digging the dirt on density

a study of
medium density housing
in
Christchurch's Living Three zone

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abstract

Since the 1987 Brundtland Report, the development of urban areas has been considered a key determinant in achieving 'sustainability'. Greater residential density is increasingly advocated for and applied through policy statements around the world as a way of achieving this goal. Various tiers of New Zealand government are following international policy trends, developing programmes, protocols and strategies that promote sustainability and 'good' urban design practices through intensification, or concentration, within urban areas. Research shows that a policy framework of urban concentration, through greater residential density, is only successful where consumers and providers of housing support its practical application. Confrontation between policy and the market, and the acceptability of greater levels of residential density to residents, can jeopardise a policy's success.

This research uses a mix of survey and interview techniques to determine the acceptability of "medium density" developments to residents, and to understand the practises and motivations of housing developers in Christchurch's "Living 3" zone. This zone is predominantly sited between the central business district and low-density suburban areas, making it ideally located to facilitate policies of intensification. The principle purpose of the zone is the development of medium-density residential accommodation, however greater residential density is relatively new to Christchurch where the potential for expansion is seemingly unbounded.

The intention of this research is to assist the planning, production and performance of future developments. In conclusion, this thesis makes recommendations to improve the form and design of medium density residential developments in Christchurch's inner Living Three zone in terms of the market's producers and consumers.

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one

This Chapter introduces the research that is the subject of this thesis. It includes the scope of the topic and the aims of this research. The study area is presented and placed in context. The Chapter concludes with an outline of the form that this thesis will take.

introduction

The development of urban areas has become a key determinant in achieving aspects of 'sustainability'. Urban concentration and greater residential density are increasingly advocated for and applied through policy statements around the western world as a way of achieving sustainability goals. An 'urban design discourse' has appeared in policy documents around the world for achieving compact form or urban concentration.

A policy of urban concentration attempts to achieve urban sustainability, through 'good' urban design. This includes reduced travel distances to shops, services and employment, greater use of public transport options, pedestrian friendly streets resulting in increased street activity, greater levels of community feeling translating into safety, and high urban amenity and a valued public realm for quality of life.

Contemporary New Zealand urban policy embraces the concept of sustainability and the belief that greater urban concentration produces a desirable form to which city spaces should aspire. At a national level, the Government's Sustainable Development Programme features cities as a priority issue. The Ministry for the Environment declared 2005 the *Year of the Built Environment*, and recently released an Urban Design Protocol which, in part, addresses intensification of inner suburbs.

This thesis draws on the principles of urban design and key themes in debate around urban concentration, in a study of residential density in inner Christchurch. The research is timely in light of the Christchurch City Council's on-going support for urban concentration, and the recently launched Greater Christchurch Urban Development Strategy ('UDS'). This collaborative planning effort between local authorities in the greater Christchurch metropolitan

Figure 1 **Urban Development Strategy Option A Concentration**

The "concentration" option put forward by the GCUDS posed a new housing development focus on central Christchurch and inner suburbs of Riccarton, Spreydon, St Albans, Waltham and Linwood. Of a proposed 62,000 additional dwellings, 60% would be via the process of 'renewal' or redevelopment, and 40% by new subdivision or traditional infill. Multistorey townhouses, apartments and flats would replace villas and bungalows, and mixed development of commercial space on lower floors and residential on upper floors would occur.

source: GCUDS *Options*, 2005

area[1] received 63% public support for the 'concentration' development option (Figure 1). The next most popular option was that proposing a consolidated form, and the option proposing a dispersed form was the least favoured (see Appendix 1).

Studying urban concentration in a specific context is useful. The benefits of intensification are claimed at the strategic level, yet the impacts are often felt locally (Jenks, 2000). Applied in different contexts, policies manifest in different ways, and people and places respond positively and negatively to different extents (UFP, 2001; Jenks et al, 2000).

Christchurch is a useful location for this study. Historically, Christchurch has experienced much lower densities than other New Zealand cities (Table 1). A perceived abundance of flat land has enabled Christchurch's housing stock to nearly all conform to the New Zealand standard of a detached, single-family home on an individual, relatively large section, and at densities generally lower than in other New Zealand cities. Exurbanisation, the process

Table 1 **Comparative Density of New Zealand Cities**

Urban Land Use – 1990/1991		
Population per hectare		
Central	Inner	Outer [2]
Auckland 3.7	22.4	17.0
Wellington 7.3	26.9	22.1
Christchurch 4.1	21.1	14.1
translated from Newman and Kenworthy, 1999, and Laird et al, 2001		

whereby the outer commuter 'belt' grows at the expense of the inner urban core, is occurring in the greater Christchurch metropolitan area, where the city's two outlying districts[3] recorded

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[1] local authorities include the Christchurch City Council, Waimakariri Distict Council, Banks Peninsula District Council, Selwyn District Council, and Environment Canterbury (Regional Council), as well as key stakeholder Transit New Zealand.
[2] 'central' suburbs are within a short (walking) distance from the Central Business District; 'inner' suburbs are built to a large extent in the transit era prior to the Second World War; and 'outer' areas are defined as the remaining parts of the urban region outside the central and inner suburbs, and extending to the fringes of the built-up area, mostly built in the era of the automobile, after the Second World War.
[3] Selwyn district and Waimakariri district

the highest change in distribution of usually resident population in the decade to 2001 mostly due to net migration out of the city area (FPC, 2003). Like many international examples that perceive growth pressure and face sustainability concerns, the management of urban form is a significant issue for Christchurch City and new solutions are being sought to accommodate urban growth within existing city boundaries. Whatever policy is assumed will contribute significantly to Christchurch's future urban form.

This is an empirical study using an applied geographical approach. It is problem-orientated and, through the application of geographic knowledge and skills, seeks to resolve 'real-world' problems (Pacione, 1999). This thesis uses primary data collected from surveys and interviews conducted during the study period. However, it also draws on policy documents and academic text from a number of disciplines, highlighting the need to recognise and value the multi-disciplinary influences in urban policy.

aims of this research

"… households' requirements and the retention of a flexible housing stock is an issue which seems to have been largely overlooked in the debate over sustainable development … in its place, debates over 'compact' cities appear to view housing development as a mere space-packing exercise, in which the requirements of producers and consumers alike are largely absent." [4]

As a consequence of development pressures and controls around the city, Christchurch is going to face greater levels of residential intensification with housing to higher densities than previously experienced in the city. The outcome of a recent public consultation process concluded a policy of concentration was popular with the Christchurch public. However,

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[4] Hooper and Nicol, 1999, pg 805

there has been little research into the extent to which policies for urban concentration are consistent with the views of the market, and this research goes some way to filling that gap.

This research considers how a policy of urban concentration, and consequential impact on the residential environment, may best be achieved in Christchurch. It pays particular attention to the market producers, and the purchasers and residents as consumers of those higher density developments. Jenks et al (2000) argues that a policy framework focused on achieving urban intensification, or concentration, will only prove successful if consumers and providers of housing support its practical application. The acceptability of increasing residential density for residents is considered pivotal to the debate around urban concentration. Housing is directly related to quality of life, and without empirical evidence as to what is good practice from owners and tenants, developers may unwittingly be storing up problems for the future (Mulholland, 2003). The extensive provision of unfavourable developments may have negative long term effects on those forced to accept them.

This research has been undertaken in two parts. First, the study aims to test the acceptability and suitability of existing developments to current residents. The acceptability of urban residential intensification to residents is a much-neglected aspect of the debate (UFP, 2001; Breheny, 1997). A survey technique was used to identify the positives and negatives of housing that exists at greater residential density and increase the awareness of these for future developments. The second part of this research uses interview techniques to gain an understanding of the practises and motivations of housing developers. The success of policies of urban concentration depend on the extent to which they are consistent with the views of the market (Fulford, 1996). However, little attempt has been made in current debate around urban form to gauge the degree of likely practical confrontation between policy and the market (Breheny, 1996).

Material is drawn together to highlight the extent to which current consumption and production patterns fit with broader policy goals of sustainability. Williams et al (1996) believe it is crucial that those planning and developing urban areas are aware of the type of developments that are and would be popular with existing and prospective urban residents. In

bringing the results of these two parts together, this research will conclude as to how a policy of concentration can be best achieved in Christchurch, in terms of the residential environment's producers and consumers, and to assist the planning, production and performance of future developments.

study area

The study area for this research is described as the inner city Living Three ring (Figure 2). It includes that part of Christchurch's "Living 3" zone that forms a 'ring' around the "four avenues", within which is the business district and higher rise residential areas that make up the central city. While pockets of Living 3 zone exist in strategic sites, such as Sumner and New Brighton, and experimentally in areas such as the new Northwood subdivision, the majority of the zone forms the study area ring and takes in parts of Merivale, St Albans, Linwood, Richmond, Sydenham, Spreydon, Waltham, Addington and west of Hagley Park.

The principal purpose of Christchurch's Living 3 zone is to provide a space for the development of medium-density, permanent residential accommodation. There are no direct controls over population density, and development is regulated through rules addressing building bulk, height and site coverage. Unlike the central city "high rise areas, where buildings dominate over open space and plantings", in the medium density zone "there is to be a balance of built form, open space and plantings" (CCC, 2004, pp 11/5).

Redevelopment will place pressure on open space amenities. Christchurch has a distinct history for developing public open spaces. The city has had the title of 'garden city' since around 1906 (Wilson, 2005), and has won a number of international awards based on its Garden City image (Vallance et al, 2005), and this reputation forms a major part of its image creation (Perkins and Thorns, 2002). In contrast to the remainder of the city, Christchurch's older inner suburbs had little provision for open space. Many of the parks that do exist in and immediately around the inner Living 3 ring have been designated such after their original

role[5], serving to remedy some of the area's shortfall, but the inner areas remain less generously supplied with quality open space than other areas of Christchurch. This was highlighted by a 1993 *Parks Deficiency Study* that identified a lack of public open space generally in the inner suburbs, particularly in the eastern parts of the city (PCE, 1997).

The inner Living 3 ring has been experiencing degrees of housing intensification. Since the late 1980's, the process involved 'infill', typically effected through the placement of an additional dwelling on the back or front of an existing site, while leaving the original dwelling in place. This resulted in 'cramming' and, with the release of additional land on Christchurch's periphery in the mid 1990's, the process lost its appeal. The provision of medium density residential accommodation has increasingly been achieved through site redevelopment, involving entire sites being cleared (either an original house being demolished or removed) and new dwellings being built on bare land.

The inner city Living Three ring's location, between the central business district and low-density suburban areas, and alongside many commercial districts and retail centres, makes it ideally sited to facilitate a policy of urban concentration. However, it also comprises some of the city's oldest residential areas, some of which have been designated Special Amenity Areas. Intensification that has occurred has resulted in a jumbled, mismatch of residential form, with seemingly unplanned and uncontrolled infill or row-home style townhouses muddled amongst many of the city's original residential areas. This suggests a general lack of consideration to the public realm and production of a quality urban environment by a profit orientated private sector. It also implies a complacent general public and inattentive local authority.

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[5] Showgrounds (Sydenham Park), Shingle pit (Bradford Park) or private gardens, purchased (in the case of Abberley Park) or gifted (Opawa/Risingholme and Mona Vale)

Figure 2   **Study Area - Christchurch Inner City 'Living Three' ring**
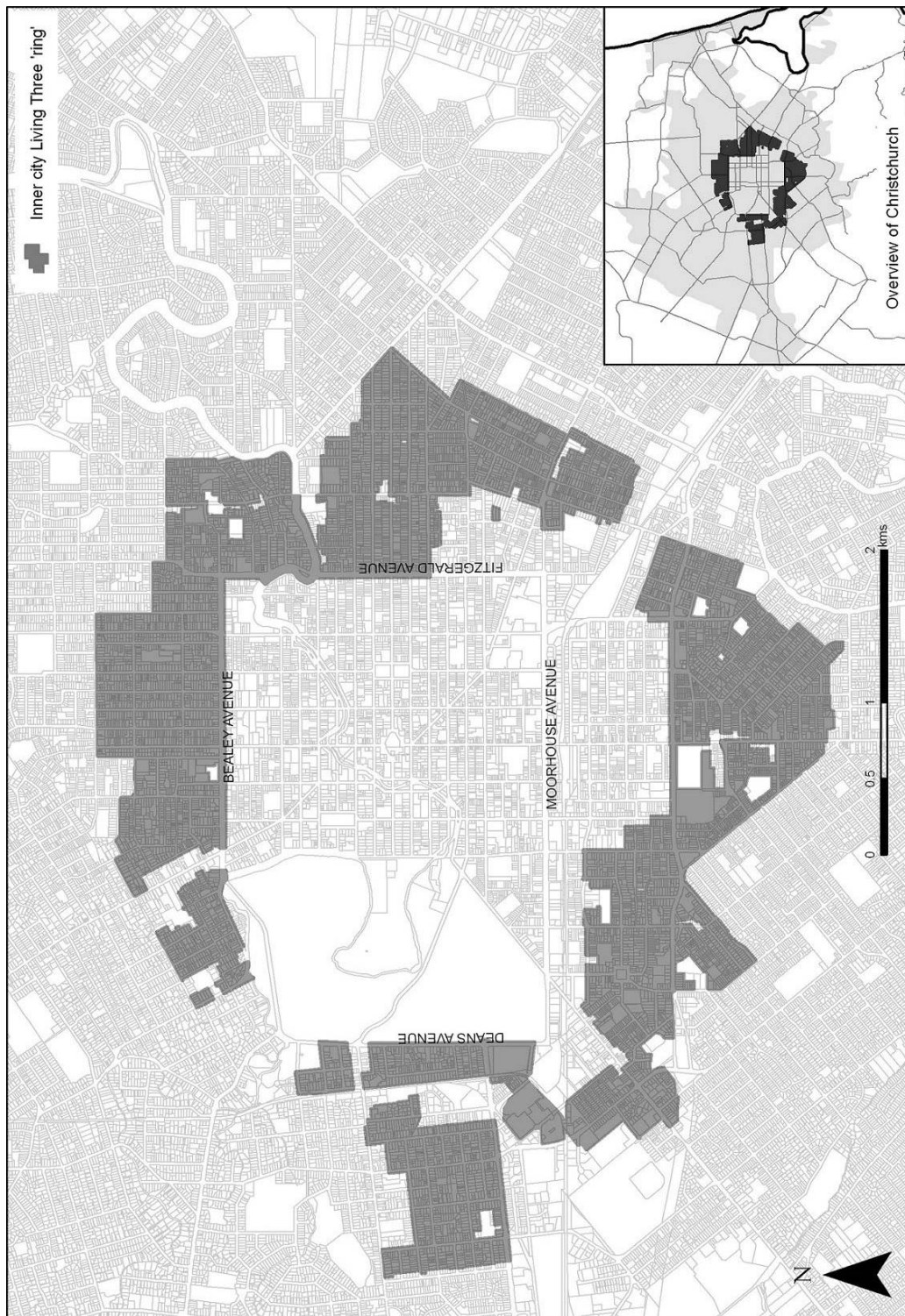
thesis outline

Beyond this introduction, Chapter two introduces the concept of sustainability and places this in the context of cities. Debate around urban form and urban concentration is presented, and examples given of international policies and strategies that seek to bring about urban concentration. The chapter then goes on to discuss the concept of density arising from production of a concentrated residential environment.

Chapter three presents urban design as the means of bringing about sustainable urban form, and discusses relevant themes from the literature.

Chapter four focuses the sustainability debate on the New Zealand context. The rise of an urban design discourse and attention to density is discussed in respect of specific urban centres.

Chapter five describes the methods used in this research.

Chapter six presents qualitative and quantitative results, and a discussion of the findings in light of the literature and broader debates.

This thesis concludes with Chapter seven which draws from the findings recommendations as to how the form and design of medium density residential development can best be achieved in Christchurch.

two

Any contemporary discussion about urban form must commence within a framework of 'sustainability'. This concept is central to debates about the various forms urban environments may take. It has become the language of policy and its guiding principals the driver of practice. This chapter introduces the concept of sustainability and the importance of cities in achieving this goal. The centrality of sustainability is evidenced in the context of the ongoing debate about the virtues and outcomes of a concentrated, or compact, urban model and residential form.

sustainability
and the case of cities

"If sustainable development does not start in the cities, it simply will not go. Cities have to lead the way."[6]

The sustainability agenda arose out of a global awareness that the consumption of natural resources was occurring at a rate greater than the natural environment could support. The *Our Common Future/Brundtland Report* (1987) cautioned as to the preservation of resources. This warning gave rise to the concept of 'sustainable development', whereby economic growth, as a priority for human welfare, was balanced with concerns for social equity and environmental protection (Humphrey et al, 2002; Pacione, 2001).

Achieving sustainability became a balancing act. It was first conceived with the "triple bottom line" (environmental, social or economic components) being interlinked, but only

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[6] Maurice Strong, chair of the Rio Summit, 1992 (quoted in Hargreaves and Davies, 2003)

sharing some common ground (Figure 3).   This model assumed that the parts could be substituted for each other, and that improvement in one area would compensate for degradation in another (PCE, 2002). The popularity of this model has waned. Attempts to produce balance resulted in dispute as to what should be developed, what should be sustained and whose needs should be promoted (Humphrey et al, 2002). It is also now argued that this model failed to acknowledge the ecological constraints that human society, and its necessary economic activity, must operate within. As a consequence, this model is referred to as *weak sustainability* (PCE, 2002).

A new decision-making model requires ecological thinking to be integrated into all social and economic planning (Figure 4). This model is referred to as *strong sustainability*. It recognises that economy activity only exists in the context of human society, and that together these two components are constrained by, and must not exceed, the capacity of the natural system to provide for and absorb the effects of human activities (PCE, 2002).   Sustainability and 'sustainable development' have become synonymous (Humphrey et al, 2002), and the concept of sustainable development has become enshrined in political philosophy (Adams and Watkins, 2002).

Figure 3 **'Weak Sustainability' model**   Figure 4 **'Strong Sustainability' model**

source: PCE (2002)
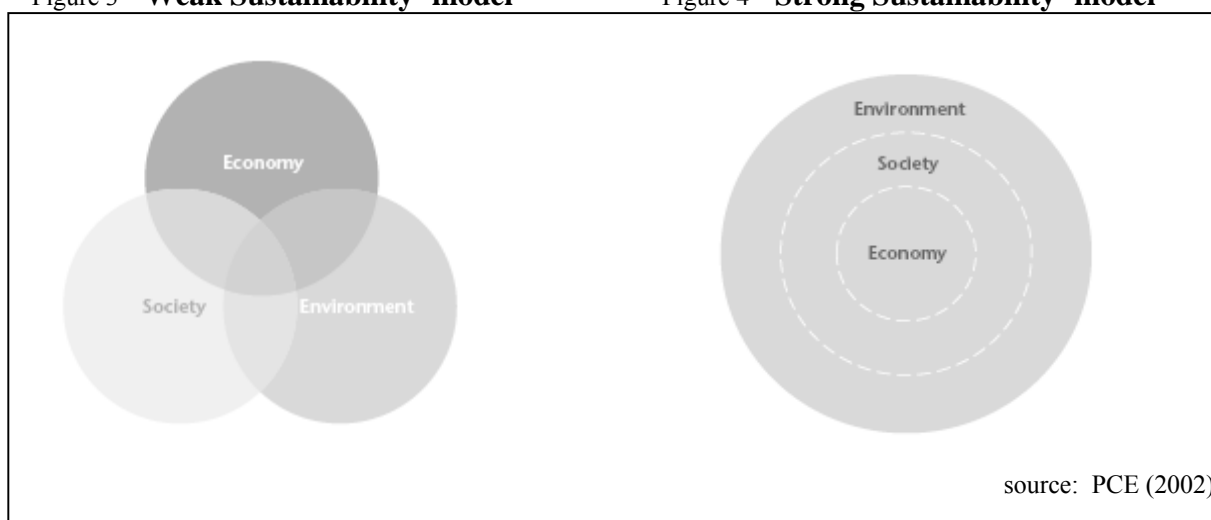
Urban systems have become key components in the sustainability debate.   Urban systems represent a complex mix of social, cultural, economic and environmental systems within

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which individuals, households, organisations, institutions, infrastructure and governance agencies interact. Cities represent the leading centres of wealth creation, as well as heritage, culture and identity. They also produce an unprecedented 'footprint' through consumption of raw materials and energy, and the production of waste (Hargreaves and Davies, 2003). Impact is felt in terms of energy consumption, air quality, water supply, production of waste, loss of land and levels of biodiversity, livability, human amenity and health. As a result, the concept of 'sustainable development', as it relates to urban systems, has become a fundamental principle of planning and management (de Roo and Miller, 2000).

Specific concern has been directed towards urban systems in light of predictions about population growth in urban centres. The world's urban population was estimated at three billion in 2003, accounting for 48 per cent of the world's population (UN, 2005). The United Nations predicts that, by 2007, urban populations will, for the first time in world history, exceed rural populations. One half of these populations will be living in urban settlements with fewer than 500,000 inhabitants (UN, 2005). Population predictions prompt the argument that our quality of life, and legacy to future generations, depends on the success of the sustainable development of cities and settlements.

Global declarations about sustainable development in cities have resulted in the development of guiding principles. 'Agenda 21' is a political agenda for changing the way urban areas are shaped, managed and monitored (Lunday, 2003; Adams and Watkins, 2002). Emphasis is placed on managing urban change to improve our quality of life in terms livability, where 'livability' involves health, employment, income, education, housing, leisure, accessibility, urban design quality and community (Hargreaves and Davies, 2003; Newman and Kenworthy, 1999). A principal component of Agenda 21 is the need for a new approach to the processes by which sustainability is achieved, including interagency collaboration that addresses social and ecological change, greater community participation and consultation.

urban form

Current urban form and the spatial distribution of populations does not reconcile with the environmental, economic and social goals of sustainability. Low density suburbia was constructed for the newly formed post-war families, who envisaged 'the good life' in the countryside with full-sized homes and gardens. It represented a freedom for those no longer obliged to integrate their domestic lives with others on a shared plot, in a shared building and on shared transport (Riddell, 2004). Instead, people were able to possess a freehold plot, a free-standing house and to have the discretionary use of a free-to-go-anywhere automobile (Riddell, 2004). The subsequent exodus has continued with the better off and highly mobile perceiving a better quality of life in areas beyond the suburban fringe, but within commuting distance from the city (Crookston et al, 1996). This process of exurbanisation has become the fastest-growing territorial change to North American and Australasian landscapes (Riddell, 2004). These low-density developments, facilitated by private motor vehicles, are affecting quality of life and the sustainability of human settlements. Of principal concern is the use of productive, peripheral urban land in creating sprawling suburbia. This urban form also necessitates extensive provision of infrastructure such as drainage, sewerage and water. It results in transport patterns that are highly consumptive of non-renewal resources. High volumes of traffic generate negative externalities, such as noise, odour and vibrations, as well as air pollution. It is considered that breakdowns in social life result from suburban isolation. Inner cities deteriorate, and access to services and facilities become difficult.

debating concentrated urban form

There has been a shift in contemporary debates about urban form. Significant to this shift was the 'compact city' focus of a European Commission *Green Paper on the Urban Environment* in 1990 (Frey, 1999). The Commission's report presented compact form as "high density", mixed use urban areas, which mirrors that of many European towns and cities (Williams, 1999). This paper was significant in advocating the inclusion of more residential development at greater densities in inner cities (Bunker et al, 2005; de Roo & Miller, 2002) and linking environmental sustainability with the quality of urban life.

The compact city debate works from the premise that new urban growth must be accommodated within an existing city boundary. The process results in more concentrated development as well as activity intensification, through which areas become either physically more built up or more intensively used (Jenks, 2000; Williams, 1999). The process involves the redevelopment of residential areas to higher densities, the infilling of backland and gardens, extensions to existing buildings and use of brownfield or 'leapfrogged' sites with greater emphasis on townhouses, apartments and terrace homes (Williams, 1996).

It is hoped that the concentration of urban development may come some way to meeting sustainability goals by delivering savings on land. Studies have found that concentration

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[7] sourced from Built Environment, v.22(4)

policies have successfully directed development to unused 'brownfield'[8] sites (Williams, 2000). However, Adams and Watkins (2002) insist it is a gross over-simplification to suggest that brownfield development is necessarily always sustainable. For example, 'compaction' places open space within the urban area under pressure from development. This may result in an ironic loss of greenery, open urban space and biodiversity within an urban boundary (Vallance et al, 2005).

There are perceived advantages for energy efficiency from transport. Higher densities, and resulting population intensification, attract public amenities to relocate within easy transport distance (MfE, 2005). Ideally this would reduce the need to own, or at least principally use a private motorcar, with the added advantage of contributing to a reduction in air emissions. This also facilitates 'soft mode' transport options, such as walking and cycling. However, it cannot be taken for granted that people living at greater concentration will embrace the idea of travelling by public transport or on foot (Churchman, 1999 citing Goodchild, 1994; Williams, 1996). The realisation of this goal depends on residents' attitudes and behaviour, as well as the provision of what is perceived to be a convenient, cheap and efficient alternative.

Energy efficiency may also be achieved in terms of home heating. Building design, particularly where dwellings are attached, can aid in the reduction of heat loss. This could result in power savings to the economic benefit of consumers. However, this argument is thwarted by Frey (1999, citing Breheny, 1992), who suggests that energy solutions, such as solar power, are reliant on detached housing at lower densities to be most optimal.

Advocates of the compact urban form claim economic benefits through infrastructural savings. Greenfield developments require substantial investment in roading and utilities such as electricity, water, gas, and telecommunications. It is thought infrastructural costs would be lowered as proximity of dwellings reduces the distances networks and systems would necessarily take (MfE, 2005). The anticipation of reductions in infrastructural spending was a

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[8] "Brownfield" refers to land within an urban area on which development has previously taken place, such as through industrial activity, and/or has been abandoned.

primary motivation behind the introduction of intensification policies in Australia (Newman, 1992). The counter-argument to this relates to the costs involved in upgrading existing infrastructure to cope with greater usage, or that there is an optimal density and costs increase as a result of demand generated by very high densities (MfE, 2005). Further, additional resources will need to be made available for street cleaning and the management and maintenance of urban space, as well as possible assistance with sound proofing (Williams, 1999).

There may be benefits to business. This arises from concentrating knowledge and innovative activity, and creating the opportunity for people to exchange ideas (MFE, 2005; Williams, 1999). Other economic gains may be achieved when intensity of development brings people closer to their workplace, reducing commuting time (MFE, 2005). However, Breheny (1997) observes that, in many cases, business or industry has already relocated outwards in pursuit of the working population and, if it proved necessary, it may be difficult to attract employment back to areas that may already have been abandoned. The complication of this issue is highlighted by Williams (1999) who comments that there is no proven link between high densities and economic benefits, and questions the ability to ever unravel the relationship between economic performance and urban form.

Social sustainability may be realised in terms of community. MfE (2005) cites findings from the United Kingdom and the United States that density contributes to the informal vitality of streets, and generates greater interconnectedness between neighbours. Vitality is achieved when streets are reclaimed from traffic, and take on the role of meeting places and public open spaces for social interaction. It also occurs when buildings have 'public fronts' which encourage activity and create safer urban environments. The connectedness and social cohesion that proximity may create must be balanced against people perceiving a loss of privacy or suffering negative feelings associated with overcrowding (Williams, 1999). Closeness in a physical setting does not necessarily generate participation, shared meaning or strong and lasting bonds. That it takes more than physical form to bring people together is evident in numerous failed public housing estates where residents are paralysed by depression, isolation, crime and fear.

There are obstacles to the adoption of compaction policy. Burton (2002) considers there is an absence of recognised indicators for monitoring and measuring a policy's effectiveness. Alternatively, single issue research, and particularly the dominance of transport concerns, has not provided sufficient scope to determine if a compact form equally sustains all issues (Williams, 1999). A better understanding of impacts would guide policy and enable monitoring of progress for use in planning, and Bunker et al (2002) cites research showing growing political and academic criticism that urban concentration is not achieving its aims. These criticisms focus on how the concentration policy is applied as a remedy for urban problems, ignoring wider social, economic and environmental costs associated with it. Accordingly, Williams (1999) questions the ability of policies to work within existing land use planning systems, or with a focus on land-use planning alone.

Consideration must be given to the goal of an urban concentration policy. Policy that seeks to increase the desirability for redevelopment and infill development relative to ex-urban greenfield development is problematic (Dawkins and Nelson, 2002). Dawkins and Nelson, (2002) argue that shortage of supply drives prices up, but does not necessarily result in housing producers responding by increasing the density of development. Rather, developers will continue to provide what and where they consider the market demands are, and transfer the costs of production on to the consumer. If the production of density is not economical from a developer's perspective, nor popular in terms of demand, overall development levels may reduce. Equally, increasing the number of dwellings per hectare does not always lead to an increase in the number of people per hectare.

Finally, there are social considerations. The compact city form may contradict people's fondness for and predisposition to suburban or semi-rural living (Frey, 1999 citing Breheny, 1992). Unlike many European populations, who seem happy to know that the countryside is out there if they want to use it, Crookston et al (1996) questions if the residents of many historically spread out cities will readily give up their rural dream and embrace intensification policies. Williams et al (1996 citing Minnery, 1992) state that if the current urban form creates difficulties, some problems are likely to be exacerbated if the form is made more

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dense. There are deeply engrained habits and behaviours, which have produced urban environments characterised by traffic congestion and poor environmental quality. Successful urban concentration would involve a major shift in cultural values.

There is extensive academic debate as to the workability of a concentrated urban form and the debate is clearly indecisive. The 'compact city' concept is grounded in a tradition of urban form that arose from a need for protection or fortification, and a lack of transport technology that resulted in most trips being made on foot. Pacione (2001) considers Europe has always been progressive with urban form, embarking on comprehensively planned cities with high-rise, high-density designs, and using advanced concepts in roading and building materials in the early 1900's, until it necessarily undertook massive reconstruction of housing and basic infrastructure during the post World War II period. It is to this very distinct, contextual history that cities around the western world now attempt to play catch-up by the injection of compact city principles.

achieving
urban concentration

Urban planning will have a significant role in achieving urban concentration. Pacione (2001) suggests urban planning presupposes government intervention, but the extent of this involvement has varied from place to place. The role, or lack, of urban planning has been influential in bringing about urban form. In the United Kingdom, urban planning has involved extensive government intervention, existing within a framework of national policy and delivered through local authorities. However, much of this appears to be reactive, rather than proactive. Problems arising from rapid industralisation lead to a Public Health Act being passed in 1875 and concern about urban sprawl resulted in the Town and Country Planning Act (1947). A 1970's social welfare phase set about to address a 'culture of poverty', and following the withdrawal of State support and New Labour policies in the 1980's significant attention has been directed to the actions of the private sector (Pacione, 2001). Where planning has not been effected, the goals of private interests have dominated. Early planning

practices in the United States arose from a perceived need for regulation of the capitalist economy, however private enterprise proved strong and planners merely followed the ambitions of developers (Pacione, 2001). Zoning, as a form of control, only became widespread after a Supreme Court decision in 1926 permitted municipality action. In the United States urban planning remains discretionary. There is no nationally set framework, and objectives are defined and applied within a fragmented local government structure.

There are numerous examples of policies and strategies in place to bring about concentrated urban form. In the United Kingdom, the Government set up the Urban Task Force in 1998 specifically to provide guidance on how to re-use urban land in preference to the development of greenfield sites. As a result, Planning Policy Guidance Note 3 (2000) aims to widen housing opportunity and choice in terms of size, type and location of housing, giving priority to re-using previously-developed land within urban areas, bringing empty homes back into use and converting existing buildings. This policy, which advocates compact city objectives, meets a nationally set target of providing 60% of additional housing on previously-developed land and through conversions of existing buildings by 2008. Through urban residential design, the policy aims to promote the creation of attractive, high-quality living environments that give prioirty to people, facilitate more walking and cycling, and improve public transport links between housing, jobs, local services and local amenity. This policy gives a housing focus to otherwise environmentally driven intensification policies (Williams, 2000).

In Australia, a prime-ministerially appointed Urban Design Task Force prepared *Urban Design in Australia* (1994), which has continued to feed into national State of the Environment reports[9]. Urban consolidation has been a major objective for over 20 years (Searle, 2003), and regional policies are in effect. A New South Wales State Planning Policy (SEPP65) was developed, following a forum of developers, government representatives, architects and other industry professionals, to improve the design quality of apartments and

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[9] see Australia State of the Environment report at http://www.deh.gov.au/soe/2001/settlements/index.html

flats constructed to a size of three storeys/four dwellings or more[10]. Committed to providing housing choice for seniors and people with disabilities, the New South Wales Government also has a Seniors Living Policy[11] designed to address housing choice and safeguard the character of neighbourhoods by providing urban design guidelines for infill development. Sydney's metropolitan strategy aims to establish an estimated 60-70% of all new dwellings over the next 30 years within existing suburbs through higher density development, making the assumption that these areas have the capacity to accommodate the predicted 300,000 plus new dwellings (Searle, 2003). Melbourne has used a Melbourne 2030 urban growth boundary to introduce a range of policy directions to provide for a more compact city, minimise growth on the fringe and protect highly valued farming, conservation and recreation areas, since 2002[12].

Concerns about sprawling urban form in the United States has promoted 'New Urbanism'[13] and 'Smart Growth'[14]. These movements promote policies that integrate transportation and land use decisions by encouraging more compact, mixed-use development within existing urban areas, and to create more attractive, efficient and livable communities. The use of urban containment policy in the United States has been the exception rather than the rule, and the promotion of strategies has increased in recent years to encourage more orderly, predictable and efficient urban growth. Greenbelts, created by permanently protecting open space or working land, or as a consequence of topographical features, have been tried in Boulder, Colorado. However, Pendall et al (2002) has questioned their effectiveness when they generate satellite cities. Urban growth boundaries aim to constrain geographical expansion through regulatory techniques such as zoning. This strategy is not widely used as land-use controls. Urban growth boundaries are highly controversial, particularly in the face of ex-urban lifestyle pressures, which require the downsizing and rezoning of rural land. Nevertheless, in Portland, a city held up as a model, this measure has been positively applied.

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[10] see NSW Department of Planning at http://www.planning.nsw.gov.au/programservices/flatdesign.asp)
[11] see State Environmental Planning Policy (Seniors Living) 2004 at www.dipnr.nsw.govt.au
[12] see Victoria Department of Sustainability and Environment at ttp://www.dse.vic.gov.au/melbourne2030online/
[13] see Congress of New Urbanism at http://www.cnu.org
[14] see Smart Growth at http://www.smartgrowth.org

Other strategies include urban service areas which address low-density, leapfrog development by requiring new development to be installed and connected to the existing infrastructure of a 'host' community before development can commence. Pendall et al (2002) observe that this strategy does not necessarily impose an outer limit but has served to increase densities. A variant 'tier system' assesses areas for new growth and where development should be avoided by looking at existing infrastructure capacity, current levels of development and the viability of rural resources.

acceptability of the concentrated residential environment

> *"The success of medium density housing is crucial ... and could represent the most significant form of urban change since the large-scale suburbanisation of the immediate post-war period".*[15]

Residential density is both a method of achieving concentrated urban form and an outcome of policies applied. Residential buildings occupy more land than any other single urban land use but the density of these areas has varied over time and space. For example, Newman and Kenworthy (1999) consider that newer cities invariably have lower densities than much older cities, and that United States and Australian cities have significantly lower densities than those of Europe, with Canadian cities sited between the two. Also, density varies between parts of cities, with areas immediately outside the central core experiencing greater density levels than the central city and outer suburbs (Table 2).

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[15] Dupuis and Dixon, 2002, pg 425-426

Table 2 **Comparative Density of International Cities**

	Intensity of Urban Land Use – 1990/1991 Population per hectare		
	Central	Inner	Outer
Sydney	20.8	39.2	15.3
Melbourne	27.1	27.2	14.4
Australia average	**14.0**	**21.7**	**11.6**
Portland	34.0	23.7	9.9
Houston	17.9	18.4	8.8
Chicago	30.3	47.3	11.4
US average	**50.0**	**35.6**	**11.8**
Vancouver	25.6	41.5	17.4
Montreal	51.5	64.1	28.5
Canadian average	**37.9**	**43.6**	**25.9**
Zurich	37.3	73.5	36.1
Amsterdam	93.2	89.3	29.7
London	63.0	78.1	33.2
European average	**77.5**	**86.9**	**39.3**
Singapore	82.8	124.2	80.5
Hong Kong	113.8	803.9	258.0
Asian average	**216.8**	**291.2**	**133.3**
	translated from Newman and Kenworthy, 1999, and Laird et al, 2001[16]		

Density is expressed in different terms. Measurement can be expressed as the number of dwellings or habitable rooms per unit of land, or as activity or numbers of people per unit of land. Further, the concept and scale of 'density' has no universal or standard applications and there are no hard and fast rules for establishing 'ideal' density levels (MfE, 2005; Turner et al, 2004). The policy in the United Kingdom states that low density of development should be avoided and that densities between 30 and 50 dwellings per hectare (dph) may be appropriate. Alternatively, an optimum form, such as three to four storeys, that maximizes density, energy efficiency and capacity to change over time may be suggested (CABE, 2005). In New

[16] 'central' suburbs are within a short (walking) distance from the Central Business District; 'inner' suburbs are built to a large extent in the transit era prior to the Second World War; and 'outer' areas are defined as the remaining parts of the urban region outside the central and inner suburbs, and extending to the fringes of the built-up area, mostly built in the era of the automobile, after the Second World War.

Zealand, Turner et al (2004) suggest the common definition of medium density housing, used by the majority of City Council's and Housing New Zealand Corporation, is housing at densities of more than 150m2/unit and less than 350m2/unit, or 30-66 dwellings per hectare (dph).

Equally, there is a difference between quantitative figures and how crowded a place feels. Rapoport (1997) argues density is a perceived experience and suggests that density, as a number of people per area unit, is not very helpful as the experience of density goes beyond ratios. Similarly, Burton (2002) notes studies that have shown residents' perceptions of density do not relate to empirical calculations.

Studies have examined when and how the process of urban intensification is acceptable to users of the built environment. Jenks (2000) found there is a limit to the acceptance of intensification. Development at greater density can significantly change the physical appearance of an area, and the existing character and quality of an area is highly significant to how intensification is received. Opinions on intensification are a reflection of how the process changes the assets that people value in their neighbourhood (Williams, 2000). The existing resident population may feel threatened or perceives a risk to the quality of their environment in terms of quietness, character and open space. If people value vibrancy and liveliness in their local areas, then intensification may benefit them. However, if they place greater worth on the quiet character of an area, they may be less likely to happily receive intensification (Williams, 2000). Further, there may be social limits to density after which people act to preserve their personal space and privacy, either by withdrawing from others or trying to limit interaction (MfE, 2005).

Environmental characteristics of the area will contribute greatly to how smoothly the impacts are absorbed. Densities are generally perceived as low if they include open spaces, low height to space ratios, low artificial light levels, low traffic levels, private gardens and entrances, the absence of non-residential uses nearby and social homogeneity (Goodchild, 1985). As a consequence, inner urban, run-down areas may be more likely to positively receive intensification, particularly if it serves to improve general image and appearance, increase

confidence, and attract new business and investment (Jenks, 2000). Smith et al (1998) suggests there are other factors which, when combined with high density, will cause a negative impact on the quality of life of a settlement. For example, higher density fails when planning enables it to be poorly located and badly constructed (MfE, 2005). Layout and design of buildings and spaces can have a significant impact on perceptions of density. The spatial layout must facilitate the movement of people to generate a sense that the space is well used and not suffer from increased traffic and reduced open space and amenity.

Acceptance is affected by people's perceptions. This is often dependent on an individual's background and cultural experience (Burton, 2002). Culture leads to different perceptions of density, and crowding is interpreted against personally understood norms and standards (Rapoport, 1977). To some groups, intensification or density is synonymous with low standards of living. People may feel threatened if activity intensification appears to bring newcomers perceived to not hold the same social values. While studies have shown that density per se is not unpopular (Frey, 1999), levels of acceptability may be higher if well-designed, predominantly residential forms of intensification occur over time and at a scale in keeping with the local context (Jenks, 2000). Healey (1997) considers that characterising public opinion is difficult as ideas of place are complicated by the diversity of perceptions. Nevertheless, it is crucial that proposed forms of development are agreeable to the urban population, and Williams et al (1996) emphasises the importance of gaining insight into the perceptions and opinions of local residents.

In New Zealand, the experience of concentrated residential environments is relatively new. Given the apparent cultural preference for suburban living, acceptability of greater density will be very important. New Zealand studies have found varying degrees of acceptability of medium density housing (also see *Chapter Four)*. In their study of Wellington, Morrison and McMurray (1999) found inner city apartments a natural extension of an existing demand for residence close to the city. However, in Christchurch Vallance et al (2005) found those living at higher density were more inclined to see it in positive terms, where those living in lower density, or who felt higher density had been 'imposed' on them and in their area, were more likely to see higher in negative terms. Similarly, in Auckland Hitchcock (2002) found a lack

of appreciation from the general public of the benefits of medium density housing, however suggested greater understanding was enhanced with education, and reduced opposition became apparent with experience. Of housing density generally, Breheny (1997) suggests that the issue of acceptability is the very much neglected, yet may be the point upon which the issue of compaction turns. For a policy of urban concentration to be successful in New Zealand cities, it must offer this housing form in an environment that is not merely considered the poor cousin of the outer suburbs. The following chapter, which addresses urban design principals, presents key themes from the debate as to how this concentrated environment can best be produced.

three

To bring about a concentrated, or compact, urban model, the attention of policy and practise has turned to the value of urban design. This chapter draws a number of themes from the literature on concentrated urban form and urban design. Arguments are presented as a means of assessing the effectiveness of urban design.

concentration by design

Design has become central to attempts to transplant the features of compact cities into existing urban centres. The biggest question in applying a policy of concentration to existing urban areas is how that urban form can be replanned and redesigned to be more readily and easily sustained (Frey, 1999). It is envisaged that policies based around urban design principles will produce high-quality urban environments, considered vital as, "unless cities are perceived as high quality environments there is little chance they will ever be sustainable" (Jenks et al, 2000, pg 18). At its most broad, it is considered that "good urban design could confer social and environmental value and provide long-term economic spin-offs in the wider economy" (CABE, 2001, pg 74). Urban design refers to structure and design, the connections between people and places, public and private space, the natural and built environment, movement and

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form, and between the social and economic purposes for which urban space is used (MfE, 2005). Urban design is thought sympathetic to geography and history as strategies can compliment local climate, topography, heritage, and building practice (Hebbert, 2003).

The urban design discourse has captured the attention of policy makers around the western world. The language of urban design appeals because of its holistic treatment of the urban environment, and it has increasingly become the language of urban strategies and related policy documents. The language is simple and accessible, expressed in common sense terms, 'sense of place', 'public spaces', 'creation of identity', 'public realm', that do not require 'expert' or insider knowledge, giving it an immediate advantage over more elitist or exclusive disciplines (Franklin, 2001).

Urban design is not a set, defined field. It emerged as a 'new urban' thinking and practice in the 1960's when the legacies of modernist planning and architecture were perceived to have failed the urban environment (Thompson-Fawcett, 2003; MfE, 2005). Land-use and building design roles, respectively assumed by planners and architects, did not account for holistic urban design (Frey, 1999). Urban design represents the post-modern shift away from anonymous settings lacking visual interest, segregation and single use zones (UP since 1945; MfE, 2005), to cities as places of consumption and the aestheticisation of space (Costello, 2005 citing Zukin, 1998). It emphasizes holism and interconnectedness, the linking of buildings to streets, cars sharing roads with pedestrians, the celebration of difference and diversity, alternative value systems and views of what is quality of life. It can shape the physical environment sufficiently to enable people to fulfil their wants and requirements (Frey, 1999).

The practice remains relatively unclaimed by any one group. As a consequence, it is thought able to bring together an array of professionals and practitioners from numerous disciplines, such as architecture, engineering, planning, landscape architecture, economics and surveying (MfE, 2005). However, it is not a paradigm shift but a hybrid discourse, drawing on aspects of sustainability, and adding sufficient of its own to make it new. In its infancy, there is a risk that it will become loosely applied, as 'experts' from a wide spectrum work to determine

urban design criteria. Research is problematic due to the difficultly of quantifying its value, particularly in changing contexts, and the difficulty of methodologies and analysis (Carmona et al, 2002). These 'difficulties' may prove sufficient for collaborative input to translate, not into shared responsibility but, 'outs' in terms of construction, monitoring, maintenance, and accountable (Frey, 1999).

The value of urban design is not without critics. Skeptical of the language, critics question what, if any, value or benefit is gained through urban design. Franklin (2001) notes the difficulty of describing and defining what is 'good' design due to subjective appreciation and interpretation. The rise of its popular discourse is a concern when some commentators consider the 'discipline' no more than a recent invention intended to mediate between the responsibilities of planners and architects (Frey, 1999), and questions what challenges may occur if it was claimed as the domain of more established disciplines (Franklin, 2001; Frey, 1999). Urban design is concerned with physical elements and spatial relationships, and there is a risk that this focus on tangible characteristics discounts people, social behaviour and meanings attached to place (MfE, 2005). Noting the significance of language within social relations and identity construction, Franklin (2001) observes how certain versions of reality are favoured over others. This leads critics to argue that design strategies can become elitist and superficial, focusing on re-imaging 'prestige' sites at the expense of areas of greater socio-economic need (Biddulph and Punter, 1999). Alternatively, when strategies are not supported with the necessary budget or resources, they unjustly raise the hopes and expectations of local people. Smith et al (1998) argue, to create a sustainable city, there must be a true commitment to the fundamental principles of compact urban design. It is vital that design involves the networking of public spaces, rather than isolated cosmetic treatments of existing streets and spaces (Frey, 1999). There is the risk that a new focus of urban livability through urban design which, in part, seems to be about 'sexying' places up for the purposes of attracting visitors, may create a superficial urban environment, glossy on the surface, but without a substance that is worth anything to the local citizens.

themes

location

The literature on compact cities and urban design refers to the importance of location. The inner city is promoted as a 'lifestyle' choice, and has become the new playground of the wealthy (Costello, 2005). In a United Kingdom study, Allen and Blandy (2004) found this inner city location most desirable amongst people seeking a city centre 'experience'. Any perceived inconvenience or undesirability of central city living was thought unlikely to undermine demand from the predominantly young, single, and particularly professional, population who desired the fashionable location and 24 hour convenience of the central city. However, Allen and Blandy (2004) argue that this 'experience' is short-term and eventually people seek to realise their long-term, cultural preference for suburban living. Equally, in their Wellington study, Morrison and McMurray (1999) found little expectation of permanence amongst inner city apartment occupants who appeared transitory and prepared for change.

transport

Housing at greater density is envisaged to mitigate the use of private motor vehicles. This will be achieved if, as a result of population density increasing, business relocates to be closer to the working population. Shopping malls have become suburban sites of leisure and entertainment, and shopping is a key contemporary urban activity (Thorns, 2002). Williams (2000) found that intensification had contributed to better access to facilities and services providing everyday needs, but had not improved access to specialised jobs or retail, cultural or leisure facilities. The expectation of 'everything-on-your-doorstep' must be realised by inner city dwellers, or many may continue to pursue shopping and services opportunities in the suburbs (Allen and Blandy, 2004).

Research does not necessarily reconcile with the desired impact of urban concentration on transport and access. Williams (2000) found no change in traffic volumes, and UFP (2001) described residents of dwellings at greater density as overwhelmingly car owners. Williams et al, (1996) suggests that even if public transport was cheap and efficient, for many people it would still not be perceived as efficient enough to be a substitute for the private car. UFP (2001) suggest this is too simple a cause-and-effect relationship and fails to take into account the complex variables that determine levels of car ownership and patterns of usage. UFP (2001) also argues that car usage was more dependent on income or simply the inability to afford to own and run a vehicle, rather that on dwelling type or location. Further, people are unlikely to change their behaviour, as a consequence of being made to feel guilty about owning and using private cars, or environmental concerns (Crookston et al, 2005), so policies of urban concentration must seek to have a direct impact on travel behaviour.

privacy

Compact urban form raises issues of privacy that design in residential development seeks to address. Privacy is a highly valued (Vallance et al, 2005), and achieving acceptable standards of privacy is a key issue in the design of socially successfully housing at higher density (Turner et al, 2004). Rapoport (1977) found that even in a culture with a strong preference for low density, the more densely settled area may be evaluated as less dense, and more desirable, if the layout minimizes interaction. This is also the case with achieving internal privacy. The provision of space and necessary levels of interaction can determine the degree to which internal privacy can be achieved. Mulholland (2003) found issues related to room size not being big enough and design not allowing any opportunity to separate adult from child space. Density between units is also a major issue. In their assessment of medium density developments in Auckland, Turner et al (2004) found design resulted in privacy between units being minimal, due to the possible overlooking from first floors. Mulholland (2003) also found overlooking into 'private' and communal outdoor spaces resulted in residents wanting head height screening.

community

A concentrated urban form is thought to have positive implications for social cohesion and community development. Where higher density development brings people into close proximity, this is considered to facilitate social relations similar to how rural communities form as a consequence of geographic association. However, studies have found that higher density residential environments differ from the archetypal community in that they often accommodate homogeneous groups. Bunker et al (2005) considers one explanation for this is the concentrated provision of housing for smaller households, which results in a degree of social segregation by housing type or income group. Smith et al (1998) suggests segregation by income group results in frequent shifts in household due to career progression or increases in income. The mobility disrupts community and, urban populations exhibiting high rates of mobility, prevent people from getting to know each other, or staying long enough to become known (Bounds, 2004; Thorns, 2002). Alternatively, people can hold a conceptual disconnection or association with areas other than their actual neighbourhood (Allen and Blandy, 2004).

A lack of understanding or awareness can be detrimental to creating community. Respondents in the research of Vallance et al (2005) had feelings of 'otherness' towards occupants of infill, and Williams et al (1996) reported that 'new types' were considered to not create new communities or merge with existing ones. This is concerning in light of Rapoport's (1977) suggestion that being with 'others' results in isolation and a lack of interaction. Marcus and Sarkissian (1986) believed that the more residents in a development perceived a likeness or similarity with others the higher the level of satisfaction with other residents and the development overall.

security

Living at greater density in an inner city may create more opportunities for anonymity and intruders being less obvious. Urban design seeks to overcome these issues by facilitating

activity, and opportunities for observation and surveillance. Design is important, and Cozens et al (2001) cites the 'defensible space' theory of Newman (1973) to suggest that design can hinder or assist in a perpetrators selection of site and criminal act. However, in many cases, defensive styles have been used, resulting in properties being further cut off from the street and wider area (Adams and Watkins, 2002), or fortified with limited restricted rights of entry. This is in contrast to the argument of design proponents that dwellings with street frontages are desirable in higher density design (see *Chapter Four)*. Beer et al (2003) also suggests it is important that space be formed in a way that avoids uncertainty amongst users over rights to 'control' and access space. However, rather than being contrary to ideals of the safe, suburban setting, Turner et al (2004) suggests there is little evidence in support of the idea that housing at greater density *per se* is less safe or more susceptible to crime than other housing types.

form and quality

The application of urban density principles in higher density residential developments can take a number of forms. However, the extent of these reflects the market. Gibson et al (1996) found that developers felt limited in their ability to impose principles of urban design on developments due to the constraining preferences of investors. Equally, investors did not place pressure on developers for urban design as they felt constrained by the demands of tenants. Carmona et al (2002) found developers, motivated by marketability and profitability, were concerned with how urban design added to this. Investors, seeking profit over time, were interested in urban design's ability to reduce running costs and enhance value over time. Urban design mattered to occupiers to the extent that it produced flexibility, security and image (Carmona et al, 2002). However, consideration of urban design was not considered to play as significant a part in housing decisions of property renters as value for money and affordability (Gibson et al, 1996). House purchasers are conservative, which Ball (1999) considers deters developers from being innovative with housing form. In contrast, given their focus on profit, Turner et al (2004) suggests that it is developers who are cautious, preferring a tried and trusted model before a more innovative, but potentially risky, one.

The result may be the standardization of housing forms. These can be limiting in the marketplace. Dixon and Dupuis (2003) found the type of medium density housing constructed suggested considerable homogeneity of external appearance and internal construction which did not provide for a wide range of family types. However, for developers, standardised forms are popular for a number of reasons (Adams and Watkins, 2002). Savings could be achieved through accuracy of pricing, purchase of bulk materials, blanket building applications, repetitive construction that can be achieved by a lower skilled workforce, and reduced marketplace risk when relying on designs that have sold in the past (Adams and Watkins, 2002; Ball, 1999). Economic pressures to standardize must be balanced against economic pressures for diversity in terms of market demand (Hooper and Nicol, 1999). Some argue the market increasingly places emphasis on individualistic aspects of design and that developers try to differentiate their work, rather than be associated with 'run-of-the-mill' products, by offering innovative, dynamic designs (Hooper and Nicol, 1999). Adams and Watkins (2002) consider that increasing levels of affluence, and the social and economic diversity of potential urban purchasers/occupiers, make it unlikely all purchasers will be satisfied with a narrow, inflexible product range. However, this may be overcome by using a limited number of designs with individuality achieved through interior finishing and external detail. In this way the industry is able to undertake incremental refinements rather than radical overhaul.

Housing quality is also a significant issue. What is produced today should constitute the housing stock for many decades. While housing will not always prove adaptable to changing lifestyles, poor design and construction creates a burden for the immediate user and a problem for future generations (Goodchild, 1997, citing Malpass and Murie, 1982). The standard must maintain durability, popularity and suitability (Goodchild, 1997).

Housing quality impacts on different groups. Allen and Blandy (2004) found people who had the means and resources did not have to compromise to avoid situations of poor quality. Where possible, consumers rejected developments low in quality, taste and style. However, those with limited resources did not have the same opportunity to avoid substandard products. From an investment perspective, high standards offer good quality accommodation that attracts and keeps tenants. However, at the other extreme, declining housing quality was

unlikely to deter young renters (Allen and Blandy, 2004). Imrie (2000) suggests discussion around quality is inattentive to the needs of disabled persons, of concern when it is argued that most people are disabled to some degree at some point in their lives (Goodchild, 1997).

Research has shown the negative effects of poor quality housing at greater density. Vallence et al (2005) described residents' concern as to the visual impact of some developments on their neighbourhood and the belief that many infill developments were substandard in terms of materials and design. These beliefs manifested into concerns that properties would not prove durable, but rapidly deteriorate to become "cheap rental hovels" (pg 727). Dupuis and Dixon (2002) also found residents felt the construction of low-cost and poor quality "matchbox housing", and little maintenance could result in slum generation. A poor quality residential environment may impact on residents' community spirit and neighbourhood pride, effecting the degree to which properties are respected and cared for (Gibson et al, 1996).

Quality extends into aspects of livability. Consumer choice is a very important feature in construction and impacts on how developers operate with regard to quality (Costello, 2005). However the pursuit of profit may lead to disproportionate attention to finishing and inappropriate internal design for the needs of user households (Adams and Watkins, 2002; Hooper and Nicol, 1999 citing Ball, 1983). In the United Kingdom, the focus on production of small dwellings has produced an inflexible residential environment incapable of coping with the increasing desire for home-based work or the varied demands of an adult dominated households (Goodchild, 1997).

tenure

It is a principal goal of urban concentration policy that greater housing choice be supplied to meet changing demand (UFP, 2001). However, research shows that the demand inner city apartments are filling is not that of owner-occupiers, but property investors which, in turn, meets demand for inner city rental accommodation. In the United Kingdom, rising property prices and a growing demand for rental properties by young people seeking a city centre 'experience' resulted in such an expansion in the investors' market that developers were able to

raise the price and reduce the size of new apartments (Allen and Blandy, 2004). In Sydney, Bunker et al (2005) also found that the market for attached dwellings was predominantly an investment market, with marketing heavily targeting investors willing to purchase directly off plans. An apartment rental market provides for single person, highly mobile households, plus those on lower incomes and immigrants (UFP, 2001). Costello (2005) found the Melbourne inner city apartments were also directed towards investors seeking to benefit from an overseas student market. Investors are not always resident close to their investment. In New Zealand, the Auckland apartment market is providing opportunities for Australian investors seeking to avoid Australia's steep capital gains tax and stamp duty charges[18]. Conversely, in Wellington Morrison and McMurray (1999) found the primary purchasers of inner city apartments tended to be long term residents of the inner city rather than suburban dwellers making a move to the inner city.

affordability

Concentration is premised on the need for more 'affordable' housing. This will be achieved where housing supply is mixed, providing diversity in choice and a better social mix, rather than major concentrations of developments at either end of the market (UFP, 2001). However, UFP (2001) warns that this assumption may fail when the production of new stock removes older, more rundown housing stock existing at lower densities, that supplies the affordable housing particularly to families in need, for whom the newer, more dense stock, is often unsuitable. This suggestion is supported by Ancell (2004) who, in her study of Christchurch, found low income groups were being priced out of the market.

Land price affects affordability. Developers relate land price to the subsequent need to optimize density, which is a major constraint on design (Hooper and Nicol (1999). The costs of inner urban development may be higher than greenfield development. Production is more complicated if sites are physically constrained (Crookston et al, 1996). In terms of brownfield

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[18] "Rooms with an overcast view", New Zealand Herald, 1 October 2005

development, Williams et al (1999) also notes the hinderance of stigmatized areas and the costs of carrying out wider environmental improvements in low amenity areas.

context

Urban design literature places significant emphasis on maintaining an area's context and physical character. Intensification can take a number of different forms and there is repeated understanding that new development at greater density should, as much as possible, be designed in recognition of an area and in sympathy with existing structures (UDP, 2005; Australia Property Council, 2005; Burton, 2002). MfE (2005) suggest that designing in sympathy with local character may facilitate the introduction of dwellings that could otherwise be resisted by existing communities. There are increasingly non-local forces shaping cities that may not know the specific characteristics of the cities in which they are at work (Frey, 1999). Form, quality and appearance of developments are vital (Jenks, 2000). New housing is most acceptable when it acknowledges local building traditions, reflects local character and resembles versions of homes found throughout the community (MfE, 2005 citing Danielsen and Lang, 1998). In the United Kingdom, policies have been critised for prescribing intensification without attention to difference (Williams, 1999 citing Minnery, 1992).

The competitive nature of the free market may drive producers to assume a product-orientated focus. Market conditions differ and development companies must be encouraged to not simply apply and reapply what has been tried elsewhere, risking the essence of place. These lessons have been learnt in Auckland where residents have expressed dissatisfaction in the urban amenity of their development (Dupuis and Dixon, 2002). Residents called for control of design, with less uniformity and standardization. Vallance et al (2005) also found negative sentiments towards building styles, where respondents found neighbourhoods "less ordered, less stable and … less understandable", describing a 'mish mash' of housing types that compromised the legibility of the area (pg 725).

greenspace

Greenspaces become vital as density increases. Concentrated development results in significant site coverage, reductions in private space, smaller or no garden space, and a loss of on-site trees and shrubs (Williams, 2000). Research has found people prefer spacious living and are anxious about the loss of public, or what they considered 'living' space (UFP, 2001; Breheny, 1997). If there must be some trade-off between density and the number of trees, gardens and open green space (MfE, 2005), the provision of greenspace must be made to sufficient levels to compensate for this loss within the private realm. Increased parks and reserves need to be allowed for, or streets used in a way that improves the amount of open space available to people, where the cost of obtaining sites for parks and reserves is prohibitive. It is important that provision of greenspace keeps pace with population growth, or growth of the built environment. It is not clear how much green space needs to be conserved inside the city, as too much open space can lower densities, and increase infrastructure and maintenance costs (MfE, 2005). However, population density necessitates good access to parks and urban green space (CABE, 2005b) and the planning of these spaces must consider the user groups and the role of any space, and its continuation for future generations.

Design and appearance of green space are important issues. Landscaping and planting must be given priority by developers at the very initial stages of design (Williams, 2000), as well as by urban managers in terms of on-going maintenance (CABE, 2005a). This is in contrast to unwelcoming, unkempt or dangerous spaces that people do not want to spend time in (CABE, 2005a). To overcome the expense of green space provision and preservation, Beer et al (2003) suggests construction could be charged to the developers and maintenance to the residence, or reserve contributions used in the area they were collected and a rates allocation from the areas used in maintenance.

design guides

Design guides are used at a local level to bring about design in context. Understanding local differences and responding with consideration to design principles in the specific context in which they are being applied is a key issue (MFE, 2005; Jenks, 2000). Frey (1999) argues that design guides, based on the city's particular history, culture, location and topography, are necessary in order to safeguard the city's identity. PCE (1997) agrees, suggesting guidelines could assist in preventing situations of incompatible styles and designs. The form or style of a development should enhance the character and identity of place, and new developments should attempt to find balance with traditional housing forms and street patterns (Burton, 2002). While focus on the physical exterior of buildings is important, design controls should not be dominated by external appearance. Rather they should be more thoughtful of the 'overall' effect of residential development in a broader, more holistic context (Hooper and Nicol, 1999 citing Punter and Carmona, 1997).

Policy direction for design is legitimated to some extent by the arguments that the private realm bounds public streets and spaces. This gives way to design rules and standards for those aspects of the private realm that form the public realm (Frey, 1999). Non-regulatory guidelines, with no specific powers, can only be influential (Biddulph and Punter, 1999). However, there must be balance. Controls must be sufficient to prevent formless, ugly buildings and a chaotic form (Frey, 1999), but not deterministic or prescriptive, suppressing flair and expression.

Design controls are often resisted for being difficult to work with and inhibiting creativity. Developers have argued that design controls can be overly subjective and may stifle architectural expression, that they give undue power to bureaucrats who have no aesthetic training, and that there is a risk that the uncritical application of guidelines may create clichéd environments, rarely stopping bad conventional building but often stopping good, unconventional building (Biddulph and Punter, 1999). In the New Zealand context, Dixon and Dupuis (2003) believe there is increasing recognition from developers and stakeholders that clear guidance is needed.

the industry

The private property industry can be highly influential in the development of an urban environment. Residential housing makes up the vast majority of an urban environment, and private sector developers make significant contributions to the form housing takes. The New Zealand development industry operates within a 'free market', confined by the scope of the Resource Management Act. Rather than take on many major role in providing or producing housing, the State assumes more to encourage developers to take responsibility for urban sustainability and make a commitment to the principles of urban design in the production of the residential environment (UDP, 2005).

There is much emphasis placed on the rewards that good urban design will bring developers. MfE (2005) suggests good urban design offers competitive advantage by raising projects above the general market, to the advantage of developers in terms of trademark value and market status. Similarly, Carmona (2002) predicts benefits will accrue to developers over time through reputation, consumer confidence, and the potential to work in collaboration with other stakeholders. However, studies have found overall value to be unclear, as returns vary contextually and relative to local market conditions (MfE, 2005).

Equally, arguments seek to assure developers that consideration of urban design is not costly. CABE (2001) argues that good urban design does not necessarily raise design or development costs. The Ministry for the Environment even goes so far as to insists that 'good urban design' can be profitable (MfE, 2005). However, Adams and Watkins (2002, citing Barrett, 1978) suggest development feasibility involves finding land at the right price, securing planning consents, and marketing an attractive completed product to pull customers in. It is problematic for developers if they cannot judge the addition of urban design principals with financial return or compliance costs. As a consequence, CABE (2001) warns the private sector alone cannot be left to provide the full range of social impacts that good design is perceived to deliver as it will tend to under-provide the benefits of urban design.

constraints and incentives

Constraints are factors that prevent development, limit the type of development or add excessive costs to development. Land is very important. It is an essential raw material in property development and constitutes a significant capital cost. Accordingly, it needs to be secured well before construction is due to start (Adams and Watkins, 2002). There is debate as to the effects of urban concentration policies in terms of land value. Breheny (1997) suggests such policies are contrary to free market ideologies in that they limit the availability of land.

Carparking is a significant issue in inner city residential areas. Density of the built environment implies relatively limited parking provision (MfE, 2005), and increasing the density of residential developments necessitates the lowering of within-plot parking requirements. Car parking requirements reduce site dwelling yield and add significant development cost (ARGF, 1998). There is a strong desire amongst residents of higher density residential development for secure, on-site car parking arrangements (Goodchild, 1997), and car storage detached from the dwelling is regarded by both developers and occupiers as a less convenient and secure arrangement (Turner et al, 2004). Reliance on private motorvehicles is high, and Goodchild (1997) found demand for on-site carparking related to the number of adults in a property and their income levels, rather than to the number of households.

Time and the potential for delays are significant factors in the consideration of urban design issues. Gibson et al (1996) found that pressures of time resulted in consideration of urban design issues being squeezed out. Smith et al (1998) suggest private sector developers are motivated by the rapid circulation of capital and want to produce what is demanded as quickly as possible to maximize the market. Consequently, MfE (2005) conclude developers will only contribute to the principles of good urban design if it does not jeapodise their profit margins.

Other constraints related to lenders who translated the addition of complex design features into higher project risk and higher lending rates. Reserve contributions were the most significant

constraint, which developers felt prevented affordable housing and did not necessarily result in more reserves (ARGF, 1998).

Incentives could be put in place to overcome barriers that developers perceive. Since the withdrawal of the public sector, the private sector is increasingly relied upon to provide the residential environment but provision of affordable housing requires both incentive as well as support. Crookston et al (1996) suggests there is the need to 'nudge' the market towards inner city production. This could involve better-organised and more predictable Council process, tighter controls on Greenfield development, and tax breaks for developments in targeted areas. Alternatively, schemes could be put in place to ensure the end-user receives the benefit, such as support for mortgages or shared-ownership arrangements. Williams (1999) notes developers in the United Kingdom favour tax breaks to encourage development on smaller or very large sites, and other schemes such as 'greenfield tax' on new developments. Developers in an Auckland based study recommended special zoning or incentives for creating affordable housing, and the deferring of rates during construction or the first six months of occupancy to help the creation of affordable housing (ARGF, 1998).

strategies

The underlying sustainability rhetoric in urban design discourse emphasises that attention should be paid to producing urban environments that can be sustained over a long period (Gibson et al, 1996). This presents the possibility that decisions made by urban managers and actors take too short term a view. Strategies can be positive, providing a clear vision and reassurance for providers as to the long tem planning of a locality, including upgrading of infrastructure and the public realm. Where it is extremely difficult for areas in decline to attract development, and it is equally hard for growth areas to resist development on the grounds of its cumulative effects, strategies can attract higher levels of investment in less prosperous areas, and 'cramming' controls, can redress the balance (Williams et al, 1996).

The production of sustainable residential development is not merely a matter of design and location, but requires effective institutional mechanisms and policies to bring about a much

higher quality of development (Adams and Watkins, 2002). Gibson et al (1996) suggests that if urban managers, such as Council representatives', wish to increase the degree to which developers apply urban design principals, they should consider making these factors part of the planning permission process.

Another vital component to design strategies is that they be communicated to the public. Without an understanding of the aims of intensification, it is unlikely that urban dwellers will accept the compromises they are sometimes being asked to make. If processes are seen to be unjust then it is likely that outcomes will remain unacceptable (Williams et al, 1996). There must also be sufficient information as to the management and implementation of the process (Jenks, 2000). This has proved problematic in the United Kingdom, where policies have been crised for prescribing intensification with no definition of what the processes may entail, (Williams, 1999 citing Minnery, 1992). Similarly, Turner et al (2004) concluded that planning strategies to consolidate urban growth in New Zealand presupposed a higher density housing form but did so without a clear definition or preferred model.

collaboration

"… developers complain about planners like farmers complain about the weather…"[19]

New integrated decision-making ideals call for collaboration between Council and property developers to ensure successful urban design outcomes. This is particularly necessary as developers may determine the quality of the urban environment but the public sector controls the space (Biddulph and Punter, 1999). Franklin (2001) suggests policy makers are using language to impose certain constructions of housing quality and 'good' housing design developers of housing. Ball (1999) accepts this, suggesting that the state has more reason to intervene in housing-building than any other industry. However, a certain amount of co-

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[19] Adams and Watkins, 2002 citing Wellings, 2000; pg 134

operation from the development industry is necessary as the success of policies depends on the extent to which they are consistent with the views of the market (Fulford, 1996).

In urban design, neither the public nor the private sectors can claim a monopoly, as local and central government agencies, property developers and investors, community groups and the public all stake a claim. Consequently it is the perfect field to achieve integrated, collaborative planning considered vital to achieving sustainability (PCE, 1997). The interests and views of these groups do not necessarily reconcile, and PCE (1997) suggests a proactive approach at the early stages of proposal and design development to prevent significant financial outlay on designs not compatible with local plans or strategies.

four

This chapter uses New Zealand, and examples from various urban centres, to provide an overview of how the sustainability agenda and urban design principles are applied in a specific context. Over the past two centuries New Zealand has been influenced by practices from abroad. On a relatively small scale, and within a unique geographical context, New Zealand continues to apply contemporary international approaches in the practice of making a compact urban residential environment.

urban sustainability
in new zealand

New Zealand's major urban centres have grown relatively fast. In a little more than a century, New Zealand has moved from being a predominately rural, natural resource-based nation, to become highly urbanized, with 85% of the population now living in towns and cities (Hargreaves and Davies, 2003; Eley, 2003). Urban centres formed around distinct geographies and alongside population and environmental pressures[20]. However with what Eley (2003) describes as an overall casual attitude to growth, with a prevailing public opinion that there is always more land, New Zealander's love of the private motor vehicles, the apparent luxury of space and the 'kiwi dream' of owning a home on a ¼ acre section made a significant contribution to the New Zealand urban form since the post-1950's.

Urban form in New Zealand has also developed in an increasingly disrupted regulatory climate. Early urban form was initially managed or controlled through the Town Planning Act 1926. This legislation regulated land use through zoning practices designed to provide

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[20] Wellington occupies the floor of a natural amphitheatre, Auckland has never experienced a population decrease and Christchurch is bounded by significant and naturally valued landscapes, artesian water recharge zones for high class fertile soils.

certainty for landowners and developers (MacLaren, 2003 citing Memon, 1991). It was not until a 1977 review of the Act that Councils were required to take account of end users. However, a very conservative approach was taken in implementing this legislation (MacLaren, 2003 citing Memon, 1991) and subsequently, the protecting and advancing of community values. New Zealand's later shift to a neo-liberal market orientated economy from 1984, under which it was determined that the economy was the most efficient mechanism for allocating scare resources, the State's role became one of minimum intervention (MacLaren, 2003). This shift resulted in the repeal of the Town and Country Planning Act and introduction of the Resource Management Act 1991 (RMA).

New Zealand's Resource Management Act 1991 (since amended) also represented a response to the global sustainability debate. Its overriding objective is the sustainable management of resources (MacLaren, 2003). After decades of regulatory planning through the Town and Country Planning Act, the Resource Management Act represented a legislative 'about-face' in the control of the use of land. Calling for a 'hands off' approach, and placing less emphasis on intervention and the prescription of activities, the Act was strongly influenced by environmental concerns and focused on the management of environmental effects in a principally 'enabling' way. The RMA made no specific reference to the urban environment, which was necessarily dealt with indirectly. The Act provided no means of control over urban growth other than indirectly through the provision of infrastructure, which would facilitate the timing and location of growth (PCE, 1997).

Commentators are not convinced that the Resource Management Act has worked to the best advantage of the built environment. Enacted in a period of neo-liberal reform, the legislation embodied the ideological principles of the free market, resulting in a disproportionate favouring of automotive modes of travel and poor quality residential infill (Eley, 2003). Dupuis and Dixon (2002) believe there is an increasing call by users and providers for more intervention to address issues of inadequate urban design and the poor quality of residential developments. This has resulted in a shift towards more holistic planning that takes account of economic, environmental and social concerns. Miller (2003) describes this as a lurch towards

sustainable development, and warns problems with the RMA will continue if attempts to relate the new agenda to existing legislation are not made.

Only in 2001 did the New Zealand Government announce its intention to produce a national strategy on sustainable development, propelling the urban environment and its form onto political agendas. Mirroring international attention, significant emphasis was placed on urban design. The Government's Sustainable Development Programme for Action, launched in 2002, features cities as a priority issue in response to Agenda 21. The Ministry's 2002 report, *People, Places and Spaces* provided a broad overview of urban design processes and principles for councils, developers and professional groups involved in the planning and management of urban areas. The Ministry's designation of 2005 as the Year of the Built Environment was to encourage the recognition of the built environment's impact on quality of life. During that timeframe the Government's aim was to raise awareness of how the built environment could be designed to create more liveable, vibrant and healthy environments to ensure a sustainable future (MfE, 2005). An Urbanism Downunder conference, hosted in 2005, brought together international and local experts from a number of disciplines to present Australasian focused case studies on urban design solutions and best practice[21].

urban design

Urban design was definitively launched onto the New Zealand setting with the 2005 Urban Design Protocol. Principles of sustainability underscore the Protocol with statements that quality urban design would meet the needs and aspirations of people both now and in the future, meet economic goals by making places successful and enhancing competitiveness of place, and address social equity by providing opportunities for all. This focus was reinforced by "The Value of Urban Design: the economic, environmental and social benefits of urban design" produced subsequent to the Protocol. This document examined international

[21] see Urbanism Downunder 2005 at www.wellington.govt.nz/services/ urban/downunder/downunder.html

experiences and documented benefits and costs associated with urban design, to assess what value it could offer New Zealand towns and cities.

At a local level, urban design concerns about local context and character have resulted in Council specific non-statutory design guidelines. The Auckland City Council's *Residential Design Guide* (2001) was a response to community concerns that intensification would lead to a loss of neighbourhood amenity. The North Shore City Council's *Good Solution Guide for Intensive Residential Development* (2001) aimed at quality designs that complemented the areas unique and natural environment. Christchurch City Council's *New Housing in Living 3 Zones* design guide sought to provide a checklist for landowners, designers and developers proposing new housing in the medium-density zone (Reeves, 1999).

Density guides for medium density residential developments put out by various Councils and Housing New Zealand Corporation, give a very clear indication of what physical attributes dwellings should have to constitute 'good' design. A review of design guides and reports provides an understanding of what aspects are considered most desirable (Table 3). They place a lot of emphasis on the physical exterior of developments, but do not mention the provision of housing in relation to transport facilities, shops, services or open space.

Table 3 **- Physical dwelling attributes that constitute 'good' design**

- garages that do not dominate the visual impact of dwellings
- high quality landscape planting
- broken building mass, or repetition, with diversity of materials and features
- a relationship between indoor and outdoor space.
- front doors that offer street frontages
- fences and walls not stark or bare, particularly when buildings face onto them
- outdoor design that has not presupposed 'low maintenance' to mean full paving, and a recognition that compact areas can be green
- an absence of featureless spaces
- houses fronting the street
- parking areas created so as not to reduce the attractiveness of sites or create a barrier to the street
- balconies of sufficient size, with canopies for weather and use of partitions for privacy

source: NSCC, 2001; Reeves, 1999; ACC, 2001; Turner, 2005

It will be a challenge to distinguish between 'good' and 'bad' design. MFE (2005) concluded that good design offers as many benefits as poor design does not, but does not make it clear who is to make the distinction. Within a discipline that aims to embrace the knowledge and opinions of a range of practitioners such as architects, engineers, planners, landscape architects, as well as local and central government agencies, property developers and investors, academics, community groups and the public, it is difficult to see how ideas will be reconciled to assess the merits of urban design activity. This is further complicated by warnings about applying international conclusions drawn from large and dense cities to the New Zealand context and conditions. However, cities do not lend themselves to prescriptive solutions and, with very little commonality, strategies should not be indiscriminately transplanted from one centre to another.

changing trends
and housing choice

The concentration of the residential environment is partly premised on the demographic shift in many urban centres to 'smaller' (1-2 person) households. Over the last 15 years, household composition has changed. Household sizes have become smaller with couple-only families and increases in one-person, and particularly single female households[22] due to a growing ageing population and rising divorce rates (BigCities, 2005). However, UFP (2001) suggest this, as a rationale for building 1-2 bedroom units, may somewhat oversimplify the market. Housing is driven by a number of factors beyond demographic and household change. Cultural shifts in taste, style and lifestyle, and market trends all contribute to housing demand, and must be accounted for in terms of supply.

The New Zealand Quality of Life reports conclude that while the proportion of new apartments, relative to all new dwellings, varies greatly between cities, there has been a

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[22] Women comprise 6 out of every 10 one-person households.

significant emergence of higher density housing developments[23] over the last decade (BigCities, 2005). In the decade to 2001, the number of inner-city apartments nationally more than tripled from 2532 to 8607. This marks a reversal of a declining trend that began in the 1920s (Morrison and McMurray, 1999). Inner-city apartments accommodate a number of submarkets. New inner city dwellers tend to be young, and 65% have never been married. This group typically do not have children, are highly educated and have 'white-collar' professional jobs. City centres are also the domain of over-50's and "empty nesters"[24], as well as immigrant and student populations.

Changes in the housing market are also signalled by trends in housing affordability. Private homeownership has been the dominant tenure for decades (Ancell, 2004). However, a Centre for Housing Research report recently released and reviewed by the Christchurch Press[25], reported that while the 'kiwi dream' of owning a home had not diminished, people's ability to achieve this goal has. This was particular the case for young people and low-income earners. The report suggested the biggest hurdles were rapidly rising house prices, the inability to save a deposit and household debt. As a result, home ownership rates were being redistributed away from younger to older households.

current urban form

Housing provision reflects changes in demographic make-up and household composition, as the market attempts to recognise new lifestyles. People are trying new patterns of living and, thinking in different ways with regard to their living arrangements, seek smaller, easier to keep homes. Changing lifestyles, leisure needs and demand has encouraged the development of smaller, different types of housing in new locations. Patterns of consumption mean people

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[23] Higher density housing developments include apartment blocks (high density, high rise developments), terraced housing (low rise apartments of up to four or five levels), and townhouses (medium density on cross-leased or subdivided sections, either on the same property as already existing older houses or in blocks where older dwellings have been demolished)
[24] "Empty-nesters" - people whose children have moved away.
[25] "$50b of new homes 'needed in 10 years'", Christchurch Press, 6 October 2005

desire to live in inner cities close to shops and entertainment, and near services and work locations, and high transport costs have people seeking alternative ways of getting to work. Younger homebuyers and renters are seeking a new 'dream', different from previous generations, defined in urban rather than suburban terms (Heath, 2000 citing Smith, 1996).

The provision of medium density housing also represents an attempt on the part of urban policy makers to recognise changing social values and needs by providing for diversity and choice of housing form (Dixon and Dupuis, 2003). Local authorities respond to the central government's agenda, bringing about planning changes in an attempt to curb urban sprawl by limiting greenfield housing development. The demand for inner-city apartments has been responded to by local authorities keen to see a rejuvenation in demand for downtown services, as well as developers seeking to broaden their residential portfolios and small-time investors looking for regular income and capital gains (Morrison and McMurray, 1999). However, the previous lack of clear, national vision or direction with which local authorities could guide and co-ordinate efforts, has left many regions now playing 'catchup', or again seeking solutions where past efforts have failed. The four centres discussed below vary in terms of historical and geographical context, size and rate of growth. Nevertheless, each is using greater residential density, to different degrees, as a means of addressing local concerns, and with various degrees of success.

auckland

Auckland is Australasia's second fastest-growing city, and accommodates nearly one third of New Zealand's population[26]. The city is a stark example of the New Zealand culture of low densities and large sections, and the national love of the motorcar. Infrastructure and development has occurred predominantly in favour of the motorcar and Auckland's growth pressures are felt in respect of ongoing transport problems, as well as demands on open space

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[26] estimated Resident Population of New Zealand as at Saturday, 4 February 2006 - 4,123,928 – see http://www.stats.govt.nz/populationclock.htm

and reduced capacity of existing infrastruture, such as electricity, water, sewerage and stormwater. Growth is managed through a collaborative partnership between the cities of Auckland, Manukau, North Shore and Waitakere, and Rodney, Papakura and Franklin districts. Numerous reports have been prepared in relation to Auckland's growth and the intensification of urban development[27], and a Growth Management Strategy released in 1999, focused attention on rapid transit and high-density mixed-use corridors.

The city has experienced an increase in density due to higher rates of population growth, competing land use demands and the desire to limit urban sprawl (BigCities, 2005). With the population predicted to grow to two million people, it is estimated that 320,000 additional dwellings are required by 2050 (ARC, 2005). A large percentage of these may end up as rental properties, given the falling rates of home ownership and issues around affordability. Policies have directed intensification to existing central areas and in the five years to mid 1999, the inner city apartment market grew at a rate of 98.5% per annum. By 2007 it is predicted there will be 21,000 inner city apartments housing 30,600 people[28].

The rapid growth of Auckland's higher density environment has resulted in criticism of developers. There is an array of developments from the high amenity, open space areas of the "eastern haven" or popular Viaduct, to the "western nightmare" involving cramped apartments as small as 12sq m above traffic-dominated precincts with poor ventilation, no sound-proofing, little natural light and windowless bedrooms; or 25sqm fringe-city 'shoeboxes', with no balconies and views directly into other apartments[29]. However, markets remain strong as

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[27] Reports include the Auckland Regional Growth Forum's *Residential Intensification Developer Survey* (1998), *Building A Better Future: Intensification Review* (2000) and *Urban Area Intensification: Regional Practice and Resource Guide* (2000); the Auckland City Council's *Residential Design Guide for Developments in Residential Zones in Strategic Growth Management Areas* (2001); and the Auckland Regional Council's *Low impact design manual for the Auckland region* (2000).
[28] "Auckland apartment numbers to double", New Zealand Herald, 1 October 2005
[29] "From Shoeboxes to Palaces", New Zealand Herald, 1 October 2005; "Rules ban tiny apartments; Cheek-by-jowl living and flat, ugly concrete towers to get the heave-ho by the city council" New Zealand Herald, 3 June 2005

aesthetic appearance rates secondary to purchasers' primary concerns of price, location and ease of upkeep[30].

In early 2005, in response to growing public anxiety about poorly constructed or poorly designed buildings, the Auckland Urban Taskforce, representing key influencers in the development industry, was appointed by the city's Mayor. The Taskforce's report, *Designing Auckland: A Springboard for Action (*2005) called for a "back to basics" approach to city-making in respect of aesthetics as well as the form and function of a sustainable city. It stressed a holistic, "design-led transformation" of the city and placed significant responsibility on Council to implement a regulatory framework that aligned all council strategies and policies with best practice in urban design and sustainable development. The report acknowledged the importance of developers and emphasised the need for a collaborative approach to introduce stronger controls and incentives to encourage environmentally sustainable designs that related to the public realm. It was proposed that an assessment of urban design outcomes for all new development become part of the resource consent process, and incentives be offered, such as fast tracking through planning and building consent processes for buildings that scored highly in terms of urban design[31].

tauranga

Tauranga, and the Western Bay of Plenty sub-region, is one of the fastest growing areas in New Zealand. The 130,000 population of the sub-region in 2001, comprising 49,000 households, is predicted to reach 198,000, or 80,000 households by 2021. That rate of growth will see the sub-region become the home to 5.2% of the national population, and the fifth most populated region in New Zealand. There is limited land available for urban residential development (Thompson-Fawcett and Carter, 2003). Existing land capacity has been estimated at 18,500 additional households, land under consideration would accommodate a

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[30] "Don't you dare to call my house ugly", New Zealand Herald, 3 June 2005, "Rules ban tiny apartments; Cheek-by-jowl living and flat, ugly concrete towers to get the heave-ho by the city council" New Zealand Herald, 3 June 2005
[31] "Auckland Plans a Design Revolution", Dominion Post, 1 June 2005

further 17,500 additional households, leaving capacity for a further 34,000 households to be identified.

The Western Bay of Plenty *SmartGrowth* strategy was adopted by the Tauranga City Council, Western Bay of Plenty District Council and Environment BoP (Regional Council) in response to public concerns about the rapid and sustained population growth. The planning of residential development required consideration of issues such as existing capacity, types of housing provided, major development areas, intensification nodes and areas *not* designated for development. The Tauranga City Council commissioned a *Residential Intensification Study* (2000) to identify the community response to intensification and different growth scenarios, the effects of intensive development on community amenity values, and what levels or type of housing density local residents were prepared to accept.

It is now proposed that greenfield development cater for 65% of new development to 2051, with densities increasing from 10 dwellings per hectare to an average minimum of 15 dwellings per hectare. Intensification around commercial centres or within a 10-minute walk (up to 800m) of public transport, shops and open space, will account for 25% of new development. Terrace, row housing or low-rise apartments will be clustered around these nodes at densities of at least one unit per 325m², but typically around one unit per 100-250 m². The strategy proposes a 5% increase in intensification of medium-rise residential development in the heart of Tauranga (Thompson-Fawcett and Carter, 2003), but calls for a general move away from intensification through infill "across the board".

wellington

Wellington is New Zealand's second largest urban area. Even with relatively modest population growth, it is more densely populated than most other settlements in New Zealand, due to limited building space between the harbour and surrounding hills. By the mid 1900's most of the flat land of the city had been converted to commercial use. Suburbs spread with transport technologies as middle and higher income households sought dwellings in the spacious and flatter sub-divisions that were an easy commute by new suburban trains, bus

services and the automobile. The city centre became the domain of young people seeking education and jobs, and older residents utilising subsidised pensioner housing (Morrison and McMurray, 1999).

Demand for inner city living became clearer, and developers began converting old office stock long in decline due to overbuilding and a stock market crash in the 1980's. All inner-city apartments placed on the market in Wellington City from the end of 1992 to mid 1996 resulted from the conversion of old office stock throughout the inner-city core (Morrison and McMurray, 1999). Developers then began to construct purpose-built apartments, and in the year to June 2000, 56.1% of all new dwellings in Wellington City were new units. Inner city apartment numbers increased from approximately 3,000 in 2000 to almost 5,000 in 2005. Inner-city apartments are marketed as downtown living opportunities for small, increasingly childless, middle-income households wanting an alternative to the turn-of-the-century wooden inner-city dwellings, with high maintenance costs, unruly gardens and sloping sections (Morrison and McMurray, 1999). The owner-occupier market is strong, driven by young, professional couples and an increasing number of 'empty-nesters'. Investor interest continues as new rental sub-markets have developed for students and serviced apartments[32].

Development was initially facilitated by a City Council prepared to remove impediments. These included consents enabling developers to convert buildings as of right, the removal of ratio of car parks to size of building, waived reserve contributions, rates breaks following construction and rates rebates. The council contributed to the strengthening and preservation of earthquake-risk buildings of historic value and played an important role in creating both a standard and a level of confidence for subsequent inner-city residential conversion projects through its own conversion projects (Morrison and McMurray, 1999). A Wellington City Urban Design Strategy was put in place in the Council's 1993 Draft Strategic Plan[33]. The policy sought to bring about quality outcomes, promote walkability and offer a safe and attractive environment (Eley, 2003). The Strategy required the rationale of projects to be

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[32] "Wellington apartment market picked to slow", National Business Review, 12 August 2005
[33] see Wellington City Urban Design Strategy at http://www.wellington.govt.nz/services/urban/urbandesign.html

questioned in terms of who benefits directly, and what spin-offs may occur to surrounding properties, movement, and visual impact. Development projects were to be assessed on the basis of areas' "character"[34] that distinguished it from wider surroundings, in the interests of both consistency and variety throughout the city. Public access and the use of space was also important, as was how a project enhances the real or perceived experiences of safety. Development constraints now come from increasing construction costs, driven by world community price, building materials and rising local labour costs. There is also an increasing shortage of suitable development sites causing delays of up to 12 months for resource consents at the cost of hundreds of thousands of dollars in interest[35].

christchurch

Christchurch is the largest city in the South Island and its urban area is the third largest in the country. The city's original site was laid out in a formal, geometric grid, typical of the urban design ideas that flowed out of England at the time (Wilson, 2005). The original population, concentrated in the central area, was rapidly squeezed out by commercial development (Wilson, 2005), and a differentiation formed between the city's east side and more 'fashionable' higher priced west (PCE, 1997). The abundance of flat land and changes in dominant modes of transport took growth steadily outwards, with the 'edge' of urban expansion engulfing the then outlying and detached villages (Wilson, 2005). Suburban growth assumed the style that prevails today of largely single-storey, single-family homes on relatively large sections. In 1999 inner city net densities averaged 15 dwellings per hectare, while net densities of suburban parts of the city averaged 10 dwellings per hectare (Eley, 2003).

The first Metropolitan Planning Scheme made provision for housing intensification in the central city and inner suburbs, bringing apartment-style developments to the central city as

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[34] Defined as social, cultural, physical and economic qualities
[35] "Wellington apartment market picked to slow", National Business Review, 12 August 2005

early as 1936. The first Christchurch Planning Scheme, proposed in 1959, included 'medium density' housing in inner areas, and 'high density' in central areas[36]. The concentrating of medium and high density residential development around the city's core was maintained through planning scheme reviews, and has had a strong influence on infill and redevelopment practices in the suburbs immediately around the central core (Wilson, 2005).

The rate of new unit or apartment style development, compared to new developments overall, has not been high. Since 1990 there have been a number of new units built in the central city, and the inner city north-east of the CBD (PCE, 1997). In 1997 a report by the Parliamentary Commissioner for the Environment identified that the scale of development, the rate of change and the cumulative effects on the architectural design and character of areas undergoing urban intensification were major issues for Christchurch. The report called for innovative design solutions to address issues of negative cumulative effects, and suggested that more needed to be done than just the encouragement of good design. A Central City Strategy was initiated in 2000 to reverse the general drift to the suburbs, along with a Green Streets Programme, to increase the amount of open space in the central city. However, there was a decrease in inner-city intensification in 2002 as a result of planning amendments that released vacant land on the city fringe, encouraging new housing development at low density. This contrasted with the local authority's plans to buoy the production of greater density in Christchurch through central city revitalization involving the marketing of the central city as a destination for new business and residential development, and the streamlining of development consents and approvals (CCC, 2005).

Christchurch's five territorial authorities were unsuccessful in their 1997 attempt to adopt an Urban Growth Strategy to meet projected need beyond 2011. In March 2004 the Christchurch City Council, Environment Canterbury (Regional Council), Waimakariri, Selwyn, and Banks Peninsula District Councils, together, with Transit, adopt Terms of Reference for a

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[36] 'medium density' at Merivale and parts of Linwood, and 'high density' east of Park Terrace and Rolleston Avenue

collaborative planning effort that was to become the Greater Christchurch Urban Development Strategy. The Strategy's agreed purpose was *"to ensure an excellent quality of life in greater metropolitan Christchurch through an integrated and collaborative planning approach for future metropolitan urban development"* taking into account a forecasted period of up to 30 years.

A Press release in December 2004 was followed by an *Introduction to Issues* document in February 2005. The 2005 Strategy involved assessment of 11 key indicators[37], projected into four growth options and presented for public consultation. A key driver in the adoption of the Strategy was population growth. Christchurch has not experienced population pressures to the same extent as other major New Zealand cities, and the number of households is predicted to increase at a rate faster than the population. Almost 32,000 people live in one-person households, making up 26.5% of all households, couples with no children make up 40.7% of all families, and 19.4% are one parent with child(ren) families. It is predicted an additional 37,000 new dwellings are needed by 2021.

In addition to the street posters, website information and community meetings, the Great Christchurch Urban Development Strategy was promoted through a special Press series in a *Where Will The City Grow?* campaign. Particular attention was given to environmental concerns such as air pollution, versatile soils, sprawl and sustainable growth, social issues such as housing affordability, local identity/community, transport issues. Other articles, written by one property developer in particular, were critical of the Strategy, its process and the ability of land-use regulators to bring about real, useful change. Of housing development at higher density in particular, one article suggested "people had been 'scared off' concepts of high-density urban design because of 'appalling' development in Christchurch"[38], while

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[37] Key indicators were infrastructure costs, transport choices and access, private costs, community identity, housing type and location, Greenfield average section size, parks/open space/quality and access, air emissions, transport energy use, water demand, additional land required for residential development
[38] *"Horses and houses vie for attention in planning"*, Christchurch Press, 12 July 2005

another referred to "the dehumanizing three-storey sausage flats that are starting to make their way down Hereford Street"[39].

The Urban Development Strategy public consultation process received over 3,200 responses, representing one of the biggest public responses to any Canterbury Council initiative[40]. The Christchurch Press reported "Two-thirds of residents say they want less urban sprawl" following a result that saw 63% of responses received preferring the 'concentration' development option. Of greatest concern to respondents was protection of a quality water supply, collaboration between Council stakeholders, protection of farmland and open space, and transport. However, subsequent market research, undertaken through an Opinions Monitor survey of a representative sample of 400 Christchurch residents, found a different response. When asked 'where people should be placed' 28% of those surveyed favoured spread into the countryside/outskirts/urban sprawl, 26% favoured satellite towns in surrounding districts and only 8% favoured high density housing in the city centre/inner city location (Opinions, 2005). Similar concerns were expressed, however, related to transport, loss of 'green' areas, uncontrolled or unmanaged housing growth and domestic water supply.

new zealand
attention to density

Housing at greater density is a relatively new form of housing in New Zealand (Dixon and Dupuis, 2003). This 'newness' relates to consumers experience, as well as those who are responsible for producing it, resulting in the varying quality developments being received with mixed public responses. As a result, Turner et al (2004) suggests there is a misconception in the public mind about what constitutes higher density development. Development that is of medium density on an international scale is, from a New Zealand perspective, of a much higher density than has traditionally been seen (BigCities, 2005). Also, as in other countries,

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[39] *"Our city planning disastrous"*, Christchurch Press, 12 April 2005
[40] *"Two-thirds of residents say they want less urban sprawl"*, Christchurch Press, 21 June 2005

there is public concern that developments at higher density, either as a result of redevelopment or infill, may become the 'slums' of the future (Vallance, 2005; Costello, 2005; Dupuis & Dixon, 2002). Turner et al (2004) suggests that in future, increasing numbers of New Zealander's will live in medium density housing. However there is a strong cultural preference for detached, single-family homes on individual, relatively large sections. Nevertheless, there is a notable absence of research and other literature on the design of medium density housing in New Zealand (Turner et al, 2004; Dixon and Dupuis, 2003; Morrison and McMurray, 1999).

Academic work has been reflective rather than pre-emptive. Dixon and Dupuis (2003; 2002) have examined Ambrico Place, a large-scale development in New Lynn, Waitakere City with a higher density component. They found that assumptions about demand for medium density housing have resulted in structural homogeneity that has failed to cater to a range of household types. Hitchcock (2002) presented research that examined preferred growth patterns for Auckland, and highlighted strong themes around space, privacy, social issues, rural and natural values and provision of infrastructure.

Morrison and McMurray (1999) looked at the growing demand for residence within the Wellington central business district and the subsequent construction of inner-city apartments. They concluded that occupants sought dwelling attributes similar to the low-density, suburban, single-unit dwellings such as aspect, sun, and spaciousness.

In Christchurch, Vallance et al (2005) compared interpretations and responses of residents of higher density environments resulting from infill, and those who live in more traditional quarter-acre sections to infill housing. Their conclusion highlighted the significance of context and the need for policy, when addressing issues of design in a changing residential environment, to recognise people's contextual understandings. Ancell (2004) undertook a study focused on the social sustainability of Christchurch's central city apartment market, using themes of affordability, quality, transport, neighbourhood quality and community to guide the research. This research found that central city apartments were proving socially sustainable for those living within them, but were proving less equitable generally. It also

suggested that the establishment of more areas of public green space could be undertaken by the local Council to enhance the social sustainability of central city housing.

Additional studies have been undertaken at a policy level and produced critiques of existing residential form. Housing New Zealand Corporation commissioned *A Report on Best Practice in Medium Density Housing Design* (Turner et al, 2004). The report focused on medium density housing primarily in the Auckland region. It assessed the physical environments of 34 medium density developments, evaluating the quality of residential standards and identifying what compromises had been made at different sites. Evaluation was made of public and private open public space, privacy, parking, identity, security and refuse collection, plus the provision for clothes drying as indicators of best practice. They concluded that no single factor determined best practice in good design, but that successful developments took account of all issues including the intended resident mix, neighbourhood character, interface with the public domain, site specifics and topography, car parking, appearance and style, privacy, security, landscaping, and maintenance.

The Urban Design Protocol documented 16 urban design case studies, including three medium density developments. Assessed in terms of seven key principles[41], the developments were used to demonstrate the practical application of urban design principles, the benefits that come from good practice and areas where improvements could be made (MfE, 2005c). The study raised issues of noise and acoustic privacy, the benefits of involving specialists for informed design and sustainable building technologies, reconciling repetition and blandness with scale, the potential inflexibility of district plans for dealing with diverse housing stock, and the application of reserve contributions and provision of public open space that appear within private developments.

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[41] UDP "*7C's*" – *Context*; building, places, spaces as parts of a whole: *Character*; reflect/enhance distinct character, heritage, identity: *Choice*; diversity, for people: *Connections*; enhancing networks: *Creativity*; innovation, imagination, solutions: *Custodianship*; ensuring sustainability, healthy, safety: *Collaboration*; communication, shared knowledge between sectors, professionals, community (taken from UDP, 2005)

To understand the 'how' and 'where' of future intensification in the Auckland area from a market perspective, the Auckland Regional Growth Forum produced *Residential Intensification: Developer Survey* (1998). The study surveyed 21 developers and property companies on their role in the market, perceived constraints to effective market participation and the future of residential intensification. The report highlighted issues around time, Council procedures, and costs relating to land and development contributions.

The research in this thesis is timely in light of the current debate in Christchurch as to urban growth, and where and how housing should be produced in the city. This study also fills a research gap, in the Christchurch context, between the suburban based study of Vallance et al (2005) and the central city focused work of Ancell (2004). Collectively, these three works will provide valuable, up-to-date information about how changes in Christchurch's existing residential zoning are being received by the residents and users of those areas. Finally, rather than studying separate components of the market, this thesis has brought together the views of consumers and producers. By doing so, it has made it possible to understand the issues that surround each group and interpret how the actions of one group impact on the other. By using an urban design framework, placed within broader debates about sustainability, the findings in this study can be reconciled with current urban form debates, and hurdles to achieving more compact, or concentrated, urban forms identified. The following Chapters discuss the methods that have been used in this research, results and recommendations for how greater concentration of the residential environment can be best achieved in Christchurch's inner Living Three ring.

five

This chapter describes the methods used to collect and analyse data used in this research. Primary data was collected by way of a survey with occupants of the sample dwelling within the study zone, and interviews with developers of higher density residential developments. This chapter provides an in-depth discussion of the processes involved in acquiring this data. Secondary sources, including use of real estate advertising, newspaper articles, UDS and Christchurch City Council plans and reports, Statistics New Zealand data and urban design related policy documents (national and international), were also used.

methods

Within any geographical work, the researcher comes to the subject matter from a perspective that must be acknowledged. Different positionalities produce different interpretations of the world and it is important to reflect on ones place in generating research knowledge. For the past five years I have rented properties in various sections of Christchurch's inner Living Three ring. Not owning a car, this has provided me with convenient access to transport, services, shops and entertainment. In contrast to my quiet suburban upbringing, I seek the city atmosphere. My single/no dependents lifestyle is based around leisure pursuits, and does not include hours to mow lawns, top trees, rake leaves, trim edges, and weed gardens, as my parents did. As this study has developed, I have become increasingly aware that I may be the demographic for whom these apartments are being built - thirty-something, single, professional, female. This positionality is recognised as having the potential to jeapodise objectivity, and my awareness of this has been paramount in this research.

Another consideration in studies involving human participants is the appropriate regard for ethical principles. Ethical issues arise in terms of truthfulness, confidentiality and respect, and researchers must take into account these values. Approval for this study was sought

from the University of Canterbury Human Ethics Committee. Application was accompanied by an outline of questions to be addressed through the resident's survey. Approval was granted in May 2005 (see Appendix 2).

sample dwelling site selection

An outcome of redevelopment practices that have been ongoing within Christchurch's inner Living 3 ring has been the clearing of entire sites (either with an original house being demolished or removed) and new dwellings being built on bare land. A 'scoping' exercise disclosed a number of potential higher density styles existing as a consequence of urban redevelopment processes in the inner city Living Three zone (refer *Figure 2*). These included detached townhouses on small individual sites (Figure 5), and two and three-storeyed attached townhouses (Figure 6).

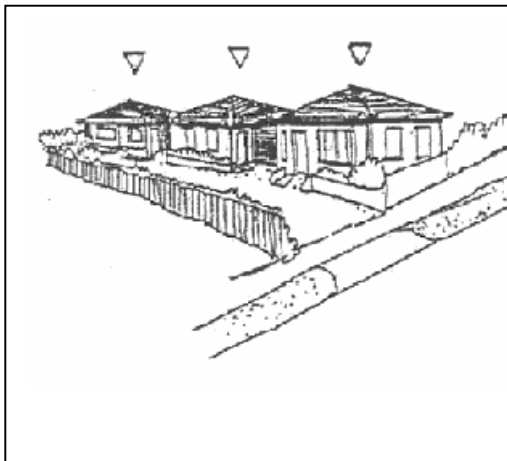Figure 5 **Detached townhouses**   Figure 6 **Three-storey attached townhouses**

source: Vallance, 2005

The style chosen as the sample-dwelling for this study was the three-storeyed, attached townhouse. This style was chosen due to its height, and subsequent visual dominance on the landscape, and potential to increase on-site density. Developments typically involve ground

level garaging for one or two cars, with two storeyed living areas above. Balconies and individual courtyards with high walls provide outdoor areas.

The Living 3 zone was informally scoped over the course of many months. This scoping was undertaken in person, and by reviewing weekly published real estate magazines. These publications also proved a useful resource for providing insight into market demand. Two publications were intermittently collected throughout the timeframe of this research (see Appendix 3), and advertisement 'blurbs' examined to discern market drivers.

Throughout this period of initial investigation, the whereabouts and general character of properties were noted (Figure 7). On three separate occasions, potential survey sites were photographed (see Appendix 4). The number of units were noted as it was considered preferable that properties had more than four units per site[42]. The location of properties was marked on a street map with coloured pins, providing a simple visual indication of the distribution of prospective sites.

Figure 7   Field Work

It was considered desirable to have an even spread of developments around and throughout the zone. Second to sample dwellings meeting the 'style' criteria, the survey sample was selected solely on the basis of location. Fourteen properties, comprising 103 individual units, were eventually selected for survey purposes from around the Living 3 zone (Figure 8).

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[42] This was achieved at all but one site (Clarence Street); this property was also the only development to take the form of one unit above another, rather than side by side.

Figure 8 **Survey Sites**

Site ID	Site Location	Number of Responses
1	Clarence Street, Riccarton	4
2	Brockworth Place, Riccarton	3
3	Rhodes Street, Merivale	2
4	Carlton Mill Road, Merivale	2
5	Eversleigh Street, St Albans	3
6	Madras Street, Richmond	6
7	Heywood Street, Richmond	2
8	River Road, Avonside	2
9	St Asaph Street, Linwood	1
10	Cross Street, Linwood	5
11	Hastings Street West, Sydenham	4
12	Burke Street, Addington	2
13	Burke Street, Addington	2
14	Grove Road, Addington	4
	TOTAL RESPONSES	**42**

survey

The aim of this survey was to meet the research goals of testing the acceptability and suitability of existing developments at higher density to current residents, and to identify the positives and negatives of housing that exists at greater residential density.

The survey of residents comprised a major part of the study's primary data. A significant amount of time was devoted to survey development. The survey was developed in the very early stages of this project. It was considered good practice to draw on established surveys, and a number of previous studies were used. The *New Zealand Quality of Life Survey 2004* questionnaire provided useful direction for the development of community orientated questions and the construction of demographic questions. For consistency of results, demographic questions were aligned to the format of the New Zealand Census. The Christchurch City Council *Central City Pedestrian Activity Survey* (2005) prompted questions relating to transport. An ODPM *Urban Intensification: Impacts and Acceptability (2001)* study was drawn on for questions relating to residence and previous residence. In the United Kingdom, in particular, there have been a number of studies that have directly or indirectly examined the acceptability of urban intensification to residents. The results of these studies, presented in a number of journals, also motivated question development.

Use of a number of different question styles was considered. Closed questions formatted with options in a 'very satisfied' to 'very dissatisfied' type scale were predicted to result in highly subjective responses of very little comparative value. Also, research has shown that people have a tendency to respond positively to such scales (Breheny, 1997). An alternative method was to provide predetermined responses as options. However, this would have necessitated an intimate understanding of respondents' experiences and values that was not achievable within this study timeframe.

The survey resulted in a mixture of open-ended and closed questions being used. Closed questions produce specific, factual information. Open-ended questions provide the

opportunity for qualitative material to be interpreted. It was also considered useful to allow respondents to think through the questions and provide their own responses. Care was taken to avoid leading questions. However, in some circumstances, specific information was desired and questions contained sample answers as 'prompts'. This may have affected the responses given. However, at the most, four prompts were provided and overall an average of 15 different responses were received, suggesting any effect was minor.

The order of survey questions was important. The survey opened with questions that were easy to answer. These related to housing experiences, patterns of movement and motivation for relocation. Questions relating to demographics, and requesting personal information, were added at the end of the survey so those not willing to provide such information would not be put off completing the survey from the outset. Survey questions were grouped under headings that related, as much as possible, to key themes in the debate around urban concentration. These included 'transport', 'community' and 'urban development'. Another section, entitled 'space', was designed to gauge whether greater population density is being achieved and to consider how respective sites are being utilised. Questions were neither numbered nor pre-coded on the respondent's copy. This was to avoid unnecessarily cluttering the questionnaire. The absence of numbering did not appear to matter as to how the survey was completed. There were only two incidences where a filter (ie *go to Q.10)* may have been useful to move respondents from one question to the next question. This was dealt with using a directive language (ie *if no…).* The lack of numbering did, however, prove an inconvenience in the initial stages of coding.

Advice on survey development was taken from a variety of people. These included academic staff involved, to various degrees, with the research, and professionals experienced with survey development. The survey was also 'sampled' on approximately six people who, although not residents of a specific development, were taken as sufficient to represent a test sample. Useful feedback was provided for the fine tuning of questions. The questionnaire was three A4 pages in length (see Appendix 5). The final printout was presented in booklet style, prepared on one A3 sheet, folded landscape, with the cover letter printed on the front

page. This format was attractive, very easy to manage, and had the added advantage of not requiring loose sheets to be attached together.

letter to residents

Letters were not addressed to any particular member of the household. Consideration was given to addressing the survey to the highest earner or head of household, but this was considered unnecessary and overly complicated, particularly in shared household situations. It was thought more important to get a response, and potentially any response was valid.

The importance of cover letters cannot be overemphasised. They provide the main opportunity for researchers to motivate respondents to complete a questionnaire (DeVaus, 2002). It is important they appear attractive to catch attention and stir interest. Letter length is also important. The cover letter was drafted to be one page in length (see Appendix 6). Language was kept simple and the first three paragraphs concise to enable people to quickly scan the contents. The first paragraph was used to spark interest and draw the reader into the material by relating their experiences to the future experiences of others. It was necessary for formal information relating to ethics approval and informed consent to be included and this was placed towards the bottom of the letter so as not to detract from the study. Graphics were used to soften the appearance and make visual links to the study.

It can be beneficial if research carries some official standing. There was some deliberation as to which group(s) should be emphasised as associated with the study. Initial discussions had been conducted with members of the Great Christchurch Urban Development Strategy, but the study did not have the formal support of this group. Also, it was unclear what, if any, impact associating the study with local government may have had. Consequently, the UDS was mentioned, and the University logo used to increase the legitimacy of the study. Contact details of the primary researcher and supervisors were provided, and each letter was personalised with a handwritten signature.

conducting the survey

Surveys were delivered to 103 selected sites on a Thursday evening. A letterbox drop was chosen as the most likely way to get the surveys into people's homes. It was thought more likely that people would clear their mail and take all items inside, whereas a door-knock/hand-delivery would give them the opportunity to reject the survey at the outset. In undertaking a letterbox drop, it is vital that respondents open the envelope. Envelopes should be personalised to prevent them from appearing as advertising material (DeVaus, 2002). Questionnaires were placed in blank envelopes and the units' addresses were handwritten. It was thought the informal, personal appearance of the envelope might decrease the number of occupants who would readily disregard its contents.

Surveys were collected in person the following weekend. It was considered people would either complete the survey straightaway or not at all. The timeframe for collection was indicated in the cover letter. Without knowing how long the collection of the surveys would take, the process was started as early as possible (deemed 10.00 am) on Saturday morning. Guesswork as to which area would provide the best response rate proved accurate and the first house called at had left the completed survey on the front doorstep. This 1-from-1 result had an immediate morale boosting effect.

Collection did not take as long as anticipated. Where people were already out for the day, reminder cards were left (see Appendix 7) and these addresses noted for later collection. Some people commented that they had not yet completed the survey but would do so if a later collection time could be arranged. As a consequence, the collection process proceeded throughout Saturday, Sunday afternoon and Monday evening by arrangement. Displaying flexibility in the collection of surveys proved very useful and added significantly to the number returned. There were few incidents where people displayed annoyance at the survey, and at no time did safety appear an issue. In person, people were generally polite, helpful and accommodating. The surveys seemed well received, with respondents adding additional

comments such as;

> *"prefer this less intrusive type of survey. I receive 8-10 calls/week for surveys/insurance/charity, which is inconvenient at times. This lets me fit it in when practical".*

During the collection process, four apartments were identified as being unoccupied. In one flat, additional surveys were requested which rendered four surveys from one address, and a total of six from a five-unit development. Two surveys were returned by post, and another scanned and emailed. A total of forty-two responses were received.

interpreting results

For the purposes of coding survey results, the city was been divided into nine sections (Figure 9). Areas outside the 'four avenues' were separated using four main arterial routes (Ferry Road, Lincoln Road, Fendalton Road and Hills/New Brighton Roads). Sections translated into the central business district, north, south, east and west areas of the inner Living Three zone, and outer north, south, east and west suburbs of the city. A tenth code was given to 'outside Christchurch', which was anywhere outside the Christchurch territorial local authority area, and therefore included Lyttelton.

interviews

The interview process sought to meet the research aims of gaining an understanding of the practices and motivations of developers who produce medium density housing. Questions to developers focused around understandings of the Christchurch marketplace, motivations in respect of developments, roles in the development and design of the Living 3 zone, and interpretations of the development process overall, including constraints or hurdles in dealing with Council.

Figure 9 **Division of city for coding purposes**

71
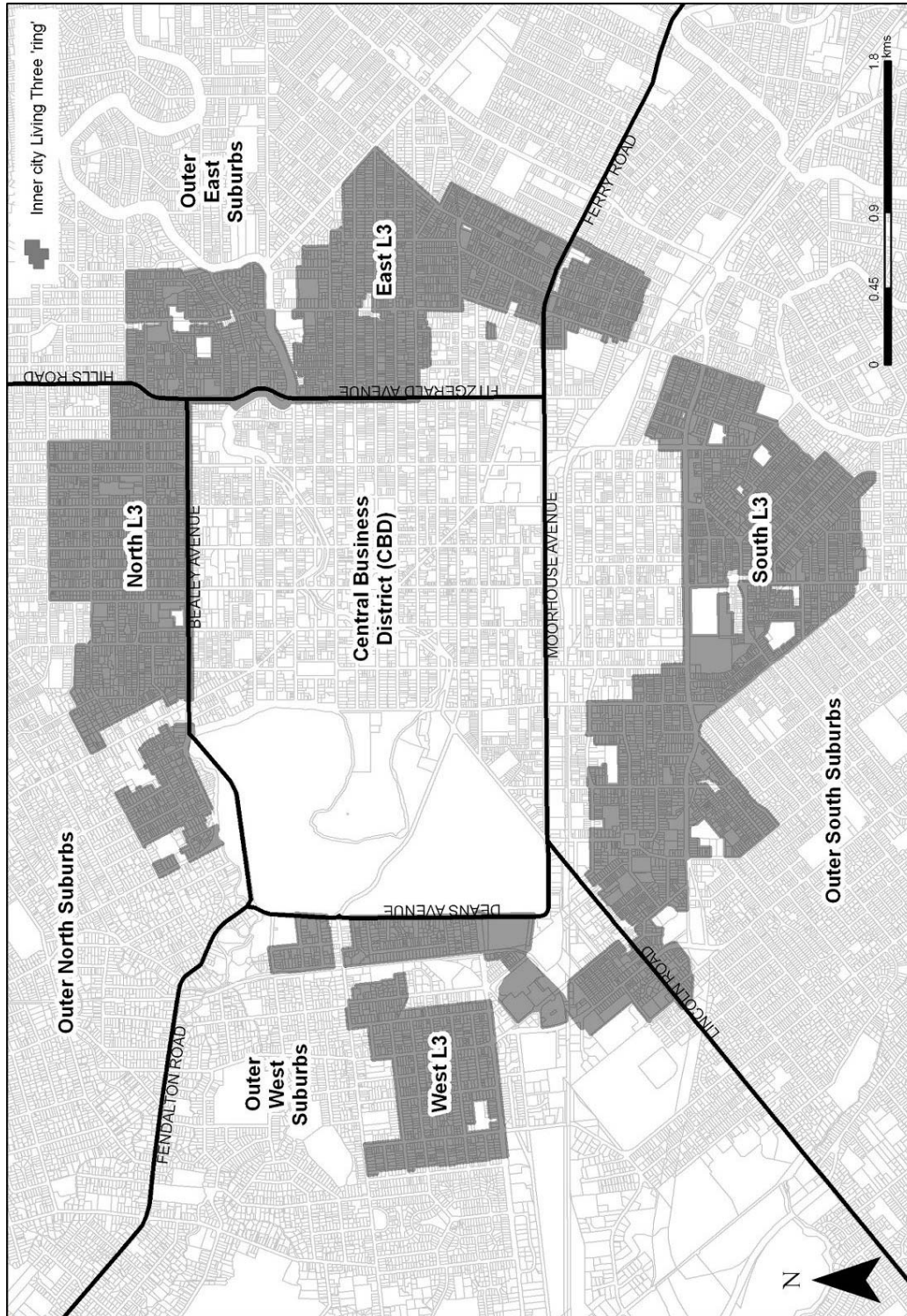
Interviews were chosen as the method of data collection as they can produce a particular representation or account of an individual's experiences (Seale, 2004). Interviews were conducted on a one-to-one basis. Using one-to-one interviews has a number of advantages. Where fewer respondents are available, one-to-one interviews enable information to be gathered in breadth as well as to greater depth. Interviews can be flexible, providing scope for asking unstructured questions, the opportunity for complex answers to be explained in greater detail, and engaging in lengthy discussion as issues are raised.

Previous surveys provided a useful starting point from where a topic-guide could be developed. Previous research that proved most useful was ARGF (1998) *Residential Intensification: Developers Survey*, the principle purpose of which was to report on perceived constraints to effective participation in, and the future of, residential intensification market in Auckland. A United Kingdom house-builders survey (Fulford, 1996) also identified constraints perceived by that development industry in producing a higher density residential environment.

Interviews were conducted after the survey was completed. This was beneficial as initial results helped in the development of the topic-guide. However, interviews were conducted over some months and a conscious effort was made not to elaborate on the topic-guide between interviews, so as to ensure comparative analysis of data was possible.

It was considered most desirable to interview developers currently producing higher density residential form in the inner Living 3 ring. On the basis that only a limited sample was available, this was thought to improve the quality of the information gathered, and enabled the researcher to achieve the greatest understanding of the issue under research. Where possible, it was also considered desirable to achieve an even distribution in where development was being undertaken.

Finding these individuals and firms proved relatively simple. Construction sites contained billboard advertising including company names and telephone numbers. Also, it proved

possible to enquire of on-site builders who the developer was. Alternatively, searches of Council held property files disclosed the names and details of developer applicants for properties already completed. Contact was made by telephone and email. The telephone rendered the most positive response, at which time most interviews were arranged.

It became apparent during interviews with developers that discussions with real estate agents potentially offered value to this research by offering a greater understanding of both the market and the 'development industry'. Real estate agents were identified through the published marketing material. Direct contact was made by telephone. The real estate agents contacted were more than happy to be interviewed. When initial interview times arranged proved unsuitable, the agents concerned set about rearranging a new, convenient time.

Interviews were conducted at a place nominated by the interviewee. In all but one instance, the interviews were conducted at the interviewees' respective offices. This was for their convenience, and served to minimise any disruption to their schedule. That this may also have proven the most comfortable environment for them was of less consequence, given the professional nature of the individuals. The one interview not conducted at an office, was undertaken at the developer's construction site, in one of the units. This was very beneficial for both the developer and the researcher, as it enabled the unit to be on display and discussion to evolve as a consequence.

Interviews were semi-structured. This enabled interviewees to talk to issues as they arose. A structured topic guide was developed, with a range of topics to be discussed (see Appendix 8). Visual aids, such as diagrams, sketches and copies of documents, were used to help relay information and clarify understandings. Interviews ranged from one to two hours in length.

The first two interviewees did not wish to be recorded, and subsequent requests to record interviews were not made. Notes were taken during the interviews.

hurdles and limitations

While research needs to be well defined, it is important that flexibility remain during the initial investigation of topics. The reading in this research became increasingly dominated by extensive literature and debate about urban design. It brought new ideas into the research, which resulted in a shift in the focus of developer interviews. Additional questions were related to the provision of open space and the commitment of Council to urban design, given the hurdles and constraints that developers must overcome. The urban design framework proved compatible with resident surveys.

There were few hurdles or limitations in dealing with property developers. The timing and duration of interviews provided some challenge, but all interviewees were very accommodating and generous with their time. Because of the professional nature of their business, it was necessary to be aware of the environment in which interviews were conducted and to dress and behave appropriately for interviewing professionals in their workplace.

Initially, developers were a little guarded, and keen to clarify if the researcher, or research, was associated with the local Council. Some were also a little protective about issues that related to market position and competitive advantage, however this did not affect the research. The first two developers interviewed did not wish to be recorded, and this idea was subsequently not entertained. Some developers made very specific remarks about processes and it would have been useful to be able to quote verbatim, such as on constraints with Council. However, given it was not the intention of this research to provide an opportunity for developers to complain about the Council, the material available has proved adequate.

Rather than individual interviews, it may have been useful to speak with developers in more of a focus group type arrangement. This would have provided an interesting opportunity to compare and contrast in a 'live' exchange of ideas. Together, through their collective experiences, the developers may have introduced new, 'sticky' issues to the discussion that would not otherwise be considered.

Producing a survey was a worthwhile learning exercise and a first for the researcher. The communal space questions were poorly answered. Most developments did not have communal space and, as a consequence, few respondents elaborated on their answers and some left this section blank. The intention of this section was to ascertain how people would perceive communal space, for example in the form of shared open space, lawns, or trees. Use of different phrasing would have made this intention clearer, however given the low levels of communal space from which respondents could draw experiences, results may have been similar.

The developments in the survey sample were constructed over the last ten year period, and generally exhibited a lower standard of design and specification than those developments currently being produced by the developers interviewed. This point is acknowledged, as surveying developments that were the same or similar age and specification to those being produced by the developers now may have provided richer comparative data. Nevertheless, this is not assumed to be problematic in terms of the results.

six

In this chapter, the results of this research are presented. The findings represent a market perception of one current form of medium density housing in Christchurch's inner Living Three ring. Qualitative and quantitative data, arising from the residents' survey and developers interviews, are drawn together and presented and discussed, as much as possible, as they relate to the themes presented in chapter two.

respondents

Forty two completed surveys were returned from 39 individual dwellings. In all but one case, at least two surveys were returned from each survey site. The random selection of dwellings resulted in predominantly two and three bedroom units being surveyed (Figure 10).

Figure 10 **Bedrooms per dwelling**   Figure 11 **Gender of respondents**
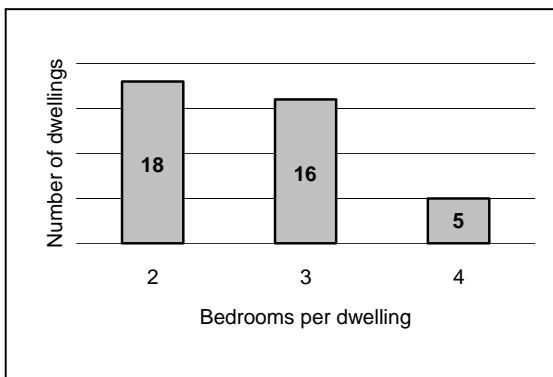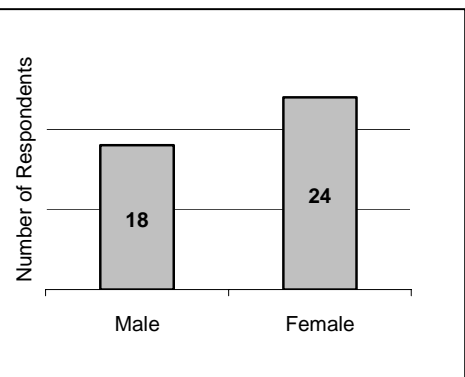
More females completed the survey than males (Figure 11).   The ages of adults in occupancy ranged from late teens to mid 50's, with an average age of 27 years (Figure 12).   Five dwellings accommodated children, aged between 18mths and 15 years.

For most survey respondents the experience of living at greater density was new.   The previous residential experience of 74% of respondents was of detached houses. In making the

move to the inner Living Three ring, 40% said they had specifically wished to live in an apartment. The reasons why respondents had moved were varied, and included cost, location, 'newness', maintenance levels, as a consequence of relationships or due to the expiration of previous tenancies. Seventy six per cent of survey respondents said they would make the same move again, suggesting some aspect of the higher density experience had been favourable. These results suggest apartment living is becoming a recognised housing option in Christchurch and there is a positive attitude towards the sampled dwelling style of housing density.

Figure 12 **Age of respondents**
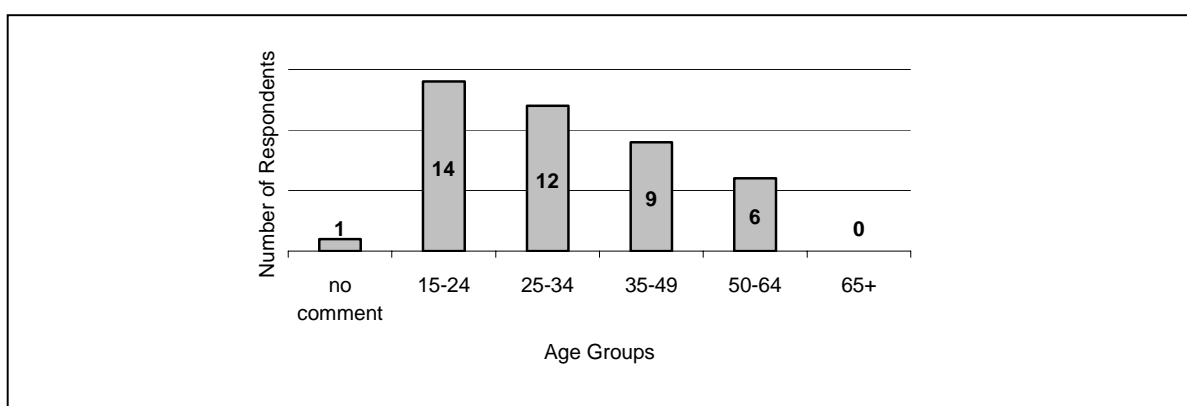
Interviews were conducted with four developers. These included representatives of three development firms –

  o a New Zealand development company with a focus on the investment property market;
  o a Christchurch based residential building company, working in the L3 in contrast to its traditional focus on Greenfield development; and
  o a finance and development company.

An independent builder/developer was also interviewed.

The experience of producing the sample dwelling style of medium density housing was new to two of the developers, and two had previous experience to draw on. These four developers

were active in different sections of the city, although there was a stronger tendency towards the west and north of the city. Only one developer was active in the south Living Three section.

Interviews with two real estate agents were also conducted –
- o one new and currently marketing new development; and
- o another, marketing a smaller complex, who had years of experience with the inner Living 3 ring.

These interviewees provided a useful cross-section of experiences, opinions and attitudes towards the development of medium density housing in Christchurch inner Living Three ring.

findings

location

Survey respondents indicated location as one of the most important advantages of their current residence. This result was consistent across age groups, as well as from survey sites within the study area. Reasons given included the ability to readily access shopping and services, public transport, entertainment and employment. The inner city location was new to half the respondents, where 43% who had made the move from the outer suburbs to the inner Living Three ring. Thirty-one percent had previously resided within the inner Living Three ring, and a further 10% had made a move outwards from within the central business district. In contrast to the Wellington based findings of Morrison and McMurray (1999), respondents in this study exhibited a degree of satisfaction with, and commitment to, the inner city locality. Significantly, the group that appeared the most satisfied were those aged 50-65 with all respondents having moved from to their current residence from within the study area or central city. The age group who next appeared the most stable were those aged 25-34 years. For

these groups, living in the inner city appears to be neither fleeting nor diminished by the experience.

While other studies highlighted residents were not deterred by undesirable aspects of city living, such as noise and smells (Allen and Blandy, 2004), this study found low levels of amenity greatly impacted on respondent's commitment to location. Given the choice, 50% of survey respondents said they would choose a similar style of accommodation, but in a different neighbourhood. Of these respondents, 62% resided in the south and east sections of the inner Living Three ring (see Figure 9), in the area from Church Square east around to Madras Street. Their concerns primarily related to neighbourhood amenity, with reasons cited as the older or rundown standard of many houses in an area, a high crime rate including vandalism and theft, raucous neighbours and a general lack of aesthetics (see *Open Space*).

Investor's interest in location also related to broader concerns about neighbourhood and amenity. One real estate agent suggested it was common for investors to enquire as to what was happening in and around an area. This was to determine if there was a sense that the area was being redeveloped through the addition of other new buildings, the tidying up of streetscapes by Council or the control of traffic flow through planted road build-outs. Large tracts of vacant land, particularly vacant land owned by Council, were of concern to investors if future development plans were unclear.

For developers, the inner city location was attractive due to market demand. One developer commented that high returns could be achieved where pressure for space in already built up areas drove demand. Christchurch developers also recognised the importance of location and proximity to the city to purchasers. The new 'lifestyle' choice suggested by Costello (2005) was evident in marketing material that promoted 'central city lifestyle' even for properties spatially dislocated from the city. One developer considered people increasingly desired to live near to where they worked, 'played' or went to school. The location just outside the 'four avenues' combined suburban living with a walk-to-town option.

transport

This research highlights that people do not choose where they live based on the location of their workplace. Those survey respondents who traveled to the outer suburbs did not necessarily live in the section of the inner Living Three ring closest to their workplace, and many travelled across the city. Transport mode was also of little consequence in relation to the length of workplace trip. Half of respondents travelled to the central business district for work, which can be a journey of only a few kilometres. Of those who traveled to the central city to work, half chose to travel by private motor car (Figure 13). This is in contrast to compact city ideals, which promotes the use of 'soft' modes of transport or seeks a change in people's opinions on public transport (Williams et al, 1996). In terms of this research, it begs the question as to whether a lack of design is proving a barrier to the use of 'soft' modes, given the lack of pedestrian routes into the city from many directions other than along main arterials. However, this research also found households had few, if any bicycles, with which to make alternative transport choices and, reflecting the findings of UFP (2001), recorded that households generally had as many motor vehicles as adults.

While the literature notes the complexity of interpreting motor vehicle usage (UFP, 2001), this research found distinct age based attitudes to transport. Being able to access shops and services without using a private car was important to those aged 18-24 years, and respondents in this age group nearly all placed a high value on good public transport (93%). Public transport was also important to those respondents aged 25-34 years, and this group was most likely to choose a mode of transport other than the private motor vehicle to get to work. In contrast, those aged 35-49 years placed little value on public transport and, although living in close vicinity to work, were least likely to use alternative transport to get to work.

Respondent's choice of main urban centre, for shopping and services, was influenced by age, and place of residence or work. Those aged 25-34 years were most likely to consider the central city their main urban centre, and were also the group most likely to work there. Those

Figure 13 **Respondents means of travel to work in central city**
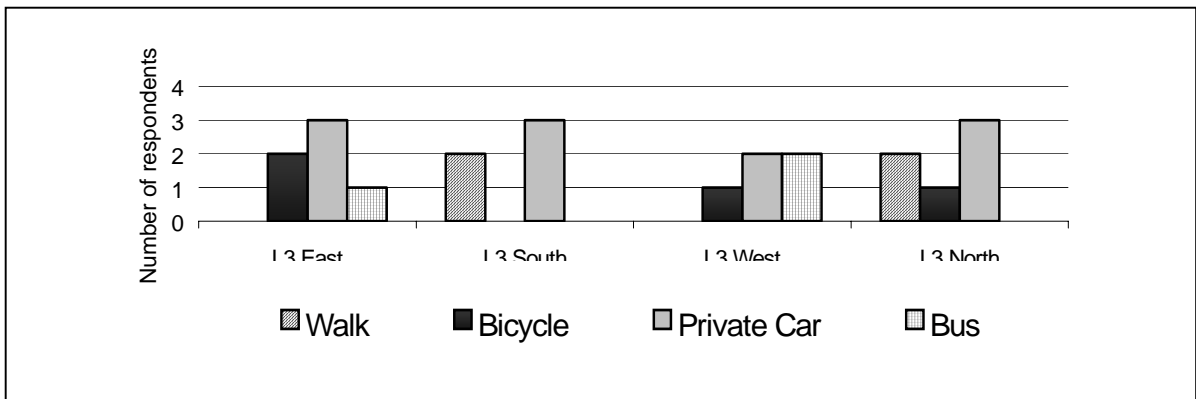
aged 15-24 years clearly favoured Christchurch's two largest malls, The Palms and Riccarton[43], but as the malls were chosen relative to where they lived[44], it is unclear whether the emphasis was placed on convenience (Allen and Blandy, 2004) or leisure (Thorns, 2002). There was some identification with minor centers, such as Merivale, Fendalton, Addington and Sydenham, particularly by those aged 34-49 years. Of this age group, 45% worked in the central business district, however shopping and services in the central business district were forsaken in favour of minor centres closest to place of residence. The age group 50-64 years also tended towards the smaller centres, but also considered the central city as a key urban centre. The consumptive behaviour exhibited by survey respondents reinforces that the convenience of location is more important than mere attraction or whim (Allen and Blandy, 2004; Williams, 2000), and may be positive for policies of urban concentration that aim to reduce the use of private vehicles (Crookston et al, 2005).

privacy

Results of this research mirrored those in the literature (Vallance et al, 2005; Turner et al 2004), emphasising the importance of privacy generally, and specifically in relation to design.

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[43] These two centers are the largest mall by area (The Palms) and the indoor mall with the most stores (Riccarton) in New Zealand.
[44] Those who traveled to The Palms (located in the approx north-east) lived in Sections 2 and 5, and those who traveled to Riccarton (located in the west) lived in Sections 3 and 4.

Privacy was important for 83% of survey respondents, who appreciated being able to *"shut everybody out and feel your unit is the only one"* or, as another suggested *"when you live close to others you want privacy ... the private, the better"*. Similar to the findings of Mullholland (2003), for many of this study's survey respondents, the 'standard' open plan style of living prevented them from feeling they could achieve adequate personal space. A number of households in this study were living in 'flatting' arrangements or shared accommodation, where households consisted of independent adults.

Internal noise between units was also an issue which could be interpreted as an acoustic invasion of privacy. Respondents commented on poor insulation, stressing the disadvantage of having *"2mm of concrete between me and teenage neighbours"*. Others suggested that *"from room to room you can hear everything"*, they *"can hear our neighbours do everything"* or they *"would rather not live above such noisy people"*. However one developer believed some degree of noise between connected dwellings had to be expected.

The developers and agents interviewed claimed to understand the high value placed on privacy by residents. Yet this understanding was not translating into designs. The external construction of sample dwellings in this study, with individual courtyards divided by high walls, did little to provide privacy. As Turner et al (2004) also found, this was because 'private' outdoor space could be viewed from neighbouring second floor balconies. The closeness of this balcony/courtyard arrangement was such that one respondent frequently had cigarette buts flicked in a private garden from the balcony alongside.

community

Results were not conclusive as to whether respondents felt a 'sense of community' with people living in other units in their development or whether they considered it important. One respondent suggested *"people in the city don't care and are naturally suspicious and non-communal"*, while another who did not consider a 'sense of community' was important did concede *"it would be nice"*. Survey respondents had experienced both positive and negative contact with the people in their housing developments. This was perhaps best summed up by

one respondent who remarked that community was *"pretty much up to the people"*. The majority of contact was described as 'some positive contact with a nod or saying hello', however 'no contact' recorded more frequently than 'positive' contact. Isolation that can result from a sense of 'otherness' (Vallance et al, 2005; Rapoport, 1977) was, in part, overcome by the closeness of the units. This enabled people to see one another, and design features such as communal entrances, shared stairwells and common driveways, gave people the opportunity for interaction.

The demographic of the predominantly rental population that the sample dwellings attracted (see *Tenure)* may be problematic for establishing community. Survey respondents exhibited high rates of mobility (figure 14), given that the survey dwellings were generally between five and ten years old. It is argued that mobility disrupts the forming of community (Bounds, 2004; Thorns, 2002), particularly if this involves the arrival of perceived 'new types' (Williams et al, 1996).

Further, those survey respondents aged 18-34 valued neither community nor familiarity with people on the street. In contrast, value was given to a sense of community by those aged 50-64 years. This may be a consequence of their owner-occupation and a desire for acquaintanceship that this status may generate. It may also have a number of life stage explanations, such as possible vulnerability of age.

The new forms of medium density housing being produced in Christchurch's inner Living Three ring may facilitate social segregation. Sites are dominated by either, predominantly, two and three bedroom units. The suggestion to mix up apartment sizes, and avoid social segregation that can arise by housing type or income group (Bunker et al, 2005), was rejected by one developer on the basis that he considered the lifestyles of different age groups and life-stages did not mix. One developer suggested the apartments may appeal to 'double income no kid' professional couples and were marketed as 'executive'. Exclusive by price, the new developments are pitched at very specific households. In light of the literature that suggests aspects of 'community' may form when people perceive a likeness with others (Sarkissian, 1986), any segregation that may occur could be positive in terms of community.

Figure 14 **Respondents period in occupation of dwelling**

security

The survey did not directly addressed the issue of security, or what makes people feel secure, and conclusions have been deduced from the data available. 'Security' was mentioned as a feature that had attracted some respondents to their development, or was noted as an advantage of a current residence, but was not mentioned with particular significance. The group who placed the most significance on it was those aged 35-49 years, who also saw the value in activity on the street if it resulted in greater safety/security to person, vehicle or dwelling. This generally suggests people do not firmly associate the sample dwellings with an increased need for security. One developer suggested that security was *"the thing"* with inner city living, however this comment was neither reflected in the survey responses nor supported by the literature (Turner et al, 2004).

Levels of security varied between developments. Security gates and intercom systems were uncommon, as was the accessing of front doors through private courtyards. Access was most common up a driveway and directly to front doors, supporting the feeling that respondent's *"don't always know who are neighbours and who aren't"* and that *"anyone could walk in"*. As an advantage of their current residence, particularly female respondents mentioned *"no-one can access it from the exterior"* or *"noone can get in from the outside"*. However, 'defensive styles' that cut units off from the street (Adams and Watkins, 2002) may have negative consequences for security where apartments are located well away from the street, up

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unlit driveways or out of sight. Nevertheless, access to some apartments was up dark stairwells, along narrow, winding paths between high fences, or through high gates and courtyards, did not prompt any concerns from respondents.

Personal security concerns rose within the context of communal space. Where developments included communal washing lines comments were made about the potential theft of clothes. In respect of communal spaces generally, one respondent considered they *"could be dominated by one group of people which may be a problem if there are issues between neighbours"*. Some survey respondents expressed feelings of powerlessness in respect for the use of communal driveways, as *"people park wherever it suits them"* or with *"other people parking so you can't get out of your own garage"*, or when rubbish was not adequately dealt with. This calls attention to Beer et al (2003) as to the need to make the use of space and rights of users clear. An agent's suggestion for overcoming this issue was the placement of *tenants only* signs or to indicate where parking was allowed. However, this may be of little consequence in situation where respondents are unsure of their ability to address a situation, particularly when others are perceived to control a communal space.

form and quality

The form and quality of the sample dwellings impacted on aspects of livability. The greatest disadvantage of previous residence for many survey respondents was the size of their previous residence, the high levels of maintenance with lawns and gardens. Respondents also commented negatively about the cold and damp of previous residence. In contrast to the suggestion that young renters are not deterred by quality (Allen and Blandy, 2004), respondents were attracted to the units' newness and modern design, and the warmth of the apartments and subsequent ease of heating contributed significantly to the popularity of the sample units over much of Christchurch's older rental stock. Aspects of livability differed by the respondent's life stage. Older respondents appreciated the reduced home size once their children had moved on. Parents found the space adequate for toddlers, but not adequate for older children where there was no space outside for children to recreate. Another respondent

comments *"the style of home* [was] *good to live in when single"*, while a couple noted *"as a couple its enough space, but wouldn't be if in a flatting situation"*.

In respect of the development's exterior design, respondents frequently commented that there was *"no design"*, that apartments were *"not very nice or innovative to look at"* or *"mass produced"*. Even those that were described as having *"show-off value* [still looked] <u>*exactly like every other flash townhouse"*</u>. In respect of landscaping, a compromise seemed apparent between *"low maintenance"* and areas being *"not visually pleasing"* due to *"too much concrete"*. Survey respondents appreciated the low maintenance aspects of apartment living, however it seemed this was often because it was *"all asphalt"*. While some considered it a positive that outdoor areas were *"paved, so no lawn"*, a number commented there was a lack of outside space, with no grass or outside sitting area. Survey respondents considered individual courtyards were small and stark, without sufficient vegetation, although any increase of vegetation must necessarily be low maintenance. Many people reflected on their inability to effect changes due to the fact that they were renting or because the space was not conducive to alteration, being too small or sealed.

Where developers were most notably letting users down were in size, layout and design. Almost half of survey respondents felt their dwellings lacked internal space, and survey respondents appeared to want more livability from their homes. Few dwellings had access to living areas at ground level, there was a notable lack of indoor/outdoor flow when garages were on the ground floor and respondents were concerned by multi-level arrangements where primary access was by stairwell. These emphasize issues raised in the literature about quality and access (Imrie, 2000; Goodchild, 1997). Storage was also important to liveability. This was reflected in the survey results, as well as agent's comments about buyer demands. One agent commented that double garaging was popular and, for tenants, garages were used for household storage and invariably doubled as a laundry. Reference was made to an inadequacy of kitchen and cupboard space, and a general lack of storage for people who owned a household's worth of effects. Partly for this reason, one developer had made good use of roof space for this purpose.

It was also the opinion of agents that developers did not generally think about livability, or who would be living in the apartments they produced. This opinion was based on a belief that developers were motivated to complete construction and get units sold as quickly as possible, a point supported by the literature (Adams and Watkins, 2002). An example was given of one developer's decision to utilise kitchen pantry space for hot-water cylinders when no other provision for this fitting had been made. The agent considered this represented a rapid, 'short-cut' solution that did not take into account resulting livability issues. Another agent noted the inclusion of stylized, freestanding basins in place of more practical vanity units with cupboards. Also noted was an apparent lack of consideration to space utility, which could be rectified simply by considering how much room a swinging door takes up and the significant difference a sliding door could make to a small space.

Investors were interested in unit specifications. One land agent commented that investors often won't buy what they wouldn't live in themselves. However, investors were also interested in as little ongoing maintenance as possible. It was the opinion of one agent that tenants did not maintain outdoor space and, for this reason, it was desirable for outdoor space to be kept as small as possible. In one example when outdoor space had been provided with ready-lawn, the agent thought it likely that owners would seal or cobble over the grassed area to eliminate any maintenance concerns. Equally, one developer believed that zero maintenance was very important and produced common areas, such as driveways, accordingly.

Developers drew on development experience, feedback from previous buyers and input from agents to determine specifications. This had resulted in features such as double glazing, heat pumps and greater levels of insulation becoming standard in many cases. However, it is questionable if seeking feedback from those who own rather than live in the units is beneficial to meet occupants needs. Developers placed a great deal of emphasis on the quality of fittings and fixtures, such as benchtops, carpets, lightfittings and the number of power points, that differentiate their products and determined the period by which a product would maintain its original standard. But reference to *"battery hens"* and survey respondents who purposefully rent more rooms than needed, as *"2 bedroom townhouses are like living in a cardboard box"*, suggests that developers should pay less attention to cosmetic features. Encouragingly,

developers indicated that development of the sample dwellings was an ongoing learning exercise. An observation was made that, even for architects, this style is new and that it takes a while to get it right. But it was felt that the industry was just getting better and better.

Advertising emphasised low maintenance and city living, and apartments were often described as "executive". Notable features were privacy, security and on-site conveniences, such as internal access to garages and visitor parking. Features corresponding to the motivations of urban design such as location to education and shopping, the ability to walk to entertainment or work, and being close to recreational facilities were sometimes mentioned, and attributes such as insulation, double glazing and energy saving home heating systems were rarely mentioned.

It is to developer's advantage to protect properties for the long-term quality of a dwelling reflects on them. This can be achieved by making it a condition of sale that a Body Corporate[45] be established. Some properties have a Body Corporate in place, however no one may activate it. Properties that do not have Body Corporates rely on owner's communication and cooperation to ensure the standard of the development is maintained. This is problematic in the situation where whole developments are owned by absent investors. Tenants may be satisfied with their respective dwelling, ignoring the outside condition and properties may only receive attention, for example exterior paintwork, in the event that an investor wishes to sell and give the dwelling a 'face lift'. One developer had influenced the content of the Body Corporate document, setting up a Body Corporate manager and attending an owners meeting to ensure the process was activated. Ensuring maintenance, such as the period within which a development must be painted, through a Body Corporate goes some way to ensure a product's appearance. Some survey respondents, and particularly those aged 35-49 years, appeared 'house proud' and were very motivated by the presentation of their development. For example, in response to questions relating to landscaping concern was expressed about

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[45] A "body corporate" is a collective of all the owners of a unit title development that make decisions about the development and, in particular the common property, through a set of rules that specify the upkeep and insurance for the buildings, paid out of money levied from the owners

plantings not being kept tidy and that *"noone takes responsibility to mow lawn at street front"*. Respondents also felt that upkeep and maintenance, repainting and basic repairs, such as to broken letterboxes, were lacking.

tenure

The findings of this research mirror that of studies based elsewhere (Bunker et al, 2005; Costello, 2005) that the apartment market in inner living zones is becoming the domain of investors. As an investment prospect, Christchurch was considered to have a strong population base and potential for growth, compared to other, smaller centers. It was indicated that investors were predominantly aged from the mid 40's upwards, and included local Christchurch investors and New Zealand nationals living overseas. While investors were also Christchurch-based residents originally from overseas, one developer commented that foreign residents, from regions such as Europe, the United Kingdom or the United States, were less interested in the apartments when from higher density urban environment. In contrast, he felt they sought the space and opportunity that individual suburban sites offered. First time investors were looking for a long term capital gain, and using the rental income as a superannuation substitute. Repeat investors gave the impression of being familiar and confident with the apartment market and there were a number of incidences where investors had purchased three or four units in one development.

Developers were aware of the strong investor demand. One developer was producing properties for the primary purpose of creating investment portfolios. The investor-buyer market is appealing to developers who offer significant discount to 'early-bird', or speculative, buyers who purchase at the initial concept stage. Bunker et al (2005) also found that 'off-the-plan' buyers were highly sought after. Early sales provide developers with a capital injection, and enable a development to be produced with money that is free from the constraints of borrowing. Investors may be likely to take this early risk, being resourced with investment capital and seeking potentially high returns through rapid on-sale. Speculative sales to investors are highly sought-after, and both developers and real estate agents hold files of potential investors who are invariably approached at the very early stages of a development.

Also similar to other studies (Allen and Blandy, 2004), survey results indicated that the medium density housing being produced around Christchurch's inner Living Three ring was attracting households of young, single people living in short term rental arrangements. The age group 18-24 years exhibited the highest rates of movement, averaging a rental period of less than a year. This may be a consequence of this age group entering into 12 month leases, as well as the survey having been undertaken mid year. However one agent did comment that tenancy periods are less long-term, and suggested a period of 18 months was typical. For long term rental prospects, survey results indicated that the most stable tenancies were held by those in the 25-34 age group who averaged just over two years in their units.

Beyond the investor market, interest in the Christchurch medium density apartment market does not appear strong. Thirty six percent of units surveyed were owner-occupied, of which only one respondent had purchased their unit as a first home. Respondent's in rental situations commented *"would never buy a place like this, but makes a good rental"*. An older couple, looking for retirement accommodation, had approached one agent, but had deemed the upstairs/downstairs layout unsuitable. Survey respondents (in the age group 50-64) expressed frustration that their properties were not adaptable to their changing livestyles. In contrast, one respondent in the same age bracket commented *"I have tried other homes/lifestyles* [and] *this one meets my current* needs". Another agent had discouraged a potential buyer with children for the same reason. Some apartments were purchased as 'working week' accommodation, where owners had the means to 'escape' out of the city on weekends.

Not all developers were pursuing the investor market. One developer had made a conscious decision to produce and market units for owner-occupiers. His explanation for doing so was that he considered too many apartments were being produced in the city for investors, and perhaps he perceived a market niche not otherwise being satisfied. However, interviewees suggested owner-occupiers and first time buyers are cautious and less likely to purchase off a plan, or even prior to full completion of the development. Pursuing the owner-occupier market had put this developer under the financial burden of lending rates as a consequence of not having early injections of 'off the plans' sales revenue.

affordability

The survey did not directly address issues of affordability. However, in contrast to the literature that suggests concentration provides increased choice (UFP, 2001), one respondent commented *"you live where you can afford, most people don't have a choice"*. The new medium density apartments produced by the developers interviewed were all marketed around the same value, and agents suggested conservative rental rates for new apartments across the city were $300 to $360 for a two bedroom apartment.

The suggestion that housing affordability generally may be effected as older style homes are removed to make way for the construction of new apartments (UFP, 2001) was apparent in this study. In one instance, a developer was aware that residents, displaced from the older, low quality dwellings that had been removed to make way for his development, had moved only a few blocks away. His development was never intended to replace their homes, and the newly constructed apartments would have commanded a rental rate significantly greater than that of the dwellings previously on the site.

One developer suggested it was the land price that determined price. One developer considered the central city, generally, to be a highly favourable for development and, being more or less fully developed in terms of available land to meet demand, it was the area thought to produce the best returns. The east-west differentiation in Christchurch has a significant effect on land values. One agent noted there was growing demand for areas previously not considered popular due to land prices rising as available land diminished. However, developers did not consider the east side of Christchurch highly valued land. The north-east part of the inner Living Three ring was described as almost saturated, and development was shifting west. The north-west corner of the inner Living Three zone was considered very desirable for the high quality end of the market because of the amenities, such as Hagley Park, the Arts Centre, art gallery, theatre and casino.

Another developer suggested the fewer apartments that are pre-sold (see *Tenure*) the higher the cost of production. This is due to fees and interest, and results in the cost being passed on to the end purchaser. One developer discussed a solution that would avoid this situation, and contribute to a housing stock for lower income groups owned by the State-run Housing New Zealand Corporation (HNZC). His scenario involved HNZC purchasing a number or percentage of apartments in a complex off the plans, and developments involving HNZC being given priority assistance or 'fast-tracked' through Council processes. He suggested this scenario would reduce developer's risk, due to a 'secure' purchaser, cost through delays at Council and cost of remaining funding at the Bank. The end result would be an increase in lower income units for management by HNZC, and remaining units being offered to a purchasing public at a cheaper price.

context

The appreciation of survey respondents to Christchurch's context as "The Garden City" varied by section of the inner Living Three ring. Hagley Park was very important to contextual association. The twelve respondents who made specific mention of Hagley Park were from section 4, the west end of sections 3 and 5. The significant remainder of respondents, living predominantly in areas away from Hagley Park, indicated their sense of Christchurch as "The Garden City" was average to none, although this was mitigated by comments about the volume of trees and street planting throughout the city. This result emphasises the differentiation between the east and west of the city. The low amenity area generally is also the section of the L3 zone most predominantly sited alongside industrial and commercial zones, suggesting a lack of attention paid to the amenity of industrial and commercial zones of the central city.

Other reference to context may be taken from comments that units had *"no character"* or, conversely, were a *"timeless design"*. This contradiction is mirrored in the emphasis placed on context in the literature (UDP, 2005; MfE, 2005; Jenks, 2000) and the reality of practice. One developer noted that styles currently produced are far removed from those being produced only three years ago. Developers raised the issue of maintaining 'context' when

influences in design, technology in construction and new building material change rapidly. Similarly, concern about standardisation of form (Dupuis and Dixon, 2002) did not reconcile with a competitive market and developers search for difference. The suggestion that non-local forces increasingly influence context (Frey, 1999) was evident in the diversity of influences that developers drew on, including settlements in Cape Cod, apartments in Rome and terrace houses in Australia. Developer's recognised the negative effects of standardization on the urban landscape, commenting on the ability to enter some areas of the city and identify the work of particular development companies by the limitation of design. This lack of differentiation was considered undesirable both for the landscape in general and the reputation of the developer.

Developers could improve an area. One developer recalled the first block he built had, for a short time, been surrounded by older rundown and near condemned buildings. His removal of very low quality dwellings and redevelopment of sections had improved the street appearance. Further, the developments had brought new residents, considered to exhibit more "socially acceptable" behaviour where there was a noted reduction in the levels of broken glass down the streets, and less activity associated with excessive use of drugs and alcohol. Although 'hoons' continued to use the streets for antics in motorcars, this was subject to complaints from the new residents. This developer considered the slum-type atmosphere of the streets had changed with the addition of his developments. The developer believed the remaining residents in the street appreciated this change and, consequently, his developments were well received. This sentiment is reflected in the comment of one respondent who noted *"crappy houses in the area"* as a disadvantage of her current residence. However, his developments were clearly not within the 'context' of the area, introducing new building materials and modern architectural styles to an older area of the city.

greenspace

Almost half of the respondents responded positively that they valued "quality of life through urban amenity/green or open space". Seventy four per cent of survey respondents did consider their neighbourhood contained enough open space, and 88% felt they could easily access

public open space from their home. However, the vast majority stated their access to green space would mainly be by private motorcar. This division between open space and access raises the question of what boundary people think of in terms of their 'neighbourhood' and suggests that people may think about the availability of open space in a broader, city wide context.

Significant emphasis was placed on Hagley Park, and those living in close enough vicinity to be able to enjoy the space spoke highly of it as a neighbourhood and city asset. Positive comment was also made about trees, and particularly street plantings. This suggests that street plantings are making a positive impression on people, and perhaps going some way to alleviate, or take the edge off, city living. However, these comments cannot be taken to suggest that street plantings are sufficient a substitute for open and green space.

Developers were not clear where reserve contributions were spent, and did not belief it was necessarily in the zone in which they were paid. This idea was even disregarded by one developer on the basis that people in the Living Three recreate in other parts of the city, not only in their immediate vicinity. However, another developer suggested that reserve contributions could be put towards street beautification and 'undergrounding' of overhead powerlines. This is particularly so in situations where reserves are low and streets are being utilised to compensate for a loss of open space.

The character of a neighbourhood has a significant impact on the level of enjoyment people experience. This research shows that residents of those areas of the inner Living Three ring that have lower amenity, specifically through a lack of quality green and open space, have lower levels of permanency. This may be improved if the value of open and green urban space is acknowledged and incorporated into housing design.

design guides

This research found that developments currently being produced in the study area are not completed in consideration of the City Council's L3 zone design guides. One developer was

not even aware that the design guide existed, and others shrugged them off. This supports Biddulph and Punter's (1999) finding that non-regulatory design guides lack effectiveness. Christchurch developers are not required to account for design factors in development proposals, and are well aware of what is and isn't required by Council plans.

Developer's motivation in producing developments appeared focused on units as individual entities, rather than the design of whole complexes. A great deal of emphasis was placed on interior finishings. Also, and to the benefit of residents in terms of energy efficiency, developers gave precedent to a buildings' orientation to the north sun over any desire to have buildings with a street frontage. This may be problematic in terms of arguments presented in the literature that stress the importance of the interconnectedness between developments and the broader context of the area (MfE, 2005; Jenks, 2000; Frey, 1999). Any consideration of broader aspects of urban design made by Christchurch developers was in terms of desirability from a customer, or sales, perspective.

Developers considered they would benefit from a long term 'vision' or Council directive as to the character and identity of place to be enhanced or safeguarded. This attitude is similar to that found in other studies that developers seek guidance, without being stifled (Dixon and Dupuis, 2003; Biddulph, 1999).

One developer considered it was hard to do what they were doing as a consequence of what were considered to be significant constraints in the City Plan. There was a somewhat cynical belief amongst interviewees that if a project proposal stayed within the rules (for example, relating to height and distance from the street frontage), a developer could do whatever they wanted. Controls over recession planes, setbacks and continuous ridgelines were accepted but mocked for their perceived ineffectiveness. One developer believed the rules were the catalyst of poor architecture and the sameness of building design. Another developer felt discouraged by the inflexibility of storage rules when, believing garage space was sufficient for storage, he found himself obligated to develop an area set aside as communal space into service areas. This same developer was then frustrated by site coverage rules when he found he could not put roofs on the service area as that exceeded his site coverage allowance. Rules relating to the

provision of private outdoor space forced particular architecture outcomes[46]. As a result, the outdoor areas of apartments were segmented and allotted to individual units.

the industry

Developers certainly felt they had the ability to influence the market. However in contrast to the desire that developers exhibit a commitment to urban design (UDP, 2005), it is the competitive nature of the industry and achieving of market position that drives production aspirations. In competition with each other, as well as with themselves, one developer sought market position by looking to competitors work and pitching products according to that standard. Another assessed what other developers were doing and set out to differentiate developments, principally by location and site layout. Those who produce a number of developments found they out-do their own earlier work, and draw on feedback from clients as to how to improve units.

This market orientation drove developers to build professional networks, or relationships with other members of the development industry. Developers indicated that the size of ones professional network was paramount, although no formal networks were in place. Real estate agents were influential as to where development took place. Some developers rely on agents to provide information about upcoming land sales and bringing prospective properties to their attention. Other developers relied on other members of the industry, such as valuers, for this information. Computer programmes and land ownership data also disclosed patterns of ownership. In cases where one individual owned a significant portion of a city block or whole street, a developer may approach them directly to negotiate a purchase.

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[46] (Living Zones 4.2.8) Outdoor Living Space – residential activity (a) each residential unit with a room on the ground floor shall be provided with an outdoor living space … (minimum area) 40m2 (minimum dimension) 3m (c) screened by a wall, screen or landscaping, to atleast 1.5m in height … constructed with materials in harmony with the unit (CCC, 2004)

Through their position within the industry, real estate agents drive development standards. They are able to dictate what will and will not sell or, alternatively, what they were prepared to market on a developer's behalf. This became evident when one developer expressed an interest in producing a product different from 'the market standard', but was discouraged by an agent when told it would not sell. Another developer was taking extensive advice from his agent as to what features to add. In contrast, one agent observed that the advice he had offered about space and facilities has been disregarded.

The ability of developers and agents to influence the market is only beneficial if they are aware of the changing desires of those who ultimately end up in residence. If market interpretation is incorrect, or wrongly directed, this may result in the production of tracts of housing unsuitable for the resident population. It is also important that the motivation to obtain sales does not stifle innovation in what is produced. Alternative styles must not be discouraged by a tendency to stay with the 'tried and true'. The lack of attention to broader issues of urban design makes arguments for the benefits of site specific urban design (MfE, 2005; Carmona, 2002) somewhat irrelevant and suggests that greater attention should be given to creating benefits and incentives that may bring developers to apply urban design principles.

constraints and incentives

Concern about carparking evident in the literature (MfE, 2005; ARGF, 1998; Goodchild, 1997) was repeated in this study where developers reacted strongly to the necessity to provide on site parking for two vehicles per unit, as well as a portion of space for visitor parking[47] and maneuverability or turning space. The more units produced, the more space necessarily provided for motor vehicles. Developers felt these rules restricted design and caused sites to be dominated by asphalt. They also constituted a considerable percentage of the overall cost of the developments. One developer, who had attempted to manage the space differently, had

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[47] (Transport 2.2.1) Residential activities generally … residents: 2 spaces (1 garageable)/unit + visitors: 1 space/5 units, with manoeuvring and queuing space

been required to incur significant additional costs having plans redrawn with one extra park. Another, hoping to avoid unsightliness of rows of garages along the front of his development, had had to construct an accessway around the back of his development to the standard of a main road as a consequence of the volume of use. Other developers had attempted to overcome carparking constraints by providing underground parking space at significant additional cost.

Another significant cost was the reserve contributions. Although the payment of these contributions did not appear to be resented by developers, one did comment there was never any indication or report back as to where or on what specific contributions were spent.

In asking what Council could do to aid the development process, the response was speed up the process as "time was the killer". The suggestion that time constraints effected the incorporation of design (Gibson et al, 1996) was apparent in developer's comments that avoiding delays with notified consents and potential hearings was a primary concern. Developers did not consider Council staff were time sensitive and had no idea about costs. They expressed frustration that information relating to their proposals was not passed on in a timely manner. However, one developer did have a sense that Council had "lost a lot of experience". This may account for time related issues, but does not present a case for undue consideration to be given by developers.

One developer described Councils and Banks as the "masters" of developers, or the most difficult players to deal with. To get something from one generally involved getting something from the other. It became a frustratingly cyclical process when getting consent requires financial bonding, but no money can be loaned without consent. In dealing with these two "masters" it was perceived each had a lack of consideration or understanding of the other.

Developers felt Christchurch presented real advantages in terms of land. A major advantage is the city being so flat. This means development is possible relatively anywhere and translates into cheaper production costs, particularly compared to hillier cities where elaborate engineering may be necessary for even the most simple projects. Developers also suggested a

positive factor to undertaking development in Christchurch was the cost of land. The process of acquiring land for development was dominated by a quantitative assessment to determine if the desired product could be produced at an acceptable return. While land was still not considered cheap, it is significantly cheaper than in Auckland or Wellington. For one developer, this provided the opportunity to offer properties to 'entry level' investors, or those without a significant capital backing. For another developer, the cost of land meant it was easier to 'get going' on less money.

The Christchurch developers interviewed did offer ideas for incentives that they believed would aid them in the development process (also see *Affordability*). One developer proposed the idea of being able to 'bank' "brownie points" where good developments earned a developer greater assistance or 'fast tracking' on more complicated or costly developments. Others offered suggestions in respect of rules, such as zoning by specific street, to ensure context and significant sites were maintained, or a zoning line that was fluid or flexible.

strategies

Despite the media campaign, survey respondents did not exhibit much awareness of the Greater Christchurch Urban Development Strategy. Only 29% of respondents indicated they had heard of the Urban Development Strategy. Of this group, only three considered they were familiar with the Strategy, and two had made submissions. Further, survey results showed the Strategy failed to attract the attention of people in the 18 to 34 year age bracket, who this research found were the group who most highly valued pedestrian streets, public transport and open space, and, are mostly likely to choose a form of transport other than a private motorvehicle for getting to work.

The low awareness was disappointing as the residents within the study area are best positioned to reflect on higher density as it currently occurs in Christchurch. Their experiences may have made positive contributions to policy development. They are those most likely to be effected by a policy of urban concentration, both in terms of intensification of development and activity. In terms of the literature (Jenks, 2000; Williams et al, 1996) the lack of awareness of

the Strategy for the study area's population will need to be rectified if application of a policy of urban concentration is to proceed successfully. This is because, not only is a change in their attitudes and behaviour necessary to achieve the goals of compact form, in terms of transport and use of services, but the process requires population stability for community to establish and acceptance of change rather than a NIMBY[48] type reaction.

Also of concern were the developers' belief that the cultural preference for individual Lots remained strong amongst the owner-occupier market in Christchurch. One developer considered significant pressure would be put on Council's by homebuyers to ensure continual provision of greenfield land for development and considered it was highly unlikely that a policy of concentration would result in reduced greenfield land becoming available. This may be problematic when developers, in their productive capacity, must envisage a market demand in medium density, or little or low quality stock may be produced.

collaboration

Irrespective of the emphasis the literature placed on importance of collaboration (Rowland, 1999; PCE, 1997), developers were skeptical about the ability to reach a collaborative relationship with Council. One developer considered the market focus of the private sector and bureaucracy disposition of Council staff incompatible; the respective philosophies and agendas too far apart for one to have an appreciation of the other. Developers held the view that they got very little help from Council. There was a general indication that building at density was not easy. One developer emphasised the amount of resources, such as scaffolding and construction staff, that became tied up in a medium density development. Developments are also complicated in terms of engineering and design. These factors add up, putting pressure on a project's profitability. Strong working relationships with Council staff were considered essential for negotiating the development process, but developers raised this in relation to concerns about time, rather than the outcome of producing better developments.

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[48] NIMBY refers to 'Not In My Back Yard'

The reconciliation of agendas can be difficult (PCE, 1997) and developers found their attempts to initiate better urban design thwarted by Council. One developer did not have the capital to purchase a last, smallish section around his development of 23 units and suggested that Council use his $80,000.00 reserve contribution to acquire the section, which was then valued at less than that amount. He was advised that this was not something Council did and the land was not acquired for reserve purposes. The land, with its near derelict dwelling still being rented, has now appreciated amongst the brand new developments. There is a real sense amongst developers that some parts of town benefit from greater levels of attention and revenue input than others. One developer requested the undergrounding of overhead power lines hanging suspended at eye level only a few metres from the edge of his developments third storey balconies, but was told not that the street he had built in was not a priority.

Some developers did consider that Christchurch was easier to deal with compared to Councils in other major centers due to it being relatively smaller, less busy and 'simpler' to deal with. This comment is noteworthy and should lead any collaboration-focused processes that Council's pursues to not result in increased bureaucratic processes or costs for developers. One developer considered the ease with which any Council can be dealt with relates to the extent to which that Council desires growth. At a point in the cycle when a Council sought growth, it would be easier to deal with, have more timely processes and provide greater levels of assistance. In contrast, it was thought a Council that was overwhelmed by development projects would invariably be slower and less able to give individual attention to new projects, described as the 'slowing down' and 'locking up' of development potential.

seven

This Chapter draws the research undertaken in thesis thesis together. It briefly presents the relevant debates to set the context in which results are concluded. From the findings, recommendations are made as to how the form and design of medium density residential development can best be achieved in Christchurch

conclusion

The move to a concentrated urban form extends from a strong sustainable model that recognises human settlements must endeavour to not exceed the capacity of the natural system. The globally recognised concept of sustainability has become a fundamental principle in planning the form of western cities. Attention is warranted given the unprecedented 'footprint' that urban areas make on the physical environment, and the risk that such impacts will increase if predictions of population growth in urban centres come to fruition.

Urban form is increasingly managed on the basis that sprawling suburban development is compromising the sustainability of human settlements. This form has been dominant in many parts of the western world and created major issues in terms of transport, energy consumption, environmental quality, open space, quality of life, infrastructure costs, community and identity.

It is argued that a concentrated urban form will produce positive results in terms of sustainability's 'triple bottom line' and the quality of life of urban populations. Environmental impacts are perceived through the preservation of peripheral land and energy saving transport strategies. Economic benefits are predicted through infrastructural savings and to businesses from a concentrated workforce. Social sustainability will come about through better community and access to services. However, it is questioned whether these claims are made

with sufficient foundation, and whether a concentrated form is possible given cultural housing preferences and market behaviour.

The principles of urban design are used to bring about this concentrated urban form. This practice, and its accompanying discourse, have been credited with the task of sustainably reconciling urban systems for the benefit of present and future generations. The key to urban design is interconnectedness and the practice offers a holistic, interdisciplinary approach for improving the design and functioning of the urban environment. Its critics question if the collaborative commitment needed is possible and stresses that policies of concentration must deliver to the community the benefits it promises.

Design will be particularly relevant in the residential environment. Housing is central to people's lives and the residential environment is where good design principles are most important. When an urban boundary cannot be extended, but development continues, the result is an increase in the density of the residential environment. This brings change, the acceptability of which is dependent on the quality of housing produced and its integration into the existing physical and cultural environments. Acceptability of housing concentration in the residential environment varies as a result of people's perceptions and experiences of the process and its impacts. Policies of urban concentration invariably compete with 'live in the countryside' desires. To be most acceptable, the form and design of an inner city residential environment must bring together the qualities and atmosphere of the city with privacy, quietness, space and parks that are the qualities of the suburbs.

In the midst of these debates, initiatives continue around the world to bring about a concentrated urban form. In New Zealand, there are a number of strategies and policies that advocate sustainability and concentrated urban form through design. The Greater Christchurch Urban Development Strategy is such an example, bringing together an array of stakeholders, engaged with the community, to negotiate the future form of Christchurch's residential environment.

The aim of this research was to examine the extent to which a policy of urban concentration would be consistent with the consumers and providers of medium density housing in Christchurch. The research sought to determine the acceptability of three-storeyed, attached townhouse developments to residents, and understand the practises and motivations of housing developers in Christchurch's "Living 3" zone. These market players have very different objectives in respect of the form, quality and design of housing, how new housing is integrated into existing contexts and aspects of liveability. It is useful to understand these market actors and agents, the processes they face and the issues and concerns they must overcome in a changing housing environment.

The study area for this research was the inner city 'ring' of Christchurch's Living Three zone. This area, set aside in the city plan for 'medium density', sits between the higher density central city and lower density outer suburbs. It acts as a transition zone between the two and attempts to balance the height and mass of the built form with open and green space. As a consequence of the Greater Christchurch Urban Development Strategy it is this zone which is most likely to be impacted by a policy of urban concentration.

To achieve the aims of this study, primary research was undertaken in two parts. A survey of residents and interviews developers and property agents provided qualitative and quantitative data. A number of themes drawn from the urban design framework, and set within wider debates about sustainability and compact urban form, were used to support an analysis of the research findings and assess how future production may be varied to produce the best medium density housing alternative for Christchurch.

There are a number of arguments for and against living in inner city environments. The Christchurch inner city, and its apartment market, offers a new and distinct residential form in a unique location. This research suggests increasing numbers of people are being drawn to inner city living in Christchurch, and there appears to be a small but highly satisfied permanent population. This population is diverse, particularly in age, highlighting the need for policy and design principles to be dynamic and responsive to reconcile the population's needs and demands. Also, if Christchurch is to be successful in applying a policy of urban

concentration that achieves its sustainability objectives, it will need to continue to attract 'lifestyle' seekers, but offer an environment that will encourage a number to remain and join the already permanent population.

The process of urban concentration seeks to contain the area that can be developed for housing and improve the quality of environment within the existing urban boundary. The appeal of the inner city as a location will become increasingly important as housing density increases. However, concern about amenity highlighted in this research suggests insufficient attention has been paid to this issue. Of particular concern is the apparent disregard of the Living Three zone's policy objective to balance built form with open space and planting. The provision of open and green spaces is vital in the application of policies of urban concentration, and particularly in areas where levels of open and green space are low, for their contribution to quality of life. This research found greater attention must be directed to the provision of green and open space in the south and eastern sections of the inner Living Three ring. This must go beyond street planting and the setting aside of corner reserves. Developments produced with no or limited vegetation must be scrutinised, and on-site landscaping and open space be incorporated into design. In the absence of public space, the private realm must compensate and it may be useful to consider land rather than monetary reserve contributions, with public sector management and maintenance programmes, to balance developments in low amenity areas.

The importance of context and maintaining local character are strong themes in the urban design literature. Maintaining the 'Garden City' concept is an important aspect of Christchurch's image making, however the current form of medium density housing does little to support this. Further, that the inner city Living Three zone takes in many of the oldest suburbs in the city has clearly been overlooked. There is nothing about the units that are being produced in Christchurch to suggest any consideration has been given to context. While many sections of the zone are quite rundown, this disregard has irreversibly compromised the form and context of parts of the Living Three zone to the extent that subsequent calls to maintain context are of little consequence. A lack of leadership in regard to context may be compounding design issues. It is recommended that some contextual direction or target for

the zone be set. This would provide developers with the direction they appear to seek and provide a standard by which future developments could be measured to prevent further decline of the area.

Transport is a strong theme within the compact city debate. However, results of this research suggest that convenience of location and accessibility to services were not a strong consideration in the transport decisions of inner city residents. In contrast, there was a correlation between transport choices and age, presenting the possibly that awareness or concern of sustainability issues and environmental impacts may be age related and that some groups are making more conscious transport decisions. This may be problematic if inner city housing choices are taken up by groups who do not change their behaviour to embrace 'soft mode' transport choices that a concentrated urban form demands. Further age/transport related research would be useful to test this hypothesis and determine what hurdles different groups perceive. In the case of similar results, education campaigns may be useful.

Quality of life in terms of community, privacy and security become interconnected in discussion of housing density. This research found residents of Christchurch's inner city apartments are not establishing social relationships with those around them. However, the apartments did not generally provide occupants with any sense of privacy, particularly due to overlooking, neighbouring units. If this proved sufficient invasion to cause people to withdraw into their homes, or resent their neighbours for the perceived intrusion, it could have long term social consequences and raise issues around personal security. Higher density designs are not supportive of urban concentration policy if they cause people to become remote from those around them, and feel they can not approach others for negotiations or assistance. Further, it is concerning that residents of Christchurch's medium density zone appear to have already reached their social limit to density, given that processes of intensification have hardly begun. This is a quality of life issue. The appropriateness of current designs must be examined and changes made to create the environment people desire in terms community, privacy and security.

This research raises a number of concerns as to the long term sustainability of the inner city medium density apartments. The form and quality of housing will be major contributors to the success of a policy of urban concentration in Christchurch. Developers face, or perceive they face, a number of constraints. These come as a result of success in the marketplace which encourages them to stick to forms of development they know have proved to do well in the past. Another constraint is the need to ensure the profitability of their projects by limiting unpredictable costs. Without strong market demand to push them past these obstacles, it may be difficult to encourage developers to embrace urban design principles in their designs. Educating the market as to what 'good' development is, or can look like, may be a useful, alternative course to bring about new market demand. Christchurch presently has a number of large, well positioned sites and this research recommends one be utilised for the production of a model development through a real partnership between the local authority and developers. Where such a model could be developed however, stakeholders would need to overcome the desire to assume sole responsibility or, equally, willingly give their role away. This would provide the opportunity to demonstrate a truly collaborative effort as well as give various tiers of government the opportunity to present, on the landscape, those concepts its promotes.

The apartments are serving the dual purpose of accommodating strong investor demand and providing an alternative housing choice within the rental market, particularly for young people living in 'flatting' arrangements. However, they are failing to meet owner-occupier demand, particularly of those who will make the greatest contribution to a concentrated urban form in Christchurch. This research found that those aged 25-34 are making the move towards the inner city and, once there, they presented a stable population. Significantly, this group exhibited the most potential to embrace compact city ideals. They placed the greatest value on public transport, and were most likely to choose an alternative mode of transport to work from the private vehicle. Those in this age group who participated in this research predominantly worked in the central city, suggesting that their place of work may have factored into their decision on where to live. They also valued the central city as an 'urban centre' for services, shopping and as a transport hub. Following demographic trends, this group will comprise smaller households of single status. While this research found this age group does necessarily value community, as a consequence of their household structure, they may seek the social

vitality that higher density, inner city living is considered to produce. That younger people are struggling to enter the housing market does not provide cause for the production of a housing stock completely beyond financial reach, or to produce a housing stock for the sole purpose of the relative short term gain of an aging investor population. This thesis recommends that greater research be undertaken into the medium density housing aspirations of those aged 25 to 34 and that such research necessarily engages debate about financial options such as rent to own schemes.

The long term sustainability of these apartments is also questioned given respondent's concerns about quality. There are a significant number of two and three bedroom units produced. As well as meeting demographic trends, this smaller size enables developers to fit a greater number of units on each site. However, as a consequence, many units barely meet the living requirements of the current occupants in terms of liveability issues such as space and storage. An emphasis away from an investor market to an owner-occupier focus may also force developers to give less consideration to aesthetics and more to how the units are going to be practical for living in. The apartments do appeal for a number of reasons. However, many of these are a reflection of disenchantment with the high maintenance, age and very low quality of the suburban alternatives prevalent in Christchurch's rental market. There were also numerous negative comments about the form and quality of the apartments, which reinforces that people are choosing this form of housing because they are looking for something different, and not because of a particularly high standard these apartments achieve.

Issues of quality have implications for the wider city. Both developers and occupiers of medium density housing in the study area interpret the zone with the same east/west division that has seemingly become ingrained in Christchurch. This has produced an imbalance within the inner Living Three zone, an unequal distribution of services and facilities and dramatically different levels of amenity. The study area encircles the central city and tourism sector of Christchurch. If development continues in its current guise characterised by barrenness and low amenity, and speculation about poor quality production and a lack of maintenance of apartments is realised, the inner city Living Three zone will appear on the Christchurch urban landscape as a very bleak ring.

Christchurch developers suggest there are various local constraints to development that must be overcome. Regulatory and non-regulatory mechanisms in place to manage Christchurch's medium density form do not appear to be working to the best advantage of the Living Three zone. Developers appeared to seek some sort of direction from Council. They were not against the idea of this direction being regulatory, as it seemed easier for them to deal with clear guidelines. However, the tight regulatory framework, based on the application of rules, is causing developers are shying away from negotiating better housing form because they perceive the system as inflexible, time consuming and expensive. This system is disadvantageous to attempts to apply urban design principles. Both developers and regulators must be open to finding some middle ground if good design has any chance of finding its way into the inner Living Three ring.

Developers had valid suggestions as to what would make the development process simpler or easier. They are skeptical about the prospects of useful collaboration, and without changes to the regulatory system it is difficult to see collaboration extending beyond the working relationship necessary to get projects through. Developers appear to do what they have to do to keep Council on side and ensure their projects get the necessary 'go aheads' for it to proceed. A comment about the relative simplicity of dealing with less complicated Council processes is something that Council should attempt to maintain, as well as look at ways of ensuring this continues. It is important that an understanding of the market be part of any plan. Collaboration may necessitate involving developers in formulating District Plan rules. The extent of such engagement cannot be recommended but, given their role in producing and influencing the residential environment and market, it would seem highly beneficial for decisions to be informed through developer's experiences to some degree. This research recommends those involved in on-the-ground production be engaged in discussion about design and given the opportunity to participate in a collaborative formulation of a "design guide", to increase the depth of understanding, if current form and design problems are to be overcome.

The number of themes presented in this research highlights the extent of the issues Christchurch will face as a policy of urban concentration is applied to the inner city area. The medium density developments that have been the focus of this study do not present an acceptable design solution if such a policy is to be successful. The application of urban design principles may go some way to helping integrate these development, however attention must be focused on the cumulative effects of medium density developments in the inner city Living Three zone for the long term sustainability of the area. Those responsible for the inner city Living Three zone's form work in isolation of each other. Collaborative efforts are needed to develop regulations and guidelines that reflect greater understanding of the constraints faced by producers. Equally, responsibly must be taken for the long term utility of the medium density apartments constructed, and producers must compelled take account of liveability aspects of these developments for residents as consumers. Only through better understanding will the design, form and function of Christchurch's inner city medium density residential environment improve and meet the city's sustainability objectives.

postscript

In the weeks leading up to the completion of this thesis, I secured a contract of employment with the local city council. Almost immediately I became aware of an Issues and Options paper entitled *"The Design and Scale of Buildings within the Living Three Zones"*, due for presentation and release in March 2006.

The report opens by stating;

> "Over the last ten years … the Council has received a considerable about of feedback … that the design and/or quality of a number of residential multi-unit developments within the inner urban areas … have not always been of an adequate standard".

The report identifies a number of issues relating to the effectiveness and ability of the existing plan to achieve the desired outcomes for the Living Three zone. It concludes by recommending that a detailed assessment be undertaken in relation to the design, bulk and location of buildings in the L3, and that draft changes to the Plan be prepared.

This Council report supports the underlying argument of this thesis that the form of medium density housing in Christchurch's Living Three zone needs to be addressed, and gives this researcher hope that this will be the case.

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table of appendices

appendix one

greater christchurch urban development strategy options

These maps (available at http://www.greaterchristchurch.org.nz/Options/) indicated where development in Christchurch would generally occur.

The Business as Usual option proposed continued current trends with the spread of development out around the Greater Christchurch area in new subdivisions, with some housing in urban renewal developments.

Option B proposed to balance future urban development between existing built areas, with particular attention to key focal points, and some expansion into adjacent areas.

Option C proposed to disperse development out around the Greater Christchurch area away from established urban areas.

Option A *see* page 2.

Business as Usual option
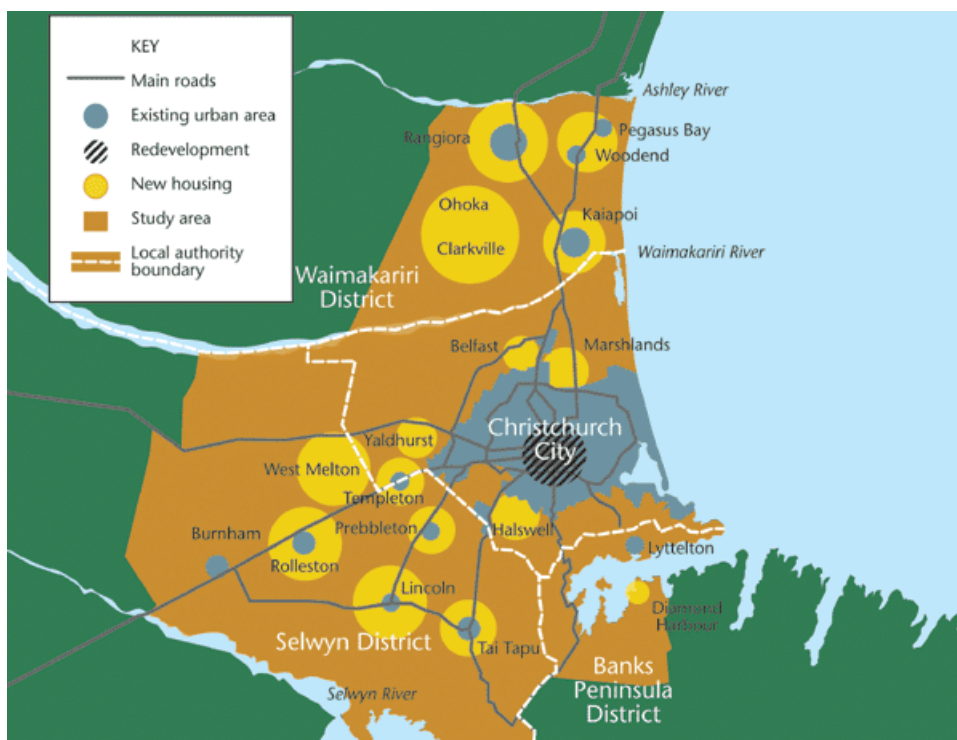
Option B Consolidated form
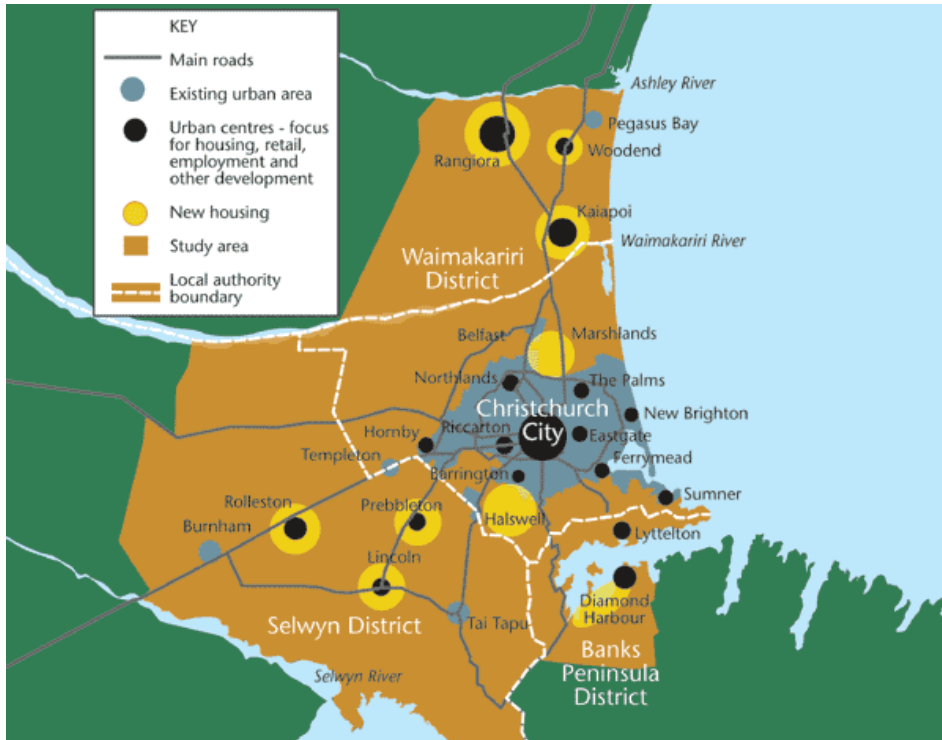
Option C Dispersed form

appendix two

university of canterbury human ethics approval

Ref: HEC 2005/36

30 May 2005

Susan Lilley
Geography
UNIVERSITY OF CANTERBURY

Dear Susan Lilley

The Human Ethics Committee advises that your research proposal **"Acceptability of Residential Density; a review of Christchurch's Living 3 Zone"** has been considered and approved.

Yours sincerely

pp. Wendy

Dr Catherine Moran
Interim Chair

appendix three

weekly published real estate magazines sourced

Canterbury Bluebook
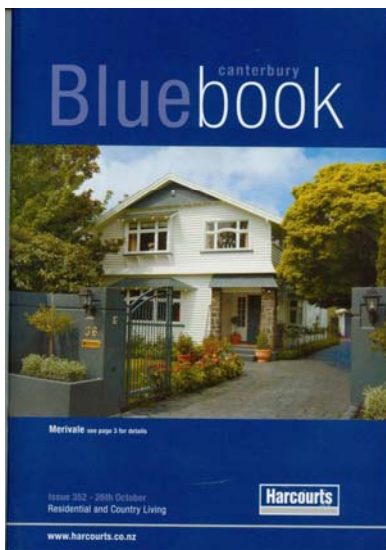
Issue 322	current from 23 March
Issue 323	current from 6 April
Issue 327	current from 4 May
Issue 329	current from 18 May
Issue 331	current from 1 June
Issue 338	current from 20 July

Christchurch and Canterbury Realtor (Volume 25)
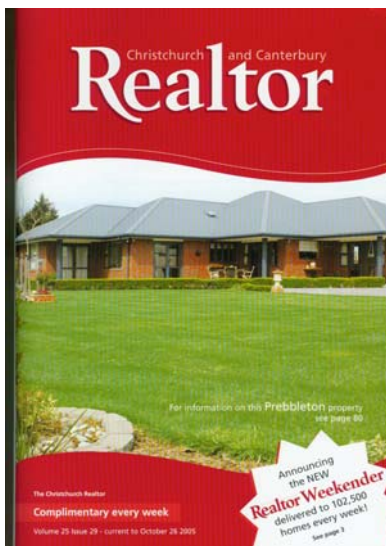
Issue 5	current to 11 May
Issue 8	current to 1 June
Issue 12	current to 29 June
Issue 13	current to 6 July
Issue 14	current to 13 July
Issue 15	current to 20 July
Issue 16	current to 27 July
Issue 17	current to 3 August
Issue 23	current to 14 September
Issue 25	current to 28 September

appendix four

photographs of potential survey sites

appendix five

survey

RESIDENCE

Where was your previous home?
Street _____
Suburb/City _____

What style was your previous home?
(eg detached house, townhouse, unit/apartment?)
_____

If a townhouse or unit/apartment ONE of how many [ ]

What were the advantages of your previous home for you?
(eg Location, Design, Features, Size, other) _____
_____
_____

What were the disadvantages of your previous home for you?
(eg Location, Design, Features, Size, other) _____
_____
_____
_____

Was your previous home owned by you and/or your spouse/partner? | Yes | No |

If yes, was it sold to enable you to move? | Yes | No |

Why did you move? _____

How long have you lived at your current home?
Months [ ]
Years [ ]

Did you *specifically* wish to live in a unit/apartment?
| Yes | No |

What features attracted you to your current home?
(eg Price, Location, Design, Size, other) _____
_____
_____

What are the advantages of your current home for you?
_____
_____
_____

What are the disadvantages of your current home for you?
_____
_____
_____

Is your current home owned by you and/or your spouse/partner? | Yes | No |
If owned, is it your first home? | Yes | No |
If owned, is it mortgage free? | Yes | No |

Having lived in your current home, and knowing what you know now, would you move there again?
| Yes | No |

(please comment) _____
_____

If you had to make choice, where would you prefer to live?
Similar unit style/different neighbourhood [ ]
Different unit style/same neighbourhood [ ]

(please comment) _____
_____

How many adults live in your home?
(those 18 years & over) [ ]
What are all their ages? _____

How many children live in your home?
(those under 18 years) [ ]
What are all their ages? _____

SPACE

In your home, how many...

Bedrooms are there? [ ]

Bathrooms are there? *(including ensuites)* [ ]

Car spaces in a lockable garage? [ ]

Outdoor car parking spaces allocated solely to your unit? [ ]

Is your unit's car parking space used for any other purpose?
(eg trailer, boat, storage, washing line, laundry, by other people
| Yes | No | **(If yes**, what purpose) _____
_____

Do you find the household storage space adequate?
| Yes | No | **(If no**, why not) _____
_____
_____

Does your unit include private outdoor space? (please tick)
Outdoor ground floor/courtyard [ ]
Balcony [ ]
Other *(please specify)* _____

What do you see are the positives about your home's private outdoor space? _____
_____
_____

What do you see are the negatives about your home's private outdoor space? _____
_____
_____

What design changes would you like to make to overcome these? _____

_____

_____

Do you feel the interior layout of your home provides adequate personal space for occupants?

Yes	No

(please comment) _____

_____

Does your development include an outdoor communal area?
(eg for clothes lines, bbq area, landscaped gardens, lawn, other

Yes	No

If yes, please comment) _____

If yes, do you use the outdoor communal area?

Yes	No

If yes, for what purpose? *(please write)* _____

_____

What do you think about your developments outdoor communal area(s) *(eg function, appearance)* _____

_____

_____

What concerns would you have regarding use of outdoor communal area(s)? _____

_____

_____

Do you think your development has a good balance between private space and 'public'/communal space?

Yes	No

(please comment) _____

_____

Do you like the physical appearance of your residential development? *(eg attractiveness, aesthetics)*

Yes	No

(please comment) _____

_____

What do you think about the design of grounds around your development? *(eg function, appearance)* _____

What do you see are the positives about the landscaping around your development? *(eg function, appearance)* _____

_____

What do you see are the negatives about the landscaping around your development? *(eg function, appearance)* _____

_____

_____

COMMUNITY

Do you feel a "sense of community" with people living in other units in your development?

Yes	No

Is it important to you to feel a "sense of community" with people living in other units in your development?

Yes	No

In the last 12 months, which of the following types of contact have you had with people in your housing development?
(please tick as many as apply)

Negative contact where there's outright tension or disagreements	
Some negative contact; for example not getting on with them	
No Contact	
Some positive contact such as a nod or saying hello	
Positive contact such as a visit or chat, asking small favours, neighbourhood watch etc	

Do you feel the physical structure of your housing development contributes positively to a "sense of community"?

Yes	No

If yes, in what ways? _____

_____

TRANSPORT

How many private motor-vehicles are normally available for use by your household? *(individual or communal use)*

**How many bicycles are normally available for use by your household?** *(individual or communal use)*

What is the location of your workplace/business?
Street _____
Suburb _____

From your home, how would you typically travel to ...

please tick **one** transport option for each destination	On foot	Bicycle	Private Car	Taxi	Bus	Other (please write)	Not Applicable
Movie theatre							
Bar/Café							
Supermarket							
Doctor/Specialist							
Hairdresser							
Specialty Store (eg butcher, bakery)							
Workplace							
School/Creche							
Church							
Shopping Mall/ Retail Centre							
Bank/ Money Machine							
Park/Reserve							

X

The map below indicates areas of Christchurch that currently function as "urban centres" for services and shopping, and as transport hubs. **Please circle the area you regard as your main "urban centre"**
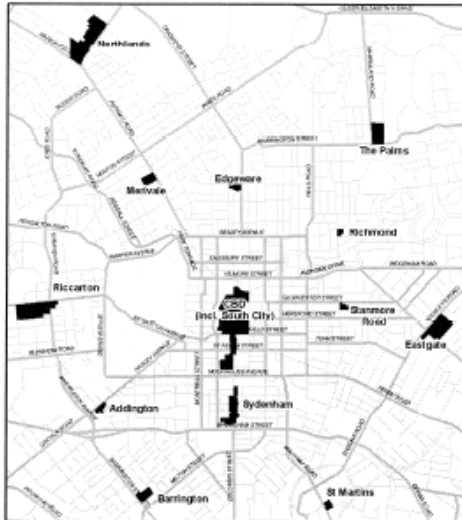
Other _____

URBAN DEVELOPMENT

Have you heard of the Greater Christchurch Urban Development Strategy?

Yes	No

If so, do you consider you are familiar with the Greater Christchurch Urban Development Strategy?

Yes	No

Did you make a submission on the Strategy?

Yes	No

Which are most important to you? (please tick as many as apply)

Pedestrian friendly streets	
The ability to access shops/services without using a car	
Public transport options good enough to use	
Increased people/activity on the street	
Increased people/activity on the street if this resulted in greater safety /security (eg personal, vehicle, dwelling)	
Familiarity with people on the street/knowing people by face and/or name	
Quality of life through urban amenity/green or open space	
Privacy in your home/outdoor private space	
Sense of Community	

From your neighbourhood, to what extent do you get a sense of Christchurch as "the garden city"? _____
_____

Do you think your neighbourhood contains enough open spaces? (eg parks, reserves)
(please comment) _____

Yes	No

Do you consider you can easily access a public open space from your home? (eg a park, reserve)

Yes	No

By what method would you travel to this space?
_____

DEMOGRAPHIC

Are you?
Male
Female

Which of the following age groups are you in?

15-24	25-34	35-49	50-64	65+

Which ethnic group(s) do you identify with?
_____

What is your households total income?

less than $25,000		$50,001 to $70,000	
$25,001 to $30,000		$70,001 to $100,000	
$30,001 to $40,000		more than $100,000	
$40,001 to $50,000			

Do you have a disability or long-term medical condition that restricts how you get around?

Yes	No

ADDITIONAL COMMENTS

_____
_____
_____
_____
_____
_____

Would you be prepared to answer additional questions in person?

(**If so,** please provide name and contact/telephone details)

Thank you for participating in this study.
Your contribution is greatly appreciated.
Please feel free to contact the researcher should
you wish to further discuss this research.

appendix six

survey information letter

Does your home
work for you?

UC
UNIVERSITY OF
CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

There has been little research into what people like and/or want to live in. I am a University of Canterbury researcher working to identify the positives and negatives of different residential developments. Your experiences could assist the future planning and production of peoples' homes.

My research involves a survey which is *overleaf* and *I would very much appreciate your time and effort in filling it in*. The survey involves a series of tick boxes and short answer questions, and should only take approximately 15 minutes to complete. Please feel free to add additional comments.

I will collect the survey on <u>Saturday 2nd July</u>. If you will not be home, I ask that you leave the completed survey outside your front door. Alternatively, it can be posted to me at the address below.

For your information, my project has been reviewed and approved by the University of Canterbury Human Ethics Committee. It has been developed through discussions with members of the Greater Christchurch Urban Development Strategy team. You can be assured that your answers to the questions will be treated confidentially, and your name and address will not be associated with the completed questionnaire. Your informed consent will be implied by voluntary participation

If you have any questions I can be contacted on telephone 364-2987, ext 8265. Enquiries can also be made through my supervisors, Dr Simon Kingham (Geography), telephone 364 2987 ext. 7936, or Professor David Thorns (Sociology), telephone 364 2168.

Yours sincerely

Susan Lilley
Department of Geography
Private Bag 4800
University of Canterbury
Tel: 364 2987 x 8265
Email: sjl91@student.canterbury.ac.nz

XII

appendix seven

survey collection reminder card

Does your home
work for you?

UC
UNIVERSITY OF
CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

I dropped a survey into your letterbox
about research looking at
the positives and negatives of different residential developments

I would really appreciate you filling it in
and
I will call to pick it up from you tomorrow

My contact phone number is 364-2987 ext 8265

appendix eight

topic guide / suggested questions for developers

- Length of time building residential units (particularly in Christchurch)

- How many dwellings units do you build annum
- Where are they predominantly located
- New Greenfield areas
- Existing build up urban areas (infill or redevelopment)
- On business zoned land

- Patterns of development activity

- Give a couple of good examples of residential intensification from your viewpoint, and why

- Major factors necessary to make residential intensification attractive to building industry

- How could / do local authorities encourage residential intensification,

- Do you feel that developers are included sufficiently in local authority development related decisions

- What do you think of the following types of policies? Would they encourage you to do more higher density development
    - Waivers of zoning requirements
    - Fast-track permitting
    - (Mandatory set-aside) Provision for minimum % of units as 'affordable'
    - Waivers of fees / land deductions (eg reserve)
    - Fund for developers of 'affordable' to draw on – would you utilise such a fund

- What policies would you like to see to aid your development process, or encourage you to incorporate an 'affordable' or mixed component into your sites.

- With reference to UDS options, from a developers point of view do you have a preferred option?

- What are the hurdles you see in developing on 'brownfield' sites

- Have you had any development proposals declined? Which/where/what reasons?

- What are the advantages/disadvantages of developing in Christchurch – What attracts you to Christchurch – What does Christchurch offer you as a developer.

o What is your impression of consumer demand in Christchurch; who/which groups are driving the market? To what extent do developers have the ability to persuade or influence consumer choice?

o Throughout the development process, how do you decide what features to add to residential units? ie how do you decide what consumers want – which groups do you seek advice from?

o Did you have your own design goals or a vision for this development, and where do you draw your ideas and/or influences.

o *How does [this project] reflect on lessons from previous developments you have worked on? What lessons were these and how have you incorporated them into the project?*

o The Urban Design Protocol suggests/recommends developers collaborate and undertake *Development Land Identification Studies* and *Land Banking Strategies* – how do you find out about available or upcoming development land? which groups are involved?

o *The Urban Design Protocol seems to place some onus on developers to achieve urban sustainability.* What do you see is your role, as a developer, in helping to achieve urban sustainability?

o What consideration do you give to how many units on site in relation to closest open space, location of bus/transport, services/shops – What would encourage you to take consideration of these things?

o What hurdles do you typically come across in the development of sites to medium density?