



**SOCIAL IMPLICATIONS OF HOUSING
INTENSIFICATION IN THE AUCKLAND REGION:
ANALYSIS AND REVIEW OF MEDIA REPORTS,
SURVEYS AND LITERATURE.**

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Executive Summary

This report is the outcome of a review of community surveys, media articles and research literature relating to the links between intensification and social issues, both in New Zealand and internationally.

The project is part of the Auckland Sustainable Cities Programme (Urban Form Design and Development work strand) which is a partnership between central government and local authorities.

To respond proactively to considerations relating to intensification and social issues, Auckland City Council, Waitakere City Council, Housing New Zealand Corporation and the Auckland Regional Council decided to assess the perceived social impacts of intensification (both positive and negative) through analysis of local media coverage and community surveys, and then to compare these perceptions with national and international research literature to see if there was any support for the views expressed.

The surveys, media articles and literature reviewed all highlight the diversity of opinion on intensification and social issues. The literature indicates that this is a complex area, with no black and white answers to the various issues raised.

The surveys and media articles tend to concentrate on perceived connections between the design of intensive developments and future social problems, yet most literature acknowledges that social problems, such as ghettos and slums, are the result of a wide range of economic and social forces, with the built environment having only a marginal influence on these forces.

Most surveys and media articles concentrate on people's attitudes to their immediate day-to-day living environments, while the literature tends to concentrate on whether particular planning approaches (compact versus expansionist urban growth, for example) are better or worse in terms of different ideas about what constitutes good cities. There is little in the middle ground: what examples of development are leading to better social outcomes, which types of development are leading to worse outcomes. Also for those studies that do canvas this middle ground it is unclear whether their results are transferable to the New Zealand context.

Following a period of literature promoting intensification and highlighting the costs of urban sprawl there is now a growing body of research questioning the claimed benefits of intensification. This literature often argues that the case for intensification was based on flawed research or on social doctrine.

Research in the next decade could be expected to provide a middle ground and highlight the importance of sound decision-making processes, good design and flexibility and adaptability, rather than adherence to a particular doctrine.

Available research would suggest that social problems are likely to be minimised if intensive housing is:

- Well designed in terms of internal and external living spaces
- Well located in terms of being accessible to a range of services and activities
- Meets the needs of a diverse range of households in terms of income and demographics, that is, it is not associated with one particular group in society.

In the Auckland context, the initial focus of planning for intensification has been on accessibility with more recent attention to the design of developments. Achieving diversity and mix within intensive developments has received limited attention and may be the biggest challenge.

Key findings are summarised below under six different types of social impact.

Character, Amenity and Quality

Analysis of New Zealand surveys and media reports reveals significant concerns that intensified housing is associated with poor quality design and low amenity. Some of the specific issues raised include poor quality construction; concern about long-term maintenance; poor layout; insufficient space; and lack of integration with surroundings.

These views are not universal with many residents appreciating aspects such as communal facilities and common open spaces.

A key social implication of negative perceptions about quality is the risk of low acceptability and resistance to this form of housing, fueled by fears that intensive housing will become the slums of the future.

There is strong evidence of community resistance to intensification throughout Australia and North America. Intensification is often seen as a threat to preserving the character and heritage of neighbourhoods.

Perceptions appear to be influenced by a range of factors including prejudices based on past experience of high rise housing (in the 50s and 60's) as well as concern about the impact of change.

It is very clear that adherence to high quality design standards, appropriate to the local context, will be critical in gaining community acceptance to intensified housing, both in this country and overseas.

Community Cohesion and Identity

New Zealand surveys reveal widely divergent views amongst residents about the relationship between intensification and values such as the sense of community.

Some residents of intensive housing developments do not want to interact with their neighbours - some even expressing concerns about the mix of people in their neighbourhoods. However many residents of intensive developments consider the sense of community and diversity of residents as one of the main attractions of their neighbourhood.

There has been a recent spate of international research to empirically test claims that higher densities, mixed uses and pedestrian-friendly design can create more opportunities for social interaction.

Overall the research is inconclusive. In some cases intensification appears to result in increased contact with neighbours, but this does not necessarily translate into a strong sense of community. Other factors may also have to be present such as homogeneity of residents in terms of socio-economic status, yet this is quite contrary to the aim of achieving a greater mix.

Safety and Crime

Intensification is often argued to have safety benefits because of better surveillance of homes and public spaces from adjacent development and more people walking through and using public spaces. Public perceptions of higher density housing are

often at odds with this ideal, with communities concerned that higher density housing is associated with poverty and high crime rates.

International research into crime, safety, housing type and density, does not reveal any conclusive relationships between these variables – positive or negative.

Safety issues are increasingly being addressed, in Auckland, in the design of intensive housing developments (e.g. Crime Prevention Through Environment Design), although in many early developments, crime prevention did not feature highly in the design issues considered.

Health

The relationship between health and housing is complex and technical. Because the Auckland Regional Public Health Service is about to embark upon research into the relationship between health and intensification in the Auckland Region, only limited information has been reviewed.

A recent Auckland survey (part of this public health sector research), involved questioning 1,000 residents of both medium to high density housing, and single stand-alone dwellings, about their perceived health.

Whilst most people in both housing types rated their health as good, residents of medium to high density housing were more likely to feel that noise was affecting their health, whilst residents of single, stand-alone dwellings were more likely to feel that their health was affected by condensation.

International research on health and intensive housing is wide ranging. It includes research linking obesity with urban sprawl, as well as research noting the potential disbenefits from noise and air pollution when people live close to busy areas.

Recently, moves are being made to impose a number of health-related design standards on apartment developments in Auckland: minimum noise standards and unit sizes are being introduced, as well as mandatory balcony and outlook requirements, for example.

Access to Services, Facilities, and Amenities

Intensification is argued to improve access to services, facilities and jobs, reducing car dependency and travel time, and placing people within walking distance of many of their needs.

Planning in the Auckland Region has sought to locate medium to high density development close to services and activities, and/or close to transport services. The surveys indicate marginally higher use of passenger transport by residents of intensive housing developments, and lower rates of car ownership, when compared to non-residents in surrounding areas. It also appears that more people in areas subject to intensification is leading to a wider range of commercial services locating there.

Access to services and location close to activities ranked highly and positively amongst residents surveyed in local surveys. Residents generally felt that living in intensive developments meant that there was a convenience of being close to facilities such as schools, shops, cafes and restaurants, work, public transport, and green outdoor spaces among many others. In many cases, this was the most important factor in choosing to live where they did.

Internationally there is a large body of literature, and much debate about the effect of urban form on passenger transport usage (and travel patterns generally). Overall the balance of opinion still favours the argument that compact cities can achieve better utilisation of passenger transport. It is acknowledged, however, that the relationships between urban form and transportation are complex.

Equity

The equity implications of intensification are discussed under two headings:

- Whether intensification results in more or less social segregation and concentration of poverty.
- Whether intensification has other equity implications such as increased affordability

In the Auckland Region a number of commentators have suggested that there appears to be a process of social segregation occurring. This reflects broader social and economic changes, however intensification may be a contributing factor.

The media has adopted a negative focus on this issue associating a perception of cheap, overcrowded housing with intensified developments, especially in the CBD area.

If increased social segregation is occurring it is an issue in its own right, but also because there is evidence that the concentration of poverty is associated with poor health and high crime rates. In other words it is possible that intensification could indirectly have negative crime and health effects, through the process of social segregation rather than because of any direct link.

Planning in the region has not directly addressed issues of affordability. It was hoped that through increases in density and flexibility in terms of design, housing costs could be made more affordable through medium to high density developments. To date the experience suggests that while making housing more affordable for some groups in society, intensification has not reduced housing costs for those most in need.

Local surveys showed the issue of affordability was important for residents; in particular, many residents felt that intensified living had given them the opportunity to afford their own home, and was a good entry point into the housing market.

However the other side of the coin of affordability - that many developments appeared cheap and of lower quality than surrounding housing - were common concerns amongst non-residents in surveys. Similar views are reflected in media articles.

No international research was encountered that comprehensively analysed the cost of housing in compact cities relative to other cities. One confounding factor is that compact cities have tended to adopt compact city policies because they are desirable places to live, and therefore the cost of housing is already higher than in other places.

There is some evidence that compact cities can reduce travel costs - which is another very important aspect of affordability.

Report Objectives and Background

Introduction to Project

The objective of the project was to undertake a literature review relating to the links between intensification and social issues, both in New Zealand and internationally.

Report Structure

This first, introductory section covers the background to the study.

Section Two of this report provides a brief overview of each of the three components of the study – the survey analysis, the media review and the literature review. This highlights key findings as well as identifying any issues and limitations that were encountered during the research.

Section Three of this report provides a more detailed analysis of key findings, under the headings of the different dimensions of “social” issues.

Project Background

The project is part of the Auckland Sustainable Cities Programme (Urban Form Design and Development work strand) which is a partnership between central government and local authorities. To respond proactively to considerations relating to intensification and social issues, Auckland City Council, Waitakere City Council, Housing New Zealand Corporation and the Auckland Regional Council, have decided to firstly assess the actual and perceived social impacts of intensification (both positive and negative) through analysis of local media coverage, national and international literature reviews, and existing resident surveys in the Auckland region.

The project has arisen from the Auckland region’s compact city approach to urban growth. This approach is set out in the Auckland Regional Growth Strategy, 1999, and is now being brought into statutory planning documents through the provisions of the Local Government (Auckland) Amendment Act.

The Auckland Regional Growth Strategy seeks the containment of the urban area of the Auckland Region and the development of compact, higher intensity, mixed use areas in selected locations. Town centres and transport hubs (for example train stations) are a particular focus for growth. More compact extensions of the urban area are also proposed, along with the expansion of some peripheral (satellite) settlements such as Kumeu and Pukekohe. A copy of the growth concept is set out in Figure One.

A common public perception with a compact city approach is that a concentration of medium to high density housing will lead onto other social problems, with people typically referring to the Stateled urban redevelopment projects in the UK and USA of the 50s and 60s as examples of the types of problems that are likely to occur.

The social issues associated with different patterns of growth were investigated during the preparation of the Regional Growth Strategy. These investigations noted that there would be a range of implications for the well being of people and communities in relation to all the different ways of accommodating growth. Intensification did not necessarily bring with it more problems than other approaches, such as satellite development. The review of social implications reinforced:

- the need to stress the accessibility elements of compact growth patterns (locations close to amenities services and transport were seen to be beneficial);
- the quality of the environment to be created (in other words the importance of urban design); and
- the need to ensure that new housing and building formats implied by a compact city strategy meet people's needs.

Since the Growth Strategy was launched, the rate of the intensification of the urban area has sped up. Planning documents (District and Regional Plans) are being updated to reflect the direction of the Regional Growth Strategy. Because of these factors it is timely to consider in more detail the particular social issues associated with intensification. The intention is that any particular issues can be addressed in the planning and design of new intensive housing areas, rather than a fundamental reconsideration of the overall direction towards intensification.

Figure 1 Regional Growth Concept



Project Scope

The project has involved undertaking the following research:

- A review of recent community surveys undertaken in New Zealand (mostly in the Auckland Region) relating to intensification.
- Summarising media coverage of the social impacts of intensification in the Auckland region, including a basic assessment of the “flavour” or balance of coverage.
- Reviewing relevant national and international research into (a) actual (measured or surveyed) social impacts of intensification and (b) perceptions of the social impacts of intensification.

Intensification is taken to mean urban style housing as defined by the Auckland Regional Council Growth Forum pamphlet: *Auckland housing choices, a guide to housing definitions commonly used in the Auckland Regional Growth Strategy*. Urban style development covers:

- Terrace housing
- Low-rise apartments
- Mid and high-rise apartments.

A description of these housing types is provided in Appendix One.

It is also important to consider intensification as a process rather than a state. Intensification is a process of change or “densification”, and many social impacts are related to this process of change rather than to density or housing form per se.

Social implications has been taken to have a broad meaning. The findings of this report have been presented under the following headings:

- Character, amenity and quality
- Community cohesion and identity
- Safety and crime
- Health
- Access to services and amenities

- Social equity:
 - Social segregation
 - Affordability and cost of living.

A separate study into the health effects of intensification is currently being planned, led by the Auckland Regional Public Health Service. This report includes limited information about health effects, as the information available is technical and specialised. Ideally phase two of this study should draw on the results of the health research to supplement the findings in this report.

Overview

Community Survey Analysis

A total of 15 community surveys were analysed for this project. The sample period was from 1995-2004. All surveys were undertaken in the Auckland Region with the exception of Project High Density, prepared by Winstones Wallboards which also covered Wellington and Christchurch.

The surveys were undertaken for a variety of reasons, and most of them asked open ended questions about what features people did and did not like in relation to medium to higher density housing. The surveys therefore covered a range of issues including design, construction standards as well as wider social issues.

The surveys covered people living in units in higher density housing areas (residents) as well as people living nearby, often in stand-alone housing (non-residents). Non-residents included business and service providers, neighbours and real estate representatives. A full table of results has been included at Appendix Two. The surveys concentrated on residents of intensive residential areas, and so there are fewer responses from non-residents.

The surveys involved a variety of survey techniques including focus groups, telephone surveys and face-to-face surveys. Because of the content of the surveys, none of them sought to obtain a statistically valid representative sample. Therefore the surveys provide qualitative, rather than quantitative material.

The surveys covered a wide range of intensive housing developments in different locations. Most surveys concentrated on intensive housing developments in suburban, non-CBD, locations. They also concentrated on market rate housing. No surveys were directed at tenants of Housing New Zealand Corporation. This focus reflects the intention of the Auckland Regional Growth Strategy to influence the housing preferences of the “middle market”.

The survey responses have been summarized under the following 14 headings:

- Health
- Safety/Crime
- Access to Services and amenities
- Parking

- Noise
- Privacy
- Affordability
- Concentration of deprivation
- Composition of household
- Design and Amenity
- Lifestyle
- Perception of people type
- Perception of overcrowding.

Overview of Residents' Views

When asked to consider what aspects residents liked and disliked about the development they were in, the overall balance of responses was about equal in terms of positive and negative responses

The most common positive responses ranked in order were:

1. Location – access to services.
2. Safety and security.
3. Community identity and cohesion.
4. Lifestyle – low maintenance.

The most common negative responses ranked in order were:

1. Noise.
2. Parking – especially for visitors¹.
3. Design and amenity.
4. Privacy.

¹ Although parking is not really a social issue.

Non-residents' Views

Overall there were considerably more negative responses than positive responses from non-residents.

The most common positive responses ranked in order were:

1. Access to services/amenities
2. Safety and security
3. Perception of occupiers – their socio-economic make-up
4. Community cohesion and identity

The most common negative responses ranked in order were:

1. Poor design and amenity.
2. Concentration of deprivation.
3. Noise.
4. Lack of privacy
5. Poor access to services.

The surveys tend to highlight design and locational issues associated with intensive housing developments, that is the quality of the living environment provided, rather than specific social issues. However, people's attitudes to social issues are clearly connected with their appreciation of the physical design of the development. The surveys highlight concerns from many residents and non-residents about the future quality of developments and the type of residents who may live in them in the future, should the quality (and hence property and rental prices) drop. Comments about these developments being slums or ghettos in the future are common; however there is little specific detail beyond these basic fears about what might happen in the future. It is fair to say that such fears about the future of new developments have dogged all forms of

urban development and are not related solely to intensive housing. The same fears are often expressed about low cost, stand alone housing on the urban fringe.

There is little real mention or consideration of whether intensification as an approach to urban development will set in-train particular economic and social forces that may exacerbate disadvantages between different social groups and between different parts of the region, beyond concerns that some areas may get too built-up or “go downhill”, and therefore be less attractive to live in.

A specific issue for the review of literature is therefore to see if there is any evidence of a downward spiral process occurring because of intensification policies, rather than other influences such as changes in the economy and people’s wealth and income, for example.

Many of the surveys were conducted during the first phase of medium density development that occurred during the 1990s. It would be useful to conduct some re-interviewing of residents and non-residents to see how attitudes might have changed since then. In particular if greater familiarity with these developments has altered any perceptions. The developments may look fairly “raw” before landscaping establishes itself and residents have not yet had a chance to personalize their living spaces. It is also unclear as to the type of people who may live there. However, overtime the development may take on more of a settled look to it, easing some concerns. Equally for residents, when they first shift in they may not be aware of all of the design problems associated with the development, which may become more apparent once they have lived there for a while.²

Media Search

One hundred and fourteen articles were located, most from the New Zealand Herald covering the time period 1999-2004.³

A number of key word searches were used to locate articles. These included:

- Apartment living and Auckland

² Any follow up survey work would need to be carefully planned to ensure that issues such as “leaky homes” and body corporate management do not dominate the research findings. It is likely that some of the original developments would need to be excluded from follow up surveys.

³ The original intention was to search the Wellington Dominion as well, however this could not be done without a special license.

- High density housing
- Social impact, high density housing
- Housing and intensification and Auckland
- Ghettos and slums and Auckland.

Overall thirty three percent of the sample articles were positive in tone. However, many of these were articles aimed at promoting particular developments, or the lifestyles associated with inner city living. Forty seven percent were negative in tone and the remaining twenty percent were neutral.

The media articles are clearly related to the news stories of the day, and so issues like the leaky building syndrome figure strongly over the last couple of years, while articles related to management issues (body corporate) follow regional government initiatives to update the legislation related to this.

Attached as Appendix Three is a table containing a full analysis of the media search. It includes a summary of the articles, notes whether the coverage is negative, positive or neutral, and notes the community issues highlighted in the article.

The main negative key themes of the media analysis included:

- Poor design
- Lack of privacy
- Perception of slums
- Perception of a poor lifestyle
- No sun or views
- Lack of parking
- Lack of amenities
- Perception of cheap housing
- Owners unaware of Body Corporate and responsibilities
- Lack of infrastructure to support intensive housing
- Poor ventilation
- Noise from neighbours
- Low income alternative
- Overcrowded student spaces.

The main positive key themes of the media analysis were:

- Close to amenities
- No flatmates

- Affordable housing
- Good security
- Less stressed lifestyle.

The media articles highlight the many, often conflicting social dimensions associated with intensive housing. On the one hand are the articles that relate to the benefits that many occupiers of intensive housing development have enjoyed. They may be able to buy or rent a place in a location they desire, when previously this was not an option for them. They may enjoy the lifestyle and security offered. At this same time, the articles highlight the fears about the future of such developments. The leaky building syndrome has clearly influenced these fears, although this problem is associated with a particular building technique, not pattern of urban development. A string of articles concentrate on community groups fighting to keep their suburb free from “shoddy” housing.

The different approaches taken to the same type of development can be seen in articles about smaller internal living spaces associated with many apartment developments in the Auckland CBD. One such apartment development is marketed as a corporate crash pad and is favorably reviewed in terms of the lifestyle it offers young professionals. Other articles discuss “shoe-box apartment developments” which are bound to attract transients and other undesirable people, according to people interviewed.

What is notable is the lack of connections made about the different perspectives. Some articles have sought to move beyond immediate design and appearance issues, and have sought to place the trend towards this type of housing within a wider social and economic context, but these are only a few. This is something that Councils and the Regional Growth Forum should address.

Literature Review

A literature review was conducted, using key word searches to locate journal articles, web-site material, and other information relevant to this study. Priority was given to locating relatively recent research (published in the last five years), and research from North America, Australia, and the UK. Like New Zealand, North America and Australia have traditionally accommodated urban growth mainly through low density green-fields expansion, but have increasingly adopted policies involving urban intensification during the last decade. Most European cities, on the other hand, have always had much higher population and household densities, and therefore different

attitudes towards higher density living. Because the impacts of intensification are to a large extent about the impacts of change, it was considered that European examples are less relevant. The UK research is probably less relevant than the Australian or some of the North American, however some of the research is of high quality and the methodology rather than the conclusions are relevant. Studies that may be particularly relevant to the Auckland Region are discussed in the final chapter.

Information about some social impacts was much easier to access than others. For example, there was a lot of readily available research about the impact of intensification on community cohesion and identity. On the other hand the body of literature on the relationship between health and housing is technical and appears to be more about overcrowding, or about traffic and air quality. Given time and budget constraints and because Auckland Regional Public Health is about to undertake a study into the health effects of intensification, this highly technical area is only briefly covered in this report. Also there is an extensive body of research on the relationship between transport and urban form which has social implications (accessibility). However, this research is more about the economic efficiency of transport investments and so is only briefly touched upon in this report.

A decade ago there was a large amount of research attacking urban sprawl on environmental, social and economic efficiency grounds. These arguments are well understood and do not need to be repeated here. Planning policies that seek to contain urban growth have gained favour (particularly in North America, Australia and NZ) as policy makers seek to reduce traffic congestion, promote walking and public transport, stop urban encroachment into the countryside, and create more vibrant and liveable neighbourhoods with a strong sense of community.

A key observation from analysis of the literature, is that there now appears to be a wave of research questioning the so-called benefits of intensification, and claiming that these benefits were based either on flawed research, or on social doctrine⁴ rather than on empirical research. Because much of this research is quite recent, it comes through quite strongly in this literature review. Notably, however, this research does not offer a robust case for urban sprawl – it merely questions whether intensification is producing the benefits it was supposed to produce. The debates in the research tend to focus on whether urban expansion or urban containment may be better or worse than the other, and are often linked to arguments that command and control planning implied by containment policies are inimical to people's economic and social freedom. There is less research devoted to the question of how to undertake either form of growth in a way that optimises people's economic and social wellbeing.

⁴ For example Talen, E, 1999

Research in the next decade could be expected to provide a middle ground. For example Mike Jenks, a recent visitor to Auckland has edited several books which focus on the complexity of urban systems. A key theme of this work is that intensification is an overly simplistic answer to the problem of sprawl, and that methods for achieving sustainable urban form will vary from locality to locality. Sound decision making processes, effective information gathering, and flexible and adaptable approaches are considered more important than a particular doctrine. Despite this the editors of this work conclude that:

“Overall, it appears that there are a variety of urban forms which are more sustainable than typical recent developments patterns. In the main they are characterised by compactness (in various forms), mix of uses and interconnected street layouts, supported by strong public transport networks, environmental controls and high standards of urban management.” (ed Williams et al, 2000, pg 355).

The Growth Strategy has adopted these principles, with its containment policies built upon a number of environmental, economic and social factors. The real question is not whether intensification is in some respects worse than other policies, but rather how the strategy can be best implemented.

Analysis of Findings

Introduction

This section provides a more detailed analysis of the key findings of each of the survey, media and literature reviews. The analysis is summarised under each dimension of social impact, however there is often overlap between the different categories. For example, a lot of negative publicity about intensification stems from concern that high density housing will turn into slums or ghettos, concentrate poverty and be associated with high crime rates and poor health. When analysing perceptions it is often difficult to separate these inter-related factors and to identify the assumed cause and effect relationships underlying such perceptions.

In addition, it is important to note that many people's attitudes to different types of housing (and the social issues that may or may not be associated with these types of housing) are coloured by their experience and familiarity of the different housing forms. It is clear that some people have a basic dislike of intensive housing types, feeling that they are not part of New Zealand's urban tradition of stand-alone houses on larger sections. To these people, more intensive forms of housing represent a diminishment of the lifestyles associated with New Zealand cities. Other people accept that some people will, by necessity or choice, not wish to live in stand alone houses on large sections and instead prefer a town house, terrace house or apartment. However there is concern that such housing developments are well located and designed. Yet another group of people actively wish to live in an apartment or terrace house, or know people who do, and these people have a more open attitude to this form of living. Their experiences provide particular pointers as to how these types of developments can be made to be more functional and attractive.

Community attitudes towards character, amenity, and quality

A key issue in relation to intensification is acceptability – that is the attitudes that communities have towards intensification of their neighbourhoods – whether they consider it fits with the character of their neighbourhood, and is of a poor or high quality. Attitudes towards intensive style housing tend to get confused with attitudes about whether it is the right sort of housing for New Zealand, as well as the type of

people that might live in this housing, and often it is difficult to isolate particular issues and concerns.

Acceptability is critical for a number of relatively obvious reasons. Firstly, if communities do not accept intensification they will oppose it. Secondly, if housing associated with intensification is considered sub-standard, people will not live in such housing unless they have no choice. The result will be self-perpetuating in that higher density housing may result in a social segregation and concentration of poverty which will add to negative perceptions about such housing.

Along with managing the location of intensive housing developments, design issues have been the main focus of planning controls associated with medium to high density developments over the past five years. Planning controls accept that medium density development will result in more built-up development (taller buildings, built closer to boundaries and closer together) than surrounding sites. The external appearance of development and the layout of units on a site have therefore become more important issues.

Surveys

Overall, there was a mixed response amongst residents and non-residents to design and amenity issues, highlighting a diverse range of views on this issue.

Design and amenity was the number three negative response in the analysis of the resident's surveys. Comments amongst residents included a lack of landscaping, poor orientation, no balconies, no outdoor areas, poorly constructed units, cheap houses with builders cutting corners. Other comments included not enough space in apartments - lack of cupboards, space for bicycles, and not enough quality urban design, including leaky building problems.

At the same time, design and amenity was a positive theme in the resident's surveys analysed. Comments included availability of pools and sports facilities as part of apartment complexes, while others liked living in a new house with good common spaces.

Design and amenity was the number one negative in non-resident's surveys. Comments included a perception that long-term maintenance of properties was not good in intensified developments with fears that if not well maintained, then the dwellings will turn into slums. Other comments from non-residents included a perception of poor quality design, a lack of integration into the surrounding neighbourhood, "look" of the developments was not good, and "match-box" housing.

Some non-residents also had the perception that development that included a mix of residential and business activities were of a high standard.

Media

Media coverage over the sample period was mostly negative regarding community attitudes towards the design of intensification. Common negative themes included the perception of poor design, poor lifestyle, a lack of sun and views in intensified developments, and a drop of quality of life associated with these types of developments. In particular, it seems that the impact of the “leaky building syndrome” was evident in the media over the sample period. In addition, there was also much concern that owners are not being made aware of their rights and obligations under the body corporate management concept associated with apartments.

There were a few positive comments, and these were mostly associated with media articles that were promoting or advertising new developments. Nevertheless these articles highlight a continuing demand for intensive housing units.

Literature

Evidence of community resistance towards intensification is strong throughout Australia and North America. In Australia “save our suburbs” movements exist in most major cities. Intensification is seen, by these groups, as a direct threat to preserving the character and heritage of neighbourhoods.

An American study looking at the extent to which smart-growth type policies were being successfully implemented, pointed out that acceptability is a key issue.

“Perhaps the greatest challenge smart growth faces is community resistance to new development in already built up areas. Suburbanites have a long history of resisting higher density housing for fear of what it might do to property values, and who might reside in such housing. Americans appear to hate two things: density and sprawl. Smart growth’s fate may depend on which they ultimately hate more.” (Danielson et al, 1999, pg516)

An Urban Land Institute Forum was held in the US in 2002 to address some of the issues associated with intensification. The Forum noted that community opposition was one of the greatest challenges to smart-growth, and that high quality design was critical.

“...higher density residential development is often opposed by citizens because they believe that greater housing density contributes to problems such as traffic congestion, crime, lower property values, and loss of green space.” (Urban Land Institute, 2002, pg 2)

A common fear reflected in the literature, and also in the survey and media reviews summarised above, is that higher density housing associated with intensification and compact city policies will become the slums and ghettos of the future. Interestingly there appears to be little analysis of whether this is actually occurring – perhaps because these forms of intensification are relatively new.

Some factors identified in the literature, which appear to be driving fears, perceptions and attitudes are:

- Prejudices based on past experiences of high rise housing– for example in the UK.

A quote from the Greater London Authority’s (GLA) architecture and urbanism unit website illustrates this:

“...there is still a profound wariness about high density because of its association with high rise. Much high rise housing in Britain deserves its bad reputation. Some of the tower block estates of the 1960’s and 1970’s were social failures with monotonous, monumental forms and inadequate internal space. In these cases it is poor design and shoddy construction as well as inadequate maintenance, that is to blame rather than the number of units or people.”

Anne Beer (2002) echoes these comments in relation to European high-rises.

“The 1960’s was a time when demand for housing was high. Governments throughout Europe became convinced that high density housing...was the answer to providing new housing. Many of the developments that followed .. were initially liked by their inhabitants. However almost without exception, the schemes over time became associated with a range of social problems. This led in many instances to a mass exodus of the more stable families and the better off to what were regarded by them as more appropriate surroundings for their residential life.”

A recent Housing NZ Corporation report⁵ notes that the experience of the 1960s “sausage flat” development is associated in the public mind with increasing density.

- Fear that intensification will reduce property values.

Again there is limited analysis of the effect that intensification has on property values, however it is clearly a concern driving opposition.

One very recent empirical study that has some relevance is an American study of the impact of multi-family housing on America’s working communities.⁶ Working communities were defined to be areas of moderate income but not impoverished. The study used data from across America. It found the average value of owner occupied housing was highest in working communities with the most multi-family housing – although in the last decade property values have increased faster for housing in predominately single-family housing areas.

A conclusion of the study was:

“...the evidence contradicts common fears about the negative impact multifamily structures might have on house values in their vicinity.” (von Hoffman 2004,pg 22)

Another study quoted by the National Multi Housing Council (2003) looked at the relationship between apartments and the price of detached homes in Atlanta Georgia. This study found that houses within a quarter mile of apartments sell for more than those that are more than half a mile away from the apartments. According to the research the most likely explanation is that the existence of apartments signal demand in an area. This explanation highlights the difficulty of establishing cause and effect relationships in research of this nature. The only true way of testing the impact on property values would be to know what property values would have been in the absence of apartments.

- The impact of change – i.e. the process of intensification

⁵ Turner et al, 2004

⁶ von Hoffman et al, 2004. Note that multi-family housing is an American term for multi-unit housing. In all references to multi-family housing encountered in this literature review, it also meant that the housing was rented rather than owner occupied.

Williams (in Williams ed, 2000) undertook a study of intensification in three London boroughs. She found that if people value vibrancy and liveliness and intensification appears to add to this, then the effect will be positive. However if people value quiet and character, and intensification changes this then residents will not be in favour. Attitudes to intensification will, therefore, depend on how intensification changes the assets which people value in their neighbourhood.

Jenks, (also in Williams ed, 2000) has undertaken research into the acceptability of intensification in 12 case study areas in the UK.

He found that density has little impact on whether or not residents are content with their neighbourhood, but that people are more concerned about changes in density (i.e. the process of intensification). He also found that intensification is unpopular where it is badly designed or out of keeping with an area and that existing character and the quality of an area is highly significant:

“In established high status areas which have more to lose from changes, intensification is less readily accepted.” (Jenks, 2000, pg 246)

Jenks concludes that different areas have different “social capacities” in terms of the amount of intensification which will be tolerated. He emphasises the importance of high quality design and a sound process that recognises social capacity in order to gain community acceptance for intensification.⁷

In a similar vein the Urban Land Institute Forum referred to above, found that commitment to high quality design, and intensive consultation/process can help gain acceptability. Arlington, Washington was an example where the process revealed the need for street-facing building facades, tapered high-rises to allow more sunlight to reach the street and provision for guest parking, to gain acceptance for high density housing.

Recent research for Housing New Zealand Corporation (2004) reinforces the importance of design. The report prepared for Housing New Zealand Corporation

⁷ Of course a likely outcome is that high status areas will end up with high quality, well designed intensification, whilst lower status areas will end up with poor quality, badly designed intensification. The potential for this to occur is discussed further under 3.7 Equity

involved case studies of 30 Auckland medium density developments (and four Australian examples). It concluded that medium density housing will always involve some compromises but that they can be minimized with good design.

The quality of the developments analysed was found to be highly variable. The report established some desirable design principles with respect to factors such as site layout, and car parking. The report was particularly critical of developments that were monotonous and lacked variety, and of “compacted suburbia” (medium density housing designed using the same principles as stand-alone housing but at a smaller scale).

Community cohesion and identity

The question of whether different urban forms can promote or hinder community cohesion or identity has been investigated by researchers for many years. According to Wilson and Baldassare (1996), early studies from the 1930s on found that crime and mental health problems tended to be concentrated in inner-city neighbourhoods. Suburban growth was proposed as the solution and was intended to reduce the stresses of the city and provide a more pleasant living environment suitable for family living.

Suburban growth and its associated auto-dependence has been subsequently attacked on many grounds, including for weakening social ties and destroying social capital – encouraging people to spend more time in private space than public space.

Healy and Birrell (2004) draw a distinction between smart-growth policies designed to curb sprawl on environmental grounds, and new urbanism which is more heavily couched in reformist social ideals of fostering a sense of neighbourhood and social and economic well-being. Components of new urbanism include higher densities, mixed uses and pedestrian friendly design. According to Freeman (2001) new urbanists claim such development can create more opportunity for social interaction especially where neighbourhood amenities (such as shops and parks) are placed within walking distance of homes.

More recently there has been a spate of research which attempts to empirically test the validity of these claims. Some key reports are summarised in the literature section below.

To date planning for intensification in the Auckland region has sought to address issues of community cohesion through the location of medium to high density developments. In general a nodal pattern is followed, with intensive housing grouped

around town centres or other focal points, giving residents the opportunity to interact with people across a whole community. Of course not all intensive developments have occurred in nodal areas.

The make-up of intensive developments (in terms of mix of renters and owner occupiers, age groupings, ethnic mix, family type) has been entirely market driven. The available evidence is that in terms of socio-economic profile, residents of intensive housing developments are very similar to those of the wider suburb.

Surveys

Community cohesion and identity was recognised as being both a negative and positive factor of intensive housing developments.

Some trends noted amongst residents included observations that some neighbours did not wish a high level of connectedness with their neighbours, with some tending to minimise contact with their neighbours. Some concerns were raised about the mix of people in their neighbourhood. There were also comments amongst residents that there was a poor sense of community, and their developments did not have a vibrant atmosphere.

On the other hand, community cohesion and identity was the number three positive factor identified in residents surveys. Positive comments included residents finding comfort in the fact that they are not alone. Residents were also satisfied with the "look and feel" of their community. Some residents believed that they had a good sense of community with the opportunity to socialise with their neighbours. Other residents also liked the diverse range of people in their neighbourhood, helping to create a unique neighbourhood identity.

The only positive comments on community cohesion/identity highlighted in the non-residents' surveys came from businesses, who commented that there was a perceived opportunity to build on success of mixed-use developments, and other comments about developments looking good, and bringing improvements to their area.

Media

Media coverage on community cohesion and identity was negative over the sample period. Issues raised included a perception of cheap, overcrowded housing for the poor, and overcrowded student spaces associated with intensified housing developments in the Auckland CBD area.

Literature Review

The following is a summary of some recent studies testing the impact of urban form on community cohesion and identity.

“Overall ‘sense of community’ in a sub location – the effects of localism, privacy and urbanisation.” Georgeanna Wilson and Mark Baldassare, 1996

The authors of this study started with the observation that national surveys have shown that more than half of Americans are deeply involved in the search for community. The study involved surveying residents of 31 different cities in Orange County LA (an area with a total population of 2.4 million people) to find out whether localism (defined as involvement in community issues) and privacy were related to sense of community. Residents were asked directly whether their city or community had a sense of community. The study controlled for other variables such as income, age, homeownership and presence of children in the household.

Findings from the research included:

- Privacy and localism were both important predictors of sense of community.
- Higher city population density was correlated with a lower overall sense of community. In particular residents living in cities that are large, dense and ethnically diverse were less likely to have an overall sense of community identity.

Sense of Community and Neighbourhood Form: An Assessment of the Social Doctrine of New Urbanism – Emily Talen, 1999

This study is very critical of claims that new urbanist development can build social capital and revive community spirit. According to the author there is a sheer lack of empirical evidence to support what she calls “spatial determinism” – the theory that resident interaction and sense of community are cultivated via the organising power of space.

Talen reviews a range of studies and argues that many studies ignore the role of non-environmental factors (or intermediate factors) in cultivating a sense of community. She argues that studies have shown that homogeneity, length of residence, commonality of values, and homeownership all have a very important influence on creating a sense of community.

She concedes that some studies have found a link between architectural form, site layout and the quantity of neighbourhood interaction but argues that this is only one

component of sense of community.⁸ She also argues that new urbanism may not create a sense of community but may attract individuals with a preference for social interaction.

The Effects of Sprawl on Neighbourhood Social Ties: An Explanatory Analysis, Lance Freeman, 2001

This study takes as its starting point the inconclusive and contradictory nature of existing research, into the links between density and social ties. The study uses data from Atlanta, LA and Boston which contains data about social networks (which are a proxy for social ties). The aim is to test the hypothesis that the relationship between density and neighbourhood ties is non-linear – i.e. that social ties increase with small increases in density but that very high densities can reduce social ties.

The study concludes that that in fact there is little or no relationship between density and social ties but that there is a strong relationship between vehicle dependence and weaker social ties. Freeman concludes

“The accumulating evidence does appear to be weighing in favour of the notion that neighbourhoods that force people into cars and inhibit face-to-face contact somehow undermine social ties among neighbours.” (Freeman 2001 pg 76)

“Testing the Claims of New Urbanism: Local Access, Pedestrian Travel and Neighbouring Behaviours”, Hollie Lund, 2003

This study does not relate directly to density or intensification but to the new urbanist principle that placing amenities within walking distances of homes will increase pedestrian travel and social interaction.

The study involved household surveys in eight neighbourhoods in Portland Oregon that met the new urbanism criteria of being walkable and compact. All areas had similar densities. Two had access to a park and a local shopping area; two had access to a park only; two had access to a shopping area only; and two had access to neither.

The study found that local access contributed to increased levels of pedestrian travel – especially local access to shops. The study also found an increased frequency of casual social interaction in areas with better accessibility to facilities, but that more intense

⁸ And also that these studies have focused on “micro factors” such as window and door placements, rather than on overall neighbourhood form.

forms of interaction were dependent on other influences such as attitudes towards “neighbouring”⁹ and demographics.

New Urbanism and Standard Suburban Subdivision: Evaluating Psychological and Social Goals, Vivian Cropper, 2001

Residents from a “new urbanist” subdivision (NUS) and a “standard” subdivision in Salt Lake City Utah were interviewed about their sense of community, neighbourliness and attitudes towards diverse neighbourhoods.

In line with other research, Cropper notes that many studies have illustrated a link between design and contact with neighbours but have not been able to further link that to an intense sense of community. These studies have tended to focus on the importance of other factors such as homogeneity, in developing a strong sense of community.

There were strong similarities between residents of the two subdivisions chosen. The socio-demographics were similar and in both subdivisions residents were attracted by affordable housing, design of the house and neighbourhood, availability of good schools and good road access.

Results showed that both groups reported similar high levels of sense of community, but that the new urbanist subdivision experienced more neighbourhood social contact and residents engaged in more outdoor activities.

Cropper concludes:

“The fact that NUS residents can live on much smaller lots without experiencing an erosion of community or other problems counters implied claims made by critics of New Urbanism that civility requires large buffers of space between houses. Good fences may make good neighbours, but large lawns do not necessarily make better ones.” (Cropper 2001, pg 11)

Overall the research appears inconclusive. In some cases intensification appears to result in an increase in neighbouring, but this does not necessarily translate into a strong sense of community. For this to occur, other factors may have to be present such as homogeneity of residents in terms of socio-economic status. This is quite contrary to one of the aims of new urbanism which is to achieve a greater mix.

⁹ Contact and social interaction between neighbours.

Safety and Crime

Intensification is often argued to have safety benefits because of better surveillance of homes and public spaces from adjacent development and more people walking through and using public spaces. Public perceptions of higher density housing are often at odds with this ideal, with communities concerned that higher density housing is associated with poverty and high crime rates.

These perceptions may stem from prejudices based on historical experiences of high rise housing in Britain, the UK and Europe, and may relate to over-crowding and social segregation rather than from higher density housing itself.

Crime issues are increasingly being addressed in the design of intensive housing developments (e.g. Crime Prevention Through Environment Design), although in many early developments, crime prevention did not feature highly in the design issues considered. Anecdotal comments suggest a mix of crime issues are associated with medium density developments. Some developments are noted in terms of their apparent attraction of crimes, particularly property and car theft. For example, one cluster of developments that partly relies on street-based parking apparently suffers relatively high rates of car thefts from streets in the development. Other developments have perhaps not offered the high level of security that residents initially thought would be the case. Residents have not taken usual precautions, thinking that controlled access into the development and the proximity of neighbours mean that they do not need to always lock back doors or to close garages, for example. However, other developments have offered security for residents and this is often a strong selling point.

Surveys

None of the surveys addressed actual crime, but the issues of safety and security were covered.

The majority of residents were positive about safety and security with a good sense of security inside and outside buildings. This ranked as the second highest positive comment amongst residents.

Safety and security was perceived by non-residents to be both positive and negative. Positive comments included that residents were likely to feel safe living close to others with negative comments including a perceived increase in crime as a result of high-intensity development.

Media

There were few direct references to crime. One positive theme relates to developments offering a good sense of security for residents. This is often used as a marketing tool to help attract single females to consider intensive housing developments. Contrasting this, many community groups think that intensified developments will result in more crime in an area through the birth of slums.

Research

There does not appear to be any comprehensive research linking crime, safety, and housing form or density that can address these contrasting views. In a book entitled "The Costs of Sprawl Revisited" (Transit Cooperative Research Programme), the authors refer to studies carried out by Newman and Kenworthy, who correlated density and crime statistics for twenty six major US cities. No significant relationship between crime and density was found.

An interesting Scientific American article reviews data on per capita murder rates compared to the number of people living per square km in different nations. This data shows that the US has a murder rate eight times than the Netherlands, which has population density thirteen times that of the US. The article then argues that assumed links between overcrowding and crime are based on flawed studies of rats!

"A persistent and popular view holds that high population density inevitably leads to violence. This myth, which is based on rat research, applies neither to us nor to other primates." (de Waal et al, pg 77)

In a booklet produced by the California Planning Roundtable, attempting to dispel some myths about affordable and high density housing, the authors state that:

"Density does not cause crime. For many years social scientists have asked whether high-density housing causes crime. Not one study has shown any relationship between population or housing density and violent crime rates. Once resident's incomes are taken into account, the effect of density on non-violent crime decreases to non-significance." (California Planning Roundtable, Pg 9)

The booklet then explains that a concentration of low income housing can be linked to higher crime rates, especially in areas lacking jobs, responsive police and community services. That crime is linked to socio-economic conditions rather than density is

reiterated frequently in the literature.¹⁰ Whether or not intensification encourages the concentration of poverty is considered later.

Whilst it appears there is little evidence to support a link between housing form and crime, equally intensification does not always deliver the safety benefits that it promises.

Two studies in Williams et al (2000) attempt to determine whether there is a link between safety and/or perceptions of safety and intensification. The first by Williams (2000) considers three boroughs in London that have intensified in different ways – one mainly through infill, one mainly through redevelopment, and an inner suburb that has experienced intensification of employment, tourist numbers and residential densities. The study sought to test a range of environmental, economic and social theories regarding intensification including whether intensification increased safety or perceptions of safety.

The research findings were, apparently, mixed. The study found that fear of crime was very high, especially in Camden which has some very affluent areas and some large areas of social housing, but that actual crime was impossible to relate to built form. There was little support for the argument that intensification in residential neighbourhoods increases surveillance; however some agreement that town centres felt safer partly because of new entertainment facilities that attracted more people.

The second study was a Scottish study by Masnavi (2000), of four suburbs – two in high density Glasgow and two in low density New Town. In each city one suburb was a mixed use suburb, and one was a single-use (residential) suburb. As part of the study, respondents (residents) were asked about the period of hours in which they felt safe. Overall the results showed a better and safer environment for walking in the compact single-use area¹¹ – with 28% of respondents saying they always felt safe walking compared to 3%-9% in other areas.

The recent Housing New Zealand Corporation study (2004) reinforces that there is no established link between crime and housing density.

“(there is) little evidence to support the view that higher density housing generally, or medium density housing as a typology is either less safe or more safe or more susceptible to crime than any other housing type.” (Turner et al, 2000 pg 24)

¹⁰ For example, Craglia et al. (2001)

¹¹ This was Hyndland Glasgow – over 90% of the buildings are three and four storey tenement urban blocks.

A Canadian article by McIlroy and Bryan argues that intensification can reduce fear and incidence of crime as long as certain design criteria are applied. Examples include:

- Orient building facades to the street
- Access to parking from the street is favoured over a rear-accessed lane
- Adequate street lighting on both sides of the street
- Ensure visibility to lanes from adjacent buildings and the street

Health

The relationship between health and housing is complex and technical. Because the Auckland Regional Public Health Service is about to embark upon research into the relationship between health and intensification in the Auckland Region, only limited information has been reviewed in this study.

Housing intensification could be expected to have some positive and negative effects on health. The following table summarises these:

Possible positive effects of intensification		Possible negative effects	
Effect	Possible cause	Effect	Possible cause

Improved mental health	Strong neighbourhood cohesion (opposite of “suburban neurosis)	More respiratory and associated illness	Local air pollution
Improved general health and fitness	More opportunities to walk and cycle	Poor mental health	Noise, lack of outdoor space, problems associated with concentration of poverty, limited living spaces
		Poor general health	Noise, quality of building (ventilation etc), indoor air quality

In discussing higher density living and health issues, it is important to distinguish between the health issues associated with overcrowding of individual dwellings and the health issues that might arise from a greater number of dwellings within a defined area. A further dimension is the health issues associated with the location of higher density housing. Some of the health issues identified above, such as increased exposure to air and noise pollution, are likely to arise from the location of higher density housing in mixed use areas and along main transport routes.

Health related issues have not figured to date in planning for medium to high density development, apart from those issues covered in the Building Act, as well as common design criteria related to outdoor living spaces and sunlight and daylight access to internal living areas. It was noted during the preparation of the Regional Growth Strategy that intensive housing developments along busy transport corridors may experience particular noise and air pollution problems; although it was felt that this could be addressed through the design of buildings.

A range of interface issues are arising in mixed use areas, where residential developments are occurring close to industrial and business activities. These interface issues include noise, traffic and air discharges.

Recently, moves are being made to impose a number of health-related design standards on apartment developments: minimum unit sizes are being introduced, as well as mandatory balcony requirements. Buffer controls are also being introduced.

Surveys

A survey was undertaken in August 2004, by EnHealth¹² as a preliminary step in testing the potential health effects of different housing density environments in Auckland City. The study involved surveying people living in 500 medium-high density households, and 500 single stand-alone dwellings. Participants were asked questions about a range of factors health effects and likely contributing factors (such as noise and ventilation). The study measured perceptions rather than actual health.

Key findings were:

- Overall there was little difference in answers between the two housing types
- Occupants living in high-medium density housing were more bothered by noise travelling through walls, floors and ceilings.¹³ They were also more likely to have their sleep affected by noise.
- More occupants from high-medium density houses perceived their outdoor living area to be cramped.
- More occupants of single stand-alone dwellings felt that their heating was inadequate to heat their homes. Significantly more used unvented gas heaters to heat their homes.
- More occupants of single stand-alone dwellings reported condensation within their homes, as well as mould and mildew. (This was found to be likely due to the type of heating and the age and construction style of the dwellings).
- The majority of occupants of both housing types rated their health as average, good or very good.
- Occupants from medium-high density homes reported suffering more frequently from headaches – while no direct cause could be established the study concluded that this was possibly due to noise disturbance and cramped outdoor space.
- Although the results were too low to be statistically significant, more residents of medium-high density homes felt that noise was affecting their health, whilst more residents of single stand-alone homes felt that condensation was affecting their health.

¹² Lyne, M and Moore, R (2004)

¹³ However for both groups noise from traffic was the main source of disturbance

Other residents' surveys analysed did not mention any references to health effects associated with intensified housing developments.

Media

Only negative issues relating to health were raised in the media over the sample period. These included a perception that the mental health of apartment dwellers is likely to be affected if living spaces are small, and because of the loss of sun and views from adjacent developments

Other media articles (which were not surveyed) have noted the growing issue of inactive lifestyles and health concerns like obesity, and the links to general urban form. However, none have particularly related this to the potential benefits of higher density housing.

The benefits to people's health and well being from having housing choices that were affordable to them have not been touched upon by the media.

Literature Review

No major study of the health effects of intensification was reviewed, although health was often mentioned in passing in the studies that were reviewed. Information of note includes:

- An article by Lawrence (2004) discussing research on the relationship between health and housing concludes that there is no widely shared consensus about the nature of the relationship between health status and living conditions. He argues that the complexity of the relationships, and their multidimensional nature, is hindering effective research.
- Recent work on the link between urban sprawl and obesity by Smartgrowth America (McCaan et al, 2003) has received a lot of publicity (and some criticism). In this study health researchers found that people who live in counties marked by sprawl-style development, tend to weigh more, are more likely to be obese and to suffer from high blood pressure. The study involved 200,000 people from 448 counties. Variables such as age, education, gender and race were controlled. Criticism of the study argues that the differences are small.
- Lyne and Moore (2004) in the report of the survey reviewed above note that international research has shown that residential intensification may pose risks to the health, quality of life and well being of its occupants, compared to those who

live in single stand-alone dwellings. Their reference for this is Canada's Healthy High rise work.

- The Healthy High-rise work (Canada Mortgage and Housing Corporation 2001) highlights the poor quality of multi-unit housing, due to issues relating to design, construction, testing, operations and maintenance. Issues typically include water penetration and air leakage; inadequate thermal envelope performance; poor indoor air quality; and noise. Practical, technical solutions are proposed.

Access to services and amenities

Intensification is argued to improve access to services, facilities, open space and jobs, reducing car dependency and travel time, and placing people within walking distance of many of their needs. Whether or not accessibility is improved through intensification will depend on:

- **Proximity** to different services and facilities– in general intensification within a mixed use area (such as a town centre) would be expected to perform better in terms of accessibility to most facilities compared with infill type intensification (or low density expansion). The exception might be proximity to green space.
- **Adequate provision** of different services and facilities. One concern of intensification is that it can place pressure on existing facilities such as schools, unless new facilities are built to cater for increased demand.
- **Ease of access by passenger transport** to facilities and work places. Intensification is argued to improve the viability of passenger transport, particularly for commuting. This argument has an environmental basis but also a social dimension as ability to access facilities and jobs by passenger transport can improve quality of life (for example by reducing commuting time and stress), and reduce travel costs.

Planning in the Auckland Region has sought to locate medium to high density development close to services and activities, and/or close to transport services. The surveys indicate higher use of passenger transport by residents of intensive housing developments, and lower rates of car ownership, when compared to non-residents in surrounding areas. In other words, the proximity to transport services assists in greater use of bus and trains and less car dependency. In general though the level of intensification so far achieved has not significantly lifted public transport services or been to a level that has supported additional public services in areas of change. However this may occur in the future as intensification continues. There is some

evidence (anecdotally) that retail activities have responded to increases in density in selected areas.

Surveys

Access to services and location ranked highly and positively amongst residents surveyed. Residents generally felt that living in intensive developments meant that there was a convenience of being close to facilities such as schools, shops, cafes and restaurants, work, public transport, and green outdoor spaces among many others. In many cases, this was the most important factor in choosing to live where they did.

Non-residents perceptions of access to services and facilities were more positive than negative (this was the highest positive response by non-residents). Perceptions of non-residents were similar to the residents' actual comments, including convenience of travel and accessibility to services.

Media

Media coverage was mostly positive on the issues of access to services and facilities. However, it should be noted that most of these positive values were associated with advertisements on proposed developments. Comments included;

- Close to amenities – supermarket, apartment store, fruit and vegetable store
- Minutes to motorway and public transport
- Walking distance to everything – including work
- Ongoing desire for residents to be close to CBD
- Plenty of outdoor space.

Literature Review

Information from the literature on accessibility is discussed under each of the headings used above.

Proximity- Three studies referred to in previous sections found a positive association between intensification, mixed uses, proximity to facilities and walking trips. Lund (2003) in a study of 9 intensified areas in Portland found that areas with access to both a park and local shops had the highest level of walking – suggesting that these facilities are accessible and used by local residents.

“..when combined with pedestrian-friendly streetscapes, locating everyday amenities such as parks and retail shops within a neighbourhood can increase pedestrian travel and neighbourhood interaction within a community.” (Lund 2003, pg 13)

Williams (2000) in a study of three London boroughs states that surveys of residents have shown that access to shops and facilities had improved during intensification in two of those areas.

Masnavi (2000) in a Scottish study of four urban areas (one compact, single use; one compact mixed use; one low density single use; and one low density mixed use) found strong evidence of more walking trips in the mixed use areas but particularly the compact mixed use area (again suggesting greater use of local facilities).

An alternative view suggested by Crookston (1996) is that the economies of facilities provision are working in the opposite direction to the notion of a compact city with convenient, high quality local facilities. He argues that as demands become increasingly sophisticated so do facilities. The economies of provision become greater and facilities become more expensive, specialized and likely to be located regionally rather than locally.

Adequate Provision - Population increases associated with intensification can place pressure on existing facilities. In addition, there may be a scarcity of land for development of new facilities (including green space) because of other competing high value uses.

These issues were raised by the Regional Growth Forum through work on social infrastructure. The Forum identified that major social infrastructure requirements would arise from increasing densities – both in terms of open space and local built space (educational facilities, health services etc). Similar concerns are echoed in planning document for other cities. For example, Edmonton’s Urban Land Intensification Strategy identifies anticipated overcrowding of schools, parks and other facilities as a deterrent to intensification in that city.

No studies were reviewed that actually measured the level of provision of facilities per person in intensified versus suburban locations; however there is anecdotal evidence of the lack of green space in particular in many intensified locations. For example, Anne Beer (2002) notes that even in built up Europe more affluent people are leaving the dense areas of the city to move to places with more green space – however she cites a 1999 study that suggested this was less likely to happen when green space was present in the immediate vicinity of a residence.

Ease of access by passenger transport – There is a large body of literature and much contentious debate about the effect of urban form on passenger transport use (and travel patterns generally). It is beyond the scope of this report to review that literature, and a very high level summary only, can be provided here.

Newman and Kenworthy are widely acknowledged for their groundbreaking research which investigated the relationship between gasoline usage per head, and density, for a large number of cities internationally. Their research concluded that as population density fell below 30 people per hectare, gasoline usage increased. An important component of this was argued to be increased passenger transport use.

This work has subsequently been debated from a number of angles including that it ignored the effect of socio-economic variables such as income, car ownership and fuel price. Also density is only one component of an urban form that might support increased passenger transport use. A high quality transport system, mixed land uses, intensification around transport corridors and increases in the density of both residential and business uses are other elements.¹⁴ Overall the balance of opinion still favours the argument that compact cities can result in better utilisation of passenger transport. It is acknowledged, however, that relationships between urban form and transportation are complex.

Equity

One of the tenets of new urbanism is a mix of housing types – to cater for people at different stages of their lifecycle¹⁵ and with different income levels. A compact city is assumed to be more equitable because of the better mix of housing and also because it can reduce travel costs. However, the reality does not necessarily match this vision

This section is split into two sub-sections. The first reviews evidence and perceptions about whether intensification is likely to result in a greater or lesser social segregation. The second considers whether intensification is likely to benefit the most disadvantaged people in our communities.

¹⁴ Newman and Kenworthy acknowledge the importance of all these factors but argue that density is the most important influence.

¹⁵ And this is obviously much wider than the relationship between health status, intensification and living conditions would include factors such as overcrowding.

Social Segregation

This sub-section reviews analysis of whether compact city policies are likely to deliver a city that is more or less socially polarised in terms of the location of different income groups.

Comparisons with other countries may be of limited usefulness because of differences in the way growth has impacted upon lower income groups. The pattern of urban growth in many UK and US cities has been that more affluent people have moved out to the suburbs to avoid the problems associated with city living – leaving a decaying urban core. One of the benefits of a compact city is expected to be revitalisation of this core. On the contrary, New Zealand (and many cities in Australia) has seen the gentrification of many inner city suburbs over the last 30 years and a mix of wealthy and more deprived fringe suburbs.

If intensification results in greater social polarisation this is likely to be an undesirable effect for two reasons:

1. Concentration of deprivation is likely to make those people worse off (for a range of reasons including a lower quality built environment, and negative neighbourhood effects)
2. The rest of this report has shown that many issues assumed to be associated with intensification, such as crime, poor health, and low amenity, are more likely to be a result of concentration of poverty, rather than housing type or density per se. For this reason social segregation can be assumed to have a negative impact on a city as a whole as well as on those living in areas of deprivation.

Planning in the Region has, to date, not aimed to directly address issues of social segregation, although the Regional Growth Strategy does recognise this as an issue. It is apparent that there is a process of segregation occurring in the Auckland region, but this process is not primarily being driven by the planning process. Rather it reflects social and economic changes. However the planning system may exacerbate these trends. In particular intensification in some inner city suburbs may be increasing the speed of social segregation by removing opportunities for rental and low income houses. Older houses that traditionally may have housed such household units are being redeveloped into more expensive apartments and town houses. Thus intensification is contributing to a shift of lower income housing to the suburban fringe.

Surveys

The issue of social segregation was not inherently raised in the residents' surveys. There was one perception by a non-resident that these types of developments encourage quite a few students as well as transient people who rent, resulting in a fear that the areas will become slums in the future.

Media

The issue of social segregation was raised in a negative way through the media between 1999 and 2004. Some articles associated a perception of cheap, overcrowded housing for the poor with intensified housing developments. The concept of the "birth of a slum" – community groups fearing slums would be created impacting on character of surrounding bungalows - was also raised in the media.

Literature review

The risk of spatial and social polarisation was foreshadowed in the Regional Growth Forum's work on the social impacts of urban growth.¹⁶ This work suggested that unless managed carefully, intensification could result in polarisation between lower income, lower resourced areas with high density and low natural amenity, and more affluent low density suburbs (as well as affluent higher density suburbs with high environmental amenity such as in coastal locations). The Growth Forum work suggested that in order to avoid this scenario it would be necessary to develop growth nodes without reducing amenity – for example by ensuring provision of open space and recreational space. This work also suggested a greater number of small nodes would result in a better outcome.

To date, intensification has mostly occurred in middle income suburbs rather than low income suburbs – places such as the Inner Isthmus, Albany, New Lynn and Botany. Concentration of low income households may be occurring through a process of displacement, rather than the direct intensification of lower income areas.

Despite the difficulty of international comparisons there are some studies that have some relevance for Auckland:

¹⁶ Regional Growth Forum, "Social Infrastructure: Impact of Urban Growth", Auckland

Ernest Healy and Bob Birrell, “Housing and Community in the Compact City”, Positioning Paper, Australian Housing and Urban Research Institute, 2004

This positioning paper outlines the basis for a study that is currently underway. The authors propose to undertake an empirical assessment of the implication for compact city for socially disadvantaged groups in Melbourne.

The authors question whether the urban village type concept of vibrant, pedestrian-friendly, mixed use, mixed housing types, is realistically achievable. They note that data from Melbourne and Sydney shows growing spatial concentration of poor people and question whether this is a result of stigmatisation of high density areas. They point to “save our suburbs” movements which have a strong hold in more affluent suburbs and have partially insulated these suburbs from the impact of higher urban densities.

“Because those who live in the most affluent suburbs may be better able to resist the impact of a compact city policy, some of the greatest increases in density may consequently occur in lower to middle class socio-economic areas, and this lead to negative evaluations of the housing question.” (Healy and Birrell 2004, pg 26)

The authors also hypothesize that when intensification occurs in more affluent areas it does not carry the same stigma because other attributes are present to compensate, such as proximity to inner-city amenities. Furthermore, differences in the perception of urban density may vary according to the social capital¹⁷ of the residents in the area:

“..the residents of socially disadvantaged areas with higher densities may not have the social and cultural capital to compensate for loss of spatial amenity, or to cope with a more defined, demanding social environment.” (Healy and Birrell, pg 36)

The proposed research (assumed to be currently underway) involves an assessment of the social and physical characteristics of a number of case study subdivisions. It includes direct observation as well as structured stakeholder interviews. The outcome of this research is likely to be of interest because of the similarities between Melbourne and Auckland (for example the existence in both cities of higher income inner suburbs).

¹⁷ “Social capital” is a term that is usually used to mean social cohesion, community involvement and neighbourliness (evident through mechanisms such as networks, trust, shared norms and values, and volunteering.)

Bill Randolph, “Social Perils on the Suburban Fringe”, *Australian Planner*, Vol 41, no 2, 2004

A slightly different perspective on the Australian experience is outlined in a short article about growth in western Sydney. The author argues that the effect of intensifying around older town centres is producing polarisation.

“..urban consolidation policies are strongly promoting higher density non-family accommodation well away from the ..new fringe suburbs. The result is an increasingly spatially polarized housing output, with middle-income families piling up in the new outer suburbs and singles and other “non-conforming” households effectively excluded to medium and high density ghettos in older town centres or overlooking a main road or rail line.” (Randolph 2004, pg 38)

Randolph argues the need for greater diversity in housing types in suburban locations as well as in town centres. This may have some relevance for places such as Waitakere City where intensification is taking place in older town centres such as New Lynn.

Other Studies

A study by Elizabeth Burton (2000) of 25 English cities and towns, found that more compact cities are likely to be associated with reduced social segregation. This study is discussed more fully in the next sub-section – however note that Burton cautions against generalising the results to US or Australian cities.

Gordon and Richardson (1997) question whether compact cities are more equitable, and point out that the more highly publicised American compact cities such as Laguna West, Seaside Florida, and Kentlands Maryland, are much less affordable relative to state-wide average house prices than many typical suburban communities.

Literature on affordable housing which was briefly scanned for this review, suggests that to achieve a housing mix within intensified high quality development requires proactive policies that require a certain percentage of housing to be lowincome (by the use of tools such as inclusionary zoning).¹⁸ However, even then there are issues such as the retention of low income housing.

Affordability, cost of living, other impacts on most disadvantaged

¹⁸ Housing NZ Corporation is currently undertaking a study ‘Regulatory approaches to promote private sector provision of affordable housing’ as part of another Auckland Sustainable Cities Programme project.

The effect of urban form on spatial segregation is one aspect of the impact on people who are disadvantaged, but another important consideration is whether intensification can result in more affordable housing or a lower cost of living. In theory it should, because higher density forms of housing use less land, and because improved accessibility should reduce travel costs.

Planning in the region has not directly addressed issues of affordability. It was hoped that housing costs could be made more affordable through medium to high density developments and through increases in density and flexibility in terms of design. To date the experience suggests that while making housing more affordable for some groups in society, intensification has not reduced housing costs for those most in need.

Surveys

The issue of affordability was important for residents. In particular, many residents felt that intensified living had given them the opportunity to afford their own home, and was a good entry point into the housing market. This theme was echoed around the suburbs of Birkenhead, Ranui, Epsom and Eden Terrace.

The positive issue of the affordability of units was not raised by non-residents. However the other side of the coin of affordability – that many developments appeared cheap and of lower quality than surrounding housing – were common concerns.

Media

The media portrayed both positive and negative themes associated with affordability. It should be noted that there was particular reference to affordable intensified housing in the widely desired Auckland Grammar School Zone. The concern was that intensification of housing within the Grammar School Zone could see the geographical extent of the zone shrink, and as a result some homes on the edges of the current Zone may end up being outside of the Zone in the future.

One negative comment in the media was intensified developments are linked to income with a perception of poverty and disease associated with low-income earners.

Literature Review

No research was encountered that comprehensively analysed the cost of housing in compact cities relative to other cities. The difficulty is that compact cities have tended to adopt compact city policies because they are desirable places to live, and therefore the cost of housing is already higher than in other places.

One concern raised in the literature is that compact city policies are often only half implemented. For example, Danielson and Lang (1999) fear that currently the politics

of smart growth favour only one part of the equation – limiting greenfields development. Negative perceptions of intensification may put the brakes on intensification and reduce housing affordability.

Housing affordability is only one element of the cost of living. If intensification can reduce travel costs then this will have a social equity benefit. Reduced car dependency could be of particular benefit. An article from the Victoria Transport Policy Institute, about transit oriented development reports that:

- A study of neighbourhoods around Sky Train rail stations in Vancouver found that households located within 300m of a station owned 10% fewer vehicles on average than households located more than 1km from a station – and 30% fewer than households a few kilometres away. This could partly reflect self-selection, however there is evidence that many residents reduce their vehicle ownership when they move.
- A study of Orenco Station in Portland found that 22% of residents commute by public transit, far higher than the average 5% for the region.

Another study (McCaan 2000) notes that transport is an expense second only to housing – and that in some areas transportation expenditure accounts for more than expenditure on shelter. McCaan analyses the relationship between transport expenditure and urban sprawl in 28 metro areas. She found that there was a strong relationship between sprawl and transport costs. In one-third of metro areas that were found to be the most sprawling, households devote 20% more of their spending dollar to transportation than in the one-third of areas with the fewest sprawl characteristics.

One overall study of some interest, for its methodology perhaps more than its conclusions is by Elizabeth Burton.

Burton, Elizabeth, “The Compact City: Just or Just Compact? A Preliminary Analysis.” Urban Studies Oct 2000, vol 37, issue 11

(Also discussed in Burton, Elizabeth, “The Potential of the Compact City for Promoting Social Equity”,2000)

In a study of 25 English towns and cities with a population of 80,000-220,000 Burton reviewed all the claimed effects of urban compactedness on social equity (positive and negative) and sought to test these empirically. Burton argues that the least explored and most ambiguous argument in support of compact cities is that they are socially equitable. She sets out to test the validity of this claim.

Burton, herself, cautions against generalising her results to other locations including Australia and the US. Nevertheless the methodology is of some interest.

Some positive (claimed) effects she identifies in the literature include:

- Better access to facilities and jobs
- Better public transport and greater opportunities for walking and cycling
- Reduced crime
- Lower levels of segregation

Some negative (claimed) effects she identifies include:

- Poorer access to green space
- Reduced living space
- Poorer health (general, mental and respiratory)

She acknowledges that for many of these effects conflicting claims exist and the nature of the evidence ranges from “sparse” to “contentious”.

The compactness of cities was measured by a number of dimensions covering:

- Density (population and household density, housing form etc)
- Mix of uses (facilities, retail/residential, commercial/residential etc)
- Intensification (changes in density of most dense area, rate of in-migration, rate of new house building).

Indicators were then developed for each of the social equity issues, and values for the indicators were obtained by collecting a large range of data primarily from secondary sources. The quality of the information is, however, only as good as the indicators used. For example the only indicator used for access to facilities was access to superstores.¹⁹ This tells us nothing about the facilities that are likely to be of most interest such as local shops, community facilities and recreational facilities.

¹⁹ Another example is that the only indicator used to measure crime was the cost of home contents insurance. Presumably the choice of indicator was limited by the data that was available.

Statistical analysis showed mixed results. The only clear positive relationships between intensification and social equity²⁰ were:

- Better access to superstores
- Better mental health²¹
- Reduced social segregation

Negative effects included:

- Poorer access to green space
- More respiratory illness
- More crime
- Less affordable housing

For the other effects either the results were mixed, or it was found that other intervening variables had a much stronger effect than compactedness. Examples of the latter were accessibility to jobs and job opportunities.

²⁰ In most cases social equity was determined by measuring the difference between the most deprived ward and the average, or the difference between the most and least deprived.

²¹ Measured by death from mental illness!

Conclusions

The review of surveys, media articles and literature highlights a number of points that are relevant to policy related to intensification and social issues.

Foremost amongst these is that the surveys, media articles and literature all highlight the diversity of opinion on intensification and social issues. The literature indicates that this is a complex area, with no black and white answers to the various issues raised. Yet most surveys and community comments suggest that people want certainty over their immediate living environment, and would like to see statements that intensification is either good or bad.

Surveys and media articles tend to concentrate on perceived connections between the design of intensive developments and future social problems. However most literature acknowledges that most social problems, such as ghettos and slums, are the result of a wide range of economic and social forces, with the built environment having only a marginal influence on these forces.

Most surveys and media articles concentrate on people's immediate day-to-day living environments, while the literature tends to concentrate on whether particular planning approaches are better or worse in terms of different ideas about what constitute good cities. There is little in the middle ground: What examples of development are leading to better social outcomes, which types of development are leading to worse outcomes? Also for those studies that do canvass this middle ground it is unclear whether their results are transferable to the New Zealand context.

In terms of policy development, and what steps the planning process could take to help encourage good social outcomes, given the wider social and economic framework within which planning operates, the available research would suggest that social problems are likely to be minimised if intensive housing is:

- Well designed in terms of internal and external living spaces
- Well located in terms of being accessible to a range of services and activities
- Meets the needs of a diverse range of households in terms of income and demographics.

It could be said that the Regional Growth Strategy, when first published, concentrated on the middle point. The overall direction of the Strategy is to concentrate intensive housing around town centres and transport hubs to ensure high levels of accessibility. Planning documents, along with other tools such as the Building Act (2004) are now increasingly focusing on the first point, the quality of the living environment offered to residents. Planning has yet to address the third point – that of diversity and mix within intensive housing areas. This may prove to be the most important social issue to tackle. Inclusion of a range of unit sizes, mixed uses and affordable units in intensive housing developments may be needed to ensure that intensive areas remain diverse areas.

Further Research Required

More discussion is needed to determine what further research is required, following this initial stock-take of information. A major difficulty associated with research in this area is the vast number of variables that impact on social conditions and the difficulty of isolating the housing influences from broader socio-economic influences. Also intensification is such a broad term and as this report has shown in many cases, it is how intensification is carried out that has an impact, rather than the act of increasing densities itself.

This report has touched on two specific areas for further investigation:

- Revisiting some earlier surveys to assess change over time. Many of the Auckland surveys were carried out when housing developments were relatively new. As they have matured it is likely that people's reactions (both residents and non-residents) to them will have changed. This would have to be done in a way that controls for factors such as "leaky building syndrome".
- Sales and rental histories of a selected range of intensive developments could also be analysed. Resale values will provide an indication of the extent of continued interest from investors and owner occupiers in intensive housing developments and would help to see if there is a move towards a loss of value over time. The leaky building syndrome would need to be controlled for. In addition, the sales and rental values of surrounding stand-alone housing areas could also be tracked to see if there has been any flow on effect into the surrounding area from intensive developments.
- In undertaking the research it may be desirable to broaden this into a wider "quality of life" survey and to include some traditional developments as well as

intensive developments to provide a comparison. An example that could be of some use is another piece of AHURI research investigating the links between housing and nine key socio cultural factors: health; crime; poverty; social exclusion; community; perceived wellbeing; anomie; education; and labour force participation.²² The research was not reviewed for this report as the focus was on housing tenure rather than housing form – however the methodology may be relevant. The survey was undertaken in South East Queensland and incorporated a variety of measures of quality of life. Some examples included extent of civil engagement; satisfaction with neighbourhood and various aspects of lives more generally; perceptions of safety; actual exposure to crime; and extent of social networks.

- Undertake more work into social segregation. This could include mapping the deprivation index alongside areas of intensification in Auckland to assess how they are related. It should also include following up results of the AHURI study into the impact of intensification in Melbourne, in terms of its impact on socially deprived groups and assessing the relevance of the findings for Auckland.

²² Australian Housing and Urban Research Institute; “Examining the links between housing and nine key socio cultural factors”, November 2001

Bibliography

- Baar K, "The National Movement to Halt the Spread of Multifamily Housing 1890-1926", Journal of the American Planning Association, Vol 39, 1999
- Beer A, "A Changing Understanding of the Role of Greenspace in High-Density Housing", unpublished paper, 2002
- Burton E, "The Compact City: Just or Just Compact? A Preliminary Analysis", In Urban Studies, Vol 37 issue 11, Oct 2000
- Burton E, "The Potential of the Compact City for Promoting Social Equity", in Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000
- Buxton M, "Energy, Transport and Urban Form in Australia" in Williams K, "Does Intensifying Cities Make them more Sustainable", in Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000
- California Planning Roundtable, "Myths and Facts about Affordable and High Density Housing" undated.
- Canada Mortgage and Housing Corporation, "Healthy High-Rise; A Guide to Innovation in the Design and Construction of High-Rise Residential Buildings", 2001
- The City of Edmonton, "Edmonton's Urban Land Intensification Strategy: Edmonton's Intensification Audit", January 2002
- Craglia M, Haining R and Signoretta P, "Modelling High Intensity Crime Areas in English Cities", Urban Studies, Vol 38 No 11, 2001
- Crookston M, Clarke P and Averley J, "The Compact City and the Quality of Life", in Jenks M, Burton E, Williams K, Ed, The Compact City: A Sustainable Urban Form?, Oxford, 1996
- Cropper V, "New Urban and Standard Suburban Subdivisions: Evaluating Psychological and Social Goals", Journal of the American Planning Association, 9/22, 2001
- Danielson K, Lang R, Fulton W, "Retracting Suburbia; Smart Growth and the Future of Housing", Housing Policy Debate, Vol 10, Issue 3, Fannie Mae Foundation 1999

de Waal F, Aureli F and Judge P, "Coping with Crowding", Scientific American, May 2000

Dupuis A and Dixon J, "Body Building in Auckland: Body Corporate and Intensive Housing, undated

Freeman L, "The Effects of Sprawl on Neighbourhood Social Ties: An Explanatory Analysis", Journal of the American Planning Association, , Vol 67 no 1, 2001

Gordon I, "Densities, Urban Form and Travel Behaviour" Town and Country Planning, Vol 66 no 9, Sept 1997

Greater London Area's Architecture and Urbanism Unit, "Housing for Compact City" , www.london.gov.uk/mayor/auu/docs/housing_compact_city.rtf

Healy E and Birrell B, "Housing and Community in the Compact City", Positioning Paper, Australian Housing Urban Research Institute, Feb 2004

Jenks M, Burton E, Williams K, Ed, The Compact City: A Sustainable Urban Form? Oxford, 1996

Jenks M "The Acceptability of Urban Intensification" in Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000

Lawrence R, "Housing and Health: from Interdisciplinary Principles to Transdisciplinary Research and Practice" , Futures, 5/1/2004

Lund H, "Testing the Claims of New Urbanism: Local Access, Pedestrian Travel and Neighboring Behaviours" Journal of the American Planning Association, Vol 69, 2003

Lyne M, Moore R, "The Potential Health Impacts of Residential Intensification in Auckland City, "School of Population Health, University of Auckland, and School of Applied Sciences AUT, Aug 2004

Jenks M, Burton E, Williams K, Ed, The Compact City: A Sustainable Urban Form?, Oxford, 1996

Masnavi M, "The New Millennium and the New Urban Paradigm: *The Compact City in Practice*", in Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000

McCaan B, "Driven to Spend: the Impact of Sprawl on Household Travel Expenses", at www.transact.org, 2000

McCaan B and Ewing R, "Measuring the Health Effects of Sprawl: A National Analysis of Physical Activity, Obesity and Chronic Disease", Smartgrowth America, Sept 2003

McIlroy R and Bryan R, "Creating Safer Communities: Is Intensification the Answer?", Plan Canada, March 1996

National Multi Housing Council, "Creating Successful Communities: A New Housing Paradigm", Brochure, 2001

National Multi Housing Council, "From NIMBY to Good Neighbors: Recent Studies Reinforce that Apartments are Good for a Community", White Paper, 2003

Randolph B, "Social Perils on the Suburban Fringe", Australian Planner, Vol 41 no 2, 2004

Regional Growth Forum, "Social Infrastructure, Impacts of Urban Growth", Auckland, undated

Talen E, "Sense of Community and Neighbourhood Form: An Assessment of the Social Doctrine of New Urbanism", Urban Studies, Vol 36 no 8, 1999

Transit Cooperative Research Programme, "The Costs of Sprawl Revisited" Report 39, Washington DC, 1998

Turner D, Hewitt J, Wagner C, Su B, Davies K, "A Report on Best Practice in Medium Density Housing" for Housing New Zealand Corporation, September 2004.

Urban Land Institute "ULI/NMHC/AIA Joint Forum on Housing Density", Washington DC, Feb 2002

Von Hoffman A, Belsky E, DeNormandie J, and Bratt R, "America's Working Communities and the Impact of Multifamily Housing", Joint Center for Housing Studies of Harvard University and Neighborhood Reinvestment Corporation, 2004

Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000

Williams K, "Does Intensifying Cities Make them more Sustainable", in Williams K, Burton B and Jenks M, Ed, Achieving Sustainable Urban Form, London, 2000

Wilson G and Baldassare M, "Overall 'Sense of Community' in a Suburban Region - the Effects of Localism, Privacy and Urbanization", in *Environment and Behaviour*, Vol 28 no1, 1996

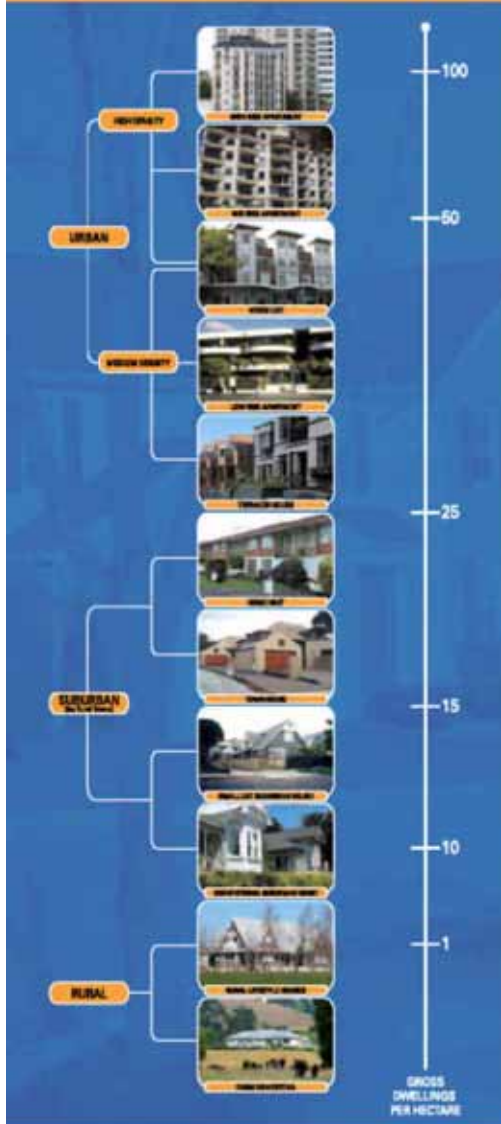
Appendix One – Housing Types

Auckland housing choices



A guide to housing definitions commonly used in the Auckland Regional Growth Strategy

August 2003



URBAN HOUSING CHOICES

- High Rise Apartment**
 One seven storeys high. Must occur in CBD and sub-regional centres. Site area per unit of 100m² or less.
 Ownership is shared amongst unit title with body corporate management.
 Gross neighbourhood density: 80+ dwellings per hectare
- Mid Rise Apartment**
 Buildings between four and seven storeys. Usually a site area per unit of 100m² or less.
 A single building containing a number of units, usually held in unit title with a body corporate. Shared parking and vehicular access. Pools or laundry for each unit. May share recreational facilities e.g. gym.
 Gross neighbourhood density: 40 to 80 dwellings per hectare
- Mixed Use Development Within Urban Areas**
 A mixture of residential and commercial uses. Often, commercial uses are restricted to the ground floor with residential above. Often separate access and parking spaces for each storey and customer.
 Ownership is shared amongst unit title with body corporate management. Can be both medium and high density.
 Gross neighbourhood density: 50+ dwellings per hectare
- Low Rise Apartment**
 Apartments in a single building, no higher than three storeys. Usually with a site area of between 100m² and 200m² per unit.
 Usually there is a patio or balcony for each unit. May share recreational facilities such as a swimming pool. These are usually unit title and operated under a body corporate.
 Gross neighbourhood density: 30 to 40 dwellings per hectare
- Terraced House**
 Attached dwellings sharing side walls. Built facing the street or around private access ways. Site area usually 100m² to 200m² per unit.
 Separate off-street parking, although vehicle access may be shared. Separately owned courtyards with recreational open space. Can be three storeys high with a single unit access each floor. These can be in the streets, or unit title.
 Gross neighbourhood density: 30 to 40 dwellings per hectare

SUBURBAN HOUSING CHOICES

- Home Unit**
 Attached in a row of between two and five units. Usual site area per unit of between 100m² and 150m². Usually built end title. Generally one or two storeys with separate units of two storeys on the top and bottom. Usually one to three bedrooms. Separate or shared access. Parking provided on site. Titles are usually unit titles, but can be cross-titled.
 Gross neighbourhood density: 18 to 24 dwellings per hectare
- Town House**
 Can be detached or semi-detached. Often two storeys from the street and with separate small gardens or courtyards. Usual site area per unit between 100m² and 200m².
 Off-street parking provided. Sections over two storeys. Often built in a three section following the alignment of the site. Titles in the streets, cross-titled or unit title.
 Gross neighbourhood density: 18 to 24 dwellings per hectare
- Semi-detached Suburban House**
 Single dwelling on small allotment. Site area per unit between 100m² and 150m².
 Commonly occur on land that was previously zoned or on lots that have been cross-titled or subdivided. Access can be separate or shared. Titles are usually fee simple but can include cross lease and unit title.
 Gross neighbourhood density: 12 to 18 dwellings per hectare
- Conventional Suburban House**
 Single dwelling on an allotment. Site area per unit between 100m² and 1,000m².
 Detached single houses on its own site. Off-street parking is provided. Usually two to four bedrooms and a bath and/or third year. Titles in fee simple.
 Gross neighbourhood density: 8 to 12 dwellings per hectare

RURAL HOUSING CHOICES

- Rural Lifestyle Housing**
 Single dwelling in rural areas between 1,000m² and 4 hectares.
 Typically traditional houses on sites in a rural setting. Includes both living, rural residential, and rural lifestyle housing.
 Gross neighbourhood density: between 0.1 dwellings per hectare and 1 dwelling per 4 hectares
- Farm Homestead**
 Single dwelling on a farm.
 Usually closer to having a formal road lot, generally defined by the property size and its productive purposes.
 Gross neighbourhood density: 1 dwelling per 4 hectares

Appendix Two - Community Surveys – Summary

Appendix Three - Media Search