dwellings, given its effects on resale price. This is what estate agents refer to as 'street appeal'. Interior layout is a more important consideration for the success of rental housing (Davey, 1978). The construction of flats was a reactive measure, poorly thought out. The utility and practicality tended to be forgotten in the midst of criticism and name calling. Major design deficiencies led to names like 'sausage' flats which gave rise to "squalid connotations" (Mitchell and Chaplin, 1984, 53). There were calls to see "banana box builders suppressed" (*Waikato Times*, 10 July 1975a). The banana box flats, in "concrete jungles" would be "the slums of

the future" (Nahkies, 1976), situated in "sterile and treeless areas" (*Waikato Times*, 10 August 1973).

What to do about the flats became "Hamilton's housing dilemma" (Fookes, *Waikato Times*, 3 March 1973). Because the planning controls suitable for detached housing proved to be unsuitable for flats, the controls had to be changed. The values and aesthetics of the developers of the multi-unit flats were at variance with those of many other Hamiltonians. One Hamilton woman's image is expressed in the following:

Along any number of streets...one can only regret the decline - and the passing - of many handsome houses and pretty cottages, run down, and replaced with flats or home units, in the main gracelessly utilitarian (Gant, 1974, 5).

Compared with all previous period-styles, the meanings and symbolism of the flats period-style were weak and inadequate. Their communicative and symbolic properties (Rapoport, 1977) expressed negative messages to members of the public. Before the introduction of the district scheme Hamilton East had developed in a 'free market', without planning or design controls. Houses that looked like houses were built. With the first town plan flats, described as 'banana boxes' or 'sausages' resulted. In 1978, Davey called for a new image for medium density housing, and suggested the introduction of townhouses (Davey, 1978). Even before the 1977 district scheme was made operative, the two storey flat had been outlawed. Davey's suggested change of image appears to have been successfully achieved in Hamilton East. Today low level home units and townhouses have increased densities and provided new housing without the construction of any more multi-unit blocks.

The aesthetic and social shortcomings of the typical higher density block (HCC, 1974b) became legendary. Flats are an urban house form. Before 1970 all of Hamilton East's dwellings were suburban single family houses. Perhaps the urban image of the

flats led Hamiltonians to contemplate visions of a true urban centre, unacceptable to them in a truly suburban country. Mainland Europe has an urban tradition but in American and British planning the anti-urban motif or theme has been pervasive (Rapoport, 1977). A pro-suburban theme has successfully characterised New Zealand. The flats period-style was imposed by a few decision makers on the rest of the community. There was no attempt to persuade, in true advertising fashion, or cajole the people into positive attitudes toward multi-unit flats. It has not been a matter of the public adjusting to the new period-style, its design, or the meanings presented by the new house form. Subsequent housing development suggest the people rejected the image of blocks of flats outright.

The constraining effects of sections

The provision that allowed four, six, eight or ten dwellings be constructed on sections designed for one house, proved to be a disaster. The size and rectangular shape of the existing sections contributed toward the design of the flats in a negative way. The sections had a constraining effect. The district scheme allowed long narrow sites to be used when two or more should have been amalgamated (Fookes, *Waikato Times*, 3 March 1973). There was little alternative to banana boxes or sausage flats as long as Ordinance 15 stood (HCC, 1975a). The use of inappropriate subdivisional patterns inherited from the detached house tradition led to the worst features of multi-unit housing (Stephenson, Olsen and Nahkies, 1975). The image of the flats reflected negatively on the surrounding housing. Multiple unit dwellings located on narrow lots designed for single unit dwellings could not be other than some nuisance to the residents of surrounding properties (Baldwin, 1988). The flats overlooked previously private gardens. Thus those properties and all the properties in the neighbourhood were reduced in value and the status of the houses and their image declined. The

...blanket Residential B zoning of old inner city areas has meant that redevelopment for multi-unit dwellings is scattered over a wide area, often where existing family homes are still in good repair (HCC, 1974b, 30).

The Residential 'B' zoning was also a major contributor to the tendency for some detached houses adjacent to blocks of flats to deteriorate, as the people were reluctant to maintain them, when they believed they were unsuitable for family living (HCC, 1974b).

Feelings ran high about blocks of flats and the *Waikato Times* made its contribution. Ever since 1918, the residents of one Hamilton East bungalow had occupied a large corner section of more than an acre, 4545 square metres (0.4545 hectares), high above the Waikato River. About 1968 it was subdivided into five approximately rectangular conventional sections (VNZ Survey Plans, 1989). One single storey and four two storey blocks of flats were constructed around the bungalow between 1968 and 1975. The newspaper headline over the photograph (shown in plate 32) read "Rural views obliterated for ever". The new views from the bungalow were of various washing lines (*Waikato Times*, 13 November 1974). In this instance the owner of the bungalow was obviously responsible for selling the land for housing developments. The headline was designed to be emotive and it made its point. VNZ Files (1989) showed that the bungalow was rambling and obsolete, and on the 1967 air photograph, it was surrounded by a very mature garden. In many other cases however, neighbours were negatively impacted by such developments. They did not have any say in the decisions made to build flats. The authors of a contemporary article in *Town Planning Quarterly* claimed that "people who are accustomed to the qualities of a traditional detached housing environment resent the intrusion of unsympathetic multi-unit development" (Stephenson, Olsen and Nahkies, 1975, 16). Clearly the residents of many of Hamilton's single family dwellings "suffered an unnecessary loss of amenity, particularly as regards aesthetics and privacy" (HCC, 1974b, 30).



Plate 32 A 1918 bungalow on the corner of Albert and MacFarlane Streets, in the process of being infilled with five blocks of flats
Waikato *Times* 17 April 1974 aerial photograph

Before the 1970s the small size of cities, and the property owning, outdoor lifestyle ethos had meant there was little demand for flats. Such demand that did arise was satisfied by remodelling older houses (Johnston, 1976). In those days single people and transient workers occupied accommodation in boarding houses and private hotels. There were several in Hamilton East. Indeed in the early 1960s, commentators were still asserting that New Zealanders would not live in flats (Mitchell and Chaplin, 1984). Within a few years planning ordinances around the country were adjusted to allow flats to be built (Mitchell and Chaplin, 1984). Like Hamilton East's nineteenth century houses, the flats built in the 1960s and 1970s owed a lot to practical considerations. Single storey flats were a smaller, cheaper version of the single family house. The two storey flats were a reflection of political and economic decisions made about inner city suburbs everywhere in New Zealand. Urgent decisions were made because of what is now known to have been inflated predictions of population growth. Flats were a new concept in housing in Hamilton. Their purpose was to provide accommodation rather than houses.

The multi-unit housing from the 1970-1976 period tended to be incompatible with existing development at the time. "The boom in multi-unit developments caught both the public and the planners by surprise" (Stephenson, Olsen and Nahkies, 1975, 15). Other forms of medium density housing have now been constructed in the same areas as the flats, leading to further consolidation, but commonly single storey and detached. The 1975 scheme change which became operative on 23 September facilitated the change, allowing for the first time, more than one separate house on a section (HCC, 1975b).

It was a shocking indictment of its own policies and of the whole multi-unit period-style that Hamilton City Council condemned the effects of the residential 'B' zone. Apparently,

only 17 per cent of the total number of sections had been developed for higher density use by June 1973. Consequently, the "blighting" effect of such flat development has been spread over a wider area than is necessary (HCC, 1974b, 47).

Why was 'blighting' allowed to occur anywhere? Many people have short memories and the criticisms have mostly faded into acceptance, as the design deficiencies of this period-style are best ignored and forgotten. The flats have provided much needed accommodation for many people, and continue to do so. Those professional planners who warned the City Council against their introduction can say 'I told you so'. There is also the hope that most residents do not need to occupy a two storey flat for too many years, while aspiring to another house form, or period-style of dwelling.

With the first review of the district scheme (HCC, 1977) the people of Hamilton entered a new period in housing. It was, one in which the incoming period-style comprised a combination of houses, home units and townhouses, but without blocks of flats.

VARIATIONS ON OLD THEMES

Since the late 1970s change in the composition of the New Zealand population has been recognised to be of more significance than population growth, in the provision of housing (National Housing Commission, 1988). This is very evident in Hamilton East, perhaps more so than in Hamilton's newer outer suburbs, which still comprise almost all single family houses. Changes in lifestyles and in the composition of the Hamilton population are reflected in the more innovative house types which constitute the latest period-style:

- traditional houses on full sections,
- traditional houses two per section,
- home units,
- kit set houses, and
- various forms of townhouses.

These five 'types' are identified collectively as one period-style. They are juxtaposed with each other and with the housing stock inherited from past period-styles - the individual houses and the flats. One major conclusion about this period-style is that although there is diversity in names and apparently in house types, there is also a similarity. They are commonly single storey, small or medium size houses, two or three bedrooms, surrounded on all sides by a garden, but the garden is now on a smaller scale than was common in the past. Significantly most are detached. They are the latest versions of the single family house from past period-styles, but located closer together. Where houses are not detached they are joined garage to garage. The single household unit still dominates, and housing density has increased but there has not been a fundamental change in house types. The major changes related to the sections are discussed in Chapter Five.

For the first time since the 1920s fashion in housing styles can be identified. As in the villa and bungalow period-styles there is variety on the theme of home units and townhouses. There is no collective name for the period-style which continues to perpetuate the emphasis on suburban not urban meanings. The houses are conceivably only a little less part of Rapoport's (1977) anti-urban motif. The low level, detached developments and a concentration on low perceived density is still as anti-urban as any other period-styles. Fashion is reflected in house construction materials, and the fact that any style that suits the owner is considered fashionable. Nothing is out of fashion, for the style includes the:

- renovation of past housing stock;
- historic revival styles in new housing;
- townhouses with post Modern architectural components added to the facades, in the medium cost bracket; and
- kit set housing in the lower cost bracket.

The second influence of major significance is referred to as urban consolidation which makes a major contribution to the period-style and particularly the form of the houses. It means houses are built closer together and have smaller gardens. It is reflected in higher land values, more than one house on many sections, and clusters of new houses constructed at the same time on larger sections.

Preserving the past I

This period-style reflects historic styles in two ways. New houses are built in revivalist styles, and existing older historic houses are renovated. These two themes are reflected all over New Zealand and have been significant for some time in the 'Western' world. Each theme is important alone but also

collectively reflect the latest movement in high style architecture, post Modernism.

New Zealand architects Roger Walker and Ian Athfield's work had great public appeal. Along with contemporary features, they used colonial devices on their houses in the late 1960s, including some of the common external features of the villa period, for example finials, curved verandah roofs, and dormer windows. By 1975 the 'neo-colonial' style introduced by Walker and Athfield had become fashionable in middle price housing (Mitchell and Chaplin, 1984). The inspiration for an important contribution to ordinary (not low cost) housing was therefore a combination of high style architecture and historic precedent. No longer did vernacular housing reflect the British cottage or the American bungalow but it reflected local history (plates 33-38). "Wood turners and demolition yards peddled new pine mouldings and balusters to match the old, and the colonial house, new or old, became the most popular on the market" (Mitchell and Chaplin, 1984, 71).

The verandah that had been missing since the villa period has been reintroduced and houses which mimicked historical inspiration were constructed in Hamilton East in the 1970s and 1980s. This neo-colonial revival included examples of one of the earliest European inspired house styles built in New Zealand, but not common in the Waikato until the 1970s. These one and a half storey houses included upstairs rooms with sloping walls built, in effect, in the attic. This attic colonial or the New Zealand colonial house is also referred to by its North American cousin's name, Cape Cod colonial. In Hamilton East (plate 34) it has taken the following forms:

- completely new one and a half storey houses;
- a turn of the century villa which has been converted into a type of Cape Cod colonial style; and

- a post war bungalow (1950s) with a new roof, attic and dormer windows added in the 1970s, in neo-colonial style (VNZ Files, 1989).

The new yet old settler designs of the 1970s and 1980s reflected in interest in history in general and was part of a movement in New Zealand which included interest in local history, oral history, antique furniture, historic villages, revivals of traditional furnishing fabrics, genealogy, pot belly stoves, wood burning fires, long dresses for day wear, and herb and cottage gardens. It was a rejection of everything that related to the standardisation of the post-war bungalow, except the comforts provided by electrical appliances and modern kitchens and bathrooms.

Perhaps the instantly antique neo-colonial house owed its popularity in the late 1970s to that public taste for nostalgia that blossoms during periods of national economic insecurity (Mitchell and Chaplin, 1984, 15).

The historic revival appears to have got stronger during the even more economically insecure 1980s.

Revival styles connect the lives of the owners to a symbol that is an idealised past (Meinig, 1979). Builders and buyers of houses are conservative, consequently many style changes are re-introductions of patterns acceptable at an earlier time (Lee, 1983). In North America and Britain, the 1970s saw revivals of Victorian and Georgian styles in popular housing. This movement in which "the old is new again" (Relph, 1987, 213), like many architectural movements, was only skin deep - the facade and other elevations of the houses bore the brunt of the revival. Internal changes reflected the comforts and convenience provided by 1980s technology - easy clean surfaces, practical carpets, vinyl floor coverings and numerous electrical appliances. The popularity of this reminder of the past in housing design reflects also a deliberate ploy in the building industry, aided



Plate 33 A 1983 house in Nixon Street built to reflect historic styles



Plate 34 Two Cape Cod colonial style houses (i) built to imitate the style in 1983, in a cluster of new houses in Nixon Street (ii) an attic storey was added to this standard New Zealand house, Fox Street

by the advertising industry to make people believe they selected these styles voluntarily. People "are extremely susceptible to the influence of fashions, engineered by merchants sensitive to the anxieties of their clientele" (Mitchell and Chaplin, 1984, 15).

Preserving the past II

Preserving the past has also taken the form of renovation of old houses, particularly villas (see plates 13, 16 and 42). Renovation and restoration has been an important component of this period and so should be considered within this period-style. In Hamilton East it has not been an all embracing development, not having reached the dizzy heights that renovation has reached in parts of Auckland. In fashionable suburbs of Auckland very large prices have been paid for villas in original condition, with a view to renovation (*New Zealand Herald*, 14 December 1988). This has not occurred in Hamilton, but there is evidence of both individual restoration, and public and institutional moves to preserve historic houses. Overseas, Ford (1984) and Goss (1988) recognised both private and local State activity in the concern for preservation or conservation.

As Hamilton does not have a great number of historic buildings compared with other New Zealand cities "it makes it more necessary to preserve and promote existing historic buildings" (HCC, 1989, 106). The 1967 district scheme recognised only seven objects and places of historical or scientific interest or natural beauty in Hamilton City (HCC, 1967). This did not include any buildings (HCC, 1967, Appendix 4). The first review of the district scheme recognised a 'floating' conservation zone of "older residential buildings to preserve their historical heritage and character" (HCC, 1977, 18). This zone was designed to be brought into operation at the request of residents with a change to the scheme. It did not take place in Hamilton East.

That review registered 'items' of historic interest including only three buildings one of which was Beale house, Hamilton East (HCC, 1977, Appendix 17A). The proposed second review of the district scheme recognises 48 buildings of special value, including fourteen houses (HCC, 1989, Appendix 11), under the Historic Places Act 1980. Of these, five are located in Hamilton East.

Staff of the Hamilton City Council and the Historic Places Trust of New Zealand (HPT) now work closely together. "The heritage has become increasingly important as economic pressures demand more intense use of land" (HCC, 1989, 291). The HPT has embarked on the task of looking at buildings in Hamilton built between 1900 and 1940 with a view to classifying the very best examples of private, commercial, industrial and public buildings (HPT Files, 1990). There has been a suggestion that a conservation area, including a number of houses could be established in Hamilton East. This could become a protected area like the Conservation-Claudlands (RC) zone or the Heritage Frankton Railway Houses, HPRH zone (HCC, 1989). It could comprise a street in the former Hayes Paddock Crown rental estate. This suggestion has not gone beyond the discussion stage, but would require local residents to be involved in initial proposals. There may be other groups of houses worthy of inclusion in a small conservation or heritage preservation zones, for example the corner of Wellington and Nixon streets including Hawkins house and the neighbouring villas. Such schemes require the co-operation of the residents, the City Council and the HPT.

Architectural geographers overseas favour involvement in historic preservation and conservation. Larry Ford (1984) in San Diego describes such work as applied geography. Jon Goss (1988, 400) in Hawaii recognised that architecturally pleasing older buildings be selected on the basis of answers to these kinds of questions:

- Are these buildings symbols of traditional values?

- What is the nature of this collective nostalgia?
- Do buildings effect imaginary ties to the past? and,
- In terms of sign value of the built environment, what is the social meaning of historic preservation?

The unique character of Hamilton East was a constant theme in discussions regarding the future of Hamilton East commercial centre (HCC, 1986), as a result of its unusual blend of land uses and the people-oriented atmosphere. A 'Parnell Village' type of development was suggested, but a 'township' label was considered preferable.

While it is very sensible to develop the historical links, it should be noted that few of the buildings a) have appropriate colonial frontages, b) are worthwhile economically for renovation in the medium to long term (HCC, 1986, 11).

Heritage protection of this kind would depend on Hamilton East becoming popular with middle class renovators, as in some other New Zealand inner city suburbs, involving the co-operation of residents and institutions. So far it has only taken place at the individual household level.

Kitset housing

Housing designed and manufactured in factories is a significant part of this period-style (plate 35). There are some kitset houses in the medium and expensive ranges of the market. Most Hamilton East kitset housing is designed however, for the lower cost end of the market. It is an example of the kind of housing described by Rubin (1977, 523) as "vulnerable to economic priorities". These units and houses are the lowest priced new houses available and are scattered through Hamilton East. Kitset



Plate 35 Kitset houses built on adjacent one acre allotments (i) Galloway Street, 1986 house infilled the garden of a 1926 bungalow (ii) Nixon Street, 1985 house infilled the garden of a 1939 house

housing is commonly practical housing without conventionally accepted 'style' and without external decoration. Fashion and image are not important features. Its low maintenance characteristics are highly valued. The status provided by elaborate exteriors has been sacrificed to economy. The kitset or 'budget' house does not have the symmetry of the settler cottage, the decoration of the villa or the artistry of the bungalow. The owners cannot afford style but they have bought home ownership, a detached house, a small garden, and independence, albeit on a small scale. The drawings in the advertisements promise a stylish house, but the reality is different. These houses with insulated walls and ceilings, in spite of their modest proportions, are probably much more comfortable, with better climate control than older, more stylish houses. The kitset house thus reflects new values and priorities (HCC, 1988).

It is worthwhile considering the kitset in terms of Robert Rakoff's (1977) framework. He claims that housing is endowed with meaning differently by 'builders', 'inhabitants' and 'observers', all of whom seek to understand the cultural role of the house. The 'builders', that is the kitset house production companies, envisage the end results in terms of profit and providing what home buyers want. For the 'inhabitants' a kitset house means a home of their own that they can afford and its small size is probably a bonus, since little furniture is required (HCC, 1988). The meanings for the 'inhabitants' equate reasonably well with those of the 'builders'. No attempt is made to 'put on a show' or to impress the neighbours or the public, as occurred in Edwardian Hamilton East. The third group, 'observers' comprise members of the Hamilton community, indirectly involved but 'judging' this housing for its impact on the city or the suburb, or for the impact it may have on the monetary value of their own properties, or on the prestige of the neighbourhood. Rubin (1977, 522) reported from the United States that observers' comments about houses are based on perceptions "rooted in qualitative judgements derived from class-based expectations regarding social, economic

and aesthetic norms". Judgements that are made by 'observers' on the basis of appearances may conflict with the satisfaction of the housing experienced by the 'inhabitants' (HCC, 1988). Because "the cheapest house is a kitset which allows little modification for individual sites" (*New Zealand Herald*, 21 October 1989), there has been some public controversy about the siting of kitset housing.

The home unit

Following the introduction of the scheme change (HCC, 1975b) home units began to appear because the infamous Ordinance 15 (HCC, 1967) was removed. This change permitted "more than one residential building on any one site" (HCC, 1977, 13), in all three residential zones, and allowed the introduction of the home unit. The term 'unit' or 'home unit' as applied to a small, usually detached modern bungalow has been commonly applied in Australia and New Zealand to dwellings smaller than standard houses. No reference to its use in other countries has been located. The Hamilton district schemes do not use the term, but it has been commonly used in real estate columns of newspapers. The district schemes use the term 'dwelling unit' to mean one-dwelling, so perhaps the term 'unit' was applied in the numerical sense and has been coined widely from that source. The choice of the term has tended to de-value this house type. The home unit has been promoted deliberately as a retirement home and was popular with some retired people. Other older people, pressurised by well meaning relatives to exchange their single family house for a home unit, were reluctant to do so because of the unit's retirement home image. In spite of this there has been a big demand for home units from a variety of householders.

Commonly units had two bedrooms and two or more were built in close proximity. Clusters of four or more exist in a number of locations throughout Hamilton East, built where larger sections

came on to the market. Spaced innovatively with regard to each other, the sun or the central drive, there was no longer a necessity for buildings to lie in straight lines at right angles to the street because of more flexible planning ordinances (HCC, 1977). The main influences on style were related to architectural trends in the wider market, use of a good variety of building materials, and the inclusion of the most modern amenities. Built commonly in the medium price range, units attract a premium price, compared with houses. The new owners may have sold large family homes for cash or have sufficient incomes and are prepared to pay for attractive designs, low maintenance materials and extras related to high levels of external and internal amenity. Many of the features most criticised in the standard house were avoided in home unit dwellings.

The house as a commodity

The appearance of houses in the middle or upper price range are affected by the efforts of their owners to attract good resale prices, because of the value of houses as a commodity and as an investment. Housing is the consumer good which has considerable use value (Eyles, 1987). The facade must reflect the dollar value and be the house's own advertisement. Architect Ian Reynolds (1977) discussed the factors which influenced housing design during the mid 1970s, and concluded that advertising in newspapers and magazines was very important. Even the 'trendiness' promulgated in television programmes has affected public perception of the ideal home. Where a number of houses are built by the same developer they may be 'packaged' and promoted collectively. This occurred in Hamilton in the 1950s with the government promotion to the public known as the 'parade of homes' (Anon., 1958a). Today commercial promotions are made in Hamilton when a developer acquires enough land to construct a group of houses (plate 36). Profit margins are high enough, in the medium to high price range and because of the economies of scale, to

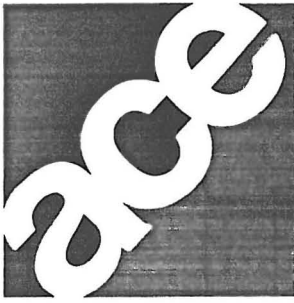


Plate 36 Townhouses under construction in Naylor Street 1990

budget for a commercial promotion. For commercial reasons this figure is not disclosed. This method of advertising a commodity, and creating the image that the developer wishes to promote, is being used in Hamilton East in 1990 to sell seven townhouses (see plate 36 and figure 3). The cost is minimal in this small scale example, and involves only the printing of special brochures (McGall, pers. comm., 1990).

Goss (1988, 395) discussed major promotions in which housing was packaged for consumption and "prescribed as a life-style for the resident, or as spectacle for the visitor". Eyles (1987) has made a major study in Britain and Canada of housing advertisements as signs. The housing advertisements say "buy and you possess the style, you are part of the in-group" (Eyles, 1987, 97). The implications of such promotions are also important. The converse means that by not buying and not joining in, by not acquiring this commodity or having the style, people are marginalised and left out of the 'group'. In Hamilton a number of townhouse promotions have claimed the new houses as the ultimate lifestyle goal, so that the words and pictures displayed in the advertisements are developers attempts to create an image of the lifestyle of the 1990s. A new development of townhouses "presented, is a particular social construction of what it means to belong" (Eyles, 1987, 104).

The 1990 Hamilton East examples are brick and tile houses, for the middle range of the market. They have much in common with the original 1920s bungalows, without the specifically 1920s features. These individual three and two bedroom houses are clustered together to reduce land costs and garden size. In effect, they are good quality, single family houses and home units without the quarter acre section, in the spatial configuration and density of the 1990s.



Ace Real Estate
1982 Limited
M.R.E.I.N.Z.

265 Grey St, Hamilton East
Phone: 562-879. Fax: 562-879
Dinsdale Mall, Whatawhata Rd
Phone: 473-133. Fax: 473-133

ANOTHER ACE REAL ESTATE
SOLE AGENCY

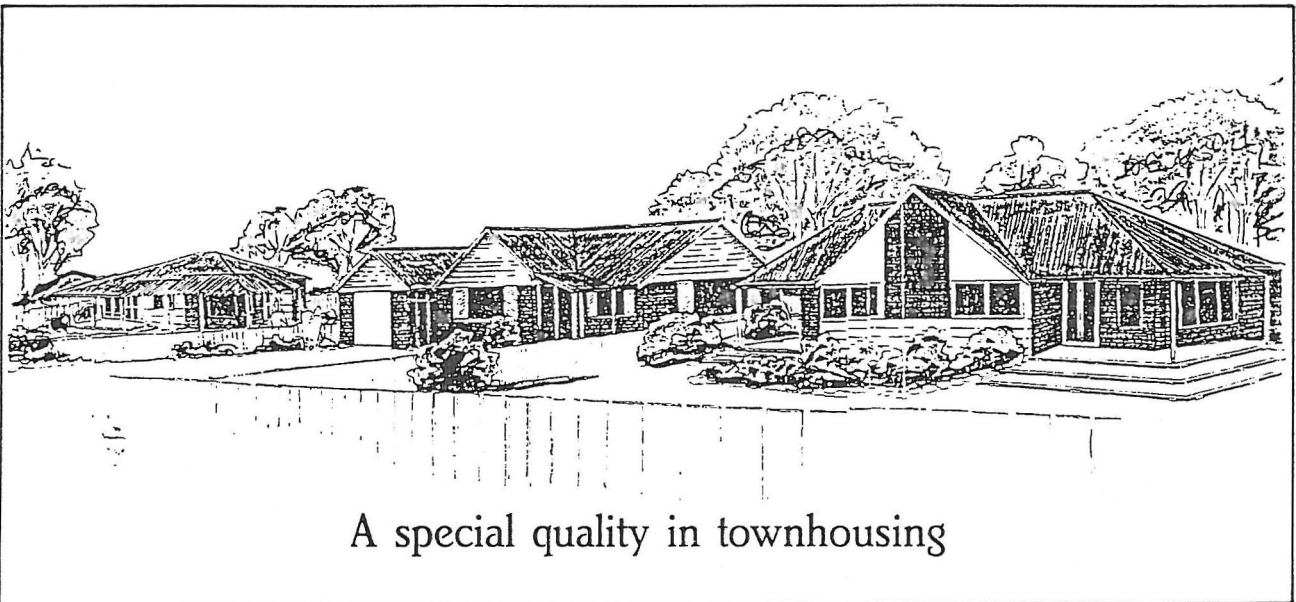
JOMION COURT
A MYRIAD HOLDINGS DEVELOPMENT

JOMION COURT

Jomion Court is a quality townhouse subdivision. A building covenant, which maintains strict controls on the material content of all seven townhouses, ensures that each home has at least 66% brick in its construction.

LOCATION

The Jomion Court development is in Naylor Street, close to Hamilton East township. This close proximity to all amenities makes Jomion Court a most popular location.



JOMION COURT

Each site will be fully fenced so each home will have its boundaries clearly defined.

Paving, section development and cobbled walkways will all be completed prior to possession. Carpeting is also included.

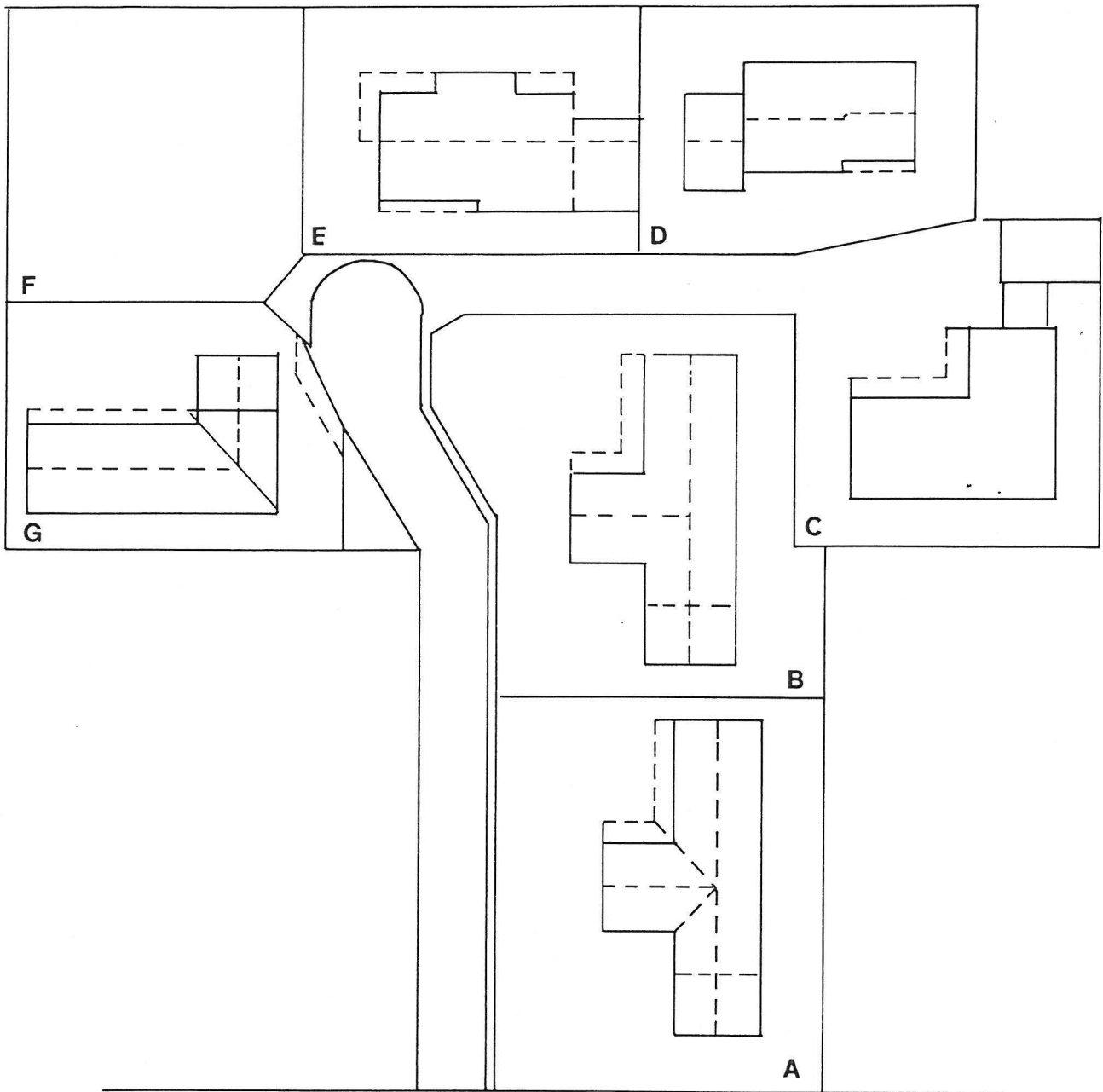
Clearly everything but the removal expenses have been seen to.

CONTACT

Dave McGall is the Sales Consultant for the Jomion Court development.

You may contact Dave at
A/h 436-669 or call any
Ace Real Estate Salesperson at
Hamilton East Ph 562-879
or Dinsdale Ph 473-133

Figure 3 Housing advertisement 1990
Source: Ace Real Estate



JOMION COURT

A = 3 Bedroom	— Sold	
B = 3 Bedroom	— Internal access to attached garage. 1300 sq ft living space Ensuite off master	= \$179,000
C = 2 Bedroom	— Attached garage	= \$140,000
D = 3 Bedroom	— Internal access to single garage	= \$158,000
E = 3 Bedroom	— Sold	
F = 3 Bedroom	— Family room, single garage	= \$180,000
G = 3 Bedroom	— Two level, 3 bedroom, 2 bathrooms, garage	= \$189,000

Material variety and comfort

The methods of construction and the materials used have changed the appearance of houses, and made a contribution to the style. The garage has moved from its position in the rear garden or attached to the side of the house, to a position incorporated within the house's basic structure. This trend has dramatically changed the shape and the size of the house. The same trend was reported to have occurred in North America (McAlester and McAlester, 1984). The reasons for this innovation include convenience, practicality, security, and protection from the weather. Internal access to a garage is listed as an amenity in the real estate columns. Double garages, two or "three car garaging", in the language of the real estate industry, and car ports have made an impact on the housing of this period-style. Some houses and units were designed in the 1970s so that the slope of the roof allowed a car port to become an integral part of the basic structure of the house. The automobile has been commonly used in Hamilton since at least the 1920s. Cleave's Trade directory (1920) lists garages as already established in Hamilton East and car mechanics amongst the resident population, indicating sufficient vehicles were available to maintain businesses. It is only in this period-style, however, that the automobile has had such a direct impact on domestic architecture.

The concrete slab foundation has become common trade practice in New Zealand in the last twenty years. It has affected the construction, the comfort and the appearance of housing. Avoiding the need for steps and decking, houses can be built with the floor at ground level, increasing the opportunities for indoor outdoor living. The same method has been common practice in other 'Western' countries for much longer (McAlester and McAlester, 1984; NZCIH, 1971). This period-style has included an emphasis on comfort, and protection from the extremes of climate using insulation to keep the residents warm in winter and cool in summer. With changing period-styles has come a change of

attitude, reflected in an increasing emphasis on comfort. Hamilton East residents' cultural and symbolic interpretations of the "conditions and their definition of comfort" (Rapoport, 1969, 87), have changed, for they are now more sensitive to material comfort.

The use of materials, colours, shapes, size, landscaping and other features are used to represent the social characteristics of the resident household (Rapoport, 1982). One significant change in the appearance of housing in this period-style results from the widespread use of a variety of construction materials. Several roofing materials in many colours are in common use and there has been "a veritable flood of cosmetic building materials" (Reynolds, 1977, 84). Wall coverings now available in many colours, not the limited range from the post-war period, include clay brick, stone, concrete brick and stone, and fibre cement, all referred to as 'permanent materials'. Typically two or more wall covering materials are used to face each house. Timber weatherboards are now rare. Every possible combination of roof shape and roof pitch are used. Two storey houses are popular and the outline shape of many houses is complex, not standard rectangular or square.

Not all housing in the period-style is a reminder of past design, but some of the most contemporary owed inspiration to a world wide trend. This is post Modern architecture, a fashion in high style architecture and vernacular architecture all over the 'Western' world in the 1980s. Although much of the influence on this period-style is indigenous the trend toward eclecticism has seen the adding of many historical devices to the exteriors of commercial, public and residential buildings. This trend owes its influence to the revolution against the functional Modern architecture which was characterised by bland, glass covered apartment blocks and offices common in highly populated countries. These have been rejected in the post Modern movement which has develop simultaneously in all 'Western' countries.

Cultural diffusion has reached such a level of sophistication that New Zealand is no longer the recipient of new information at the end of a boat journey, but at the end of a satellite link. Initially post Modern architecture was seen predominantly in commercial and expensive residential buildings. Even today post Modern features do not appear on low cost housing, but the external characteristics common all over the world during the 1980s are constructed in Hamilton East. Like much of what is called 'style' the features of post Modern architecture tend only to affect external features and the interior design of the building is not necessarily changed.

Post Modernism and heritage protection and revival are movements which have been promoted simultaneously. Edward Relph explained that although post modernism literally means coming after Modernism it is "largely based on a self-conscious and selective revival of elements of older styles" (Relph, 1987, 213). Its influence has been controversial and reaches far beyond the built environment (Harvey, 1987). It is much more than an architectural style but an attitude which has infused the whole urban landscape. Every kind of architectural feature appears because it is arbitrary rather than regimented. Post Modernism in its Hamilton East expression is simply an architectural trend, but the use of the term 'post Modernism' can be contentious since reactions to 'Modernism' are confused. It is pluralist, an irreverent pastiche and the definition remains in contention. For Harvey (1987) it is a break with large scale planning which was technologically rational, austere and functional. It has meant vernacular traditions, local history, along with any design ideas, can "be approached with a much greater eclecticism of style" (Harvey, 1987, 262).

The terms 'post Modernism' and 'heritage protection' are not widespread in everyday use, but their features are evident everywhere. Neither is there any reference in the real estate literature to these movements and approach to house design.

Clearly, there has been an impact in Hamilton East, and Hamiltonians are receptive to historical reference, and to this eclecticism which is fashionable just about everywhere (Relph, 1987). Real estate agents claim fashion is second only to location as the most important factors influencing property prices (*New Zealand Herald*, 21 October 1989).

Consolidation

The appearance and styles of some of the housing constructed in this period-style reflect deliberate attempts to increase the number of houses available in established city suburbs. These decisions have been made by individual owners and buyers, and by groups, the building industry and the City Council. The Council formulated a definite policy of encouraging consolidation within the city, and discouraged peripheral expansion (HCC, 1977; 1989). Since 1974 the population growth rate has slowed dramatically but the rate of household formulation is high (HCC, 1989). Infilling the rear or sometimes the front yards of existing properties has been the result (plate 37). This new attitude to land use and housing density has the effect of constraining the shape and style of housing constructed. The details of the infilling have varied:

- The existing house remains and a new, or several new houses are built around it.
- The existing house is moved on the section, and new houses are built, or an existing house is brought to the site from elsewhere (VNZ, Files, 1989).
- The existing house is replaced with two or more units or townhouses (HCC, 1989).

Consolidation was made necessary by rapid inflation of land values (Johnston, 1976) and by a multitude of social changes outlined by Porteous (1987).

One minor trend observed in Hamilton East is the provision of single storey housing aimed at the rental market. Residents, in four examples, have made decisions about the provision of housing for others, individual commercial enterprises for a perceived market. Aimed at the student, and transient market, but not in the form of blocks of flats, this housing is intended to blend into a still predominantly single family house suburb. Only small changes are made in the appearance of neighbourhoods. The restructuring of postal services led to the closure of a Waikato rural post office. A Hamilton East resident bought the post office building, and it now provides rental accommodation situated on her double section garden, adjacent to the original house. It also provides retirement income for the owner (Shirley, pers. comm., 1989). A Hamilton East greenhouse complex was destroyed by Cyclone Bola in March 1988. The owners of the land replaced the greenhouses with four housing units purchased from Electricorp. Each now provides accommodation in five bedrooms for tenants (*Waikato Times*, 30 July 1988), and an income to replace the income derived from horticulture. On two separate sites a few hundred metres apart in Hamilton East, existing family houses have been considerably enlarged to provide extended rental accommodation. Substantial fences screen the on-site paved parking, which occupies the front yard space (VNZ Files, 1989).

Housing consolidation and increased density has been achieved in the United States using different methods, partly because the pre-existing housing stock was different from that existing in Hamilton East or in New Zealand as a whole. Attics, basements and garages have been remodelled to make new dwellings which are accessory to the standard house (Hayden, 1984). In this country the new accessory dwelling commonly takes the form of a separate house within the same section. Both countries have faced similar demands for new smaller dwellings for various household types, especially amongst the elderly and the young. In the United States "division of the existing housing stock seems desirable, yet the ideal of the intact one family home dies hard" (Hayden,

1984, 174). These are different solutions to similar perceived problems. If people change their collective mind about their houses there is a good chance they have changed their mind about many other important things as well (Lewis, 1975). Gradually the people of the United States and New Zealand are changing their houses as well as their attitudes to population density, the single family household ideal, the ideal size of sections, lifestyles and recreation, and many other important social phenomena.

In Anglo-American culture there is still more value placed on the rural than on the urban motif. The features of the environment which now have positive meanings and high social status include, a rural image, low perceived density, privacy, good maintenance and appearance, as well as variety and complexity in design (Rapoport, 1982). These features have been important in Hamilton East in the post flats period, since about 1976. The way the space within the property is organised has communicative properties and, this has changed with time. Meaning in this period-style in Hamilton East has been expressed in a way that reflects the same high social status factors shown in Rapoport's generalisations. The people still cling to the rural past and to low perceived, if not actual density, and to the detached house, even if it is on a much reduced section.

The townhouse

The townhouse in its modern New Zealand form came to Hamilton in the 1980s. Now most new housing in Hamilton East is either lower cost kitset infilling of normal sections with a second house (unit), or townhouses. Everything really desirable in new housing in Hamilton in the late 1980s was a townhouse. Some townhouses had post Modern features (plate 38), if they were designed by architects. These were mostly associated with windows and include arches and wide curves and circles and triangular shaped



Plate 37 A 1982 unit infilled the front garden of a 1921 cottage in Cook Street



Plate 38 This 1988 house occupies a 'half' section on Dawson Street

classical pediments (low pitched gables). They are entirely cosmetic but also entirely distinctive.

It is difficult to define a 'townhouse' for the term is used loosely. The only certainty is that many house forms are referred to by that name, at least by builders, developers and estate agents. In studying for a year (1989) the *Property Press* and *Property News* - two free advertising publications circulated in Hamilton - the definition of a townhouse did not become any clearer. By reading between the lines a townhouse has the following features: it is single or two storeyed, newly built, and has a small garden. Built to appeal to a middle class market, not 'low cost', the name is used in creating an image of a special house form, probably not suitable for a family. It is a house built for singles, couples, and 'youthful' retired people. It is 'trendy', 'up-market', and fashionable. The image is in the name and the amenities, for townhouses are not necessarily located in inner city areas, but are also in outer suburbs.

The townhouse is not new. In the past it was a house in the town as opposed to a country house. Johnston (1976) recognised its existence in New Zealand in the mid 1970s, and Fookes recommended the townhouse as an alternative to flats in his newspaper article (*Waikato Times*, 3 March 1973), under the provisions of the Municipal Corporations Act 1954. The famous Napier Street townhouses in Freemans Bay, Auckland have a high profile in the high style architectural literature (Fowler and Van de Voort, 1983; Mitchell and Chaplin, 1984), but they are in reality terraced houses. Townhouses today are not a style - they are a concept. The Greeks and Romans resided in townhouses and country houses (villas). Michael Conzen (1960) discussed townhouses in eighteenth century Alnwick Northumberland. Townhouses have "all the favourable attributes of the single family house without the heavy maintenance burdens and the suburban isolation" (Davey, 1978, 105).

The townhouse has been in vogue internationally as a component part of post Modernism. Hamilton East has also reflected the national housing scene and real estate agents reported a demand from throughout New Zealand:

Preferences are for small-scale developments conveniently placed with some private outdoor space, visual and acoustic privacy, attractive landscaping and adequate provision for cars (National Housing Commission, 1988, 38).

The term 'townhouse' is so fashionable that it is applied to house forms which had other names in the past. In the late 1980s the home unit was transformed by a change of name and image into a townhouse. New, but classic bungalows built close together around courtyard drives are referred to as townhouses. The purveyors of housing in New Zealand may have recognised public dislike of the term 'unit' and in an attempt to conjure up a new image turned to the internationally recognised 'townhouse' to reflect a lifestyle ideal. This is high quality and low maintenance housing for those who work and play hard.

Hamilton East townhouse developments are low to medium density just as Davey (1978) recommended. The claim in 1974 was that townhouses were houses plus courtyards usually attached in a row, with staggered setbacks to avoid a monotonous appearance (HCC, 1974b). This is not what has been constructed in Hamilton East, although a group of four Crown rental, attached houses, built in 1979 occupies a sloping section near the river (VNZ Files, 1989). A number of groups of medium to high cost townhouse developments have been constructed on steeply sloping (plate 39) and wooded sites adjacent to the riverside pathway. The land for these very contemporary houses came on the market as a result of demolition of an old house, and of infilling the large mature garden of another (VNZ Files, 1989). However, at the elite end of the housing market in 1990 some new subdivisions in Auckland are advertised regularly as being all prestige homesites, absolutely "no townhouses or crossleasing" (*New Zealand Herald*, 15



Plate 39 This cluster of townhouses in MacFarlane Street occupies a sloping section, previously occupied by a 1923 bungalow

September 1990). This means that only one house is allowed per section, to maintain the elite character of the neighbourhood.

House units and townhouses have dominated in the sixth period-style. In spite of the wide ranging inspiration for this housing the one feature it has in common is that it is virtually all detached. The way in which consolidation has been achieved is through more and often smaller houses built closer together. The building industry and the people ignored the provisions of the 1977 district scheme which intended that the "single family dwelling house will ultimately be replaced by higher density housing types" (HCC, 1975a, 57), in selected areas. This was intended to be typically two and even three storey apartment blocks. The proposal that high rise apartments be built beside the Waikato River west of the Hamilton East shopping centre in a Residential Three high density zone (HCC, 1975a) also did not come to fruition. In reality, the introduction of the 1977 district scheme meant that no more two storey blocks of flats were constructed in Hamilton East.

The objective laid down in the 1974 blueprint for long term planning was to give greater freedom of choice than the market offered at that time, by the provision of "as wide a variety of accommodation types and layouts as possible" (HCC, 1974b, 28). In 1991 it may be concluded that the people of Hamilton East have also failed to achieve that objective, because all the housing constructed is detached single household units, and "movement away from single detached units has been slow" (HCC, 1989, 28). On the other hand a variety of innovations have been introduced; renovation of existing homes, more two storey houses, kitset housing, home units, townhouses, and clusters of new developments have all added to the variety. There is an increasing demand for a wide variety of housing options with appropriate choices for the elderly, single parent families, students, high, medium and low cost housing (HCC, 1989) preferably with the proviso, 'as long as it is detached'. This is not surprising since "the

detached family house is the world's favourite kind" (Mitchell and Chaplin, 1984, 14) even when it is occupied by non-family households. Fashion and lifestyle related to social change are two of the determining influences identified in several period-styles since the turn of the century. They continue to be important in the provision of housing in Hamilton East in this the latest period-style, along with the inevitable economic considerations, historic precedent, material variety and comfort, and pressures of consolidation.

CHAPTER V

INFILLING THE ONE ACRE SECTIONS

This chapter focuses on why, where and how the Hamilton East one acre allotments were infilled with houses. Following this introduction it is divided into five sections which consider the processes of infilling: the nineteenth century, the villa period, the bungalow period, the standard New Zealand house period, and the last two decades. The last two decades are combined so that the flats period-style, 1970-1976, and variations on old themes period-style, 1977-1990, are considered together. For each section, the chapter shows:

- why the infilling occurred,
- where in the suburb the infilling took place, and
- the subdivision design.

Improvements in Hamilton's economic fortunes brought a corresponding demand for new houses (Gibbons, 1977). During times of depression and economic downturn, the demand for new houses fell away. The influences that prompted the infilling will be shown here to have been of local, regional, national and international origin. In analysing why infilling occurred in Hamilton East, the chapter considers what created a demand for new housing. Social, economic and political processes can be identified that led to the building of the village of Hamilton East into a suburb of a town, and then into an inner suburb of a city. The responses of the people of Hamilton East to changing social, economic and political conditions are reflected in the present road pattern, subdivision pattern and housing stock. That is the accumulation of all the past decisions which resulted in

the parcelling up of land, and the use of that land for residential purposes. The origins of the influences that led to the demand for infilling are identified as:

- local to Hamilton, inter-city relations;
- regional to the greater Waikato, as Hamilton's hinterland, city-region relations;
- regional, in a wider sense in which Hamilton is part of the South Auckland region and in a dependent position in relation to Auckland, or intra-city relations;
- national to the whole of New Zealand; and
- international in which Hamilton East has been influenced by events in Australia, North America and Britain, as well as wars and depressions in the global context.

Infilling occurred at times of prosperity and population growth and as Carter (1976) identified in the growth of towns in Wales the growth was not solely due to internal generation, nor can it be ascribed to external pressures alone. Rather it was a combination of both which was the key to growth phases. There are therefore stimuli impinging on a village, town, or city from outside, and internally. The spatial distribution within a settlement is consequent upon internal competition and relative dominance (Carter, 1976). Internally, the stimuli acted to cause two apparently equal townships to change so that Hamilton West became dominant over Hamilton East because of the presence of the Central Business District on the western side (Gibbons, 1977). Hamilton East developed a dual function. It became a centrally placed major residential suburb and contained an important commercial core. Hamilton East commercial centre was of secondary

importance to the Central Business District, but important to the people of the eastern side of the river.

Periods of growth and stagnation can be identified in the landscape by the quantity of building in any particular period-style (Lewis, 1975). It is possible to observe when Hamilton East grew and when it languished. It is possible to speculate about the decisions the individual people made about infilling the suburb and about their motives. During each of the five periods selected here to coincide with the period-styles used in Chapter Four, Hamilton East achieved a road pattern, building pattern and morphology required for the current activities of the residents. As each new period superseded the old period the roads, sections and buildings were the material residues of the settlement (Conzen, 1960), along with new innovations like the development of parks and the use of the reserves.

The first period identified as the nineteenth century, corresponds to the nineteenth century houses period-style. In Hamilton East village early development was the building of the first houses on the allotments allocated to individuals. Once the land was freeholded, allowing the allotments to become commodities, the original settlers and new residents bought and sold land. After the initial period, therefore, Hamilton East became a scattered village, as individuals made decisions about where to live and how to make a living. In the villa period from about 1900, no systematic organised settlement occurred. Individuals subdivided land and other individuals bought it and built villas. Villas remain extant in almost all parts of the suburb today. Most development, however, was near the commercial centre of Hamilton East in the north of the suburb adjacent to newly developing Claudelands suburb, and in a subordinate, semi-nucleated settlement in the south of the present suburb, centred on Brookfield, Graham and Grey Streets.

The 1920s and 1930s saw more individuals subdividing randomly, and home buyers infilling the big spaces between the villas. Corresponding to the bungalows period-style, it is described as the bungalow period. In this inter-war period, bungalows were constructed in the same neighbourhoods as the villas, infilling between the villas, but also in distant parts of the suburb, where new bungalow owners occupied vast properties comprising whole one acre allotments. Many of the residents developed industrial, horticultural, agricultural, or constructional enterprises based on their own land, which was then used for the dual purpose of making a living and as place of residence. Typical arterial ribbons of bungalows were constructed along the main routes in Hamilton East just as they were in other Hamilton suburbs.

Before World War Two substantial construction of houses for purchase and for rental infilled specific locations mainly in the south and west of Hamilton East. Following the war, infilling took on a new meaning and occurred at a very large scale in every part of the suburb, right up to the town belt and the river. Over 50 percent of Hamilton East's present housing stock was built between 1939 and 1969 (calculated from VNZ Files, 1989). The late 1930s State housing and all the developments after the war correspond to the standard New Zealand houses period-style. This section of the chapter is entitled the standard New Zealand house period.

In the early 1970s most infilling took the form of replacement of older houses by flats, or infilling vacant rear sections with flats. Zoning regulations limited this development to the areas designated in the district scheme (HCC, 1967) close to the commercial centre. This major period of housing development only lasted until 1976. Because the reasons for the flat building boom were considered in Chapter Four, the final section of this chapter is devoted collectively to the last two decades, 1970-1990. This corresponds to the flats period-style and the

variations on old themes period-style. Since the flats period infilling has continued apace all over the suburb, in a form that has become known as 'infill housing', any new housing introduced into an already established urban area (Gray and Davey, 1986). This latest development is therefore little different from the infill housing that has been randomly filling the one acre sections since about 1900, except that much has occurred without the further subdivision of land. The gardens are even smaller today and the house types have new names but the principle is the same. The areas zoned high density have seen the most intense infilling, but it has been permitted anywhere that 500 square metres minimum section can be surveyed, and anywhere that 400 square metres minimum section average can be crossleased (HCC, 1977). The crosslease is a title to land, a form of ownership where a purchaser owns an individual share in the freehold of the whole property and leases back from the owners of the whole property, the dwelling unit (Parfitt, 1986).

This chapter explores this "sequential infilling" (Ley, 1983, 51) and analyses the dynamics of a settlement. At no time has the evolution of the infilling process stopped for long, but it has been slowed by wars and the depression. Dealings in land result in material changes in the suburb. Human decisions and actions have been transforming the buildings and the empty spaces of Hamilton East in response to changing perceptions and to different social, economic, and political circumstances.

Hamilton East is not unique in its original plan but it is unusual. Few settlements in New Zealand share with Hamilton East and West an original plan in which one acre allotments were surveyed. Those that do are Wellington, Nelson, Cambridge, Kihikihi and Pirongia. The form of development that has occurred in all these settlements has been severely constrained by the size, shape, alignment and location of the original allotments. The infilling and subdivision discussed in this chapter has therefore been entirely dependent on a government decision that

Hamilton East's soldier settlers be assigned one acre allotments (*New Zealand Gazette*, 5 August 1863). Hamilton East would not, and could not have developed as it has without the acre allotments. Infilling has only been possible in this form because of the size of the original allotments and the nature of the original settlement. The acre allotments have allowed enormous scope for infilling, and since 1977 for crossleasing.

Land is subdivided for the purposes of establishing either freehold or leasehold title (Grierson, 1962), that is "delimiting private ownership" (Sack, 1986, 15). The word 'subdivide' means to divide again after first division. Within the provisions of the Municipal Corporations Act 1933, Section 332 (1) (a) (b), subdivision was defined as where an owner of land by way of sale or lease disposed of a specified part thereof, less than the whole, or advertised or offered any such part for disposition. The term 'subdivision' will be used throughout the chapter when referring to the surveyed division of larger parcels of land into smaller parcels.

Ownership of land is based in hereditary rights, rights associated with "hereditaments". This has created a value in land for security of loans, as a tax base, and as a saleable commodity (McRae, 1984). The original one acre allotments were freeholded and then the individual owners were able to make the decision to subdivide. Subdivision took place as individual owners made appropriate decisions which suited their own circumstances. It was not done systematically but in a haphazard fashion over many decades (Walsh, pers. comm., 1989). Upon subdivision each section was assigned a Deposited Plan number or DP number, and the date of subdivision can be assessed on the basis of the DP number to within a year or two (Walsh, pers. comm., 1989).

Subdivisional design has been the exclusive preserve of surveyors in New Zealand (Baldwin, 1988). Subdivision of the one acre blocks in Hamilton East and West has resulted in quite different

outcomes from subdivision of greenfield sites found elsewhere in Hamilton. A small number of one acre blocks were also surveyed in Claudelands when the present suburb was a township outside the borough (Plan of Part Hamilton Borough, 1913). The surveyors who have worked in Hamilton East were required by the existence of the original plan to conform to an already established framework of roads and one acre allotments. They could ignore the boundaries between the allotments only when adjacent allotments were in the possession of the same land owners. These surveyors were faced with constraints, for example the widths and depths of newly surveyed sections were dictated by the width and depth of the original allotments. Subdivision of land has been determined by statutory requirements outlined in this chapter.

The concept of infilling is recognised in historical geography (Carter, 1983; Conzen, 1960). It means using open land for housing in towns that are already established. This chapter emphasises the concept of 'infilling' and argues that except for the original houses and the direct replacement of an old with a new house, all housing in Hamilton East is infilling. This concept would not be popularly recognised, although with a clear explanation it would probably not be disputed. Infilling, common in the landscape, does not attract much attention in the literature. In Conzen's (1960) major work he explored this concept using the terms 'repletive development' and 'repletion' to describe infilling. Carter (1983) recognised that extensions to cities take the form of new suburbs on the periphery, or infilling by which open sections of the original town were built upon. In Hamilton East changes in the character of residential areas have therefore been in the form of replacements of old houses by new houses, and by infilling open land. Infilling amounts to the conversion of part of a backyard into someone else's section, just as Conzen (1960) noted in Britain. This involved first the creation by subdivision of a new section, or a "plot" in Conzen's terminology. The original dwelling on a section, Conzen (1960, 104) referred to as a "plot dominant". In

the Hamilton East context the plot dominant can be identified as the original settler house, pre-villa cottage, villa, or bungalow, that is the first house to occupy an acre allotment. The site of many but not all of these houses will be identified. The sections created out of the land occupied by the plot dominant, the original acre allotments, Conzen (1960) referred to as "derivative plots". Here they will simply be considered new smaller sections.

The original plan

Figure 4 is a simplified copy of the original 1864 surveyed plan. The original one acre allotments were mainly rectangular in shape approximately 36.6 metres (40 yards) wide and 110 or 111 metres (120 yards) long, that is a ratio of one to three. Where the original route of the road necessitated there were some non-rectangular allotments, but these were surveyed as near rectangular as possible. No literature has been located which analyses the original plan (SO 201, Plan of East Hamilton, 1864). Because of the extra width Grey Street, Galloway Street and Albert Street were intended to be the major streets. No bridge over the Waikato River to Hamilton West was included in the original brief, but it appears that the surveyor, W.A. Graham may have intended that there would be a bridge, reached by Albert Street, crossing the terraced area now known as Hayes Paddock. It may be that Albert Street was intended to be a major ceremonial route, perhaps a kind of boulevard leading from the bridge over the Waikato River to Galloway Park, reserve land used as a redoubt, or defended site in the post-1864 period (SO 201, Plan of East Hamilton, 1864).

In the original subdivision design the map, figure 4 shows that the majority of one acre allotments lie approximately in an east-west configuration, symmetrical about Albert Street, which can be seen as the line of symmetry. However along the length of Albert

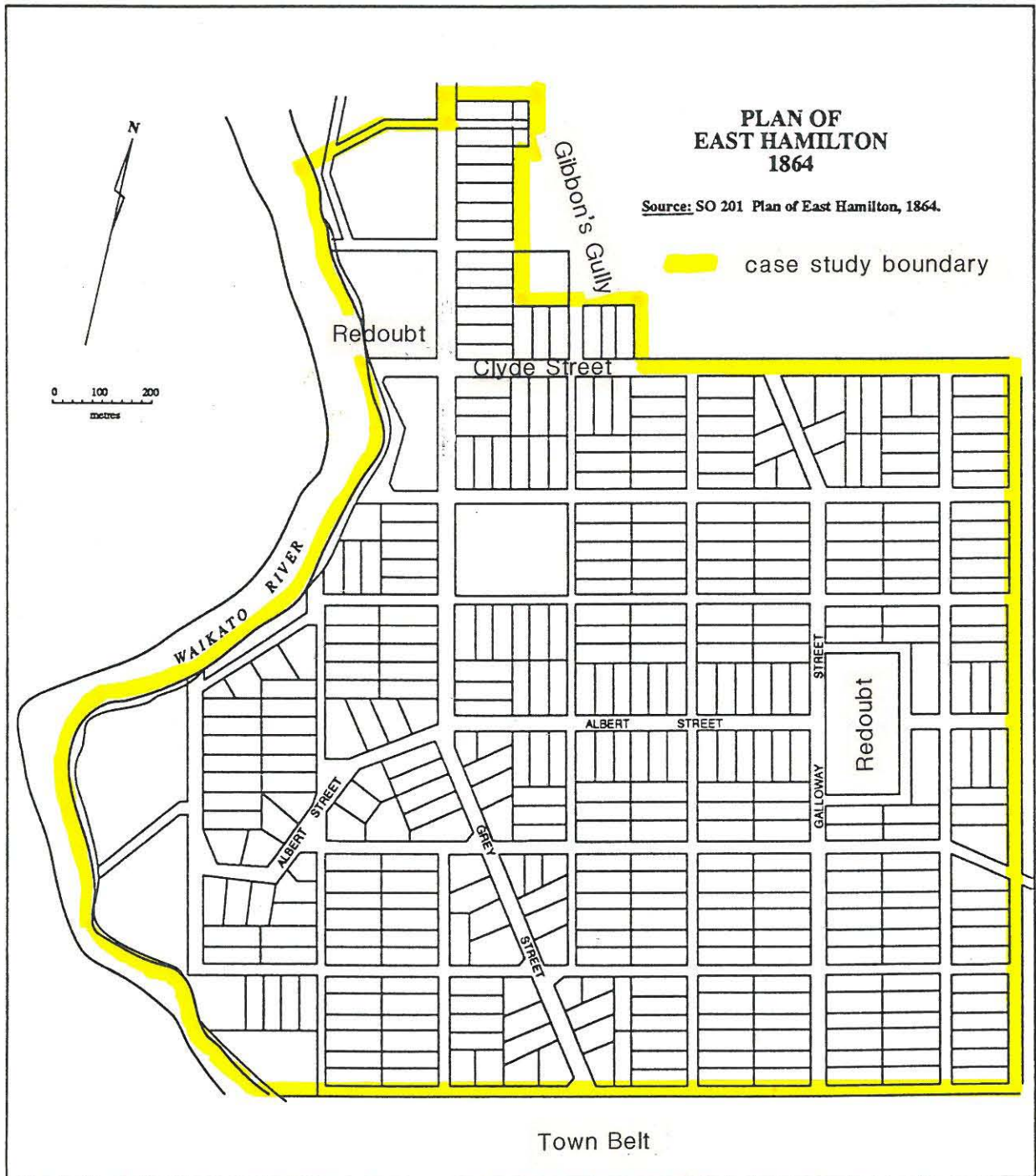


Figure 4 Plan of East Hamilton 1864
Source: SO 201 Plan of East Hamilton, 1864

Street, the narrow end of each acre faces Albert Street, against the general trend. Perhaps this reflects a proposal or an assumption that houses would face the narrow end of an allotment. The corollary of this was that Albert Street as a major street would have the front elevation or facade of every house facing it. Likewise the narrow ends of all the allotments faced Grey and Galloway Streets, also apparently designed to be major streets as a result of their greater width. The present Steele Park reserve also appears to have been recognised as a major focus of the surrounding allotments, for the narrow ends of all the allotments face Steele Park. Grey and Galloway Streets became major routes, Albert Street did not - it retains its width as a relict feature, providing its residents with many metres of street space.

A majority (14) of the blocks of allotments were surveyed with 12 acres, and were square. Near to Steele park 10 acre blocks were surveyed. Elsewhere the area of blocks varies from approximately three to more than 20 acres. All boundaries between allotments were perpendicular to the street with only two exceptions on the original plan, where geometry would not allow rectangular sections perpendicular to the street in Firth and Graham Streets.

The original streets spaces have acted as morphological frames, each containing blocks of acre sized residential allotments. These frames have conditioned the genesis and growth of subsequent development, just as Conzen (1976) noted about streets in towns and cities in Europe. The streets, sections and buildings "integrate in space and time to form combinations of a dynamic rather than a static nature" (Conzen, 1976, 117).

The grid pattern of the streets

The mechanical, organised grid pattern of Victorian town plans has attracted some interest in the literature (Carter, 1983; Conzen, 1981; Hargreaves, 1980; Williams; 1966a; 1966b). All the

Waikato military settlements from the 1860s were planned with a grid pattern of roads, Hamilton West and East, Cambridge West and East, Kihikihi, and Pirongia (Alexandra) West and East (Allen, 1969). The Hamilton East site allowed almost a perfect grid. Where the relief did not accommodate a grid the surveyor W.A. Graham either left it out of his plan, such as the gully area in the north or the terraced land near the river, now Hayes Paddock, or turned the roads through a small angle, such as at the south end of Grey Street.

The ubiquitous grid pattern was the simplest relatively cheap, most popular way to lay out towns in the New World. New Zealand surveyors accepted the current practice of their profession (Hargreaves, 1980). Speed and economy were high priorities in land survey (Powell, 1970). The economy of the method arose "from the ease and accuracy to be obtained from working in straight lines and right angles" (Williams, 1966a, 46). It was a strictly formal and geometric approach to town design.

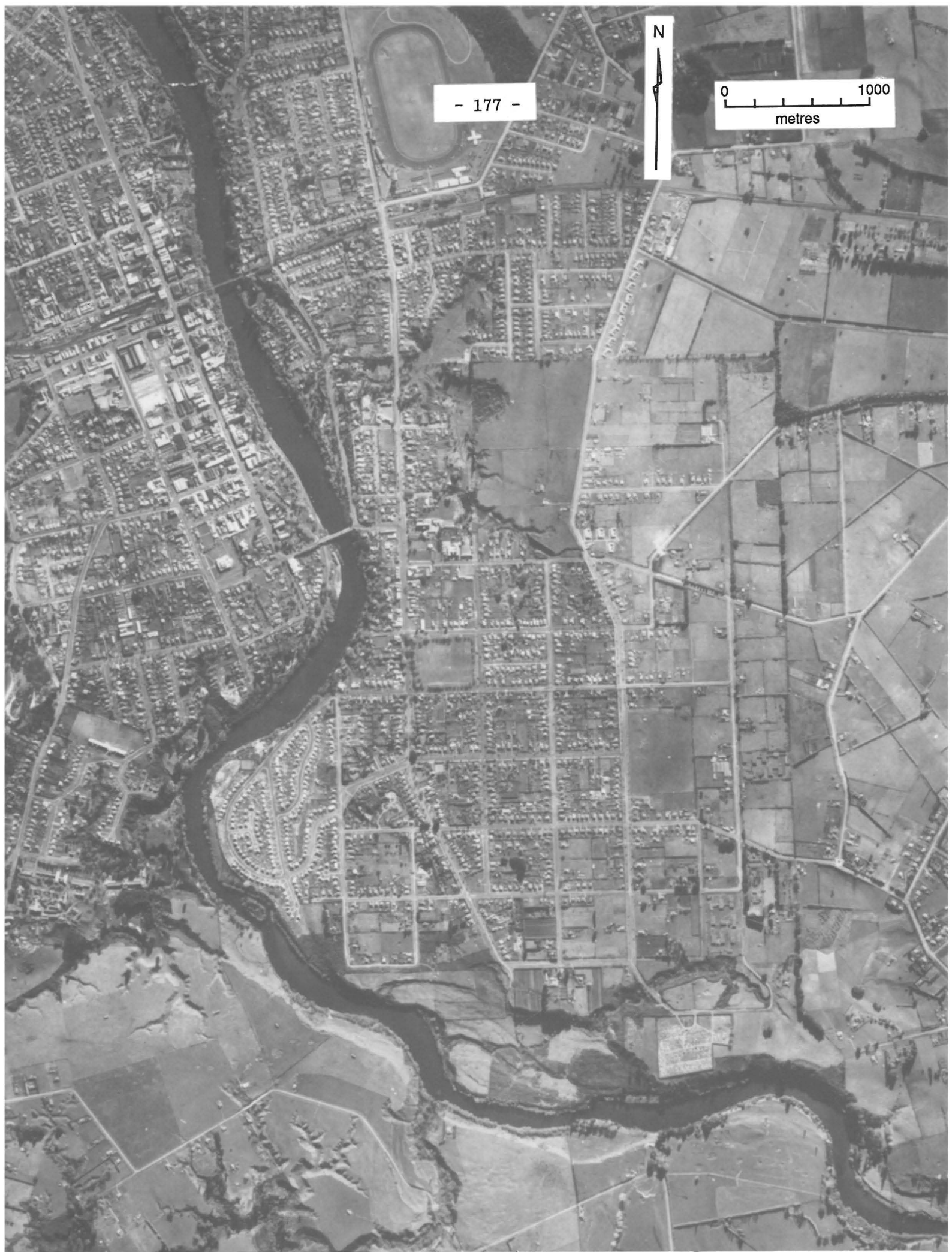
For Carter (1983, 119) the grid was not used to allocate land equally to all people, as a neutral subdivision of space, predicting no preferred social order. He claimed the grid was not a symbol of a democratic and egalitarian system, but a symbol of "mercantile capitalism", the "most rapid way of exploiting urban land". In New Zealand as in America and Australia the grid used in township design formed an essential ingredient in the overall plan for systematic colonisation (Powell, 1970). This was precisely the case in Hamilton East and all the Waikato military settlements. The imposition of order was central to the colonial enterprise. The European colonisers sought to discipline both the environment and the people (Pawson, 1987a). The very first major action in surveying the land, in 1864 in Hamilton, initiated the Eurocentric concept, the commodification of land (Pawson, 1987a). Regular orderly street patterns were part of orderly plans, geometric to keep the people on "the straight and narrow" (Pawson, 1987a, 315). The original survey was made possible

because the colonisers were literate, capable of printing and surveying and determining latitude and longitude. The territories surveyed, the one acre allotments in blocks of 12 acres, were used to support a complex hierarchical society based on private property (Sack, 1986).

The Plans of Towns Regulation Act 1875 applied only to towns surveyed on Crown land. It post-dated the survey of Hamilton, but it was based on the same philosophy as the survey of the Waikato military settlements. Section eight of the Act required straight streets at right angles to each other and with right angled corners. This was New Zealand's first legislation aimed at what is now called 'town planning' (Ross, 1974). It was repealed by The Land Act 1885 which also required straight streets and right angled corners and surveyors had no option but to comply with the law. In the last century, wide straight, regular streets were also considered vital to health. They allowed the wind to blow and "disperse bad air and odours which proponents of the miasmatic theory of health believed to spread disease" (Pawson, 1987b, 126).

Conzen (1976) identified towns where the original plan acted as a palimpsest, a manuscript where the original writing has been obliterated by later additions. This has not occurred in Hamilton where the original plan is still very much in evidence. Meinig (1979) noted that the basic geometry of routes and allotments in the original plan of many towns were indelible features. The latter is true of Hamilton East because of its relative youth and the nature of the development. The present day street pattern and many of the property boundaries are a direct legacy of W.A. Graham's original plan. The 1864 plan is therefore a major residual feature, with only minor changes made to the road system, a few short additional streets built in the first decade of this century, and some mid century culs de sac.

Territorial partitioning is a primary instrument for defining property into saleable parcels, each under the control of an individual. Each land parcel has monetary value and can be bought and sold again and again (Sack, 1986). Although they are not always visible on the ground, territorial boundaries can include fences, walls, hedges and survey markers. They are fixed precisely on maps and documents and they affect the lives of all members of the community (Sack, 1986). While "all cultures distinguish among domains and mark boundaries, the use of fences is much more variable" (Rapoport, 1982, 170). Fences, hedges and walls have been strongly in evidence in Hamilton East and some remain today. Substantial hedges were a particularly significant element of Hamilton East in 1943 (plate 40; Air photograph, 1943), and in earlier times (Watkins, pers. comm., 1989). While individual owners have therefore constructed frames round their properties the original "morphological frame" (Conzen, 1960, 71) has been the major framework or stage in which the sequence of infilling has taken place.



- 177 -



0 1000
metres

Plate 40 Part of, 14 June 1943: Photomosaic of Hamilton and district.
Department of Lands and Survey, Wellington

THE NINETEENTH CENTURY

Hamilton East village

Hamilton East and Hamilton West became established as two of many new villages or townships during the nineteenth century. Each house was constructed on an individual one acre allotment and infilling was not a significant development. "Further subdivision in the nineteenth century was limited to the commercial areas" (Gibbons, 1977, 46) of Hamilton. It is not therefore possible to discuss factors which influenced infilling but only factors which led to the survival of Hamilton East as a settlement. Infilling began in the villa period from about 1900. During the nineteenth century the Hamilton settlements were never stable communities. Considerable in-migration and out-migration occurred as residents made decisions which caused their village to intermittently grow and stagnate.

In an attempt to be self sufficient, many of the residents operated a system of semi-subsistence agriculture. All houses were surrounded by large areas of land (Gibbons, 1977). Small scale farming enterprises on the allotted sections, the abandoned sections, and the 'waste' or reserve land were common. These included fruit and vegetable growing, and the keeping of many cattle, chickens, and pigs, some of which illegally wandered freely about the village (Gibbons, 1977; *Waikato Times*, 24 March 1885; 1 July 1886 quoted in Norris 1964; HPT Files, 1990; Watkins, pers. comm., 1989).

Initially, all the sections were allocated, but not all were settled long term. The soldiers were free to sell their allocated sections after three years of service (*New Zealand Gazette*, 5 August 1863), and this did occur. Others abandoned their home and land temporarily to work elsewhere. Norris (1963) reported that the Pearson family of Nixon Street, Hamilton East, whose

descendents have been long term Hamilton residents, left their slab hut for the Thames goldfields for two years 1868-1870. When they returned the hut was still sound. He obtained this information in a personal communication with T.H. Pearson. Gibbons (1977) suggested there were many deserted houses in Hamilton when the residents went to the Thames goldfields.

The railway from Auckland was constructed between 1872 and 1877 (AJHR, 1877, E1) and the "township at last began to grow appreciably" (Gibbons, 1977, 55). The prospect of the railway was a great drawcard in the mid 1870s and the people of Hamilton began to prosper between 1872 and 1883. Hamilton West and East were together proclaimed a borough in 1877 (*New Zealand Gazette*, 1877, 1208). The general economic difficulties of New Zealand in the 1880s affected the prosperity of Hamilton so severely that it struggled to survive from 1884 until the turn of the century (Gibbons, 1977). Aucklanders had great regard for the land of the Waikato even from the 1880s but farming did not start to become rewarding in the Waikato until the late 1890s (Stone, 1973). In an Almanac, Bond (1892) praised Hamilton as a 'health resort' for visitors from crowded centres of population, but nineteenth century Hamilton East appears to have been typical of pioneering settlements in early colonial days in the New World. Such colonial townships commonly displayed scattered buildings including barns, livestock, kitchen gardens and wide muddy right angled streets (Grey, 1984). The following could have been written about Hamilton East. The early township was an:

intimate mixture of rural and urban features resulting from an infant hinterland, poor roads and imperfectly developed town services, and representing a short-lived semi-subsistence stage (Grey, 1984, 74).

Hamilton East also had characteristics in common with the Old World where in the early town the land was rarely completely built over, and there were extensive open areas. These were most

frequently the large gardens that were part of the primitive urban economy. Infilling occurred when there was a major phase of urban population growth (Carter, 1983). This urban population growth and infilling in Hamilton East did not begin until the start of the new century.

Location of the houses

The map figure 5 shows the location of the nineteenth century houses. It was prepared from a variety of sources but mainly VNZ Files (1989). It does not show the location of all the houses constructed in the last century, only those definitely known from documents to have existed at or before 1900. A small number can be reliably dated. Some houses are still occupied but as stylistic mixtures, and their present facades do not indicate nineteenth century construction. Others are no longer extant. Houses known to have existed but now demolished are not shown on figure 5 because there is no definite indication that they were built before the turn of the century, although they may well have been (VNZ Files, 1989; Air photographs, 1943; 1953).

Houses were well scattered through much of the surveyed township including one or two on the northern, southern and eastern boundaries. No evidence has been uncovered of houses on the terraced land in the west near the Waikato River. Fewer houses were identified west of Grey Street than east of Grey Street. There was considerable randomness about which houses have survived and which are known to have been demolished. The longer the house remained occupied the more likely a record has been retained at VNZ. The many decisions of ordinary Hamiltonians were responsible for the survival, or loss, of these houses. There is no pattern to the scatter but there was a tendency to occupy the central part of the township. Any conclusions about the location of houses must be made with the understanding that many others must have existed. Figure 5 shows that one or more households



Figure 5 Houses built in Hamilton East in or before 1900
Source: VNZ Files, 1989; HPT Files, 1990

occupied many of the 10 and 12 acre blocks. In the central, most settled blocks two, three or four houses were identified. Of the total of over 40, nine faced Grey Street and nine faced Firth Street.

Throughout the 35 years to the turn of the century, the diffused village also included a number of other buildings associated with the churches (Hair, 1984), the county council (More, 1976), and some commercial enterprises (Cleave, 1894). In 1894, Cleave's directory lists 173 heads of households in Hamilton East. No addresses were recorded. The occupations of the heads of households ranged from: Roman Catholic father, journalist, land agent, coroner, nurse, and teacher, to business people: carter, cabinet maker, miller, saddler, fishmonger, butcher, flax miller, painter, coal dealer, builder, and draper. The farm based occupations included: farmer, labourer, cattle dealer, dairyman, gardener, apiarist, orchardist, and creamery manager.

Laying the foundations of the future town

Even though Hamilton East was an insignificant village, it was planned to be something much more ambitious. The planned settlement of the Waikato, and of all of New Zealand, took place within the constraints of "institutional policies by which the patterns of land settlement were supposedly controlled" (Heathcote and McCaskill, 1972, 150). New Zealand was "settled in an era of liberal capitalism in which the colonial State sought to establish conditions favourable for the creation of private wealth" (Pawson, 1987b, 123). Survey and subdivision of land was fundamental to the government's objective to initiate and promote the settlement of the country. In the Waikato the provision of town acre allotments and farms for the military settlers was part of the deliberate establishment of conditions which would allow the creation of private wealth. Conditions in nineteenth century Hamilton did not lead to the achievement of this objective.

Hamilton East and the other Waikato military settlements were unusual because of the size of the original allotments. The Waikato as part of Auckland province was also atypical in the use of the term 'allotment'. Only in the Auckland province were parishes created, "the subdivision of a Parish being numbered allotments" (McRae, 1984, 4-16). Elsewhere all land parcels were referred to as 'sections'. In other respects however, survey and subdivision of Hamilton East was typically controlled by the Crown, through the government, as were all the other Waikato military settlements.

In the earliest days the Crown issued instructions authorising surveyors to carry out title surveys and direct the laying out and subdivision of land (McRae, 1984). All the Waikato military settlements were surveyed and pegged out at the expense of the government into one acre town allotments and farm sections. After three years military service the soldier owned the allotted land (*New Zealand Gazette*, 5 August 1863). This involved using the "Deeds System" where the deeds constituted the title to the land (Gunman, 1961). Until 1870 all property dealings and conveyancing was carried out under modified British laws. From the beginning to the present day, subdivision of land and the provision of cadastral maps upon which the modification of title was to be effected was solely the function of the State (McRae, 1984).

Pawson (1987b) discussed the rationality of the design of towns as a product of the capitalist need to parcel land for sale, and to identify and establish territory, and to commodify land.

The roots of this form lie in the planning of the original New Zealand company settlements of the 1840s (eg Wellington, Nelson, Christchurch), which were pegged out in numbered sections on the grid iron principle; the motif that subsequently became pervasive in urban New Zealand (Pawson, 1987b, 126).

Wellington was divided into one acre lots in 1838. The large size was "intended to allow plenty of scope for future subdivisions" (Moore, 1974, 10). Nelson was surveyed into one acre town sections in 1841, which were sold to settlers (Dart, 1961; McRae, 1984; Plan of Town of Nelson, approved 1842). Other early subdivisions included: New Plymouth 1842, quarter acre sections, Dunedin 1847, quarter acre sections in town and 10 acres in the suburbs (Dart, 1961; Salmond, 1986), Christchurch 1850, quarter acre sections, and Invercargill 1856, quarter acre sections (Dart, 1961). The same principle of surveying before settlement was adopted in New Zealand, Australia and America (Grey, 1984).

The Waikato settlements were developed rather later. The land was not sold to the settlers but allotted in recompense for army service. The land on which the settlements were based was confiscated Maori land, under the New Zealand Settlements Act 1863. The settlements were initially defensive as well as residential. The land is now subject to the Waikato land claim which has been lodged with the Waitangi Tribunal. Each town was "laid out around or as near as conveniently may be to the stockade, in one acre allotments" (*New Zealand Gazette*, 1863, 303). There were two such redoubts, or defensive places established in Hamilton East (SO 201 Plan of East Hamilton, 1864). The original plan of each Waikato settlement varied because of variation in the configuration of the site. The aim was to survey compact rectangular shaped towns for security and defence (Allen, 1969). By European standards they were not compact but very generous. In 1969 Allen noted that, of the Waikato settlements, only Hamilton West and Hamilton East had grown beyond the limits of the original township. This continues to be the case.

Conventionally in New Zealand rectangular shaped sections were the norm, and in Hamilton East this was also the case. The *Journals of the House of Representatives of New Zealand* (27 November 1863) states: sections shall be rectilinear; every

section shall front on a road or shall have a right of way reserved there to; and road frontages shall not exceed two-thirds of the depth of a section.

The Municipal Corporations Act 1876 Section 349 (5) (b) provided for councils to make bylaws in respect of buildings. It allowed the regulation of the distance from any other building at which a building could lawfully be constructed. This was the first provision for front, side and rear yards. The Land Act 1877 Section 40 stated:

All sections shall, as far as the features of the country will admit, be of a rectangular form, and when fronting a road, river, lake or seacoast, be of a depth not less than twice the length of the frontage.

In Hamilton East, most of the acre allotments were already rectangular in form, and so further subdivision quite naturally took the same form. As Hamilton West and East combined became a borough in 1877 so surveyors were required under the law to continue the practice of surveying rectangular sections. The provisions of The Plans of Towns Regulation Act 1875 were incorporated in The Land Act 1885. The Land Act 1885 was the legislation that for the first time gave statutory recognition of the exclusive rights and responsibilities of surveyors in land subdivision. In Hamilton East surveyors have strictly adhered to this requirement ever since. The only locations where the boundaries were not surveyed at right angles are one boundary in Graham Street, boundaries in part of Firth Street, and where Clyde Street was realigned. This resulted in the original acre boundaries automatically being non-perpendicular to the street, and the houses built subsequently were not constructed perpendicular to the street. Subdivision produced more of the same. These anomalies in Clyde Street and part of Firth Street are obvious in a grid based part of the city where every feature of the built landscape is perpendicular.

Hamilton East is clearly typical of New Zealand's original grid based town centres. The country's urban residential environment was established in land-disposal schemes of Victorian rigidity. The static features of the initial phase of land-disposal have tended to be perpetuated, including regular and repetitive sections and uniform streets (NZCIH, 1971). The formal pattern of allotments and streets have survived long after their original rationale has disappeared (Heathcote and McCaskill, 1972).

In the original plan a Town Belt of open land was created along the east and south of East Hamilton. It was 220 yards or 201 metres wide and was never residential, although several cottages were constructed on it in the past (Leightons, 1930; Air photographs, 1943; 1953; Shirley, pers. comm., 1989). During the nineteenth century it was a large reserve of unsettled, uncultivated land (Gibbons, 1977). The residential allotments abandoned by early settlers, or never settled, amounted to a large area of 'waste' land which was gradually earmarked for specific purposes. Abandoned allotments reverted to the Crown. Some of these were sold to non-military settlers. Other allotments were retained by the Crown as waste land (Walsh, pers. comm., 1989). This was to become official reserve land - Education Reserve, Museum Reserve, Hospital Endowment, Borough Endowment, Municipal Reserve (Hamilton Borough Map, 1927; Plan of Part Hamilton Borough, 1913; Town of Hamilton East Map, 1924). In 1878 some 'waste' land was set aside to the Corporation of the Borough of Hamilton under the Municipal Corporations Act 1876. This included all the land immediately north of Bridge Street, altogether 43 acres 2 roods and 25 perches in Hamilton East (*New Zealand Gazette*, 1878, 1546). Then more land was reserved for the protection of the river banks of the Waikato (*New Zealand Gazette*, 1881, 117). Under The Public Domains Act 1881 a number of allotments were made public recreation reserves (*New Zealand Gazette*, 1886, 596). Additional acres around Clyde Street were set aside as Municipal Endowments (*New Zealand Gazette*, 1885,

645) and additional land was added to Hamilton recreation grounds (*New Zealand Gazette*, 1887, 957).

As early as 1892 or 1893 (DP 1233) some 1878 Borough Endowment reserve land, near the bridge over the Waikato River was subdivided, for lease (NZMS 189, Hamilton East, 1966; *New Zealand Gazette*, 1878, 698). Situated on Bridge Street, Grey Street corner, this land was, and has continued to be a strategically placed site, which has been leased and used continuously for commercial purposes. The Hamilton Domains Empowering Act 1894 allowed Hamilton Borough to grant leases of Domain reserve lands within the borough, subject to The Public Domains Act 1881.

Under The Hospitals and Charitable Institutions Act 1885, approximately 14 of the one acre sections in Hamilton East were designated Hospital Endowments (Town of Hamilton East Map, 1924). Section 84 of the act provided that such endowment land could be leased for agricultural, pastoral or building purposes. One allotment was used for a sand quarry in Naylor Street before World War Two and then developed for housing, around a new cul de sac, Wiremu Street. Villas were constructed on some of this land after the turn of the century. Then more of the acres were developed in the bungalow period at low density (VNZ Files, 1989). After World War Two, most Hospital Endowment land was completely infilled with houses, following subdivision, at the same density as the rest of the suburb. The houses constructed were owned by the residents, but the land was leasehold, for 21 years in perpetuity. The Waikato Area Health Board now has a policy of encouraging the lessees to freehold the land. Under present circumstances leasing the land does not give a good return on investment (O'Sullivan, pers. comm., 1990). Already about half the former Hospital Endowment land has been freeholded. Development of this freehold land has resulted in further consolidation where individual houses have been

demolished in the 1980s to make way for clusters of townhouses and home units. For example:

- in MacFarlane Street a 1923 bungalow was replaced by four townhouses; and
- in Nixon Street a bungalow was replaced by eight houses between 1982 and 1984, and another is under construction in 1990 (VNZ Files, 1989).

Prior to 1900, therefore, the residents of the Hamilton East township did not make any significant decisions which led to the subdivision of their land and the infilling of their large properties. Hamilton East survived as a minor settlement. Within the large area surveyed was much 'waste' land, vacant land and many paper roads. National legislation was established to control subdivision and the development of towns. The government's ambitious 1864 plans for Hamilton East however, remained in abeyance until after the turn of the century. Only then were Hamilton East residents able to seize the promised opportunities to create private wealth. At last they were able to take advantage of the favourable conditions the State had attempted to create in 1864. The wide streets became busy, the people began to subdivide their large allotments and the processes of infilling began.

THE VILLA PERIOD

Why the infilling occurred

Between 1891 and 1911, the population of New Zealand increased dramatically from 626,658 to 1,008,468 (*New Zealand Official Year-Book*, 1911; Sinclair, 1967). In the late 1890s people flocked to Taranaki, Hawke's Bay and Wellington, and later to the Waikato (Sinclair, 1967). In 1901, the population of Hamilton was 1253, but by 1916 it was 8980 (*New Zealand Official Year-Book*, 1901; 1916). The period from the turn of the century to World War One is identified as the villa period and corresponds to the villa period-style. The many new residents required sections and houses. The straggling villages of East and West Hamilton which together had been a Borough since 1877 became a town, in the accepted sense of the word 'town', during the villa period. Claudelands became the first new suburb when the town boundary was extended in 1912 (*New Zealand Gazette*, 1912, 2599 and 2994) and Frankton the second in 1917 (*New Zealand Gazette*, 1917, 246) while nearby Hillcrest (Steele's Hill) was also growing.

Hamilton and the Waikato reflected the national trends, with an increase in population, and economic prosperity based on farming success. In 1900, the New Zealand "people had one of the highest average standards of living in the world" (Sinclair, 1967, 36). This return of prosperity and the growth in building societies accelerated suburban growth (Fairburn, 1975). More and more people resided in urban centres, nationally and in the Waikato (Spooner, 1972). With the demand for houses came the infilling of the villages, and Hamilton East became one suburb in a substantial town.

During the years from 1900 to World War One, Hamilton was supplied for the first time with piped water, drainage, and a gas

works. Work began on footpaths which were tarred and sanded. The main trunk railway line was completed between Auckland and Wellington in 1909 (AJHR, 1909 D2). A footbridge was opened beside the railway bridge over the Waikato River at Claudelands in 1908 (HPT Files, 1990), only the second crossing point in the town. The 20 bedroom Warwick Private Hotel was built behind the commercial centre in Grey Street (Waikato Valley Authority Accommodation File, 24/1). Hamilton developed into the premier town, "by far the largest and most important centre in the Waikato" (Bradbury, 1917, 97). Ellis and Burnand, a major central North Island sawmilling company chose to establish its head office in Hamilton in 1905 (Ellis and Burnard, 1953). People retired to Hamilton (Bradbury, 1917). The first car was seen in Hamilton in 1905 (HPT Files, 1990), and very early there was a big demand for motor cars, with a large number of agents in Hamilton (Bradbury, 1917). Soon after the turn of the century, land agents began full time work in Hamilton (Gibbons, 1977). Several resided in Hamilton East (Cleave, 1916).

Hamilton was far enough away from Auckland for the establishment of some separate institutions, government agencies and organisations. It became the regional centre to serve Waikato residents who came to consult lawyers, attend stock sales, shop and bank (Gibbons, 1977). Hamilton, however, remained dependent on Auckland, and very dependent on its rural hinterland.

The infilling of the one acre allotments really began about 1901, 37 years after Hamilton East and West were established as two townships. Prior to 1900, private landowners in Hamilton did not consider subdividing because the economic situation did not warrant taking risks. As people began to prosper they considered subdividing land, in the first decade of the new century (Leitch, 1981). There was considerable growth in land transactions. Land was considered Hamilton's only natural resource and dealings in land, buying, selling and financing, were at the heart of Hamilton's financial affairs (Gibbons, 1977).

The infilling of Hamilton East resulted directly from economic prosperity in Hamilton based on agriculture. New Zealand prospered because primary exports brought high prices on the British market. "It was Hamilton's good fortune to be part of a region that was doing very well out of the new prosperity" (Gibbons, 1977, 123). In 1901, Ruakura Experimental Station, north of Hamilton East, was created out of 137 acres of government land from the Waikato Model Farm, and 690 acres purchased from Isaac Coates (Scott, 1989). A number of the staff resided in Hamilton East (Cleave, 1916). Farming first became rewarding in the Auckland Province from the late 1880s as a result of the use of refrigeration techniques (Stone, 1973). Dairy farming became established, and the development of dairying was reflected in the development of Hamilton from the 1900s (Stokes, 1984). Dairying made spectacular strides as much unproductive land was broken in and swamp drainage progressed in the greater Waikato. The new farming styles required new technology and services which were supplied by Hamilton (Gibbons, 1977). By 1917, there were 34 dairy factories in the Waikato, and numerous creameries. The Waikato Co-operative Dairy Company was large, with a major factory in Hamilton. About 1914, casein manufacture began at Frankton Junction. The Waikato region was pre-eminently a dairying district with butter as the staple product. Stock raising and fattening were important with large stock yards in Hamilton. The freezing works at Horotiu opened in 1916, and "considerable quantities of wheat, oats and barley were grown in the Waikato" (Bradbury, 1917, 18).

Where the infilling took place

Figure 6 shows all the houses identified as built during the villa period. Houses still in use are shown with those known to have been demolished (VNZ Files, 1989). Houses that were demolished or removed from the site, but the original date of construction is not known, are not included. Two villas, were

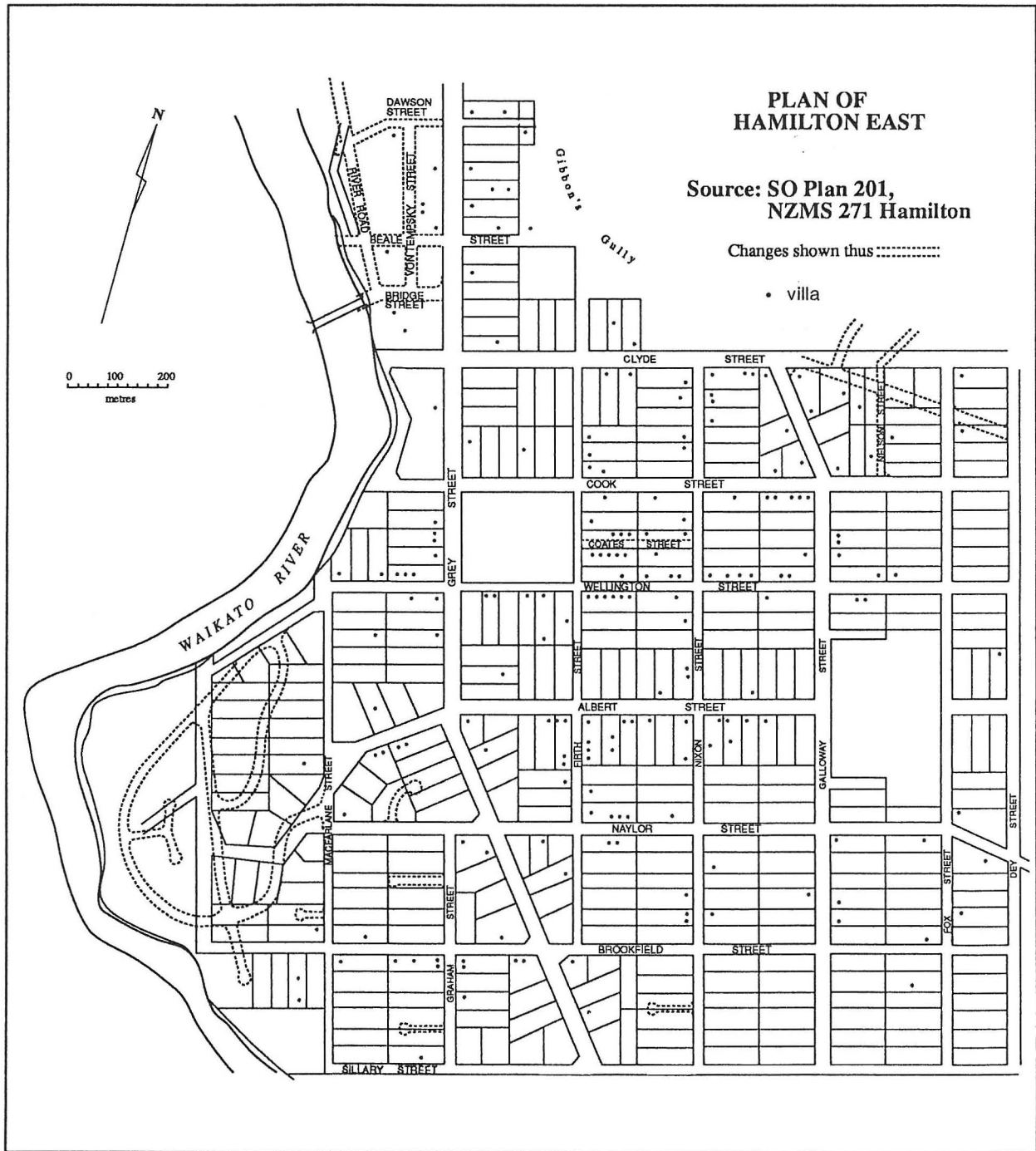


Figure 6 Houses built in Hamilton East in the villa period
Source: VNZ Files, 1989; Cleave, 1916

identified as not constructed on their present site but moved there later (VNZ Files, 1989; Air photograph, 1943). It is possible that they are not isolated examples. Villas in the commercial area of central Grey Street are known to have existed from personal communication with local residents who lived there, but exact dates and locations are sketchy (Cassidy, pers. comm., 1989; Johnston, pers. comm., 1989; Watkins, pers. comm., 1989). For that reason they are not identified on the map.

Cleave's directory (1916) proved to be a useful resource in the preparation of figure 6. It lists households by address, but each household did not necessarily occupy a separate house. As the major purpose of the directories was commercial use, many individuals are listed twice, once at their place of residence and once at their place of business. For example, Mr Brind, a butcher is listed under Clyde Street, probably his residence and farm (Town of Hamilton East Map, 1924), and in Grey Street, probably his butcher's shop (Cleave, 1916; 1920). Mr Zank, a bootmaker is listed under Coates Street, presumably his residence, and Grey Street his workshop (Cleave, 1916). It is not always possible to identify which entry is a residential address. Some people lived and worked at the same address. This creates difficulties in identifying houses.

Overall, the housing development in this period took place in the most established streets, infilling between the settler cottages and pre-villa cottages. There were also people residing on the periphery of the suburb. For the first time, some of the one acre allotments were subdivided, and two houses built facing the road on two half acre sections. At least 20 such examples were identified (VNZ Files, 1989). In some cases, two adjacent houses were built about the same time, while other pairs of villas were built some years apart. On the whole, however, most villas occupied a whole acre. At least 100 examples can be identified. These may well have been the original houses on some allotments, in other cases they will have replaced older houses. There are a

number of streets where rows of four to six villas were constructed. For example in:

- Albert Street, at least four adjacent houses were built between 1901 and 1912;
- Wellington Street, four houses were built between 1906 and 1916, and six between 1900 and 1910, and many more individuals and pairs;
- Grey Street, four houses were built between 1906 and 1911;
- Coates Street, see below;
- Cook Street, five houses were built between 1911 and 1918; and
- Nixon Street, four houses were built between 1905 and 1910 (VNZ Files, 1989).

One small part of Cook Street appears to have been settled very early, possibly in the last century, with 11 households recorded in Cleave (1916). However, most of the present housing stock was constructed in the 1920s and 1930s. This must have replaced earlier houses. Only one villa, built about 1900 survives. It is unlikely that villas would have been replaced by the construction of modest 1920s bungalows. Thus it can probably be assumed that these were early cottages from the last century, built on a very early subdivision of small sections, ranging from 397 to 412 square metres. The small size of these sections suggests modest housing, on the smallest subdivided sections in the suburb.

The southern part of the suburb saw the development of what was probably a second semi-nucleated separate settlement centred on part of Brookfield, Grey and Graham Streets. Even before the turn

of the century, cottages had been constructed. At least 10 presently occupied adjacent houses were built in the villa period and there were others nearby. At least five early houses are also known to have been demolished in that area (VNZ Files, 1989). Early subdivision of the privately owned acre allotments where the long side faced the road provided sections for the construction of villas. Early settlement was related to the availability of these sections. These modest cottages, baches and villas were not the homes of the most wealthy Hamiltonians.

The first Trade directory to list Hamilton heads of households by street address was published for 1916 (Cleave, 1916). The streets of Hamilton East with the greatest number of resident households were:

- Albert 27
- Cook 30, of which 21 lived between Firth and Galloway Streets
- Firth 24
- Galloway 25
- Grey many households and businesses
- Graham 11
- Nixon 34
- Wellington 42

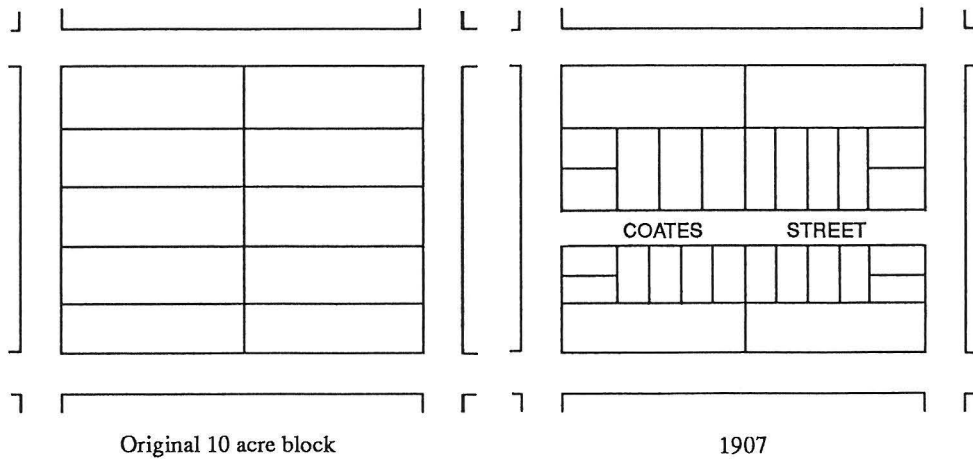
There were also residents in the short streets, Bridge, Coates, Dawson, and Clyde Streets. There were very few houses in Naylor (referred to as Cambridge Road), Dey, Fox, MacFarlane, Nelson, and Sillary Streets. The kinds of occupations represented in Hamilton East included:

- motor agent, motor mechanic, motor engineer and motor car proprietor;
- gas stoker, gas fitter, gas employee, gas works employee;
- two government farm staff;

- four land agents;
- coachsmith, blacksmith, drover, bathkeeper, cordial worker, two monumental masons, hawker, cabinet maker, soapmaker, telegraphist;
- four solicitors;
- auctioneer and two surveyors (Cleave, 1916).

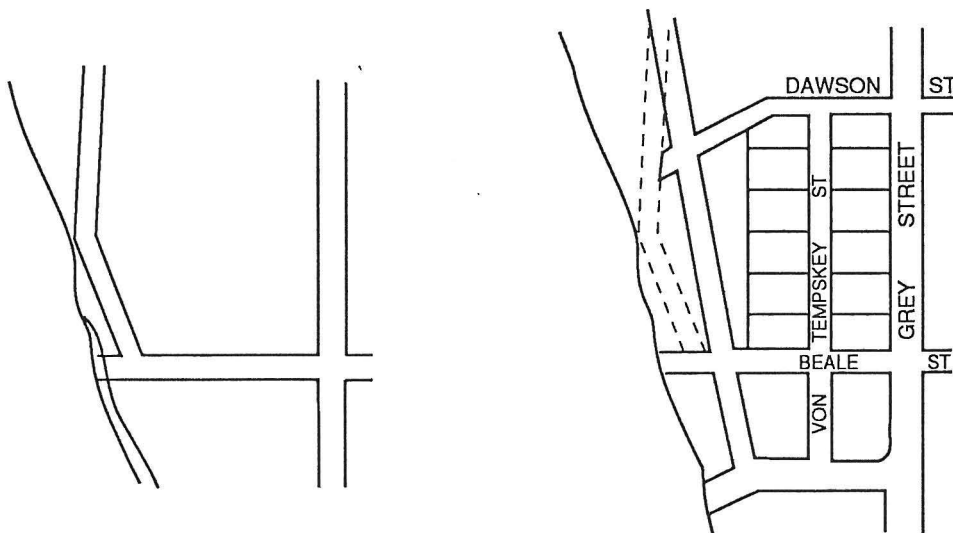
The area at the south end of Firth Street between Albert and Naylor Streets was highly developed in the villa period. Today, there are 15 villas built 1891-1916 still occupied in that vicinity. Not only is it possible to identify the original villa on each acre, but it is also possible to identify further subdivision, which led to the construction of more than one villa on some sections (VNZ Files, 1989; Plan of Part Hamilton Borough, 1913).

Two completely new subdivisions were established in the villa period as a result of the construction of two new streets, conforming with the grid pattern. One was Coates Street, (see below), which was constructed in 1907, along with 23 new sections on both sides of the new street, on DP 4447 (DOSLI Survey Plans, 1989; Leitch, 1981). It meant a block of 10 acres was divided into two smaller blocks, one of four and one of five acres, the road comprising the other acre. With the construction of Coates Street, direct road frontage access was provided for the new sections. No rear sections have ever been necessary in these small blocks. Houses were built on these sections relatively quickly, 15 in the villa period and seven in the bungalow period. The last section was used to construct a single State house in 1940 (VNZ Files, 1989). This private subdivision was made possible because Isaac Coates owned the land and it was a project typical of this enterprising pioneer (Coates, 1962).



In the town of Nelson, there are examples of original blocks containing 10 one acre sections being divided in this way to provide new streets and better access to land. It also allowed residents to avoid the problems associated with infilling rear sections (NZMS 189, Nelson Sheet 2, 1964; Plan of Town of Nelson, 1842). There are also examples in Hamilton West where 12 acre blocks have been bisected by new roads, for example Alexandra and Barton Streets (Plan of Hamilton Borough, 1936; Plan of Part Hamilton Borough, 1913).

In Hamilton East the other major subdivision involved the development of reserve land for housing, north of Bridge Street. A new street and new sections were surveyed in 1904 (see below). Von Tempsky Street was a Crown Grant (Leitch, 1981) and gave access to some land from which views of the Waikato River could be obtained. Alternative access to these sections was also possible directly from River Road.



The extra high value placed on this location related to the views and to convenience of access to the churches, the primary school, the only bridge across the Waikato River for vehicles, the commercial centres of Hamilton East and West and to the newly developing Claudelands settlement and railway station. Unusual, half acre sections were surveyed. These were subdivided again. Against convention the houses were built at the rear of the sections away from Von Tempsky Street, but over-looking the Waikato River. This can be observed on the 1943 air photograph (plate 40). Those sections not occupied in the villa period were developed in the 1920s. Grey Street, as a major route was important, in providing direct access to Claudelands and the north east of the town. Two of the streets surveyed in the township of Claudelands were originally named Firth and Nixon Streets (Plan of Part Hamilton Borough, 1913). The surveyors obviously envisaged the future joining of Firth and Nixon streets Hamilton East with the same in Claudelands, via Gibbons Gully and the Education Reserve land, now occupied by Hamilton Boys' High School. This did not eventuate and the gully remained undeveloped. The Claudelands streets were later renamed Whyte, and Bond Streets.

The most prestigious areas of the suburb at this time appear to have been this northern area adjacent to Claudelands, and the southern end of Firth street where large villas and later bungalows, infilled the street quite densely. The river end of Wellington Street was also an elite area. Isaac Coates moved next door to his original house about 1911, into a nearly new seven roomed house, on one acre. It included all available conveniences - hot and cold water, and a bath. With infilling in mind, he "cut off about one third of the section at the back for sale in the future" (Coates, 1962, 160). The Greenslade family house was built on the land that Coates sold. In the same street and in Grey Street, some large villas were also constructed. The area was conveniently located for the commercial centre and views of the river may have been considered an added amenity.

As a result of The Rating on the Unimproved Value of Land Act 1896, a poll of Hamilton rate payers was held in 1901. It resulted in a majority in favour of a change to rating on the basis of unimproved land value, not capital value. Much land had been held for speculative purposes and large land owners with small incomes could no longer afford to pay their rates. In a second poll, the majority of West Hamilton residents voted to uphold the rating on unimproved values, while two out of every three East Hamilton residents voted for rating on capital value. The West prevailed, because of the greater number of rate payers (*New Zealand Gazette*, 1901, 705; Gibbons, 1977). Some subdivision of land resulted, for example the Coates Street subdivision and smaller scale examples which involved an individual acre allotment being put on to the market in five or six sections. These were scattered through the streets surrounding the commercial area thus:

- Wellington Street north side 1908,
 - Wellington Street both sides 1913/1915,
 - Grey Street 1903, 1907, 1914,
 - Nixon Street 1907,
 - Albert Street 1911, and
 - Cook Street both sides 1914 and earlier
- (Plan of Part Hamilton Borough, 1913).

Not all these sections were developed during the villa period. Many were not infilled until the 1920s.

Subdivision design

At the end of the nineteenth century "many residents felt Hamilton had too much reserve land which lay undeveloped and ugly" (Gibbons, 1977, 108). A considerable amount of the originally surveyed township remained as reserve land during the villa period. Groups of unused one acre allotments had been

amalgamated as reserves. Domain Reserve, Hospital Endowment, Hospital Reserve, Recreation Reserve, Municipal Endowment are some of the designations given to this land. Figure 7 shows the reserve land shown on the 1924 map (Town of Hamilton East Map, 1924). By 1924, some of this land had been developed for leasehold purposes and some had been sold. Many of the blocks of 10 and 12 acre allotments included some reserved land, and in the extreme east and west of Hamilton East, all the land was thus set aside. Much of it has now been developed and infilled with houses and the form this development has taken will be discussed in this chapter.

Under The Public Reserves and Domains Act 1908 a Domain Board was appointed to have control of domain lands within the Borough of Hamilton. Any of the land that came under the Act could be leased for up to 21 years (Section 34 (a)). Section 27 allowed a licence to be granted to use the land for pastoral purposes. Special legislation resulted in the Hamilton Domains Act 1911. The First Schedule lists the Domain Land under its original 1864 allotment numbers and acreage. It amounted to 92 acres 2 roods and 26 perches in Hamilton East, not including the Town Belt land, listed separately in the Second Schedule. On a small scale some of this land was leased for residential, pastoral and horticultural purposes during the villa and bungalow periods (VNZ Files, 1989).

All the subdivision designed in the villa period was strictly rectangular. As Carter (1983, 121) observed in Europe it "was the simplest and cheapest and clearest way of dividing land for rapid development". The Public Works Amendment Act 1900, Section 20, made it mandatory that every allotment in private subdivisions required legal access to a public street. This Act also required the setting back of frontages from the public street. The Public Works Act 1908 again required every section to have its own access frontage to public streets, and this has been strictly interpreted. Access by joint ownership did not constitute legal

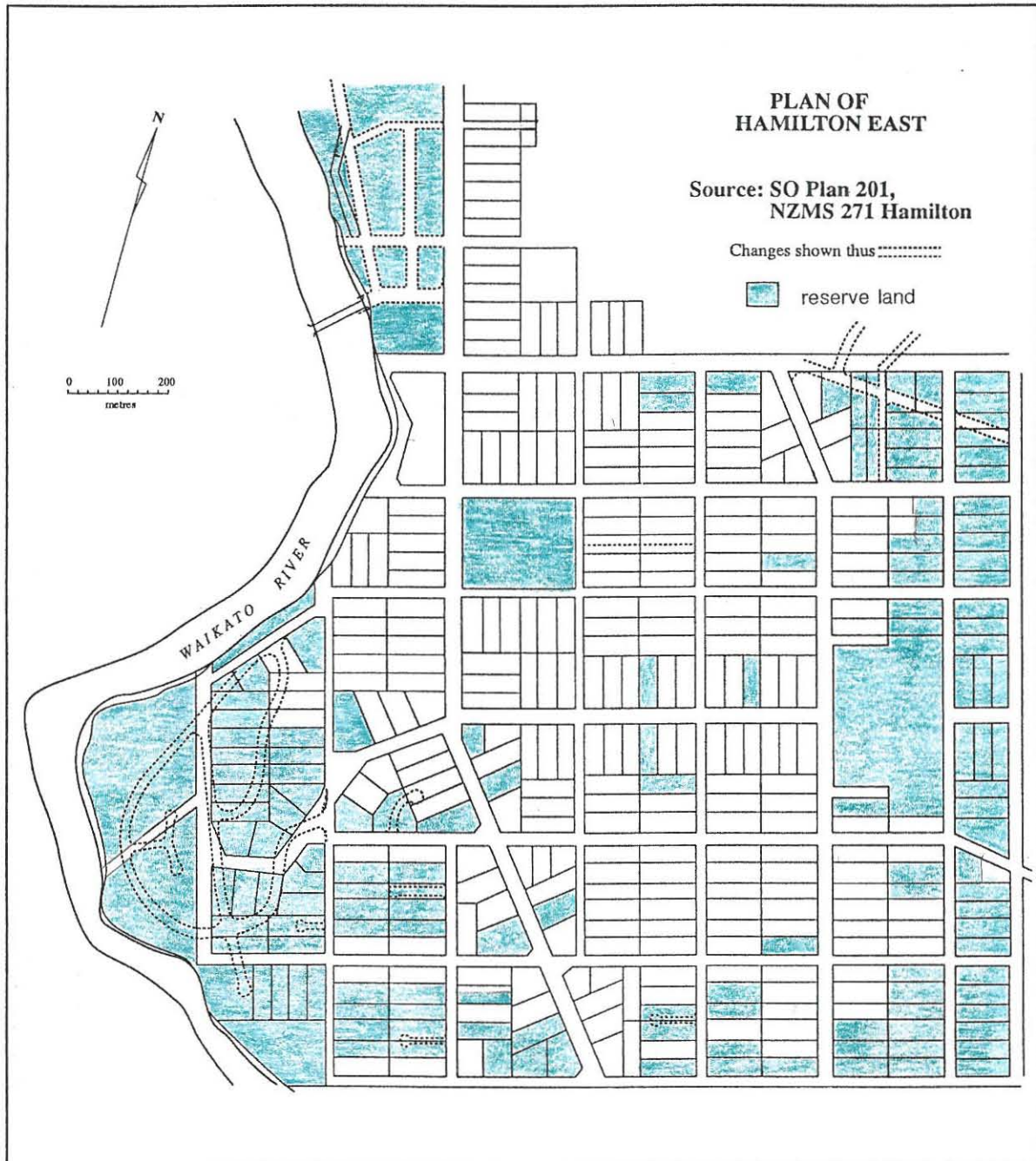
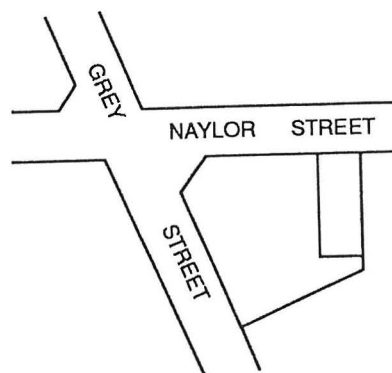


Figure 7 Reserve Land in Hamilton East, 1924
Source: Town of Hamilton East Map, 1924

access. This is why there are individual drives to every rear section in Hamilton East. This provision was not relaxed until the implementation of the Local Government Amendment Act 1978 Section 279 (2) (e).

Although the people of Hamilton East and the country benefitted from economic prosperity, based on agricultural success on world markets, between the turn of the century and the first World War, Hamilton East was not infilled quickly with houses. The capacity of the original township was very large and housing development also occurred in Hamilton West, Frankton, Claudelands, Steele's Hill (Hillcrest) and elsewhere. Parts of Hamilton East must have been rural in character with no housing development, while other parts, notably Coates Street and parts of Grey, Wellington, Cook, Nixon and Firth Streets were beginning to look like a developing town. The subdivision took four basic forms.

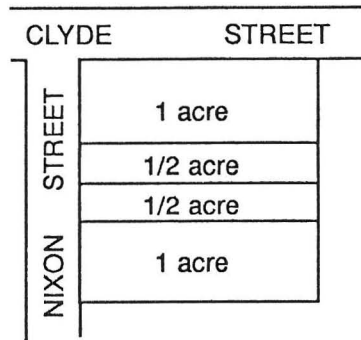
First, there was random subdivision in a number of parts of the suburb which saw the creation of small sections from the one acre allotments. This allowed a second house to be constructed in the garden of the original house, the owners of which retained the largest portion of the original allotment (Plan of Part Hamilton Borough, 1913).



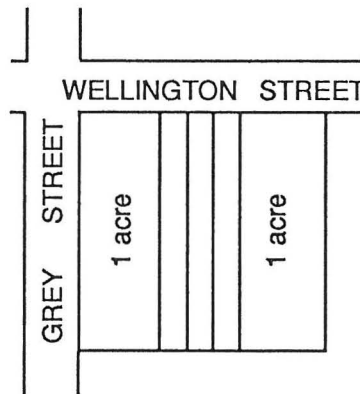
Secondly, there was random subdivision in various parts of the suburb where the one acre allotments were carefully bisected to produce two long narrow half acre sections, each approximately 20

yards (18.3 metres) wide by 120 yards (110 metres) long. In a number of cases two villas were constructed on two half acre sections, for example in:

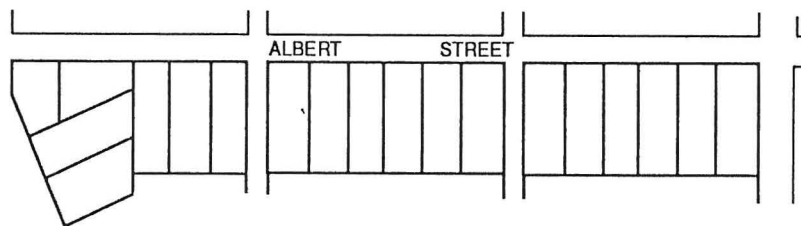
- Nixon Street north end in 1905 (see below),
- Galloway Street in 1906 and 1910, and
- Nixon Street south end in 1911 (VNZ Files, 1989).



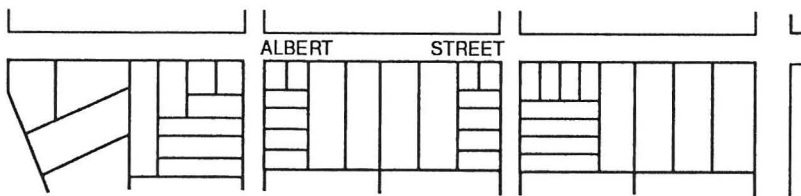
Only in one example in Wellington Street was an acre subdivided lengthwise into three (see below). Two original villas built 1904 and 1910 remain in use as refugee housing, but the long rear gardens have been subdivided for other purposes (VNZ Files, 1989). The sections are not noticeably narrow from the street but such a form of subdivision on a large scale would have caused major problems of access to rear gardens. Such access could only be gained from adjoining properties and would require joint ownership of both allotments.



Thirdly, there was deliberate planned subdivision of several acres centred on Coates Street and Von Tempsky Street. Fourthly, the most popular form was subdivision of individual acre allotment where the 120 yards (110 metres) long side, fronted a road. These were the allotments commonly subdivided systematically in the early years to produce between two and eight sections. Commonly five rectangular sections were surveyed, all with a front boundary adjacent to the street (see below). No land was wasted on long drives. Where the same landowner chose to do so two adjacent allotments were divided into sections collectively (see below). This resulted in the loss of the original boundary but allowed access to the rear of the allotments without creating rear sections. Owners and surveyors appear to have deliberately avoided the creation of rear sections. On the *Plan of Part Hamilton Borough, 1913* there are only two rear sections shown which required the provision of driveways. There is no record of development of these sections in the villa period.



Original one acre allotments



Subdivision in 1913

The twin settlements of Hamilton West and Hamilton East that were proclaimed a borough in 1877 (*New Zealand Gazette*, 1877, 1208) became a real town in the villa period with Hamilton East as one of several suburbs. Infilling occurred to accommodate all the new residents. Hamilton's new prosperity was based on agricultural developments in the greater Waikato. The central parts of the suburb saw the random subdivision and infilling with houses, as landowners chose to put their land on the market. There were two examples of more formal subdivision based around new streets. The most common form of subdivision resulted in approximately one fifth of an acre rectangular sections. This normally involved only one of the original one acre allotments in which the long side faced the road. Many villas stood alone on individual allotments, as much of Hamilton East remained part of the country, within the surveyed boundary of a town.

THE BUNGALOW PERIOD

Why the infilling occurred

Between the two World Wars, Hamilton East residents experienced prosperity, then a major depression and the start of a slow recovery. The fortunes of Hamilton East residents rose and fell with the world economic situation. The amount of new house construction which infilled sections in Hamilton East was a direct reflection of international trends. The bungalow period corresponds with the bungalow period-style identified in Chapter Four.

The end of World War One fostered rapid settlement and economic prosperity in the Waikato. There was an increase in population and a tendency toward a larger percentage of the population residing in towns (Spooner, 1972). Into the 1930s the population of the Waikato Region continued to grow. By 1936, Hamilton (population 19,373) was New Zealand's eighth largest settlement (Goodall, 1972; *New Zealand Official Year-Book*, 1936).

The number of houses constructed in Hamilton in the inter-war period illustrates and reflects the growth in population that led a small town to become a city. Money was spent on the streets, footpaths, sewers and stormwater drains (Gibbons, 1977). Electricity was supplied from Hora Hora power station, from the early 1920s (Cassidy, 1984), and Victoria Street in Hamilton West became established as the mercantile heartland of the Waikato. The construction of Wesley Chambers on the corner of Victoria and Collingwood Streets

symbolised the transition of Hamilton from a rural service centre to the commercial nexus of business activity in the Waikato region (Simmons and Byrnes, 1989, 5).

New Zealand experienced a movement of people from the country and small towns to larger cities and provincial centres. This urban drift in the North Island was most noticeable in Hamilton, New Plymouth, Auckland, Lower Hutt and Wellington. The empty spaces in the suburbs of all these urban centres were filled with houses (Chapman and Malone, 1969). It was at the whim of the individual land owner to subdivide land and put it on the market. The 1920s and 1930s saw many such decisions being made because of the increase in population and demand for houses. So much land in Hamilton East was subdivided that it exceeded demand and was not all infilled until after World War Two (VNZ Files, 1989; VNZ Survey Plans, 1989). Some of the new sections were infilled immediately and others took many years to be infilled. In spite of much house construction in the 1920s there was an acute housing problem in Hamilton (HPT Files, 1990). During the depression the acute housing shortage persisted and worsened as people could not afford to buy or rent houses, and families shared houses. Great distress was experienced by many of the people (Gibbons, 1977). When the economic situation eased, house construction was re-established from about 1936, when both State and private house building began to change the landscape of Hamilton East (VNZ Files, 1989).

The car was greatly in evidence after World War One and almost everyone who could afford one bought one (Gibbons, 1977). The residential character of Hamilton East reflected the influence of the automobile. Infilling was still achieved piecemeal, but there was an inadvertent formality in some of the infilling. Fairly systematic infilling took place along the major arterial routes Grey Street and Naylor Street and to some extent, Galloway Street. Naylor Street developed into the classic inter-war residential arterial ribbon, just as Boundary Road and Te Aroha Streets in Claudelands developed at the same time. These "residential ribbons" (Conzen, 1960, 104), were lines of houses close to the road frontage on major roads that led out of the town. This type of development, lining major routes, was typical

of inter-war housing in Britain (Conzen, 1960). Access to major routes was attractive to home buyers and considered an advantage - the volume of traffic was obviously not sufficient to be regarded as a disadvantage. Behind the rows of new bungalows were huge gardens devoid of houses. Within the Hamilton East boundary there was still considerable open farm land, even at the end of the period (see plate 40; Air photograph, 1943).

The increasing vehicular traffic through Hamilton East, along Bridge Street, Grey Street and Naylor Streets brought increased business activity. This was reflected in the businesses established on the major routes for through and local traffic. (See the reference to Leightons Trade directory, 1930 later in this section.) This route was part of the nation's premier road, the Great South Road which became National State Highway One (NZMS 17, Hamilton, 1965). It remained very important until Cobham Bridge and Cobham Drive were built in the 1960s, skirting the suburb of Hamilton East, adjacent to Sillary Street on the Town Belt. Grey Street and Naylor Street continue to this day to be suburban arterial routes. With three service garages, a corner shop and traffic lights at one intersection Naylor Street retains its bungalow period character. Before World War Two, virtually the whole street frontage from the Bridge along Grey and Naylor Streets to the Town belt was completely infilled, (VNZ Files, 1989).

The source of the prosperity which led to the infilling was related to the economic success of Hamilton's hinterland. Hamilton "became one of New Zealand's important centres of farming politics" (Gibbons, 1977, 140). All the time the people of the Waikato Region obtained good prices on the world market, the people of Hamilton were prosperous. When there was world recession, the people of Hamilton were no longer able to afford new houses. In 1920-1921 overseas prices for primary produce fell. They rallied 1923-1925 but did not fully recover, being subject to great fluctuations (Murton, 1984).

There was a spectacular increase in dairy production in the 1920s. Dairy farmers responded to innovations, and the technological revolution. These included electrification of cowshed machinery, the use of tractors, herd testing from 1910, and animal breeding based on performance. The newer dairying regions of the Waikato and Bay of Plenty were at the forefront in the use of the new technology (Chapman and Malone, 1969). In 1919, cheese and butter factories merged to form the New Zealand Co-operative Dairy Company in Hamilton. It was the largest in New Zealand. In 1920-1921, the Waikato dairies manufactured about one third of all New Zealand butter (Gibbons, 1977). The Dairy Company established its dairy laboratory in Hamilton in 1921, and in 1922 a new group herd testing scheme based on co-operation commenced in the Waikato. The Hora Hora hydro power station on the Waikato River that supplied the domestic users of Hamilton supplied electricity for milking. There was increased use of superphosphate fertilizer from Nauru, and the use of permanent pastures, new grasses and clovers all led to a highly mechanised, and successful dairy industry (Chapman and Malone, 1969).

Where the infilling took place

Figure 8 shows the location of all the houses built in the bungalow period, including those subsequently demolished. Early in the bungalow period, in 1920, the majority of the Hamilton East population lived in the same streets as in the villa period with several new households moving in since the publication of the 1916 directory (Cleave, 1916; 1920). There were now 13 households in remote Brookfield Street. The commercial area centred on Grey Street included a wide range of businesses, retail, service and industrial. The commercial centre was not exclusively non-residential, as it is now. Businesses on both sides of Grey Street were interspersed with houses, and residential accommodation was also provided within the business premises (Johnston, pers. comm., 1989; Watkins, pers. comm.,

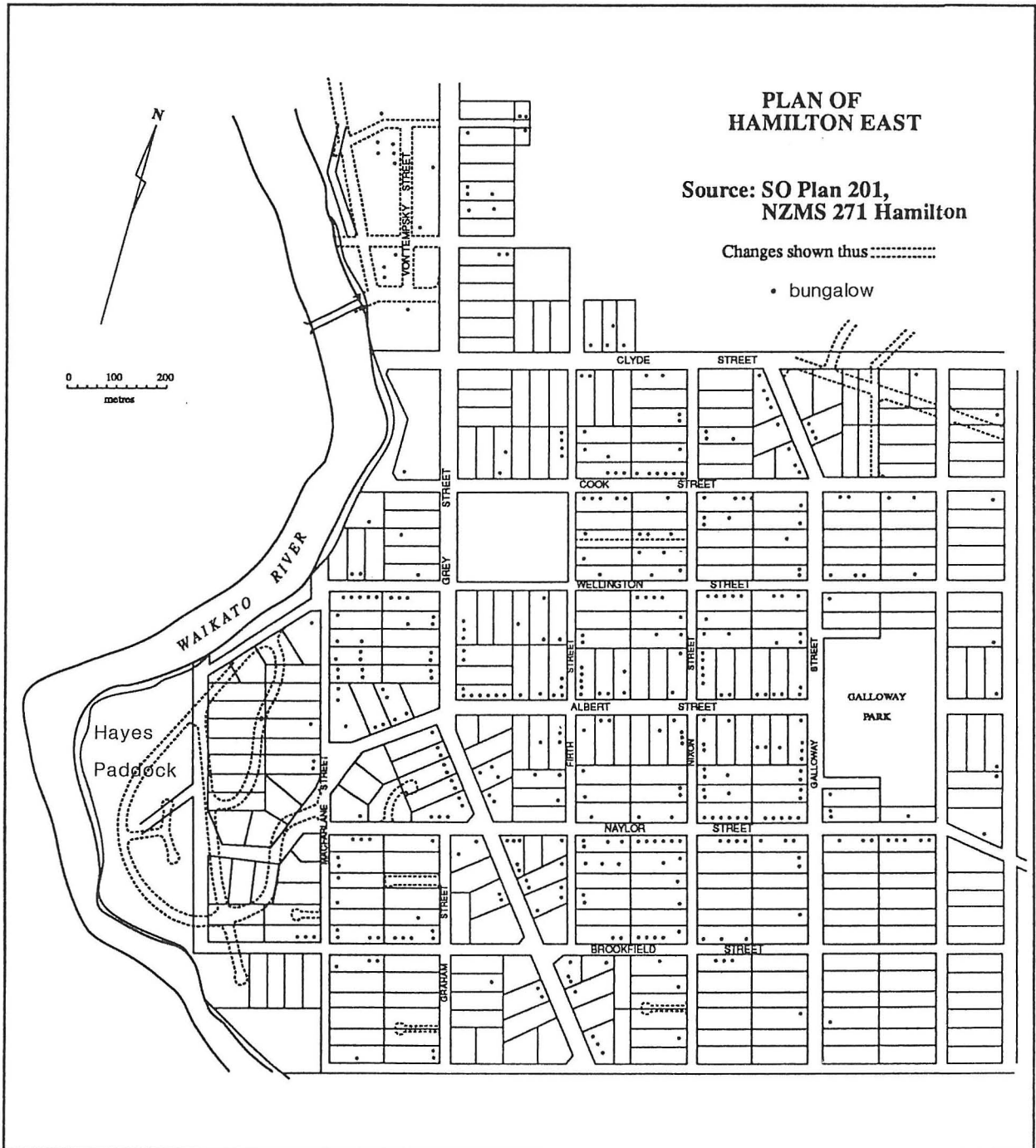


Figure 8 Houses built in Hamilton East in the bungalow period
Source: VNZ Files, 1989; Cleave, 1920; Leightons, 1930; 1940

1989). Near Hamilton East school there was a boarding house, and the Warwick private hotel continued in business (Cleave, 1920).

The range of occupations recorded in Cleave (1920) for the heads of households included thirty farmers and horticulturalists. The largest number of people in one occupation group, was 62 construction workers, that is plasterers, bricklayers, builders, plumbers, carpenters and including 14 painters. This indicates that building construction was significant and a considerable amount of building work was available. The machine age (Relph, 1981) had also been established in Hamilton, and was reflected in the occupations of Hamilton East residents, including:

- two engineers, and an electrical engineer;
- a milking machine expert;
- four motor mechanics, a motor car proprietor, a taxi driver and a taxi proprietor (Cleave, 1920).

Ten years later, Leighton's 1930 Trade directory showed that most of the Hamilton East population still resided in the same streets:

- Albert Street;
- Cook Street had gained at least 10 new households;
- Firth Street saw much infilling with 41 instead of 25 households;
- Galloway Street remained about the same;
- Grey Street was still the major street with many businesses and residences;
- Nixon Street 53 instead of 39 households; and
- Wellington Street 64 households instead of 51.

Other changes that had taken place in those 10 years included:

- Brookfield gained a good scattering of residents on both sides from Galloway Street to the Waikato River;

- Coates Street was well infilled virtually to the capacity of the sections;
- MacFarlane Street had been opened up in the 1920s and now was occupied by 22 households;
- Naylor Street saw the most changes in the 1920s. It was infilled with 39 households as against 15 in 1920. It also contained a 'traveller's stop' at the edge of the town belt which included two shops, a "Cash and carry", and a grocery and two petrol stations;
- Cassell Hospital in Von Tempsky Street, a maternity home in Grey Street, and a gravel pit in Naylor Street were functioning; and
- the commercial centre included a branch of the National Bank, a concrete works, two fishmongers, two fruiterers, tearooms, a chemist, hairdressers, and a Farmers Trading Company store (Leightons, 1930).

Altogether, some 390 houses have been identified as built between the two wars in Hamilton East, 160 of which were built in the 1930s. This figure includes all those still occupied and those houses where the date of construction was recorded but have been demolished (calculated from VNZ Files, 1989). This figure does not include the State houses constructed 1938-1942.

Infilling continued to occur randomly in the bungalow period, at the whim of what is known as the 'market', that is the decisions made by the individual landowners and home buyers. The central part of the suburb continued to be most settled. The area within the meander curve of the river, Hayes Paddock, was completely devoid of housing development, until State house construction occurred from the late 1930s. Likewise, the eastern area of the

suburb was reserve land and virtually no development occurred. Away from the most developed areas, the roads were such that settlement was not encouraged (see plate 40). Even after World War Two many of the roads were unsealed (Shirley, pers. comm., 1989). Fox Street did not exist except for a few hundred metres in the south (Air photograph, 1943). Sillary Street was not complete, Henry Street did not exist and access along Cook Street ended near Nelson Street in the east. To the south of the suburb there was no river crossing and the streets all ended as T-junctions with Sillary Street. Galloway Street was the only outlet to the south which led only to the Town Belt area and the cemetery.

This lack of access severely constrained any development. Rapoport (1980, 294) referred to this as "the imperative of accessibility". Since there was adequate land available within the built up area of Hamilton for the demand, there was no pressure to open up the roads, subdivide the land, and sell the sections. When there was a shortage of housing it was related to the ability to pay, not the availability of land or subdivided sections. The real pressure to open up the whole of Hamilton East did not come until the end of World War Two. In the inter-war period, there was an abundance of land, reflected in the kinds of developments which occurred.

The area north of Bridge Street continued to be a popular area for development. In the 1920s and 1930s infilling was completed, with almost every section being acquired for bungalow development. The area boasted more than 20 houses at the end of World War One, but in the inter-war period this area was chosen by the members of at least another 20 households. It was so clearly infilled that virtually no infilling was possible there in the 1940s and 1950s (VNZ Files, 1989).

In the 1920s parts of Brookfield Street and adjacent land in MacFarlane Street and Graham Street in the south of the suburb

were infilled around a small nucleus of villas and cottages. Some of this was leasehold land and lessees acquired large gardens, of one half or even one whole acre. Most development occurred in the centre of the suburb with several of the 12 acre blocks gaining between 20 and 30 houses, infilling the spaces between the villas and cottages. These houses were constructed predominantly close to the road frontage. In terms of inter-war perceptions of density the two 12 acre blocks on the west of Galloway Park must have been considered replete with houses. These blocks contained so few vacant sections that little infilling was possible after World War Two (VNZ Files, 1989). These 12 acre blocks were on the edge of the country in the 1930s and were thus fashionable, as in later decades when the outer suburban areas of Hamilton have each been popular, as the city boundary was extended.

In the late 1930s infilling was important in the south of the suburb. There, on the east side of Grey Street one whole block underwent considerable housing construction, associated with the arterial ribbon along Naylor Street. This small nearly triangular-shaped block acquired 12 houses between 1931 and 1939. The houses and the neighbourhood have stood the test of time (plate 41), with many of the properties appearing more modern today than many houses from the post-war period. They are characterised by good quality, well maintained facades and gardens. This is an unusual block, because its originally surveyed allotments have not allowed property boundaries on Firth Street to conform to the perpendicular to the street boundary rule (see figure 8).

Subdivision design

The Health Act 1920 Section 67 gave local authorities power to make bylaws regulating minimum site areas for dwellings, and specifying minimum yardage provision. The Municipal Corporations Act 1920 was the first to control subdivision of private land in



Plate 41 A typical late 1930s house in Grey Street

boroughs (Section 335) by requiring approval of subdivision by boroughs. Before that, private subdivision was not controlled (Cavanagh, 1988; McRae, 1984). Persons proposing subdivision for sale or lease were then required to provide a plan of subdivision showing the allotments and dimensions of streets and reserves, prepared by a licensed surveyor, and approved by the council.

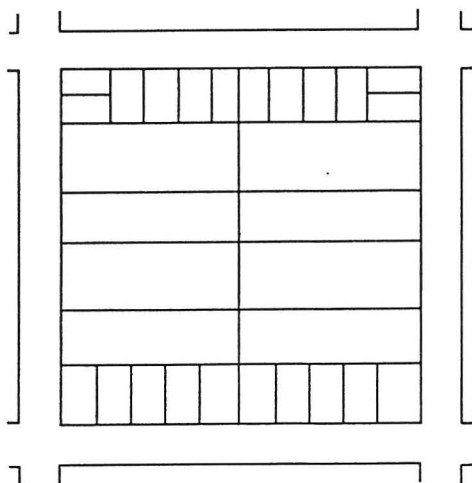
The Land Act 1924 Section 16 (2) perpetuated the grid plan requiring as it did that roads be laid off in straight lines and at right angles to each other. It also perpetuated the rectangular sections, requiring that subdivision be as far as practical laid off at right angles to the road or roads which they fronted. The frontage of each section was required to be not less than 40 feet (12.2 metres). The legislation was significant in influencing subdivision in the early inter-war period, since control of the subdivision of land was exercised by virtue of the Land Act 1924. Surveyors customarily planned the layout, carried out the survey and prepared the road and engineering plans. The surveyor was the professional on whom the people relied for guidance. The surveyor was trained to visualise land development and was required to be familiar with laws and bylaws relating to subdivision of land. Legislation and Survey Department regulations laid down the principle of standardisation of all the details of layout so that planning of "suburbs has necessarily become stereotyped and as nearly rectangular as possible" (Blake, 1938, 201).

The lowest density development comprised individual bungalows in whole one acre allotments (VNZ Files, 1989). There were a number of examples in Nixon, Albert, Grey, and Galloway Streets. The houses were not necessarily large, but the surrounding space was very generous (see plate 40). In some cases, the houses were set back further from the street than is conventional in the suburb, on privately owned and leasehold land. Some of the residents used the large gardens to pursue their occupations. After World War Two a number of examples of light and heavy industry can be

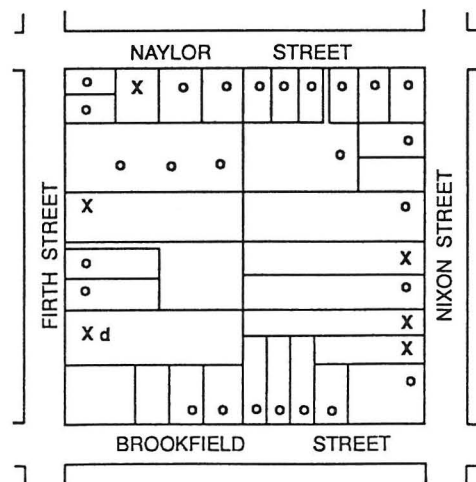
identified on air photographs and maps (Air photographs, 1943; 1953; Land Use Survey Map of Hamilton, 1955).

The one acre allotments subdivided into about five rectangular shaped sections in the villa period were finally filled with houses, so that over a number of years a whole road frontage was infilled. These were the easiest original allotments to subdivide, and road access was also straight forward. No residential land was 'wasted' on long driveways. There was a substantial amount of this form of infilling between the wars. It was exemplified in Naylor Street but also elsewhere infilling the spaces between the cottages and villas. For example on land subdivided in 1926 six houses were built along the Grey Street frontage between 1930 and 1938 (VNZ Files, 1989; VNZ Survey Plans, 1989). Likewise an acre on Naylor Street was subdivided in 1921, but houses were constructed 1921, 1928, 1930, 1932, 1936 and 1938 (VNZ Files, 1989). Adjacent to this, four houses were built in the garden of a 1906 villa, in 1917, 1924, 1932 and 1937. There are also examples where infilling took place quickly. On Albert Street, on allotment 126 seven houses were built during the depression years 1930-1932, seven years after the land was subdivided (VNZ Files, 1989; VNZ Survey Plans, 1989).

Classic example



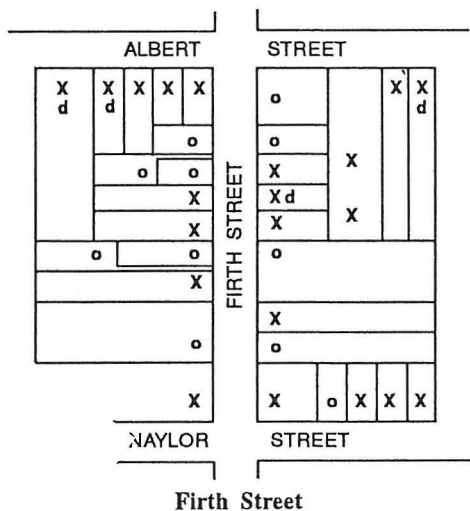
Actual example



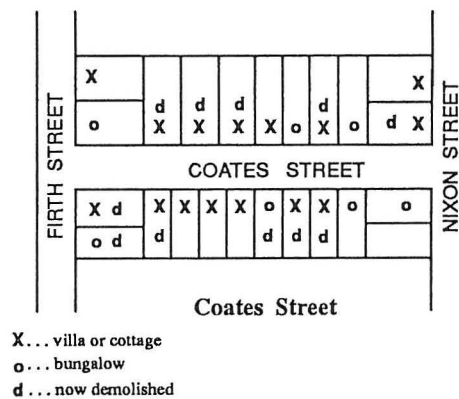
X... villa or cottage
o... bungalow
d... now demolished

In Coates Street and Firth Street, where there were many villas, all the remaining sections were filled during the bungalow period. In these streets classic consolidation took place, in which no sections remained vacant. Total repletion was achieved.

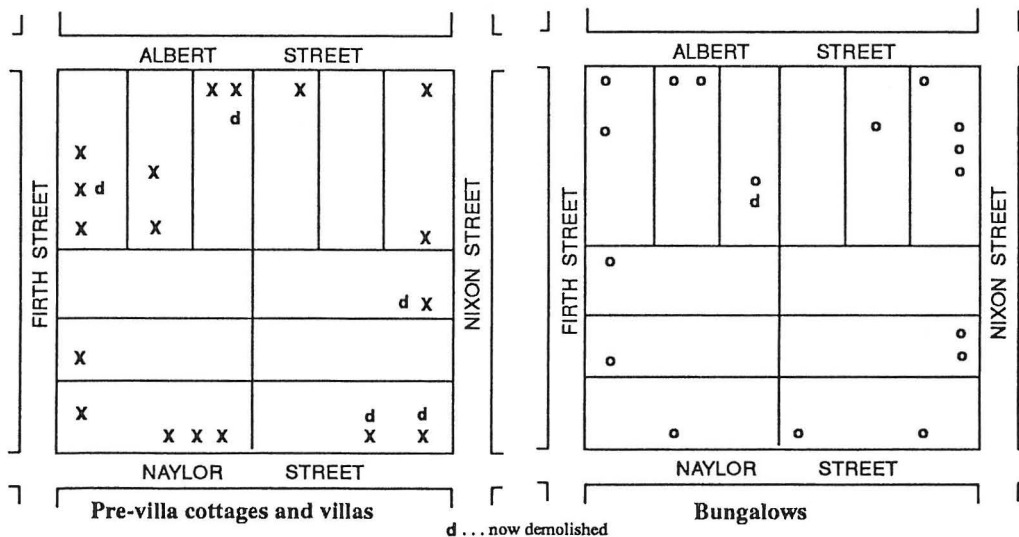
Firth Street



Coates Street



The 12 acre block bounded by Albert, Nixon, Naylor and Firth Streets illustrates how infilling occurred between the villas and cottages (VNZ Files, 1989).



Development in the late 1930s was different from what had been typical earlier. In private developments the sections tended to be infilled faster. For example in MacFarlane Street from 1934, 12 new sections were designed in a subdivision of over three acres. They were all infilled with houses between 1934 and 1939. Such developments occurred in pockets where land was already subdivided. For example, seven houses were built at the west end of Albert Street between 1938 and 1940 even though subdivision had been completed in 1927 (VNZ Files, 1989; VNZ Survey Plans, 1989).

In public housing this period in the late 1930s, was quite revolutionary, and typical of developments in other 'Western' countries. In Hamilton the State proved to be a leader in subdivision design. It was during the late 1930s that the first curved roads were engineered in Hamilton East on Hayes Paddock (VNZ Files, 1989). The change from grid to curved roads is attributed to a change in fashion (Rapoport, 1977). The State converted a large area of vacant land into a suburb in a very short time. This was technically not infilling but accretion, for it was a direct extension to the existing residential area, but within the original 1864 township boundary frame. Subdivision design changed considerably. Non-rectangular sections were not only permitted but encouraged where roads were curved, or at the heads of culs de sac - another 1930s innovation. The new subdivision was very large by Hamilton East standards. It is shown in figure 9 adjacent to the Waikato River. The new (1930s) road pattern is shown overlying the original (1864) pattern. Other Hamilton East subdivision was conventional, for the rectangular acre allotments allowed little variation unless two or more were jointly owned prior to subdivision. There was no community planning or district scheme at that period. The surveyor had to plan on a piecemeal basis without any particular relationship to the district as a whole (Blake, 1938).

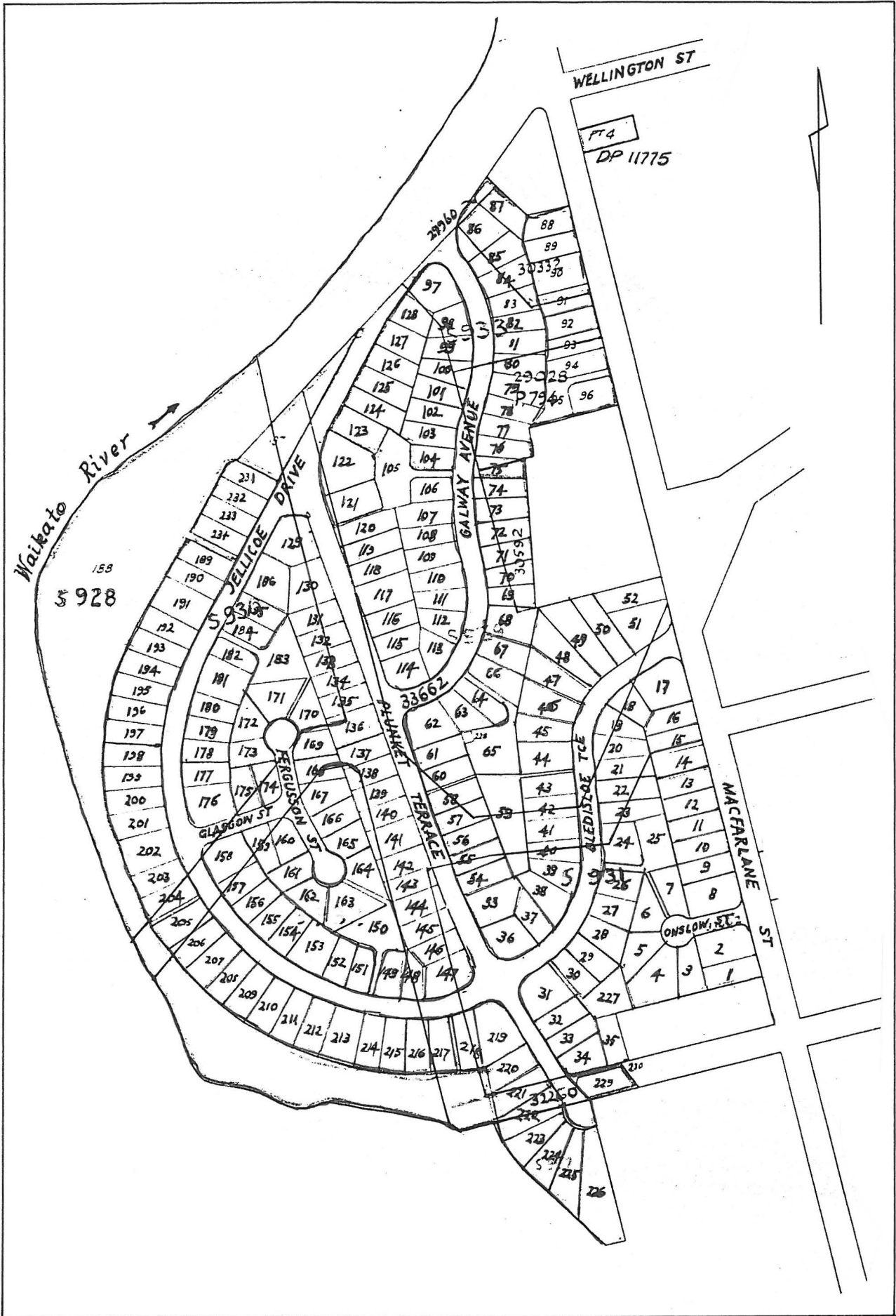
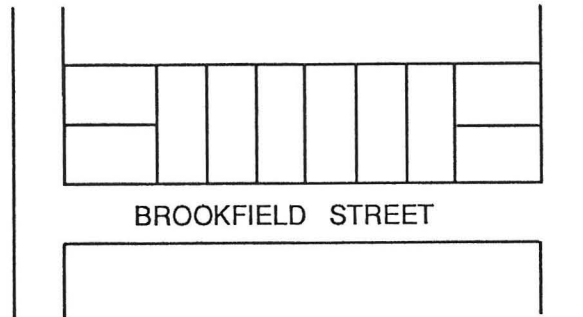


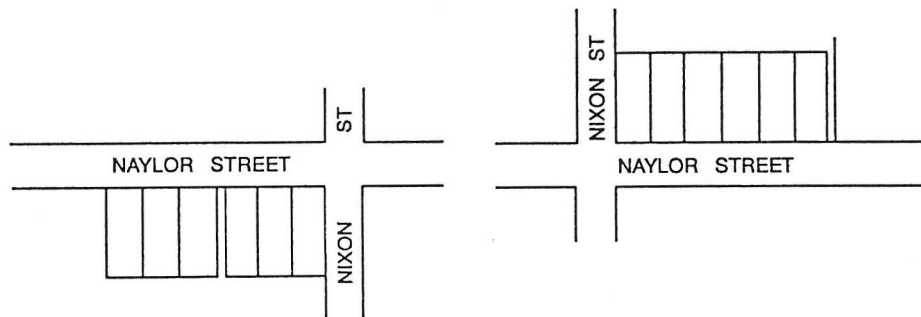
Figure 9

A copy of a map showing the late 1930s subdivision of reserve land adjacent to the Waikato River (Hayes Paddock)
Source: Housing Corporation of New Zealand map, undated

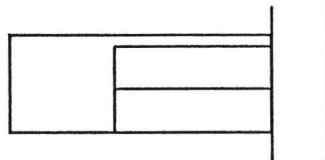
Most sections subdivided in the 1920s and infilled in the 1920s and 1930s were therefore rectangular. Typical examples were similar to those from the villa period.



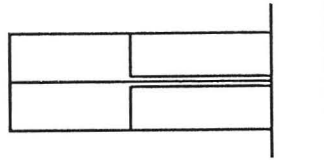
There were variations on that theme.



With sections that had more limited access because the narrow end fronted the street, fewer and larger sections were the rule. One solution, shown below, comprised two front rectangular sections, and one rear, nearly square, larger section.



The first pan handle sections were surveyed, but they were very rare in the 1920s. The only examples, shown below, were in Galloway Street, Albert Street and Nixon Streets.



The quarter acre section was not significant in the inter-war period in Hamilton East. Most sections were either larger (whole acres, or half acres) or smaller, (one fifth or one sixth of an acre). Middleton (1966) claimed that the quarter acre section was a tradition which flowered in the 1920s as the classic section for moderately sized houses, but he may have been referring to typical 1920s subdivisions on greenfield sites. Watkins (pers. comm., 1989) believed there was a perceived status in the ownership of large sections in Hamilton East. Certainly subdivision and infilling in Hamilton East in the inter-war period represented "extravagant horizontal developments" (Ley, 1983, 29).

Compared to the 1930 Trade directory, (Leightons, 1930) one of the most significant features of the 1940 publication was the number of households that appeared to share a house. Precise numbers would be impossible to assess, but there were examples in virtually every street, and in Clyde, Firth and Nixon Streets a number of examples (Leightons, 1940). In 1940, even though the war had already begun, there was still considerable building construction taking place in the private and public sectors (Gibbons, 1977; VNZ Files, 1989), but this eventually ceased.

There were more houses and more households in all the major residential streets in 1940, between 10 percent more in Cook Street and 45 percent more in Albert, Galloway and Naylor Streets. By 1939, Naylor Street was infilled along the whole of its length. Galloway Street still functioned as the edge of the suburb and beyond Galloway Street was the country. Fox Street was a paper road and the streets near to the Town Belt were country lanes. Residents of these fringe belt (Conzen, 1960) areas,

tended to live well apart from their nearest neighbours on small farmlets (Johnston, pers. comm., 1989). These 'signs' of the country inside the town boundary included: a number of resident farmers, a vinery, a horticulturalist, and five 'nurserymen'. There were saleyards on the edge of the suburb in Clyde Street, adjacent to the Town Belt (Leightons, 1940).

This inter-war bungalow period saw considerable infilling in Hamilton East with many new residents arriving. Prosperity, based on farming in the greater Waikato, was followed by depression, and prosperity was starting to return when the Second World War began. The central area of Hamilton East continued to be the most popular, because of access in the established streets and the service centres of Hamilton. Infilling occurred between the villas and cottages and in new subdivisions. The major route, Grey and Naylor Streets, was part of the Great South Road and it proved popular for housing developments. Other new houses occupied whole acres of land. The 'remote' fringe areas of Hamilton East were occupied generally by small scale farmers. There were two basic forms of subdivision design, the traditional rectangular sections where original one acre boundaries remained and new curved roads, culs de sac and non-rectangular sections constructed at the end of the 1930s for a major housing project planned by the government.

THE STANDARD NEW ZEALAND HOUSE PERIOD

Why the infilling occurred

In the early decades of the century, Hamilton was a rural market town. After World War Two it was a city of 21,982 people (*New Zealand Official Year-Book*, 1946) and recognised as a metropolitan centre (Brander, 1964). In preparing the first district scheme in the 1940s and 1950s the Hamilton City Council proposed to develop the city into a major distribution, business, industrial and educational centre (HCC, 1963). Their objective was achieved in the 1960s. This section of the chapter is identified as the standard New Zealand period, from the late 1930s to 1969, corresponding to the standard New Zealand house period-style in Chapter Four.

In the early 1950s, Hamilton was growing at a greater rate than anywhere in New Zealand except Upper Hutt (Mawson, 1952). By the mid 1950s, it was New Zealand's fifth largest centre (*New Zealand Official Year-Book*, 1957), and between 1956 and 1971, the population increased at more than double the overall New Zealand rate of increase (Goodall, 1972). This substantial increase in population

came with the post-war years of the late 1940s and 1950s as the Borough overflowed its boundaries and expanded in all directions over adjacent farmland (Stokes, 1984, 282).

Land for the houses to accommodate the increased number of people was subdivided:

- in 'accretions' (Conzen, 1960) at the periphery of the city, new suburbs attached to the edge of the built up area; and

- by infilling, or 'repletion' (Conzen, 1960), of established suburbs like Hamilton East.

Hamilton's population and economic growth, based on agricultural success, was aided by excellent communications (Mawson, 1952). Hamilton was an important railway junction on the Main Trunk Line, with Frankton handling much of the Waikato's agricultural exports for the port of Auckland (Blechynden, 1964; Brander, 1964). It lay at the junction of five National State Highways (NZMS 17, Hamilton, 1965). The City Planning Officer claimed that at one to three, the Hamilton postal district had "about the highest ratio of motor vehicles to population in the British Commonwealth" (Mawson, 1952, 7).

The buoyant New Zealand economy produced a dramatic acceleration in land subdivision and development (Reynolds, 1961). With the burgeoning economic development in the Waikato, Hamilton became the principal industrial, commercial, administrative, servicing and education centre for the South Auckland, Bay of Plenty and Central North Island regions (Blechynden, 1964; Spooner, 1972). It was also the major collection and distribution centre for the smaller towns of the Waikato, especially for farming goods (Gibbons, 1977). It provided the specialised services and facilities for urban and rural inhabitants, including specialised medical facilities. Hamilton provided a wider range of articles for comparison shopping than any other South Auckland town (Blechynden, 1964), making it the "prime shopping centre for a region of 250,000 people", with 750 stores (Brander, 1964, 17). Services, commerce and manufacturing were the three major employment segments. Service and commerce together accounted for almost one half of the employment (Blechynden, 1964). There was a growing heavy road transport sector, and most new industry in the Waikato was based in Hamilton. All these employment opportunities and the extensions to educational facilities in this period led to a huge and sustained demand for sections and houses (Gibbons, 1977; Robinson, 1965). Part of this demand was supplied by the

most sustained infilling of Hamilton East's one acre sections. Approximately 1170 of the present house stock was built in Hamilton East during this period (calculated from VNZ Files, 1989). Figure 10 shows the location of the sections occupied by these houses and flats, that is all of the standard New Zealand houses, single storey flats, 'flat' roofed houses and State houses built 1939 to 1969.

Hamilton's function as a regional centre increased and stimulated its own growth (Blechynden, 1964), but the basis of the prosperity and infilling was yet again the city's agricultural hinterland (Blechynden, 1964). Hamilton serviced the farming community (Young, 1964). In 1952, the economy of most New Zealand towns was inseparably bound up with that of the region of which they formed a part. All New Zealand towns, apart from the four main centres, existed to service the rural population, and provided industries within their economic radius of transport (Mawson, 1952). In an informal publicity booklet Brander (1964) described Hamilton as the capital of New Zealand's dairy farm, at the heart of New Zealand's richest farmyard. He correctly claimed that Hamilton could not have existed without its region. During this period Ruakura Research Centre gained fresh regional significance (Gibbons, 1977).

Where the infilling took place

Subdivision and house construction occurred in all parts of Hamilton East. The people of Hamilton liked the image of bigness and the "growth of low density housing continued at an even faster rate" in the 1950s than in the bungalow period (Gibbons, 1977, 246). Figure 10 shows that a large percentage of the houses constructed in the 10 and 12 acre blocks along the east, south and west boundaries of the suburb were from the standard New Zealand house period. In most of the blocks directly adjacent to the Town Belt over 70 percent of the houses were built during

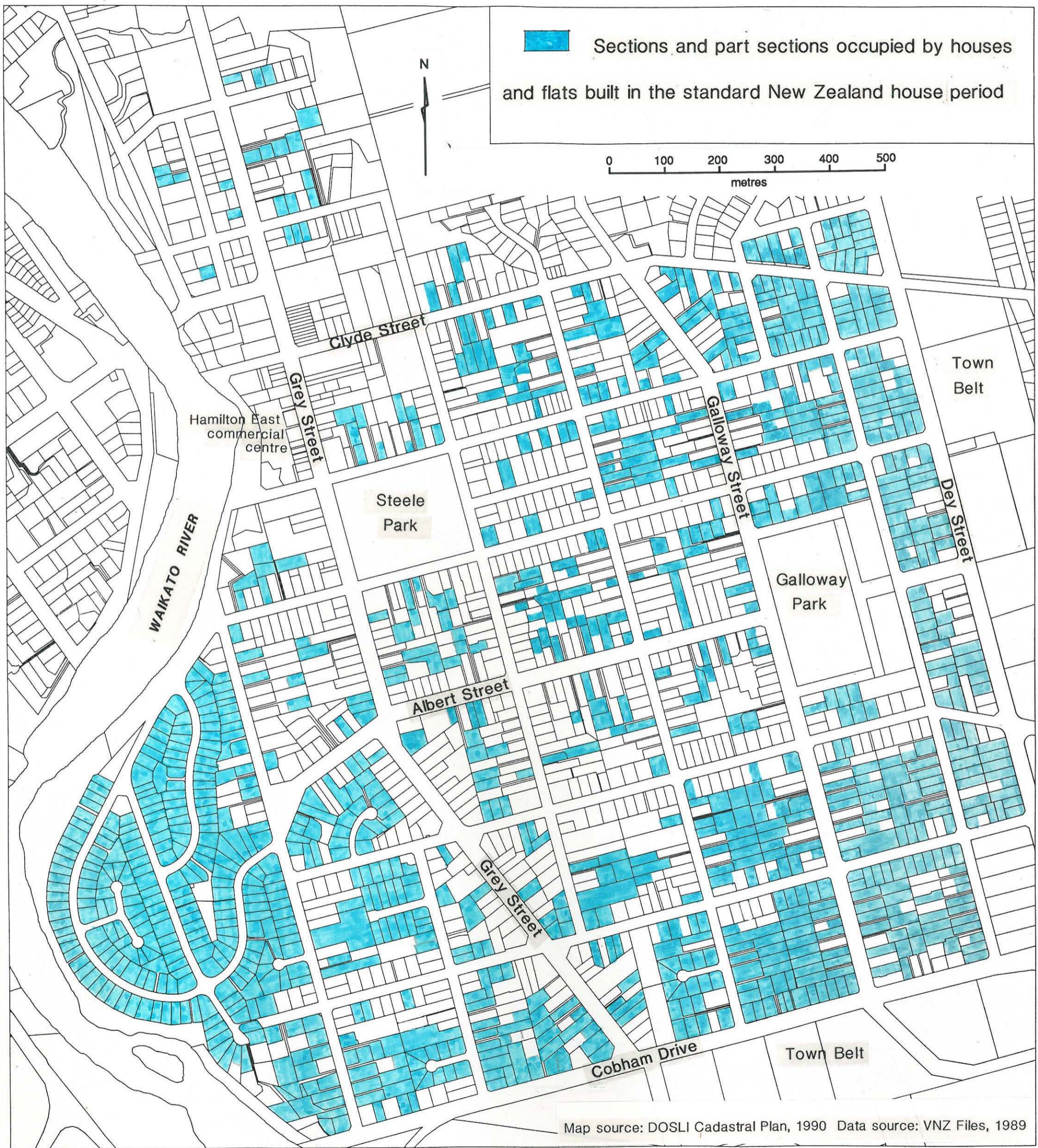


Figure 10 The sections occupied by housing built in Hamilton East in the standard New Zealand house period

that period (calculated from VNZ Files, 1989). Those blocks with the smallest percentage of post-war bungalows are west of Galloway Park, infilled substantially during the inter-war bungalow period, and the two small blocks either side of Coates Street where most dwellings date from the villa and bungalow periods, or are 1970s flats (VNZ Files, 1989). Infilling in the most established parts of the suburb was in the form of new houses scattered through the 10 and 12 acre blocks, wherever vacant land existed. Infilling virtually completed the use of residential land, at the density considered the norm in the post-war period. However, there was still some vacant land in the 1960s (Air photograph, 1967), and some pockets of land used for market gardening. Figure 11 shows the location of single storey flats most of which were constructed in the 1960s.

In 1943, (plate 40), a considerable percentage of the suburb was under pasture or used for market gardening (Air photograph, 1943). Gradually these market gardens, "agricultural residual" enterprises (Conzen, 1960, 81), were replaced by houses. The market gardens that remained into the 1960s and beyond occupied public reserve, leasehold land (Hamilton Domain Endowment Act, 1979), and that may explain why it was not subdivided earlier. In spite of the pressure for land and houses, the demand was diffused by the provision of sections within many parts of the city, rather than by selling all market garden land in Hamilton East.

Many of the allotments with the long side facing the road had been completely or partially infilled earlier. In this period they were virtually all made replete, but with five or six houses. These allotments had the capacity to comfortably accommodate five or six sections, at the density fashionable at the time. No land was required for driveways, as direct access from the footpath and street was easily provided. Some of the 10 and 12 acre blocks in the centre of Hamilton East were well developed for housing along all four road frontages in 1943.

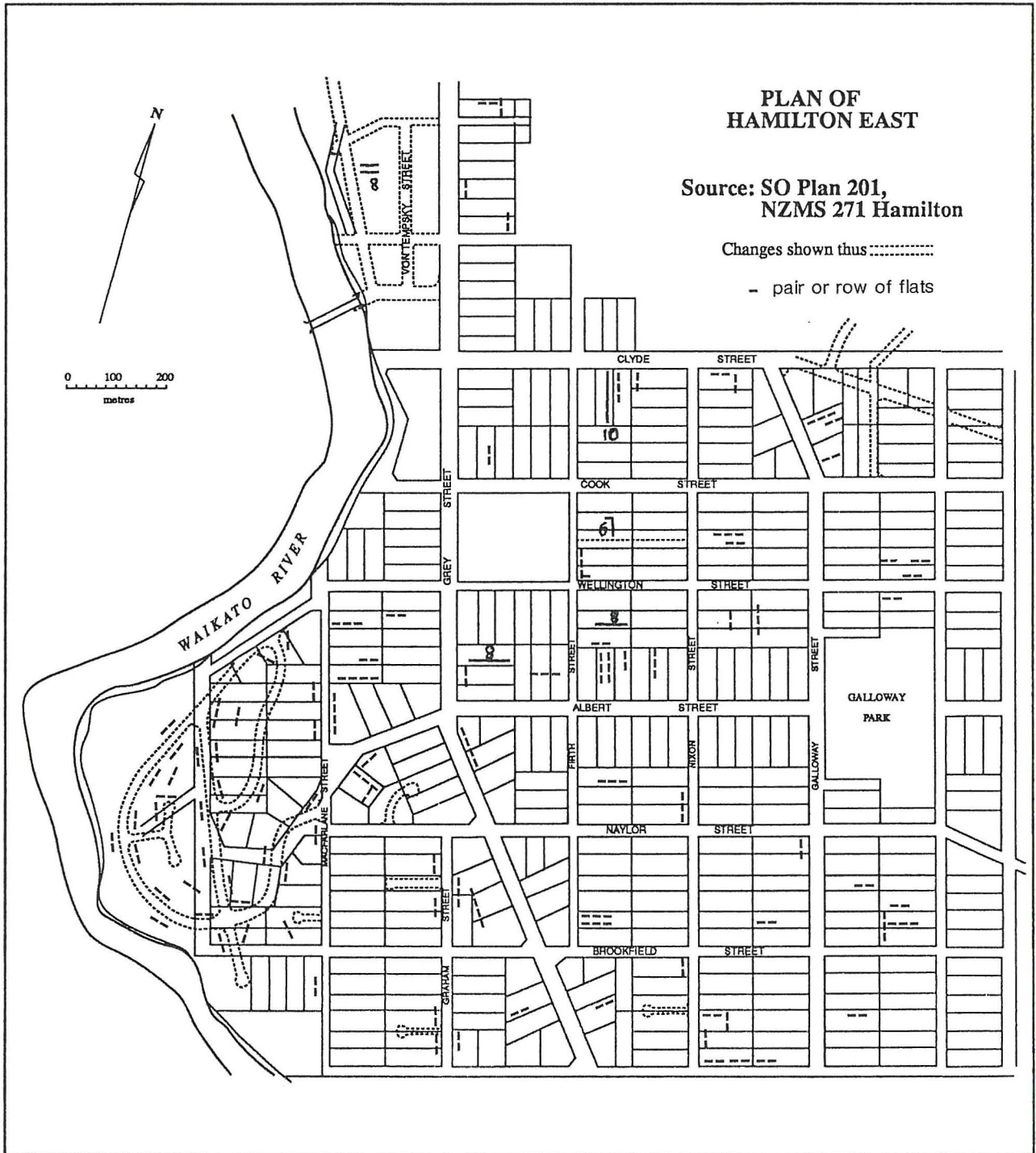


Figure 11 Single storey flats built in Hamilton East in the standard New Zealand house period
Source: VNZ Files, 1989

Behind these houses were large gardens, or 'backland'. Following the war, much of this was filled with houses. Johns (1963, 24) in Britain referred to this as "interstitial development". The one acre and half acre sections were subdivided into one quarter or one fifth acre sections, the fashionable size for sections and the normal density of houses for the lifestyle of the time. Thus most of the one acre gardens were sold.

The allotments with the narrow end to the road were conveniently divided into four to produce the classic quarter acre rear sections and one fifth acre front sections. Even though this was the period when the quarter acre section was most evident, subdivision of the one acre allotment did not result in four quarter acres, because of land 'wasted' in the essential provision of individual driveways to rear sections. Such large residential sections were not confined to the New Zealand suburb. In the United States, typical 'tract' housing, where estates of many houses were built following World War Two, was on sections of one quarter to one half an acre (Hayden, 1984). The quarter acre section was the norm in Australian suburban areas (King, 1984). A quarter of an acre was a round figure in terms of imperial measurements. Even in 1788, quarter acre allotments were the proposed sections in Australia after the landing of the first fleet (King, 1984).

The south western part of the suburb, close to the Waikato River was effectively part of the country in 1943 as plate 40 shows. Sillary Street was not fully formed and much of the land was bush covered. A cottage occupied a site in the middle of what is now a major arterial route (Air photograph, 1943). As soon as building construction got under way this land began to be developed with:

- State houses 1946-1948;
- private house building on freehold land from 1945; and
- private house building on leasehold land (VNZ Files, 1989).

From 1945 the "explosive period of expansion" (Johns, 1965, 24) was typical of many cities world wide. In Hamilton, the "scale of building operations to deal with such growth was vast" (Gibbons, 1977). The present road network was completed in the early post-war period. Some roads shown on the original township were not formed until this time. Cook, Fox, Sillary and Henry Streets, were completed between 1943 and 1953 (Air photographs, 1943; 1953). This gave access to much land which became available for residential development (Land Use Survey Map of Hamilton, 1955).

Scattered throughout the suburb were the 'flat' roofed houses discussed in Chapter Four. Their location is shown in figure 12. By the end of the 1950s, almost every section in every street in Hamilton East was infilled with houses. In the 1960s, the newer suburbs were more fashionable and building in Hamilton East included:

- new developments on leasehold land in the north east of the suburb;
- infilling any vacant sections with pairs of flats;
- the occasional replacement of old cottages with new houses; and
- in rare circumstances, infilling of large gardens where the owner had decided to subdivide. This occurred behind the cottage built about 1886 (plate 7) in Galloway Street, where three houses and two flats infilled a one acre allotment in the 1960s (see below) (VNZ Files, 1989).



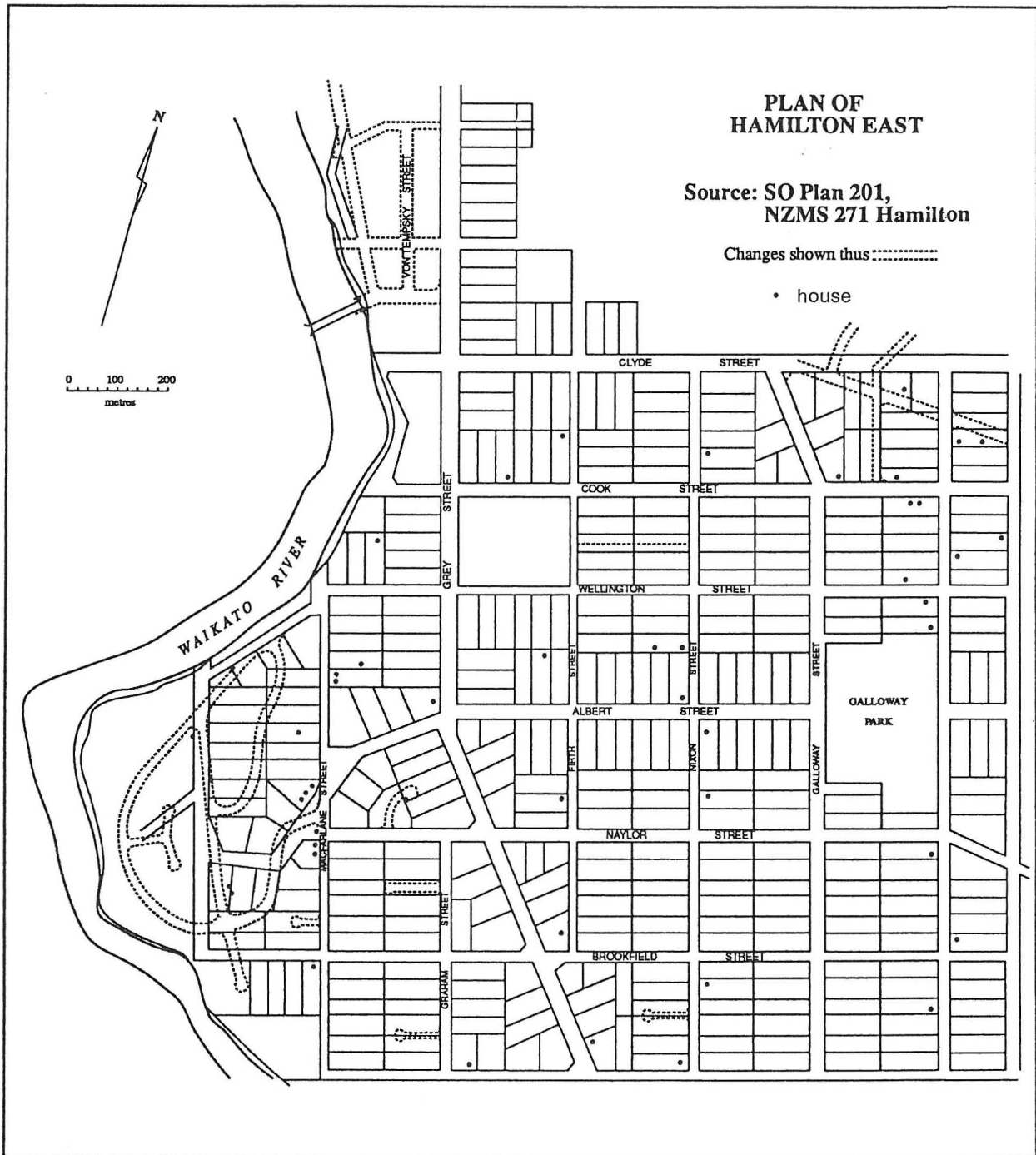


Figure 12 'Flat' roofed houses built in Hamilton East in the 'Moderne' style, 1937 - 1955
Source: VNZ Files, 1989

The Hamilton East commercial centre was increasingly commercialised on both sides of Grey Street; houses were replaced by shops or converted into shops (Cassidy, pers. comm., 1989; Johnston, pers. comm., 1989; Watkins, pers. comm., 1989). Parklands, a villa situated on a prominent site in Bridge Street was renovated in 1952 as a private motor hotel (VNZ Files, 1989). The Warwick Private Hotel was purchased for offices in 1964 (Waikato Valley Authority Files 24/1 Vol 1).

Land that was no longer required for other purposes became available for housing in the post-war period. For example some land shaded in the cadastral plan shown below, in Naylor Street was an industrial residual prior to the war. This gravel pit (Leightons, 1940), on Hospital Endowment land (Town of Hamilton East Map, 1924), was used as a transit camp in the 1940s (Crichton, pers. comm., 1989; Air photograph, 1953). It was subdivided in 1957 (VNZ Survey Plan, 1989) and developed as 15 sections, around a cul de sac, Wiremu Street. Houses were built in 1959 (VNZ Files, 1989) and eight pensioner flats were constructed in 1959. These were the first pensioner flats constructed for Hamilton City Council (HCC, 1979).



In 1955, Hamilton City Council approved, as a result of the Reserves and Domains Act 1953 under section 351 of the Municipal Corporations Act 1954, the subdivision of land shown below, in Nixon Street as a new cul de sac, Cotter Place, for 10 sections. This recreation reserve land (*New Zealand Gazette*, 1886, 596) held by Hamilton Domain Board became available to the public as leasehold land. Between 1959 and 1965 houses were built (VNZ Files, 1989). Some have now been freeholded (Hamilton Domain Endowment Act, 1979; DOSLI, Certificate of Title, 1989).



Several groups of pensioner flats infilled blocks of reserve land that had originally been vested in the Borough in 1911 (Hamilton Domains Act, 1911). It was now controlled by the City Council. The need for pensioner flats for low income older people and disabled residents was recognised soon after the war. The result was:

- in 1951, the first project built by the State Advances Corporation in a new cul de sac called Newell Street;
- in 1959, eight flats were built in Albert Street by Hamilton City Council;
- in 1966, 23 bedsit units were built in Graham Street;
and
- in 1978, 18 double units were built in Graham Street (HCC, 1979; VNZ Files, 1989).

The availability of reserve land in public ownership was important for the provision of these rental units. It was during this period therefore, that the reserve land was finally developed for housing. As well as pensioner housing infilling of reserve land, this infilling also was in the form of pockets of new houses constructed between the few scattered farm houses and other isolated dwellings. In Hamilton East at least 50 acres of Domain Reserve land (calculated from Town of Hamilton East Map, 1924) became available to the public as leasehold land for house construction. The new house owners acquired perpetually renewable leases on the land for periods of 21 years, under the Municipal Corporations Act 1954, Section 152, (1) (b), from Hamilton City Council (Drury, pers. comm., 1990). Some housing on leasehold land dates from earlier times, but in the 1940s, 1950s and 1960s most pastoral land within the suburb was developed.

The leasehold land is now administered by Hamilton Properties Limited, a newly-created wholly owned company of Hamilton City Council. In the post-war period because leasehold land was usually subdivided several acres at a time, the original one acre boundaries were frequently ignored (DOSLI Survey Plan, 1989). Some subdivision was on a very generous scale. In one development in MacFarlane Street, two acres were subdivided in 1952 into six sections, three at the front and three at the rear, ranging in size from 1100 to 1550 square metres, all well in excess of a quarter of an acre (VNZ Files 1989; VNZ Survey Plans, 1989). Most new sections, designed by the surveyors of the 1940s and 1950s, were the conventional one fifth to one quarter of an acre (800 to 1012 square metres). They were rectangular, long and narrow. The smaller number surveyed in the 1960s were more square and smaller. As with freehold land, buyers acquired their sections individually and had houses built individually. It may have been several years before all the eight, 10 or 12 sections were developed. For example, in Fox Street, eight leasehold sections were developed between 1951 and 1960, just as 10 freehold

sections in Galloway Street were developed between 1949 and 1961 (VNZ Files, 1989; VNZ Survey Plans, 1989).

The use of the reserve land came under the provision of a number of statutes. Since the passing of The Hamilton Domains Empowering Act 1894 there have been a number of Local Acts which dealt specifically with Domain Reserve in Hamilton East and Hamilton West. The major legislation was the Hamilton Domains Act 1911 and its amendment in 1922. The provisions of these Local Acts were subject to national legislation. The Municipal Corporations Act 1954 allowed local councils to subdivide or re-subdivide land, not held in trust, into building allotments (Section 328), erect houses on that land (Section 329), sell building allotments, and lease building allotments for house construction (Section 330). The lessee could purchase the fee simple (Section 331). The Hamilton Domain Endowment Act 1965 specified that the land which was presently leasehold could be sold, transferring the fee simple only to the lessee, at current market value (Section 5). The land had to be occupied exclusively as a self-contained house or residence according to the Hamilton Domain Endowment Act 1971 (Section 5). Subsequently, many lessees freeholded their land (Drury, pers. comm., 1990).

By the 1960s, the suburb of Hamilton East had certain features in common with St Albans in England, as Smailes (1966, 85) described it, "a haphazard intermixture of styles and classes of dwellings", interspersed with reserves, small industrial sites, market gardens and other commercial enterprises.

Subdivision design

Surveyors have been required to comply meticulously with legislation, and local body officials judged subdivision design on paper in terms of shapes and sizes, and tidiness or symmetry of design. The buyer, however, has been little concerned whether

"section boundaries are parallel or at right angles to some other boundary or road" (Speedy, 1961, 207). Registered surveyors were given the monopoly in all schemes of subdivision in New Zealand. In North America and Britain, architects were responsible for the design layout of land, as well as buildings (Basire, 1948).

Until the advent of the State house infilling was undertaken piecemeal. From about 1938, some infilling took on a more systematic guise. The State house planners and surveyors designed a completely different road system in the large area of reserve land adjacent to the Waikato River (figure 9). All the roads for that major housing scheme were curved and narrow compared to the original grid plan. Several culs de sac were also designed for groups of State houses in other parts of Hamilton East where the Crown land comprised two adjacent acre allotments. This allowed direct access to each house and negated the survey of rear sections. Very few rear sections were designed by State house surveyors. Figure 13 shows all the State houses built in Hamilton East. Many of these are now privately owned.

Subdivision of the Hayes Paddock estate was on a very large scale, compared with the remainder of the suburb. The original acre allotments and their boundaries were set aside and the very latest contemporary curvilinear road system surveyed. Large numbers of lots were created on each deposited plan. Only on MacFarlane Street are there remnants of Graham's original plan (SO 201, Plan of East Hamilton, 1864). The government planners followed current subdivision design practice surveying the first non-rectangular sections and the first culs de sac. Some sections were triangular in shape, or the road frontage boundary was curved. In others the rear garden was wider or narrower than the front garden (DOSLI Survey Plans, 1989).

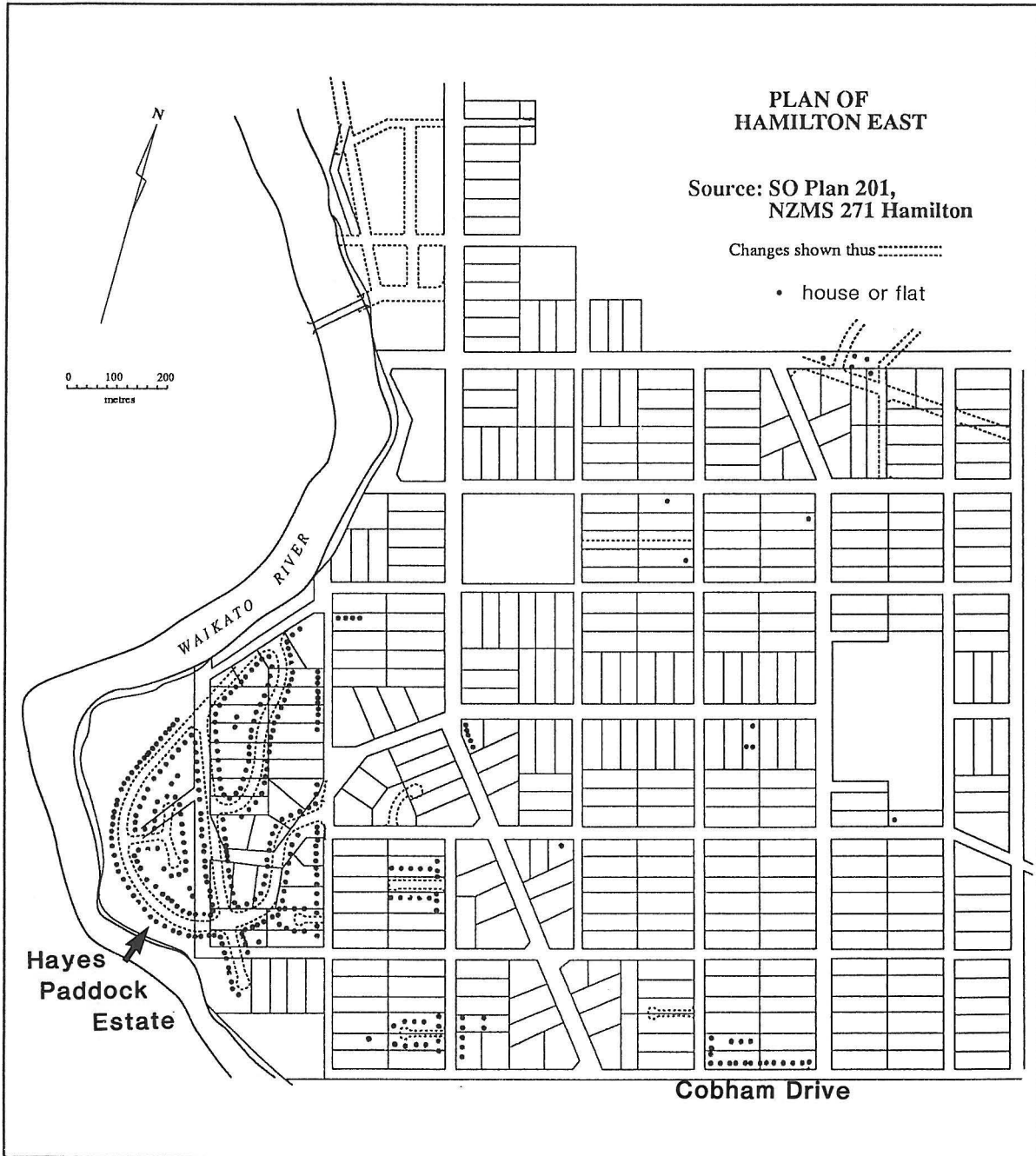
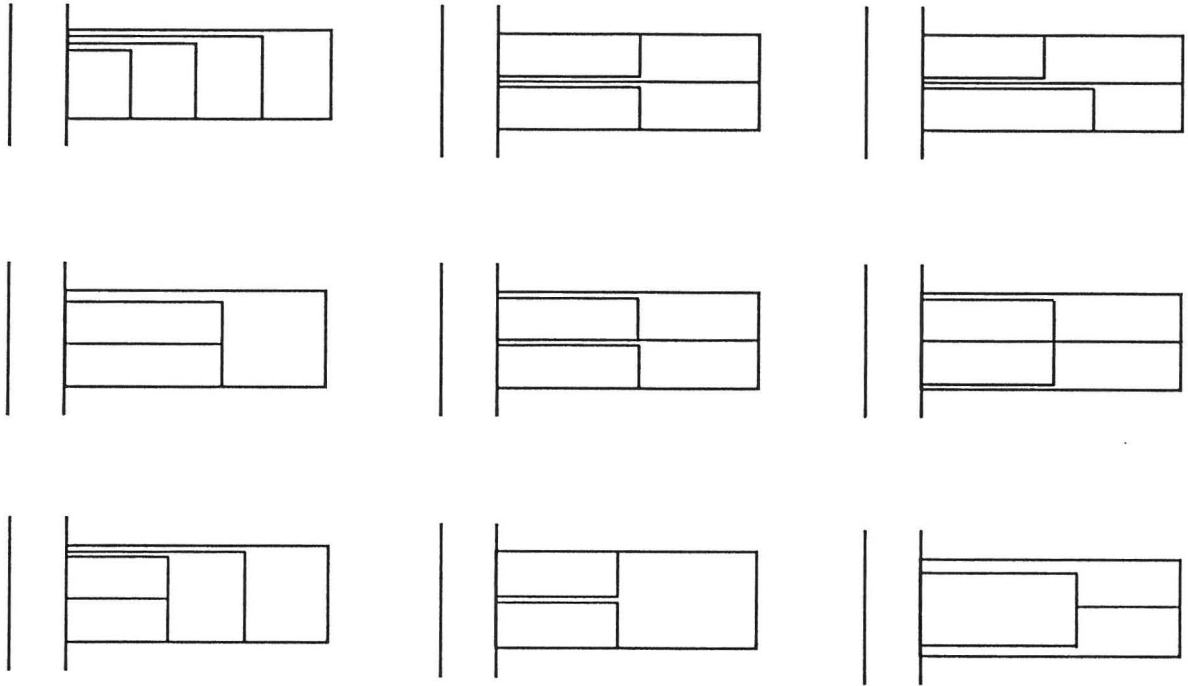


Figure 13 State houses and flats built in Hamilton East
Source: VNZ Files, 1989; Housing Corporation of New Zealand
Map, undated

The work of government surveyors in the late 1930s was therefore revolutionary in Hamilton East. Basire (1948) was a member of a team of surveyors, planners, and architects who worked for the Housing Construction Department on the subdivision design of most of New Zealand's substantial State housing schemes 1938-1948. The First Labour Government, as the decision makers for the major housing schemes of the late 1930s, was ahead of the times, for culs de sac were an essentially post-war feature of town plan design. A cul de sac is a road closed at the end by houses in a conscious group, manipulating a cluster of houses with their front elevations all designed to face each other from a distance. Conceived as an architectural composition, it represented "modern ideas of residential design" (Conzen, 1960, 103), planned to create a more human and intimate townscape. It also provided excellent access to every house, even those at the rear of sections. It was a new way of opening up 'backland' without the need for driveways. The cul de sac also resulted in a variety of unorthodox shaped sections of the non-rectangular variety (Baldwin, 1988; Speedy, 1961).

It was in this post-war period that the majority of the one acre allotments with the narrow side to the street were infilled. Many were subdivided in the 1930s, but remained completely vacant until the standard New Zealand house period (VNZ Files, 1989; VNZ Survey Plans, 1989; Air photograph, 1943). Other acre allotments were occupied by a single villa or cottage or bungalow. Most were subdivided into four, the original house retaining one section and three new freehold properties were put on the market for sale. Most were infilled in the 1940s and 1950s, in one of about nine different designs, constrained by the original boundary frame. The specific design chosen depended on the owner but particularly the surveyor, and in some cases the site of the original house. Standard types included the following.

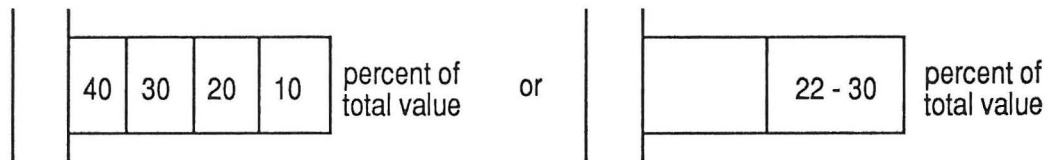


Careful observation of VNZ Files (1989) relating to the date when houses were first occupied suggested that the rear sections were less popular than front sections. Where a number of sections were subdivided those at the front tended to be occupied first. In spite of a great demand for land, vacant rear sections still existed in the 1960s and these were commonly used for the construction of pairs of semi-detached flats. Reynolds (1961, 196), an architect, claimed that:

rear lots often by their greater size and relationship to the surrounding sections have a better shape for flexibility of development.

Nola (1961, 135), a surveyor, believed the standard 40 perches, a quarter of an acre (1012 square metres) rear section, was a waste of good urban land. Councils refused to approve back sections under 40 perches. This began to change by the end of the period, and in the Hamilton district scheme (HCC, 1967) rear lots were required to be 28 perches minimum (708 square metres). Speedy (1961) calculated the perceived value of a section in regard to

its relationship with the street. He claimed that the land nearest to the street had greater value than any land further away from the street, according to valuation records internationally. He advised against extra deep sections on this basis (no dimensions given).



Wider sections had greater value and rear sections were more difficult to sell and more difficult for the house owner to re-sell (Speedy, 1961). This confirms that the experience in Hamilton East was typical and helps to explain the regular initial use of the front of allotments for house construction, leaving the centre of the blocks as garden, up to the end of the bungalow period. After the war, it explains the continued preferential choice of road frontage sections. The owners of rear sections 'suffer' the disadvantage of extra costs of drives, electricity and water reticulation (Speedy, 1961). Their houses can be surrounded by several neighbours' tool sheds, clothes lines, kennels, overgrown trees and hedges, compost containers, and incinerators. They also require expensive fences to screen such nuisances. They can be 'overlooked' from several directions, with the consequent reduction of privacy (Baldwin, 1988). There is a greater distance to carry refuse to the street boundary. Often mail, milk and newspapers are delivered to boxes at the street frontage.

Rear sections do have advantages for those people who wish to live away from the street, and in the post-war period, for those who required larger than average gardens (Speedy, 1961). In Hamilton East there are a number of examples where owners of above average size rear sections have resisted the temptation to infill or subdivide large sections, ever since the construction

of the house in the 1950s. These are square shaped sections which occupy the full width of the original acre boundary. For example, these properties exist today:

- a 1712 square metre section and 1959 house in Fox Street;
- a 2036 square metre section and 1955 house in Fox Street;
- a 2255 square metre section and 1955 house in Nixon Street; and
- a 1996 square metre section and 1958 house in Brookfield Street; (VNZ Files, 1989; VNZ Survey Plans, 1989).

A 2043 square metre section and older style house in Nixon Street was auctioned on 1 December 1990 (*Waikato Times* real estate advertisement) .

Dart (1961) claimed that the lower market value of rear sections was because of the importance of road appeal and appearance of houses. In the villa period-style, the front elevation was of paramount importance. Rear sections were deliberately surveyed larger than front sections, to compensate for the lack of frontage to the street. Houses that pre-date this period were rarely located in rear sections. There are fewer than 20, in Hamilton East of which 15 were built in the 1930s (VNZ Files, 1989). This is not because the old houses in rear sections have been demolished, there were always very few. Some were built on farmlets, not in rear sections, but placed back from the street on a whole acre allotment. Other rear section houses were consciously located because of the views. There were many rear sections subsequently available in the 1940s and 1950s. A large number of new home seekers thus opted for the purchase of cheaper rear sections. For example in 1989 in some 12 acre blocks, there

were between 10 and 20 houses from that period occupying rear sections. Many Hamilton East residents have now lived in rear sections for a large number of years, recognising the disadvantages and benefitting from the advantages.

Many of the features of the subdivision design common in Hamilton East exist to provide vehicle access to sections. Rapoport's (1980, 294) "the imperative of accessibility" took several forms:

- the construction of roads which had been paper roads for many years;
- the construction of culs de sac;
- the semi-official development of lanes incorporating several adjacent driveways; and
- the ubiquitous driveway.

Without the motor vehicle as the major form of transport the subdivision of Hamilton East may have been quite different. The conventional form of access to rear sections was therefore by individual drives, longitudinal lines of communications from road front to house. Each dwelling required a separate drive under The Public Works Act 1908, until the advent of the Local Government Amendment Act 1978, Section 279 (2) (e). The result was single, double, triple, and quadruple drives all over Hamilton East, because of the requirements of the law. These surrogate roads formed what Conzen (1960, 60) referred to as the "pseudo street system".

The size and shapes of most sections designed in this period therefore owed much to historic precedent, and the shape of the original allotments only allowed certain options. The size and shape of sections surveyed depended on meanings placed on them by people, due to:

varying perceptions, cognitions and evaluation of environmental quality, images, values and many socio-cultural variables (Rapoport, 1977, 21).

There was considerable variety in the subdivision design when the basic types were juxtaposed. The basic forms summarised here are shown in figure 14:

- the standard rectangles, common since 1900, comprising about six sections adjacent to the street;
- nine or so alternatives, shown in diagram form above, for subdividing allotments, where the narrow end of the allotment faced the street;
- a range of sizes of rectangular sections on the smaller blocks in the east of the suburb adjacent to the Town Belt, where rear sections are rare;
- the varied design of non-rectangular sections on the State housing scheme;
- the cul de sac design with a symmetrical pattern of varied shape sections; and
- a mosaic of sections where the land to be subdivided was not rectangular initially, including triangles, squares and other polygons.

Hamilton residents were prosperous, by world standards, during this period. The population swelled to city proportions and way beyond. The residents had a choice of inner city suburb sections or greenfield site sections. The established suburbs were infilled while the city boundary was extended. Infilling occurred all over Hamilton East, and all vacant land within the suburb boundary was occupied. New innovations included culs de sac, curved roads, the common use of rear sections for housing and many long driveways. Most allotments were subdivided into one quarter, or one fifth or one sixth acre sections. For the life style of the 1950s, and the common values held at the time this

inner city suburb was replete. There was no potential for further infilling. The density was low, the streets were wide and the residents were comfortably settled in a classic suburb. Yet the city population continued to swell. There were questions asked. Where will the newcomers live? Should the city boundary be extended again? How can the housing density be increased? Where will the new Teachers' College and University students live? Some of these questions are answered in the following section which deals with infilling in the last two decades.



Figure 14 Department of Survey and Land Information cadastral plan showing subdivision boundaries of Hamilton East case study at 27 February 1990
Source: DOSLI, 1990

THE LAST TWO DECADES

Why the infilling occurred

This section of the chapter deals with the period from about 1970 to the present day, referred to as the flats period-style and the variations on old themes period-style in Chapter Four. In 1970, almost every section in Hamilton East contained a house, and a few sections contained pairs or rows of flats. Infilling has, however, continued throughout this period. This has not been as a result of subdivision of land, in the conventionally accepted definition of 'subdivision', where new freehold sections are created out of larger sections or open land. This recent infilling has been accommodated by the:

- use of market garden land, and former industrial sites;
- demolition of very old houses;
- demolition of older houses perceived as obsolete, but possibly able to be renovated;
- the advent of the crosslease title which allowed more houses on sections without subdivision; and
- the scheme change to the district scheme which permitted more than one house on a section (HCC, 1975b; 1977).

Subdivision effectively ceased in Hamilton East in the 1960s. Of all the houses built in Hamilton East in the last 20 years, only four developments are identified as on newly subdivided land (VNZ Files, 1989; DOSLI Cadastral Plan, 1990). Figure 14 shows the pattern of subdivision boundaries on 27 February 1990.

Today few vestiges remain of the original suburban fringe atmosphere of Hamilton East's villa and bungalow periods. These include two substantial market garden enterprises, and the occasional one acre and half acre gardens, a few baches, and the odd vacant section. The suburb is now devoid of all industrial development. All other market gardens and industrial enterprises were replaced by houses in the 1970s and 1980s.

The Local Government Act 1974 (Section 314) created the crosslease title, which can be issued to owners where a surveyed section is shared by two or more dwellings. Each owner becomes a tenant in common with all the other owners in equal and undivided shares in the land. Each owner holds a lease for 999 years (Baldwin, 1988). At least 120 surveyed sections contained more than one house in April 1989. In Hamilton East as in many of New Zealand's suburbs one result of the introduction of the crosslease title has been smaller gardens. Housing developments in inner city suburbs have also been as popular as in green field sites (*New Zealand Herald*, 21 October 1989).

There has been considerable economic pressures to crosslease rather than subdivide. Rising land values have made the acquisition of traditional one fifth or one quarter of an acre sections in new subdivisions beyond the reach of many people (Baldwin, 1988). There are also practical reasons for the acceptance of smaller sections. These include the reduced need to grow fruit and vegetables and keep chickens, and the reduced enthusiasm for large scale gardening and lawn mowing (Baldwin, 1988). To acquire smaller sections in an area already subdivided into parcels of land, the most practical way "involves the construction of additional housing units on vacant sites or on the little used 'backland' of existing properties" (Nahkies, 1981, 10). There was much 'backland' in Hamilton East and there is still considerable potential for further infilling. Many sections in excess of 800 square metres still contain only one house.

A recent trend in the real estate business has been the emphasis placed on the 'infill potential' of a property using its potential building capacity as a selling point as a way of reducing ultimately the owner's land costs. This in turn is being reflected in the selling price, indicating that infill potential has become a market factor (National Housing Commission, 1988, 39).

Porteous (1987) classified into four the conditions which influenced the development of infill housing in Hamilton, Auckland and Tauranga. These were identified as demographic, institutional, economic and locational lifestyle conditions or social trends. Many of these factors have influenced the infilling of Hamilton East in the last two decades, especially since 1975 and are summarised below. The demographic conditions which have influenced recent housing demand included:

- a growing diversity of household types for whom traditional housing may not be ideal;
- a decrease in the number of nuclear families, and an increase in the number of child-free couples;
- a demand from single parent families for smaller houses and sections;
- the increased incidence of marriage breakdown creates a demand for small, low maintenance, low cost housing;
- the trend toward smaller households, more one and two person households, and an increase in households, without much increase in population; and
- the increasing number of elderly people, many of whom seek smaller homes.

The institutional conditions which have influenced infilling and have become causal factors in the process of infilling include:

- local authority decision makers recognised the advantages of infill housing over traditional subdivisional housing policies (Ministry of Works and Development, 1986);
- the district schemes encouraged urban consolidation (HCC, 1977; 1989);
- the provision that two separate residential dwellings be permitted on one section (HCC, 1975b; 1977);
- the provision that a dwelling unit could be built on each 400 square metres of net title area (HCC, 1977); and
- the creation of the crosslease title which has been easy to obtain.

The economic conditions which influenced infilling include:

- living in inner suburbs like Hamilton East saves travelling time, compared to living in outer suburbs;
- more efficient use is made of land, roading infrastructure, utility services and social infrastructure;
- under used gardens become better used;
- productive agricultural land is saved;
- development is concentrated around the central core of the city;

- with rising land values smaller sections are cheaper, and help to produce more affordable housing;
- the cost of standard subdivision sections proved to be beyond the means of many home buyers;
- low maintenance, compact, fully insulated housing can be attractive to those on fixed incomes;
- capitalising on the value of the gardens attracts land owners to crosslease part of their section; and
- realising this asset can provide much needed cash to offset mortgage payments or pay for renovations or for other purposes.

The locational and lifestyle conditions which have influenced infilling include:

- vacant, standard size, sections are no longer available in Hamilton East, but it is a popular suburb;
- local residents who seek smaller houses often prefer the suburb in which they already reside, close to friends and family;
- some people are prepared to trade off large gardens for locational preferences;
- inner suburb living is fashionable;
- new subdivisions in outer suburbs can be criticised for the absence of shops, health centres and schools;
- infill housing close to facilities suits those who cannot drive;

- some residents require smaller than average gardens; and
- many women are in paid employment and require low maintenance houses and gardens.

Infilling has provided many advantages, but for some people it is a compromise. In the absence of the ideal - a small freehold detached house on a small surveyed section - some residents of Hamilton East have compromised. They bought small houses on half sections, with crosslease titles.

Where the infilling took place

The housing that has been constructed in the last twenty years has taken two basic forms, the two storey blocks of flats and the houses, units and townhouses. Flats were built exclusively in the 10 and 12 acre blocks, zoned high density (HCC, 1967; 1977). They surrounded the commercial area and as replacement housing are technically not infilling. Figure 15 shows the location of all the blocks of two storey flats. Altogether 372 flats in two storey blocks were constructed in Hamilton East between 1970 and 1976 (VNZ Files, 1989). The flats were built on vacant sections following demolition and in some cases, infilled large sections where houses remained.

The construction of nearly 400 houses, home units and townhouses has occurred all over the suburb as shown in figure 16. About a half of this total is housing on vacant sections as a result of demolition or the closing of non-residential enterprises (VNZ Files, 1989). The other 200 are infill houses which share sections with older houses, without subdivision of the land (plate 42). There has been infilling of this type in almost every residential block. Leasehold land cannot be infilled and so less infilling has taken place on the fringes of the suburb where many houses have not been freeholded.

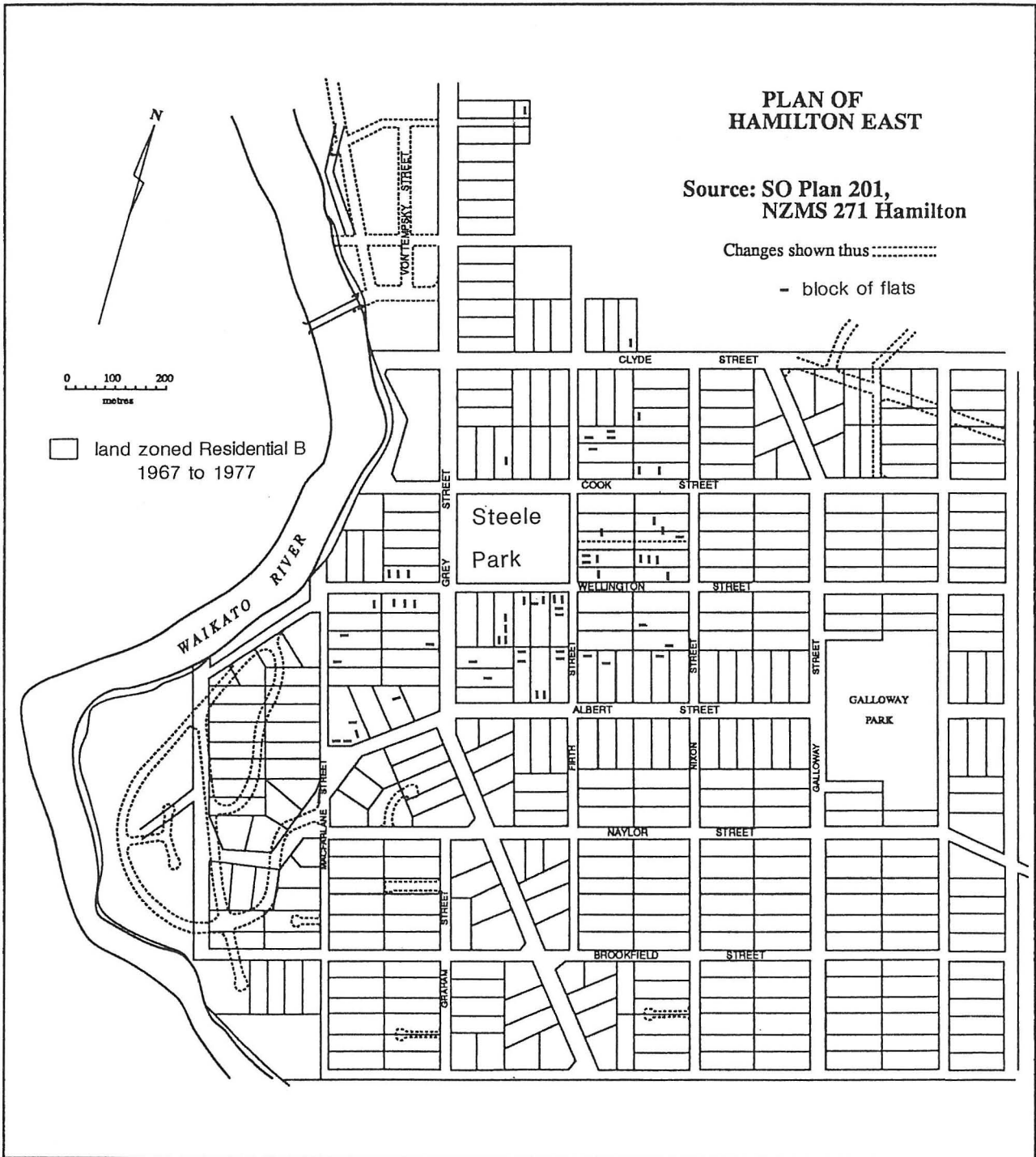


Figure 15 Two storey blocks of flats built in Hamilton East, 1970 - 1976
Source: VNZ Files, 1989; HCC, 1967

Virtually no infilling has occurred in former State housing areas, with only two examples identified (VNZ Files, 1989). This is because even though many former State houses are now privately owned, the majority of sections in Hamilton East are of less than 800 square metres. This precludes crossleasing (HCC, 1977) as the district scheme requires a minimum of 500 square metres per section, exclusive of drives for subdivision. Where State house sections exceeded 800 square metres, a pair of semi-detached houses was constructed in the initial development period between 1938 and 1948. The only sections large enough to allow crossleasing are a group at the east end of Bledisloe Terrace and a group at the south end of Plunket Terrace where at least one has been subdivided and one crossleased. Elsewhere in Hamilton, for example the suburbs of Melville and Claudelands, State houses were built on such large sections, that in the mid 1980s, the sections were infilled by the Housing Corporation with smaller units (*Waikato Times*, 9 April 1986; 6 June 1986).

The decisions to demolish dwellings, construct new dwellings and infill gardens with additional houses are made by land owners. This means these demolitions and constructions are random, within the constraints of the district schemes. In Hamilton East, however, the operative district scheme has greatly influenced where some of the infilling has occurred. The district scheme was instrumental in permitting:

- two storey flat construction only in Residential B zones 1967-1977 (HCC, 1967);
- the high density zones to be the location of a considerable amount of new housing development (HCC, 1967; 1977; VNZ Files, 1989);
- limits on site area to 500 square metres for subdivision (HCC, 1977);



Plate 42 A 1910 villa (i) in the 1970s, (ii) renovated and infilled with four units in 1984

- limits on crossleasing to 400 square metres average per dwelling (HCC, 1977); and

- increased density in Residential 2 zones (medium density) since 1977, which resulted in the construction of 70 dwellings in the four Hamilton East residential blocks zoned Residential 2 (calculated from VNZ Files, 1989; HCC, 1977).

Figure 16 shows that very little infilling has occurred north of the commercial centre, which was zoned Residential B 1967-1977 (HCC, 1967). From 1977 there were a number of different zones represented in that area including Residential 2 medium density and Residential 3P, professional offices. Only eight houses and one block of two storey flats were built and because there are so few blocks of flats it has retained a low perceived density, and mixed character. The area includes medical facilities in converted houses, other professional offices, some old houses and a selection of dwellings from all periods, juxtaposed. The recent infilling has been of high quality housing including architecturally designed houses. The changes in zoning have had the effect of leading capital development in that direction, changing the area from residential to mixed residential and professional offices (HCC, 1986).

The 10 and 12 acre blocks where a substantial number of two storey flats were built south and east of Steele Park, have been the site of very little infilling with units and townhouses. Blocks zoned high density, but where little two storey flat construction occurred, have seen considerable infilling with units and townhouses. Infilling has also taken place in parts of the suburb zoned for low density residential development. For example, one 10 acre block is the location of 22 houses from this period and two blocks acquired 23 and 19 new houses respectively. These developments have not been the direct result of zoning, although it has occurred in the areas adjacent to higher

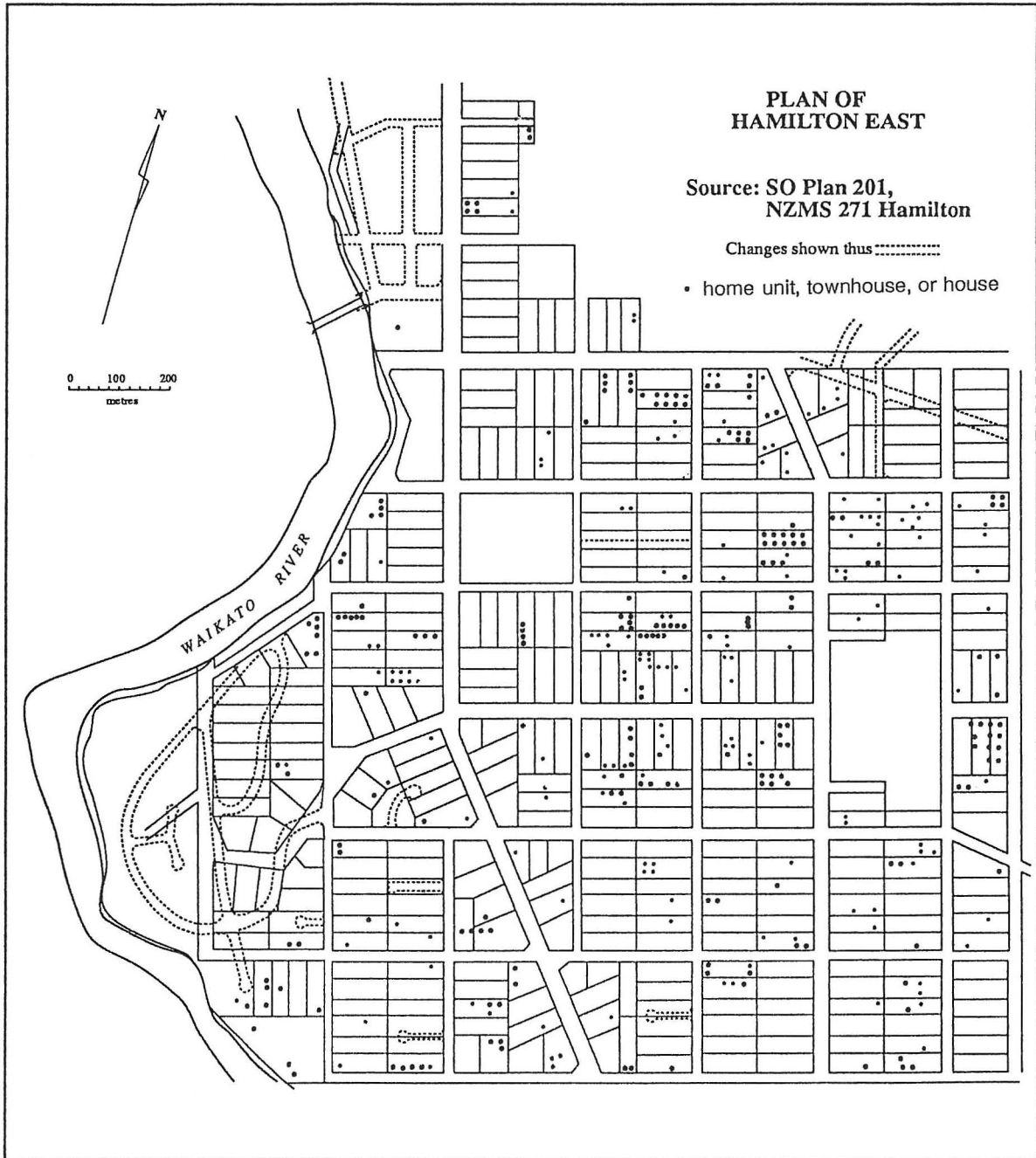


Figure 16 Housing built in Hamilton East in the last two decades
Source: VNZ Files, 1989

density zones. Where a high level of infilling in low density residential zones has occurred it is related to a number of decisions made by a number of people. These include the construction of:

- a comprehensive development made possible where a large vacant site allowed a single landowner to construct several new houses;
- new houses in residential zones previously occupied by agricultural residuals, that is, former market gardens;
- houses built in a possible 'copycat' effect, resulting where owners perceived the advantages of crossleasing their land, by observing the infilling in the neighbourhood; and
- housing in areas zoned as residential since 1967 where industrial enterprises have closed, allowing five or six new houses to be built (VNZ Files, 1989).

In at least two cases, complete one acre sections have come on to the market when owners sold the original houses. This allowed the comprehensive development of nine and 10 new houses respectively, where there had previously been one house. One residential, low density block, south of Albert Street has accommodated 23 new houses, mostly individual houses infilling large rear sections, and seven more are under construction in 1991. Only three houses are known to have been demolished. The centre of this 12 acre block was developed at a very low density prior to 1970, when it contained 48 houses, an average of exactly four to the acre (Air photograph, 1967).

Typically the 10 and 12 acre blocks which were developed in the villa and bungalow periods included many large gardens. These have readily allowed the owners in recent years to infill gardens

with one or several new houses. Typically those outer suburban blocks adjacent to the Town Belt, developed in the post-war period, have acquired fewer new houses in the last two decades. There the typical section would probably accommodate only one new house. This is where most leasehold land exists, and this cannot be infilled until it is freeholded. In some parts of the suburb a majority of landowners are obviously content with the status quo. They do not wish to infill and are continuing to enjoy their one fifth or one quarter acre gardens (VNZ Files, 1989; Air photographs, 1943; 1953; 1967; 1979; 1986).

The differential impact of the infilling on the original 10 and 12 acre blocks has resulted in considerable differences in the density of housing within the suburb. For example,

- one of the 12 acre blocks which was the site of the most concentrated 1970-1976 flat building now contains a church complex, a motel complex and 176 dwellings, at an average of 14 dwellings per acre;
- the 12 acre block where only five two storey blocks were built, but where the most intense infilling by units and houses has occurred, contains 136 dwellings, at an average of 11 dwellings per acre;
- a typical 12 acre block, where there is no leasehold land, contains 49 houses and a private hospital, at an average of four houses per acre;
- a typical 12 acre block where there is considerable leasehold land, State houses and pensioner flats contains 67 dwellings, at an average of five point five dwellings to the acre; and
- a 12 acre block, on the boundary of the suburbs developed in the post-war period, contains 63 dwellings,

at an average of five dwellings to the acre (VNZ Files, 1989).

In spite of the infilling with one and two storey flats and the total construction of nearly 800 dwellings in the last 20 years, Hamilton East remains in the main a very spacious part of Hamilton's extensive suburbia. It is as Smailes (1955, 105) observed overseas, an "open type of urban development which deliberately attempts to preserve or create an illusion of country in the town". A small proportion of the central core of the suburb is more densely settled. These central core blocks are located in the area of Hamilton East which has seen the most intensive residential development since the turn of the century.

Low density development is still valued by some people who aspire to the "space, privacy, visual appearance, peacefulness and recreational amenity which large sections provide" (HCC, 1989, 151). In Hamilton East in 1990, there are many areas where the average density is still only four, five or six houses to the acre. Many quarter acre sections remain in tact. There are still houses occupying sections in excess of one quarter of an acre. The trend suggests density is increasing everywhere, and since this present survey was completed in the first half of 1989, many more houses have infilled rear gardens. Scattered through the suburb, crossleased half sections are available to be infilled, when their owners place them on the market for sale (VNZ Files, 1989).

Apart from the demolition of houses to make way for flats and for new houses this period has seen a great number of decisions made to demolish houses. All houses known to have been demolished or removed from a section are recorded on figure 17. Some were probably derelict, others undoubtedly were considered obsolete, others were sound and habitable. Some demolitions made way for commercial enterprises, as the commercial area spread both north and south. A whole street frontage of houses in Grey Street,

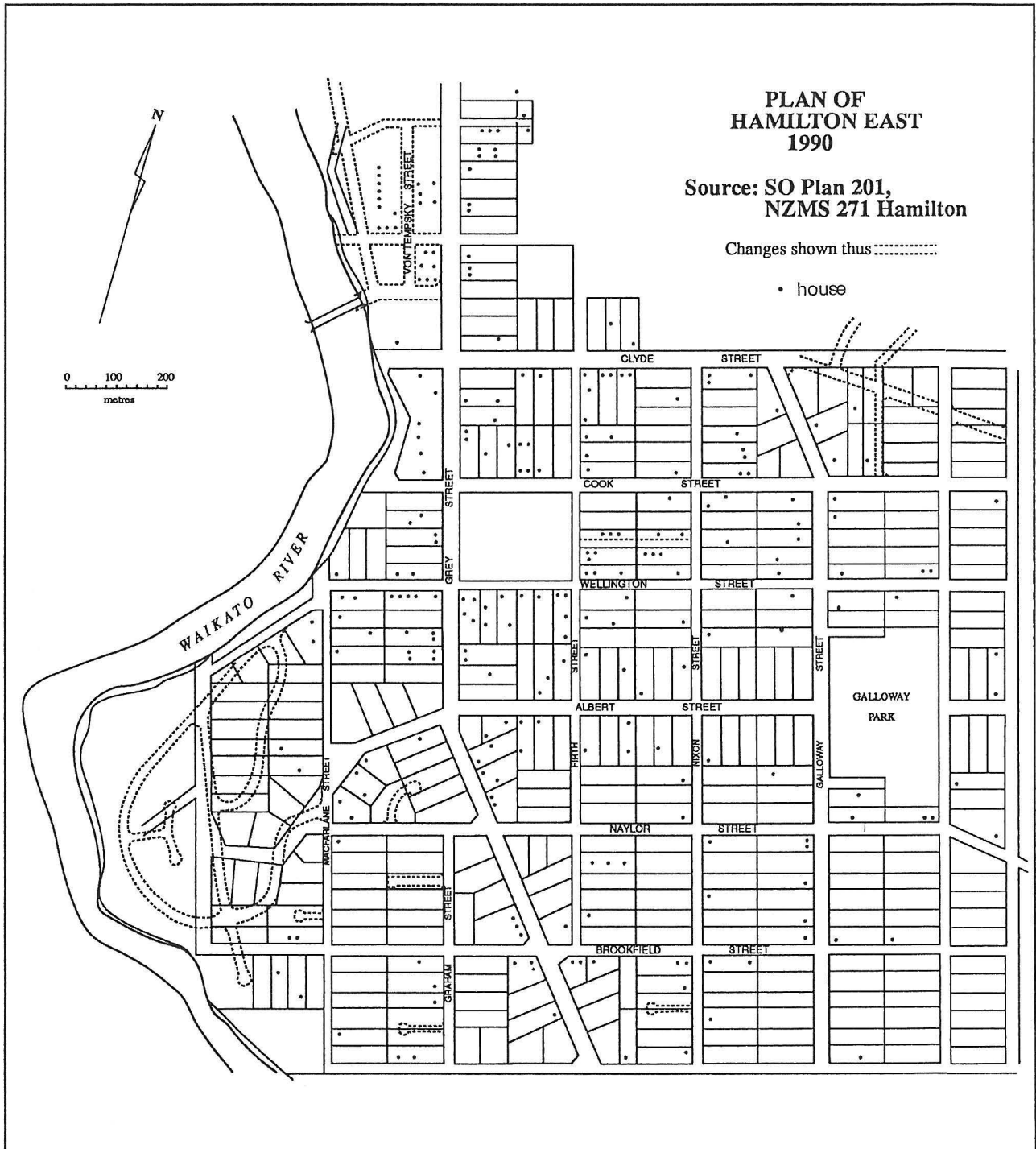


Figure 17 Houses demolished or removed from their original sites in Hamilton East
Source: VNZ Files, 1989; Air Photographs, 1943; 1953; 1967; 1979; 1986

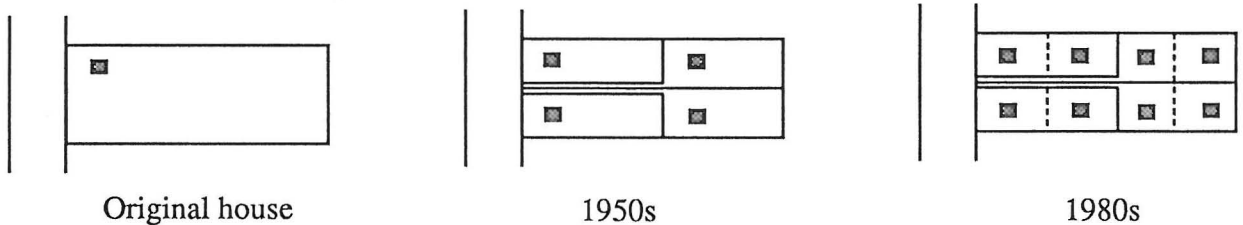
built in the bungalow period, was demolished for commercial uses. Four post-World War Two houses went to make way for a motel in 1986 (VNZ Files, 1989). A number of houses were demolished to make way for churches and church facilities. Three 1930s houses were removed for the construction of a new private hospital and a number of houses were replaced by rest homes. These have resulted from individual and group responses to perceived economic and market conditions. Rest homes have been a major development in the 1980s, with four establishments opening in Hamilton East, added to those built earlier. In the 1980s there has been a trend toward replacing one older house with two or more higher quality new units or townhouses. Several houses were demolished when the present Regional Council Office buildings were constructed for the Waikato Valley Authority (Waikato Valley Authority Files 24/1 Vol II; More, 1976; VNZ Files, 1989). Many other houses have been converted to other uses by the churches, and for commercial enterprises and professional offices.

Infilling design

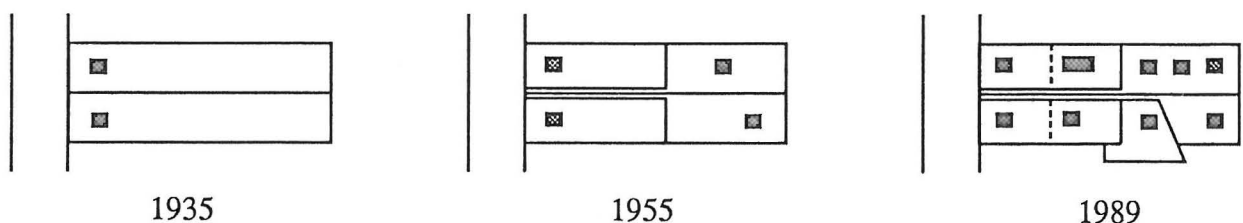
Even though rectangular sections are no longer required by law there are practical considerations in designing sections for freeholding or crossleasing. Acute angles are avoided because they create useless land. Even today, keeping boundaries parallel, unless there is a good reason to do otherwise, is still considered a rule for surveying (Baldwin, 1988). In Hamilton East this period saw little subdivision, but considerable addition to the housing stock with the cadastral plan (figure 14) remaining virtually unchanged for over 20 years (DOSLI Cadastral Plan, 1990; NZMS 189, 1966). The form this infilling has taken has not altered the basic plan of Hamilton East's roads and section boundaries. The original plan of roads and allotments remains as a network and frame very much as it did in the 1864 design. The infilling has adapted to the original plan which is long established, just as Conzen (1960) discovered in Alnwick.

Infilling has continued to occur piecemeal, at the whim of the individual resident, in spite of the strict City Council regulations (HCC, 1967; 1977). It has been in this period that the disposition of the buildings on the sections has at last varied, on occasions, from the universally square to the road and to each other. Now houses can be placed informally and at a variety of angles to each other and to the street. Ways have been explored to group houses together in arrangements utilising land more economically and yet without loss of privacy (NZCIH, 1971). On occasions privacy has been jeopardised. The deletion of Ordinance 15 from the district scheme in 1975, permitting more than one residential building on a site, was fundamentally important in the form the infilling has taken (HCC, 1967; 1975b; 1977). Between 1967 and 1975, when only one dwelling was permitted on a site, the minimum site was 24 perches (607 square metres) for a front and (28 perches) 709 square metres for a rear section (HCC, 1974b, 6). From 1977 the standard density was rationalised to 400 square metres per household unit (HCC, 1977). At the same time the Local Government Amendment Act 1978 Section 279 (2) (e) repealed the requirement for separate drives to individual sections which had been in place since The Public Works Act 1908. Typically the infilling that has occurred in the last 20 years has been literally between the older houses, as shown in the examples below.

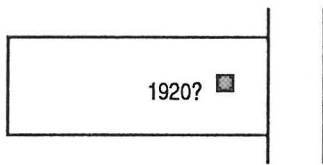
a. Classic Example



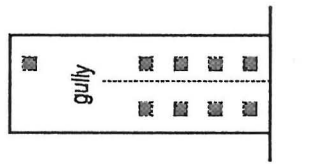
b. Allotment 132 Firth Street



c. Allotment 37 Nixon Street

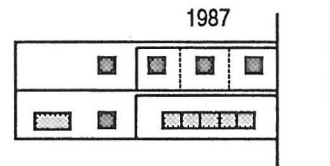
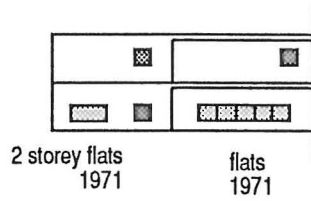
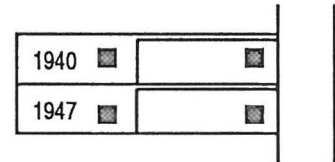
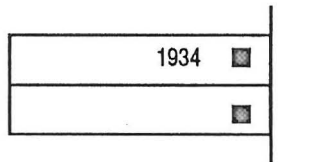
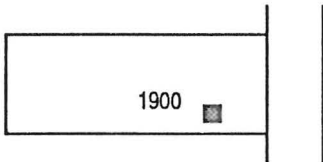


Original House

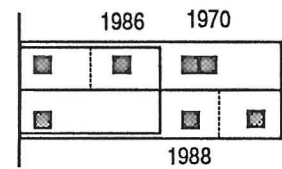
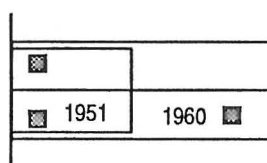
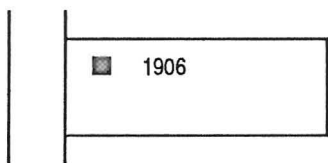


1980's original house demolished-
nine houses constructed

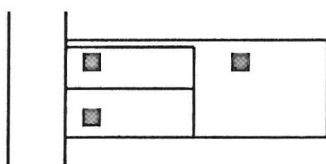
d. Allotment 140 Nixon Street



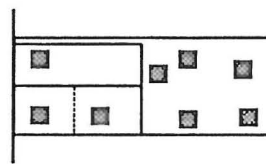
e. Allotment 327 Graham Street



f. Allotment 48 Nixon Street



1920



1980s one original house demolished-
six new houses constructed

In every decade this century pre-existing cadastral boundaries had a major effect on the subdivision and infilling of Hamilton East. This continues to be the case. The large size of the original allotment has allowed this subdivision and infilling, giving considerable opportunities, as well as causing considerable constraints. In the context of Hamilton, Nahkies (1981, 9) was accurate in forecasting that in New Zealand in the 1980s priority would be given to the "consolidation of development within existing urban boundaries". He also recognised that at last there was an appreciation of just how much vacant or under utilised land there was in towns. While the early 1970s were characterised by very rapid development of two storey flats in Residential B zones (HCC, 1974b), the last 15 years have been characterised by less frenetic construction of individual housing units in the spaces between the older houses and flats.

This chapter has traced the sequential infilling of Hamilton East, that is the colonising of Graham's original township, why, where and how. Continuous incremental change has resulted in the gradual intensification of housing development through time. As new houses were constructed there was a consequent reduction in the average size of sections. The infilling has reflected increased population and has occurred sometimes steadily and sometimes in spurts, depending on the prosperity of the people of Hamilton. There was a spurt of infilling associated with each period-style interpreted in Chapter Four. This meant that with each "new wave of architectural fashion" (Johns, 1965, 24) constructed in Hamilton East, there was a wave of infilling.

In Hamilton East, population increase and the processes of infilling are fundamentally attributable to economic success based on agriculture. However, other influences which had a bearing on population growth and the subsequent form of the infilling were international, national, regional and local in origin. International influences included imperial expansion and colonisation, the two World Wars, depressions in the 1880s and

1930s, the prices of primary produce on the world markets, and the increasing internationalisation of styles and designs, in a range of products, and even in images, meaning and attitudes, based on faster and more sophisticated communications. The national influences have been politically based, the promotion of the capitalist system, the nuclear family, the single family home, the quarter acre section and the provision by the State of rental housing. The regional influences resulted from dairy farming success in the Waikato. Local influences were also of a political nature. These included the promotion of Hamilton West as the business centre of Hamilton, the continued recognition of Hamilton East as a residential suburb, and with the introduction of the first district scheme the zoning of the suburb into different types of residential area. It has also meant the gradual closure of non-residential enterprises both industrial or agricultural. Residential use now dominates, with commercial (retail and office) uses in an area based around the original commercial centre of the old township.

Successive additions to Hamilton East since about 1900 have occurred differentially across space. Different parts of the suburb have been subdivided and infilled at different times. Vast changes since 1900 in the suburban landscape have taken place, with only brief periods of reduced building construction in the 1930s as a result of recession and in the 1940s as a result of war. The residential area of Hamilton East has therefore seen intensification and consolidation of settlement, within the original boundary. This was made possible by the initial 1864 survey of sections being so generous in terms of land area.

The material forms created by the people, the roads, section boundaries and the buildings, have been very resistant to change, in spite of continuous social changes. Regardless of the formal grid pattern of roads, Hamilton East exhibits a very informal townscape. This is because of the construction of each house relative to adjacent houses and because of the variety of period-styles in close proximity one to another - that is the present

accumulated housing stock. The present subdivision design, that is the present property boundaries, represent the accumulation of subdivision and crossleasing over the 'life' of the suburb.

CHAPTER VI

CONCLUDING REFLECTIONS

This study examines the evolution and provenance of house styles in the context of particular periods of time, and identifies six period-styles. These are spatially specific to Hamilton East, the case study area, an inner city suburb. In the context of changes in subdivision design since the original survey in 1864, it also answers three questions related to the location of these houses. These are: why, where and how did the people of the case study area construct houses that filled the sections, gradually consolidating development and creating a suburb from a scattered village. The construction and siting of these houses involved a social and physical processes known as infilling. The focus of this study is house styles and infilling processes.

It is now over 20 years since Peter Allen conducted research into the historical geography of the establishment of the Waikato military settlements in the 1860s (Allen, 1969). Research into the subsequent development of these settlements was long overdue. This study concentrates on the residential development of just part of one of the military settlements. Such work urgently required research to be completed while some of the original houses, fragile through the use of timber in construction, were still extant. In the 1980s, there was an upsurge of interest in historic preservation of older houses and heritage revival in new housing both in this and many countries. This appears to have led interested New Zealanders to recognise the value of their heritage of historic places. The decade of the 1980s was apposite for the study of housing design. Estate agents responded to

public interest in historic housing, focussing on the 'character' features of the housing stock. The public interest was reflected not just in the housing market but also in New Zealand's heritage of typical and unique historic houses. One result has been the production of coffee table books (Fowler and Van de Voort, 1983), academic research (Murton, 1984; Salmond, 1986) interest in colonial architecture (Fearnley, 1986) and academic interest in local housing history (Saunders, 1987). Hamilton does not have a unique heritage of extant nineteenth century houses, but at least two areas of the city are proposed as special zones in the district scheme (HCC, 1989). These are Residential Conservation (RC) in Claudelands, and Heritage Frankton Railway Houses (HFRH). This is because of the interest shown in the preservation of pre-1940s domestic architecture, on the part of the residents of those districts, members of the Historic Places Trust of New Zealand, and members of the staff at the Hamilton City Council.

This is a study in interpretation, humanistic in character, involving some of the products (houses and sections) of the culture of the residents. It takes the form of historical architectural geography which draws upon a cultural landscape as a rich source of data about the people who created it. An exercise in detective work, it allows the reconstruction of past residential landscapes using a wide range of bits and pieces, or varied sources. Although firmly based in geography, it is an interdisciplinary study involving the use of the information compiled by registered valuers, knowledge of architectural language, the practice of town planning, and the legislation relating to subdivision and the work of the surveyor. House styles and cadastral patterns are discussed not just as artifacts but as social products. The physical objects that were the focus of the study were visualised, planned, used, socially constructed, mythologised, invested with meaning and built by people. The houses and sections were neither inevitable nor were they accidental.

An important component of this study is elucidation and interpretation of meaning in the built environment. This requires considerable subtlety and ingenuity, especially when dealing with past environments and past generations. The topic could have made a study in its own right, but would have required different methods involving interviews and close scrutiny of a wide range of historical documents of a more personal, rather than public nature. Observation of residential neighbourhoods of Hamilton East illustrates New Zealanders' shared meanings of how a house and a section should 'look'. These meanings have changed with time. Meaning is individually and privately experienced, but collectively determined (Rakoff, 1977). Hamiltonians have shared meanings about their domestic architecture not only with other New Zealanders, but also with Australians and North Americans and to some extent with the British. The popular culture of this country is reflected in Hamilton East's domestic architecture and sections. Within this one suburb there is a microcosm of New Zealand's vernacular housing, and a close similarity of stylistic features with housing in other New World countries. The provenance of the styles is mainly indigenous, North American and British but "made unique by adaptation to the local culture" (Mitchell and Chaplin, 1984, 12).

The experienced 'house watcher' learns to recognise consensus of social constructs in architectural form by observation in the field. The sign value of an architectural type is its meaning as a sign of something else, beyond the purely physical dimension. People use their houses to communicate with other people through signs and symbols. The villa period-style is perhaps the one which lends itself most easily to an interpretation of the symbolic meaning of external appearance. This may be because meaning in architectural forms can be interpreted more satisfactorily in retrospect than in the present, because more research findings are available. The social patterns of the late Victorian era manifested themselves in Hamilton East in Edwardian times, with a passion for outward display and formality,

involving many symbolic elements in the external and internal features of the houses. This is not just evident in the architecture of Hamilton East or New Zealand but in all countries influenced by the colonial culture based on Victorian England. Cultural diffusion in housing styles can be illustrated by observation of old photographs and relict buildings or whole urban or suburban landscapes in countries separated by oceans. Equally, visits to Victorian suburbs in the English speaking countries illustrate the origins and results of cultural diffusion.

Housing style is explained by numerous interrelated contingencies. Hamilton East may not have contributed greatly to world trends but it has been as much part of international trends in popular housing as any town in the 'Western' world. 'Architecturally', the people of Hamilton East have been a part of the world community since the first European settlers arrived in 1864. They have been closely involved in world trends and events. These have included imperial expansion, land confiscation, colonisation, and the pioneering of new settlements. They explored capitalist and socialist ideals and experienced accelerating internationalism. Suffering in depressions and wars and affluent when New Zealand was prosperous, they shared with the rest of the 'Western' World in the popular versions of high style architecture. They occupied British rural cottages, Victorian villas, the American bungalow, the Spanish Mission style revived in California, and Moderne style houses originating in continental Europe. Today they recognise heritage protection and revival, and post Modernism as the latest fashion trends in housing. World wide communications were reasonable, but slow in 1864. Now they are so sophisticated that new trends can be introduced in Hamilton immediately they are exhibited in the centres of architectural innovation.

The houses built in Hamilton East are group solutions not individual solutions to the need for housing. All over the world,

individual owners rarely choose the styles of houses they occupy. The styles in popular architecture are predetermined by an intangible force known as fashion. That is why the basic house styles are the same all over New Zealand. Domestic architecture and the culture of the people who produce and reside in it are closely linked. The interpretation of house style may well be best achieved by the use of an historical perspective with emphasis on social change over time (King, 1984). The perceived ideal lifestyles of the people of any period contribute to the fashion in new housing. As the lives of the people change so do their houses (Lee, 1983). New houses represent and reflect the social pattern ideals fashionable at the time of construction. By observing the houses at the street level it is possible to recognise how the cultural phases in the development of landscape in Hamilton or other towns is imprinted in the morphology and styles of the houses, and in 'ideal' sections.

Hamilton East can be considered a pastiche or picture made up from various sources, a medley made of numerous determinatory and contributory components of varied provenance. Figure 2 summarises this pastiche in map form, in a combination of symbols of houses (coloured polygon) and property boundaries (black lines). This analogue is the culmination of the subjective process of classification. Maps in humanistic geography, however, do not lead to descriptions of form, but to interpretation, with a view to understanding (Ley, 1983). Figure 2 therefore functions as a means to an end, showing the sections occupied by period-styles of extant housing frozen in time, early 1989. This is overlain by the cadastral plan for February 1990, the boundaries of the subdivided sections. The map cannot be a conclusion, for there can be no conclusion for a dynamic entity. Drawn at a larger scale, this basic map could have further data added. Data is available for the date of first occupation of each house, the number of flats in each two storey block and how many houses exist on each crossleased property. Maps could be drawn to show former State houses now privately owned. The standard New Zealand

houses constructed in the Moderne style, or joined in pairs or rows, could be mapped. A map showing houses which are the second generation of dwellings on a section could be compiled. Such maps would all be classificatory and frozen in time, but would have a value as documents in future historical geography. However, the purpose of the production of the map (figure 2) is to classify the houses into manageable period-styles for the purposes of interpretation and explanation.

It is not possible to map the original houses constructed on the one acre sections as a result of the research completed. This would require more in-depth work on nineteenth century records. It would also involve grappling with the problems of continuous changes as new residents came and went, and houses were constructed, burnt down, demolished, or even collapsed through rot and borer attack, and were replaced or renovated. Only the forty or so houses shown in figure 5 are definitely known to be pre-1901. Figure 6 shows accurate locations of all extant villas, including those demolished since about 1970. A combination of the houses shown in figures 5 and 6 would allow an approximate reconstruction of houses in the settlement at the time of World War One. It is therefore possible to observe in the present landscape a fair proportion of early houses in relation to the property boundaries of the original township. The villas could thus be considered the original 'houses', as opposed to the original cottages, built when Hamilton East was part of a small town, 1900 to the first World War.

Just as houses have been subject to fashion so have sections. The present subdivision design is the accumulation of all the parcelling up of land since it was first freeholded for the militiamen, when they had completed their three year contracts. The nature of the subdivision is explained in terms of several interrelated contingencies, three of which were very significant. These are the size and the shape of the original allotments, and access requirements for motor vehicles. The size and shape of the

original allotments, has had both a constraining effect on future subdivision and also provided great opportunities which made subsequent infilling possible. National legislation had the effect of maintaining very high standards in the subdivision of land, but it has been highly standardised, concentrating on tidiness of design on paper, rather than innovation. The imperative of access by motor vehicle, particularly to the rear sections, was also facilitated by legislation. The fact that the law demanded an individual drive to every section created generous access which contributed to the extremely low density developments. Several adjacent drives provide wide strips of otherwise unused land between the houses located on front sections. It is one of the elements of the subdivision pattern which has now made possible the construction of several blocks of flats, or up to ten individual houses to the acre.

The subdivision design of any settlement is unique, but it shares many features in common with all other towns and cities. Hamilton East shares original one acre allotments with only Nelson, Wellington and the other Waikato military settlements. The original design of one acres inherited from the initial survey remains virtually intact. As with other towns, sections have got smaller with time, as development intensified. Now subdivision has virtually ceased in Hamilton East as a result of the use of the crosslease title. A new form of land title, known as the 'flathold' title, to replace the crosslease is in preparation (*New Zealand Herald*, 11 July, 1990). This will probably influence cadastral design in the 1990s and beyond, as well as the patterns of future infilling.

The relationship between the houses of different periods one to another is best observed in the landscape. It is not easy to photograph this relationship. In any period a new house could be built next door to a house from any earlier period. The result has been the "accidental juxtaposition of houses" (NZCIH, 1971, 109), which is common all over New Zealand, not just in places

where the original sections were of one acre. The relationships between buildings are considered to be so important to geographer Larry Ford (1984) that he considers himself an analyst of architectural juxtaposition. The random admixture of styles appears to be considered 'in order' in Hamilton East today. It contributes to Hamilton East's special character. This mixing of styles was not received positively by the NZCIH in 1971, nor by Murton in 1984 (119) when he discussed Gisborne's housing. They each claimed it was conflicting, inappropriate and gave the impression of chaos and confusion. However, the people who compiled the proposed district scheme review, considered that recent infilling has made a positive contribution to Hamilton, giving a pepper pot effect of different housing types scattered through a suburb. It has led to a "pattern of mixed architectural and housing development" (HCC, 1989, 27).

One of the problems of monitoring landscape change, as enunciated by Ford (1984), is clearly illustrated by the speed with which the maps (figures 1-17) have been rendered 'out of date', as land is cleared for new developments and new infill houses are built. This researcher has been closely involved in the subject, just as Ford (1984) suggested geographers should address architectural geography. For example the research revealed insights into urban conservation, and the preservation of historic buildings. This researcher became sensitised to the valuation of assemblages of houses considered suitable for designation as heritage protection zones, in the future. The diffusion of innovation from other countries was considered in detail. This study is evidence that "Geographers want to know exactly where things are and exactly why they are there" (Ford, 1984, 17). This geographer believes she now knows many of the whys and the wherefores of the features of the landscape of Hamilton East. The study has, however, been much deeper than "simple enumeration of styles" (Ford, 1984, 17), because the interpretations have such a wide relevance both in New Zealand and beyond. The choice of the concept of infilling as a theme on which to focus proved to be most rewarding. The

discovery of the work of European geographer Michael Conzen (1960) in Britain, gave the second research question considerable additional credibility because of the importance of Conzen's work in urban morphology.

This study successfully reveals some of the proposals for architectural geography made by Jon Goss (1988). The language of geography is used, but with the understanding of the language of architecture and building practice. The elucidation of the social meanings implicit in the housing is part of a broad focus, dealing with national and global issues relating to the case study. The interpretation results from empirical research and literature research across a number of countries. The maps reveal the significance that has been placed on spatial relationships. Lifestyles are discussed in relation to all the period-styles. The research reveals some conflict relating to housing styles, and infilling processes. For example criticism has arisen over the standardisation of housing after World War Two, the two storey flats period-style and some recent kitset housing. A concerted effort has also been made to read the cultural landscape of Hamilton East like a book, as proposed by Peirce Lewis (1975; 1979). The visual evidence was plentiful. The case study area has been treated as a human landscape and as a great document, spread across part of the city.

The two research questions selected were compelling and proved to be most worthy of study. The issue of housing styles has received little attention in New Zealand geography. The morphology of towns, road patterns, subdivision design, the juxtaposition of dwellings, meaning in the built environment and other issues raised here have received scant attention in this discipline in New Zealand. No reference to the social and physical processes of infilling in the New Zealand context has been located. These topics were therefore in urgent need of address by human geographers. This thesis perhaps breaks new ground in the discipline. The social and physical characteristics of Hamilton

East became very familiar to the researcher. This familiarity was essential in order to elucidate and address the research questions. The constant reflections on the fieldwork, and re-interpretations of the meanings implicit in the landscape continued even as the thesis was being written. This thesis is a statement of the researcher's understanding of the social construction of a landscape.

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PERSONAL COMMUNICATIONS

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- Booth, Mr. Gospel Hall, Cook Street, Hamilton East. Telephone conversations 19 and 20 July 1989.
- Cassidy, Mrs Bill. Former resident of Grey Street, Hamilton East. Park Terrace Hamilton. Telephone conversation July 1989.
- Crichton, Raewynne. Resident 66 Naylor Street, Hamilton East. Many conversations during 1989.
- Drury, Bernard. Eastside Real Estate. Telephone conversation 29 June 1990.
- Johnston, Phyllis. Resident 88 Cook Street, Hamilton East. Informal interviews and many conversations in the winter of 1989.
- Ley, David. Geographer at University of British Columbia, Vancouver. Seminar in the Department of Geography, University of Waikato, August 1988.
- McGall, Dave. Real Estate Agent, Ace Real Estate. Conversation November 1990.
- Martin, S. Senior Planner, Hamilton City Council. Mrs Martin read the section of Chapter Four entitled 'the flats', and gave useful advice, 8 November 1990.
- McGall, Dave. Real Estate Agent, Ace Real Estate. Conversation November 1990.
- McGall, D. Sales Consultant Ace Real Estate 1982 Limited. Conversation 19 November 1990.
- O'Sullivan, V. Waikato Area Health Board. Telephone conversation 25 October 1990.
- Paterson, Neil. Community Constable, 160 Grey Street, Hamilton East. Telephone conversation July 1989.
- Payne, Doug. Member of the Historic Places Trust of New Zealand. Conversation regarding the Methodist Church, Hamilton East. 1 October 1989.
- Reay, Merv. Royal New Zealand for the Blind. Several conversations 1989.
- Shirley, Nancy. Resident 251 Dey Street, Hamilton East. Many conversations 1989.

Smith, Helen. Trevellyn, 1340 Victoria Street, Hamilton. Former resident of Hamilton East. Conversation 26 July 1989.

Walsh, Kevin. Chief Surveyor, South Auckland Land District, Department of Survey and Land Information. Conversation 11 January 1989.

Watkins, Bill. Resident 68 Cook Street, Hamilton East. Telephone conversation 29 August 1989.

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