Full name of author:  Jordyn Candy
Title of research project:  The Vertical Village
Department of Architecture
Master of Architecture (Prof)  2015

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Candidate Signature: [Signature]  
Date: 3rd February 2016

Student number: 1380687
The Vertical Village

Reinterpretation of the housing paradigm for the ageing population

A research project submitted in partial fulfillment of the requirements for the degree of Masters of Architecture Professional. Unitec Institute of Technology, 2015

Jordyn Candy
1380687
This research explores New Zealand's current trends, development and future needs for the ageing population with regards to retirement living and housing for the aged in Auckland. Specifically focusing on the needs and wants of the Baby Boomer generation, and how this can be translated into an alternative housing model within Auckland.

The aged population (65 years plus) has increased to 12%, which equates to one in eight currently accounting for the age group in New Zealand, with an estimated increase to 19% in 2025, with further increase of up to 25% or an equivalent to one in four expected by 2050. The impact of this growth will have consequences both socially and economically with limited availability of “resources, community services, pensions, health care, workforce and the provision of alternative housing for older people.”

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1.0 Introduction

1.1 Research Question

How can needs and wants of the baby-boomer generation be reinterpreted in an alternative way to the conventional retirement village?
1.2 Research Problem

New Zealand as a nation is getting older, and like many other developed nations has a rising ageing population. The aged population (65 years plus) has increased to 12%, this equates to one in eight of the population in New Zealand, with a projected increase to 19% in 2025, and 25% by 2051, equivalent to one in four of the total population. The ageing population is a result of three main factors: increased life expectancy, decreased fertility rates and the Baby Boomers heading towards retirement age. New Zealand, along with the rest of the developed world is experiencing an ageing population increase, partly due to the post-World War II baby boom. Post The Great Depression and WWII there was a population explosion with an increase of births between the years of 1946 and 1964. The Baby Boom birth rate within New Zealand peaked in 1961 with 65,400 births that year. The Baby Boomer generation is now in or reaching retirement age, continuing to remain socially and physically active, while technologically knowledgeable and up to date.

The impact of this growth will have consequences both socially and economically with limited availability of "resources, community services, pensions, health care, the workforce and the provision of alternative housing for older people."

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Due to the population continuing to age there is a higher demand for aged care facilities. “Demand for rest home care will begin to rise between 2012 and 2015.” With the population ageing, facilities for these New Zealanders become more critical and visible.

The conventional retirement village model is viewed both as a positive and a negative housing solution for this ageing population. Retirement villages are seen to be exclusive due to the cost of living there. Retirement villages offer the availability of care when required, maintaining independence as long as possible within a safe community, and promotes ageing in place. Negatively the idea of a retirement village is seen to be removing the aged from the wider community, creating institutionalised isolation. Betty Friedan puts forward the argument that the aged gain nothing by putting themselves into “an aged ghetto, away from the rest of society.” A similar view was put forward by Peter Gauchat, “these housing environments represent a warehousing of older people that contributes to the negative stereotypes of ageing.” The government and other organisations view retirement villages as being a solution for the ageing population. However, it is acknowledged by the Aged Residential Care Service Review that there is a need for an overhaul of aged care facilities and practices. “Within aged care facilities, we need to move away from institutionalised, highly structured care of the elderly to a new model that provides less structured regimes; empowering residents and treating them with dignity.

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and respect, while offering human companionship and meaningful activities." Engaging in meaningful activities encourages participation and social relationships, which are beneficial to ongoing health and wellbeing. The new ‘young-old’ generation who are social and active are heading towards retirement and require suitable solutions for living as they age.

1.3 Research and Design Objectives

The objective of retirement villages is to offer alternative housing solutions for the ageing population, providing a safe community with ease of access to all amenities. The village is for independent living, with assisted living available if and when it may be required. The number of villages in New Zealand, and more specifically in Auckland, has been growing rapidly over the last five years due to the ever increasing population growth. One of the consequences of this growth is a greater need for housing within New Zealand.

Currently, many aged residents remain in their homes, until this option is no longer viable with individuals having to sell, downsize or move into a residential facility with support. The choice of retirement village living is generally not the preferred alternative as it is viewed with a biased perspective and is perceived to be an unsuitable choice of living. However, retirement villages do have a place in the larger scheme of housing, not only for the aged. Due to existing housing

shortages, and an overall growing population, these villages offer an alternative solution for housing. Due to the rapidly growing population, the housing markets are unable to keep pace with the increasing demand, thus creating an overly competitive housing market. If more of the ageing population choose to reside in retirement villages, it will free housing for younger generations and their families.

However, as has already been mentioned, the retirement villages of today come with stigma attached regarding institutionalism, with decreased independence and freedom of choice. So, how would an acceptable alternative, removing the stigma encourage habitation of the spaces both communal and private be designed?

The objective of this project is to design a retirement village within an existing dense urban environment, which dictates the design parameters. The site location and a small footprint dictate and define the design objectives, such as the village being vertical rather than sprawled as is the traditional retirement village. During the process of design it is to be expected that some architectural research problems will be encountered, these include habitation, interaction within the spaces, the included amenities removing the need to leave, housing at higher levels, and highrise limitations.

This design will be located on the city fringe, with accessibility to all resources, entertainment and transport, redefining the traditional sense of the retirement village. The intention is to
create a series of living quarters that allow individuals the same freedom of living they would have in their homes while living within close proximity to all facilities, activities, family and friends enabling continued community participation. Some of the baby boomer generation are very mobile, technologically plugged in, social, fit and physically active, well-educated and travelled. This new age of the ageing will lead to the ‘new village’ or alternative community living, to provide and meet all requirements.

1.4 Methodology

The methodology used for this research and design project has been a combination of quantitative research, utilising books, journals, government reports and statistics, precedent studies of existing retirement villages both in New Zealand and abroad, urban and site analysis, program (influenced by research of existing retirement villages and current needs), and design concept through drawing and modelling to achieve final design outcomes.
The first half of this project is an investigation into retirement living, viewing ageing at a global and local level. Analysing how ageing is perceived and received in the wider community, and how successful ageing can occur with forward thinking and positive intervention. Alternative retirement village housing solutions are analysed in the precedent studies.

The second half of the project is a response to the investigation, making sure the chosen site encompasses all the required social connections, transportation and community links. The program for the building is then outlined through research of current retirement village needs and future needs, with subsequent design being formed as a response to the investigation findings.
2.0 Global Ageing

2.1 Introduction

The question has to be asked, where does ageing fit into today’s world? Getting older is seen as being an ever increasing burden on society. The population ageing did not happen overnight, in fact there has been plenty of warning regarding the ever increasing ageing population. On a global scale the percentage of people ageing (65 plus years of age) accounted for 500 million people in 2006, with a projected of approximately 1 billion by the year 2030. This is a total of one in every eight people inhabiting the earth. Children under the age of five years old will be outnumbered by people 65 plus years of age for the first time in history. The total world population is projected to increase to 2 billion people between 2010 and 2050, which seems a small figure, in comparison to the expected 1.3 billion increase of the ageing population over the time.

The most rapid ageing is occurring in the developing countries with a projected increase of approximately 250 percent between the years 2010 and 2050, whereas developed countries expectation is approximated to be 71 percent increase of ageing population. With declining numbers of children being born and the average life expectancy being longer, older people are accounting for a larger share of the population globally. The numeric surge of people entering the 65 plus age bracket in some countries will challenge national infrastructures, in particular the health system.

12 Ibid. 3.
Both China and India are expected to have the biggest boom in ageing, with China’s older population (65 plus), currently sitting at around 110 million people with expected growth rising to 330 million within the next thirty-five years. India currently has 60 million older people with an expected 280 percent increase within the next thirty-five years, equating to approximately 277 million people in the older age bracket.15

2.2 Perception of Old

Ageing and old age is seen in a negative light, with the perception that becoming older, more fragile, with the potential for diminished functional capacity leads to increased isolation, loss of independence and mobility. People perceive the aged as a burden on the economy and health sector, forgetting that old age is inevitable and comes to everyone. There is ongoing debate as to which age group defines old. There have been three defined age transitions in life, childhood, adulthood and old age. However this is argued to be incorrect as there is now a fourth definition of the young –old (aged 55-75 years) which comes before old age.

“We are presently undergoing still another changing perception of the life cycle, and still another meaningful division is appearing: namely, a division between the Young-Old and the Old-Old. Although chronological age is not a satisfactory marker, it is nevertheless an indispensable one. At the risk of over simplification, the Young-Old come from the group composed of those who are approximately 55 to 75 – as distinguished from the Old-Old, who are 75 and over.”  

_Bernice L Neugarten_

Neugarten describes the young-old as those who are physically active and able to participate in their chosen activities during their leisure time. These young old are the Baby Boomers of today, heading towards retirement, with free time, while maintaining active physical, cultural and social lives. These young old of today may also have part-time jobs or work within the community as volunteers, thus remaining very much a part of the wider community while maintaining strong family ties. The old-old are perceived as those who may require some assistance in activities of daily living, and are less physically active. This age bracket of 75 plus years, try to maintain as much independence as possible, but this is often determined by the individual’s health status.

‘Old’ cannot only be measured as purely an age number, it must also be considered a state of mind, with the popular phrase ‘you are only as old as you feel,’ being heard often. This term implies that you can be in your eighties and still be as youthful as a sixty year old. Old age is what people make of it. If you define yourself as old, you will be old. There have been studies undertaken by psychologists and scientists into this theory confirming that those who feel younger live longer. It is indicated that individuals who feel their age die younger, while those feeling older than their actual age were at an even greater risk of dying young.
Ageing in place is giving a person the ability to remain living in a chosen residence for as long as possible as they age. To enable continued living in their own homes, older adults recognise the need to make modifications to facilitate this, although their homes lack the necessary accessibility.\textsuperscript{17} Part of ageing in place is to have ease of access and availability to appropriate supports and services to accommodate the changing needs of the occupant as they age. “The act of aging in place takes place during a period of time in an elderly person’s life where they can have the things that they need in their daily life, while maintaining their quality of life.”\textsuperscript{18} Ageing in place was initially a term used when referring to remaining in residential homes or a location where an individual had resided for many years. More recently the term has been used in relation to retirement village schemes, where individuals enter at the initial phase of ageing and can remain within the one location, with services being provided as required. This idea indicates that you continue to reside in the same dwelling for the remainder of your life time. This location does not have to be a residential house; it can be any housing chosen to enhance the living and activity of the occupant.

\textsuperscript{17} Vining Radomski and Catherine A. Trombly Latham, Occupational Therapy for Physical Dysfunction, 6th ed. (Baltimore: Lippincott Williams & Wilkins/Wolter Kluwers, 2008), 954.
At what stage is it time to move on from home based living? Ageing in place within a retirement village is all about making one move in the earlier stages of ageing, while it is easier to do so, and then remaining there until end of life. If an individual is determined to live independently and has the home modifications and accessibility features to do so, it is a suitable solution. But at what point do they lose the option of making the choice to move themselves? Maybe they are forced to move after having a fall, resulting in them no longer being able to support themselves. How successful is ageing in place within a community, if the surrounding community cannot accommodate the aged.

A liveable community is one that contributes to the quality of a person’s life. A current debate leads to the question, are the current communities, consisting of the city, suburbs or towns, ready for the ageing population. The ageing population needs to plan and prepare for any future challenges to limit the negative impact on their quality of life and independence with decisions about whether the community they live in meets their current and future needs. Communities need to influence positive ageing outcomes by growing and changing the physical (built) and social environments to promote the individuals independence and strengthen their social and civic ties.19

19 AARP. Beyond 50.05: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging (Washington, AARP, 2005), 4.
This concept has evolved with a number of definitions and viewpoints. However the term can be dated back to the 1970’s, when it was used to broadly encompass quality of life and environments. In the 1990’s urban planners associated a liveable community as being related to the “smart growth movement.” The Smart Growth view is that “a liveable community incorporates” mixed-use development, exhibits compact development patterns, minimizes highly dispersed development patterns (sprawl), provides transportation choices, and makes efficient use of scarce resources and existing infrastructure. The evolution of this has included additional principles which incorporate design for active lifestyles, safety, security, and greater public participation.

A liveable community should have “affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life.” A very important aspect of the liveable community is the engagement of residents through participation in social activities. Independence for ageing does not mean isolation. It means that the person remains functioning and active, regardless of limitations, within a setting of their choice and continuing interactions with, and support from other people.

20 AARP, Beyond 50.05: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging (Washington, AARP, 2005), 15.
21 Ibid.
22 Ibid.
23 Ibid, 16.
24 Ibid, 5.
“One defining characteristic of a liveable community is the high level of engagement of its residents with one another and with the life within the community itself. Homes, neighbourhoods, and transportation facilitate this interaction and affect how people of every age make economic, social, and emotional investments in their communities.”  

There is a strong correlation between liveable communities, community engagement and the positive effects on successful ageing.

Community has been defined by the Oxford Dictionary as a “body of people living in the same locality” or having a particular characteristic in common. A retirement village has services, housing and supports, but needs to ensure an ongoing connection to the wider community with the provision of transport and social links. The wider community engagement is seen to be a key factor within liveability.

25 AARP. Beyond 50.05: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging (Washington, AARP, 2005), 22.

Successful ageing is seen to be linked with liveable communities and community engagement. The successful ageing concept is measured through the literature on gerontology, which is defined by the Oxford dictionary as the “scientific study of old age, and process of ageing, and of old people's special problems.”

The term ‘successful ageing’ has no one fixed definition or model. In 1961 Robert Havighurst defined it as “adding life to the years” interpreted as giving people enjoyment and satisfaction in later life. In 1987 John W. Rowe and Robert L. Kahn defined it as “multiple physiological and psychosocial variables.” In the early 1990’s a study of successful ageing was undertaken by the MacArthur Foundation led by Rowe, defining successful ageing as “the ability to maintain three key behaviours or characteristics: low risk of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life.” In 1982 the psychologist Carol D. Ryff defined it as “positive or ideal functioning related to developmental work over the life course.” In 1992 Fisher interviewed a selection of

27 AARP. Beyond 50.05: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging (Washington, AARP, 2005), 19.
31 John W Rowe, and Kahn, Robert L. “Successful Aging” The Gerontologist, Vol 37, No 4, 43
32 Bearon, “Successful Ageing,”
nineteen people aged between 62 and 85 years of age living in senior centres to see how they defined successful ageing. These ageing citizens defined it in terms of coping mechanisms and strategies for ageing. In 1992 Gerontologist Gibson believed ageing success was “reaching ones potential and arriving at a level of physical, social, and psychological well-being in old age that is pleasing to both self and others.”

There are two main social theories for successful ageing with the first emerging in 1961 being the “disengagement theory” this theory proposed that over the course of ageing, people would withdraw or disengage from social roles as a reaction to their reduced capabilities, diminished interests and in anticipation of death. This “disengagement theory” placed emphasis on the survival of society to the detriment of the individual’s self-worth and dignity, by encouraging the ageing to withdraw themselves from meaningful activities and ongoing social participation. Withdrawing socially leads to ongoing negative consequences for individual’s health and well-being as well as the social system. This theory now seems dated, however was fitting for an era with a shorter life expectancy.

The second theory, in 1972, was “activity theory” which put forward the idea that people age successfully when they engage and participate in daily activities. This “activity theory” can be linked to a surge of volunteers and senior activists during the 1960’s and 70’s who believed in

33 Bearon, “Successful Ageing.”
advocating for a certain lifestyle, which many older adults did not believe to be achievable or successful. This philosophy is now known as “the busy ethic.” Proponents of the activity theory regard disengagement by the ageing to be a result of society’s withdrawing from the ageing person, against their wishes. The consequences of these social barriers are the reason for the decline in engagement, participation and interaction.

The “continuity theory” was a third theory that proposed if people continued to maintain their lifestyles, relationships and activities from midlife into their later years they would age successfully. This continuation of activities, sports and socialising as people age, leads to a positive outcome, promoting satisfaction in life and guaranteeing consistency between the individual’s past and foreseen future. If, due to changes in health, individuals need to give up sports, work, or leave clubs it is important to find an alternative substitute. These substitute activities can generally involve interest in similar activities participated in prior to negative change in health occurring. For example, if arthritis prevents playing of a musical instrument an alternative could be to organise regular social gatherings of friends or like-minded people with an interest in music to listen and discuss music. This “continuity theory” believes in the importance of keeping the ageing physically, socially and cognitively active which will enhance and add to a desirable life outcome.

38 Ibid
39 Berk, Development through the Lifespan, 611.
41 Berk, Development through the Lifespan, 611.
Universal design is the idea that spaces and products should be designed for everyone to utilise throughout their lifetime. The implementation of universal design in buildings creates physical empowerment, allowing independent living and equal opportunities for a diverse population. It is intended to enable all people, but specifically within this document, the aged to get the most out of their environment, with no need for specialised design and modifications. This enforces the ageing in place, with the idea that the environment is already designed for the ageing process. Seven principles of universal design were established in 1997 by a group of product designers, architects, environmental design researchers and engineers to design for usability and independence.

The seven principles are as follows:

Principle 1: Equitable Use- Ensuring zero discrimination, providing accessibility towards any group of users, while maintaining aesthetic design appeal, avoiding segregation or stigmatising of users.

Principle 2: Flexibility in Use- Accommodating an individual’s varied preferences and functional capabilities within their living environments by adapting to individual user’s pace.

Principle 3: Simple and Intuitive Use – Easy to understand design irrespective of user’s knowledge and experience by excluding unnecessary complexity.

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Principle 4: Perceptible Information- Ensuring design information is relayed effectively regardless of sensory abilities, to assist those who experience changes in visual, auditory or tactile senses which impinge on functional capabilities.

Principle 5: Tolerance for Error- The design reduces hazards by providing fail safe features to maximise safety, which in turn minimises any adverse consequences of unintentional or accidental injuries.

Principle 6: Low Physical Effort- The design is utilised as efficiently and effortlessly as possible to minimise fatigue by reducing the need for repetitive movements and continuous physical effort.

Principle 7: Size and Space for Approach and Use- The need to ensure ease of reach to all workings to accommodate those seated (as in wheelchairs) or standing. Provide appropriate spaces if and when assistive devices or personal assistance is required. Consider individual’s hand and grip sizes to enable ease of manipulation.  

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The ageing population are all pigeon-holed under one umbrella of old. This ageing population are categorised under two stages of old, young-old and old-old, with a vast difference in the level of activity carried out between both age stages within the community. The young-old want to maintain the same quality of life they had experienced during their middle years, including maintaining their level of activity. This age group choose to remain in their homes or relocate while they are capable of making their own decisions, choosing a more convenient lower maintenance place to live while maintaining social and family connections within the community. Cities, suburbs and towns are not currently prepared for an ageing society with insufficient infrastructure to accommodate this increased population of the ageing. If the cities do not make changes and accommodate this increase of the ageing, where will the ageing fit within society and within the current urban scale. The liveable community promotes affordable and accessible housing, access to services, supports and facilities. Liveability with successful ageing promotes independence while maintaining an active and social lifestyle, in keeping with the wishes of the young-old. The well-defined needs of the young-old or as they are known the Baby Boomers, combined with the liveable community model can be integrated into communities that provide the available accessible infrastructure.
3.0 An Ageing New Zealand

3.1 Introduction

The ageing population of 65 years plus is rapidly increasing within New Zealand, with an estimated projection of more than one million living in New Zealand by the year 2031,45, with expectations that the population will continue to grow to between 1.17 million and 1.48 million residents (65 plus) by the year 2051, doubling the current statistics.46 The ageing population is a result of three main factors: increased life expectancy, decreased fertility rates and the post-World War II increase of births between 1946 and 1964, who are now reaching retirement age.47 The impact of this growth will have consequences both social and economic, with limited availability of “resources, community services, pensions, health care, the work force and the provision of alternative housing for older people.”48 With a larger number of New Zealand’s population entering retirement, there are fewer people paying income tax, placing greater pressure on the government and economy to provide appropriate housing alternative. The ongoing impact of this will place increased financial pressure on all public health services and the superannuation scheme giving cause to increase both the age of entitlement and retirement age.49

47 Gillies, Baby Boomers Outgrowing other Age Groups.
49 Koopman-Borden, “Older People.”
The growing number of aged population will increase the need and demand for housing solutions. Liveability becomes a major concern as people age and find they can no longer function adequately or safely within their own home and community environments. Liveability is measured by the quality of a person’s life through participation and engaging in social activities within the community. Liveability ensures individuals can function at the highest level with access to technology, health care, transport, generating ease of daily activities, empowering individuals to maintain their independence and achieve the highest living standards possible.

With the concern of impending economic strain, the government has chosen to investigate residential care facilities to cater for future needs. There is currently vast amounts of funding going into residential care facilities annually, with “Rest homes receiving more than $800 million in taxpayer funding each year,” as opposed to funding community services keeping elderly in their homes. “New Zealand has one of the highest proportions of people in residential care in the developed world and is relatively unique in its continued focus and support of residential care facilities for the aged.” Aged residential care facilities are seen as being the solution for housing the aging population by government and other organisations. However this is not seen as being the solution by the ageing population. What can be done architecturally to make this solution more liveable?

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50 Labour NZ, Green Party and Grey Power, A Report into Aged Care, 7.
51 Grant, Thornton Ltd., Aged Residential Care Service Review, (Wellington: New Zealand Aged Care Association, 2010), 86.
“Within aged care facilities, we need to move away from institutionalised, highly structured care of the elderly to a new model that provides less structured regimes; empowering residents and treating them with dignity and respect, while providing human companionship and meaningful activities. 52 As acknowledged by the Aged Residential Care Service Review, there is a need for an overhaul of current aged care facilities and practices. The review proposes four alternative models of care for the aging. These alternative models are: to vastly improve the current approach, improve and increase community services available, provide individual funding schemes, and provision of low-income housing for the aged. “There has been a call for community-based models.” 53 Many new methodologies have been put forward for housing the elderly. Common throughout the models is “a recognition that the physical and social environment must work together to create an environment that facilitates better care for the older person within an environment that at least replicates home.” 54 The location of accommodation for the ageing population is of great importance, as it has a profound effect on the quality of life and daily activities, along with an environment that mirrors their usual routines and normal daily activities.

52 Labour NZ, Green Party and Grey Power, A Report into Aged Care, 9.
53 Ibid, 15.
3.2 New Zealand’s Retirement History

The earliest glimpse into aged care within New Zealand was during the 1860’s when benevolent institutions were introduced; these were charitable aid housing solutions for the elderly who were unable to continue working or living independently.55 The growth in the elderly male population outnumbered females by 3.5 to 1 between 1881 and 1901.56 With the men out numbering females, many could not marry and have families, therefore, a large number of aged males were placed in these benevolent institutions. Traditionally the ageing or old were taken care of in their own homes or those of their children. Those aging men who had not married and had children had no one to take care of them in their old age. Life expectancy during this era was very low with people lucky to reach fifty years of age.

To assist the ageing population, the pension was introduced in New Zealand in 1898. This contribution was a small amount given each week to support people in the 65 and over age bracket, unable to support themselves financially in retirement. 57 By the 1900’s charitable organisations had introduced rest homes, which started appearing nationwide. These rest homes were predominantly provided for former soldiers as remuneration for their services in World War I.58 After World War II the number of rest homes grew to accommodate the increased number of women, who were then outnumbering men.

58 Koopman-Borden, “Older People: Life Circumstances,”
By the 1970’s New Zealand had one of the highest rest home residency rates in the world.\textsuperscript{59} With the large numbers of rest homes, charitable organisations looked at the retirement village initiative models that Australia was implementing. Retirement villages were slowly introduced in New Zealand in the 1990’s and have since grown in size, height and occupancy. These retirement villages are appearing throughout the country, with heavier concentrations in the larger city centres such as Auckland. In 2001 a quarter of New Zealand’s aged (65 plus) population were located in Auckland (115,000), Canterbury (66,500) and Wellington (46,900).\textsuperscript{60} Currently there are a total of 363 registered retirement villages in New Zealand, which continue to increase in number.

\textsuperscript{59} Koopman-Borden, “Older People: Life Circumstances,”

\textsuperscript{60} Statistics New Zealand, Older New Zealanders: 65 and Beyond, (Wellington, Statistics New Zealand, 2004), 4.
3.3 Current Retirement Practice

Retirement is viewed as a new found freedom. With no commitments, such as children and work, there is far more freedom to pursue interests at leisure. In retirement many choose to live a leisurely lifestyle with active participation in family (especially grandchildren), community activities, social, cultural and fitness groups. The current retirement age in New Zealand is 65, this is the age people are expected to stop working and live off the fortnightly superannuation payments. Many ageing do not wish to stop working or change their lifestyle when they reach 65 years of age. Forty percent of people aged 65-69 years old continued to work either full or part-time in 2013.61

This ageing population of Auckland accounted for 11.5 percent or 163,161 people, of Auckland’s total population in 2013, the highest percentage of this ageing population being in the young-old age bracket, accounting for 95,190 people.62 The 2013 Census stated that of these young-old, Auckland had twenty-two percent currently employed.63 Those in the young-old age bracket are reinventing the retirement picture by continuing to work into their retirement years. These young old are living in the central areas, participating and contributing to community, with eight out of ten ageing Aucklanders having actively participated in the community on a voluntary basis.64

63 Ibid, 24.
64 Ibid, 30.
The current housing options for ageing in retirement range from private housing, multi-generational households, and retirement villages. The majority of the ageing population desire to remain in their homes for the remainder of their lives. The ageing in place policy allows people to remain in their houses till late in life, however this is not always the case. Multi-generational housing, relates to the aged living with family members, generally their children. Many aged do not wish to be reliant on their children and believe they are a burden to them. In some cultures, particularly Asian and Pacific, it is an expectation as part of their values and belief system that the elders will be taken care of by their children. They will live and participate in family life, being looked after as necessary for the remainder of their lives within this family unit.

A certain percentage of ageing individuals, move to retirement communities which offer accessible amenities and freedom from having to maintain a property. The number of ageing in New Zealand now moving into retirement village schemes is increasing and, in relation to global trends, New Zealand has one of the biggest proportions of ageing in residential care.

A 2012 Australian report identified six typologies of the ageing Baby Boomers.
1. ‘age in place,’ a select group that can remain in their family home
2. ‘local adapters,’ downsize but remain in the same area
3. ‘scene changers,’ wanting to move to a place with better amenities
4. ‘constrained retreat,’ moving due to financial constraints
5. ‘increased dependency,’ deteriorating health making them relocate to get extra care
6. ‘older renters,’ needing to find ongoing rental accommodation

All of these typologies can fit into the retirement village model. However, there are always a select few who prefer to remain in their own homes, even if their liveability and functional levels are affected.

3.4 Prediction of the Next Five Years

The current and future needs of the ageing population of baby boomers are different to the needs of past generations. Some of the Baby Boomer generation wish to remain working, stay active and social. The change in retirement expectations will create a shift in the housing model, with many people wishing to remain in their homes. However, there is still a select group who wish to relocate. Ageing in place will move beyond a dwelling and will be focused on connection in the community, the access to friends, resources and social clubs. Access to community ties will become a stronger necessity than housing. This change in needs will generate a shift of the location, design and functions of the retirement community. The model of planning on age will move to design for cultural and social needs, focusing on mobility, community, social groups and supports.

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65 Simon Pinnegar et al., Understanding Housing and Location Choices of Retiring Australians in the ‘Baby Boom’ Generation (Sydney: City Futures Research Centre, 2012).
As cities grow, and land becomes less available in the central areas, there is a noticeable shift in building typology. With densification and growth in the cities it has become impossible to source enough land for sprawling retirement villages, thus creating a need for the vertical village. Taking the traditional village buildings, with their amenities and building upwards, maintains a smaller footprint on the ground. The inner city offers a vibrant lifestyle, of leisure, transport, social interactions, accessibility, and closer living to friends and family.

New Zealand’s population is ageing, with this increase in ageing expected to impact the larger cities more adversely with greater amounts of ageing located in these areas. Further planning and discussion needs to be executed to accommodate the ageing population’s requirements within these communities. Infrastructure and Housing New Zealand puts vast amounts of funding into residential care facilities annually, in conflict with the positive benefits of keeping the ageing in their homes. It has been noted in the Aged Residential Care Service Review the requirement for an over haul of the current aged care facilities and practices within New Zealand, moving away from a highly structured institution. New models need to be based around and consider cultural and social needs, community integration, and the physical (both built and natural) and social environments that work together.

3.5 Conclusion
4.0 The Retirement Village

4.1 Introduction

Retirement villages offer alternative housing for the ageing population. The Retirement Villages Act 2003 defines a retirement village as a place which provides residential accommodation, together with services or shared facilities, or both. Retirement villages are a convenient solution to housing when ageing, offering low maintenance housing and grounds upkeep, access to a range of facilities and amenities on site, and ageing in place with staff supports accessible. These villages cater to a community of similar like-minded people, promoting social integration while encouraging ongoing participation and engagement in activities.

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Selwyn Village is a 105,000m² site located in Pt Chevalier, Auckland, alongside the Waitemata Harbour. Selwyn is one of the founding retirement villages in New Zealand. Selwyn has grown in size since it opened in the 1990's with new apartment blocks and amenities, providing a total of 285 villas and apartments currently available. There are numerous blocks of apartments, totalling 243 units, ranging from one to three bedrooms, all built at different stages, with 42 individual villas also provided. Development and upgrades are constantly occurring on site to ensure the highest level of standard is maintained.

Selwyn has a very large site area, with the buildings sprawled across the site. The arrangement of the site encompasses living areas, forming around the community areas and social spaces within the centre. Social interaction around the apartment blocks and residential villas is harder to achieve, the sheer size of the site requiring golf carts for the transportation of residents around the grounds. Having the socialising and amenities positioned in the centre creates a hub of activity.

To ensure residents of Selwyn are not stranded in Pt Chevalier and can maintain wider community ties and participation, a public bus service stops at the village and travels to Auckland central and east areas.
Figure 6 Selwyn Village Social Hub

Figure 7 Selwyn Village Interior of Social Hub

Figure 8 Selwyn Village Aerial Site Perspective
Analysis

Selwyn Village is a founding village in Auckland and portrays a traditional model of a retirement village in a suburban area, with the buildings placed around the suburban site which can be viewed as both a negative and positive. Selwyn Village provides travel options when heading to a chosen destination, but can also create a sense of disconnection due to the size of the site where golf carts are required to cross the grounds. The social interactions and active engagement are limited for those residents who do not dwell within the main ‘hub’ or centre building. Sufficient amenities are provided with all stages of care provided when necessary. One of these amenities include a hospital, however ageing in place is not a priority, with higher levels of care requiring relocation. Selwyn Village has increased the number of residences on site, with additional apartments added every few years, this incorporates differing styles, heights and building size all adding to the characteristics of the village.

A major problem with this traditional model is it acts as a gated community, keeping the wider community out limiting social inclusion. The residents are shut away from the wider community and isolated, rather than integrated. This separation is viewed negatively by many ageing individuals and formalises the ideas of institution or an ‘aged ghetto.’
The Poynton is a premium luxury high-end lifestyle retirement village, located on an 18,000m² site in Takapuna, Auckland. It comprises eight linked buildings with a total of 257 apartments that go to a maximum of six levels high. This village is structured to allow the buildings to form around the outside perimeter and create enclosed grounds for landscaping, bowls and croquet. Underground is a full site carpark for residents and visitors. The main building with the entrance houses a number of amenities and social spaces. All apartments have been designed to have open plan living, a small deck, and are oriented to get an abundance of light, and ventilation.

This village shows the current village model being used in New Zealand. The miniature high-rise is a less sprawled system of housing, with apartments stacked and blocked. This arrangement of building up rather than out has to consider how, on a smaller scale, the socialising and interaction works. The location of community spaces within the building plays an important role in how people interact. Ageing in place is available, with care needs packages tailored to each individual, with staff who are available 24/7 on the site. This allows the resident to make one move to the apartment and remain, ageing in place.
Figure 9 The Poynton Exterior

Figure 10 Typical Apartment Interior

Figure 11 The Poynton Aerial Site Perspective
Analysis

The Poynton demonstrates the building design of a miniature high-rise retirement village located on an urban fringe. The Poynton site is located on a main road and intersection on the North Shore of Auckland. The formation of buildings is an interesting response to site, with an almost C-shape forming a centralised community, and sheltering from the traffic. There are a number of schools surrounding the Poynton with a neighbouring hospital, but there is limited access to a vast range of amenities within close proximity to The Poynton. The site choice reflects poorly on the needs and wants for the ageing residents restricting independence and limiting community inclusion. The social spaces included within the Poynton are limited, with this lack of social space throughout the building restricting engagement. The Poynton is purely for residents living there with no implementation of wider community engagement or socialisation requirements within this scheme.
Rathdowne is a six storey care facility located just 2km from Melbourne’s central business district promoting connectivity and community integration. Rathdowne Place has 160 rooms and is classed as a wellbeing precinct consisting of three standalone buildings orientated around a public social space. The connectivity and community integration is achieved both with location and servicing the wider community needs through the health centre. The focus of the precinct is the wellbeing centre for both public and residents, including a gym with pool, physiotherapy, occupational therapy, podiatry, and medical centre. “We wanted to show how the built form and service model could work together to challenge established perceptions of aged care,” says Derek McMillan, CEO of Australian Unity Retirement Living.  

This retirement living shows the current model of living within, or on, the city fringe. It demonstrates what Australia is achieving in terms of aged care community models. The integration and connectivity through a public building with private residences creates a hub of activity.

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Analysis

Rathdowne Aged Care is a city fringe response to retirement living in Melbourne. Rathdowne focuses strongly on community integration and servicing wider community needs. The way Rathdowne approaches wider community is through the service model of health centre. The location of city fringe offers access to a number of amenities, transport and community engagement. The integration into community is achieved through the implementation of bringing community into the building and residents out into the city strengthening sociability, engagement, and connectivity.
4.5 The Clare, 55 East Pearson St, Chicago, Illinois
Perkins and Will, 2009

The Clare is an enormous 54 storey retirement tower, located in the heart of Chicago city. It classifies itself as a continuing care retirement community (CCRC) offering urban living for ageing. A typical CCRC distributes the functional elements in a series of buildings, where the Clare has stacked them vertically. The size of the East Pearson Street site is approximately 2,500m². The total gross floor area for the building is 70,000m², with each independent living floor measuring 2,200m², containing a total of 271 independent living apartments from floors 21-52. There are a total of 39 assisted living units located on floors 13-15, and 45 nursing units located on floors 10-12. A total of 175 parking spaces for residents and guests are located from floors 3-8. There are a number of amenities throughout the building. These include three dining areas, catering kitchens, fitness area with pool, function space and roof gardens.

The Clare has been designed with a formal hierarchy from care units to independent units. The majority of social community spaces are located on floor 9 between carpark and nursing care, and 16-19 between assisted and independent living. To maintain visual connects within the limitations of a high-rise building an atrium has been implemented, to allow connectivity of social spaces, living and dining areas. The floor to ceiling height remains consistent throughout the building, with a curved façade being designed to capture the views of Lake Michigan. Included within this tower scheme are three levels for Loyola University, which adds an intergenerational link while dealing with wider community needs.

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68 Debbie Fry and Robyn Beaver, eds. Perkins + Will: 75 Years (Mulgrave: Images Publishing Group, 2010), 142.
69 Ibid.
Figure 15 The Clare Exterior

Figure 16 The Clare Site Aerial Perspective
Analysis

This city based high-rise retirement scheme takes the typical CCRC amenities, residential and care needs and defines an order of layer and hierarchy within the building. Connectivity is positively reinforced within the building by utilising an atrium which promotes visible connections and movement. With the sheer scale of the building a sense of disconnection and isolation are possible, with the independent residential levels offering little to no break-out space or interaction among residents. Integration of the university campus into the building reinforces wider community ties and promotes intergenerational relationships. Social spaces are introduced in two clusters, breaking up the residential areas. These social spaces are not defined architecturally by making a statement such as significantly greater ceiling heights, with Perkins and Will designing the social spaces to appear uniform with the rest of the building resulting in making it unexciting and dull. Ageing in place is promoted to a certain extent only. If and when individuals get to the point of requiring specialist nursing care this necessitates a move to a lower level within the building. Negatively the lower levels of the building are taken up by car parking. These lower levels are a crucial part of the design and important for visual, physical and social connection within the city. Lack of journey from street level to retirement village can also create displacement, which is triggered by a lack of visual connection when ascending into the retirement village by lift. Car parking area at the lower levels can also be viewed as rejecting the wider community by turning away rather than opening the building up and encompassing the community. This model of retirement living demonstrates how a traditional model can be translated into a high-rise building within a bustling city.
4.6 Conclusion

The analysis of these four styles of retirement villages located in different urban areas, pointed out how successfully the different models worked within cities, urban fringes, and suburbs. Retirement villages are a convenient solution to housing when ageing, offering access to amenities and low maintenance housing. Selwyn Village offers a traditional approach in the suburbs, it has plenty of amenities and offers a wide array of activities however rejects the wider community and cultivates a gated community. The Poynton offers a miniature high-rise on an urban fringe, with insufficient amenities available onsite with some distance to travel to access amenities offsite. The structure is not integrated into the wider community and provides limited engagement and sociability internally. Rathdowne Place Aged Care is located on the city fringe and offers strong community integration through servicing the wider community, located within easy access to amenities and transport creating engagement and sociability. The Clare offers a high-rise alternative within a city catering to the wider community needs by including a university in the design. The Clare attempts to create internal connections within the building, however with the car parking spaces situated on the lower levels this removes the connection between the city and community both physically and socially.

These precedent examples demonstrate both the traditional horizontal and vertical model encountering issues for community inclusion; however these designs can be improved to incorporate enhanced community integration. Community integration is best achieved by servicing the wider community needs and situating the building centrally, creating ease of access to amenities, transport and support networks.
5.0 Project Defined

5.1 Site Selection Criteria

The site chosen had to enforce the ideal characteristics of a liveable community, with access to support and services, amenities, and transport to facilitate independence and community engagement and social life. The site had to be located centrally for the selection of Baby Boomers who want to remain physically active, technologically switched on, and socially connected to both family and friends.
5.2 The Site

The site chosen for the retirement village is located on the corner of Nuffield Street and Mahuru Street in Newmarket, Auckland, with an approximate site area of 5371.1m². This site sits on the urban fringe between the central business district (CBD) and the suburbs. A central location was important, ensuring the close proximity and ease of access to amenities and transport for both the building’s occupants and the community. At present the site consists of a single storey rundown building facade, with partial skeletal structure covering approximately 30% of the site, enclosing what is currently used as a carpark. This partially decayed structure will be removed, and the site reset as a blank canvas.

Nuffield Street is currently under utilised within the Newmarket precinct, with more than half of the buildings being single storied. The Mahuru end of Nuffield Street is currently underdeveloped and in much need of revitalisation. This site allows for the inclusion of retail space at street level, along with public space to encourage activity. The site dictates some design decisions, such as building up rather than out, based on the area needed for a retirement village, with further consideration given to the cost of land. With land currently being so expensive, it is not considered to be economically viable, to build out within such a central urban location.
Figure 17 The Site: Corner of Nuffield Street & Mahuru Street

SITE AREA 4180 m²
Figure 18 Elevation: Mahuru Street Highlighting Site
Figure 19 Elevation: Nuffield Street Highlighting Site
Figure 20 Defining Newmarket within Auckland
Amenities:

Newmarket offers a wide variety of amenities, with numerous eateries, retail stores, banks, gyms, cinemas, doctors, specialists and a supermarket.

Eateries: Incorporate cafés, restaurants, and bars, with varying opening hours.

Retail: Clothing stores, with price ranges varying from low to high-end designer fashion, pharmacies, hair dressers, beauty salon, post offices and chain stores such as Farmers.

Figure 21 Survey of Surrounding Amenities
Figure 17 shows the distance a person can travel within a five-minute time frame by walking through Newmarket at a leisurely pace. Within each of the three five-minute walking rings, individuals have access to many cafés and retail stores. Consumers are able to walk the majority of the Broadway shopping strip, which incorporates shops, cafes, gyms, cinemas and restaurants, within fifteen minutes.
Figure 18 shows how far a person can get within a five-minute drive from the Nuffield Street site. Each ring represents the five-minute travel distance. This distance data was gathered by timing of the drive, which included, pedestrian stops and traffic lights. The many traffic lights within Newmarket narrowed the distance achieved. However, the majority of healthcare professionals/ specialists were within this range, along with the many other amenities.
Public Transport Routes

The train station in Newmarket is located eight minutes’ walk from the site, directly opposite Nuffield Street at the opposing end. Trains are scheduled at regular intervals, travelling in both North and South directions.

Newmarket is a destination, or thoroughfare, for many scheduled bus stops, with these buses travelling North, East, West and South. There are two main Link buses provided that travel through Newmarket every 20 minutes. The Inner Link has a smaller, central based, circuit with stops in Newmarket, Parnell, Britomart, Victoria Park, Three Lamps, Ponsonby, K-Road, and the Auckland Hospital, continuing the loop back to Newmarket. The Outer Link has a wider circuit of Newmarket, Epsom, Mt Eden, Balmoral, St Luke’s, Mt Albert, Pt Chevalier, Westmere, Herne Bay, Britomart, Parnell, and then back to Newmarket.
Figure 24 Public Transport Routes
Current Retirement Villages:

The current trend in retirement villages, has them located within the wider urban communities with larger portions of land sprawl for the village. The alternative has much smaller retirement villages with fewer amenities spotted through suburbs such as Epsom, Mt Eden, Remuera and many more.

There are currently no retirement villages located within the Newmarket area, leaving an opportunity in the real estate market for a centrally located retirement village with all the surrounding amenities, transport and services at the resident’s finger tips.

Figure 25 Current Retirement Villages in Auckland
The Auckland City Council future plans for Newmarket are focused around medium density residential growth and business growth. This chosen site falls within this area of residential/ business growth as seen on Auckland City Councils future plans map.

Figure 26 Auckland Council Future Plans
The rationale of the design program of the building is to create a functioning vertical retirement village, with a combination of amenities and residential apartments. The amenities and spaces included within the building have been determined by a survey of similar sized existing retirement villages within Auckland. The selection of amenities within the building is not only for the convenience of the residents living there but also to cater for the wider community needs.

The building can be broken up into five main sections incorporating, community interface, atrium/ circulation, social/ recreational zone, fitness hub, and residential apartments.

Community Interface -

The ground floor holds the connection and relationship with the wider community, drawing people into the building creating an interface, where both community and residents can interact. Nuffield Street offers a unique opportunity to connect via retail stores and café or restaurants, which not only draws the public into the building, but also caters for the community with a number of amenities, including a kindergarten.
Atrium/ Circulation -

A key aspect of sociability and the interaction of residents within the building relies on both the atrium and horizontal circulation. The atrium, is of great importance for a visual connection between floors within the building, creating and encouraging encounters, enhancing the spatial activity, and controlling circulatory flow. Stairs and lifts will be required due to the height of the building and fire safety requirements. Horizontally a series of ramps and bridges will create movement and spatial activity.

Social/ Recreation zone -

These social spaces will be located in the lower levels of the building, with horizontal circulation ramping between levels. These areas are predominantly for residents. However, they can be accessed by visiting family and friends accompanied by residents. Spaces can be rented by businesses, or for private functions/events by the general public. These areas will include:
  - Small Cinema
  - Library
  - Lounge
  - Function space
  - Dining Hall (with commercial kitchen)
  - Breakout space on all residential floors
Fitness Hub -

The fitness hub will be located further up in the building. Its facilities will be accessible to the public and residents creating a dynamic area that motivates utilisation of these facilities. These areas will be:

- 25 metre Lap pool
- SPA/ Sauna
- Squash Court
- Indoor Bowls

Residential -

The program design will include both single and double storeyed apartments with an option of one or two bedrooms. These will need to be arranged to maximise daylight and ventilation in living spaces and bedrooms.
5.4 Users

Those utilising facilities within the building will be residents and the wider community with a combination of spaces being available for use to service that wider community.

The residents of the retirement village will be a subset of Baby Boomers who want to retain cultural pursuits, are physically capable, and are looking for a convenient living option on the urban fringe. The residents will be of retirement age, 65 years and upwards. This minimum age is for like-minded retirees who want a particular lifestyle with ease of access to amenities and care if needed. This allows for ‘ageing in place’ with care needs to be added as required.

The majority of community utilising the building will be families and business people. Access to these facilities will be for leisure, child care, cafés, restaurants, kindergarten, and a 24/7 fitness hub for those wishing to maintain or improve their fitness levels. The fitness hub will include a pool, spa, sauna and gym. The retail, cafés, and other amenities will be located at street level for accessibility by the community.
The horizontal model of retirement living has a series of different buildings over large sections of land. The independent residential living tends to be located around the outer border of the property, with amenities and care living situated centrally. Analysis of a number of horizontal retirement villages showed common trends in availability of amenities and the spaces required within the village. As stated in section 5.3, the amenities to be included have been determined by a survey of retirement villages. Due to the number of amenities already accessible in Newmarket, a smaller selection will be required within the building.

The vertical retirement model, changes the design of these retirement settings from horizontal to stacking, a hierarchy to be achieved in regards to importance of space and levels of community interaction. All social and interactive spaces are required to be positioned in the heart of the building, with strong visual connections created.

The verticality of the village poses design problems for both view lines and movement which naturally occurs in the traditional model. View lines are achieved through linear connections in the horizontal scheme, translating these view lines within a stacked arrangement becomes more of a challenge. Differing heights, open spaces and the implementation of visual connection through an atrium becomes important within the vertical stacking. Having the social spaces lower down in the building also allows for a connection at street level and, although this connectivity is important, it is harder to achieve in high rise buildings.
Movement in a traditional model is navigated as the journey through pathways, wide and narrow spaces, between the buildings, and around the site. Movement through a vertical stack makes it more difficult to achieve the journey due to the need to take the lift up to the required level, thus removing the journey which generates a sense of displacement. To improve movement and create the journey through the building there needs to be horizontal movement within the spaces provided, with each area requiring its own connections and movement.

Figure 27 Exploration Horizontal in Vertical
6.2 Hierarchy & Order

Incorporating the defined areas and amenities blocks of the required spaces has been developed by stacking them to determine both internal and wider community connections. Due to this being a high-rise scheme, consideration was given to the relationship with the ground. Different arrangements were explored until an order of space was achieved. The order of the zones from ground floor up is: community interface (mentioned in 6.6), social (mentioned in 6.7), fitness (mentioned in 6.8), residential (mentioned in 6.9). These spaces move from public to private within the hierarchy of spaces.
Figure 28: Hierarchy & Order Stacking Exploration

RESIDENTIAL  SOCIAL SPACES  FITNESS  COMMUNITY
Figure 29: Hierarchy of Zones Defined, Exploration of Floor Plates
Figure 30 Exploration of Volumes Defining Required Spaces
6.3 Connection

Connection needs to be achieved in two ways. The first is the relationship with the wider community providing a range of available community facilities connecting the residents in the building with the community. The second way to achieve connection occurs internally within the building, establishing this connection around the built environment promoting independence and social activity. These two connections are imperative to creating a liveable community. What defines a liveable community is the promotion of engagement of residents within a community and with one another. The community needs to enhance access by providing transport and amenities to facilitate interaction.\footnote{AARP, Beyond 50.05, 22.}

The site plays a large role in the connection to the community, located on the urban fringe, situated close to both train and bus routes, providing amenities and ease of access to medical care. With the selection of amenities available within Newmarket, there are minimal amenities required within the building. Residents can utilise the wider urban facilities and social areas to maintain their connectivity and inclusiveness within the community.
To achieve these connections to the wider community the ground floor needs to be an interface. Nuffield Street’s road frontage has been chosen for utilisation as a retail/café area, with access to the retirement village, and kindergarten also via this route. However, the main entry to the retirement village and kindergarten is from Mahuru Street. The kindergarten’s dimensions are medium sized, with kitchen, bathrooms, reception, play areas and outdoor area facilities provided. This kindergarten is structured between levels one and two maintaining a reasonably open appearance for visual connections to the residents.

The main design driver within the building was the social engagement and participation of residents with one another. A social zone was designed within the building with cinema, lounge, library, dining and function space, with each social space offset to enhance social movement and maximise the visual connection between these spaces. These spaces have larger floor to ceiling heights, and are arranged around a central atrium.
Figure 31 Exploration of View Lines & Access Paths
Figure 32 Overlaying to Determine Building Placement on Site through Community Connections
Figure 33 Development of Interface through Community Connections
Figure 34 Development of Interface with wider Context Connections
6.4 Circulation

The circulation within the building becomes an important aspect for movement, connectivity and sociability. Circulation within the building is both horizontal and vertical, with the horizontal being the important connection both physically and socially. The horizontal circulation within the building is organised to encourage movement, create casual encounters ‘bumps’, and interactions.

Particular zones (refer to 6.2) within the building circulate movement differently, generating different horizontal movement. The ground and second floor are the community interface with these floor levels having no defined circulatory paths, resulting in free circulation, movement and sociability. The social levels may be reached by vertical circulation (lift); however the primary navigation between floors and sub floors is achieved through a series of ramps and bridges. These ramps link the staggered floor levels, forcing interaction and movement. This ramping, and floor arrangement, creates not just physical connectivity, but also visual connectivity, linking the activity spaces and creating inclusiveness. The fitness levels have ramping for connection, with the interaction on these levels already well established through physical interactions. Movement between the residential levels is by vertical means, elevators or stairwells, with the hallway providing the horizontal movement creating social interactions.

Connection both visual and physical is important within a larger scale building. Multi-storey buildings can have a divide between the visual and physical connection. While this space is seen there is not automatic access to the space. However, being able to see the movement and activity within that space gives one a sense of inclusion.
Figure 35 Ramping Exploration 1

Figure 36 Ramping Exploration 2
6.5 Atrium

The atrium has been implemented due to the necessity of multi storeyed buildings requiring visual connection when the physical connection cannot be achieved. The ability to see into a space generates a feeling of inclusion, therefore a full length atrium has been implemented in this design. The public atrium has evolved over time from the external courtyard space to an enclosed glazed space. The atrium makes the most of the available ventilation and lighting provided by either the sides or the roof of the atrium. The atrium not only enhances the building’s passive design, but also creates visual and physical connections, through wayfinding, encounters, spatial activity and circulatory flow.

The atrium runs the length of the building creating visual connectivity at all levels. Differing floor to ceiling heights, and the arrangement of floor plates, interrupt the atrium at some levels creating a narrowing of the atrium. The arrangement of floors within the community interface, social and fitness levels, are offset to increase the connection both visually and physically improving the social interactions.
Figure 37 Exploration of Visual Connections through Atrium
The definition of an interface is “place, or piece of equipment, where interaction occurs between two systems.”\(^{72}\) The community interface on the ground floor brings the community and residents of the building together in a common space with a café, restaurant, and retail on the Nuffield Street road frontage.

A kindergarten is situated also at ground floor level, with further space on level two. This kindergarten services the wider community needs, as well as strengthening intergenerational relations. Children are a constant source of happiness and play, and can provide companionship for the elderly population. In return the children receive unconditional support, acceptance, undivided attention, a safe place to talk and receive knowledge and wisdom from the elderly. Children can benefit from these connections, as can the elderly with these connections not having to be through a biological link.

Figure 38 Community Interface: Retail, Cafe, Entry
Figure 39 Community Interface: Kindergarten
Socialising is important as you enter older age, spending time with people that have similar interests, and maintaining family involvement and contact. To enhance the social interaction of the residents, there are a number of social areas and small break out spaces within the building.

The social spaces are designed and arranged to maximise visual connection, and sociability. The social areas included are (small cinema, library, lounge, dining hall, and function spaces) situated on sub floor-levels, with levels offset and staggered to maximise the visual connection while creating physical connectivity by ramping. The ramping creates social interaction through movement and circulation. The floor to ceiling heights differ between levels allowing for some larger open spaces, and some more intimate spaces, with the ceiling heights improving connectivity and visibility of activity through these spaces.

The social zone within the building is located above the community interface. Therefore the interactions and visual connections with the public remain.
Figure 40 Social Zone: Defining Order & Exploring Connection of Spaces
Figure 41 Social Zone: Defining Order & Exploring Connection of Spaces
6.7 Community Fitness

Fitness other than being considered another social activity is a necessity for people of all ages producing benefits for physical and mental health and overall wellbeing. Exercise is considered to improve mood, boost energy, improve overall health and brain function and improves sleep. The community fitness centre promotes active health benefits for all ages, with an array of fitness activities offered, including a 25metre lap pool, spa, sauna, gym, squash courts, mini golf, petanque and bowls.

Figure 42 Fitness Zone: Defining Order & Exploring Connection of Spaces
Figure 43 Fitness Zone: Defining Order & Exploring Connection of Spaces
6.8 Residential

North-East Apartments:

The North-East apartments are single storey, one bedroom, with open plan kitchen, dining, and lounge attached to a screened off balcony. Each apartment is approximately 55m².

Figure 44 North-East Apartments Concept
West Apartments:

The apartments to the West, have been designed as two storeyed apartments to maximise the natural lighting. An internal window into the atrium admits further light to the apartment. These apartments contain two bedrooms upstairs, one with an ensuite, with living, dining, kitchen and bathroom down stairs. Each apartment has an approximate area of 85m².

The apartments are located above the social and fitness areas, maximising the views of the city and creating privacy and security.

Figure 45 West Apartments Concept
Figure 46 Conceptual Perspective Exploration 1
7.0 Design Outcome

Figure 48 Floor Plans
Figure 49 Sectional Perspective
Figure 52. 25m Lap Pool

Figure 53. Bowls Green
Figure 54 Interface / Kindergarten

Figure 55 Kindergarten
Figure 56: Community Interface
Figure 57 Exterior South-West
Figure 58 Exterior North-East
8.0 Conclusion

There is currently pressure applied on both a global and national scale to confront the inevitable increase in the ageing population. There is a shift in the balance of the ages world wide, with fewer births and longer life expectancies. The ageing and aged will now be of greater number in our communities. There is an abundance of reports on ageing, with the subsequent impact on how the world should deal with the increase, however there has yet be anything physically implemented to address this important issue. Communities need to be functional to accommodate the ageing. If the ageing are discriminated against, and denied the chance to age in place within their community, alternative solutions need to available. Many ageing consider the traditional retirement village model to be outdated and institutionalised. The institutionalised retirement villages are seen as an option only for the old-old stage in life, and even then this option is viewed with reluctance. New models of housing need to be considered to accommodate the ageing, due to the inevitability that we will all come to this stage in our lives, providing our health and well being is maintained.
7.1 Concluding Statement

The project researched and investigated how the needs and wants of the Baby-Boomer generation could be reinterpreted in an alternative way to the conventional retirement village. The design response this project poses cannot be considered to be the only solution to the research question. It is a response to a specific group of the ageing population who would consider an alternative scheme like this. The theoretical investigation into ageing, defined the community needs for liveability, and the successful ageing theory promoted socialisation and connection as the main drivers. The project researched the current retirement model and what it had to offer in relation to amenities and social areas. The site was chosen by the defining factors of what the Baby Boomers or young-old required, their needs and expectations, community connections, access to transport, amenities, and much more. Due to the site being centrally located on the urban fringe with the drivers of socialisation and connection, the retirement village was created as a high-rise. The hierarchy, or stacking, in the building was determined by internal and external connections. Each zone responds to the social connection that is relevant to that space. To strengthen community relationships the building’s interface relates to the community needs and cements the building in the community.

This response to providing housing to the ageing population plays with and challenges the current model and poses new ideas based around socialisation and connection. Independence and an ongoing active lifestyle is promoted, creating a liveable community and promoting successful ageing in place. The design challenges the negative views of the institutionalised isolating environments, which alienates and removes the ageing from participation and inclusion in the wider community.
9.0 Bibliography


10.0 Figure List

All images are produced by the author, unless otherwise specified.

Figure 1  Global Ageing Population 2015, http://www.helpage.org/global-agewatch/population-ageing-data/population-ageing-map/

Figure 2  Global Ageing Population 2050, http://www.helpage.org/global-agewatch/population-ageing-data/population-ageing-map/

Figure 3  New Zealand’s Population Ageing Estimations, http://life-timefinancialgroup.co.nz/retirement/what-happens-if-you-live-too-long

Figure 4  Population Growth Map, http://www nbr.co.nz/article/census-2013-auckland-accounts-half-nzs-population-growth-2006-ck-147139


Figure 6  Selwyn Village Social Hub, http://www.aspecconstruction.co.nz/project/construction-company-selwyn-heights-retirement-village/

Figure 7  Selwyn Village Interior of Social Hub, http://www.aspecconstruction.co.nz/project/construction-company-selwyn-heights-retirement-village/

Figure 8  Selwyn Village Aerial Site Perspective, https://www.google.co.nz/maps/place/Selwyn+Village/@-36.866455,174.69785,17z/data=!3m1!4b1!4m2!3m1!1s0x6d0d47304dc63f19:0xb3e095b2acb6461d
Figure 9  The Poynton Exterior, http://www.klein.co.nz/projects/retirement-and-aged-care/metlifecare-the-poynton/

Figure 10  Typical Apartment Interior, http://www.villageguide.co.nz/village/the-poynton

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Figure 14  Rathdowne Place Aged Care Aerial Perspective, https://www.google.co.nz/maps/place/Rathdowne+Wellness+Centre/@-37.794139,144.9707558,17z/data=!3m1!4b1!4m2!3m1!1s0x6ad643288a621925:0x4aa289087d509352

Figure 15  The Clare Exterior, http://www.huenelectric.com/portfolio/residential/theclare.aspx

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