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ADDINGTON 2041 -

a platform for change.
Addington 2041 - A Platform for Change

A thesis
submitted in partial fulfilment
of the requirements for the Degree of
Master of Landscape Architecture

at
Lincoln University
by
M. M. Flanagan

Lincoln University
2011
ADDINGTON 2041 - A PLATFORM FOR CHANGE

ABSTRACT -

Abstract of a thesis submitted in partial fulfilment of the requirements for the Degree of M.L.A.

Addington 2041 - A Platform for Change

by

M. M. Flanagan

While we recognise that our current suburban form is unsustainable, and through regional growth management policy seek to intensify the city core and inner suburban areas, we do not have a new design programme for these liminal spaces. Intensification therefore falls to the suburban default, often resulting in compact suburbia, and undesirable urban environments. Using a ‘research through design process’ this thesis explores transit-oriented development as an alternative design programme for Addington, an inner suburban Christchurch space. Addington 2041 is a compact, mixed use, diverse urban landscape, clustered around a reactivated train network and station. Supported by educational, cultural, commercial, and residential activities, and a high quality pedestrian and public realm, Addington 2041 interprets an international urban form in the local context, and combined with a revealed sense of place and identity creates a liveable urban environment for the future.

KEY WORDS -

Transit oriented development, Addington, liminality, New Urbanism, urban form.
We had no idea that it couldn’t be done
And we needed to find a like-minded someone
Who had no idea that it couldn’t be done
(extract from Tim Finn, ‘Couldn’t be done’)

I am extremely grateful to my supervisors who have guided this endeavour to completion. Particularly Jacky Bowring for her generosity of time, patience and valuable insights; and Neil Challenger for always challenging my design decisions, and constant encouragement.

I would like to thank Mum and Dad for making me believe that I could achieve anything I set my mind to.

And most importantly, I would like to thank Dave, whose unwaivering support and patience have made this endeavour possible and bearable.

Thank you all for being the ‘like-minded someone’s’ I needed.

A final word to Mother Nature - earthquakes, aftershocks, and snow storms, and yet we still keep going!
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CHAPTER 1.0 - INTRODUCTION

INTRODUCTION

WOODS BROTHERS' MILL, WISE STREET, ADDINGTON
research context -
CHAPTER 1.0 - INTRODUCTION

Lewis Mumford once said, “forget the damned motor car and build the cities for lovers and friends” (from My Works and Days (1979)).

I wonder what a city for lovers and friends looks like? How and where do people live? Where do they work? How do they travel between the two? And, more importantly do they enjoy living in such a city? Mumford’s observation goes much deeper than simply abandoning the car. A city for lovers and friends suggests humanity, connection, resilience; it makes time for meeting, conversation, and fun; it celebrates diversity, inclusion and character; and perhaps most importantly, it makes us feel good.

The question then becomes, what is an urban form that makes us feel good?

Since urban settlement began, people have actively intervened in the nature and form of development to achieve social, political or environmental goals (United Nations Human Settlements Programme, 2009). In recent times, the modernist planning approach of monofunctional zoning has seen increased separation between home and work, and increased dependence on the private motor vehicle. This approach, a response to the congested, sickly, and immoral conditions of the industrial city, has spawned urban forms that “reinforce spatial and social exclusion, and produce cities which are not environmentally sustainable” (ibid, p. 59).

As well as being socially and environmentally unsustainable, our current urban form faces significant challenges. Climate change, oil depletion, over-exploitation of resources, globalisation of markets, and population growth will all have direct impacts on urban form (ibid). The drawbacks of modern urban planning, coupled with these growing environmental and social challenges, has seen the rise of alternative approaches to urban planning; the most dominant being New Urbanism. Such an approach, under the guise of ‘smart growth’, or ‘compact cities’; promotes compact form, mixed land uses, mass transit options, attractive public spaces, and pedestrian friendly streetscapes (ibid).

The move to more compact cities is not an easy one. Whilst proponents argue that a compact urban form is more “efficient, inclusive and sustainable”; critics counter that it is contrary to both market forces and our desire for suburban living; increases congestion and pollution; and drives up the cost of land and housing (United Nations Human Settlements Programme, 2009, p. 159). Changes to urban form will not come easily. It will require more than a physical change in form. A paradigm shift in the way we live, interact, govern and experience space will be required.

Inspired by a desire to find a ‘city for lovers and friends’, Addington 2041 – explores the future of Addington, and asks: what is its urban form?

1.1 LOCAL CONTEXT -

Despite our rural and wilderness identity, New Zealanders are “overwhelmingly ‘townies’” (Department of Internal Affairs, 2006, p.9). We live in one of the most urbanised nations in the world with approximately 87% of the population living in urban/suburban areas. Our cities generally started as trade centres, expanding outwards along rail, and then road corridors. After World War II, these cities grew rapidly, moving outwards across the landscape as dense road networks and low density, suburban sprawl (Memon & Perkins, 1993). This urban form, whilst catering to the New Zealand ‘quarter acre’ dream, has negative effects on the natural, physical and social environments. The consequences of urban sprawl are well documented, and hence will not be debated in this thesis. Suffice to say, the generally accepted consequences of sprawl include:

- Increased dependence on the car resulting in increased traffic congestion, fossil fuel consumption, and air pollution.
- Loss of productive rural land.
- Loss or fragmentation of natural habitat and landscapes.
- Adverse effects on water quality and quantity.
- Decay of public open space.
- Suburban hubs out compete the city core contributing to a decline of the core.
- Increased demand for infrastructure services (power, water, waste, telecommunications)
- Poorly planned communities lacking an identity or community heart
- Loss of heritage and neighbourhood character.
- Dispersed settlement with reduced connectivity between living and working environments.
- Public health effects - obesity, traffic fatalities.
- Exclusion of those without access to a car.
- Loss of social capital.


Sprawl and its consequences are not something that happens elsewhere; it happens in our neighbourhoods, and this thesis is grounded in one of these neighbourhoods - Addington. Located in Christchurch, New Zealand, Addington is one of the city’s first suburbs. Once a thriving railway town and industrial hub, Addington is now tired and lost. Sprawl has drawn investment away, and it cannot compete with the glitz and convenience of suburban malls and business parks.
But Addington is special. It is a liminal space, one between the urban and suburban realm; one released from its past industrial programme, and awaiting a new urban programme; and one open to opportunities. Despite its liminality, remnants of Addington’s urban past puncture the fabric, and anchor its identity. Its close proximity to the city core, transport corridors, and local amenities make for a rich node; and proposed intensification gives impetus for revitalisation. But despite these qualities, it is not yet a neighbourhood for ‘lovers and friends’.

Given these rich opportunities, one again asks; what is the ideal urban form for Addington?
1.2 RESEARCH AIMS -

Deming and Swaffield suggest that “all research and design projects share the same beginning – an awareness, articulation and acceptance of a problem” (2010, p.48). Under the broad context of ‘what is the future urban form for Addington?’ the ‘problem’, or opportunity, in this instance is a convergence of three lines of enquiry:

1. What is the future programme for liminal urban spaces? Spaces that are neither urban nor suburban; spaces which have been released from past programme, and not yet been inscribed with the future; spaces with unrealised potential.

2. What is the future local urban form given the current focus on sustainability, consolidation and intensification? And

3. Can international planning and design constructs be applied successfully in the local urban context?

Tying these questions together, and grounding them in the spatial context of Addington, this study seeks to explore ‘Addington’s conceptualisation as a transit oriented development’.

Using Deming and Swaffield’s checklist for framing research questions, this thesis can be summarised as follows:

Topic – I am investigating the future urban form of Addington.

Question – Because I want to find out if transit oriented development is an appropriate design programme for local, urban liminal spaces.

Strategy – I am using a projective design strategy.

Motive – In order to understand the application of transit oriented development in the local context (2010, p.52).

Addington 2041 – A Platform for Change, therefore considers Addington’s future as a transit oriented development.

1.3 METHOD OF ENQUIRY -

This thesis, undertaken through the landscape architecture discipline, is a design driven approach to research. Whilst accepted within the discipline as a legitimate method of critical enquiry; research through design still struggles for validity against the scientific trifecta of hypothesis, testing and proof. This thesis combines traditional research methodologies of observation, literature review, testing and case study analysis, with the [non] traditional approaches of design and critique; for the purpose of creating new knowledge on future urban form in the local context.

Breen suggests that “designing is essentially an activity of conceiving futures” (in De Jong & Van Der Voordt, 2002, p.97), and this thesis is the final instalment in a research through design trilogy that explores the future urban form of Addington (refer Figure 1-2). The first stage, a design study, considered ways of conceptualising the suburb of Addington. The second stage, comprising a major design exercise, grounded the theory in a spatial context through investigation of Addington as a transit oriented development. The final stage, this thesis, explores the transit oriented design for Addington in its local and regional context, and assesses its success relative to other transit oriented developments.

Given the infinite nature of design; its expression at a range of scales, and the interconnectedness of all elements, it was difficult to know where and when to cease designing. This research could have continued endlessly onwards and outwards; testing, refining, and resolving. However, given the finite nature of this thesis, it is essentially a sampling exercise looking at the expression of a transit oriented development at the neighbourhood, site, and element level.
1.4 22nd February 2011 -

At 12.51pm on the 22nd February 2011, the urban form of Christchurch changed in a violent and devastating manner. Gaps in the urban fabric had already appeared after the September quake in 2010; however the 6.3 magnitude quake in February devastated not only the core of the City, but also parts of the eastern and hill suburbs, and over the Port Hills to Lyttelton. The scale of damage across the city suggests that “there is barely a house left in Christchurch that is not in need of repair work” (Cairns, 2011).

The effects of the quake are significant, and ongoing. Although secondary to the tragic loss of life, much of the City has been robbed of its heritage. Well loved buildings that define the Christchurch landscape are in pieces, including the iconic Christchurch Cathedral. There is the potential wholesale abandonment of some suburbs; and suburban facilities are coming under pressure from a temporary east-west migration. The City has lost its heart, literally and metaphorically.

But it’s not all bad news. Despite the human and material tragedy of the quake, there are positives that can be drawn from the event. In the hours and days following the quake communities rallied to rescue, assist, feed, and comfort their neighbours; in most cases people they had never met. It is this sense of community, this shared strength that will need to be carried to the recovery phase if we are to mend the urban fabric both physically and socially. Christchurch will face challenges going forward, and that journey is just beginning. The quake, and the subsequent rebuild, has bought urban form, architecture, heritage and landscape to the centre of public conversation. Let us hope that this conversation leads to a sustainable, resilient, exciting urban fabric, one that focuses on the future whilst still respecting the past.

When I started my thesis the urban form of Christchurch was directed by growth policies and market forces, rather than a natural disaster. My thesis seeks to explore transit oriented development as a new design paradigm for delivering the consolidation goals of growth policy; and revitalising inner suburban areas. The design phase of my thesis, centred on Addington, was well underway at the time of the September 2010 earthquake, which fortunately had little effect on the site and its context within the city. The same cannot be said for the February earthquake which had a two-fold effect on Addington. The acute effect of the quake was the partial demolition of Woods Brothers’ Mill and silo; both iconic structures within Addington, and important elements of the design for Addington. A number of buildings along Lincoln Road, and Bernard Street also suffered significant damage (refer Figure 1-3).

The chronic effect of the quake has been the (re)occupation of Addington by displaced central city businesses relocating to the Hazeldean and Wrights Road business parks, and the establishment of a temporary business hub by Westpac at CBS Arena.

Although the February earthquake had a significant effect on Addington, and its context within the city, a decision was made to continue my thesis based on pre-earthquake conditions. As my thesis had reached an advanced stage with the design work complete and write up in progress, a redesign to address current conditions was not considered feasible. A post earthquake design investigation of Addington would constitute a completely new research exercise, particularly given the acute and chronic effects of the quake.

Therefore it is assumed for the purposes of my thesis that the flour silo, Mill Theatre, and other damaged main street buildings remain; and that Addington remains an urban intensification area supporting a semi-functioning city core.
1.5 THESIS FRAMEWORK -

Clemens Steenbergen in his ‘Composing Landscapes’ suggests that landscape architectonic design can be split to its constituent parts – basic form, spatial form, metaphorical form and programmatic form (2008). Through design these elements are disaggregated and reassembled as a new landscape composition. In my thesis the urban form of Addington is broken down into its constituents of place, space, symbol and programme; rearranged; and reassembled as a transit oriented design.

This thesis is organised around three elements of Steenbergen’s landscape composition – basic form, spatial form, metaphorical form. The fourth element, programmatic form; which concerns finding a balance between economics, culture and nature, has not been discarded but rather assimilated, where appropriate, into the other three constituent parts.

The framework of this thesis is as follows:

BASIC FORM – relating to place and context;
SPATIAL FORM – relating to space and form; and
METAPHORICAL FORM – relating to story and contents.

Steenbergen’s ‘basic form’ refers to the activation of the landscape topography through design; in his words “playing with place” (2008, p.39). He suggests that revealing the site’s topography through design is a way of revealing place (ibid). My use of basic form in this thesis differs from Steenbergen’s interpretation in that it focuses on context rather than topography. For urban sites, in this case Addington, I am suggesting that the basic form of the design is a product of its urban context, more than its topography. The latter of which is often long buried under layers of urban detritus.

Spatial form concerns the three dimensional arrangement of space to create a “spatial dynamic” (Steenbergen, 2008, p.127). For Addington this concerns the rearrangement (or reinstatement) of spatial elements to create a distinct form; firstly a transit oriented design, and secondly a creative hub. The activation of spatial form involves the integration of urban fragments into a unified whole; in this instance focussing on form, land use and transport.

Metaphorical form tells the story of place, making “references to origins and other worlds” (Steenbergen, 2008, p.236). Metaphorical form is the content that is woven through the basic and spatial form, connecting, as Steenbergen suggests, the past and the future (ibid). For Addington metaphorical form involves the exploration of liminality; and middle landscapes.

Whilst identifying design constituents, Steenbergen argues that design itself relates not only on the articulation of each of the constituents, but also their integration into a meaningful whole (2008). Similarly, while the design for Addington 2041 has been broken down into its constituent parts for ease of discussion; none of these parts exist in isolation. The basic form influences the spatial form, and vice versa; similarly the metaphorical form inspires the spatial form, and is reflected in the basic form. All the constituent parts interweave. The framework in Figure 1-4 provides a visual road-map of the thesis, including the chapter breakdown.

Each of the chapters, and in some instances sub-chapters, starts by asking a question. As the thesis progresses the questions narrow in scope, becoming more specific. The series of questions seeks to do two things; to define the focus of the chapter; and to take the reader on a logical journey from theory to design, and from regional to local (refer Figure 1-4).
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**Figure 1-4 - Thesis Framework.**

- What is the ideal urban form?
- How do you identify the ideal urban form?
- What does transit oriented development look like in Addington?
- Does transit oriented development work?
- What makes transit oriented development local?
- Is transit oriented development a design solution for our first suburbs?
In the process of conceptualising and designing Addington as a transit oriented development there are many other secondary layers of landscape theory that weave through the process. In some instances the theories, and their authors are not directly quoted, although they have shaped the thinking that has taken place. The theory manifesto in Figure 1-5 maps out the theoretical background that has inspired this thesis. Produced originally as part of the design study for Addington, this manifesto has been updated to highlight the theory streams considered most relevant to the major design and thesis stages of this study, and includes additional theoretical influences explored during these stages.
1.6 PERSONAL CONTEXT-

Attio suggests that “criticism is first and foremost about the critic, not about the object being criticised” (1978, p.8). The same could be said for design, which by its very nature is subjective; a product of the designer’s experience, knowledge and perspective. As this thesis is a mix of design and critique, the self-image of the designer/critic, and the framework within which these pursuits are undertaken, will influence the outcome. It is therefore useful to situate this thesis within the context of its author (myself) and its setting.

I must admit that I am new to the field of design and landscape architecture. I am however familiar with the manipulation of urban form, albeit from a different perspective. Prior to returning to postgraduate study I spent the better part of the last decade working as a planner in both the public and private sectors, focussing primarily on infrastructure projects (e.g. roading, telecommunications, wastewater and electricity). My move into landscape architecture was born of a desire to see if there was a better way of organising urban form. Planning, architecture, engineering, and landscape architecture, have all prodded at urban form over the years, with some success. However, cities are still sprawling on the periphery, and dying in the centre. I wondered whether a more integrated design based approach would work better, combining the analytical, evaluative and strategic skills of a planner with the creative, revelatory, and design skills of a landscape architect.

This thesis was undertaken as part of a professional Masters of Landscape Architecture at Lincoln University, Christchurch. In 2010 the final year programme of this degree was altered to offer a research by design thesis. Previous students followed a design study, major design, and dissertation route to complete the programme. I am the first student undertaking the design thesis, and as such there were no exemplars to follow, no prescribed process, and only a loose definition of the expected outcomes. Being the ‘guinea pig’ in any setting is both exciting and challenging. To combat the lack of definition I took the attitude of just jumping in and hoping the line of enquiry would lead onto further connections or avenues; and in most instances it did. However, had I understood where the journey was headed I may have taken different roads, but as always that is the benefit of hindsight.

In undertaking research through design, I felt that my design work was required to have greater depth, than the final year undergraduate students in my studio tutorial group. This was both liberating and smothering. On the positive side, having a strong theoretical platform (transit oriented development) from which to draw virtually eliminated the dreaded ‘blank page’ syndrome, where one stares at a page wondering where to start; and encouraged me to push the design envelope. On the negative side this platform provided a seemingly endless string of ideas and elements to explore, which had the potential to lead to infinitely detailed studies, and required self discipline to keep in check. It was a challenge, but nonetheless an exciting one!

Little boxes on the hillside,
Little boxes made of ticky-tacky,
Little boxes, little boxes,
Little boxes, all the same.
There’s a green one and a pink one
And a blue one and a yellow one
And they’re all made out of ticky-tacky
And they all look just the same.

And the people in the houses
All go to the university,
And they all get put in boxes,
Little boxes, all the same.
And there’s doctors and there’s lawyers
And business executives,
And they’re all made out of ticky-tacky
And they all look just the same.

And they all play on the golf-course,
And drink their Martini dry,
And they all have pretty children,
And the children go to school.
And the children go to summer camp
And then to the university.
And they all get put in boxes
And they all come out the same.

And the boys go into business,
And marry, and raise a family,
And they all get put in boxes,
Little boxes, all the same.
There’s a green one and a pink one
And a blue one and a yellow one
And they’re all made out of ticky-tacky
And they all look just the same.

Malvina Reynolds (1962)
theoretical context -
1.7 A (Very Brief) History of Modern Cities -

Before exploring Addington as a transit oriented development, it is important to understand the general values that shaped its context within the wider urban fabric, and gave rise to its current form. Whilst a detailed treatise on the origins of the city is outside the scope of my thesis, it is useful to explore the theories that have influenced modern urban form.

Cities are a complex paradigm to understand, let alone design and plan. Common analogies help; likening the city to a cosmos, a machine, and an organism for example (Lynch, 1981). Whilst considering the city in machinic or organic terms may help clarify its functions and parts, it sheds little light on its genesis, and therefore in turn, its future.

Early (pre-industrial) cities were shaped by forces such as trade, agriculture or defense (Brown et al, 2009); with their location relative to advantageous landscape features (e.g. a harbour). The extent and layout of these cities was determined by how far a person could walk, resulting in compact, mixed use settlements (ibid).

The industrial revolution, in the 18th century, was a major turning point for urban form and settlement. New transit technology; railroad, and later street cars, subways and road networks, enabled industry and then cities to push outwards. New building technologies enabled the city to push upwards with multiple storeys (Macionis & Parrillo, 2010). As the economic base shifted from agriculture to industry, urban migration began with workers flocking to the factories, clustering in settlements around the factories, or along the transport corridors. Cities were no longer constrained by walkability and increased in both size and scale.

However, these industrial settlements were not pleasant places to live. A growing labour pool, boosted by immigration, attracted more industry, which in turn attracted more workers, creating a cycle of overcrowding and congestion. Workers had no option but to live near the factories in often squalid, unhealthy conditions (Brown et al, 2009) (refer Figure 1-6). Those with means however, used the rail road to escape the smoke, noise, and ‘immorality’ of the city, moving outwards into surrounding rural areas, creating decentralised enclaves (ibid).
These early suburbs created a new urban landscape of detached dwellings within a garden setting; an antithesis to the industrial city; a new urban dream. At first the domain of the rich, the expansion of train, tram and street car networks, combined with mass produced housing, saw urban development cluster around transit stations (Brown et al, 2009). These first suburbs essentially made early suburban living available to the wider middle and working class. While largely relying on the city for employment and amenities; local services addressed the everyday retail, community, and worship needs of residents. Continued urban growth saw these suburban clusters diffuse along the transit lines, eventually forming linear development corridors, radiating outwards from the city (ibid).

Continuing the trend of suburban development outside the city core, the private motor car was the next major influence on urban form. Previously the “plaything of the idle wealthy”; increased availability, and expanding road networks saw the motor vehicle become widely accessible, transforming it from an “upper-crust toy to a middle-class necessity” (Brown et al, 2009, p. 52-53). Combined with growing prosperity, growing populations, and the lure of green open space; the post World War II urban form of low density, single use, often mono-cultural development spread across the (rural) landscape (Macionis & Parrillo, 2010). The suburban lifestyle was one of personal freedom, mobility and convenience, all within a semi-urban, semi-rural (suburban) landscape. As the distance between home, work and shopping increased, so too did dependence on the car, and people quickly made the shift from public to private transportation.

As people migrated out to the suburbs, so too did retail businesses, creating a new suburban form – initially the shopping mall, and later ‘big box retail’. These large footprint, enclosed structures, surrounded by surface parking created a pseudo city, one that could “capture the car and store it so that people could walk, shop and civically engage in a fully pedestrian environment” albeit separated from the surrounding landscape (refer Figure 1-7) (Brown et al, 2009, p.64). A close relative of the shopping mall, which also appeared, was the strip mall; a linear, retail development generally catering to commuters on busy arterial routes. With the migration of people, and retail businesses from the city core to the suburbs; commercial, manufacturing and industrial activities soon followed forming business and industrial parks on the city periphery.

As the upper and middle class citizens migrated outwards, the void in city cores was filled by ethnic minorities and low income earners who could not afford the suburban lifestyle. As people, industry and jobs decentralized, the city revenue base declined, resulting in an urban underclass experiencing poor living conditions, limited employment opportunities, and low amenity urban environments (Macionis & Parrillo, 2010).

Although in decline, the urban ‘bones’ of the city remained. As the delight of suburban living waned, due to increasing congestion, and the perceived blandness and isolation of the suburbs, the city’s transport networks, mixed communities, and urban grittiness once again became attractive. Enticed by these urban amenities, high-tech, postindustrial businesses moved back into the city (Macionis & Parrillo, 2010). The employees of these businesses, wanting to be closer to work, and enjoy the city, moved into decaying neighbourhoods, transforming them into desirable places to live (ibid). Although positive for the core, this rejuvenation often resulted in gentrification – or “a rise in social and economic profile” (Brugemann, 2005, p.4), resulting in an influx of wealthy residents and a displacement of the neighbourhood’s traditional residents. This gentrification generally results in socially and culturally homogenous neighbourhoods, with an altered (generic) character and form.
This (very brief) walk through the evolution of the city shows that since their inception, modern cities have essentially followed a centralization/decentralization pattern; in response to changing social values (refer Figure 1.8). Christchurch in this instance is no different. The city began as a planned settlement, laid out in accordance with the 1850 Canterbury Association Plan (refer Figure 1-9) (Cookson & Dunstall, 2000). Although extending out to the four town belts (now the four avenues) the commercial and industrial heart of the city was enclosed by Salisbury Street, Barbadoes Street, St Asaph Street, and Antigua Street (Morrison, 1948). Christchurch differed from typical city evolution at this point as it did not experience the first wave of decentralization. The city gentry did not migrate outwards to escape the city but largely remained along the north-west of the grid (in the suburbs of St Albans, Fendalton and Riccarton). Those that did move went to the hill suburb of Cashmere or the seaside at Sumner (Cookson & Dunstall, 2000).

*Figure 1-9 - 1874 Plan for Christchurch.*

Settlement outside the town belts (Christchurch’s first cycle of decentralization) followed key transport routes radiating from the central city grid. Processing and manufacturing industries; and residential development, clustered along these routes. The catalyst for this expansion was the construction of public rail and tram networks. To the north of the city core, the tram network opened up the suburbs of St Albans and Papanui; to the east the suburbs of Linwood, Aranui and New Brighton; and to the west the suburbs of Riccarton Bush, Spreydon and Sockburn. To the south east the tram ran to Sumner and Opawa; and to the suburb of Cashmere in the south (refer Figure 1-10) (Cookson & Dunstall, 2000).

The dominance of the tram in Christchurch began to wane during the 1930’s, and by the 1950’s the bus had fully displaced it (Cookson & Dunstall, 2000). The loss of the tram network, and the growing availability of the motor car, saw settlements along and between the tram routes in-filled with auto-centric suburbs (the second cycle of decentralisation). Growing populations, increased individual mobility, and access to cheap land saw the city’s peripheral greenfields opened up for development. Unconstrained by topography Christchurch grew outwards in a series of concentric rings across fertile rural land (e.g. Marshland, Avondale, Bishopdale, Hoon Hay) (Cookson & Dunstall, 2000).

As the city expanded at the edges, suburban shopping centres developed, often at public transit termini or key road intersections. These centres reduced reliance on the city core, servicing the wider neighbourhoods’ everyday needs. Christchurch’s first ‘modern’ shopping malls at Bishopdale and Church Corner opened in the 1960’s, setting the scene for the current ‘mega’ shopping and entertainment centres at Riccarton, Papanui, Shirley, Linwood and Hornby (Wilson, 2005). These suburban developments contributed to a gradual decline of the city core with businesses “choosing to decentralise or relocate to suburban locations for various reasons including better quality space, more abundant and ‘at the door’ parking, and lower lease costs” (Christchurch City Council, 2001, p.9).

The Christchurch City Council recognised that the continual suburban expansion of the city would have significant effects on the city core, and be unsustainable in the long-term. The Greater Christchurch Urban Growth Strategy, which seeks to manage growth over the next thirty years, aims to arrest decentralisation through revitalising the central city, intensifying inner suburban areas, and limiting peripheral urban development. The question thus becomes what is the next phase in the decentralisation/centralization pattern, and what is the urban form that expresses this?

Figure 1-10 - Christchurch tram network

1.8 URBAN UTOPIA - THE ANSWER TO THE QUESTION?

The quest for the ideal urban form is nothing new, and is an ongoing conversation (or argument) between the expanded field of disciplines that affect and are affected by urban form. The recent earthquake in Christchurch has propelled urban form to the forefront of public discussion, asking both professionals and the public “how the Central City should be redeveloped to be a great place again”.

In this thesis, transit oriented development is being explored as the ideal urban form for the suburb of Addington. It is useful to understand the genesis of this form, through a review of modern urban utopian thinking. It is acknowledged that there are, and varied, utopian theories, and it is not the goal of this thesis to visit them all. Those included here are considered to be dominant movements in the urban form and planning genre, and are grouped into decentrist, post urban, and new urban streams (refer Figure 1-11).

DECENTRISTS -

It was the poor urban form and social malaise of the industrial cities that first sparked the search for the modern ideal (utopian) city. Three leaders of modern urban planning; Ebenezer Howard, Le Corbusier and Frank Lloyd Wright, all sought to design the ideal city of the twentieth century. Such a city would express “the power and beauty of modern technology and the most enlightened ideas of social justice” (Fishman, 2003, p.21). All three rejected the romanticism of the ‘old world’ cities, and viewed cities of their time as an uncontrolled malignant growth sprawling into the countryside, centres overwhelmed with congestion and pollution, and growth driven by profit (Fishman, 1982). Their vision was a radical reconsideration of cities, rather than the amelioration of existing form. Each perceived the physical reconstruction of the city as “the outward sign of an inner transformation of the social structure” (Fishman, 2003, p.23), and each embraced the technology of their time – the train, the skyscraper, and the car.

Whilst Howard’s ‘Garden City’ is a blueprint for moderate decentralisation, it is by no means a rejection of urbanism, but rather a rejection of the “concentration of power and wealth that the cities represented” (Fishman, 2003, p.39). Howard envisaged a future where the benefits of the country were married to those of the city, creating a community “which would have high wages and low rents, beauty of nature but plenty to do”; “bright homes and gardens”; “along with freedom and cooperation” (ibid, p.39).

1. From http://www.shareanidea.org.nz, a Christchurch City Council website established to collect ideas for the rebuilding of the central city.
Howard’s Garden City consisted of a series of compact urban centres (each housing a community of about 30,000), surrounded by a greenbelt of productive rural land and open space. These urban centres were intended to be self-sufficient, although they remained connected to the Central City via rail, and each other by inter-municipal links (refer Figure 1-12). Each urban centre was to be laid out in concentric rings around a central park and civic core. Moving outwards this core was to be surrounded by an enclosed retail precinct (‘Crystal Palace’); followed by homes and gardens radiating outwards to an industrial/manufacturing precinct on the periphery. Beyond this were allotments and farms that supplied the Garden City with food (Fishman, 1982).  

Figure 1-12 - Howard’s Garden City.

In contrast to Howard, Le Corbusier envisaged a much more radical urban form, a great metropolis of dense skyscrapers and highways. Le Corbusier saw the city as a place of interchange, a set of destinations through which man continuously moved. His ideal urban form was a simultaneous expression of individualism and cooperation that reflected his rejection of capitalism and embrace of syndicalism (a social order based on the organization of workers into production units) (Fishman, 2003). Le Corbusier envisaged a collective and ordered city, where the strict hierarchy of the business world was contrasted with a cooperative home life (ibid).

Corbusier’s ‘Radiant City’ consisted of a series of high rise apartment blocks, or Unités, at its centre. Each Unité is a vertical neighbourhood consisting of residential accommodation, leisure facilities, workshops, retail and services; all connected by vertical streets or elevators. Business centers were to be located in towers separate from the Unités. The Unité operated as a cooperative neighbourhood whereby residents could have their homes cleaned, meals made and children raised by others, leaving more time for leisure, and artisan skills. The vertical urban form of the city freed the ground plane for transportation and open space networks. Transport networks were independent of urban form, and modes were separated hierarchically and vertically. The street environment is rendered obsolete.

Figure 1-13 - Le Corbusier’s Radiant City.

Wright, like Howard, saw decentralisation of the city as the urban ideal; although Wright’s proposition was much more decentralised, imagining in ‘Broadacres’ the very anti-thesis of the city (refer Figure 1-14). Wright embraced the car, envisaging a series of low density scattered homesteads, connected by superhighways (Fishman, 1982). Wright favoured a type of agrarian individualism where every family was entitled to sufficient land to satisfy their needs. This created a city whose inhabitants had almost complete physical, social and economic independence (ibid). Wright however did not see Broadacres as a reversion to a subsistence economy, but rather a return to the economic role of the family; activities that were once surrendered to urban institutions were now reconnected to the home (Fishman, 1982). This contrasts with the Corbusian vision of separating work and family life.

Broadacres could be viewed as a precursor to suburbia; with no defined city core, a blurred rural/urban interface, and the highway system acting as the linking or connecting element. Similar to suburban development, factories, schools and commercial centers would be scattered amongst the homesteads.

Figure 1-14 - Wright’s Broadacre.

POST URBANISM -

A second stream of decentrist thought considers the expansion of cities outwards, and the loss of the city core as an entirely expected phenomenon given changing societal values. Bruegmann suggests that “sprawl has been a feature of urban life since time immemorial”, and is merely a reflection of a cities growing economic maturity and affluence (2005, p.220).

As industrial city’s prospered, it allowed people choice. Initially only those with means could escape the pollution and congestion of the city. However as transport and housing systems changed, and land became cheap, moving out to the suburbs became an option for middle and lower class citizens. As Dicarlo suggests, “the suburbs have made it possible for ordinary Americans to enjoy the privacy, space, leisure time and choice that were once available only to the richest of the rich” (2008, p.54). And, whilst it could be argued that the desirability of today’s suburban living is a carry-over from the industrial city exodus, Dicarlo proposes that a return to compact, distinctly urban cities will do more environmental and social harm, suggesting that “trapping more people into a tighter space can only make pollution and traffic congestion worse” (2008, p.52).

Gordon and Richardson (1997) and Bruegmann (2005) also weigh in on this argument, suggesting that the costs of sprawl are not as dire as is often made out. For example both suggest that the movement of industry to the suburbs, following the workforce actually reduces road congestion and pollution; that despite the perceived loss of peripheral rural land agricultural yields are still rising; and that suburbs are not inherently unsustainable.

There is also the argument that the suburbs are actually a good place to live (refer Figure 1-15). O’Neill suggests that suburban living offers “enough space in the backyard for the children to frolic, just enough privacy to allow them to keep to themselves if that is what they want, but sufficient density to foster friendships and associations” (2008, p.56). Dicarlo goes onto suggest that the suburbs are not the “weird or depraved place” depicted in popular media through shows such as ‘American Beauty’ and ‘Desperate Housewives’ (2008, p.49), but are a place for ordinary people.

Bruegmann offers a different view on the suburban/urban conflict by suggesting that both spaces are valid within the city form. He proposes that suburbanites are not anti-urban. They do not reject the city, but rather value the two spaces for different uses. The suburbs are a “good place to live, work and raise children” whilst downtown is a good place to “go to a nightclub, visit a museum, or do some special Christmas shopping” (2005, p.97)

If the decentrist notion of sprawl is taken to extreme, what becomes of the ideal city? Rem Koolhaas puts the theory of ‘Bigness’ forward as a contemporary reading of cities (refer Figure 1-16). Koolhaas suggests that the traditional city typology is defunct and that sprawl, increasingly complex infrastructure networks, and global corporations have created a new urban form. This form, un-moderated, placeless, and without context, replaces the traditional organisation of cities.

Similar to Bigness, Koolhaas also introduced ‘Scape©’ as a way of thinking about contemporary urban form. Scape© suggests the city is an edgeless, continuous field with no distinction between core and periphery, figure and ground, inside and outside (Angeli and Kilingmann, 1999). In Scape© the urban field is interconnected; landscape, architecture and infrastructure all converge into an expanded field. If sprawl was to continue across Christchurch, unchecked and at an amplified rate, the urban form could be considered in the context of Bigness and Scape©. These theorums are not suggesting that this situation is necessarily ‘bad’ but simply an urban condition requiring a new way of planning and decision making. Under Bigness or Scape©, Addington would cease to be a definable suburb, it would simply be a patch in the urban field. As urban form moved across the landscape, place would be smothered or hidden, Addington as a spatial, social, cultural and historical entity would not exist.

Garreau offers a parallel argument to Koolhaas suggesting that the traditional city centre has passed, and that the emerging urban form is a series of ‘Edge Cities’. Such cities comprise large retail and commercial complexes on the periphery of settlement, generally with more jobs than housing (Gosling, 2003). Edge Cities essentially reverse the traditional commute; instead of travelling inwards from home to core, travel is outwards from home to edge (ibid). Garreau describes Edge Cities as urban spaces different from the core and the suburbs. He suggests that rather than footpaths there are jogging trails, low rise offices set in park-like landscapes, and freeways and satellite dishes rather than subways (Gosling, 2003).
NEW URBANISM -

Decentrist and post-urbanist theory suggests fractal or flowing urban forms as city future, New Urbanism in contrast takes a centrist view, looking to the human-scaled and walkable city as the urban utopia. Gaining prominence as a planning and design theory in the United States in the early 1990’s, New Urbanism, advocates a return to traditional neighbourhood design as an antidote to suburban sprawl. New Urbanism contests that planning for sprawl has resulted in “the creeping deterioration of once proud neighbourhoods, the increasing alienation of large segments of society, and constantly rising crime rates and widespread environmental degradation” (Katz, 1994, p.ix).

New Urbanism in its physical sense comprises a “compact, transit-friendly, walkable city, with a hierarchy of public and private buildings, and places that promote face-to-face social interaction and daily physical activity” (Kelbaugh, 2008, p.40). As with the Garden City, Radiant City and Broadacres, New Urbanism also acknowledges the link between physical and social environments, suggesting that urban health (economic, community and environmental stability) is not possible “without a coherent and supportive physical framework” (Congress for the New Urbanism, 2001). New Urbanist principles appear under a number of guises including smart growth, compact cities, traditional neighbourhood design and transit oriented development.

Whilst New Urbanism as an organized movement was born in the 1990’s, its roots extend back to a rejection of modernist planning principles. One of the early critics of modern planning was Jane Jacobs. In her ‘Life and Death of Great American Cities’, Jacob’s advocated a humanistic reading of the city, emphasising the importance of the street as a social connector; diversity at the neighbourhood scale; and the cohesive repair of the urban fabric (1992). New Urbanism is now a strong planning and design movement, championed by the ‘Congress for the New Urbanism’ whose manifesto outlines twenty seven principles for the creation of these ‘neo-traditional’ cities.

Even though New Urbanism is “perhaps the most significant new school of thought in urban planning and design in decades” (Marshall, 2009, p.45), the movement is not without its critics. One of the dominant criticisms is that the movement has simply become a ‘style’. Calthorpe himself admits that even within New Urbanism there is “debate as to whether the movement is guided by an open-ended set of principles or a design canon with specific forms and norms” (2005, p.16). In becoming a style, New Urbanism risks creating generic urban space that is ignorant of local identity, social and physical environments (refer Figure 1-17).

On a similar note, Talen (2008) also questions the ‘lightness’ of New Urbanism, where the focus is on delivering the physical rather than social environment. New Urbanism may deliver design visions, however the social visions of affordability, diversity, and social capital, are potentially left neglected. Unfortunately, the achievement of these social visions is not automatic; neighbourhood form does not necessarily beget a sense of community (ibid). As Talen suggests “New Urbanists must come to see the less sexy aspects of their endeavour as essential to giving weight and substance to their designs” (2008, p.78). This harks back to the understanding of the city as a product of its social values and decision making.

Within the local context, New Urbanism seems to suffer from this ‘lightness’ and is often used more as a real estate marketing tool rather than a viable urban form. Winstanley, Thorns and Perkins (2003) in their critique of New Urbanism in Christchurch, suggest that even though urban development has been influenced by new urbanist ideas such as community, neighbourliness, diversity; these concepts are limited to selling a vision. They examined real estate advertising material such as that for Aidenfield which is marketed as “a community in the making” or Northwood, which is set “apart from suburbia and makes for a more relaxed and leisurely lifestyle” (p.184); which alludes to new urbanist principles. They suggest however that in reality whilst these developments may provide opportunities for community, they do not on the whole deliver new urban neighbourhoods.

Figure 1-17 - Seaside, Florida.

On a similar note, Seaside, Florida, one of the first realised New Urbanist towns. Started in 1981 it was designed by architects Andres Duany and Elizabeth Plater-Zybeck. Seaside was intended to foster the sense of community often absent from suburban life. Originally an affordable, vacation town, seaside is now more like an “upscale resort” (Katz, 1994, p.4).
CHAPTER 1.0 - INTRODUCTION

THEORETICAL CONTEXT -

One might question at this point why, given the pitfalls of New Urbanism, this thesis focuses on transit oriented development as a tool for Addington's revitalisation. I had three reasons for continuing on. Firstly, we can't go on living the way we are, our urban form needs to change to reflect the current focus on sustainability. Secondly, the rollout of New Urbanism across developed nations under various guises suggests there is something there, something that needs to be explored in the local context; and finally like every utopian vision, be it decentrist (e.g. Garden City) or post-urbanist (e.g. Bigness); New Urbanism is aspirational and idealistic. And, just like other utopia, implementation often fails to achieve its lofty ideals. This is however no reason to abandon the vision altogether and much can be learned from applying aspects of the vision in different settings.

But still, why transit oriented development?

As was discussed in the brief history of cities, all urban development is essentially transit oriented; it is just the dominant mode, and its spatial expression that has evolved over time (refer Figure 1-18). It therefore makes sense to consciously integrate urban form and transportation. Addington also has specific attributes that make transit oriented development a viable option; the existing and underutilised infrastructure, historical characterisation as a local and regional node; and current urban intensification pressure.

1.9 DEFINING TRANSIT ORIENTED DEVELOPMENT -

Transit oriented development is just another step in the urban evolutionary process, an adaptation where autocentric forms and habits are upgraded to compact urban areas, centred on mass transit and pedestrian networks. Given such a broad pretext, transit oriented development has no universal definition. The term first arose in Peter Calthorpe's ‘The Next American Metropolis, Ecology, Community and the American Dream’ (1993). In this Calthorpe explores the ecology of communities, suggesting that the balance of our communities is out of kilter, favouring “specialisation, segregation, lack of scale and centralisation” (1993, p.9). Calthorpe suggests that a redefinition of the ‘American dream’ (New Zealand dream in this instance) is required, where values such as diversity, integration, and community are given form, bringing balance to the urban equation. Calthorpe doesn’t see this redefinition as a nostalgic regression but rather a new paradigm for urban space marrying these “timeless imperatives” to the “modern condition” (Calthorpe, 1993, p.16).

Calthorpe defined this new paradigm as transit oriented development (refer Figure 1-19); an urban form where “moderate and high-density housing along with complementary public uses, jobs, retail and services, are concentrated in mixed-use developments at strategic points along the regional transit system” (1993, p.41).

The lack of an absolute, universal definition of transit oriented development arises as it is a locational and situational paradigm. What might constitute a compact, mixed-use, pedestrian friendly development in one location may be perceived quite differently, subject to different conditions, in another location (Cervero et al, 2004). Transit oriented development is also challenging to define as it is a multi-layered concept.
At a surface or shallow level it concerns the arrangement of built form, space and activities. However as Cervero et al suggests transit oriented development cannot be considered solely in “physical determinist terms”, it is more than “simply an assembly of buildings around transit nodes” (2004, p.8).

At a deeper, more complex level, transit oriented development concerns community and neighbourhoods, it is about “building social capital – strengthening the bond between people and the communities in which they live, work, socialise, and recreate” (Cervero et al, 2004, p.8).

Whilst there may be no absolute classification there are principles or physical elements common across transit oriented definitions:

- Transit supportive urban development that encourages transit riding;
- Compact, medium to high density development within walking distance of a transit node;
- High level of pedestrian accessibility and mobility;
- A mix of land uses within walking distance of the transit node;
- A mix of housing types, densities and affordability; and
- High quality public and civic spaces.

When combined through design these elements create a new urban space, one that differs significantly from transit adjacent, or traditional suburban development (refer Table 1-1 and Figures 1-20 and 1-21).

It must be noted that while the principles of transit oriented development focus on mass transit and pedestrians, the concept is not ‘anti-car’. Calthorpe suggests that “the goal of community planning for the pedestrian or transit is not to eliminate the car, but to balance it” (1993, p.17). This balance refers to integrating the sometimes conflicting needs of the two different modes to provide an alternative urban form where one can live comfortably without a car.

This concept of balance and integration is fundamental to transit oriented development, particularly locally where the New Zealand dream is wedded to suburban living. Calthorpe suggests that such new space must integrate the potentially conflicting forces of “community and privacy, auto and pedestrian, institution and small business, suburban and urban” (1993, p. 17). Transit oriented development is neither wholly urban nor wholly suburban, but rather tries to integrate the positive elements of each form to create a new form; an in between space; a liminal space. This integration is however more than a physical melding. The physical form and function of this new space also sets the scene for social interaction and the building of community.
TRANSIT ORIENTED DEVELOPMENT CONTEXT -

One of the challenges in defining and implementing transit oriented development is that it occurs across spatial scales. At the regional scale, transit oriented development focuses on the transit corridors, and seeks to integrate regional goals, such as reduced traffic congestion, and improved air quality; with regional contexts such as urban growth management (Centre for Transit Oriented Development, 2010).

At the corridor scale transit oriented development focuses on the nodal points along the corridor, and the walkable space surrounding these nodes. It is at this scale that the type of transit technology influences development. The area of influence for rail systems, either heavy or light, is generally within one kilometre of the station or a ten minute walk. In contrast buses or trams can exert a linear influence along the corridor as they have the ability to stop more often (Centre for Transit Oriented Development, 2010). Whilst there is much debate over the benefits of light rail over bus networks, the Centre for Transit Oriented Development suggests that transit oriented development potential is more dependent on the design and quality of service rather than the transit technology itself. A high quality service is defined as “dedicated lanes or rights of way that serve to ‘fix’ the line and provide certainty for developers and investors that transit service will not be moved to another corridor” (Centre for Transit Oriented Development, 2010, p.4).

Transit oriented potential is also influenced by the function the corridor serves, irrespective of mode. Three basic corridor typologies; the destination connector, commuter, and district circulator (refer Figure 1-22); create different transit oriented opportunities. The destination connector, as the term suggests, links residential neighbourhoods with key destinations; employment, recreational, educational, and commercial centres (Centre for Transit Oriented Development, 2010). A destination connector corridor typically serves a wider catchment than the immediate domicile, and has all day rideship (ibid). In contrast a commuter corridor generally only serves a single activity centre, for example the central business district, and has distinct peak time rideship. Different again is the district circulator which enables movement within a specific activity area, for example a downtown precinct (ibid). Circulators encourage a ‘park once’ strategy and provide connections to the destination or commuter corridors (ibid). Defining the transit corridor helps to understand the role of the node in the regional network, and this in turn influences the arrangement of spaces and activities at the local scale.

The relative position of the node along the regional corridor also contributes to the form and function of the transit oriented development. Dittmar and Poticha, building on Calthorpe’s ‘Urban TOD’ and ‘Neighbourhood TOD’, identified six transit oriented typologies (refer Figure 1-23):

- Urban downtown;
- Urban neighbourhood;
- Suburban town centre;
- Suburban neighbourhood;
- Neighbourhood transit zone; and
- Commuter town (Dittmar and Poticha, 2004)

These typologies are not prescriptions for transit oriented development, but rather are a “starting point for defining common types of TOD and distinguishing them from each other in terms of their role and function within regional systems” (Dittmar and Poticha 2004, p.34). An understanding of the development typology is beneficial in this thesis as it influenced the expression of transit oriented development at Addington.

Figure 1-22 - Transit oriented development corridor types

Source: Centre for Transit Oriented Development, 2010, p.5
DETERMINING THE SUCCESS OF TRANSIT ORIENTED DEVELOPMENT -

Whilst there appears to be a general consensus within New Urbanism circles that transit oriented development is an exemplar for the integration of urban form and transportation, Belzer and Autler suggest that there is “no universally accepted premise about exactly what TOD should accomplish” (2002, p.3). Niles and Nelson concur, suggesting that despite transit oriented development being the “dominant urban growth planning paradigm in the United States”, there is limited evidence of its benefits, and minimal proof that the considerable infrastructure investments typical of a development will deliver commensurate public and environmental benefits (1999, p.1). Belzer and Autler also weigh in on this argument suggesting that if the benefits of transit oriented development are so great, then why isn’t this paradigm rolled out across the urban landscape? Perhaps, as they propose it is the perennial underachievement of such development which often seems to “fall short of their potential?” (2002, p. 1).

To critique (and therefore evaluate the success of) the design of Addington as a transit oriented development, it is necessary to identify standards or benchmarks against which the design can be assessed.

Establishing such standards is somewhat problematic, as while there is some empirical research into the benefits of transit oriented development, this research focuses on singular, quantitative, outcomes such as transit ridership, increased density, or rising property values. These outcomes however do not tell the full story. For example, a transit oriented development showing increased rideship may only do so because of a vast park and ride network; it is still auto-oriented. Similarly, a development with a high residential density may not have the desired demographic diversity, potentially resulting in a gentrified, rather than transit oriented urban space.

As suggested earlier transit oriented development is more than a simple physical entity, and its success results from the sum of all its parts, rather than an isolated component. As Cervero and Bernick suggest “there are important social and economic dimensions behind transit village design” (in Watson et al, 2003, p.5.8-1). Belzer and Autler suggest that the evaluation of transit oriented development is often based on its physical characteristics rather than its performance as an urban space. They acknowledge that whilst “built form is a necessary element, that alone is not sufficient for achieving all the benefits of TOD” (2002, p.8). They propose a focus on performance criteria or outcomes rather than physical characteristics for the critique of transit oriented development. Such an approach, they suggest, would reveal the primary goal which is “to create places that function differently from traditional development” (Belzer and Autler, 2002, p.3).

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2. The term transit village is considered interchangeable with transit oriented development in this context.
1.10 NEW URBANISM MEETS ADDINGTON - A fruitful collision?

A change in urban form will not come easily. For transit oriented development to be successful in a local setting it is important to understand the values that influence current urban form, and that will require acknowledgement in any successful future form.

‘Quarter acre, pavlova paradise’ epitomises the New Zealand love affair with suburbia. The quarter acre, or thereabouts, has long been the Kiwi dream, satisfying the desire for space, place, and equality. It allowed families to be part of a neighbourhood, yet separate from neighbours; to be self-sufficient yet still city dependant.

New Zealander’s however haven’t always lived in the suburbs; a compact city was once the dominant urban typology. Christchurch, for example, was a planned city. Laid out as a grid, the majority of residents lived between Salisbury, Barbadoes, St Asaph and Antigua Streets (Wilson, 2005). However, from the 1870’s onwards Christchurch’s urban population distribution changed, with the same number of residents living outside the formal city boundaries (the town belts) as within (ibid). As radial transport routes opened up, and industry populated the corridors, the inner suburbs (including Addington) were established on the periphery of the belts (Wilson, 2005). An expanding transport network, and the availability of cheap land, enabled the wider suburban development we have today. Despite this, the city core is still home to approximately 7,600 residents, and between 1981 and 2006 the total number of occupied dwellings within the Four Avenues increased by fifty percent (to 3,672 dwellings)\(^3\).

Still, the single detached house remains the predominant dwelling type in the city with seventy four percent of dwellings fitting this typology. Between 1986 and 2006 an additional 23,270 detached houses were added to the City, an increase of thirty one percent\(^4\). In comparison, in the same time frame only 4,260 ‘two or more flats or houses joined together’ were added, an increase of 16%\(^5\).

This embrace of suburban living is ingrained, both physically and socially. Early colonialists laid out a physical settlement that mirrored mother England, but attempted to improve on it. A detached dwelling on a large plot was intended to provide for the settlers’ physical needs, whilst avoiding the illness, depravity, and immorality associated with industrial urban living (Vallance et al, 2005).

New Zealand’s embrace of suburbia and general rejection of historical city form has three distinct roots. Early settlers were sold the vision of a wild, abundant land from which a picturesque rural landscape could be carved (Ferguson, 1994), and apart from the physical challenges there was little to stop such manipulation of the landscape. Also New Zealand’s relatively late colonisation saw the nation miss the period in which cities were romantically seen as a centre for art, culture and conversation (ibid). Local cities simply became hubs for governance, industry and trading; and were abandoned quickly for the ‘natural’ rural environment (Vallance et al, 2004). Finally, the settled landscape was a new utopia, neither rural nor urban. It was a suburban hybrid. It captured the desired rural character without the social isolation (ibid).

Since colonisation New Zealand housing policy has perpetuated the suburban model, with successive governments promoting suburbia though legislation, access to finance, or the direct construction of homes (Ferguson, 1994). The three bedroom bungalow therefore became the cultural norm, and other housing types, though trialled, were generally rejected, or relegated to those not considered worthy of the New Zealand ‘dream’ (ibid).

Deregulation and the global focus on sustainability created impetus for alternatives to the suburban model. The Resource Management Act 1991, the vehicle argued to be the tool for implementing sustainability in New Zealand, devolved responsibility for resource management from central to local government, and required local councils to regulate their own growth and development. In regulating development councils recognised that a low density urban form would not constitute sustainable management. Policies and strategies for consolidation began to appear; however ingrained cultural and institutional ties to low density forms, and the economic return from greenfield development; saw the minimal uptake of medium to high density development. Continued demand for low density development, often on the urban periphery resulted in councils promoting consolidation whilst still releasing greenfield land on the city margins for development (Vallance et al, 2005).

Despite suburban living being the norm, the housing portrait of New Zealand is undergoing change. Although home ownership rates are declining (from a peak of 73.7 percent in 1986 down to 66.9 percent in 2006), the desire to own a home is still strong (CHRANZ, 2008). Current decline is largely due to the rising costs of home ownership, entry costs, and the costs of servicing loans, making ownership difficult for those entering the market.

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Coupled with the deference of workplace entry, marriage and childbirth, the multi-position career, and an increase in non-traditional family units; home ownership may become an unattainable dream. Current trends suggest that people are purchasing multi-unit (medium density) properties as a cost trade-off (CHRANZ, 2008). Throw into the mix New Zealand’s aging population, immigration, and sustainability goals, and there is significant potential for change in housing expectations and preferences, with consequential change in urban form.

**LOCAL ATTITUDES TO URBAN INTENSIFICATION -**

Whilst there is groundswell for change, current urban intensification is generally a compact version of the suburban dream; no longer quarter acre, but still in line with the underlying philosophy of space, place and equality. For intensification to be successful, Joiner suggests that there will need to be “changes in expectations and behaviours at both the institutional and individual level” (2010, p.4). Similarly, Vallance et al suggest that more than just physical change is required for urban intensification to be acceptable (2005). The value of the built environment in a community’s psyche must be recognised, and any intensification designed and constructed to accommodate social and cultural needs (ibid).

Vallance et al argue that objection to urban intensification often reflects the perceived risk to the quality of the environment, in a contextual, physical and social sense (2005). Contextually, intensification is perceived as negatively affecting neighbourhood character. The sense of place is diminished through the removal of existing character homes, and the loss of vegetation and open space. The legibility of the neighbourhood is also affected, making it appear “less ordered, less stable, and, in some ways, less understandable” (ibid, p.725). Physically it is the perceived appropriation of space, particularly the loss of privacy and reduced access to sunlight, which create opposition to intensification. Views into private open space, or the home interior from adjacent infill housing, and the loss of a sense of openness, have effected a behavioural change in neighbours - blinds are kept shut, washing no longer placed on the line, and outdoor spaces screened off (Vallance et al, 2005). Finally, socially, intensification is seen to change the accepted way of life. Higher densities are perceived as substandard (slum-like) and occupied by people who are ‘different’. Residents are perceived as less neighbourly, less family oriented, and less likely to engage with the community (ibid).
These attitudes to urban intensification stem directly from the ingrained cultural norm of suburban living, and the values it expresses. For intensification to be acceptable, and more importantly sought after locally, it will require integrated change at the physical, social and institutional level. Joiner suggests this change concerns “negotiating sustainable behaviour” (2010, p. 5).

At a physical level, the key to higher density acceptance is to create urban form that takes the best of suburban values and manipulates these into a new form – a hybrid between urban and suburban. Current intensification practices in contrast, such as those currently specified for the Addington Living 3 zone, generally create compact suburbia – suburban characteristics squeezed into smaller parcels and dwellings (refer Figure 1-24). There is no quality of life uplift as a compromise for reduced space. Intensified development has a greater chance of acceptance if an improved quality of life is achieved. This translates to higher density neighbourhoods that do deliver (sub) urban characteristics; albeit in a different form; whilst creating strong connections between public and private spaces, walkable neighbourhoods, and environmentally, economically and socially sustainable communities.

Socially successful intensification requires a community as well as a geographical association. Higher density housing will need to be viewed as more than just a transitory stop on the journey to suburbia, or a form of low socio-economic housing. Raising a family in an urban environment must be made a viable option for New Zealand families. If urban living is merely transitory, strong, stable intergenerational communities cannot grow. Similarly if higher density living caters to only one demographic urban spaces become social monocultures, lacking in vibrancy.

Institutionally, public policy, planning and financial frameworks have reinforced suburban living. Whilst both central and local government encourage intensification for sustainable growth these underlying frameworks lie virtually unchanged. District and regional policy on consolidation does not flow through to effective implementation. The resulting intensification is then potentially sub-standard and not accepted by the community. Legal and financial institutions need to recognise the different needs of higher density development, including the amalgamation of land, ownership issues, and financing structures. An agency also needs to show leadership in implementing intensification. The local territorial authority, can take this role; particularly as they govern the street and open space environment, are involved in community housing, and often are a significant land owner.
URBAN INTENSIFICATION STANDARDS -

The perceived quality of life is one of the key tensions surrounding local urban living. There is a general theoretical acceptance of urban intensification, particularly on the basis of sustainability; however this often does not translate into personal acceptance of intensified urban form. We are happy for ‘others’ to live in apartments in vibrant mixed use areas, whilst we withdraw to the suburbia, all the while enjoying the social, cultural and economic benefits a vibrant city offers. Our dislike of urban living is perhaps drawn from our historic experience of cities. As suggested earlier, New Zealand cities did not flourish as cultural centres like many European and North American cities, but rather grew as predominantly functional and institutional zones. These environments were unlikely to be desirable living environments, hence the retreat to the suburbs. Suburbia is now the default urban form, with higher density, urban living having been ‘off the radar’ for so long.

If urban intensification is to be accepted in New Zealand neighbourhoods, then what is the optimum density for achieving urban growth targets whilst still delivering the desired quality of life? Often discussions on density are limited to maximising the number of units per area, rather than focussing on quality of life or liveability. Density is more than an intensification standard, and it is the spatial and social components of density that determine its acceptability.

The definition of low, medium and high density development varies internationally, and there is no standard measure (Cheng, 2010). In the New Zealand context medium to high density development tends to be at a much lower intensity relative to international practice.

The definition of density in the New Zealand planning environment is vague, and typically regulated through controlling the ratio of residential units to land area. The Christchurch City Plan states that the Living 3 (Medium Density) Zone anticipates “A diverse range of residential buildings to moderate densities and heights (1-4 storeys) compatible with the character of existing development in the area” (V 3, Part 2, Section 1.7). The definition of higher density development (Living 4) is similarly vague at “A diverse range of residential buildings to medium-high densities and moderate heights (generally 1-5 storeys), consistent with the location of the zone adjacent to the central city business core” (V 3, Part 2, Section 1.7).

As well as no standard measure of density there is the added complication that as a concept, density is subjective. Rapoport terms this ‘perceived density’, and defines this as “an individual’s perception and estimate of the number of people present in a given area” (in Cheng, 2010, p.12).

It is this perceived density which gives rise to the variation in density standards. Where there is an incongruence between perceived density and social/cultural norms, density is interpreted as too high (crowding) or too low (isolation). For example high perceived density in New Zealand, would be viewed as low density in Singapore or Hong Kong. The perception of overcrowding and isolation vary across different spaces and cultures.

To define density in the New Zealand context its components must be understood. Rapoport (1975) suggests that there are two aspects to density; spatial density, and social density. Spatial density concerns the interaction between the individual and the space (or environment), and is affected by form, bulk, and activities. Social density concerns the interaction between individuals within the space, and as such is influenced by experiential elements and cultural norms (Rapoport, 1975). How these spatial and social density cues are read influences the perception of density. Urban intensification is therefore more than just increasing the number of people within an area.

In his ‘Redefinition of Density’ Rapoport identifies a number of density ‘cues’; elements which influence the reading of density (1975). It is suggested that the manipulation of these cues (refer Table 1-2) through design could provide the blending of suburban and urban forms needed to make urban intensification acceptable in the local context.

Despite density regulation being a one dimensional tool, it is still a definable measure of urban intensification. Determining an optimal local density is problematic however given the perceived spatial and social aspects of density; and the design cues that can be manipulated to influence these. For the purposes of this thesis the density levels for the Addington design are drawn from Plan Change 1 to the Canterbury Regional Policy Statement. Policy 11, Residential Density, states that residential subdivision and development should generally achieve the following minimum net densities:

- Low density = 15 household units per hectare in Greenfields Areas in Christchurch City (except in Hendersons Basin);
- Medium density = 30 household units per hectare for intensification outside Christchurch’s central business district; and
- High density = 50 household units per hectare for intensification development within the City Centre Area central business district of Christchurch.

The challenge then becomes, how to design and implement these densities whilst creating socially acceptable, and desirable higher density urban living.
A key outcome of urban intensification is a reduction in urban sprawl. Concentrating development in existing urban areas reduces development pressure at the periphery. This protects productive rural land and soils, which has consequential economic, amenity, biodiversity, air and water quality benefits. Concentrating development also centralises infrastructure, improving its efficiency; and better supports sustainable transport modes (e.g. public transport, walking and cycling) with positive flow on effects for traffic congestion and pollution (Department of Building and Housing, 2008).

Urban intensification is a key response to city population growth. The Greater Christchurch Urban Development Strategy for example seeks to encourage intensification (as well as some greenfield growth) to accommodate growth, and support central city revitalisation. Intensification also responds to changing household size and structure; providing for the growing proportion of young professional, empty nest, childless couples, single parent and senior citizen households (Department of Building and Housing, 2008).

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**Table 1-2 - Density cues**

<table>
<thead>
<tr>
<th>PERCEPTUAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DENSE</strong></td>
<td><strong>NOT DENSE</strong></td>
</tr>
<tr>
<td>Tight spaces</td>
<td>Open spaces</td>
</tr>
<tr>
<td>Intricate spaces</td>
<td>Simple spaces</td>
</tr>
<tr>
<td>Large building height to space ratio</td>
<td>Low height to space ratio</td>
</tr>
<tr>
<td>Many signs</td>
<td>Few signs</td>
</tr>
<tr>
<td>High artificial light levels</td>
<td>Few artificial lights</td>
</tr>
<tr>
<td>Many people (or their trace) visible</td>
<td>Few people (or their trace) visible</td>
</tr>
<tr>
<td>Mostly man-made (minimal vegetation)</td>
<td>Mostly natural (much vegetation)</td>
</tr>
<tr>
<td>High noise levels</td>
<td>Low noise levels</td>
</tr>
<tr>
<td>Many cars, high traffic density, much parking</td>
<td>Few cars, low traffic density, little parking</td>
</tr>
</tbody>
</table>

**SENSE OF PLACE**

<table>
<thead>
<tr>
<th><strong>TYPICALLY URBAN</strong></th>
<th><strong>TYPICALLY SUBURBAN</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall buildings</td>
<td>Low buildings</td>
</tr>
<tr>
<td>Absence of private gardens and entrances</td>
<td>Presence of gardens and entrances</td>
</tr>
</tbody>
</table>

**TEMPORAL**

<table>
<thead>
<tr>
<th><strong>DENSE</strong></th>
<th><strong>NOT DENSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast tempo and rhythms of activity</td>
<td>Slow tempo and rhythms of activity</td>
</tr>
<tr>
<td>Continuous activity</td>
<td>Distinct periods of activity</td>
</tr>
</tbody>
</table>

**PHYSICAL**

<table>
<thead>
<tr>
<th><strong>DENSE</strong></th>
<th><strong>NOT DENSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of defences to control interaction (e.g. walls, compunds, fences).</td>
<td>Presence of defences to control interaction (e.g. walls, compunds, fences).</td>
</tr>
<tr>
<td>High levels of ‘attractive stimuli’</td>
<td>Low levels of ‘attractive stimuli’</td>
</tr>
<tr>
<td>Absence of places for use (e.g. streets, meeting places, third places)</td>
<td>Presence of places for use (e.g. streets, meeting places, third places)</td>
</tr>
<tr>
<td>Presence of non-residential land uses and mixed land uses</td>
<td>Singular or segregated land uses</td>
</tr>
</tbody>
</table>

**SOCIAL/CULTURAL**

<table>
<thead>
<tr>
<th><strong>DENSE</strong></th>
<th><strong>NOT DENSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>High levels of social interaction</td>
<td>Low levels of social interaction</td>
</tr>
<tr>
<td>Perceived lack of freedom, choice and control</td>
<td>Feeling of freedom, choice and control</td>
</tr>
<tr>
<td>Social heterogenity</td>
<td>Social homogenity</td>
</tr>
</tbody>
</table>

Source: Adapted from Rapoport, 1975
This policy blind spot feeds an urban form that is simply ‘compact suburbia’. In the absence of an alternative form, the vacuum is filled by suburban forms and values, albeit squeezed onto smaller parcels. The consequences of this ‘default setting’ are varied; there are no changes to the transportation network, the parking provisions, the pedestrian environments or the open spaces. Places of commerce, employment and entertainment, and links between these are not provided; and the qualities of the traditional neighbourhood, and its distinct local character are diluted and obscured. The creation of compact suburbia gives no uplift in the quality of life, in exchange for higher density of living, and as a result there is no incentive to embrace intensification.

However, the prospects for the inner suburbs are improving. With the local development ratio favouring intensification rather than green field development, the contribution that these areas make to urban growth management is coming to the fore. The Christchurch City Council are proposing a suite of management tools for intensification areas, including the Strategic Intensification Review, Neighbourhood Regeneration Plans, and Urban Character Studies, and it is to be hoped that these will provide the specific management needed for intensification of the inner suburbs to be successful. In addition, the recent Christchurch earthquake has resulted in gaps in the inner suburban fabric creating opportunities for a more comprehensive development programme, rather than intensification on a site by site basis. The masterplans for the reconstruction of Sydenham and Lyttelton are expected to be released for public consultation in the near future.

If, as suggested, the inner suburbs are a distinct space, an understanding of their character is required, to effectively resolve the policy blind spot, and realise their potential within the urban growth framework. A growing body of research in North America recognises the uniqueness of the inner suburb. Puentes and Warren suggest that the “general lack of appreciation of the differences between inner and outer suburbs fails to recognise their diversity, their variable assets, and the different challenges they face” (2006, p.2).

Orfield (1997) suggests that it is the “push and pull of regional polarisation” (p. 2) which creates the discord between the inner and outer suburbs. As people move out to suburbia they withdraw their social and economic capita from the city, pushing poverty into the core and inner suburbs. Additional resources are also pulled outwards to supply infrastructure and amenities, most of which already occur in the core, and are left defunct (Orfield, 1997).

Orfield suggests that the costs of this polarisation; concentrated poverty, disconnected communities, resource waste, and environmental destruction; are high, and need a co-ordinated regional management approach (1997).

Research by Puentes and Warren (2006) delves further into the socio-economic character of the inner or ‘first suburbs’, suggesting that they can be defined by time, place and profile.

As well as time and place, Puentes and Warren (2006) suggest that first suburbs exhibit a distinct demographic profile, with five key points of difference:

- First suburbs generally grow at a faster rate than the city core, but slower than the peripheral suburbs.
- First suburbs have growing racial diversity.
- First suburbs remain home to traditional family households, and have a growing aging population.
- First suburbs are home to wealthy, highly educated residents, a high proportion of whom work in ‘white collar jobs’.
- First suburbs experience growing overall poverty (ibid).

Addington fits the first suburb profile in terms of time and place. It formed immediately after the city core, and is located on the periphery of the town belt (Moorhouse Avenue). A demographic analysis of Addington, undertaken in an earlier design study, however suggests that it does not fit the first suburb profile neatly. Although there are subtle differences that differentiate Addington as a first suburb from newer suburbs, the demographic profile of Addington is very similar to the city core. This similarity can be attributed to two factors. Firstly, Addington as a suburb was born immediately after the establishment of the core. The two spaces have essentially ‘grown up’ together rather than in a distinct sequence. Secondly, Christchurch is a relatively young city, only settled in 1850. It therefore has not had time to evolve distinct profiles between the core and the first suburbs.
Compact or concentrated development brings people closer to the spaces where they live; work and play. This mixing of land uses encourages vibrancy, diversity and social cohesion, all of which contribute to a strong community. Intensification also improves mobility through access to public transportation; and affordability, through reduced travel and energy costs (Department of Building and Housing, 2008).

Whilst urban intensification is a key action in reducing urban sprawl; with associated benefits for the environment, infrastructure, housing and the community; there are costs. The perceived negative effects (costs) of intensification include:

- Loss of public and private open space
- Loss of established trees and vegetation from a neighbourhood
- Lack of integration with the existing streetscape
- Development is out of scale with surroundings
- Loss of local character and sense of place
- Impacts on privacy and access to sunlight
- Construction of poor quality dwellings
- Loss of community
- Perception of transitory, low income tenants
- Minimal community involvement or relationships formed
- Increased traffic and noise
- Increased pressure on infrastructure, services and amenities
- Legal ownership issues (freehold versus unit or strata titles) (Sharpin, 2006).

It is suggested that these costs arise when intensification is considered solely as an increase in density.

Although the importance of urban intensification locally is recognised at the national, regional and local level there are significant barriers to higher density development. These constraints can be classified in five broad categories; land, process, infrastructure, development and community.

**Land -**
- Land provision squeezed by urban limit boundaries.
- Lack of suitably zoned land.
- Difficulty in amalgamating or consolidating smaller sites.

**Process -**
- Time, cost and risks associated with regulatory processes.
- Innovation stifled by prescriptive planning rules, and no reward for innovative development.
- Inherent assumption within the regulatory framework that higher density development will have adverse effects.
- Limited capability and experience of developers and project managers.

**Infrastructure -**
- Unfair, and inequitable application of development and infrastructure contributions.
- Capacity of existing infrastructure.
- Difficulty in ensuring the integrated delivery of infrastructure, services and amenities.

**Development -**
- Existing financial models don’t work for higher density development.
- Developers therefore have difficulty in securing finance, and consequently revert back to a low cost (low density) development model.
- The costs, time and risk associated with higher density development is too great for the potential returns.
- High upfront costs for the design, master planning, and consenting of higher density developments.
- Rising cost of land and materials leads to low profit margins.

**Community -**
- The power of community opposition through the RMA process.
- Lack of council leadership in implementing growth strategy intensification.

(Auckland Regional Growth Forum, 2006).
NEITHER URBAN NOR SUBURBAN -

If Christchurch’s urban growth is to be consolidated through intensification of its inner suburbs, as proposed in the Greater Christchurch Urban Development Strategy (2007); the question then becomes how these spaces should be managed, particularly as they are neither wholly urban or suburban in nature.

The inner suburbs, such as Addington, do not have the strong, dense, interconnected form of the city core; or the isolated, dendritic form of the suburbs (refer Figure 1-25). They typically do not display the institutional mix of land uses of the core, but they have more than a single land use. Most, like Addington have a historical, industrial or commercial flavour, and a strong sense of place.

These inner suburbs could be perceived as liminal, or in-between. They are the transition zone between the core and the suburb, and are strongly connected in both directions, feeding the core, and accessing the suburbs. However, with urban growth, particularly at the periphery of the city, these inner suburbs have been ‘leap-frogged’, and like Addington are not viewed as distinct places, but rather as spaces one passes through, usually in a car, on the way to somewhere else.

Whilst being a distinct space, the liminal status of the inner suburbs has seen them caught in a policy blind spot, with urban management regimes focussing on the edge and the core. Current urban management within Christchurch appears to follow this trend. At the regional scale the UDS and RPS tend to focus on compaction of the core to reduce sprawl at the periphery. At the city scale whilst the City Plan includes policy encouraging consolidation, and has identified zones where higher density development is deemed appropriate; the provisions do little to maintain the character, amenity and environmental quality of intensification suburbs. Other non statutory policy such as the Central City Revitalisation Strategy, Lanes Plan, and City South Master Plan all focus on the core. At the local scale Neighbourhood Improvement Plans, whilst “seeking to support the progressive renewal of the older residential parts of the city” are out of date, and have a narrow focus on street improvements, planting, art installation and minor public space improvements.
Although Addington does not neatly fit the profile there are signs that suggest it is approximating a first suburb. Addington is predicted to grow from a current population of 3,000, through to 4,700 under current growth trends. Under the intensification scenario proposed by this thesis Addington would grow to 12,000 people by 2041, a 330% increase over a thirty five year timeframe. The ethnic make-up of Addington is also more variable, with a growing Maori and Pacific Island community; and the majority of households are predicted to be either single person or one-family households.

Whilst Puentes and Warren’s research identifies time, place and profile as the key determinants of first suburbs, I propose an additional local element which differentiates these spaces. Local first suburbs have a concentricity, a focus around which they form. This focus is not necessarily spatial, i.e. the arrangement of spaces around a distinct core; but rather experiential, the ‘vibe’ of the place. It enables the reading of the first suburb as a whole, reveals the palimpsest, and contributes to its identity, character, and amenity. In the local context this focus is often the remaining industrial or commercial (urban) fragments which gave the original impetus for the suburb. For example in Addington it is the industrial and railway character which is revealed through glimpses of past built form (refer Figure 1-26); and in Sydenham it is the commercial character revealed in the Colombo street scene (now devastated in the 2010 and 2011 earthquakes).

Such a focus is often absent in newer suburbs, which tend to be ambiguous, amorphous spaces. There is no start or end to the space, and nothing to differentiate it from other similar spaces. Any remnants of the previous landscape, typically rural, are removed (e.g. shelter belts, farm sheds etc). With no inherent concentricity developers try to inject this with entrance signage, street names, and barriers (refer Figure 1-27). Unfortunately these ‘shallow’ elements do little to express identity or enable the layers of the landscape to be read.
1.11 RISE OF THE CREATIVE CLASS

“The keys to the kingdom are changing hands” claims Pink in ‘A whole new mind: moving from the information age to the conceptual age’ (2005, p.1). He suggests that the advanced world is undergoing a seismic shift as it evolves from the logical, linear ‘Information Age’ of the 20th Century to the creative and empathetic ‘Conceptual Age’ of the 21st Century (refer Figure 1-28). In this conceptual age ‘right-brain’ thinking comes to the fore with a focus on “metaphorical, aesthetic, contextual, and synthetic” aptitudes (Pink, 2005, p. 26). Pink asserts that the ‘high-tech’ (left brain) thinking of the Information Age will become obsolete in the new Conceptual Age; instead a “whole new mind” that integrates left and right brain thinking will be required (ibid, p.51).

But what does this shift in thinking mean for urban form? Pink’s evolution of thinking parallels general eras in urban form; with the Agricultural Age expressed as rural villages, the Industrial Age as industrial cities; and the Information Age as suburban nodes, business parks and Edge Cities. The question then becomes, what will be the urban form of the Conceptual Age? Pink, identifies six “essential R-Directed aptitudes”; design, story, symphony, empathy, play and meaning; which will “guide our lives and shape our world” (Pink, 2005, p.65 & 67). It is interesting to observe that these attributes show correlation with New Urbanist and transit oriented theory (refer Figure 1-29).

Richard Florida, in his ‘Rise of the Creative Class’, considers this future urban form by asking “how do we decide where to live and work?” and “what really matters to us in making this kind of life decision?” (2002, p.217). Like Pink (2005), Florida identifies an evolution of thought from the rise of agriculture, trade and specialization, industrial capitalism, to the current organizational age (2002). He suggests that the next stage is the rise of the creative economy, which in turn has spawned its own social class (2002). This ‘creative class’ “create meaningful new forms”, and comprise the ‘Super Creative Core’; those who engaged in the creative act e.g. scientists, engineers, poets, artists, actors, architects, designers etc; and ‘Creative Professionals’; those who engage in creative problem solving, for example lawyers, accountants, doctors, managers etc (Florida, 2002, p.68).

Florida suggests that this Creative Class expresses new social and cultural values which focus on individuality (non-conformity), meritocracy (goal setting and achievement), and diversity (tolerance and openness); and that they actively seek out these values when deciding where to live (2002). Florida identifies seven key attributes sought by the Creative Class, all of which can be expressed through urban form.
Florida suggests that these attributes (refer Table 1-3), combined with the “3T’s of economic development: Technology, Talent and Tolerance”, create an “economic geography of creativity”, linking creativity and economic growth (2002, p.249).

<table>
<thead>
<tr>
<th>Table 1-3 - Attributes of the Creative Class.</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Thick labour markets – clustering of resources, companies and people</td>
</tr>
<tr>
<td>▪ Lifestyle – music, art, entertainment, recreation, nightlife</td>
</tr>
<tr>
<td>▪ Social interaction – quality of ‘third places’</td>
</tr>
<tr>
<td>▪ Diversity – tolerance of difference, openness to outsiders, cosmopolitan</td>
</tr>
<tr>
<td>▪ Authenticity – not generic, unique, original, celebrating heritage and history</td>
</tr>
<tr>
<td>▪ Identity – defining self through place</td>
</tr>
<tr>
<td>▪ Quality of place – a set of experiences integrating the environment, the people and the ‘vibe’</td>
</tr>
</tbody>
</table>

Learning from Pink and Florida’s ideas, I decided to explore Addington as a creative hub, and the consequential urban form this would entail. There were three reasons behind this decision. Firstly, Addington has always ‘punched above its weight’, serving the needs (industrial, agricultural and penal) of wider Christchurch. A creative hub allows Addington to continue to do this. Secondly, Addington has always been an innovative hub, particularly with respect to the railway workshops; and finally, Pinks attributes of right brain thinking, and Florida’s creative class attributes correlate closely with those promoted by New Urbanism, and transit oriented development.

1.11 SUMMARY -

This chapter posed the question, ‘what is the ideal urban form?’, and more importantly in a local context what is the ideal urban form for Addington, a liminal, in-between space? These questions are far from academic musings, and are a hot topic of conversation given the destructive effects of recent earthquakes on Christchurch. Cities evolve in response to the values of the time; often expressed through the dominant transport mode, and the urban form that accommodates it. Looking forward I suggest that the age of creativity, will highlight values of diversity, lifestyle and identity; and that these will be expressed through an urban form integrated with pedestrian and mass transit (transit oriented development). Any future urban form however will need to be adapted to the local context, reflecting our social and cultural relationships with the landscape. The next question is therefore, how is this ideal urban form identified?
2.1 RESEARCH THROUGH DESIGN -

One of the most challenging aspects of this thesis was the use of the design process as a vehicle for research. Like most landscape architecture students I perceived two distinct avenues of landscape learning; design, such as that undertaken in a studio environment; and research, such as that undertaken in an academic environment. Both avenues of learning informed each other, but in practice I struggled to see the direct interaction.

Whilst design is becoming an accepted mode of knowledge creation within the profession, and at Lincoln University, it was difficult to find examples of research through design. My journey into such started with a design directed thesis that examined the New Zealand wilderness and conservation estate as a phenomenological landscape. Of particular resonance was Abbott’s observation that landscape architecture as a discipline focuses on “landscape research” or “design focussed” research rather than “design-directed” research (2008, p.36). This distinction helped me to distinguish the task I was undertaking from other landscape research endeavours. Abbott’s reasearch also confirmed three other key points for me; firstly that creativity is a valid mode of research; secondly that the design process is equally as important as the outcome; and finally that research is not necessarily about finding an answer but rather taking contexts and using design to “open them up” (Abbott, 2008, p.69).

I find the term ‘research’ itself to be the biggest perceptual barrier in its application to design. The term holds connotations of truth, measurement and answer, and as Chalmers observes “the naming of some claim or line of reasoning or piece of research “scientific” is done in a way that is intended to imply some kind of merit or special kind of reliability” (1999, ixx). Replacing the term ‘research’ with an alternative moniker gives landscape architecture a unique object of knowledge, without requiring conformity to the narrow output of truth.

Perhaps ‘critical enquiry’ is a more fitting descriptor for research through design, highlighting exploration, creativity, and change. McAvin suggests that critical enquiry is a dialogue rather an absolute proof, and that the purpose of such inquiry is to “hold interactive conversations or even contentious debates that inform divergent points of view” (1991, p.156). Shirvani sees critical enquiry as a creative force that “is a fundamental integrative element of the design process”, and “is necessary in order to generate effective, forceful, spirited forms, ideas, and proposals for creating a more humane living environment” (1991, p.163). Both Corner and Meyer look on critical enquiry as an agent of change. Corner views such enquiry as a mediating force, one that is speculative rather than prescriptive, and provides “new possibilities” and “richness of associations” (1991, p. 161).

Meyer sees the catalyst function of critical inquiry suggesting that it makes three key design contributions; it “makes precise the formal language of design”; it “provides new ways to think and evaluate”; and lastly it “agitates for change” (1991, p.157). The importance of critical enquiry is summed up by Corner who suggests that it is “fundamental to any form of significant landscape architecture” (1991, p.161).

When I think of research, I commonly fall back to the conventional paradigm of scientific research; research based around observation, explanation (forming hypotheses) and experimentation (testing the hypotheses) (Carey, 2004). This scientific method focuses on measurement and repetition to create evidence. A solid body of evidence equates to objective proof which in turn equates to knowledge. Whilst there are commonalities between conventional (scientific) research and research by design; both observe, analyse and seek explanation; there are fundamental differences. Conventional research operates from the relatively shallow premise of truth seeking. The desired outcome is proof (or disproof) of the hypothesis. Design in contrast can operate from the deeper premise of enriching knowledge or understanding. This thesis is an ideal example of this, contributing to the body of knowledge on urban form. Corner suggests this deeper premise is “both question and questioning the process of knowing the right question to ask and a method of exploring multiple answers” (1991, p.63).

This leads onto design’s second fundamental contrast, that of replicability. In conventional research repeated testing of the hypothesis, within a controlled setting, demonstrates robustness and builds knowledge. In research through design however, repetition does not necessarily build robustness as design opportunities are endless. Rather than producing identical results each ‘test’ is a design iteration, and each iteration is a refinement of the previous. Put simply, two landscape architects designing the same site, with the same constraints and opportunities will produce different design outcomes.

The question then becomes, if robustness cannot be determined through replicability, what mechanism judges a design as ‘good’ or ‘bad’, right or wrong, true or false? Two inter-related instruments, theory and critique, fill this void, and provide the yard-stick against which design is measured. Bowring (2000) suggests that critique is “an integral part of the design process” (p. 42), and that design and critique are so co-dependent that, “you cannot have one without the other and expect any improvement” (p.45). McAvin ascribes further value to this mode of design interrogation, suggesting that “criticism is not only interpretive and evaluative, it is also creative” (1991, p. 156). Meyer concurs observing that “an act of criticism is an act of creation, a productive endeavour” (1991, p.157).

This thesis is therefore a critical inquiry into the conceptualisation of Addington as a transit oriented development, following a four step process of site selection, design study, major design and design thesis.
CHAPTER 2.0 - METHODOLOGY

SITE SELECTION -

Spaces in the urban and suburban fabric are well defined; we accept their form and function, often without question. It is the spaces between the weft and warp that pique my interest. These are the liminal spaces - flexible, fluid and full of opportunity. These are the spaces that have been released from past programme, and not yet imprinted with the future; the spaces awaiting attention.

In choosing a site to explore the reaggregation of liminal space, six key characteristics were identified (see below). However, the overriding criterion was the search for an urban space with a current, visible issue that could only be resolved through design. Addington fitted this criterion as an inner city suburb under intensification pressure. Previous architectural, planning and economic intervention had resulted in incremental change, both positive and negative, and it was my opinion that a strategic, design based solution was required to realise the potential of Addington.

Site selection characteristics –

A suitable site needed:

1. To be located within the Christchurch urban area;
2. To exhibit remnants of the past urban fabric;
3. To have a degree of suburban engagement;
4. To be affected by a major transportation corridor
5. To be facing urban intensification pressure; and
6. To have a significant site area available for design intervention.

Choosing a site within the Christchurch urban area was a two pronged logistical decision. Firstly, I wanted to be able to readily access the site and surrounding neighbourhood. Secondly, I had a degree of familiarity with the Christchurch regional and district urban planning frameworks, which assisted in understanding the urban context of the site.

For a space to be liminal it must be betwixt and between, neither wholly one thing nor another. For this thesis I wished to explore an urban fabric that was neither urban nor suburban. Such a space would have links in both spectral directions, retaining inward urban remnants or fragments (Criterion 2), and forming outward relationships with suburbia (Criterion 3). All of Christchurch’s inner suburbs fitted these criteria, and all were in close proximity to major roading corridors (Criterion 4).

The core of a research or design experiment is a problem that needs resolution, or a hypothesis to be tested. For this thesis the central tenet is that to accommodate the future urban growth of Christchurch, intensification of the City’s existing urban areas will be required. The paradigm shift away from peripheral greenfield development to intensification suggests that the City’s inner suburbs, including Addington, will come under development pressure (Criterion 5).

In undertaking research for this thesis, space was needed for a design experiment to ‘ground itself’, i.e. to have a physical, spatial expression. Therefore, a site of sufficient proportions to accommodate a design intervention was required (Criterion 6). Given that one of the key drivers of urban intensification is sustainability, I decided that this space should be a current brownfield site rather than the wholesale clearance of existing urban fabric to create a suitable site. Brownfield sites, in the context of this thesis, encompass historic industrial or commercial sites that are currently underutilised.

Whilst all of Christchurch’s inner suburbs generally meet the selection criteria, Addington was selected as the study site for the following reasons:

Criterion 1 - Addington is located to the immediate south-west of the city core, bordering the historic Southern Town Belt (now Moorhouse Avenue).
Criterion 2 – Addington includes remnants of its industrial and railway past. These urban fragments are revealed in the spatial framework, built form, and current land use activities.
Criterion 3 – Addington is a transitional zone between the city core and the south-western suburbs of Christchurch.
Criterion 4 - Addington is located at the intersection of major transport corridors – the northern and southern main trunk rail lines, the arterial routes of Moorhouse Avenue, Lincoln Road and Blenheim Road, and the State Highway 73 (Brougham Street) motorway.
Criterion 5 – Urban intensification at Addington is signalled in both regional and local planning frameworks.
Criterion 6 – The southern portion of the historic Addington Railway Workshops and Woods Flour Mill site centred along Walsall Street is currently underutilised. This creates a site of approximately 6.5 hectares on which to ground a design intervention.

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1. The inner suburbs are those located on the periphery of the Four Avenues - St Albans, Richmond, Linwood, Waltham, Phillipstown, Sydenham, Addington.

2. The definition of a brownfield site for this thesis is more relaxed than the ‘technical’ definition proposed by the US Environmental Protection Agency as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence of potential presence of a hazardous, substance pollutant, or contaminant” (Public Law 107-118 (H.R. 2869) – Small Business Liability Relief and Brownfields Revitalisation Act).
Following the selection of Addington as the design site, a design study was undertaken exploring ways of conceptualising the site. This study followed a conventional research program of observation, analysis and explanation. Observation occurred at the micro (local neighbourhood) scale, examining the biophysical, cultural, and social environment of the site; and at the macro scale, examining the site within its regional context. The act of observation itself included physical exploration, a review of the current planning framework, and a review of published material.

The observation phase then set the scene for the subsequent analysis and explanation phase, proposing the questions to be asked, and the themes to be explored. Carey suggests that in conventional scientific research it is during this explanation phase that hypotheses and/or theories are established (2004). The explanation phase of the design study sought to shed light on the question ‘how can Addington be conceptualised as an urban space?’ The means of conceptualising urban space are as vast as the space itself. Addington, for example, could be analysed from any number of different perspectives - historical, ecological, social, political, economic, visual, experiential, or sustainable, and this list could go on. Within the framework of liminality, Addington was conceptualised in three ways:

• As a forgotten suburb – one that is neither urban or suburban;
• As a break in the fabric – an underutilised urban brownfield site; and
• As a driver of form – as a transit oriented development.

The conceptualisation of Addington as a forgotten suburb arose from observation of its basic urban form. This form fitted neither a wholly urban nor wholly suburban typology. This suggested that Addington was a distinct urban space. In searching for an appropriate typology for this unique space, research from North America identified ‘First Suburbs’ as a potential fit for Addington. As discussed previously, these suburbs have a distinct profile which raises challenges and opportunities for their design and management, and suggests that they warrant a different type of urban development.

The consideration of the study site as an urban brownfield was physically obvious. Brownfield sites are essentially a ‘break in the urban fabric’. Spaces that once thrived with industry now lie underutilised. As these sites are often located in declining city cores, or inner suburbs, their redevelopment can be a catalyst for wider urban rejuvenation, and can focus development inwards, easing pressure at the city’s periphery (De Sousa, 2008). Conceptualising the Addington site as a brownfield focussed on the degree of design intervention.

In addition to conceptualising Addington as a first suburb and brownfield, the space was also explored as a transit oriented development. Transit plays a strong role in the urban form of Addington. Spatially the suburb is located at the junction of the northern and southern main trunk rail lines, houses the current Christchurch Railway Station, is bounded by the major arterials of Blenheim Road and Brougham Street (State Highway 73), and is bisected by Lincoln Road, a minor arterial. Historically, rail transportation was the original impetus for the suburb through the establishment of the Railway Workshops, and the suburb was and continues to be the city gateway from the south west.

The strong links between transportation and urban form are well documented, and conceptualising Addington as a transit oriented development focussed on its establishment as an inner suburban transport node. Whilst all urban development is essentially ‘transit oriented’, the design study explored options for mass transit (light rail, heavy rail, and bus), coupled with improved pedestrian and cycle networks.

The design study, focussing on the conceptualisation of Addington, was essentially the literature review that appears in a traditional research thesis. As this work was undertaken as a separate academic paper, it has not been included in this thesis to avoid academic self plagiarism. However, it informed the entirety of this thesis, in particular the following key design decisions for exploration (testing) in the following major design phase:

1. That Addington was a unique space that could not be managed within a wholly urban or suburban context. A new design programme would be required;
2. That the redevelopment of the study site as brownfield site would reuse built form, materials and spaces on the site as a link to the industrial identity of the suburb; and
3. That the new design programme for Addington would focus on transit oriented development.
The major design stage was the exploration phase of this thesis, where the explanations or hypotheses of the design study were tested. In a scientific context an experiment is carried out to determine whether the predicted result eventuates under defined circumstances. If the results are as predicted it can be inferred that the explanation is correct, if not, the explanation potentially requires amendment (Carey, 2004). Testing the explanations for Addington involved taking the knowledge gained during the design study and giving it spatial form, i.e. transforming abstract concepts to physical spaces and places, represented through plans, cross sections and sketches. This testing occurred within an artificially defined situation, a development scenario based on Addington in 2041. This development scenario was based on a set of national and local assumptions. The national assumptions concern wide ranging global and national trends, and include:

- That peak oil demand is approaching, and consequently the use of petroleum as a fuel source will become uneconomic and unviable.
- That as signatories to the Kyoto Protocol New Zealand cities have an obligation to reduce greenhouse gas emissions.

The local assumptions included:

- That the spatial definition of Addington as suburb extended from Blenheim Road in the north, Moorhouse Avenue and Antigua Street in the east, Brougham Street in the south, and Whiteleigh Avenue in the west.
- That Addington would accommodate a population of 12,000 people by the year 2041, approximately 8,000 more than the current (2006) population.
- That the main north and south rail lines remain, and become available for commuter passenger transport.
- That the current land use zonings in the Christchurch City Plan are not fixed, and can be amended to accommodate higher density and mixed use environments.

Throughout the major design phase, rather than conducting experiments, design was interrogated through critique. Critique in this context avoids the negative connotation of finding fault, and focuses on “evaluating design in an informed manner, based on an understanding of the content and context of the work, and the design language in which it draws” (Bowring, 2000, p.42). It is the latter three elements of Bowring’s statement that are of particular importance for critique. For content and context, Meyer suggests that “inherent in the idea of landscape design is the ideal of situational specificity” (2000, p.157). Landscape design does not occur within a vacuum. It informs, and is informed by, the site, its context, and associated physical, social, cultural, economic, and political forces. Without an understanding of these, critique can be shallow. The last element of Bowring’s definition focuses on design language, which creates a framework of agreed norms against which design can be interrogated. In this instance, the ‘design language’ concerned transit oriented development. The combination of situational specificity and theory as an informer of design language provides the framework to defining design success or failure. Without this benchmark critique is reduced solely to subjective judgement.

Interrogation of the design for Addington was based solely around critique, and followed Armstrong’s theory of triangulation, which she suggests is “an accepted form of rigour in qualitative research” (2000, p.8). The interrogation of my design used three modes of critique:

1. Site survey and analysis;
2. Self and peer critique; and
3. Professional critique.

The site survey and analysis, undertaken through the design study, served two key critical inquiry functions. Firstly it provided the situational specificity Bowring (2000) and Meyer (2000) suggest is essential for effective critique; and secondly, through exploring ways of conceptualising Addington the theoretical framework and design language, against which Addington could be assessed, was established.

The second arm of interrogation involved me as the designer making critical judgements about my own design work. This critique was both conscious and unconscious. Conscious critique involved pausing the design process to review against context and theory; and assessing the design within the context of similar situations, i.e. looking at exemplars and case studies. Unconscious critique involved the continuous testing, evaluation, and reworking of the design whilst moving pen around paper.
This process of self critique is suggestive of Donald Schon’s concept of reflection-in-action “where the designer is a researcher in a practice context” (in Armstrong, 2000, p.4).

Peer critique involved subjecting my design to interrogation by fellow landscape architecture students. This critique occurred through three semi-formal presentations and through numerous ‘desk crits’ where a fellow student would happen to pause at my design desk. The majority of this critique was given in a constructive manner, and provided alternative viewpoints or strategies to consider in my design.

Professional critique occurred throughout the design process. My design was subject to three ‘desk crits’ per week by various tutors, and as Armstrong suggests this professional critique differs from peer critique in that the tutors are not as immersed in the design process, as myself and fellow students tend to be, and “bring their expertise as experienced practitioners, and theoretically informed critics” (2000, p.8). I wholeheartedly agree with Armstrong on this point, as both academic and practicing tutors from different backgrounds vigorously interrogated my design. As well as one-on-one, professional critique also occurred at semi-formal presentations. I found critique via these presentations particularly valuable as they required me to a) be clear about my design thinking; b) to make explicit my design thinking (i.e. it was not good enough to just discuss my design direction, I needed to show physical representation of the design concepts); and c) to defend the design decisions I had made through reference back to the site and/or the theoretical context. Heated discussions sometimes resulted, but all made a positive contribution to my design.

Professional critique was also undertaken through a formal presentation at the completion of the major design phase. For my fellow students this was their final presentation, after which their design work was graded. For me this was a mid-thesis presentation to ensure I had acquired the level of design skill required by the accreditation standards for the landscape architecture profession, before moving through to the thesis phase. This presentation consisted of a 90 minute session before a panel of academic and practicing professionals, with an audience of public and peers. Throughout the presentation I was subject to a number of challenging questions about my design. This critique required me to clearly articulate my design thinking; it provided areas of further research to consider; and on a positive note, confirmed that the design work I had completed to date had merit in respect of its situational and theoretical context. Essentially it allowed me to move forward into the design thesis.

The purpose of critical enquiry is not to provide a solution to a problem but rather “to sufficiently wrestle with a context in order find viable and forward looking ‘roads’ of possibility” (Abbott, 2008, p.69). The design thesis is the culmination of critical enquiry undertaken through the site selection, design study, and major design stages. The primary objective of the design thesis was not to produce a design ‘product’ or solve a problem, but rather to start a dialogue on transit oriented development, and its applicability in the local context, primarily at Addington. As well as being a fulcrum for discussion, the design thesis serves three secondary functions:

1. To explore the link between theory and design;
2. To assess the success (or otherwise) of Addington as a transit oriented development, and its applicability in the local context;
3. To critique the design to render improvement and enable the creation of new knowledge for the discipline.
2.2 CRITIQUE -

In the major design phase, critique was employed in the studio environment to test the robustness of the design. Traditional written critique was also employed in the design thesis as an evaluative tool to explore the success of the transit oriented design at Addington. Criticism in this instance provided, as Treib observes, “the crucial link between theory and practice” (in Berrizbeitia, 1998, p.10).

In evaluating the success of the transit oriented design for Addington, Attoe’s suite of critical methods were employed (1978). The complementary modes of descriptive, interpretive and normative critique were used in combination to provide both a holistic picture of the transit oriented design, and evaluate the fundamental physical components of the design.

DESCRIPTIVE CRITIQUE -

Descriptive critique is based in fact, and as Attoe suggests, provides a “foundation for understanding”, and helps to “see what is actually there” (1978, p.85). Descriptive criticism is used in this thesis in a depictive and contextual manner to provide an understanding of different transit oriented developments, its components, and its physical form on site. This then aids in the understanding of transit oriented development as an urban space different from urban and suburban norms, and sets the scene for more in depth interpretive and normative criticism.

INTERPRETIVE CRITIQUE -

Interpretive criticism in this thesis attempts to provide a new perspective on urban space. Rather than seeing a space as either urban or suburban, this critique asks the viewer to see the space as something between the two, as a transit oriented development. Attoe suggests that interpretive criticism seeks to “mould others’ vision” (1978, p. 49), and in this instance I am advocating transit oriented development as a new design paradigm for a cities first suburbs. In testing transit oriented development through a design for Addington, I am also revealing my inherent bias towards the theory. I would not have undertaken this major design exercise had I not anticipated that such a paradigm was potentially appropriate for Addington.

Interpretive criticism can also used in an advocatory manner to explore the social dimension of transit oriented development. Attoe uses the method of ‘metaphor change’ to shift the view of a building from a “shelter” to a “setting” (1978, p.52). Using a similar technique the transit station, and its environs, will be explored as a ‘place’ rather than simply a transport ‘node’.

In critiquing transit oriented development as a place it is necessary to understand the zone of ‘place’ influence. Bertolini and Spit suggest that “the influence of a railway station may go far beyond its immediate surroundings. Conversely, entities right next to a railway station may not show any apparent relationship to it” (1998, p.12). This is particularly relevant for transit oriented development which influences urban form and function beyond its station boundary. Transit adjacent development in contrast may satisfy nodal functions and exerts influence only on the station area itself. Bertolini and Spithave characterised four place approaches – walkable radius, functional-historical, topographic and development perimeter, to delimit the station as a place (1998). For the purposes of this critique a development perimeter approach is used as this was the area under control during the design process.

NORMATIVE CRITIQUE -

Normative critique typically involves the evaluation of the design (either theoretical or realised) against a set of standards or ‘norms’ (Attoe, 1978). This posed two challenges for the evaluation of transit oriented development. As the overall success, or otherwise, of transit oriented development is dependent on locational and situational factors; and the degree of success occurs across a continuum, there are no universal indicators, or norms. To complicate matters, the benefits, and costs, of transit oriented development occur at two different scales, the regional and the local. Local transit oriented benefits, for example station area development, may not result in regional air quality or congestion benefits. Similarly, improved regional transit technology may not in isolation generate local development and investment.

Despite these challenges success indicators were drawn from fundamental transit oriented development principles. The simple genealogy in Figure 2-1 sets out the ‘pool’ of potential standards from which indicators were selected to evaluate the transit oriented design for Addington. As this is a landscape design thesis the selected indicators focus on landscape elements (e.g. land use layout, streetscape, and public space design).
It is acknowledged that while all indicators, to some degree, could be influenced by landscape design intervention, this is not a transportation, property, or economic thesis.

A second evaluative challenge arises as the transit oriented design for Addington is exactly that, a design, it has not been realised in form or function. The critique therefore focuses on a potential future state of the urban space, based on my analysis. It must be recognised that this future state is only theoretical, and that the transit oriented design for Addington, could be affected by changes in the political or funding climate, advances in technology, natural disasters, and given the long implementation time of transit oriented development, potential changes in local attitudes.

Despite these evaluative challenges normative criticism plays an important role in the evaluation of transit oriented development. There are a number of key physical characteristics required to make a development ‘transit oriented’, and the presence or absence of these elements influences the developments position on the transit continuum.

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<tr>
<th>Figure 2-1 - Transit oriented design indicators</th>
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<tr>
<td><strong>CALTHORPE, 1993</strong></td>
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<tr>
<td>Compact and transit supportive regional growth</td>
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<tr>
<td>Key landuses within walking distance of transit stops</td>
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<tr>
<td>Pedestrian friendly street networks</td>
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<tr>
<td>Mix of housing types, densities and costs</td>
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<td>Preservation of sensitive habitat</td>
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<td>Build form focuses on public space</td>
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**TRANSPORTATION RESEARCH BOARD, Report 294, 2005**

- Increased rideship and fare revenues
- Joint development opportunities
- Neighbourhood revitalisation
- Economic development
- Increased land values
- Increased affordable housing
- Less traffic congestion
- Consumer activity patterns
- Travel behaviour
- Zoning flexibility
- Resident reactions
- Housing type preference
- Self selection in residential choice
- Government policies

**TRANSPORTATION RESEARCH BOARD, Report 102, 2004**

- Increased rideship and fare revenues
- Joint development opportunities
- Neighbourhood revitalisation
- Economic development
- Increased land values
- Increased affordable housing
- Less traffic congestion
- Reduced sprawl
- Reduced road expenditure
- Reduced crime
- Increased social capital
- Increased access to labour pools
- Reduced parking costs
- Increased physical activity

**Transportation oriented indicators**

- Transit rideship
- Density
- Quality of streetscape design
- Quantity of mixed use
- Pedestrian activity and safety
- Increase in property values/tax revenue
- Public perception
- Mode connections at the transit station
- Parking configuration
CHAPTER 2.0 - METHODOLOGY

2.3 CASE STUDY ANALYSIS -

As discussed earlier a suite of critical methods were employed to evaluate the success of the transit oriented design for Addington. Descriptive and interpretive critiques were used to complement a more standards based normative critique, enabling a holistic evaluation of transit oriented development.

It could be argued that given that the transit oriented design for Addington is not based in physical fact the evaluation is wholly interpretive, based upon my intent as the designer, supported by research into transit oriented design theory, examples and observations of other transit oriented development. To provide a degree of robustness in the evaluation of the transit oriented design for Addington, and to explore how transit oriented development responds in different locations and situations, three case studies were also subject to critique.

Eisenhardt suggests that case study analysis is “particularly well suited to new research areas, or research areas where existing theory seems inadequate” (1989, p.548). Given the limited research and/or evidence concerning the success of transit oriented development, the use of case studies provides a form of ‘triangulation’ where the design for Addington is evaluated within the context transit oriented examples. Two case studies were chosen for exploration in this thesis, one local and one international.

New Lynn, in Auckland, was chosen as the local example as it is actively promoted as New Zealand’s first transit oriented development. New Lynn is a sub-regional centre approximately 15km from the central city core. Historically an industrial and manufacturing hub, the suburb expanded around the development of New Zealand’s first shopping mall - Lynn Mall (opened in 1963). By the mid 1990’s New Lynn was in decline; large industry had failed, residents had moved further out into the suburbs, public transport was underutilised, and the town centre lacked focus. The revitalisation of New Lynn sought to create a thriving centre focussing on a new transport interchange, with medium to high density housing within walking distance. The redevelopment is currently underway, and the new transit interchange opened in September 2010.

Melbourne, Australia, was chosen as an international example given its Australasian location, and cultural proximity to New Zealand. Melbourne is also one of the fastest growing cities in Australia, and as part of the Melbourne 2030 Metropolitan Strategy, the Victorian Government has initiated the Transit Cities program which seeks to create safe, vibrant and accessible communities. Nine metropolitan and 4 regional ‘Transit Cities’ are proposed, and masterplans for each of the cities have been completed.

Projects for higher-density development and improved public transport are at various stages for five of the Transit Cities (Frankston, Dandenong, Ringwood, Sydenham and Footscray).

The critique of the transit oriented design for Addington, and the two case studies, followed a two stage process, based on the three methods of critique. In the descriptive stage (Stage 1) each transit oriented development is described in terms of its situational and locational elements. In Stage 2, interpretive and normative critique is used to assess transit oriented development with respect to context and form. As transit oriented development is not formulaic, and is strongly influenced by the wider urban form, transit corridor and development typology; an interpretation of context is essential in comparing developments. Whilst transit oriented development is a product of its context, there are physical elements that mark it as a different urban space, and normative critique is used to assess the development against standards established by Calthorpe in his ‘Next American Metropolis’ (1993).

The normative critique of form varies in complexity in response to the level of information available. For example detailed information on the land area allocated for commercial, retail, industrial and residential development at New Lynn was presented in the New Lynn Urban Regeneration Strategy. Hence the evaluation of the New Lynn development/design could drill down to this finer grain. Conversely information for Footscray, Melbourne, whilst typically addressing the key transit oriented elements, was at a much coarser grain, and obtained largely from interpretation of literature, images, and a site visit. Therefore the format, outcome, and depth of the normative critique may vary between case studies.

2.4 SUMMARY -

This chapter outlines the process of exploration into the ideal urban form for Addington. In a three stage research through design process, Addington was explored as a transit oriented development. The next chapter therefore asks, ‘what could transit oriented development look like in Addington?’ As the final stage in the design process, this thesis then critiques and evaluates the transit oriented design.
This chapter presents the second stage of my thesis; a design experiment (‘Major Design’) exploring the spatial expression of transit oriented design at Addington. Design was undertaken as a sampling exercise over a range of scales and the results are presented as follows:

- Site in context
- Major design
  - Master Plan
  - Intermediate Plan
  - Detail Plan
- Addington 2041 Precincts
- Design Details
- Planting Strategy
- Planting Plan
3.1 SITE IN CONTEXT -

Source: Google Earth, ©2011, Whereis®, Sensis Pty Ltd.
Accessed 27June 2011
BROADER SETTING (FIGURE 3-2) -

NATURAL LANDSCAPE -
Situated to the south-west of the City core, Addington is located on the Canterbury Plains. Framing the City to the south-east are the Port Hills, glimpses of which can be seen from Addington. Both the Avon and Heathcote Rivers skirt the suburb, and their historic tributaries through the suburb have minimal surface form. Once a wet plains ecosystem, the landscape is now urban with fragments of remnant bush remaining at Riccarton and Addington Bush.

PHYSICAL LANDSCAPE -
Situated to the south-west of Moorhouse Avenue, Addington is one of Christchurch’s first suburbs. Once a thriving industrial town centred on the Railway Workshops, its physical landscape comprises heavy industrial urban remnants, suburban low density housing, and a mix of main street retail and light industry. The physical landscape is showing signs of decline with under utilised sites, and sites of poor amenity.

SOCIAL LANDSCAPE -
The Addington community is a mixture of families and single person households. Whilst predominantly European; Maori, Asian and Pacific ethnic groups have a presence in the suburb, and almost one quarter of Addington residents were born overseas. The majority of residents work as professionals, managers or labourers, and there is a high proportion of rental properties.
ADDINGTON PAST (FIGURE 3-3) -

Addington, originally on the outskirts of town past Town Belt South (now Moorhouse Avenue), was one of Christchurch’s early suburbs. It developed as a railway settlement after the construction of the rail line south to Selwyn (1867), and north to Rangoria (1872). With the railway line Addington quickly became an industrial junction housing the city’s saleyards, gaol, immigration barracks, and railway workshops. Along the rail line numerous manufacturing and processing industries developed (e.g. flour mill, brewery, soap and candle maker, jam factory, and bacon factory) (Wilson, 2008).

The Addington Railway Workshops opened on site in 1880. The workshops were located at the junction of the northern and southern lines, bounded by Lowe Street, Foster Street and Clarence Street. The workshops became the centre for locomotive, passenger carriage and goods wagon construction, and at their height employed over 2000 men. As well as the industrial core the workshops were the social hub of the suburb, with the social hall said to be the busiest building on site.

Source: Brown, 2009
Photographer: Graham Radcliffe
Reproduced from ‘Addington railway workshops: working with wood’ with permission from the New Railway & Locomotive Society Inc

The Woods Brothers Flour Mill opened in 1891 on Wise Street. Powered by steam and serviced by the adjacent rail line, by 1936 it had the largest output in the South Island. Closed in 1970 the mill has been used as a bakery, gym, exhibition space and residential apartments (May, 2006).

Source: Brown, 2009
Photographer: Paul Markholm
Reproduced from ‘Addington railway workshops: working with wood’ with permission from the New Railway & Locomotive Society Inc

To assist with overcrowding at the Lyttelton gaol, the Addington Gaol was built in 1874 under architect Benjamin Mountford. The gaol has been used as a women’s prison and military barracks, and closed in 1999. It now operates as tourist accommodation.

Lincoln Road, Addington

The Anglican Church of St Mary, located in Church Square has long been the centre of the community. Originally a school and orphanage the church opened in 1867. The bell tower was erected in 1907 in memory of NZ Premier Richard Seddon. The first public graveyard, open to all religious communities.

Church Square, Addington

Addington Cemetery on Selwyn Street. Established in 1858 the cemetery was the first public graveyard, open to all religious communities.

Dean Avenue, Addington

Addington Saileyards, currently derelict and awaiting redevelopment.

SITE IN CONTEXT -
### ADDINGTON PRESENT (FIGURE 3-4) -

- **ROADING HIERARCHY** -
  - **LINCOLN ROAD** -
    - A busy minor arterial road. The main link to south-west Christchurch.
    - *Lincoln Road, Addington.*
  - **WALSALL STREET** -
    - A local road at the interface between industrial and residential land uses.
    - *Walsall Street, Addington.*
  - **CHURCH SQUARE** -
    - A residential local road.
    - *Church Square, Addington.*
  - **TRAFFIC CALMED** -
    - Narrowed width, speed humps, signage and kerbside planting used to calm traffic on local roads.
    - *Ruskin Street, Addington.*

- **RESIDENTIAL** -
  - **LOW DENSITY (DETACHED)** -
    - Low density, detached dwellings surrounding Church Square.
    - *Church Square, Addington.*
  - **LOW DENSITY (MULTIPLE)** -
    - New semi-detached housing units.
    - *Addington.*
  - **MEDIUM DENSITY** -
    - Semi-detached town houses on a single allotment.
    - *Addington.*
  - **MEDIUM DENSITY** -
    - A comprehensive medium density development. Townhouses clustered around a parking area.
    - *Poulson Street, Addington.*

- **RETAIL** -
  - **MAINSTREET** -
    - Small scale, local retail operations.
    - *Lincoln Road, Addington.*
  - **LOCAL MALL** -
    - Local mall recessed from the main street.
    - *Addington Mall, Addington.*
  - **RETAIL STRIP** -
    - Clustered, generic, chain store retail operations.
    - *Lincoln Road, Addington.*
  - **BIG BOX** -
    - Large format stores clustered around vast surface parking.
    - *Tower Junction, Addington.*
### Addington Present (Figure 3-4) -

<table>
<thead>
<tr>
<th>Industrial/Commercial</th>
<th>Light Industry</th>
<th>Business Park</th>
<th>Main Street Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Industry -</td>
<td>Light Industry -</td>
<td>Business Park -</td>
<td>Main Street Commercial -</td>
</tr>
<tr>
<td>Weston Milling, Moorhouse Avenue.</td>
<td>Lincoln Road Addington.</td>
<td>Hazeldean Business Park, Addington.</td>
<td>Lincoln Road, Addington.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Space -</th>
<th>CBS Arena -</th>
<th>Neighbourhood Reserve -</th>
<th>Streetscape -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hagley Park -</td>
<td>CBS Arena -</td>
<td>Neighbourhood reserves serving local residential areas.</td>
<td>Pedestrian paths and streetside planting around Church Square.</td>
</tr>
<tr>
<td>View to Hagley Park from Grove Road.</td>
<td>CBS Arena, Addington.</td>
<td>CBS Arena, Addington.</td>
<td>CBS Arena, Addington.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heritage -</th>
<th>Urban Remnants -</th>
<th>Local Art -</th>
<th>Local Features -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heritage -</td>
<td>Urban Remnants -</td>
<td>Local Art -</td>
<td>Local Features -</td>
</tr>
<tr>
<td>St Marys Chruch, the historic heart of the community.</td>
<td>Industrial and railway reminders of the past.</td>
<td>Local sculpture on Parlane Street.</td>
<td>Interesting features that celebrate the local.</td>
</tr>
<tr>
<td>Church Square, Addington</td>
<td>Railway Water Tower, Addington.</td>
<td>Addington.</td>
<td>Lincoln Road, Addington.</td>
</tr>
</tbody>
</table>
CHAPTER 3.0 - RESULTS

SITE IN CONTEXT -

**URBAN ISSUES (FIGURE 3-5)** -

**CONGESTION** -

Lincoln Road, a minor arterial carries 20,000 vehicles per day.

*Lincoln Road, Addington.*

**DECLINE** -

Run down premises.

*Walsall Street, Addington.*

**DAMAGE** -

Damage from the February 2011 earthquake.

*Lincoln Road, Addington.*

**UNDERUTILISED SITES** -

Vacant or unprogrammed sites, currently underutilised.

*Corner of Lincoln Road & Bernard Street, Addington.*

**GENERIC BUILT FORM** -

Commercial buildings with no sense of place.

*Lincoln Road, Addington.*

**LOSS OF CHARACTER** -

Urban intensification that does not complement existing residential character.

*Addington.*

**LOSS OF IDENTITY** -

The railway workshops were a significant part of Addington’s identity. Now only the water tower remains as a marker.

*Addington main street, Lincoln Road.*

**NO DISTINCT CORE** -

Addington lacks distinct edges and a core.

*Addington main street, Lincoln Road.*

**LOST RAILWAY STATION** -

Hidden amongst big box retail down a side street, the station lacks presence and character.

*Addington*

**LOW AMENITY** -

Poor street environments.

*Lincoln Road, Addington*

**POOR CONNECTIONS** -

Poor pedestrian access across rail lines at Lincoln Road.

*Looking towards Hagley Park from Lincoln Road, Addington.*

**CAR DOMINATED** -

Car rather than pedestrian dominated landscape.

*Lincoln Road heading south-west towards Halswell, Addington.*
**URBAN OPPORTUNITIES (FIGURE 3-6)**

**EXISTING INFRASTRUCTURE**

Existing rail infrastructure available for use.
*Main South Line into Addington.*

**REGIONAL SERVICES**

Christchurch Railway Station services the wider region.
*Troup Drive, Addington*

**LINKS**

Close to the City and Hagley Park, a gateway to the south-west.
*Lincoln Road, Addington*

**BROWNFIELD SITES**

Underutilised sites available for redevelopment.
*Walsall Street, Addington*

**GROWING POPULATION**

Intensification within the suburb, expressed here through medium density housing.
*Poulson Road, Addington*

**INVESTMENT**

New business parks bring jobs, people and investment to Addington.
*Hazledean Business Park, Addington*

**NEW PLACES**

Exciting new places that revitalise the suburb.
*Addington Coffee Co-op, Addington*

**ACTIVITIES**

Interesting and diverse land uses.
*Mill Theatre, Addington*

**URBAN REMNANTS**

Remnants of time past. Opportunities for refurbishment and reuse.
*Woods Flour Mill, Addington*

**SPECIAL PLACES**

Historic places of significance to the community.
*St Marys Church, Addington*

**COMMUNITY SPIRIT**

Bringing the community together.
*Addington Market, Church Square*

**QUIRKY ELEMENTS**

‘Sybil’ created by Christchurch artist Ian Lamont.
*Disraeli Street Addington*
Addington, one of Christchurch’s first suburbs was born as a railway town on the periphery of the Southern Town Belt, now Moorhouse Avenue. Located to the south west, approximately 2.5 kilometres from the city core, Addington is outside the four avenues urban core. Addington is an inner city suburb with a mix of medium to low density housing, retail, business parks, and light industrial properties. Two major transport corridors sever Addington. Lincoln Road, which bisects the residential and industrial quarters of Addington, is the city’s primary connection with the south western suburbs of Hillmorton, Hoon Hay and Halswell. The Main North and Main South rail corridors separate Addington from its northern quarter at Tower Junction.

The settlement of Addington, originally part of the Borough of Sydenham, centred on Church Square, and some of the early cottages can still be seen on Burke and Selwyn Streets. Addington developed as a railway settlement with the construction of the rail line south to Selwyn and north to Rangiora. The settlement quickly became an industrial junction housing the city’s sale yards, immigration barracks, gaol, and railway workshops. John Wilson in his historical study of Macaulay Street suggested that the working class nature of Addington made it unique, with a strong sense of community, and self sufficiency (2008). Addington was a place where residents could live, work, shop and socialise, all within the suburb (Wilson, 2008).
Christchurch’s railway workshops moved from their original site in Carlyle Street, Waltham to Addington in 1880. The Carlyle Street workshops were considered too small to handle the demands of the provincial railway system once taken over by central government in 1870. The 10 ha site at Addington, located at the junction of the north and south main trunk lines, was bounded by Lowe Street, Foster Street and Clarence Street. Initial buildings on site included a blacksmith and boiler shop, foundry, machine and locomotive erecting shop. The iconic water tower, still standing today, was constructed in 1883 to provide a high pressure water system for the workshops. The workshops became the centre for locomotive, passenger carriage and goods wagon construction, and at their height employed over 2000 people. As well as being an industrial core for Addington the workshops were also the social hub. The social hall was used for bowls, table tennis, the Thursday dance, meetings and private celebrations, and was said to be the busiest building on site, day and night (Brown, 2009).

Always serving a catchment much larger than its spatial boundaries, Addington over the years has satisfied the region’s railway, penal, rural and recreational needs. Once a thriving industrial hub, with a strong community, Addington is now a space between. Between land uses as it sheds its industrial past; and between programmes as it is neither urban nor suburban. To the pessimist Addington has been reduced to a passing landscape, one experienced on the way to elsewhere. However, at the same time, Addington has a distinct centre, a clear identity, and a diverse range of amenities typically missing from suburban development. Addington is the gateway to the city; nestled between the green of Hagley Park and the buzz of the raceway, at the junction of the north and south rail lines, Addington is a key piece in the City’s urban growth puzzle.

The notion of Addington as a key space within the city has come to fruition with the recent Christchurch earthquakes. The exodus of central businesses to the suburbs has seen low rise office space in the Hazeldene Business Park, at Wrights Road, and along Lincoln Road in demand. Westpac is also establishing a temporary business hub at the CBS arena to provide meeting, office and conference space to businesses impacted by the earthquake.

POLICY CONTEXT -

The population of the Greater Christchurch area, including the Waimakariri, Christchurch and Selwyn districts, is predicted to grow from 413,500 in 2006 to 548,520 in 2041, an increase of 135,020 people over the thirty five year period (Canterbury Regional Policy Statement, Chapter 12A, Issue 2). This equates to an additional 74,810 households within the region (ibid).

The proposed settlement pattern to accommodate this growth has been established by the Greater Christchurch Urban Development Strategy (UDS), a collaborative growth policy prepared by regional and local councils, and regional transport provider1. This settlement pattern has a focus on consolidation with seventy one percent of growth accommodated within Christchurch City, with the remaining twenty nine percent accommodated in the Waimakariri and Selwyn Districts (Greater Christchurch Urban Development Strategy, 2007).

The UDS sets out the framework for growth, including the areas available for development, and the densities within these. The UDS recognises that the majority of past and current growth within Greater Christchurch consists of low density, suburban development, resulting in an urban form that relies heavily on road transport. This suburban form is seen as unsustainable with potential adverse effects on environmental quality, infrastructure, and amenity. In contrast the Strategy’s vision for Greater Christchurch is:

*By the year 2041, Greater Christchurch has a vibrant inner city and suburban centres surrounded by thriving rural communities and towns, connected by efficient and sustainable infrastructure. There are a wealth of public spaces ranging from bustling inner city streets to expansive open spaces and parks, which embrace natural systems, landscapes and heritage.*

*Innovative businesses are welcome and can thrive supported by a wide range of attractive facilities and opportunities. Prosperous communities can enjoy a variety of lifestyles in good health and safety, enriched by the diversity of cultures and the beautiful environment of Greater Christchurch.*

The Greater Christchurch area will have:

- Enriched lifestyles
- Enhanced environments
- Prosperous economies
- Managed growth, and
- Integrated and collaborative leadership


---

1. The Greater Christchurch Urban Development Strategy partners were the Canterbury Regional Council, Christchurch City Council, Waimakariri District Council, Selwyn District Council and New Zealand Transport Agency (formerly Transit New Zealand).
As the UDS is a non-statutory, strategic plan, it will be incorporated into the Canterbury Regional Policy Statement (RPS) for implementation. Plan Change 1 seeks to introduce a new chapter to the RPS, ‘Development of Greater Christchurch’ (Chapter 12A) and at the time of writing this plan change had been notified, hearings held, and decisions released. Aspects of Plan Change 1 are still currently under appeal to the Environment Court.

The UDS (and RPS) settlement pattern accommodates growth out to 2041, and seeks to manage this growth in a consolidated fashion focusing on building the core to relieve pressure at the periphery. Consolidation, at the broad scale, is achieved through the establishment of ‘urban limits’, a boundary within which urban activities are directed (Policy 1 of the RPS). An additional 53,170 households are anticipated within these urban limits, with a proposed 60:40 development split; sixty percent of growth to be accommodated through urban intensification, and forty percent through greenfield development (currently there is a 25:75 split). Of the 53,000 households the RPS suggests that 13,990 will be accommodated within the Centre City Area, 19,500 within the rest of the city, and 19,680 within greenfield areas (refer Table 3-1).

It is interesting to note that whilst both the UDS and RPS have a strong focus on urban consolidation, the RPS appears to dilute the urban intensification provisions of the UDS. The UDS proposed an additional 13,990 households within the ‘Central Intensification Area’ (Greater Christchurch Urban Development Forum, Table 2, p.43). This area was not defined in the UDS, and was widely assumed to be the city core, i.e. the area within the four avenues. This correlates with the Central City Revitalisation Strategy’s aim to house 30,000 people within the core.

<table>
<thead>
<tr>
<th>Table 3-1 - Projected Household Growth in Greater Christchurch 2007-2041</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Christchurch City</strong></td>
</tr>
<tr>
<td>Intensification</td>
</tr>
<tr>
<td>a. City Centre Area</td>
</tr>
<tr>
<td>b. Rest of City</td>
</tr>
<tr>
<td>Greenfields Areas and existing zoned land</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source —RPS, Policy 6: Integration of Urban Form and Infrastructure within Urban Limits (Canterbury Regional Council, 2009, p. 16).

The RPS however states that the 13,990 households will be accommodated within the ‘Centre City Area’ which is defined as “within the Avenues (Bealey, Fitzgerald, Moorhouse, Deans and Harper) and the nearby inner city residential and business zoned suburbs” (Canterbury Regional Council, 2009, p.32). The Central City Area is much looser than the original city core anticipated by the UDS, and has the potential to disperse the proposed core population.

Similarly, whilst the UDS provided indicative intensification areas, approximating the Living 2 (Inner Suburban), Living 3 (Medium Density), and Living 4 zones of the City Plan (refer Figure 3-8); the RPS has removed these areas, identifying them as a potential constraint to intensification. The absence of defined intensification areas has both positive and negative effects. On the positive side, neighbourhoods where local character, amenity and heritage values could potentially be degraded may be released from intensification pressure. On the negative side, intensification could occur outside the inner suburbs, subject to district plan zoning provisions. The latter has the potential to further dilute the strengthening of the city core and inner suburbs.

However, whilst potentially diluting urban intensification, the significant role that the inner suburb intensification areas play is still recognised by the RPS, particularly the suburbs support of the central city core. Policy 2(d) for example states that:

“(d) Christchurch City Council shall recognise and provide for intensification in the City Centre Area which underpins and supports the role of the central business district within the Greater Christchurch sub-region” (Canterbury Regional Council, 2009, p.12).

A fundamental element of consolidation under the UDS and RPS is the strengthening of the city core. The UDS recognises importance of the core, stating that “as the centre of the region’s economy and gateway to Canterbury, the success of the Central City is intrinsically linked to the success of the region” (Greater Christchurch Urban Development Strategy Forum, p.73). A key priority of the UDS is the implementation of the Central City Revitalisation Strategy.

The Central City Revitalisation Strategy was born out of concern for the growing decline of the city core. The Strategy’s vision for the city is:

“a vibrant fun, exciting, safe and sustainable heart of Christchurch. A heart whose economy, environment, culture and society are healthy and strong” (Christchurch City Council, 2006, p.5).

2. The Centre City Area is defined in Plan Change 1 as “within the Avenues (Bealey, Fitzgerald, Moorhouse, Deans and Harper) and the nearby inner city residential and business zoned suburbs” (Canterbury Regional Council, 2009, p.32).
The key element of the Revitalisation Strategy is increasing the residential population of the core from its current 8,000 residents to 30,000 residents by 2026 (Christchurch City Council, 2006, p.5). The Strategy recognises that a strong residential population is essential in providing a critical mass to support core retail, commercial, recreational and cultural activities; and to create the atmosphere and vibrancy needed to make a successful city. To achieve this residential population the Council intends to:

- Acquire and redevelop strategic, under-utilised Central City sites.
- Encourage redevelopment in the Central City South area.
- Investigate and create incentives for developers to provide affordable housing.
- Promote development near Latimer Square.
- Monitor residential activities within the Central City.
- Reduce noise problems.
- Change the City Plan to improve the design of new developments.

(Christchurch City Council, 2006, p.28).

Other elements of the Strategy include growing the business and commercial sector, enhancing vital public spaces, redeveloping underutilised sites, and improving the transport network.

In addition to the Revitalisation Strategy, the Christchurch City Plan also influences urban growth at the micro scale. City neighbourhoods are the spatial expression of regional urban growth management, and it is at this local scale that the physical, social and cultural implications of strategic policy are revealed. The City Plan recognises that urban form influences resource use, community wellbeing, amenity and environmental quality, and primarily uses land use zoning to encourage consolidation (Objective 6.1), limit greenfield expansion (Objective 6.3), and promote relationships between living, business and employment areas (Objective 6.2).
CHAPTER 3.0   - RESULTS

URBAN GROWTH SCENARIO FOR ADDINGTON -

The RPS proposes a 60: 40 intensification versus greenfield development split to accommodate Christchurch city growth to 2041 (Canterbury Regional Policy Statement, Chapter 12A, Policy 2). This equates to an additional 33,490 households to be provided in the city through urban intensification, with the remaining 19,680 households, to be provided through greenfield development (Canterbury Regional Policy Statement, Chapter 12A, Table 1). This intensification is to be split between the ‘Central City Area’ and the ‘Rest of the City’. The former is defined in the Regional Policy Statement as “within the Avenues (Bealey, Fitzgerald, Moorhouse, Deans and Harper) and the nearby inner city residential and business zoned suburbs” (Regional Policy Statement, Chapter 12A, Section 12A.7); ‘Rest of City’ is not defined.

Similarly, the RPS does not define the development anticipated within the central core (i.e. within the four avenues). Whilst the Central City Revitalisation Strategy sets a residential target of 30,000 residents within the four avenues, doubt has been expressed that this intensification target is achievable. A residential analysis by Simes Valuation and Research in 2009 found that “the Central City Revitalisation Strategy’s aim of 30,000 residents by 2026 will be a difficult target to reach current growth rates” (p.37). The analysis suggested that under current growth forecasts a central core population of 17,000 by 2026 was achievable (Simes Valuation and Research, 2009).

The Christchurch City Council also commissioned a residential capacity study in 2008 to better understand the residential capacity of the central core. The study assessed three scenarios for development for the central core - conservative, moderate, and aggressive (Boffa Miskell, 2008), and concluded that under current planning conditions only an aggressive development scenario (one half of the city centre being developed) would achieve the residential target of 30,000. In contrast when confirming intensification targets for the City, the Commissioners hearing Plan Change 1 to the RPS noted that there was a “lack of compelling proof” that targets could not be met, and that “all commentators appear to consider that at least 6000 households can be added within the Avenues by 2026” (Canterbury Regional Council, 2009, p. 50-51).

Whilst the consistent theme of urban growth policy in Christchurch is consolidation there is variation between frameworks (refer Table 3-2). The urban growth scenario for Addington, as detailed in Table 3-3, is drawn from the framework established by the UDS and subsequent RPS (Plan Change 1).

The Addington scenario extends the consolidation theme with proposed intensification contained solely within the city core, and surrounding inner suburbs. Under the current environmental state this may be optimistic given New Zealander’s penchant for suburban living, and the housing and development framework that supports this. However as challenges associated with suburban living come to the fore, the inner suburbs, such as Addington, have the potential to become desirable places to live.

Under the Addington growth scenario (refer Table 4-4) the city core (the area within the four avenues) is proposed to accommodate approximately 6,000 households, or an additional 13,000 people. This would increase the residential population of the core to 19,000 people, which aligns with the Simes Valuation and Research (2009) analysis, and the conservative residential capacity study by Boffa Miskell (2008).

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Table 3-2 - Christchurch Urban Growth Policy Context

<table>
<thead>
<tr>
<th>URBAN GROWTH POLICY</th>
<th>RESIDENTS</th>
<th>HOUSEHOLDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Christchurch Urban Development Strategy (2007)</td>
<td>Greater Christchurch – 549,000 people by 2041</td>
<td>Greater Christchurch - 74,800 new households by 2041</td>
</tr>
<tr>
<td></td>
<td>Intensification – City Centre Area 13,990 HH</td>
<td>Intensification – Rest of City 19,500 HH</td>
</tr>
<tr>
<td></td>
<td>Greenfield areas and existing zoned land – 19,680 HH</td>
<td></td>
</tr>
<tr>
<td>Central City Revitalisation Strategy</td>
<td>30,000 residents within the central city by 2026</td>
<td></td>
</tr>
<tr>
<td>Boffa Miskell Residential Capacity Study (2008)</td>
<td>Potential population: 24,031 people</td>
<td>Potential households: Conservative - 17,600 people</td>
</tr>
<tr>
<td></td>
<td>Moderate – 13,990 HH</td>
<td>Moderate – 11,400 HH</td>
</tr>
<tr>
<td></td>
<td>Aggressive – 19,680 HH</td>
<td>Aggressive – 15,600 HH</td>
</tr>
<tr>
<td>Simes Valuation and Research (2009)</td>
<td>Central City population of 17,000 by 2026</td>
<td></td>
</tr>
</tbody>
</table>
Table 3-3 - Urban intensification scenario for Addington

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christchurch – additional</td>
<td>53,170</td>
</tr>
<tr>
<td>60% Greenfields</td>
<td>19,680</td>
</tr>
<tr>
<td>40% Intensification – 33,490 HH</td>
<td>19,500</td>
</tr>
</tbody>
</table>

- 33,490 HH = 13,990 proposed for Central City Area
- 19,500 proposed for Rest of City

City Core (within four avenues) = 6000 HH
- 6000 HH at 2.2 people/HH = 13,200 additional people

City Centre Area (inner suburbs, excluding four avenues) = 27,490 HH
- 27,490 HH at 2.2 people/HH = 60,478 additional people

Inner suburbs to accommodate 27,500 HH by 2041
- Addington – 5,500 HH (12,000 people)
- Sydenham/Waltham – 6,700 HH (15,000 people)
- Linwood/Richmond – 6,700 HH (15,000 people)
- St Albans/Papanui – 5,600 HH (12,500 people)
- Hagley – 3,000 HH (6,500 people)

Total Households = 33,500
- Central core = 6,000
- Inner suburbs = 27,500
- Total People = 61,000

Meets UDS and RPS (Plan Change 1) urban intensification targets.

Under this scenario the remaining intensification would be directed solely towards the inner suburbs; the area of which is defined as the Living 2 (Inner Suburb) and Living 3 (Medium Density) zones in the City Plan (refer Figure 3-9). This inner suburb intensification would include the additional households not accommodated in the city core, and the Rest of City households (19,500). In total the inner suburbs would accommodate approximately 27,500 households, distributed across five quadrants – Addington and Sydenham/Waltham to the south; Linwood/Richmond to the east; St Albans/Papanui to the north; and Hagley to the west.

Directing intensification to the inner suburbs allows four key urban growth outcomes:
- The growth targets of the UDS and RPS are achieved;
- Pressure for greenfield growth at the periphery is alleviated;
- The inner suburbs are revitalised, and feed the city core, supporting its revitalisation; and
- The inner suburbs reach a density that potentially makes rapid transit, community facilities, and mixed used neighbourhoods viable.
The vision for Addington 2041 is:

A space; A place; A home....

- A vibrant urban space built on transit, creativity and community;
- A place that celebrates the past whilst embracing the future; and
- A home to live, work and play.

The goal for Addington 2041 is:

To create a unique, sustainable urban environment that successfully integrates transit and land use, and reinvents one of Christchurch’s first suburbs as a modern transit oriented development. Addington follows a new design programme, one which focuses on seamless transit links, pedestrian friendly corridors and vibrant public spaces.

The outcomes of the vision and goals are by 2041 Addington will:

- Be a transit oriented exemplar for Christchurch;
- Be part of an effective and efficient regional transit network;
- Be a pedestrian and cycle friendly place;
- Be the centre of performance and fine arts in Christchurch
- Be a creative and innovative employment hub;
- Have diverse residential neighbourhoods, each enabling a high quality of life.

Under the alternative growth strategy for Christchurch outlined above, Addington is predicted to accommodate 12,000 residents and 15,000 jobs by the year 2041.

It is suggested that the demographic profile of Addington 2041 will approach that of a first suburb (as outlined in Chapter 1), with a unique character; one that differs from the city core and conventional suburbia. The Addington 2041 demographic profile is as follows:

- 40% of residents will be born overseas
- The ethnic make-up will be primarily European with growing populations of Asian, Middle Eastern, and Latin American people.
- The household composition will primarily be single family, and one person households.
- 15% of the population will be aged 65+ years.
- 15% of the population will be aged less than 15 years.
- The median household income will approximate the national median.

This profile is drawn from current demographic trends, and the demographic profile established by Puentes and Warren (2006) for First Suburbs.

ADDINGTON QUICK FACTS -

- 3,087 people usually live in Addington.
- One-family households make up 45.5 percent of all households in Addington.
- Couples with children make up 24.5 percent of all families in Addington, while couples without children make up 47.6 percent of all families.
- 23.4 percent of people in Addington were born overseas, compared with 17.9 percent for Canterbury Region as a whole.
- 9.6 percent of households in Addington have access to three or more motor vehicles, compared with 17.1 percent of all households in Canterbury Region.

Source: Statistics NZ
TRANSIT AND CONNECTIVITY -

OVERVIEW -

Movement and connectivity is key to transit oriented development. An integrated network for Christchurch (for 2041) would include a hierarchy of transit elements that branch across the scales from a regional rail network, to a citywide bus network, to local pedestrian and cycle networks. Transit at each of these scales facilitates local, city and regional connections.

There are two significant transit barriers preventing connectivity across Addington – the railway and Lincoln Road. The main south rail line severs Tower Junction from the remainder of Addington, preventing north-south movement. Pedestrians and vehicles can cross at grade at Whiteleigh Avenue. The main north rail line prevents east-west movement from Addington to Hagley Park; pedestrians can cross at the now defunct Blenheim Road overbridge, or at grade at the Lincoln Road/Moorhouse Avenue intersection.

Transit within and through Addington currently focuses on the car, with Lincoln Road, a minor arterial, carrying approximately 19,000 vehicles per day\(^3\). Whilst footpaths are provided on both sides of the street, the heavy traffic volume, lack of formalised crossing points, and poor street amenity are barriers to pedestrian movement. A formal on road cycleway is provided along Lincoln Road from Moorhouse Avenue to Halswell.

Residential blocks to the south east of Lincoln Road, radiate outwards from St Marys Church, and whilst footpaths are generally provided on both sides of the street, the block size lacks permeability. Blocks are irregular, with some in the order of 200 x 300m, with no inter-block penetration. Open space throughout the residential area is also poorly linked, often existing in isolated pockets.

RAIL, BUS AND TRAM -

A transit oriented development requires a functioning mass transit network, and at the regional scale this is proposed via a rail network. Initially this could operate using the existing heavy rail infrastructure, with the potential to electrify the network, and/or convert to a light rail network within the same corridor in the future. To facilitate regional transit there are two key actions. Firstly the Main North and Main South lines and the Midland line are reactivated for commuter transport; and secondly the south-west lateral line to Prebbleton and Lincoln is reinstated (this line currently terminates at Hornby) (refer Figure 3-10).

Mass transit at the city scale is proposed via a radial bus network using dedicated corridors along existing arterial road corridors (e.g. Lincoln Road to the south west) (refer Figure 3-11). The use of dedicated corridors segregates the bus from general traffic avoiding congestion, and allowing travel at greater speeds. These corridors are intended to operate as medium to high frequency corridors with services running at 10-15 minute intervals at peak times. It should be noted that there is the potential for these radial corridors to be converted to light rail in the future, should this become viable for Christchurch. A light rail carriage could access these radial routes directly from the regional corridors, via a common track.

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3. Based on Christchurch City Council 2007 traffic count data at the Lincoln Road rail crossing. The seven day average at this data point is 19,185 vehicles per day.
Moving about the central city is also supported by two loop tram routes. The inner city loop follows the current heritage tram route, including the proposed south-east extension; and the outer loop traverses the four avenues. It is envisaged these routes would operate as a free service, similar to the current Central City Electric Shuttle, and the City Circle tram operating in Melbourne. The purpose of these loops is to provide links to the radial routes; to support the pedestrianisation of the city core, and to link to key tourist destinations within the city. It is likely that the carriages running these loops would be upgraded from the current heritage trams to achieve greater capacity, speed and passenger comfort; although the inner loop could continue to operate as a heritage feature if desired. As with the radial routes the city loops would be compatible with light rail.

Supporting the radial bus network are two orbiter routes. These routes facilitate cross suburban circulation. The inner orbiter essentially follows its current route linking major destinations such as shopping malls, commercial centres, and educational institutes (e.g. Canterbury University, CPIT, and the proposed Canterbury Performing Arts School at Addington). The outer orbiter links both destinations such as the airport, QE II stadium, and Ferrymead; and major suburban areas such as Belfast, Marshlands, Aranui, Opawa, Cashmere, Halswell, Hornby, and Yaldhurst (refer Figure 3-11).

Rather than fully segregated corridors, as is proposed on the radial routes, the orbital routes could operate on a ‘free-flow’ system whereby bus lanes, created during peak periods, revert to parking or normal carriageway during off peak periods.
TRANSIT NODES -

Where the rail and bus networks intersect there is the potential for transit oriented development, such as that proposed for Addington. These intersections or nodes act as a hierarchy of transit hubs creating opportunities for different transit oriented developments. As discussed Dittmar and Poticha (2004) identified a number of transit oriented typologies, largely based on their location within a transit corridor (refer Figure 3-12). Within the future Christchurch transit network four typologies are expressed. The urban downtown development would be the hub of the transit network, including an inner core transit exchange, such as that proposed for Lichfield Street. Surrounding land uses could include high density residential, commercial, institutional, retail and entertainment activities.

Urban neighbourhood transit oriented developments are typically “historic neighbourhoods that surround the downtown” (Dittmar & Poticha, 2004, p.33). Dittmar and Poticha suggest that these neighbourhoods form the “backbone of a compact, transit-friendly region”, and that “the often historic nature of these neighbourhoods, combined with an active street life, allows these places to become entertainment destinations in themselves” (2004, p. 33-34). The proposed urban neighbourhoods for Christchurch fit Dittmar and Poticha’s characterisation. The nodes at Addington, Sydenham, Ensors, Opawa, Linwood, Richmond, and St Albans were the first suburbs of Christchurch, settled immediately after the core, and have strong heritage elements (e.g. character residential form, industrial remnants, heritage buildings, and established, mature vegetation).

Suburban centres differ from urban neighbourhoods in their location from the core, and their reduced development density. The centres are typically commercial and retail hubs surrounded by low density residential housing. These centres form important employment and entertainment centres for the suburban community. Within the Christchurch framework, opportunities for suburban centre transit oriented development occur at Belfast, Northlands, the Palms, Eastgate, New Brighton, Sumner, Lyttelton Halswell, and Hornby. It is at the urban neighbourhood and suburban centre hubs that two or more transit modes intersect. Between the core, urban neighbourhoods and suburban centres are neighbourhood transit stops, typically where a single mode makes stops along a corridor.

Extending the transit framework outside the Christchurch urban area allows the connection of semi-remote commuter towns with the core. These commuter towns are generally freestanding communities, although they have strong employment, commercial and industrial links with the city. In the Christchurch framework, these towns are connected with the city via commuter rail, and include Rangiora, Kaiapoi, Rolleston, Templeton, Prebbleton and Lincoln. Further afield the settlements of Burnham, Dunsandel, Kirwee and Darfield could become dormitory commuter suburbs.
PEDESTRIAN AND CYCLES –

Within each of the transit nodes, regardless of their position in the hub hierarchy, the mass transit networks require support by pedestrian and cycle networks for a transit oriented development to be successful.

A key to unlocking the potential of Addington is to create a more civilised (i.e. less car dominated) and pedestrianised Lincoln Road. It is proposed to narrow Lincoln Road (to two 3m wide lanes) at Whiteleigh Avenue to discourage through traffic (refer Figure 4-12). Through traffic is re-routed north-west to Blenheim Road or south-east to Brougham Street (the southern motorway). Lincoln Road between Wise Street and Dickens Street then becomes a shared space with a 30km/hr speed limit, central mass transit corridor, and contiguous paving. On both sides of the street are four metre wide pedestrian belts. Within these belts are street trees and planting, staggered on street surface parking, seating areas, and leasable land allowing adjoining land uses to ‘spill’ out onto the strip (refer Figure 3). Bernard, Walsall and Wise Streets also operate as shared space with one way traffic flow from east to west; as does Clarence Street, although the latter remains two way.

There are three key pedestrian/cycle corridors connecting Addington to the wider urban area. A key pedestrian/cycle corridor links the two major recreational sites flanking Addington – Hagley path on the city side, and CBS Arena on the Addington side. This corridor extends through a proposed mixed-used and residential development at the Christchurch Saleyard site, outside which the Four Avenues loop tram stops; through the transit interchange; across Central Square and via Walsall Boulevard to the Arena (a journey of approximately 800m). It is intended this corridor would act as a major promenade during Arena or Park events (e.g. Christchurch Show Day, Sparks in the Park) with travellers to the station joining the journey at the interchange. The second key pedestrian/cycle corridor links the residential sector of Addington with the transit interchange using urban open space. The third key corridor links Addington to the north via an extension of the Christchurch Railway Cycleway to the transit interchange.

Through the residential blocks a finer grain urban grid is proposed. This will be achieved by penetrating large blocks with open space corridors for use by pedestrians and cyclists. The existing footpath system will be retained; however street amenity and legibility will be improved through planting, and street art, similar to that currently at Poulson Street. The planting will form a residential signature that helps residents identify where they are in the suburb, and street art will mark key destinations and nodes.

A finer urban grain grid is also proposed through the University and mixed use area between Lincoln Road and the rail line. Blocks and buildings are permeated by public plazas, squares, lanes, a colonnade, and an elevated walkway.
PARKING STRATEGY –

Free and excessive parking is a “significant determinate in a person’s choice of transportation” (Daisa, 2004). As transit oriented developments are intended to be mass transit and pedestrian friendly, an alternative parking strategy is required, once that takes account of car travel, but does not necessarily facilitate it. As Niles and Nelson suggest the “potential for reducing auto travel is enhanced if parking demand and supply at centres is moderated” (1999, p.4). Alternative parking management is a key element that takes a transit interchange development from transit adjacent to transit oriented. Often transit adjacent development include large surface parking landscapes (e.g. park and ride) to facilitate transit use. Transit oriented development in contrast uses a suite of methods, including parking management, to provide alternatives to car travel.

The parking strategy for Addington includes three key design interventions:

- Surface parking areas are consolidated into land-efficient public car parking buildings; or incorporated into residential, commercial and institutional buildings as below ground parking. As such no large surface parking lot (e.g. park and ride) is proposed adjacent to the transit interchange. Instead parking demand will be provided for (at cost) in the adjacent residential buildings, and a ‘kiss and ride’ facility, and bus parks are provided at the interchange.

- Mass on-street parking is removed from Lincoln Road, Bernard Street, Walsall Street, and Wise street and replaced with limited charged time restricted parking. Whilst it may be desirable from a pedestrian perspective to totally remove on-street parking; some on-street parking is provided for convenience activities (i.e. collecting drycleaning), and increased activity and surveillance in the street zone.

- Off-street parking is provided to the side or rear of commercial, retail and mixed use buildings keeping the continuity of the street facade.

To support these design interventions, four key policy interventions are also suggested:

- Land uses near the train station will have a reduced parking requirement under the Christchurch City Plan;

- Parking ratios will be subject to demand rather than regulatory provisions through ‘unbundling’ the price of car parking from the property price.

- A system of shared parking based on temporal variations in usage. Office buildings that require spaces during the day will then make these spaces available at night for use by entertainment facilities.

- Density bonuses or financial incentives are provided to developers who provide underground or structured rather than surface parking.

URBAN FORM AND INFRASTRUCTURE -

Addington already has good ‘bones’ as an urban space. Whilst some of the block sizes are large and irregular, perhaps in deference to the suburbs industrial past, it still maintains a grid like structure with few cul-de-sac streets. There are also strong urban remnants; the rail lines, Church Square, Woods Flour Mill, and Lincoln Road main street; that provide a frame around which to build a transit oriented development.

Addington is ripe for reinvention from a declining first suburb to a modern transit oriented neighbourhood; given its close proximity to the city core, its existing transit infrastructure, the availability of underutilised land, and the regional imperative for inner suburban intensification. This reinvention can only be achieved through design, using a new urban programme. Current intensification practices within Addington do not provide an adequate uplift in quality of life to balance the intensification. Development of the suburb as a transit oriented development is intended to remedy this, creating a new urban form rather than compact suburbia.

The new transit oriented design programme for Addington centres on the creation of ten urban precincts, each with its own character, form and land use mix (refer Table 3-4 and Figure 3-15).

Table 3-4 - Addington Precinct Framework

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Land use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Train Station</td>
<td>Mixed use – transit/retail/commercial</td>
</tr>
<tr>
<td>2. Central Square</td>
<td>Mixed use – open space/retail/entertainment/commercial</td>
</tr>
<tr>
<td>3. University Precinct</td>
<td>Mixed use – education/retail/residential/commercial</td>
</tr>
<tr>
<td>4. Artisan Precinct</td>
<td>Mixed use – retail/commercial/residential</td>
</tr>
<tr>
<td>5. Mill Precinct</td>
<td>Mixed use – entertainment/commercial/residential</td>
</tr>
<tr>
<td>6. Mainstreet Precinct</td>
<td>Mixed use – retail/community/commercial/residential</td>
</tr>
<tr>
<td>7. Church Square Precinct</td>
<td>Mixed use – residential/open space</td>
</tr>
<tr>
<td>8. Hagley Precinct</td>
<td>Mixed use –commercial/residential</td>
</tr>
<tr>
<td>9. Tower Junction Precinct</td>
<td>Mixed use – retail/commercial/residential</td>
</tr>
<tr>
<td>10. Raceway Business Park</td>
<td>Mixed use –commercial/residential</td>
</tr>
</tbody>
</table>
Figure 3-15 - Addington Land use framework

KEY -
- COMMUNITY
- MIXED USE - RETAIL
- LARGE FORMAT RETAIL
- MIXED USE - BUSINESS PARK
- MIXED USE - UNIVERSITY
- INDUSTRIAL
- HIGH DENSITY RESIDENTIAL
- MED DENSITY RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- OPEN SPACE
- URBAN OPEN SPACE
- PRECINCT NUMBER
major design -
Addington 2041 reimagines a declining first suburb as a modern transit oriented neighbourhood.

Rather than shallow suburban intensification, the master plan for Addington follows a new design programme focussing on seamless mass transit links, pedestrian friendly corridors, and vibrant public spaces. The goal for Addington is to reduce reliance on personal motor vehicles, and create a cohesive neighbourhood where residents live, work and play.

Addington 2041 reactivates the existing northern and southern rail lines for mass passenger transit. Initially existing rail infrastructure is utilised, with potential for future light rail within the corridor as the city grows and patronage increases. A rapid transit corridor along Lincoln Road (either light rail, or bus rapid transit) is proposed to provide a key radial link from the city to the south west. A major pedestrian corridor is provided from Hagley Park to Addington Raceway.

The spatial form of the neighbourhood radiates from the central transit node; Addington Train Station. The station is located at the terminus of an urban axis, connecting old Addington, at Church Square through the radial link at Lincoln Road. Land uses branch off this urban axis, decreasing in intensity outwards from the node.

**Addington 2041 - A Platform for Change**

**Master Plan Key**

1. Addington Train Station
2. Central Square
3. Christchurch University of Performing Arts
4. Woods Mill
5. Mill Precinct
6. Artisan Precinct
7. Addington Main Street
8. Addington Community Hub
9. High Density Residential
10. Medium Density Residential
11. Business Park

**Existing Buildings to be Reused**

**Existing Built Form**

**Proposed Built Form**

**Existing Open Space**

**Proposed Open Space**

**Proposed Street Tree Planting**

**Mass Transit Corridor**

**Shared Space**

**Footpath**

0 50 100 250 500 Metres
3.2 MASTER PLAN (FIGURE 3-7)

ADDINGTON 2041

N

MASTER PLAN
SCALE 1: 5000

ADDINGTON 2041 - A PLATFORM FOR CHANGE
3.3 INTERMEDIATE PLAN (FIGURE 3-17) -

1 - ADDINGTON TRAIN STATION –
Addington Train Station lies beneath a turf landscape surface. The surface rises up from Central Square and envelopes the current railway station. A large atrium extends either side of the surface; to the east it provides access to the station, and to the west it provides access to a viewing platform enclosed by kahikatea forest. A central light dome imprinted with a tree design casts ephemeral shadows across the internal space.

2 - DETROIT PLACE –
Detroit Place is extended to provide vehicle entry to the station. ‘Kiss and ride’ parking (5min limit) is provided in the cul-de-sac head. The entrance plaza, via the glass atrium uses paving patterns to build the rail journey experience. Adjacent to the atrium are decks for cafe seating. Cherry trees cross the plaza make a visual connection with Hagley Park. Access to the supermarket loading bay, and staff car parking is provided from Detroit Place.

3 - PLATFORM PLAZA –
This tree covered plaza is off the main transit path and is a respite space from the hustle and bustle. The Gleditsia ‘Ruby Lace’ cast a warm red glow on the paving, and coupled with their human scale the space is intimate. Timber boxed around the base of the trees provide seating.

4 - CENTRAL SQUARE –
An urban public square connecting Walsall Street and the Train Station. It is Addingtons ‘stage’, a space to see and be seen. Hinging off the square are university facilities, commercial offices, and performance spaces. The paving across the Square reflects the pinching together of the north and south rail lines at Addington.

5 - HIGH LINE –
Celebrating the sites industrial heritage, a gantry style high line extends from the Seed Shed to level two of the Train Station. The high line provides a promenade, seating, and space to view performance in Central Square below. A central lift provides access to the line, and acts as a visual landmark in the middle of the Square.

6 - SEED SHED –
The Seed Shed is converted to a performance and exhibition space. The large wooden rail doors open to an outdoor stage on the northern facade, and two gantry towers provide structures for lighting, sound, and electronic equipment. Raised bluestone and timber walls within the plaza provide ‘theatre’ style seating. Performances can also be viewed from the elevated high line or roof gardens on adjacent buildings.

7 - MILL PLAZA –
The Mill Plaza is an aggregation of spaces. The Mill Theatre (in the Woods Bros flour mill) anchors the Wise Street corner and operates as an intimate indoor and outdoor performance space. The Mill houses a theatre, and apartments for performing artists in residence. Anchoring the north-western side of Mill Plaza is the Workshop Theatre, a modern performance space. The curved facade, and entrance steps funnel people in and out of Central Square and create a sense of theatrical drama. The theatre steps orient to the end of the Seed Shed which creates an outdoor movie theatre with projection against the shed.

Walsall Street is included as a performance space culminating in Mill Plaza. It is intended as a carnival, market and parade street. A tall gantry provides a focal point for the street and can be used for sound and lighting equipment for hanging banners, projection screens etc.

8 - UNIVERSITY –
Fronting Central Square a colonade provides transitional space between the university and square. Activities at ground level would activate the facade with facilities to be used by students and the general public (e.g. cafeteria, library, bookshop, internet cafe etc). Lanes and squares within the university make the campus permeable and allow access west.
Transforms an industrial relic into a vibrant public space. The historical railway and industrial activities on the site inform both the overall transit focus of the design and the structures and materials used. The infusion of a strong creative and performance theme reflects urban societal change from industrial to innovative. Redevelopment of the railway workshops site; and Woods Mill realises the potential of what is currently an underutilised brownfield site. The design takes a liminal space - between program - and creates a new urban fabric.
ADDINGTON 2041
INDICATIVE CROSS SECTION
NORTH - SOUTH (CENTRAL SQUARE)
SCALE 1: 250
CROSS SECTION C-C (FIGURE 3-20)

INDICATIVE CROSS SECTION
EAST - WEST (CENTRAL SQUARE)
SCALE 1: 250

UNIVERSITY COLONADE
CENTRAL SQUARE
HIGH LINE LIFT

0 5 10 20 40
METRES
ADDINGTON 2041
The detail expresses the industrial nature of the Addington site. The materials are all of this character with **concrete, metal, glass** and **wood**, typical of materials used in the manufacture of engines and carriages. These materials also strongly reflect the urban nature of the site, and reinforce the permanence of the site as an urban transit node.

The materials are used to create visual and physical interest at ground level. All elements reflect the story of Addington, particularly the etchings of the workshop site map, and railway workers stories on the glass panels of the high line. The interest these elements provide is ever changing reflecting that Addington is merely a **moment in time**. The shadows cast by the printed glass panels vary according to the movement of the sun, and the colours of night time lighting.

Textured pavers reveal a site specific pattern only after rainfall. These **ephemeral elements** create a sense of drama on the site, fitting with the performance theme of the space. Their fleeting nature also allows moments of **liminality** - they exist temporarily between here and not here.
CHAPTER 3.0 - RESULTS

1 HIGH LINE–
The gantry style high line reflects the industrial past of the site and provides an elevated promenade, and covered walkway from Wise Street to the Transit Station. The high line construction consists of metal framing, and the flooring is a combination of tilt slab concrete, strengthened glass panel, and wooden decking. The barrier is also strengthened glass in an aluminium frame. The barrier acts to prevent falling, and provides shelter for those sitting on the high line. The glass flooring includes a silk print on the underside. This print is a map of the railway workshops site. As the light shines through the panel a shadow of the former site is reflected on the pavement below. Gantry style lights on top of the high line achieve the same effect at night; and by using colour this becomes an interesting night time feature. The glass barrier panels also tell the story of Addington with etched tales from workshop life.

2 RAILWAY SEATING–
The seating atop and below the high line reflects the traditional seating in a train. The backs of the seats are designed to swivel and can therefore be used from either side. The materials used in the construction of the seat – stainless steel and timber - reference the sites industrial past. The timber is left unfinished to fade to a soft grey, and express the passage of time on the site through wear and tear. In contrast the stainless steel of the seat is highly polished.

3 BLUESTONE PAVING INSERTS–
The bluestone paving inserts extend from the gantry cycleway into Central Plaza and across Stage Square. The textured paving from the cycleway is intended as a tactile reminder to cyclists to slow upon entering the shared square space. The rhythmic nature of the strips also emulates the sound of a train journey. The bluestone is a local material (Timaru) and reflects the links along the southern rail line.

4 TEXTURED PAVING–
Textured paving across the entrance and across to Platform Plaza alludes to pre-European Addington. The pavers are sandblasted to create a textured surface that when it rains briefly retains some water as the pavers dry. The water makes a pattern of historic watercourses across the swampy Addington site. The ephemeral nature of this feature contrasts with the permanence of the hard materials, and provides a fleeting piece of drama for the site.

5 METAL INLAYS–
Metal inlays across the station entrance and around the base of the colonade steps provide relief in the Central Square paving. The metal strips are laser cut with the engine numbers of trains produced at the workshops extruded. These inlays also serve to capture stormwater, and are lit at night to direct passengers to the transit station.

3.5 ADDINGTON 2041 PRECINCTS -

TRAIN STATION PRECINCT -

The train station is the core of the transit oriented development at Addington, and serves a number of key functions:

- It is a node for local and regional commuter rail travel;
- It is a gateway for mainland tourist rail services (Tranz Alpine and Tranz Coastal);
- It links the northern and southern quarters of Addington, previously severed by the rail lines; and
- It is a unique landmark element, confirming Addington’s importance in the metropolitan setting.

To facilitate transit the northern and southern rail lines are duplicated, and trenched allowing at grade access for pedestrians and cyclists through the transit station.

The form of the station is read as a landscape surface rather than a building. The surface rises up from grade at Central Square, over the rail lines, and envelops the existing Christchurch railway station on Troup Drive. The surface reconnects the historic Railway Workshops site with its Addington community. The top of the surface is a turf roof, and is an urban take on the ‘village green’. Rising from the pavement it is a green oasis in an intensified urban environment, enabling public vistas previously unattainable in Addington; those across the trees to Hagley Park, south east to the Port Hills, and west to the Southern Alps. Access to the station is also available via a high line extending from the Seed Shed through the station building.

The facades of the surface are reinforced glass for transparency, and they create a perimeter of transitional space; neither inside nor outside. Contained within the facades are ‘building pods’ that house ticketing facilities, convenience retail (e.g. chemist, dairy, news agents, internet cafe, coffee stand etc), a Metro supermarket, and commercial offices. An east and west pavilion extend from the station surface. The eastern pavilion, allows access to the station from Detroit Avenue. This is intended to be a ‘back door’ to the station, providing vehicular access and a ‘kiss and ride’ facility at the cul-de-sac head. The western pavilion consists of a wooden viewing platform extending into a Kahikatea forest plantation area. This forested area acts as a stormwater retention basin for the northern catchment area of the site.
CENTRAL SQUARE –

Central Square is the primary public space within Addington. Operating as an urban plaza, the space is the forecourt for the station, and connects the transit station with Walsall Street. The square is framed loosely on all sides by built form, essentially creating a semi-enclosed space. Penetration through is maintained for accessibility and the creation of vistas.

To the east, adjacent to the rail line, commercial buildings (up to four storeys) are staggered across the space. This configuration serves three purposes; it gives each building a partially unencumbered northern facade; it provides variability at the plaza edge creating discrete pockets of smaller public space; and allows view shafts out of the square into the wider landscape. To the west the square is framed by the Christchurch School of Performing Arts. Buildings up to four storeys interface with the square via a colonnade and steps, with the ground floor level being transparent and permeable.

Along its southern edge the square interfaces with the Seed Shed. The Shed, previously an old railway shed, has been refurbished as a flexible community space. At the termination of Wise Street the lower level of the Shed is permeable, allowing direct passage through to Central Square and the transit station. At the first floor level an elevated high line connects the Shed with the transit station (refer Figure 3-24). This high line serves three functions; it provides a covered walkway for those crossing Central Square at grade; it provides an alternative view of activities within the square – a ‘people watching’ space; and thirdly it visually breaks up the open expanse of the large square. Along the northern facade of the Seed Shed a wooden stage extends out into the square. This creates an outdoor performance space (e.g. Shakespeare at lunchtime), supported by fixed and moveable seating within the square, and framed by a large gantry structure for lighting, sound and stage props (refer Figure 3-24).
The University Precinct extends along Clarence Street South, and is currently occupied by industrial land uses, with commercial/retail at the Lincoln Road interface. The built form consists of large warehouses surrounded by surface parking, and there is no penetration through the blocks except at Walsall Street, currently an unformed road. The Precinct also extends across Clarence Street South into what is currently a low density, detached housing area.

The University Precinct houses the Christchurch School of Performing Arts, which comprises two distinct land use areas that interface along the spine of Clarence Street South. To the east, bordering Central Square is the academic and performance aspects of the school including teaching, performance and research spaces, studios, student services, and staff offices. To the west, are student accommodation, recreation and resources.

The university space is urban in nature, consisting of multi-storey (up to four storeys) buildings organised around a framework of open space. This open space takes three forms; the Clarence Street South cape; semi-public internal squares; and private roof gardens.

Clarence Street South is a shared space between Leamington Street and Lincoln Road. Buildings (up to four storeys) frame the street, providing a continuous facade. Student facilities at ground level (e.g. recreational centre, student health, convenience retail) activate the frontage. Four metre wide pedestrian strips down both sides of the street allow for planting, seating, and art installation.

Levels two to four house student accommodation, including halls of residence, and studio apartments.

University buildings fronting Central Square are transparent, active and permeable at the ground floor level. Activities such as the university library, cafe, and book store, which are open to the public, activate the edge of Central Square, and spill out into the square via outdoor dining, and market retail (e.g. a weekly book fair). Whilst the building facade along Central Square is continuous, pedestrians can penetrate through using laneways and courtyards to access Clarence Street South and beyond.

Two key university buildings interface with the Mill Precinct, and anchor the western end of Walsall Street. Workshop Theatre uses its curved facade and balcony steps to ‘funnel’ travellers through to Central Square and the train station. The Silo Building serves a dual space defining function. The eastern facade frames Wise Street and provides enclosure for the outdoor Mill Theatre; the western facade frames the Mill Plaza. Connecting the Workshop Theatre and Silo Building is an outdoor gantry. This gantry allows student access between the two university buildings, is a visual threshold on Walsall Street, and provides a unique viewing position over Mill Plaza and Walsall Street.
ARTISAN PRECINCT -

The Artisan Precinct, centred on Bernard Street, continues the performance theme of Addington, drawing together the industrial threads of Addington’s past, and the creativity of its future. This precinct operates as a mixed use neighbourhood with a focus on studios (e.g. dance), workshops (e.g. industrial sculpture), galleries, and specialist retail. These land uses occupy the ground floor, creating an active street frontage. Commercial and residential activities occupy the upper levels (up to four storeys).

Anchoring the space, and filling the current void on the corner of Bernard Street and Lincoln Road is a podium building with retail at ground floor, studios or office space at the second level, three storeys of car parking above, and a residential apartment storey at the top level (five storeys in total).

The existing railway workshop buildings along Bernard Street are retained, although upper levels are added (up to four storeys). Pedestrians will be able to penetrate through these buildings at ground level to enter the Railway Lanes, which connect the transit interchange, Lincoln Road, and the Mill Precinct. The Lanes are an entertainment precinct housing restaurants, cafe, and bars, and entertainment facilities.

Artisan Precinct becomes a destination space within Addington, and links to Christchurch City’s Arts and Heritage Trail.

MILL PRECINCT -

The Mill Precinct centres on the historic Woods Mill, and extends along Wise and Walsall Streets. Walsall Street is the spine that links the Artisan Precinct, Central Square, the University Precinct, and the Wise Street Boulevard. The section framed by the Seed Shed and Mill Theatre, and two elevated gantries; one from the Mill Silo, and the other from the Workshop Theatre, is intended as a vibrant streetscape housing evening markets, mardi gras, buskers, festivals and parades.

The Mill Theatre anchors the Wise Street corner and is an intimate indoor and outdoor performance space. Upper levels of the mill building house offices and apartments for artists in residence. The theatre opens out to Walsall Street, with ground floor bars and cafes spilling out into the shared space.

Wise Street is a key pedestrian connection between Lincoln Road and the transit station and operates as a shared space. The western edge of Wise Street interfaces with the University Precinct and operates as a mixed use zone with retail, hospitality and commercial activities at ground level, and university facilities (e.g. offices, teaching spaces etc) at upper levels. The eastern edge of Wise Street interacts with the Mill Theatre and the laneways that extend through to the Artisan Precinct. Again the zone is mixed use with an active ground floor frontage and commercial, residential, and potentially parking above.
Figure 3-27 - Artisan Precinct

Figure 3-28 - Walsall Street
The Main Street Precinct centres on Lincoln Road; currently a congested minor arterial route, with a streetscape devoted solely to the movement and parking of vehicles. As part of the Addington transit oriented development, through traffic is removed from Lincoln Road and the streetscape becomes a shared space. A radial mass transit bus (or light rail) corridor passes down the centre of the street, and patrons alight from the bus directly into the main street environment, in a similar fashion to Bourke Street in Melbourne (refer Figure 3-29).

Lincoln Road is a vibrant streetscape, framed by a contiguous building facade (up to three stories high), with retail activities at ground level, and commercial and residential activities above. Main street land uses interact with the street for example via outdoor retail and cafe seating. The focus of the street has changed from cars to pedestrians with limited on street parking, wide footpaths, seating, boulevard style planting, and art installation. Lincoln Road now becomes the spine that stitches the two sides of Addington together; rather than a barrier that bisects them.

The retail mix on the Main Street differs from that elsewhere in Addington. Tower Junction houses big box retail, Bernard Street houses artisan retail, the transit station houses convenience retail for the traveller, Wise Street houses boutique and small scale retail, whilst the Main Street provides for the everyday needs of the Addington community. The mix of retail includes grocery providers (e.g. delicatessen, bakery, fruit shop); service providers (e.g. dry cleaners, post office, hairdresser); and product providers (e.g. bookshop, apparel, homewares etc).

Extending back from Lincoln Road to encompass the historic Addington Gaol is a mixed use community zone. This area houses a mix of retail and community facilities such as a community hall, medical centre, kindergarten etc).

The Addington Gaol functions as the community service centre, a one-stop-shop for community assistance (e.g. council service centre, citizen advice bureau, Work and Income NZ etc). The built from is primarily two to three storey buildings with activities requiring a strong public interface at ground level (e.g. retail), with commercial/residential activities above. Urban public space is also provided within the zone creating connections with the residential quarter of Addington.

**CHURCH SQUARE PRECINCT**

This is the historical heart of Addington, centred on St Marys Church, and Church Square. The precinct currently comprises low density residential housing organised around a central village green (Church Square). Urban form within the precinct is undergoing gradual intensification with townhouse and semi-detached forms starting to appear.

The Addington transit oriented development seeks to maintain the low density character of the precinct, whilst enabling intensification that complements this character. Housing forms include two to three storey town houses, set amongst vegetation and augmented with streetside planting. A maximum of one parking space per dwelling (a reduction from the current minimum of two spaces) will help prevent garages and driveways from dominating the streetscape.
Figure 3-30 - Addington Main Street (Lincoln Road)

Figure 3-31 - Medium Density (Church Square area)
HAGLEY PRECINCT -

Framing Hagley Park, this precinct is currently occupied by commercial and industrial uses along Moorhouse Avenue and along the Blenheim Road Overbridge. The Addington Saleyards site on Rolleston Avenue is currently derelict and underutilised.

The Hagley Precinct is a high density housing precinct that frames the park, and gives delineation to the Christchurch City core. By delineating the extent of the core, the Hagley Precinct differentiates the space within Addington as a different urban form. The precinct is distinctly urban in character with built form at six to eight stories. The land use is a mix of commercial activities at the lower levels, and residential, apartment living at higher levels. Parking is provided either below ground, or at upper levels in podium type buildings.

TOWER JUNCTION PRECINCT -

Tower Junction is currently a suburban megablock comprising large freestanding structures surrounded by a vast parking lot. Although the coarse grain of the urban fabric limits connectivity, land use diversity, and amenity, it is likely that Tower Junction will continue to operate as a big box retail site out to 2041. It can also be argued that Tower Junction, as an alternative retail format, reinforces the development of Addington as a destination. However as the fabric of Addington shifts from suburban to urban, through the implementation of the transit oriented design, there is the potential for Tower Junction to be remediated as an urban space with a mix of land uses and public space (refer Figure 3-35).

This suburban relic is broken down into permeable blocks stitched together along an open space promenade connecting the transit station with Riccarton. Parking is no longer the dominant land use; relocated either underground, to the roof, or into parking buildings. A mix of land uses occupy the site (residential, retail, commercial, and light industrial), with some larger buildings retained to allow big box retailing. The historic water tower becomes a key pivot connecting the northern and southern sectors of Addington, and resumes its function as a key landmark.
RACEWAY BUSINESS PARK-

The existing business park, centred on Show Place and Princess Street is expanded along Whiteleigh Avenue to the Southern Motorway (Jerold Street North). This is within 500-600m of the transit interchange, and coupled with Central Square the Hazeldean Business Park is a key employment centre for Addington.

The extension of the business park also provides a distinctive edge to southwest Addington. Continuing the theme from Show Place (refer Figure 3-36), the business park is set back from the road with a wide planted frontage, and parking largely confined to the rear of the lot. The planted frontage is picturesque in character, with rolling lawns and groves of deciduous trees. This agrarian ideal serves as a pseudo ‘green belt’ delineating the urban Addington from the surrounding suburban structure. With the addition of seating areas this space would be available for use by both business park workers, and the wider community.
DAY BEFORE YESTERDAY-
Before Addington became an industrial hub it was a low lying swamp landscape; sheathed Kahikatea/Matai podocarp forest, and flax beds. Drained and cleared for settlement, remnants of this pre-European landscape are evident only at Riccarton Bush, and emerging at Addington Bush. The proposed Kahikatea forest reflects this pre-settlement time.

The proposed species assemblage for the Kahikatea forest seeks to seed a forest remnant. Natural succession, and bird dispersal will enhance the forest species mix. Some maintenance will be required in the early successional stages to remove exotic species either blown or carried in.

YESTERDAY-
Instead of hiding or obliterating Addington’s industrial past, the planting strategy seeks to highlight this period. The regenerating brownfield planting creates the impression of a harsh environment through the use of colonising species (e.g. manuka), and species with strong forms (e.g. cabbage tree) and divaricating habits (e.g. mingimingi). The use of grasses is a soft foil against these strong elements.

The selection of square, plaza and avenue trees also defers to Addington’s industrial past. The oak, gleditsia, London plane, and elm, are all species associated with industrial or urban sites, due to either their fast growth rate, or tolerance of poor environmental conditions.

TODAY -
The mixing of native and exotic species reflects the political, social, and cultural diversity of contemporary neighbourhoods, and draws together past and present Christchurch.

TOMORROW -
The Addington of tomorrow may not yet be realised, but is not unconsidered. The green roof housing the supermarket loading bay refers to the current sustainability trend. Similarly the turf surface of the transit station will reduce stormwater runoff, insulate the station (thereby reducing energy consumption), and reduce radiant heat within Central Square.

The use of native species throughout Addington also contributes to the landscape of tomorrow. Plants with bird attracting properties support the Estuary-Ellesmere flyway, which in turn facilitates the dispersal of species and increased biodiversity.
3.6 PLANTING STRATEGY (FIGURE 3-38) -

RAIL LINE OAKS -
Qualities:
- Historical railway association
- Symbol of strength & endurance
- Mythological gateway tree
- Bright red autumn colour
- Frames Addington water tower

Properties:
- Deciduous
- Hardy
- Sun & wind tolerant
- Tolerant of poor soils

KAHIKATEA STAND -
Qualities:
- Symbol of strength & permanence
- A 'grand' gesture to frame the station
- Historical industrial association

Properties:
- Evergreen
- Suits local Tai Tapu soils (moist)
- Fruit & seed provision
- Stormwater retention

WETLAND -
Qualities:
- Stormwater treatment
- Flood flow retention
- Ecological corridor
- Increased biodiversity

Properties:
- Moisture & dry tolerant
- Sun & wind tolerant

DETROIT PLACE -
Qualities:
- Links to Hagley Park
- Seasonal colour interest
- Dense summer shade

Properties:
- Deciduous
- Hardy
- Sun & wind tolerant
- Tolerant of poor soils

REGENERATING -
Qualities:
- Colonising species
- Fast growth rate
- Strong sculptural forms
- Tight, divaricating habit

Properties:
- Dry tolerant
- Sun & wind tolerant
- Tolerant of poor soils

INDICATIVE PLANTING CROSS SECTION
(NORTH TO SOUTH) -
SCALE 1:400

Quercus ellipsoidalis
Dacrycarpus dacrydioides
Cordyline australis
Leptospermum scoparium

Aristotelia serrata
Carpodetus serratus
Myrsine australis
Coprosma propinqua

Microlaena avenacea
Blechnum minus
Lepidospernum tenuifolium
Coprosma rubra

Myrsine australis
Hebe salicifolia
Carpodetus serratus
Discaria toumatou

Phormium tenax
Juncus gregiflorus
Carex solandri
Coprosma robusta

Acaena purpurea
Anemanthele lessoniana
Libertia ixioides

Prunus yedoensis

0 5 10 20 30 50 METRES
CHAPTER 3.0 - RESULTS

NEIGHBOURHOOD -
Qualities:
- Mix of exotic & native
- Links with Church Square
- Colour & seasonal variation
- Contrasting forms & textures
- Fine textures create movement

Properties:
- Hardy
- Sun & wind tolerant
- Low growing for street side safety

AVENUES -
WALSEND STREET
LINCOLN ROAD
BERNARD STREET
WISE STREET

Qualities:
- Formal habit
- Strong symmetry
- Consistency along axes
- Summer shade
- Industrial associations
- Large leaves fit scale of space

Properties:
- Deciduous
- Pollution tolerant
- Sun tolerant

CENTRAL SQUARE -
WALSALL STREET
LINCOLN ROAD
BERNARD STREET
WISE STREET

Qualities:
- Seasonal colour interest
- Dense summer shade
- Foliage colour ‘brightens’ the space & contrasts the paving
- Often associated with tough environments

Properties:
- Deciduous
- Pollution tolerant
- Sun & wind tolerant
- Fast growth rate

STAGE SQUARE -
Qualities:
- Symbol of strength & permanence
- A ‘grand’ gesture framing views of Hagley Park
- Historical industrial association

Properties:
- Evergreen
- Suits local Tai Tapu soils (moist)
- Fruit & seed provision
- Stormwater retention

PLATFORM PLAZA -
Qualities:
- Seasonal colour interest
- Dense summer shade
- Foliage colour ‘warms’ the space
- Compact form creates an intimate space

Properties:
- Deciduous
- Pollution tolerant
- Sun & wind tolerant

ADDINGTON 2041

Gleditsia ‘Ruby lace’
Dacrycarpus dacrydioides
Prumnopitys taxifolia
Aristotelia serrata
Carpodetus serratus
Myrsine australis
Microlaena avenacea
Blechnum minus
Microsorum Pustulatum

Gleditsia tricanthos finermis
Platanus acerifolia

Ulmus carpinifolia ‘Variegata’
Arthropodium cirratum
Meuhlenbeckia axillaris

Acer pseudoplatanus ‘Purpureum’
Fraxinus angustifolia ‘Raywoodii’
Quercus robur

Astelia ‘Westland’
Phormium ‘Tom Thumb’
Phormium ‘Dark Delight’
Hebe odor
Hebe ‘Species Q’
Hebe ‘Oratia beauty’

Arthropodium ‘Te Puna’
Chionochloa flavicans
Chionochloa rubra
Microlaena avenacea
### PLANTING SCHEDULE: BERNARD SQUARE -

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<tr>
<th>ID</th>
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<th>Botanical Name</th>
<th>Common Name</th>
<th>Scheduled Size</th>
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<td>Makomako</td>
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<td>21</td>
<td>Blechnum minus</td>
<td>Swamp kiokio</td>
<td>PB 5</td>
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<td>Putaputaweta</td>
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<td>PB 5</td>
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<tr>
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<td>Red Mapou</td>
<td>PB 18</td>
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<td>Ulmus carpinfolia 'Variegata'</td>
<td>Smooth Varigated Elm</td>
<td>OG 200</td>
</tr>
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CHAPTER 3.0 - RESULTS

PLANTING PLAN: BERNARD SQUARE -
SCALE 1:500

METRES

0 5 10 20 30 50

ADDINGTON 2041
3.8 DESIGN DETAILS (FIGURE 3.40)

1. PLAN VIEW
   Scale: 1:50

2. FRONT ELEVATION
   Scale: 1:50

3. SIDE ELEVATION
   Scale: 1:50

4. SWIVEL DETAIL
   Scale 1:10

5. FIXING DETAIL
   Scale 1:10

6. BRACING PLAN
   Scale: 1:50
MATERIAL SPECIFICATIONS -

1. 20 x 360 x 950, Grade 321, stainless steel plate stringboard, BA finish with PVC protective coating, fixed to concrete with 3 x M12 x 70 S/S Dynabolts.
2. 100 x 75 machined heartwood macrocarpa slats, attached to stringboard using M6 x 30 S/S flat head socket screw.
3. 50 x 50 machined heartwood macrocarpa laths, attached to seat using 4. 5 x 120 x 300 stainless steel plate welded to stringboard, 5 x 200 x 140 stainless steel gusset welded at 100 centres.
5. 5 x 40 x 100 stainless steel u-bracket welded to stingboard at 475 centre.
6. 5 x 40 x 340 stainless steel flat bearer, attached to slats using M6 x 40 S/S wood screw, CSK head.
7. 5 x 40 x 175 stainless steel flat bearer, attached to slats using M6 x 40 S/S wood screw, CSK head.
8. 75 x 5 sectioned circular hollow section stainless steel pipe pivot pipe, mill finished, bolted to u bracket using M8 x 90 S/S hexhead bolt with nylock nut.
To understand how transit oriented development functions differently, from default suburban development, two case studies are explored; transit oriented developments at New Lynn (Auckland) and Footscray (Melbourne). The case studies are explored with respect to the following contextual elements:

- Strategic context - the developments place in the wider regional and urban context.
- Policy context - the policy framework that enables or guides the development.
- Demographic context - the population and social context of the transit oriented design/development.
- The Vision - the overarching goals and objectives of the transit oriented design/development.
- Transit and connectivity - the movement networks within the transit oriented design/development.
- Urban form and infrastructure - the physical form and function of the transit oriented design/development.
New Lynn -

Image: Common Ground Urban Design and Architecture
4.1 NEW LYNN, AUCKLAND -

STRATEGIC CONTEXT -

Waitakere City is New Zealand’s fifth largest city housing approximately 192,300 people across 36,700 hectares, a third of which is urban, a third rural, and a third wilderness (the Waitakere Ranges). Located to the west of the Auckland central business district, Waitakere is predicted to be home to 360,000 residents and 100,000 jobs by 2050, and the Waitakere City Council has identified the following key urban growth issues:

- Land constraints – of the City’s 36,700 hectares, only 8,000 is suitable to accommodate urban growth. As approximately 4,500 hectares is already developed an increasing proportion of the population will need to be housed in medium and higher density development.
- Scarcity of business land – Over half of the work force travels outside Waitakere City to work.
- Climate change – to reduce CO₂ emissions the City’s vehicle emissions must be reduced.
- Community and social infrastructure – the City’s growth will require additional schools, childcare, libraries, community centres and recreational facilities.
- Three waters – the City’s water, sewerage and stormwater systems are nearing capacity.
- Transport – Journeys to work are predominantly via private motor vehicle.
- Energy – Future energy demand will potentially exceed generation regional facility output (Waitakere City Council², 2010).

To address these issues Waitakere City seeks to move from a collection of dormitory suburbs to a “dynamic network of vibrant town centres and neighbourhoods with a social, physical and natural fabric providing housing choice and employment opportunities for all” (Waitakere City Council², 2010, p.2). To achieve this vision, the City has identified a series of strategic pathways that focus on urban intensification, the creation of compact urban environments, and local access to employment, services and infrastructure (Waitakere City Council², 2010). The resulting urban form is a hierarchy of centres and growth corridors (refer Figure 4-1) that enable 60 percent internal employment (by 2021), and 95 percent of population growth to be accommodated in existing and future urban areas (Waitakere City Council², 2010).
One of the regional centres key to delivering this vision is New Lynn. Situated at one of the narrowest points on the Auckland isthmus, the suburb is located approximately seventeen kilometres to the west of the CBD; or a twenty five minute commute out of rush hour (refer Figure 4-2). New Lynn acts as the service hub for a wider suburban catchment (approximately 35,000 households) extending from Titirangi and Glen Eden in the west, to Avondale and Blockhouse Bay in the east. It is the commercial, retail and transit hub of this catchment. New Lynn is also the interface between the CBD and the west, and is the southern gateway to the Waitakere Ranges and western coastline.

Prior to European settlement New Lynn acted as a significant portage for Maori between the Waitemata and Manukau harbours. Although Maori did not settle extensively in the immediate area the Whau River was an important transport and food gathering resource (Waitakere City Council, 2010).

Building on the early transit focus, New Lynn from its very inception became a strategic hub given its close proximity to the Whau River ports, Great North Road, and western rail line; and the ample land available for development. From the 1850’s onwards, clay and ceramic industries clustered in the district to take advantage of the transit links, and the natural clay deposits. Crown Lynn Potteries, Gardner Bros & Parker (later Ceramco), Crum and the still operational Monier brickworks, had considerable impact on the district, in particular the urban form of large industrial sites, surrounded by traditional suburban allotments (Waitakere City Council, 2010).

Strong suburban growth in the 1930’s and 40’s saw the establishment of Lynn Mall, New Zealand’s first suburban shopping mall (in 1963), and a subsequent change from mainstreet to mall based trading. New Lynn still retained its industrial/manufacturing heritage, and by the 1960’s there were over sixty different enterprises ranging from printing to textiles (Waitakere City Council, 2010).

New Lynn continued to redevelop accumulating layers of commercial, suburban and infill development, linked by busy arterial roads. The district retained its transit function with the first suburban bus/train interchange opening in 1983. Shadows of New Lynn’s former settlement and industrial past remain, but are generally obscured by 1980’s style office developments; the division of large industrial units into smaller, mainly retail, operations; and bulk retail developments (Waitakere City Council, 2010). New Lynn still plays an important role as a sub-regional commercial and retail centre.
Building on its historical transportation function, and combined with its importance as a regional hub; New Lynn is currently being developed as New Zealand’s first transit oriented development. Centred on a new rail and bus interchange, an urban form of medium to high residential with mixed use retail and commercial precincts, seeks to provide the “vibrant town centres and neighbourhoods” and “employment opportunities” sought by the vision for Waitakere City (Waitakere City Council\(^a\), 2010, p.2).

The transit oriented development at New Lynn, as anticipated by the New Lynn Urban Regeneration Plan, is currently only partially realised. The pivotal transit interchange is operational, some community facilities such as the community centre and library are complete, and there is a discrete area of medium density housing at Ambrico Place. Street improvements along Todd Avenue are currently being designed, and the Clark Street extension (to alleviate through traffic on Todd Avenue) is currently under construction. As the transit oriented development at New Lynn is currently a ‘work in progress’, and has limited elements fully realised, its consideration is based on an anticipated future state, as described in Section 3 of the New Lynn Urban Regeneration Plan.

**POLICY CONTEXT -**

Similar to Christchurch, urban growth management for New Lynn is managed within a hierarchical policy framework. At the top is the Auckland Regional Growth Strategy 2050 (RGS) which seeks to manage urban growth in a manner that “meets the best interests of the inhabitants of the Auckland region” (RGS, 1999, p.6). Key critical outcomes of this strategy include urban intensification and the promotion of compact, quality urban environments; and access and transport efficiency, and for Waitakere City, sixty percent of growth is to be accommodated through intensification (RGS, 1999). The RGS directs this growth along the existing rail corridor, with sub-regional centres at New Lynn, Henderson and Westgate, and at the junction of State Highways 16 and 18.

Giving effect to the RGS is the Auckland Regional Policy Statement (1999) (RPS), the statutory vehicle for the implementation of the Growth Strategy. The RPS sets out the framework for the sustainable management of the regions natural and physical resources, and establishes Metropolitan Urban Limits (MUL) as a key tool to manage growth. These limits seek to contain urban development, and direct intensification along transport corridors and nodes.

The Growth Management Strategy for Waitakere City translates the RGS and RPS into the local context, identifying where and when growth will occur. The strategy seeks to transform Waitakere City from a collection of dormitory suburbs to a sustainable urban form, focussed on three regional centres at Henderson, New Lynn and Westgate. These centres are to be compact, provide local employment opportunities, and high quality housing choices. The Growth Management Strategy sits within a suite of linking documents focussing on economic, social, and cultural wellbeing, environment and transport. These local documents have increased importance for urban growth management given the new Auckland ‘super city’ governance regime. Although Waitakere has been subsumed by the new Auckland Council, it is still an “identifiable subset” of the region with specific urban growth challenges and opportunities (Waitakere City Council\(^b\), 2010, p.3).

Whilst the strategies above set out the visions and goals for urban growth management, it is the district plan that provides the framework for intensification at the city scale, and identifies New Lynn as a priority area for urban intensification. At the local scale, the New Lynn Urban Regeneration Plan (2010) ‘grounds’ the intensification vision for New Lynn, identifying character precincts, outlining specific projects, and their relative priority. At its core, the Regeneration Plan gives physical form to the city and regional goals for urban growth management and intensification.
DEMOGRAPHIC CONTEXT -

The Waitakere City Growth Management Strategy predicts that by 2021 Waitakere City will need to accommodate an additional 60,000 people and 30,000 jobs, and by 2051 a further 100,000 people and 40,000 jobs. This population estimate is approximately double the 2006 census night population of 186,444 (Waitakere City Council, 2010).

Urban growth at New Lynn is expected to accommodate approximately 20,000 residents and 14,000 employees within the wider transit oriented development area. The current population of New Lynn within the 1.2km or ten minute walk pedshed of the transit station is approximately 11,000 residents (Waitakere City Council, 2010). Growth estimates predict an increase of approximately 6,000 people for New Lynn by 2010, accommodated in an additional 2,500 dwellings. To support the transit oriented development these will be located within the ten minute pedshed of the transit station (Waitakere City Council, 2010).

New Lynn Quick Facts -
- High population growth – 79.5% since 1996 compared with 19.8% for Waitakere City
- Median age of 31.7 years compared to 33.0 years for Waitakere City
- Lower proportion of residents with a formal qualification: 15% of residents with no formal qualification compared to 24% for Waitakere City.
- Lower proportion of residents who are in full time employment – 39% compared to 52% for Waitakere City.
- Mean household occupancy of 3.02 – consistent with Waitakere City as a whole (Waitakere City Council, 2010).
- A high proportion of residents identify themselves as Asian - 61 percent of people living in the Lynn Mall CAU describe themselves as Asian.
- New Lynn has a Social Deprivation Index score of between 7-9 (Waitakere City Council, 2010).

THE VISION -

The vision for New Lynn as a transit oriented development has undergone a number of iterations from the early charrette through to the latest regeneration plan; however the following key elements from the original workshop remain:

New Lynn will become:
- A thriving sub-regional town centre;
- A centre with more jobs and a greater choice of employment;
- An accessible town centre;
- An efficient hub for public transport with less travel by car;
- A safe, vibrant place with pedestrian-friendly streets;
- A place where growth is managed for environmental sustainability; and have
- Integrated community and social services, and quality public places (Waitakere City Council, 2006).

The current twenty year vision for New Lynn, as contained within the Regeneration Plan is:

To create a unique sustainable urban place centred on a world class transit interchange that is capable of attracting and maintaining a population of 20,000 residents and 14,000 workers (within the area).

The outcomes of this vision envisage New Lynn, by the year 2030, as:
- A local TOD showcase;
- A buzzing transit exchange;
- A sustainable residential neighbourhood;
- A high density employment hub;
- A pedestrian and cycle friendly place;

And as a place where:
- There is ample open space and high urban amenity; and
- Natural assets are enjoyed by the community; and
- High values post-industrial activities dominate; and
- There is a thriving evening economy; and
- Buildings more toward carbon neutrality; and
- The people and businesses have enormous pride in their community. (Waitakere City Council, 2010).
TRANSIT AND CONNECTIVITY -

MASS TRANSIT -

Public transport services are supplied by private providers under the regional MAXX brand (coordinated by Auckland Transport)\(^1\). The Western Rail line links Waitakere City to the Auckland CBD, initiating at Waitakere and terminating at Britomart. The current rail fleet is diesel, although there are future plans to electrify the network.

New Lynn operates as an integrated mass transit interchange for both bus and rail (refer Figure 4-3). Two key infrastructure interventions facilitated the hub; the duplication of the Western Rail line, and the trenching of this line through New Lynn. Whilst duplication of the line enabled the frequency of rail service to increase, there were significant congestion disbenefits for the road network as the line ran at grade. Trenching the line at the Clark Street roundabout enabled grade separation with vehicular traffic passing over the sunken line. Trenching the line also improved pedestrian access from south New Lynn across to the transit interchange, and linked the rail station and bus depot.

As a mass transit interchange, New Lynn is intended to operate as a ‘spoke and hub’ arrangement. The train station acts as the hub, and is fed by a radial bus network, the spokes. Commuters walk, cycle or bus to the station, and then transfer to a train for the trip to the CBD. Such an arrangement avoids the duplication of rail and bus services. The network does not yet operate effectively in this arrangement with commuters able to catch either a bus or train from New Lynn to the city. In addition without integrated ticketing there is minimal incentive to change modes at the interchange. Both bus and train services run approximately every fifteen minutes, and it is cheaper to take a four stage bus trip ($5.60\(^2\)), one stage to the transit station, and an additional three stages to the city), than to take a one stage bus trip to the station and three stage train trip to the city ($6.10). The train however is a quicker trip at thirty four minutes from New Lynn to Britomart compared to forty four minutes plus on a bus\(^3\).

STREET NETWORK -

Whilst acting as a mass transit hub, New Lynn at the present time is still an auto-dominated space. The current urban form reflects this and is suburban industrial in character, expressed as large block sizes (in the order of 500m x 500m) bisected by busy arterial roads, and cul-de-sacs (Waitakere City Council\(^4\), 2010). This form is impermeable with low walkability, and low pedestrian amenity.

Great North Road carries approximately 25,000 vehicles per day, sending through traffic in the order of 20,000 vehicles per day along Totara Avenue and Clark Street (Waitakere City Council\(^5\), 2010). Clark Street is currently a four lane district arterial road\(^6\) which acts as a major pedestrian barrier between the transit station and New Lynn south. The Clark Street extension, currently under construction, whilst not alleviating this barrier, will carry through traffic onto Great North Road, bypassing Totara Avenue. The removal of this through traffic will facilitate the development of Totara Avenue as a shared (pedestrian/vehicle) precinct expected to carry only 3,500 vehicles per day (Waitakere City Council\(^7\), 2010).

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1. Train services are provided by Veolia Transport Auckland on rail infrastructure owned by ONTRACK. Urban bus services are generally provided by NZ Bus.
2. Prices are at 2011 rates for a single ride adult fare.
4. Appendix M of the Waitakere City Plan defines district arterial roads as those that carry traffic between major nodes or suburbs.
In the early 1990’s, the Waitakere City Council recognised that New Lynn was in decline and sponsored a community design workshop, the New Lynn charette. The purpose of the charette was to plan the future development of New Lynn as an ‘urban village’, translating the regional and local visions for urban consolidation into place based initiatives. The charette was attended by urban designers, planners, technical experts and over 700 residents, and culminated in the New Lynn concept plan which focussed on transforming New Lynn into a transit oriented development with a thriving town centre; a public transport hub; employment opportunities; and safe, vibrant streets. A charette review in 2003 confirmed the transit oriented vision for New Lynn and changes were made to the district plan to facilitate its full implementation.

The design charette was a major catalyst for development in the district sparking the community centre, library, Memorial Square, Manawa Wetlands, and Ambrico Place (medium density residential) developments. The New Lynn transit station has recently been completed (opened in September 2010), including double tracking and trenching of the rail line.

Building on the outcomes of the charette, and regional urban growth directions, the New Lynn Urban Regeneration Plan identifies ten distinct precincts which shape New Lynn as a place, and deliver on the vision of New Lynn as a transit oriented development (refer Figure 4-4). Precincts one through five focus on New Lynn’s urban core; while precincts six through ten address the transitional spaces between the urban transit oriented development and peripheral suburbia (refer Table 4-1) (Waitakere City Council, 2010).

Table 4-1 - New Lynn Precinct Framework

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Land use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Merchant Quarter</td>
<td>Mixed use – retail/commercial/community/residential</td>
</tr>
<tr>
<td>2. Crown Lynn</td>
<td>Mixed use – residential/commercial/retail</td>
</tr>
<tr>
<td>3. Delta Avenue</td>
<td>Mixed use – commercial/light industrial/residential</td>
</tr>
<tr>
<td>4. Western Gateway</td>
<td>Mixed use – commercial/retail/residential</td>
</tr>
<tr>
<td>5. The Mall</td>
<td>Mixed use – retail/entertainment/residential</td>
</tr>
<tr>
<td>6. The Avenue</td>
<td>Residential</td>
</tr>
<tr>
<td>8. Industrial</td>
<td>Mixed use – light industrial/bulk retail</td>
</tr>
<tr>
<td>9. Residential West</td>
<td>Residential</td>
</tr>
<tr>
<td>10. Residential East</td>
<td>Residential</td>
</tr>
</tbody>
</table>

MERCHANT QUARTER -

This is the historical heart of New Lynn and can be separated into three distinct spaces; Totara Avenue, Memorial Square (including the transit station), and Delta Triangle.

The Clark Street extension removed through traffic from Totara Avenue, and this now operates as a shared pedestrian space. Framing the space are three to four storey mixed use developments. At the ground floor is destination retail, complemented by cafes, bars and restaurants, creating a merchant heart. On the upper levels are commercial offices and residential activities. Key historic buildings within the quarter are retained and reused (e.g. the Potters Post, the Police Station, Ceramco House, BNZ house).

Totara Avenue acts as a major thread linking two key transport nodes – the transit station and Great North Road; and two key public spaces - the Community Centre forecourt and Todd Triangle. The Community Centre acts as a flexible space for activities ranging from meetings to festivals, and the forecourt is an urban plaza oriented around the historic Potters Post building. Within the building and across the forecourt a series of public art installations add interest and a local flavour to the space. Todd Triangle, in contrast to the urban forecourt, is civic green space with the edges enlivened by mixed uses in the historic Ceramco and BNZ buildings. Memorial Square is the centre of a laneway system (McCrae Way) linking Todd Triangle with the library and mall; and the Square with the transit interchange. Mixed uses predominate along these lanes, which operate as a two-way shared space.

Delta Triangle, traditionally an industrial precinct, now operates as a mixed use and medium density residential area. Along Delta Avenue the Rewarewa Stream has been daylighted, and is a local amenity linear park. Compact family housing, such as townhouses, terraces and patio houses fill the triangle along narrow ‘mews’ type lanes.

Figure 4-5 - Merchant Quarter today

CROWN LYNN -

To the south of the transit interchange on the site of the iconic Crown Lynn potteries is a large residential led, mixed use precinct, built around a central park. To the east of Rankin Avenue is Ambraco Place an early medium density development (circa 1980's-1990's), and the Manawa Wetland Reserve, a semi-naturalised open space. East of Rankin Avenue there are 2,500 new residential units laid out on a north-south grid pattern. Housing types within the precinct are varied from four to six storey perimeter apartment blocks, with commercial/retail uses at ground floor; to compact family housing (townhouses, terraces and patio houses) along Margan Avenue as a transition to surrounding suburban living.

DELTA AVENUE -

Delta Avenue, previously a suburban and industrial precinct, now operates as a mixed use development comprising commercial/light industrial and residential activities. The commercial/industrial activities are innovation focussed with the area dubbed the ‘Incubator Avenue’. Residential development varies from four storey apartment blocks framing key intersections, to compact family housing (townhouses, terraces and patio houses) at two to three storeys. Workshop/work live units are also provided as an alternative housing form.
Western Gateway -

Previously dominated by the low amenity Rata Street and Great North roading environments, the western entrance is now an urban gateway framed by four storey landmark commercial and residential tower buildings. Previous large format retail has been redeveloped to two to three storey mixed use, with retail/commercial activities at ground floor and office/residential activities above. A cycle way along the rail corridor links the Gateway with town centre and transit interchange.

The Mall -

Previously an internalised shopping experience with blank frontages, the Mall is now a finer-grained, multi-use complex comprising retail, entertainment and residential activities. Access routes through the mall block allow for street frontages, public spaces, and laneway developments, and improve overall pedestrian permeability. A new north-south avenue provides a key link across the transit oriented development between Delta Avenue and the Crown Lynn precinct. A public promenade extends over the rail trench linking the Merchant Quarter and Mall with the Crown Lynn Precinct.

The Avenue -

The Avenue precinct, focussed on Margan Avenue, is a residential transition zone between the transit oriented development and surrounding suburban development. To facilitate the urban/suburban transition compact housing types (two to four storey townhouses, terraces and patio houses) are interspersed with established detached dwellings. Strong pedestrian links are provided through Crown Lynn to the transit interchange, Merchant Quarter and Mall.
BOB HILL -

Previously a large scale industrial and traditional suburban housing area, Bob Hill precinct is now a mix of niche manufacturing/industrial activities and compact family housing centred on Bob Hill reserve.

*Figure 4-13 - Bob Hill concept plan*

![Image: Common Ground Urban Design & Architecture]

INDUSTRIAL PRECINCT:

To the east of the Mall, and on the periphery of the transit oriented development is the industrial precinct, comprising warehouse, workshop, manufacturing and bulk retail activities. This precinct provides a key employment base for the area.

RESIDENTIAL EAST AND WEST:

These precincts are located on the periphery of the transit oriented development although still within a ten minute walk of the transit interchange. They are residential precincts characterised by low density suburban form, and an infill moratorium maintains this form.
Footscray

FOOTSCRAY MELBOURNE -

Melbourne is the capital city of the state of Victoria, Australia. It is the second most populous Australian city (Sydney being the most populous) with approximately 4 million people residing in the wider metropolitan area. Melbourne City is the commercial, cultural, retail, entertainment and tourism hub of the state. Approximately 90,000 people live in the City itself, and over 770,000 use the city daily. Although regarded as one of the world’s most liveable cities, Melbourne has a large urban footprint characterised by low density suburban sprawl. Whilst the character of the inner city areas is higher density, transit oriented urban form, the middle and fringe suburbs still subscribe to the ‘quarter acre Australia Dream’. And despite having the world’s largest tram network, Melbourne’s residents have a strong auto-dependency, particularly those living in the outer suburbs.

Melbourne is predicted to accommodate five million residents by the year 2036, with an additional 1.8 million people calling the metropolitan area home; and more than three million people will work in central or inner suburban Melbourne (Victorian Government Department of Planning and Community, 2008). This urban growth has the following potential effects on the urban environment:

- Increased urban energy use (Buxton, 2006).
- Increased travel demand, primarily by private motor vehicles, has consequential congestion effects and creates significant challenges for reducing green house gas emissions (Victorian Government Department of Planning and Community, 2008).
- Growth under current urban policy (Melbourne 2030) creates two tier cities – service rich, high income, inner and middle suburbs; and service poor, low income outer suburbs (Buxton 2006).
- Imbalance between where people live and where people work places pressure on the inner and middle suburb transport corridors (Victorian Government Department of Planning and Community, 2008).
- Physical and environmental constraints will limit development at the fringe, diminishing the supply of suburban land (Victorian Government Department of Planning and Community, 2008).

STRATEGIC CONTEXT -


Visit the cultural melting pot of the West and experience the sights, sounds and flavors brought to Footscray by immigrants from all over the world. Dine out, discover world art, music and festivals, or stock up on fresh produce at the markets – all this just 10 minutes from Melbourne’s CBD.

http://www.visitvictoria.com/displayobject.cfm/objectId.4E16103F-DD06-4565-B06045731BD79A33/
To address these issues Melbourne is seeking to move from a mono-centric to a poly-centric urban form, based upon the principles of transit oriented development. This poly-centric form sees the designation of six Central Activities Districts with central business district like functions. One of the designated districts is Footscray, located in the City of Maribyrnong municipality approximately five kilometres west of central Melbourne (refer Figure 4-14).

Originally the home of the Woimurrung and Boonwurrung tribes of the Kulin nation, Footscray is one of Melbourne’s oldest suburbs. Established as a junction settlement at the confluence of the Maribyrnong and Yarra Rivers, Footscray developed as a “self contained industrial city”. The suburb was an industrial powerhouse for Melbourne with meat processing; soap, fertilizer, and chemical processing plants; and gas works (Butler, 1989, p.2-1). This industry, combined with Footscray’s close proximity to Melbourne City, and cheap housing, saw waves of migrants settle in the area. Once a centre for Italian, Greek, Polish and former Yugoslavian migrants; Footscray is now a hub for Vietnamese, and East African migrants.

Whilst the demise of local industry in the 1960’s and 70’s led to substantial unemployment and urban decline within the suburb, Footscray remained the regional retail hub for Melbourne’s western suburbs, prior to car and mall based shopping. However the arrival of Highpoint, Melbourne’s second largest shopping mall in the mid 1970’s; only four kilometres from Footscray, negatively impacted the retail status of the suburb (Rice, 2005). Today retail remains one of Footscray’s strengths with its “multicultural vibrancy which includes a thriving Asian shopping hub and growing numbers of African businesses” (ibid, p.6). The loss of industry within the suburb has also created redevelopment opportunities, freeing sites for higher density housing, creating of a strong arts community (Footscray Community Arts Centre), and a revamp of the transit station area.

Similar to Addington and New Lynn, Footscray has an historical transit focus. Once the site for small scale shipping, and a railway hub for surrounding industry (Butler, 1989), Footscray is now the transit hub for Melbourne’s western suburbs, and regional highway, train, tram and bus services all pass through. The railway station is the second most used transport interchange in Melbourne.

Building on its role as a transport node; including its close proximity to the Melbourne central business district, Docklands, the airport and port; its role as a regional hub; and its redevelopment potential; Footscray is strategically placed to deliver urban growth goals. The transit oriented development at Footscray, centred on the transit station, is currently only partially realised.

The Victorian Government has made a $52.1 million investment in Footscray for the purposes of:

- Enhancing access and safety around public transport services.
- Ensuring transport is well-integrated into the centre and better connected to nearby shops and community facilities.
- Creating a greater range of housing choices in central Footscray that will put people closer to transport, jobs, shops and educational facilities.
- Boosting employment opportunities in the area.
- Making physical improvements to main streets.
- Improving the variety of retail outlets, better catering to the shopping needs of local residents and workers (Department of Planning and Community Development, 2007).

Currently the Maddern Square upgrade, Nicholson Street Mall upgrade has been completed, and the Footscray Station footbridge is open. The McNab Avenue mixed use development is awaiting construction, and station area improvements are underway.

Figure 4-14 - Activity Centres, Melbourne
POLICY CONTEXT -

‘Melbourne 2030: Planning for sustainable growth’ is the Victorian State Government initiative for the management of urban growth in Melbourne. Released in 2002, Melbourne 2030 seeks to accommodate an additional one million people, or 600,000 households within metropolitan Melbourne within this thirty year time frame. Rather than a spatial blueprint the policy is a suite of guiding principles and directions that inform urban decision making at the regional and local level. Melbourne 2030 is based on the principles of transit oriented development, and has three key urban growth tools:

- The imposition of an urban growth boundary;
- Directing higher development to a network of activity centres; and
- Improving public transport to integrate this network of centres.

These key actions seek to “to protect the liveability of the established areas and to increasingly concentrate major change in strategic redevelopment sites such as activity centres and underdeveloped land”, and shift growth away from the fringes of the city (Melbourne 2030, In Summary).

One of the key strategic directions of Melbourne 2030 is the creation of a more compact city. The policy identifies a hierarchy of activity centres, all of which are well connected by a public transport network. One of the Principle Activity Centres identified is Footscray, to the west of the central business district (Melbourne 2030, In Summary).

To deliver the compact urban form desired by Melbourne 2030, the state government also put in place the Transit City Program; a project that sought to fund and deliver transit oriented development at key locations in metropolitan Melbourne. The Transit City Program is implemented by the Department of Planning and Community Development, in coordination with local councils, developers and the community.

The program identifies thirteen locations where transit oriented development is targeted. Footscray is one of seven priority Transit Cities identified.

The release of ‘Victoria in Future: 2008’ updated the population projections for Melbourne 2030 indicating that the population of Melbourne would reach the five million mark much faster than predicted. These revised estimates led to a refinement of Melbourne 2030, particularly the basic urban form. Melbourne 2030 had envisaged a mono-centric form comprising a strong city core supported by regional activity centres. Melbourne @ 5 Million\(^9\) proposed a new structure comprising several large centres, employment corridors, targeted redevelopment, and new sustainable communities (Victorian Government Department of Planning and Community, 2008).

To implement this poly-centric structure the hierarchy of activity centres was revised, elevating six Principle Activity Centres to Central Activity Districts. Footscray was one of the centres elevated, and as a Central Activity District it would be expected to provide:

- Significant CBD-type jobs and commercial services;
- A strong and diverse retail sector;
- Specialised goods and services drawing on a large regional catchment;
- Significant opportunities for housing redevelopment in and around these centres;
- High levels of accessibility for walking, cycling, public transport or car by being located at a junction in the Principal Public Transport Network;
- Vibrant centres of community activity with a range of public facilities.

(Victorian Government Department of Planning and Community, 2008)

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9. Melbourne 2030: A planning update, Melbourne @ 5 Million.
DEMOGRAPHIC CONTEXT -

The City of Maribyrnong Population and Household Forecast predicts that Footscray will be the fastest growing suburb within the municipality. By 2031 it is estimated that Footscray will need to accommodate an additional 16,663 residents, bring the total population to 28,782 (2006 population is 12,119) (2010). This equates to an additional 8,083 households (City of Maribyrnong, 2010).

The demographic profile of Footscray reflects evolving land use patterns. In its peak as an industrial powerhouse, Footscray drew in significant numbers of overseas migrants. The decline of this economic base saw “Footscray’s socioeconomic profile being relatively disadvantaged in comparison to other Victorian suburbs” (Department of Planning & Community Development, 2009, p.7).

The high level of public housing in Footscray also influences the demographic profile, making the suburb attractive to “low income earners, people with chronic social and health disabilities, and new settlers” (Maribyrnong City Council, 2005).

Today the suburb is attractive to inner city workers; tertiary students, given its close proximity of the Victoria University Footscray Park campus; and overseas migrants due to the affordable rental accommodation, and retail opportunities (City of Maribyrnong, 2010). The demographic profile of Footscray today is described as “an eclectic mix of working-class and university-qualified professional groups” (Department of Planning & Community Development, 2009, p.7).

FOOTSCRAY QUICK FACTS -

- In 2031 the most populous age group is predicted to be 25-29 year olds.
- In 2031 the proportion of elderly residents is low (only 7.8% of residents will be aged 65+ years).
- In 2031 the dominant household type is ‘lone person households’ followed by ‘couples without dependants’.

(City of Maribyrnong, 2010).

- 47% of households rent their dwelling compared with 25% for Melbourne City.
- 49% of residents are overseas born compared with 29% for Melbourne City.


- The most common overseas countries of origin for people living in Footscray are Vietnam, China, India, Bangladesh and UK.

Department of planning and Community Development , 2009, p.7

VISION -

Whilst Melbourne 2030, Transit City, and Melbourne @ 5 Million established the strategic role of Footscray; ‘(re) Visioning Footscray’ translates this into the local context. Using a collaborative approach regional expectations were integrated with a local vision to identify the Footscray of 2030 as “safe, artsy, edgy, affordable, regional, diverse/mixed and multicultural” (2005, p.30). While achieving regional goals, the community sought to retain the suburbs unique identity, and its ethnic and social diversity (2005). The following principles were identified for development:

- A pedestrian and cycle friendly neighbourhood, improved regional and local public transport.
- Protect and enhance the arts, show casing different arts and cultures.
- Protect sacred and improve hated spaces.
- Housing - medium and higher density housing that is sensitive to location, and includes mixed affordability.
- Learning - integrate the university into daily life, explore opportunities for whole of community learning.
- Explore opportunities for entertainment facilities, particularly night activities to create vibrancy and improve the perception of safety.
- Provide meeting/hanging out spaces and encourage informal and/or passive recreational opportunities.
- Retain and enhance the current diverse shopping experience

Just as ‘(re)Visioning Footscray’ grounded regional growth goals within a local context, the ‘Footscray Central Activities District: Draft Strategy Framework Report’ (FCDA) gives physical form to the goals and vision. The purpose of the FCAD is to “provide guidance about land use and development” and to help “prepare for anticipated private sector investment” (Department of Planning & Community Development, 2009, p.2).

TRANSIT AND CONNECTIVITY -

Whilst Footscray is rich in regional mass transit (train, tram and bus), mobility and access within the suburb is primarily car focussed. The transit oriented development seeks to improve this imbalance through the creation of a ‘pedestrian priority zone’ at its core, and enhancing pedestrian and cycle links to key transit, retail, recreational, entertainment, education and community destinations. Enhancement of the streetscape through continuous facades, activated ground floors, boulevard and streetside planting, street art, and public spaces creates a positive urban experience. To prioritise pedestrian movement, through traffic is discouraged from the core, using shared space, traffic calming measures, and the diversion of freight traffic to local arterial routes.
FOOTSCRAY -

URBAN FORM AND INFRASTRUCTURE -

Since the end of its heyday as an industrial and migrant hub, Footscray’s urban environment has been in decline. The Draft Strategic Framework Report states that “there are a number of unattractive, dysfunctional and unsafe spaces, with many vacant, underutilised sites and at-grade open-lot car parks” (Department of Planning and Community Development, 2009, p.17). Despite the challenges there are ample opportunities within Footscray for transit oriented development, including:

- A rich public transport infrastructure;
- Underutilised sites;
- Pockets of heritage residential;
- Diverse shop facades and landuses;
- Converted industrial and commercial buildings;
- Landmark structures; and
- A river edge environment to capitalise on.

To realise these opportunities, and give effect to the transit oriented vision for Footscray, nine activity precincts have been identified in the Footscray Central Activities District - Draft Strategic Framework Report (2009) (refer Table 4-2 and Figure 4-15).

Table 4-2 - Footscray Precinct Framework

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>LAND USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Core Activity</td>
<td>Mixed use – retail</td>
</tr>
<tr>
<td>2. Railway Station</td>
<td>Mixed use – transit interchange/retail/commercial/residential</td>
</tr>
<tr>
<td>3. Victoria University</td>
<td>Mixed use – education/student services/ accommodation/commercial</td>
</tr>
<tr>
<td>4. Riverside</td>
<td>Mixed use – arts/tourism/ commercial/industrial/residential</td>
</tr>
<tr>
<td>5. Joseph Road</td>
<td>Mixed use – commercial/recreation/entertainment/residential</td>
</tr>
<tr>
<td>6. Peripheral Activity</td>
<td>Mixed use – commercial/community/light industrial/residential</td>
</tr>
<tr>
<td>7. Neighbourhood Fringe</td>
<td>Mixed use – residential/retail</td>
</tr>
<tr>
<td>8. Civic</td>
<td>Mixed use – community/education</td>
</tr>
</tbody>
</table>

Spice up your life! Home to the iconic Forges of Footscray store, locate those hard to find spices and exotic ingredients. The Footscray Market is packed full of fresh produce and seafood and is yet another place to stop for a terrific feed. The noisy, bustling Little Saigon market is also worth visiting for its selection of tropical fruits and Vietnamese vibe.

http://www.visitvictoria.com/displayobject.cfm/objectid.4E16103F-DD06-4565-B06045731BD79A33/
CORE ACTIVITY PRECINCT -

This precinct is essentially the ‘merchant heart’ of Footscray, comprising a mixed retail area of strip shopping, enclosed malls, markets, ethnic shops, and discount department stores. This diverse shopping experience is a key contributor to Footscray’s identity, and is a regional shopping and employment hub. The precinct is well connected to the station via a footbridge, and shared space.

The precinct is a mixed use neighbourhood focussing on retail at ground level with commercial and residential activities above. Retail activities are consolidated within this precinct, to create a compact and diverse core. The street level is vibrant, with a ‘market’ feel. Retail activities spill out from the shops, with cafes and restaurants populating the footpath. Nicholson and Barkly Streets are pedestrian spines, linking key activities and public spaces (e.g. Nicholson Mall and Maddern Square).

*Source: Footscray Renewal Brochure - State Government of Victoria, Department of Planning and Community Development, 2007.*

*Figure 4-16 - Artists impression, Nicholson Mall*

*Figure 4-17 - Nicolson Street Mall & Maddern Square*

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**Big games and fireworks!**

Footscray is the home of the Western Bulldogs Australian Football League team. You can catch a training session and cheer on the 'Dogs' at the state-of-the-art Whitten Oval. If you like fireworks, make sure you’re around Footscray for Chinese New Year, or the Tết Lunar Year Festival, a vibrant, colourful Vietnamese festival features dancing dragons, live music, food stalls and fireworks.

http://www.visitvictoria.com/displayobject.cfm/objectid.4E16103F-DD06-4565-B06045731BD79A33/
RAILWAY STATION -

At the core of the transit oriented development, the Railway Station Precinct serves a number of functions. The space acts as a transit node, a gateway to the western suburbs, the link between the city and the river, and the primary interface with the commercial core. The space is currently edged with surface parking lots, low amenity retail, underutilised railway land. The William Cooper footbridge, that connects Irving Street with Bunbury Avenue across the rail lines, has recently been completed. The assessment of the Railway Station precinct is based on the ‘Footscray Station Precinct Planning and Urban Design Framework’ (Department of Planning and Community Development, 2009).

The existing train station buildings (constructed in 1900) are retained for their heritage and local identity value, and views through to the buildings are retained from Irving Street and McNab Avenue. Fronting the station and providing a key connection to McNab Avenue is the Station Forecourt, an open public plaza (refer Figure 4-18). Within the plaza are kiosks, with information and convenience retail; seating; landscape and sculptural elements. The William Cooper footbridge extends across the space, and as a transparent element it divides rather than severs the space, and provides for informal surveillance of the plaza below. The footbridge funnels travellers into the core of Footscray, into a dynamic forecourt and shared space at the intersection of Irving and Leeds Streets. Also located within this shared space is a tram platform and bus interchange.

Fronting the shared space, and extending along Irving Street, is a mixed use zone with retail and hospitality activities at ground level, with commercial and residential activities (including student accommodation) above. Built form varies between four and twelve stories. On the site of the Footscray Market intense development of up to twenty five stories provides a landmark within the suburb. The importance of the market is recognised and helps activate the street level with other retail and hospitality activities. Located above are podium parking, commercial, education and residential activities, with public and private open spaces provided on roof levels.

Joining the forecourt is McNab precinct, a mixed use neighbourhood with retail, hospitality and institutional (e.g. government department) activities at ground floor, with commercial and residential land uses above. Residential land uses include student accommodation, private and affordable apartments, and supporting recreational, childcare and community hub activities. The built form varies between four and twelve stories, and is arranged around public open space (refer Figure 4-19). Pedestrian and cycle connection through the precinct link to the University’s Nicholson Street campus.
**Figure 4-19 - McNab Street Development**

Source: Footscray Fact Sheet
McNab Avenue - Grocon
Department of Planning and Community Development, 2010

**Figure 4-20 - Railway Precinct Plan, Footscray**

Source: Victorian Government Department of Planning and Community Development, 2009
Image: SJB Urban
VICTORIA UNIVERSITY -
Victoria University has two campuses within the transit oriented development; ‘Footscray Park’ to the north and ‘Footscray Nicholson’ to the south; connected via Nicholson Street. The precinct integrates the campuses with the transit oriented development by using underutilised land to create mixed use neighbourhoods focusing on education, including student accommodation and services, teaching, research, and business incubator activities.

RIVERSIDE PRECINCT -
The Riverside Precinct, located between the railway station and river is currently a distinct mix of land uses. Adjacent to the station are period houses on wide roads reminiscent of the Victorian era. This low density, low scale form is pedestrian in character and reinforces the link from the city to the river along Bunbury Street. At the river are industrial land uses, including the Melbourne Port, and the Footscray Community Arts Centre.

The Riverside Precinct builds on the arts, industrial heritage and maritime themes, whilst enhancing pedestrian and cycling linkages through to the core. The precinct comprises a mix of land uses with a focus on employment and business activities, and residential development to live, work and play.

JOSEPH ROAD PRECINCT -
Located to the north-west of the town centre, and currently a mix of industrial and commercial activities, and redundant industrial land, the precinct will become the gateway to Footscray from Melbourne City. Given the precinct’s exposure to the Maribyrnong River there is a focus on public open space, entertainment and recreation (refer Figure 4-21). A structure plan for the Joseph Road Precinct was prepared in 2007, and in 2009 the precinct was rezoned to a Priority Development Zone.

PERIPHERAL ACTIVITY PRECINCT -
Currently a mix of light and heavy industrial activities with residential at the fringe, the Peripheral Activity Precinct is the interface between the transit oriented development and wider Footscray. This mixed use precinct will comprise light industrial and commercial activities, showrooms, a cluster of community health services, and townhouses and apartments above or to the rear of commercial properties. Retail within this precinct will be limited to convenience shops to avoid competition with the Core Precinct. Built form will emphasise streets as urban corridors, and reduce in bulk at the transition with lower density residential areas.
NEIGHBOURHOOD FRINGE PRECINCT -

This precinct at the edge of the transit oriented development is the transition zone through to a lower density, suburban form. Development within this precinct will be incremental providing a range of housing types, including affordable housing. The residential nature of the streetscape is to be retained, with improved pedestrian and cycle links to the core and station. Some mixed use development (e.g. retail at ground floor, commercial and residential above), may be provided at key locations, although it is proposed to fit with the overall residential character.

CIVIC CENTRE PRECINCT —

This precinct is the ‘civic heart’ of the transit oriented development, housing community and institutional activities including the Civic Centre, Town Hall, primary school etc. These uses are expanded across underutilised land within the precinct with key links to the station via the McNab Precinct.
CHAPTER 5.0 - TRANSIT ORIENTED DEVELOPMENT

TRANSIT ORIENTED DEVELOPMENT
5.1 CONTEXT -

Transit oriented development is not a ‘one-size-fits-all’ solution, its form and function are strongly influenced by contextual elements including the wider urban form, the type of transit corridor, and the development typology. The wider urban form, either monocentric, or polycentric, influences the type of corridor upon which the development is located. As discussed earlier there are three basic corridor typologies; the destination connector, commuter, and district circulator. The position of the transit oriented development within the corridor further influences its form and function giving rise to a number of development typologies. As with any classification, designation is often not absolute, and transit oriented development can be a mix of corridor types and typologies. In order to compare transit oriented development at Addington, New Lynn and Footscray, it is necessary to understand their role and function within their respective regional systems.

CORRIDOR -

Urban growth in Christchurch has largely followed a decentralised pattern, with the future vision for the City as a place with a “vibrant inner city and suburban centres surrounded by thriving rural communities and towns” perpetuating this (Greater Christchurch Urban Development Strategy, 2007, p.8). The proposed settlement pattern for Christchurch (as outlined in the Greater Christchurch Urban Development Strategy) focuses on urban intensification in and around ‘activity centres’. These centres are intended to be self sufficient, “where people shop, work, meet, relax and often live” (Greater Christchurch Urban Development Strategy, 2007, p.98). This pattern creates a polycentric urban form (refer Figure 5-1) with the central city acting as the ‘main activity centre’, supported by centres at Riccarton, Papanui-Northlands, Shirley-the Palms, and Linwood-Eastgate. Under this design thesis Addington is also designated an activity centre.

Although a node in a polycentric city form, the Addington corridor acts as both a destination connector and commuter corridor. As per the suggested Christchurch Mass Transit Plan in Figure 3-11, the southern rail line acts as a connector linking transit oriented developments (activity centres) at Rolleston, Templeton, Hornby, Wigram and Addington. The corridor also acts as a commuter linking through to the central city. Similarly the radial corridor along Lincoln Road acts as a commuter linking the residential suburbs of Halswell, Hendersons Basin, Hoon Hay and Hillmorton with Addington and the central city.

Similar to Addington, the management of urban growth in Auckland hints at the creation of a polycentric city with a regional growth strategy that proposes a connected network of centres and corridors. This translates into a series of compact, intensive ‘sub-regional’ centres, of which New Lynn is one, located along major transport routes. In contrast to Addington these centres are unlikely to be self sufficient, although they are intended to foster a “closer relationship between home, work and other activities” (Auckland Regional Council, 1999, p. 46). However, despite these polycentric leanings, the sub-regional centres are exactly as their name suggests ‘sub’. In ‘Establishing a classification for Auckland’s Centres and Corridors’ (2007) the Regional Council states that “the Auckland CBD is clearly the dominant centre in the region”, and when referring to the sub-regional centres that “it is essential that these regional CBDs do not underline the primacy of the Auckland CBD” (Auckland Regional Council, 2007, p.17). The sub-regional centres, such as that at New Lynn are therefore viewed in a support role, satisfying district needs only.
This diluted mono-centric urban form, and the proposed spoke and hub arrangement of the mass transit network suggests that the transit oriented development at New Lynn occurs primarily on a commuter corridor, channelling people to and from the Auckland central business district. However, the diverse mix of land use activities proposed at New Lynn (retail, residential, commercial, industrial, community, entertainment), and at other nodes on the Western Line (e.g. Henderson, Mt Albert. Kingsland, Newmarket etc) suggests that the corridor also operates as a destination connector.

Unlike the growth strategies for Christchurch and Auckland, Melbourne@ 5 Million is explicit in its desire to create a polycentric urban form, suggesting that “moving from one CBD to a number of CBD like centres will reduce congestion and enable people to spend less time commuting to and from work, and more time with their family” (Victorian Government Department of Planning and Community, 2008, p.9). Footscray’s designation as a ‘Central Activities District’ under Melbourne @ 5 Million confirms its status as a key destination node within this polycentric form. As outlined earlier these districts are intended to have ‘central business district’ like functions, creating inner suburban nodes, that reduce transit pressure on the Melbourne core, and correct the imbalance between where people live, work and play.

Similar to Addington and New Lynn, the corridor on which Footscray is located operates as both a commuter and destination connector corridor. As can be seen on the network map for the ‘Werribee and Williamstown’ lines, the rail corridor links the largely residential suburbs of Williamstown, Newport, Spotswood, Yarraville and Seddon with the activity centres at Footscray and the central business district. In contrast the corridors for the tram and bus are more destination oriented linking shopping districts, educational and recreational facilities.

But what does all this mean for transit oriented development at Addington, New Lynn and Footscray? Under their respective growth strategies each site is a destination (i.e. an activity centre) within a polycentric form. The corridors on which they are located are therefore destination connectors. This influences the local scale and form of development, encouraging higher density development within the station area; a diverse land use mix, focussing on employment, education, retail, entertainment activities rather than solely residential; and all day, rather than peak period vibrancy.

Each of the transit oriented developments expresses these traits – Addington with its education, entertainment and employment focus; New Lynn with its retail and employment focus; and Footscray with its retail, education and employment focus; all centred on the transit station (Centre for Transit Oriented Development, 2010).

Whilst the corridors may primarily operate as destination connectors, they also express commuter traits, which have different implications for transit oriented development. Commuter corridors are more likely to require residential land uses; rich pedestrian and cycle networks linking to the station; and vibrant, high amenity streetscapes. All of the case studies propose a significant medium to high density residential component within the one kilometre pedshed of the station with supporting high amenity pedestrian and cycle networks.
DEVELOPMENT TYPOLOGY -

As discussed earlier, Dittmar and Poticha (2004) propose six transit oriented development typologies related to position on the regional corridor. These typologies expand Calthorpe’s original ‘Urban TOD’ and ‘Neighbourhood TOD’ classifications. Each typology has a different local expression with variance in scale, form and land use mix.

Addington, New Lynn and Footscray are all considered to be ‘Urban Neighbourhood’ transit oriented developments (refer Figure 5-2). They fit Dittmar and Poticha’s (2004) characterisation of an Urban Neighbourhood in the following ways:

- Each site is an historic neighbourhood (first suburb) surrounding the city core, and whose inception relates to early transit, commonly heavy rail.
- Each site is a key component in the regional transit oriented, compact, urban growth framework; Addington as an ‘activity centre, New Lynn as a ‘sub-regional centre’, and Footscray as a ‘central activities district’.
- There is a rich mass transit network, involving multiple modes (rail, tram, and bus), allowing high accessibility throughout the region.
- Each development provides medium to high density housing within liveable environments.
- There is diversity in housing types including apartments, townhouses, and detached family homes. Affordable housing is also provided.
- Each site has urban remnants that contribute to a sense of place and vitality.
- The history, diversity in land uses, and creation of an active streetscape at each site enables it to become a destination in itself.

As the development typologies are not absolute, each site also expresses some ‘Urban Downtown’ tendencies. As regional hubs for retail, commerce, industry, education and/or entertainment, the land use mix is potentially more diverse than could be anticipated within a typical Urban Neighbourhood. This diversity is not unexpected given the suburbs role as a key centre’s within poly-centric urban forms.

POLICY CONTEXT -

As discussed urban growth is a multi-scalar phenomenon; it impacts urban form at both the regional and local level. The importance of strategic planning for achieving regional goals (e.g. a reduction in traffic congestion, emissions and infrastructure costs, and the loss of productive land) is well recognised, and transit oriented designs for Addington, New Lynn and Footscray are key component in their respective regional growth strategies. What is not so well recognised, particularly in the case of Addington, is the impact of regional policy at the local level. Both New Lynn and Footscray have local policy that translates regional strategy into the local context. This policy seeks to protect and enhance those local elements that define the place, and create its spirit, while achieving regional goals. At Addington however there is no local translation, and as suggested this leaves the suburb in a policy blindspot. A lack of local policy may be due to the blanket classification of Christchurch’s inner suburbs as intensification areas, with the City Plan management regime not differentiating between the suburbs. In contrast at both New Lynn and Footscray, the suburbs were identified as discrete growth areas which enabled local master planning. It is considered unlikely that any such master planning exercise would be undertaken for Addington, and that intensification will continue in an adhoc fashion.

Figure 5-2: Case study development typologies
5.2 FORM -

Whilst a transit oriented development is more than just a physical entity, there are physical qualities that make a development work. As Dittmar and Poticha suggest these elements “do not create a particular physical form”, but rather “places that function differently from conventional development” (2004, p.22). Without these key elements or “performance benchmarks” a development is not transit oriented (ibid, p.23).

Drawing from the indicator genealogy discussed earlier (refer back to Section 2.0, Figure 2-1), particularly Dittmar and Poticha’s (2004) and Belzer and Autler’s (2002) performance criteria, Addington, New Lynn, and Footscray are explored in terms of their

- Location efficiency;
- Choice; and
- Liveability.

LOCATION EFFICIENCY -

Location efficiency is an expression of the relationship between land use, transit, and urban design, and is defined by Dittmar and Poticha as the “conscious placement of homes in proximity to transit systems” (2004, p.23). Belzer and Autler concur, suggesting that location efficiency is the integration of a development’s nodal and place functions, thereby converting “driving from a necessity to an option” (2002, p.9). Both authors identify the key components of location efficiency as:

- Density;
- Transit accessibility; and
- Pedestrian connectivity.

DENSITY -

As discussed in Chapter 1, density is a challenging indicator for assessing the success of a transit oriented development, given that it comprises both spatial and social aspects. When considering transit oriented developments at Addington, New Lynn and Footscray, with respect to location efficiency it is proposed to focus on the spatial facet of density, i.e. units per area. The social aspects of density will be considered under the ‘liveability’ criteria.

Calthorpe suggests a residential density of a minimum of 30 units per hectare (12 units per net acre), with a minimum average of 37 units per hectare (15 units per next acre) for urban neighbourhood transit oriented developments (1993). This intensity is considered the minimum required to support a transit service (ibid).

However, as density levels increase, so do does transit rideship, and an average residential density of 70 units per hectare (30 units/acre) is considered positive for transit rideship (Capitol Region Council of Governments, 2010).

In developing a residential density profile for Addington a review of a selection of guidelines from North American transit oriented developments was undertaken (refer Table 5-1). Whilst there is some variation, as would be expected given the situational and locational aspects of transit oriented development; the review suggested an appropriate minimum residential density of between 12-20 units per acre (30-50 units per hectare). This density is similar to that anticipated for Christchurch, under Urban Development Strategy which suggests a net residential density of 50hh/ha for central city intensification, 30hh/ha for inner suburban intensification, and 15hh/ha for greenfields (2007, p.26).
In setting a residential density profile for Addington a minimum net residential density of 30 units/ha (12 units per acre) is proposed, with an average residential density ranging between 37 units/ha and 60 units/ha (15-24 units per acre). However, intensification across the suburb of Addington is not uniform, and follows a graduated density from the node to the periphery (refer Figure 5-3).

The highest residential densities are proposed within the University, Hagley and Main Street precincts; all of which are generally located within 800m to one kilometre of the train station and bus interchange. The higher density near the university (50 units/ha) provides for student accommodation, and takes advantage of the precincts close proximity to the amenities of Central Square, and the Artisan and Mill Precincts. Similarly the higher density at the Main Street (45 units/ha) takes advantage of the local amenity and creates an immediate catchment to support the main street.

The higher density at Hagley (60 units/ha) takes advantage of the open space amenity, and frames the park, providing a distinct boundary between the urban city core, and the transit oriented form of Addington. The residential density in the Church Square precinct (30 units/ha) reflects the historical character of precinct, and provides a transitional buffer to surrounding suburban development.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>GUIDELINE</th>
<th>DENSITY</th>
<th>YEAR</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>Florida Department of Transportation Transit oriented Development design guidelines.</td>
<td>▪ Residential density = 5 to 30 Dwelling Units/acre (12-75 units/ha)</td>
<td>2009</td>
<td><a href="http://www.floridatod.com/docs/Products/TODGuide041409.pdf">http://www.floridatod.com/docs/Products/TODGuide041409.pdf</a></td>
</tr>
</tbody>
</table>
The density profile for New Lynn, as determined from data presented in the New Lynn Urban Regeneration Plan (2010), shows a much higher density profile than that proposed for Addington (refer Table 5-2). The average residential density across the transit oriented development is 65 units/ha, with the greatest densities; at Crown Lynn, The Mall and The Avenue; clustered around the transit interchange (i.e. within a five minute walk). Relatively lower densities are located towards the edge of the development at Delta Avenue, the Western Gateway, and at Bob Hill.

### Table 5-2 - New Lynn Transit oriented development density profile

<table>
<thead>
<tr>
<th>PRECINCT</th>
<th>RESIDENTIAL UNITS</th>
<th>RESIDENTIAL GROSS AREA</th>
<th>Units/HA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchant Quarter</td>
<td>120</td>
<td>1.75ha</td>
<td>68</td>
</tr>
<tr>
<td>Crown Lynn</td>
<td>1800</td>
<td>17ha</td>
<td>105</td>
</tr>
<tr>
<td>Delta Avenue</td>
<td>300</td>
<td>4.5ha</td>
<td>66</td>
</tr>
<tr>
<td>Western Gateway</td>
<td>150</td>
<td>2.2ha</td>
<td>68</td>
</tr>
<tr>
<td>The Mall</td>
<td>120</td>
<td>1.7ha</td>
<td>70</td>
</tr>
<tr>
<td>The Avenue</td>
<td>400</td>
<td>5.6ha</td>
<td>71</td>
</tr>
<tr>
<td>Bob Hill</td>
<td>250</td>
<td>31ha</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Key Facts in the New Lynn Urban Regeneration Plan (2010)

The density profile for Footscray is not prescribed in the ‘Footscray Central Activities District Draft Strategic Framework Report’ (2010), which tends to focus more on the objectives for the transit oriented development. However, a number of precincts (e.g. the Core Activity Precinct and Joseph Road Precinct) do include objectives that seek to encourage higher density residential housing. It appears that the density profile would be determined through the preparation of precinct plans, or structure plan for specific development. For example the Mc Nab Avenue development within the Railway Station Precinct proposes 250 student accommodation units, 240 private residential apartments, and 110 affordable apartments, within a 1.3ha site (Department of Planning and Community Development, 2010). This equates to a very high residential density of 460 units/ha. Although the site is immediately adjacent to the transit station, this extreme density is potentially due to the unit makeup, specifically the provision of student accommodation.

### TRANSIT ACCESSIBILITY -

Key to achieving location efficiency; transit accessibility focuses on “transit stations and stops that are centrally or conveniently located within the TOD and service that allows riders to reach their destinations easily” (Dittmar and Poticha, 2004, p.23). Drawn from the indicator genealogy (refer back to Chapter 2, Figure 2-1) there are a number of indicators that can be used to assess transit accessibility:

- Transit rideship (Transportation Research Board, 2005)
- Mode connections at transit station (Transportation Research Board, 2005)
- Regional transit connections (Belzer & Autler, 2002)
- Reduced auto use and reduced auto ownership (Belzer & Autler, 2002)
- Reduced transportation costs to individuals and households (Belzer & Autler, 2002)
- Number of stations (Niles and Nelson, 1999)
- Transit technology (Niles and Nelson, 1999)
- Travel behaviour/trip chaining (Niles and Nelson, 1999).

There are three challenges for quantitatively assessing transit accessibility in this thesis. Firstly, the transit oriented developments at New Lynn and Footscray are not yet realised in full; and Addington is simply a design experiment. Therefore meaningful data collection on the above indicators is not yet possible. Secondly, the analysis of travel is extremely complex, involving the interplay of scales, (local versus regional); players (commuters, locals, investors, operators); policies (transport, land use, energy, emissions); and behaviours (travel demand); and is beyond the scope of this thesis. Which leads to the third challenge in that this thesis concerns landscape architecture. Whilst it is acknowledged that design does interface with transit the analysis of the indicators above is not a landscape architecture function. However, some qualitative comments on transit accessibility can be made in relation to modal and regional connections at Addington, New Lynn and Footscray.

### Modal Connections -

All three transit oriented developments enhance modal connections. New Lynn is an integrated interchange for both rail and bus services, with the station and depot located immediately adjacent to each other (refer Figure 5-4). Footscray is similar with bus interchange proposed adjacent to the station forecourt/shared space on Irving Street; and a tram stop on Leeds Street, also within the forecourt shared space.
The transit oriented development at Addington however differs in that the train station and bus interchange are located some distance apart on the site. During design the creation of a multi-modal interchange adjacent to the rail line was explored. Buses would travel from Lincoln Road, via Bernard Street, through Central Square, and connect back to Lincoln Road via Clarence Street South.

The primary reason for the rejection of this concept was the potential negative impact on the Addington main street; that removal of the radial corridor would render the Lincoln Road mainstreet obsolete. The retail and commercial hub of Addington would potentially move from its traditional main street location to be ‘hidden’ within new development centred on the rail lines. There would be minimal integration between ‘old’ Addington (centred on Church Square), and ‘new’ Addington, and the increase distance from the corridor could result in the intensification of old Addington taking on a compact suburban rather than transit oriented form. The autocentric character of Lincoln Road would also potentially be exacerbated; confirming its status as a low amenity pedestrian barrier.

Retaining Lincoln Road as a radial transit corridor, with a bus interchange, also creates opportunities for Addington. It enables a high amenity streetscape with wide pedestrian strips, active building frontages, mixed land uses, and community facilities. The arrival and departure of people from the main street creates a vibrancy and sense of movement within this streetscape, and it enables Lincoln Road to be the spine that ties together the ‘old’ and ‘new’ parts of Addington. To bridge the distance between the two modes, the design for Addington seeks to create a positive experience.

From the bus interchange a traveller will move through the Rail Lanes across the Mill Theatre to the Seed Shed where they can enter the station via the elevated high line, or at grade sheltered beneath the high line. All these spaces are geared towards the pedestrian with active frontages, veranda style shelter, good lighting and pavement surface, and an evening economy to increase safety and surveillance.

Regional Connections -

As transit oriented developments do not exist in isolation, a key component of transit accessibility is the degree of connectivity with the rest of the city and the region. At Addington the level of connectivity is considered to be high. The southern rail line links the city to the peripheral settlements of Templeton, Rolleston further out to Burnham and Dunsandel; and a reinstated south-west lateral line links Prebbleton and Lincoln to the City. Similarly the northern line links through to Belfast, Kaiapoi and Rangiora. The radial bus lines link the city, via Addington, out to Halswell; and inner and outer orbital routes enable cross suburb movement. Access to the city core is provided either by the train (to the main station on Moorhouse Avenue), by bus to an inner city exchange, and via a free circular tram navigating the four avenues.

New Lynn is considered to have a high degree of regional connectivity. The Western Rail line connects west to the major settlements of Henderson, Swanson and Waitakere (refer Figure 5-5), and east to Mt Albert, Kingsland, New Market and Britomart (located in the Auckland Central Business District). The connection to Britomart also enables transfer to the southern eastern and Onehunga lines. From the transit station, buses radiate out to the western suburbs, and to suburbs on the north shore, east and south Auckland.

The level of connectivity at Footscray is also considered to be high, with each of the modes serving different functions. Services on the regional train network (V/Line) connect from Footscray north, east, south and west to wider metropolitan Melbourne (refer Figure 5-6). These services often connect further with regional coach services for travel outside the Melbourne region. The metropolitan rail service connects the Melbourne central business district with the western settlements of Werribee and Williamstown (refer Figure 5-7). Bus routes form a spoke arrangement with the Footscray station, extending out into surrounding suburbs; and provide a connection to the central business district (refer Figure 5-8). The tram service at Footscray is essentially local running between Footscray and Moonee Ponds. It does however connect with the West Maribyrnong tram that accesses the central business district.
Figure 5-5 - Auckland rail network

Reproduced with permission from Auckland Transport
Source: http://www.maxx.co.nz/media/9658/train%20network%20map_sept%202010.pdf

Figure 5-6 - Melbourne regional train network
Figure 5-7 - Local Footscray train network
Figure 5-8 - Local Footscray bus network

Accessed 2 June 2011

Accessed 2 June 2011

Accessed 2 June 2011
PEDESTRIAN CONNECTIVITY -

Calthorpe advocates, quite ironically, that transit oriented developments should develop with the sole focus on pedestrian networks (1993). He suggests that pedestrians make communities “meaningful” and that their absence simply makes common spaces “useless obstructions to the car” (ibid, p.17). Despite this, the goal of transit oriented development is not to eliminate the car from the neighbourhood, but rather to address the modal imbalance, offering an alternative to the car through pedestrian networks.

Jan Gehl in his 2009 study of central Christchurch (Public Space Public Life) takes this holistic perception of streets, and advocates a vision for Christchurch where pedestrians, cyclists and public transport are be given priority. He sees streets as an important urban space, one that acts as both “connectors as well as urban lounges and meeting places” (Gehl Architects, 2009, p.31). Gehl suggests that there are eight key elements for a pedestrian friendly city:

- An extensive pedestrian network
- Crossings and safety with priority for pedestrians
- Pedestrian accessibility
- Attractive walking routes
- Attractive facades
- Extraordinary experiences
- Inviting and likely lanes
- Celebrating the cities heritage (ibid).

Jacobs, in ‘Great Streets’ suggest that streets are “more than public utilities” and “linear physical spaces that permit people to and goods to get from here to there” (1993, p. 3). He suggests that streets “moderate the form and structure and comfort of urban communities” (ibid, p.3), and allow people to get outside, to meet, to see and be seen, to trade, and to live work and play. He identifies further elements that contribute to making a great street:

- Trees;
- Beginnings and endings;
- Diversity;
- Details;
- Places;
- Density; and
- Contrast (Jacobs, 1993).

As Addington, New Lynn and Footscray are not yet realised as transit oriented developments, assessing their pedestrian environments is difficult. However, both New Lynn and Footscray recognise the importance of the pedestrian network, and include in their planning, objectives/guidelines to create a pedestrian friendly environment (see New Lynn example below).

The following photo essay in further explores the elements of pedestrian friendly environments, as identified by Gehl and Jacobs, and provides examples of these elements could be employed in the transit oriented developments at Addington, New Lynn and Footscray.
Pedestrian routes should be located along or visible from all streets. They must provide clear, comfortable, and direct access to the core commercial area and transit stop. Primary pedestrian routes and bikeways should be bordered by residential fronts, public parks, plazas, or commercial uses. Where street connections are not feasible, short pedestrian paths can provide connections between residential and retail areas. Routes through parking lots or at the rear of residential developments should be avoided.

**ACTIVE FRONTAGE** -
Encourage dynamic ground floor frontages which activate and interact with the street.
*Central Melbourne.*

**OPEN FACADE** -
Allow the facade to open up to the streetscape.
*St Kilda, Melbourne.*

**DIVERSITY** -
An interesting mix of land use activities.
*Central Melbourne.*

**SOFT EDGES** -
Encourage facades with ‘soft edges’ that invite people to sit, stand, and observe public life.
*Central Melbourne.*

**RESTING** -
Provide interesting places to rest.
*Brunswick Street, Melbourne.*

**DETAILING** -
Encourage varied and interesting facades.
*Central Melbourne.*

**ATTRACTION ROUTES** -
**RESTITING** -
Provide interesting places to rest.
*Brunswick Street, Melbourne.*

**ATTRACTION FACADES** -
**Telling a Story** -
Tell the story of place in interesting ways, such as pavement inlays.
*Federation Square, Melbourne.*

**UNIQUELY URBANE** -
Celebrate urban culture.
*ACDC Lane, Melbourne*

**EXPERIENTIAL** -
Play to the senses.
*Central Melbourne.*

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**Walkability New Lynn** –
The design of new or improved streets should include:

- Widening the footpaths to a minimum of 1.8m in general and even more in the core of the centre or on strategic pedestrian routes and removal of obstacles;
- Increasing the number of crossing facilities at intersections and mid-block in order to enable pedestrians to cross the street more easily, with the aim to provide crossing facilities every 100 metres in the centre and 150 metres outside;
- At controlled intersections, the duration of the green time of the pedestrian phase should be increased;
- Improving street lighting so pedestrian routes are pleasant and safe by night;
- Planting trees along the footpaths, providing for more street furniture to increase the amenity of the pedestrian journey;
- Following barrier free and universal access principles and meeting the mobility and vision impairment requirements.

*(Waitakere City Council, 2010, p. 62).*
One of the core tenets of transit oriented development is diversity and choice. Belzer and Autler suggest that one of the key problems of current suburban form is the absence of choice; “residents have few options in terms of housing types, places to shop, and modes of transportation” (2002, p.14). Opponents to transit oriented development often suggest that it is an “attempt to force people to live in high density apartments and take transit” (ibid, p.14). However as Dittmar and Poticha (2004) contest transit oriented development is about expanding, rather than prescribing options for urban living, giving people choice in how they live, work and play.

Diversity, or choice, in transit oriented development is considered to comprise three key elements:

- Land use mix;
- Housing type; and
- Mobility options (covered earlier in Transit Accessibility and Pedestrian Connectivity).

**LAND USE MIX –**

A transit oriented development has the dual function of servicing the everyday needs of residents, and the convenience needs of passing travellers. To do this the transit function needs to be supported by a diverse range of retail, commercial, service, community, entertainment and leisure activities. Given that each transit oriented development is a product of its context, namely its corridor and development typology, there is no prescriptive land use mix. Consequently the land use puzzle for each of the transit oriented developments is unique (refer Figure 5-10).

The land use mix is of fundamental importance to an effective transit oriented development. In creating a synergy between land uses there is the opportunity to reduce travel through internalising trips (Daisa, 2004). A development with a high internal trip capture essentially allows residents to live, work and play within the development, rather than travelling externally, usually by car, to satisfy everyday needs. Daisa suggests that “the broader the mix and diversity of land uses, the higher probability that trips can be captured” (2004, p.116).
In Addington the proposed land use mix serves four key functions:

- To provide small scale, diverse boutique retail to reinforce Addington’ status as a destination, and serve the specific needs of the university population (e.g. Mill Precinct, Artisan Precinct, Railway Lanes).
- To provide general retail and services to satisfy the needs of residents, and the convenience needs of workers and travellers (e.g. Addington Main Street, Transit Station, and Central Square).
- To provide sufficient community facilities to make the suburb generally self-sufficient (e.g. council service centre, library, medical centre, child care, swimming pool, gymnasium, community hall etc).
- To encourage an evening economy using cafe, restaurants, theatres and outdoor performance.

Calthorpe suggests that all transit oriented developments “must be mixed use and contain a minimum of public, core commercial and residential uses” (1993, p.63). He proposes an optimal proportional split (based on land area) for a neighbourhood transit oriented development of:

- Residential land use – 50-80%
- Core/Employment land use – 10-40%
- Public land use- 10-15% (Calthorpe, 1993, p.63)

The proportional split for the Addington transit oriented development, based on Calthorpe’s categories is:

- Residential – 47%.
- Core employment/commercial (including retail, university and commercial) – 20%.
- Public space (including open space, urban space and community facilities) – 17%.
- Secondary employment/commercial (including industrial, big box retail and schools, generally located outside ten minute pedshed radius) – 16%.

As with Calthorpe’s analysis, it should be noted that this proportional split is based on site area and does not account for density or building intensity. The land use mix therefore does not take into account uses at upper levels.

Whilst the mix of land uses at Addington generally approximates Calthorpe’s recommendations there were three key design decisions that influenced the proportional split. Firstly, the residential proportion of the development will be greater than 47% given that the Addington Main Street, Mill, Artisan and University Precincts are all intended to be mixed use with residential activities proposed at upper levels.

Secondly, the core employment/commercial proportion is mid-range given Addington’s close proximity to the Christchurch city core. Rather than competing with the core Addington is intended as a specific employment hub centred on the university, and incubator/innovative businesses located within Central Square, and at the Hazeldean and Raceway business parks. Employment at Addington is also supported by industrial activities and big box retailing on the perimeter of the transit oriented development.

Thirdly, expansive areas of open space have not been provided within the development as it is intended to utilise Hagley Park to the east and CBS Arena to the west. Hagley Park at approximately 165 hectares caters for both passive and active recreation with sports facilities; open spaces and woodlands. CBS Arena in contrast houses large scale sporting facilities (the arena stadium and Addington Raceway), and Rugby League Park.

As with Calthorpe’s analysis, it should be noted that this proportional split is based on site area and does not account for density or building intensity. The land use mix therefore does not take into account uses at upper levels.

Whilst the mix of land uses at Addington generally approximates Calthorpe’s recommendations there were three key design decisions that influenced the proportional split. Firstly, the residential proportion of the development will be greater than 47% given that the Addington Main Street, Mill, Artisan and University Precincts are all intended to be mixed use with residential activities proposed at upper levels.
The proportional split for New Lynn was based upon the zoning framework outlined in the New Lynn Urban Concept Plan. From this plan the proportional split for the New Lynn transit oriented development is as follows (refer Figure 5-11):

- Residential – 39%
- Core employment/commercial – 54%
- Public space – 7%

As with Addington this proportional split is related to site area only and does not take into account uses at upper levels.

Similar to Addington, the land use mix at New Lynn approximates Calthorpe’s optimum range. In comparison to Addington however the proportion of core employment/commercial activities is higher. If the industrial (Working) zone on the periphery if the development is also considered the proportion is much higher. This is potentially reflective of New Lynn’s sub-regional role in serving a much wider catchment than the immediate transit oriented development, including the surrounding suburbs of Titirangi, Glen Eden, Avondale and Blockhouse Bay.

New Lynn also demonstrates a relatively low proportion of public space, although still within Calthorpe’s acceptable range. There actual open space within the transit oriented development is likely to increase as the zoning map does not include proposed open spaces in the Merchant Quarter, Delta Park and Crown Lynn. In addition Olympic Park immediately outside the development is an important contribution to the suburbs open space.

The proportional split for land uses at Footscray is more difficult to ascertain. It appears that the transit oriented development is to be implemented in a piecemeal fashion through planning scheme amendments to the Maribyrnong Planning Scheme. For example comprehensive developments at the transit station, McNab Avenue, and Joseph Road developments have been facilitated through Priority Development Zones; and other small development through rezoning from residential or business to mixed use. It therefore appears that the current zoning plans do not accurately reflect the future transit oriented state; and as the development is not fully planned or realised, determining the mix of land uses is difficult. It would be expected however that the proportional split would be similar to both Addington and New Lynn with a strong focus on residential and core retail/commercial/employment.

A people generator -

When exploring Addington as an urban transit oriented development it became apparent that a ‘people generator’ would be required to boost the suburb, and provide an active catchment to support mass transit. The transit oriented development at New Lynn uses its regional retail (Lynn Mall) and employment activities (commercial and industrial) as its people generator. Similarly, Footscary relies on its distinct ethnic and specialty retail, and two university campuses.

For Addington a number of people generating options were considered including residential development; a shopping mall; and business, educational and entertainment hubs.

Flooding the space wholly with residential development was rejected on three grounds. Firstly there would be minimal uplift in quality of life to offset the increased residential density. Whilst providing a ready mass transit catchment there is the potential that the development would not become a desirable place to live. Secondly, a focus on residential development would see Addington develop as a commuter suburb with minimal local activity during the day and evening; more transit adjacent rather than transit oriented development. And thirdly, as a residential development Addington would be dependent on the city core and suburban hubs for employment, retail and entertainment. This would potentially reinforce reliance on a private motor vehicle.

A shopping mall was also rejected as the people generator for Addington. Whilst potentially providing and all day catchment for mass transit, a shopping mall is essentially a suburban construct and it is likely to be accessed by car, requiring a large parking area, and increasing local congestion. A mall form doesn’t celebrate the main street urban form of Lincoln Road; and given its close proximity to the city core it is likely to be a competitive threat to the retail viability of the core.

The ‘people generator’ for the Addington transit oriented design therefore comprises a mix of educational and innovative commercial activities. A university, Christchurch Performing Arts School, was chosen for the development as it would provide:

- A critical mass for the mass transit network;
- A continuous flow of people through Central Square, the Lincoln Road main street, and further afield; and
- Temporal variation in activity, and encourages an evening economy within the suburb.
A performing arts university also:
- Attracts a suite of supporting retail, commercial, entertainment, and community activities;
- Takes advantage of the creative seed, the Players Theatre, already on site;
- Provides a home for the music conservatorium, originally proposed, and later rejected at the Christchurch Arts Centre;
- Provides a home for the Court Theatre, displaced from the Arts Centre by the 2011 Christchurch earthquakes;
- Taps into the future of urban spaces as home to the creative class; and
- Gives Addington a point of difference within the city, and transforms the suburb to a destination in its own right.

In its role as a people generator, the university is also a significant employment hub. To reinforce Addington as an employment centre, innovative commercial development; which builds on the Hazeldean Business Park, is also proposed within in Central Square, and along Whiteleigh Avenue (Railway Business Park).

The location of educational institutes within urban areas, and at transit nodes is a common land use practice (refer Figure 5-12). Locally, the University of Canterbury was located in the central city prior to its relocation to suburban Ilam in the 1960’s. Christchurch Polytechnic Institute of Technology currently occupies a central city site, and there are a number of other primary, secondary and tertiary institutes within the core.

Footscray, and to a lesser degree New Lynn, have educational institutes as key components of their landuse mix; and Melbourne as an example has numerous city core education facilities (refer Figure 5-12). Locally there is also a proposal for the co-location of a new transit station and Manukau Institute of Technology campus at Hayman Park in Auckland.

HOUSING TYPES –

As transit oriented development concerns broadening, rather than prescribing, options for urban living it is desirable to have a range of housing densities, types, and tenures. This diversity encourages stable communities where residents can move through their housing lifecycle within the same neighbourhood; encourages a community with a diverse demographic; and perhaps most importantly gives people choice about how they will live.

As each transit oriented development is different, so too is each residential strategy. However the guiding principle is that housing is organised along a density gradient with the highest concentration of households nearest the transit service. This strategy is evident at each of the case study sites.

At Addington, the most intense residential development is clustered around Hagley Park, taking advantage of not only the close proximity to the train station, but also the high amenity the park provides. Higher density development is also proposed along Clarence Street South, in close proximity to the university; and between Dickens and Spencer Street adjacent to the Addington Main Street. These three areas are all located within one kilometre of the train station and bus interchange. Similarly at New Lynn the existing medium residential development at Ambrico Place and the proposed medium-high residential development at the Crown Lynn precinct are located within 500 metres of the transit interchange. At Footscray, the proposed McNab precinct, immediately adjacent to the train station, includes high density residential development. At each of the case study sites as the distance from the transit node increases, the density decreases, with the periphery of the transit oriented development becoming a transitional zone to conventional suburban form.

The density gradient, in combination with varied average residential densities encourages a mix of housing typologies across the transit oriented developments. Exploration of residential configuration, form and function is potentially the focus of a thesis in itself, and therefore is not explored to a detailed level here. However, it is intended that a variety of housing typologies, including apartments, student hostels, townhouses, and semidetached dwellings, would be employed within Addington to provide variation across the development.
LIVEABILITY

Belzer and Autler suggest “at its core, that transit oriented development strives to make places that work for people” (2002, p.12). Places that work for people will ultimately be liveable. Whilst there is no absolute definition of liveable, and like transit oriented development it is a locational and situation concept, a liveable place does possess certain qualities. Before considering these qualities it must be noted that in this context, liveability, relates to the public realm, i.e. the public places (e.g. civic buildings) and public spaces (e.g. public open space) which stitch our neighbourhoods together.

Dittmar and Poticha consider a liveable transit oriented development to be one that has a healthy pedestrian realm. They suggest the following characteristics for its creation:

- Places for people – vibrant, safe, comfortable, varied
- Enrich the existing – a distinctive response that complements its setting
- Make connections – integration of land use and transit
- Work with the landscape – use the sites intrinsic resources
- Mix uses and forms – diversity in form, use, tenure and densities
- Manage the investment – well maintained and managed spaces
- Design for change – development that is flexible and adaptable (2004, p.31-32).

Calthorpe takes a wider view, suggesting that it is the “civic elements (that) determine the quality of our shared world and express the value we assign to community” (1993, p. 23). He laments the loss of the commons, suggesting that the “public world is shrunken and fractured”, and “displaced by an exaggerated private domain” (Ibid). In a liveable place, civic and public space is not the residual space left over after development, but is integral to the social, cultural, commercial and physical functioning of the community (Calthorpe, 1993). He suggests that a liveable place should provide a public focus, and be the centre of the community, both literally and metaphorically (Calthorpe, 1993).

Whilst design and planning may enable compact, mixed use, pedestrian friendly neighbourhoods, it does not necessarily translate to a liveable place. Sim suggests that a liveable space is a product of its physical structure or ‘hardware’ and its activity or ‘software’ (2010). Design at the strategic scale sets the scene for the space, but it is at the humanistic and experiential scale that a liveable place is created. It is the software or activity that differentiates a node from a place, and elevates a space to a place.

Gehl relates liveability to the quality of public space provided, and the “overall invitation to the likely users to walk, stay, sit or otherwise enjoy these spaces” (2008, p.106). He suggests that the development hierarchy traditionally focuses on buildings, then spaces and then life; typically creating unappealing places (Gehl, 2008). New urban development needs to reverse the equation, asking the questions “what kind of life do we want here”, “what kind of spaces will be needed for this life”, and lastly “how can the buildings in this area be placed and formed to support these spaces and the life in this area” (Ibid, p.108). Gehl identifies three key elements for a liveable place:

- Protection - from traffic, from crime, from the climate.
- Comfort - possibilities for walking, staying, sitting, seeing, talking, playing.

In Gehl’s study of Christchurch (Public Life, Public Space), he takes these key elements, and makes the following recommendations for a liveable place:

- Improve the visual environment;
- Improve conditions for spending time and relaxing;
- Improve the feeling of safety at night;
- Create a multifunctional centre; and
- Design for fixed, flexible and fleeting activities (Gehl, 2009).

Whilst the characteristics offered by Dittmar and Poticha, Calthorpe, and Gehl are all essential to create a liveable place. I propose an additional element or characteristic; that of identity. As Florida suggests a liveable place refers to “the unique set of characteristics that define a place and make it more attractive” (2002, p. 231). A truly liveable space will reveal, revel in, and celebrate these characteristics.

Our public space lacks identity and is largely anonymous, while our private space strains towards a narcissistic autonomy. Our communities are zoned black and white, public or private, my space or nobody’s. (Calthorpe, 1993, p.23)
All three case study sites currently have public realm elements that contribute to liveability. At Addington the public realm is central to the transit oriented design. Central Square, the largest open space, acts as a urban version of the village green, it is central to daily and commuter life in Addington. The clustering of university and performance spaces around the square livens the edges, and transforms the square into a vast stage. More intimate performance spaces clustered around the square offer a more humanistic scale, for more intimate performances. The buildings surrounding the square all interact with the stage through the public land uses, transparent facades, and blurred boundaries.

In Footscray the train station will also spill out in to a public forecourt area. This station forecourt will link through to adjacent mixed use developments (McNabb precinct) and the main shopping precinct. As yet the public open space realm at Footscray is not yet fully developed. There are discrete pockets at Maddern Square and Nicholson Mall, and on the day I visited these spaces were well utilised. Despite the underdevelopment of the public realm, there are elements of a liveable place appearing in Footscray. The proposed market feel of the Core Activity Precinct, and the regionally renowned Footscray Food market, build on Footscray’s strong ethnic retail heritage. Combined with the suburb’s reputation as a centre for world cuisine the ‘software’ or activities are there.

The public realm at New Lynn in contrast is at present vastly underdeveloped. Discrete areas of urban public space exist as plazas outside the library, community centre, and at Todd Triangle, and on a weekday lunch hour all were being used. The proposed public realm at New Lynn will contribute to the liveability of the transit oriented development once the shared space, and laneways of the Merchant Quarter; the urban public space at Todd Triangle; and the Crown Lynn park are completed.

A liveable place is a function of more than just the public space or hardware, it is also a function of the software or activity. As Addington is only a design experiment, and New Lynn and Footscray are not wholly realised as neighbourhoods, this software is not yet fully developed, although it is hinted at. At New Lynn it can be found in the sculptural elements that tell the story of place, the ‘bootscootin’ line dancing at the community centre, and the cafes skirting Todd Triangle. In Footscray it is the early morning Tai Chi in Nicolson Mall, the retailing that spills out onto the street, and the exotic smells from the ethnic eateries.

The following photographic essay explores the elements of a liveable place as discussed previously that could be exemplars for the transit oriented development case studies. It is these elements that make a place fun, vibrant, exciting, and active; it is these elements that make a place for friends and lovers.

In short, the formula must be: first life, then spaces, then buildings - and in that said order please. (Gehl, 2008, p.108)
Figure 5-13 - Elements of a liveable place

Public space alive with interesting features, and landmarks for wayfinding and identity.

**LANDMARKS** -
Well known spaces and places act as landmarks, punctuating the urban fabric.
*Flinders Street Station, Central Melbourne.*

**ART** -
Blank facades become canvas for urban art.
*Union Lane, Central Melbourne.*

**SCULPTURE** -
Quirky, interesting elements provide a sense of fun in the streetscape.
*Central Melbourne.*

**A VISUAL FEAST** -
Public space that invites people to stop, stay and enjoy.

**PLACES TO REST** -
Spend a lazy sunday afternoon snoozing in a deck chair.
*Federation Square, Melbourne.*

**PLACES TO CHAT** -
Steps, walls, ledges etc all become places to stop, meet and chat.
*Federation Square, Melbourne.*

**PLACES TO EAT** -
Food attracts a crowd, and is a key element for enlivening a space.
*Federation Square, Melbourne.*

**JUST SPENDING TIME** -
Night-time destinations and activities extend the temporal life of the space.

**PLACES TO BE** -
Places to go and things to do.
*Chinatown, Central Melbourne.*

**LIGHTING** -
Attractive lighting creates interest and identity, and assists with safety.
*Chinatown, Central Melbourne.*

**ACTIVITY** -
Activities to liven and populate the street environment at night.
*Evening flower vendor, Central Melbourne.*
COMFORTABLE SURROUNDINGS - A bus stop with shelter, seating, nearby active frontages, and high amenity surrounds. 
Central, Melbourne.

SAFE AND PLEASANT WALKING - Walking environments where pedestrians have priority, with good pavement surfaces. 
Central, Melbourne.

PLEASANT STREETSCAPES - High amenity streetscapes with interesting built form, trees, and outside activities. 
Central, Melbourne.

EXHIBITIONS - Provides a changing face for public space. 
Federation Square, Melbourne.

INTERACTIVE - Elements that appeal to the senses and invite participation. 
Water wall, Central Melbourne.

PERFORMANCE - Encourages creative use of public space. Is a draw card, attracts people and creates a buzz. 
Comedy Festival, Melbourne.

MARKETS - Local markets draw the community together. 
Addington, Christchurch.

STREET ENTERTAINMENT - Enlivens the streetscape, encouraging people to stop, observe and participate. 
Central Melbourne.

MUSIC - Music always draws a crowd and adds vibrancy to the streetscape. 
Busker, Central Melbourne.

FLEETING - Comfortable spaces for the necessary activities of urban life.

FLEETING - Public spaces that are flexible and open to different activities. Spaces that people want to be.

FLEETING - Public spaces that encourage impromptu, informal, or temporary activities.

SAFE AND PLEASANT WALKING - Fixed -

SAFE AND PLEASANT WALKING - Flexible -

FIXED -

SAFE AND PLEASANT WALKING - Flexible -

FIXED -

SAFE AND PLEASANT WALKING - Flexible -

FIXED -

SAFE AND PLEASANT WALKING - Flexible -

FIXED -

SAFE AND PLEASANT WALKING - Flexible -

FIXED -
Celebrating places unique attributes. Using these rather than generic, universal brands and elements to define place. Inhabited by people who engage with and recognise the place; a community.

Fragments of the past revealed in a contemporary manner. Given identity, context and contribute to a sense of place. Differentiates a space from its surrounds.

Subtle layers between public and private space. Allows a sense of belonging as well as retreat. Creates vibrant interfaces, and opportunities for interaction.

CULTURE -
Celebrate specific and unique cultural attributes.
Chinatown, Central Melbourne.

URBAN GRIT-
Real buildings, real people, real history (Florida, 2002, p.228).
Central Melbourne.

HISTORIC ELEMENTS -
Historic buildings are a key element in the urban fabric.
Flinders Street Station, Central Melbourne.

HERITAGE -
Reuse heritage structures for modern land uses.
Central Melbourne.

SPACES -
Reinventing the city's back lanes and arcades as vibrant urban spaces.
Central Melbourne.

DETAILS -
Referencing the past within a contemporary framework
Orche block paving at Federation Square, Melbourne, is an urban artwork evoking images of the outback.

URBAN FRAGMENTS -

COLONNADE -
Blurring the boundary between inside and outside.
Central Melbourne.

STAIRS -
A place to withdraw physically from the flow, but still observe and participate.
Central Melbourne.

SIDEWALK -
Interesting footpaths enliven the thick edge between public and private space.
St Kilda, Melbourne.
BELZER AND AUTLER (2002) suggest that this dual nature of stations is one of the key challenges facing transit oriented development, particularly in relation to the regional and local functions of the station. In performing a dual function, a transit oriented development is asked to act “as both a node within a larger regional or metropolitan systems, and a good place in its own right” (Belzer and Autler, 2002, p.4).

Using Bertonlini and Spit’s characteristics for node and place, it is considered that the transit oriented developments at Addington, New Lynn and Footscray will adequately reconcile their function as both a node and place. With respect to nodal functions:

- Each transit oriented development is part of a regional, polycentric urban and transport pattern.
- Each offers the choice of multiple modes – train, bus, tram, walking and cycling.
- Each provides a discrete portion of the transit oriented development that caters primarily for passengers or travellers. For example in Addington the transit station caters for passengers convenience shopping needs whilst Bernard Street, Wise Street and the Lincoln Road main street cater to residents.

Whilst achieving the nodal functions, Addington, New Lynn and Footscray also satisfy the characteristics of place:

- Spatially all three developments are located on ‘destination connector’ corridors, each forming destination in its own right: Addington as an inner suburban hub, New Lynn as a sub-regional centre, and Footscray as a Central Activity District.
- Each development has shed its suburban roots and is distinctly urban at its core with a higher density and diverse mix of land uses including retail, commerce, education, entertainment and recreation.
- Given this diverse mix, the users of the space are also diverse, ranging from commuters, residents, students, and employees through to visitors and tourists.

**Table 5-2 - Typical characteristics of stations as node and place**

<table>
<thead>
<tr>
<th>NODE</th>
<th>PLACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional spatial reach</td>
<td>Location is typically urban</td>
</tr>
<tr>
<td>Polycentric transport pattern</td>
<td>Land use density is high</td>
</tr>
<tr>
<td>Modal choice is high</td>
<td>Diversity of land uses is high</td>
</tr>
<tr>
<td>Focus is on passengers</td>
<td>Dominant land uses are non-transport related</td>
</tr>
<tr>
<td>Land uses at node focus solely on passenger care (e.g. convenience retail)</td>
<td>Land uses are place connected (e.g. retail, commercial, recreational, residential)</td>
</tr>
<tr>
<td>Nodal users are typically commuters and city users</td>
<td>High diversity of place users</td>
</tr>
</tbody>
</table>

Adapted from Bertonlini and Spit, 1998, p.18-19.
Whilst it can be argued that merely having the place characteristics is not sufficient to make a good place, an appropriate combination of both node and place characteristics are precursors to a liveable place. Having the nodal characteristics at Addington, New Lynn and Footscray potentially satisfies regional transit goals; and when balanced, through design, with the place characteristics, local goals are also satisfied.

It is suggested however that this node/place balance is not fixed, but shifts as a development evolves. Historically all three sites started as transit nodes in response to their location near rail corridors, and waterways (New Lynn and Footscray). Initially operating as nodes servicing industry, the gradual clustering of supporting commercial and residential activities saw the suburbs develop into both nodes and distinct places; Addington as a railway settlement, New Lynn as a merchant and pottery centre, and Footscray as an immigrant community.

The subsequent decline of industry and the primacy of rail as a transport option, growing suburbia saw the recession of the space as both a node and a place. Transit oriented development could therefore be viewed as the next evolutionary phase where the nodal characteristics are restored as a both a regional growth management tool, and as a catalyst for the revival of place.

As with any evolutionary movement, change is not instant. In the case of transit oriented development the infrastructure investment (e.g. train station or interchange) is usually the first element to be realised, with the development therefore initially operating more as a node than a place. This is currently the case with both New Lynn and Footscray where the station development is complete, but not the supporting land uses (e.g. mixed use, and higher density development).

Whilst in the case of both New Lynn and Footscray these land uses are present in the development to a degree, the transit oriented design has not yet integrated or tied them altogether.

5.3 SUMMARY -

This chapter asked whether transit oriented development was an appropriate design solution for a landscape that is neither urban nor suburban. Exploring the transit oriented design for Addington, in the context of the theory and case studies, shows that transit oriented development is a situational and locational concept; not a design formula that can be in discriminately rolled out. The transit oriented developments for Addington, New Lynn and Footscray are all different, yet all seek to achieve goals of mass transit, compact development, pedestrian friendliness, diversity, identity and liveability. These traits differentiate such development from traditional suburban development which tends to be sprawling, car dominated, placeless, and without community.

All development is essetntially transit oriented, occuring on a continuum from either transit oriented, focussing on mass transit and pedestrians; to transit rejective where these elements are ignored (refer Figure 5-15). As both New Lynn and Footscray are not yet wholly realised they are currently considered to be transit adjacent, and approaching transit oriented as each of the design elements is progressively introduced. Addington as a design for a future state contains all the physical elements necessary for a transit oriented development; and through their spatial expression seeks to create an environment for the social and cultural elements to flourish.
At the start of this thesis, I introduced Addington as an in-between space; a liminal space. Liminality, derived from ‘limen’, the Latin for threshold, is a place or space between. First appearing in social anthropology, liminality describes an intermediate state during a rite of passage. Turner, in ‘The Ritual Process’, suggests that there are three behavioural phases in transitioning between space, place and time (1969). The first involves a separation or detachment from social norms and structure. The second; the intermediate, or liminal phase; is a period of ambiguity. The ritual subject neither belongs to the past, nor the future, they are anti-structure. In the final phase the subject is reaggregated into a new set of norms and structure. Turner studied these rights of passage in the context of social ritual amongst the Ndembu people of Zambia; observing transition through different life, social, and governance cycles. Turner’s ideas on transition and liminality, whilst born in social science, are equally applicable to landscape. Liminality resonates throughout the design for Addington 2041, with expression through the basic form, spatial form and metaphorical form of the design. Contextually, Addington sits between urban states, it is neither urban nor suburban; and between urban programmes. Spatially, the transit oriented design for Addington occupies a middle ground between low density suburban living, and high density city living; and metaphorically, liminal spaces exist all throughout the urban fabric of the design. Berger suggests that these are the spaces “between occupancies and uses, successional phases, and (dis)investment cycles” (2006, p.29). Spatially, they may be the gaps between built form, which lie unclaimed and unprogrammed. They may be the infrastructure that lies invisible between architecture and landscape, or more simply the doorway between two spaces.

These inbetween spaces are however not lost, but merely waiting to be found. Returning to Turner’s three phases of ritual process, liminal spaces are awaiting reaggregation. Whilst they may have no status, rank or role; liminal spaces are far from negative. Liminality, as an undefined state, is a release from normality. Stevens suggests that liminality is the “escape from social convention and the exploration of new possibilities” (2007, p. 74).

He likens liminality to a state of play. Once a space is freed from its past programme, and not yet imprinted with the future, it is open to all opportunity.

Addington, like New Lynn and Footscray, is indeed in this liminal phase. Released from its past programme as an industrial and railway settlement, it awaits imprinting. Released also from the social convention of suburban development it presents opportunity for transit oriented development as the new design programme. The contextual and spatial exploration of Addington as a liminal space has been addressed in the previous section. This section therefore focuses on liminality at a finer grain, looking at its expression at the human scale through middle landscapes, and identity.

6.1 MIDDLE LANDSCAPES -

Space, and its attributes, are neither fixed nor absolute, and as such there is rich ground for in-between, or ‘middle landscapes’. Middle landscapes arose originally as a descriptor of suburbia as a mediating or intermediate space between city and country (Rowe, 1991). This middle landscape is neither one nor the other, but a hybrid incorporating “the functional specialisation, diversity and social heterogeneity of the traditional city with dispersed, disurban, and almost rural patterns of small-town country life” (ibid, p.289).

The concept of the middle landscape however is not limited to suburbia and can be applied in a much broader sense when considering space. The transit oriented design experiment for Addington serves up a potential smorgasbord of middle landscapes, at various scales for exploration (refer Figure 6-1). However, four are considered particularly relevant to this thesis:

- First suburbs;
- Infrastructure;
- Third places; and
- Blurred edges.
This thesis has explored transit oriented development as the new design programme to replace this default. Transit oriented development itself can also be viewed as a middle landscape; one that mediates between a dense city core, and sprawling suburb. Beauregard suggests that transit oriented design “constitute a middle ground”, providing “an alternative to low-density subdivisions, as well as crowded and congested central cities” (2008, p.104). Beauregard also suggests that transit oriented design creates a middle ground where all urban designers, including New Urbanists and their critics, can meet (ibid).

**LANDSCAPE - ARCHITECTURE -**

Barbara Solomon, in her book ‘Green Architecture and the Agrarian Garden’, refers to the interface between landscape and architecture as a ‘thick black line’. This line however is no longer absolute, and diffusion between disciplines has seen architecture appropriating landscape, and landscape architecture reinventing the relationship between form and space; inside and outside.

Corner too mines the rich vein between disciplines, identifying landscape urbanism as a “new hybrid discipline”, one that dissolves the dualities of form and space, nature and culture, boundary and centre (2003, p.58). Corner sees landscape urbanism as a new way of thinking about the contemporary city and highlights the significance of infrastructure on urban form and function as a key design theme (Corner, 2003).

Strang too sees the importance of infrastructure, suggesting that it is “an essential visual component of urban settlements”, but laments that its design “is diffused, falling piecemeal to many disciplines” (1996, p.8). He suggests that whilst we once revered the landscapes that facilitated civilisation we now render these invisible, ignoring the “potential these infrastructural systems have for performing the additional function of shaping architectural and urban function” (Strang, 1996, p.10).

Building on the ideas of Solomon, Corner, and Strang, I chose to explore the middle landscape between architecture and landscape architecture as the realm of infrastructure. Largely abandoned by both disciplines, infrastructure is seen by architecture as fluid, contradicting the solidity and permanent of the discipline. Similarly, landscape architecture avoids infrastructure as this fluidity is either too fast or too slow to express meaningfully. Both disciplines avoid this middle landscape as it is seen as a need rather than a statement, and a service rather than a space.
As transit is the key driver of urban form and function in the design for Addington 2041, it made sense to celebrate, rather than conceal its infrastructure. However, I made the design decision early on to avoid traditional (architectural), nostalgic station forms, instead looking to contemporary infrastructural forms. The station, and its surrounds, also had to highlight its pivotal position within the local neighbourhood, just as the earlier Addington railway workshops had been; and its regional significance through creating a sense of grandeur, importance and permanence.

The form of the Addington train station is neither a building nor a landscape but rather an infrastructural hybrid. Intended as a landscape surface that rises from Central Square and envelops the existing station, the station reconnects Addington with the historical workshops site, and is an injection of form within the flat plains landscape. Beneath the surface, built form clusters in pods, similar to that seen at Southern Cross Station in Melbourne, Australia. These pods house commercial space at upper levels, and retail, transit, information, and convenience services at ground level. Beneath the surface, the ‘bones’ of the structure are revealed, with the surface appearing to float over a lattice of steel beams, and glass facade. The floating structure, and the voluminous space beneath, makes reference to the grand halls of traditional railway stations, and the open warehouse nature of the previous railway workshops. The entrance into the station is deeply recessed, improving legibility, and signifying the importance of the space.

Built form (architecture) and space (landscape) are not mutually exclusive; there is a rich vein of inbetween space to explore. Such space is ambiguous, neither inside nor outside, and plays an important role in blurring edges, diffusing the public/private interface, and creating transitional space. Assefa, in his critique of Frank Lloyd Wright’s ‘Fallingwater’, and Alvar Aalto’s ‘Villa Mairea’; examines the fluid nature of inside and outside, and identifies three concepts that explore the continuity between the spaces; in-betweeness, interpenetration and intermingling (2003). Each of these concepts has been employed in the transit oriented design for Addington.

**INSIDE - OUTSIDE -**

“Inbetweeness involves a place neither inside nor out. It incorporates a threshold whereby a strong dialogue between the inside and outside occurs with a unique in-between experience as a result” (Assefa, 2003, p.12). This unique experience is expressed in the transit oriented design for Addington in two ways.

The colonnade, along the western edge of Central Square, is neither inside nor out. The colonnade itself is an extension of the inside, reinforced by the transparency of the glass facades of the university buildings; and the partial enclosure of the space. Activities within the space, such as cafe dining and market trading, also reference an indoor environment. The inbetween nature of the colonnade serves three purposes; it is the uniting seam between Central Square and the university; it provides a transitional threshold between the public space of the square, and the quasi private space of the university; and it provides a covered seating and promenade area.

The deeply recessed entry to the transit station is the second example of inbetween space. The terraces carrying the station surface to grade are an extension of the inside, whilst the recessed entrance keeps the space open to the outside. This in-between space serves three key functions. The over emphasised recess comments on the importance of the station and its core function within Addington. The angled shape of the recess draws outward bound travellers in, and propels inward (Addington) bound travellers into Central Square; and the space is immediately recognisable, and legible, as the station entrance. In contrast the ‘back door’, vehicle entrance to the station, located on Detroit Place, lacks any such ‘grandeur’ reinforcing the importance of the pedestrian in the transit oriented design for Addington.
INTERPENETRATION -

Interpenetration expresses the “continuity between inside and outside” (Assefa, 2003, p.13). Interpenetration can be expressed as a physical link where the inside projects into the outside; or as a spatial link where the outside is cradled within the inside. Interpenetration of the inside is expressed at Addington in two ways; through the highline and steps. The highline is a projection of the inside station outwards and serves to link the station with Walsall Street, provide an elevated promenade for viewing activities within Central Square, and provides a covered walkway to the station for pedestrians at grade.

Interpenetration of the outside is expressed at Addington through the use of balconies, courtyards, and lanes. Balconies, projecting from commercial and university buildings overlooking Central Square, Bernard Street, Wise Street and the main street (Lincoln Road), penetrate the outside drawing that space inside, creating “defined spaces that belong simultaneously to the inside and the outside” (Assefa, 2003, p.13). The university courtyards create a different dialogue between inside and outside through the cradling of space, making it belong to both environments. Similarly the Railway Lanes in the Artisan Quarter enclose space using building facades as walls, and trees, lighting and canopies as ceilings, blurring the relationship between inside and outside.

INTERMINGLING -

“In intermingling, architectural and environmental elements are used metaphorically to bring the meaning of outside in, and inside out” (Assefa, 2003, p.14). In the transit oriented design for Addington the outside is drawn inside through the continuity of materials. For example the curved paving lines at the Seed Shed, reflecting the track form of the old railway workshops, is continued as a paving feature within the building. Similarly the gantry materials of the high line extend through to the first floor interior of the station and the Seed Shed. Intermingling is also employed within the station extending the deck structure of the kahikatea pavilion into the station, essentially drawing this forest landscape in. Similarly, the central light dome is imprinted with a tree design casting shadows on the station floor providing both a temporal marker (i.e. the composition of the shadows varies with time and season), and a spatial marker, making reference to the links to the city via Hagley Park.

WORK - HOME -

Ray Oldenburg in ‘The Good Great Place’ suggests that he problem of place is the loss of third places, the middle landscapes between home and work (the first and second places) (1999). Oldenburg defines third places as those “where people meet to relax, converse, and enjoy one another’s company” (Oldenburg, 2001). They can take various forms from cafes, bookstores, laundromats, and local taverns, through to farmers markets, post offices, town squares, and theater steps (ibid). He suggests that in the fragmentation of our cities, we have lost our affinity for such places. Instead our suburban lifestyles are privatised and isolating; our neighbourhoods are devoid of quality meeting places; and we often have a negative perception of public space (Oldenburg, 2001). In addition we have gifted the time traditionally spent these third places to transit, or more aptly, congestion. The free hour we once had between work and home is now spent on the commute, or shuttling between scattered land uses (ibid).

Oldenburg suggests that “houses alone do not a community make”, and that third places are essential in a well functioning neighbourhood (2007, p.140). Third places enable more than a shallow geographical relationship within neighbourhoods, encouraging “social cohesion...[a] sense of identity and... psychological support” (Oldenburg, 2007, p.138). The functional benefits of third places include fostering social capital; providing a neutral space to conduct friendships; serving as ‘ports of entry’ for new residents to the neighbourhood; and acting as informal political forums (Oldenburg, 2008).
The concept of the third place took on renewed significance during the aftermath of the Christchurch earthquakes. Local school halls, churches and community centres were commandeered as temporary third places to provide information, support and assistance to those whose homes and work places were damaged. Unusual locales also served as ‘pseudo’ third places. Water refill stations, chemical toilet stations, and mobile shower facilities became places where neighbours congregated to share information and stories, and to check on the welfare of others.

Although the earthquake is a discrete event, the nature of third places is changing. Gone are the places that encourage interaction, conversation, and loitering (without the negative connotations); replaced with generic coffee houses, fast food chains, and sterile malls. Whilst these places may be a social space that is neither home nor work, they lack third place credential in three key ways. They emphasise the fast processing of clientele (more people = more money); they are exclusive rather than inclusive environments, dictating acceptable behaviours and participants; and the primary focus is consumerism rather than community.

Oldenburg suggests that whilst different spaces can act as third places, they do share common characteristics. Typically third places are:

- Different from both home and work;
- Neutral ground, an inclusive space;
- Accessible in both time and location;
- Spaces with a low profile; and
- A congenial environment (Oldenburg, 1999).

Oldenburg also suggests that third places evolve or grow, rather than being constructed; which creates a challenge for the design of urban neighbourhoods (ibid). It is the role of the designer to ‘seed’ these third places through the creation of environments in which they flourish.

Addington already has an emerging third place, the Addington Coffee Co-op. Located on Lincoln Road the cafe, roastary, entertainment venue, laundromat, clothing retailer, and fruit stall, operates from a what was an old mechanics workshop (refer Figure 6-3). The Co-op has become a hub for Addington’s office workers, and weekend cafe visitors, and is building a reputation as a “local hangout” where you are “bound to run into someone you know” (Sebastian Warne in Preece, 2011, p.27). Personal experience of the place suggests that it possess many third place characteristics (e.g. different from home or work, neutral ground, and a congenial space). The Co-op’s current daytime opening hours limit its accessibility, although this would likely change if the surrounding environment became more supportive. Its current, and valued, low profile is also beginning to change with the east-west migration of office workers and cafe visitors as a result of the recent earthquakes.

As well as nurturing and encouraging third places such as the Coffee Co-op, the transit oriented design for Addington employs two key design interventions to seed third places; enabling entertainment, and vibrant interstitial spaces.
ENTERTAINMENT -

Hayden suggests that in the absence of the ideal city, i.e. that without third places, we have sought to create the ideal home (in Oldenburg, 2007). Retreating inwards we rely on bigger and better homes, bursting with home entertainment (television, internet etc) to provide connection and interaction. Coupled with Oldenburg’s suggestion that third places are not limited to coffee shops and book stores; and the notion that place is not only tied to form and space, but also event; the design of Addington as a creative hub seeks to draw people out of their homes providing entertainment as the seed around which third places can develop. To achieve this there are a variety of indoor and outdoor performance, display, and activity spaces.

Within the core of the transit oriented design there is a hierarchy of performance space, including large, moderate and intimate zones (refer Figure 6-4). Central Square is the largest performance space, focussed on the Seed Shed stage. It is envisaged the Square could hold approximately 2000-3000 people for major events (e.g. concerts, festivals etc). Viewing points are provided at ground level on raised seating in the square; and at elevated levels from the highline (elevated walkway) across the Square, from the raised station surface, and from building roof terraces on the eastern margin of the Square. Temporary ground level seating can also be installed within the Square, and space beneath the stage is provided for storage. Also within Central Square, the colonnade and steps along the western margin provides space for street entertainment, buskers and the like. The steps provide either a raised stage, or informal seating for viewing.

Walsall Street also provides a large performance space, but with a different character to Central Square. Envisaged as a ‘carnival street’ the space is intended for festivals, markets, mardi gras and exhibitions. Land uses at the ground floor level will spill out onto the street with outdoor trading and al fresco dining. Design interventions are used to enclose the space, keeping activities focussed rather diluting at the edges. At the eastern and western ends of Walsall Street, overhead gantries provide a ‘start’ and ‘end’ to the space, as well as providing elevated viewing points and access to the space. Along Walsall Street, large canopy trees provide shade, amenity and enclosure; and lighting, banners and sculpture strung across the space provide a roof or ceiling.

Moderate performance zones include the Workshop Theatre, Walsall Street and Mill Plaza. The large curved facade of the Workshop Theatre provides a dramatic ‘set’ for performance both inside and outside. Inside the theatre is a performance venue catering for audiences up to 1000 people.

The internal space is flexible to cater to different performing arts (e.g. theatre, dance, orchestra etc). Outside, the steps of the theatre also provide a ‘place to see’ and a ‘place to be seen’. The steps are oriented towards the western wall of the Seed Shed, creating an informal outdoor cinema, with images projected onto the shed wall. The orientation of the steps also allows seated views of activities in Mill Plaza and along Walsall Street. The steps also provide an elevated stage and a prime spot for street entertainers and vendors to catch commuters walking to and from the station. It was considered important to provide informal spaces for street entertainment at locations along the journey from the main street to the station to provide vibrancy, music, and a quirky element that sets the space apart.

The Mill Theatre reprises its role as an intimate performance space, and is the home of the local amateur theatre group (the Riccarton Players). The ground floor foyer of the theatre opens out onto Walsall Street on the eastern side. On the western side, the Mill frames an intimate outdoor performance space. Large doors open from the Mill out onto the space and a temporary stage and seating is provided catering for audiences up to 200 people.
INTERSTITIAL SPACES -

Oldenburg suggests that in well functioning cities “their interstitial spaces are filled with people”; the streets, parks, squares, lanes and alleys have people moving, meeting, sitting, playing and talking (2007, p.145). Three elements are considered necessary for seeding active interstitial spaces; pleasant, safe and accessible spaces; a varied mix of spaces and land uses; and focal points or core settings (refer Figure 6.5). In the transit oriented design for Addington, pleasant, safe and accessible spaces, are provided using a pedestrian focus through shared space along Lincoln Road, Bernard, Wise, Walsall and Clarence Streets. High levels of amenity will be achieved in these shared spaces with street planting, paving patterns, seating, and night lighting.

To activate the street network adjacent land uses will be mixed with active ground floor frontages. There is also a mix of different urban spaces proposed including laneways, public squares and plazas, and a main street environment. The character of each would be articulated with different land uses, forms, materials, planting and artistic elements.

These artistic elements (some of which are also functional) will also provide focal points within the development, providing landmarks and increasing legibility. There is a key landmark line reconnecting ‘old’ Addington (Church Square) with ‘New Addington’ (Central Square and Tower Junction). Varied vertical landmark elements punctuate the journey from town to station (and vice versa) creating an urban rhythm and revealing Addington.
6.2  IDENTITY -

Civic, identity is often derived from the natural features of a place (Kriken, 2010). Auckland is known as the ‘city of sails’ for its relationship with its harbours; ‘windy Wellington’ recognises the capital’s climate; and Christchurch’s ‘garden city’ celebrates the parks and public gardens. But what if the natural landscape is unremarkable, unrelated, or obscured? From where does a place draw its identity? In such a situation, the cultural landscape can be a rich source. A place can differentiate itself through its “economic strength, its age, and its unique institutions of art, culture and government” (Kirk, 2010, p.215). Deriving identity from culture has given us ‘the big little city’ for Auckland, and the ‘capital of cool’ or ‘Wellywood’ for Wellington.

Although Addington is located within the wider outstanding natural landscape of the Port Hills, Canterbury Plains, and further afield the Southern Alps; these features have at best only a remote connection with the neighbourhood. Addington’s identity is drawn from its cultural landscape; its industrial and railway past, and its close proximity to the city amenities. Addington has an urban identity, at present revealed through urban fragments scattered throughout the neighbourhood.

But why is identity important? There are the accepted reasons of connection, community and belonging, however, in this instance I would like to consider identity in an additional light, as the element that elevates a space to a place. In the context of transit oriented development this is significant. As suggested earlier, the concept is more than a physical assemblage of buildings around a train station.

Fay and Sellbach propose that identity is fundamental to the notion of sustainability, and that the definition of such “should be broadened beyond environmental concerns, to incorporate the everyday places of people – the liveable, lived-in dimension of space” (2008, p.247). They suggest that identity, or place-making, is core to sustainability, particularly given the strong link between behavioural and environmental change (ibid). Again this is highly relevant to transit oriented design, which as discussed, will require a paradigm shift in the way we conceptualise and experience urban space. In the local context exploitation of this link will be paramount in making medium to higher density living a desirable lifestyle choice, and public transport an attractive alternative option to the car.

A liminal space, like Addington, whilst in-between is not invisible. Despite the fact that we may not have the language or programme to define the place; as is the case with first suburbs; it is the role of design to articulate its identity. Elevating a space to a place requires the revelation of memories, stories, and experiences, as Fay and Sellbach suggest “our senses of place” (2008, p.2008).

MEMORY -

Memory is not an abstract or intangible concept; it is closely tied to the idea of place. The method of loci, a mnemonic device, highlights this close relationship. In the first instance, a series of loci (or places) are imprinted on the memory. The elements to be remembered, whether dialogue, text, numbers etc are then attached to the imprinted loci. Recollection is achieved through taking a ‘mental walk’ through the loci, drawing out the attached information (Marot, 2003).

Marot believes that “the city could be likened to a mental map” (2003, p.18). He suggests that gardens “can be compared to the project of constituting systems of places and making them available for individual and collective memory” (Marot, 2003, p.20). If ‘gardens’ are replaced with ‘cities’, then urban space becomes a gallery of collected memories; a palimpsest. Places and elements within this space then become the loci from which memories are drawn. The absence of these loci, through globalisation or obliteration for example, can see the loss of these memories, and consequently identity.

URBAN FRAGMENTS –

Cities are understood to evolve incrementally over time. Social, cultural and physical layers accumulate and infill, creating a “collective form (that) bears the imprint of a broad spectrum of interests” (Dunham-Jones and Williamson, 2008, p1). In contrast, New Urbanism, and within this category transit oriented development, is often criticised as “instant cities” or “faux downtowns” (ibid). This instant architecture, or more relevantly in the case of this thesis, landscape architecture, tends to be formulaic, mass produced, has little synergy with the local context, and creates the idea of place, rather than a place in itself.

Recognising the relationship between memory, place and identity, the design for Addington 2041 uses the industrial and railway heritage of the space to create a sense of place.
Figure 6-6: Addington’s urban fragments

- Addington Gaol
- Railway Workshops Water Tower
- Historic Homestead
- Woods Brothers’ Flour Mill
Addington is littered with fragments of its urban past, despite suburban development gradually obscuring these remnants (refer Figure 6-6). Dunham-Jones and Williamson (2008) suggest that one of the key ways to “enhance the character and diversity of the public realm” is to “take advantage of the unique adaptive reuse opportunities in redevelopment” (p.4). Incorporating Addington’s urban fragments into the transit oriented design recalls its heyday as a thriving hub, and gives new life to heritage elements. Given the declining state of heritage within Christchurch at present, as a result of the continuing earthquakes, preservation of these elements is vital. The redeployment of heritage structures into a contemporary urban community also reinforces their longevity; they are useful as well as memorable. A good example of this is the Addington Jail, currently being reused as tourist accommodation (refer Figure 6-7).

The retention of Woods Mill, the two flour and grain stores, chimney and wheat silo was considered essential in creating an identity for Addington. As well as being an example of Victorian era industrial architecture, and a prominent piece of work by Christchurch architects Joseph Maddison and the Luttrell Brothers, the Mill, particularly the silo was an Addington landmark (New Zealand Historic Places Trust, 2011). Unfortunately the Christchurch earthquakes have resulted in the demolition of the silo, although as stated at the start of my thesis I am assuming that it remains.

The influence of the Mill extends beyond its reuse as a performance, gallery, commercial and residential space. The iconic paving pattern (refer Figure 6-8) is repeated throughout the Railway Lanes using different paving materials, and mosaic. Similarly the unique arch of the mill windows is repeated along Wise Street. The chimney also acts as a key landmark guiding commuters from the main street through to the station.

The reuse and reinterpretation of these urban fragments in the design for Addington counters the ‘instant’ nature of the development, particularly as it forced me as the designer to engage with the local context, rather than obliterating and applying a formulaic solution.
A simple and effective way to foster identity and sense of place is through the use of a relevant materials palette. The materials proposed for the design of Addington, reference the industrial history of the place, and the materials currently in use on the site - brick, concrete, iron, steel, wood and glass (refer Figure 6-9). As well as the place qualities offered by the materials they have also been chosen for their respective properties.

For example, wood is used as a seating surface material due to its relative softness, and warmth; inviting one to sit and stay. Glass is used as the high line barrier to maintain a visual connection to Central Square below, and to maintain transparency and allow views out into the landscape when seated on the high line. Silk screened glass panels are used on the high line to allow sun and artificial light to pass through creating shadows on the Central Square pavement.
STORY -

Sporn suggests that the “landscape is loud with dialogues, with storylines that connect a place and its dwellers” (1998, p.126). The city, or neighbourhood, can be viewed as a stage upon which the dialogue between people and place is played out, culminating in a “woven fabric of dialogues, enduring and ephemeral” (Sporn, 1998, p.126). The challenge for designers is to reveal these stories of place. This can be done in a myriad of ways, and Figure 6-10 below gives example of elements that tell the story of place.

THE RAILWAY –

Addington is a railway town. It was the railway that bought the suburb to life, gave it regional significance, influenced its spatial form, and sparked a community. Today, the railway is largely hidden; the Christchurch station, relegated to a tourist stop only, is concealed behind a shopping centre. Built form turns its back on the corridor, and the lines are only visible at Lincoln Road, or when travelling over the Blenheim Road Overbridge. The transit oriented design for Addington seeks to reveal the railway, and its story, both physically and metaphorically.

Physically, the reactivation of commuter rail enables Addington to once again become of regional significance as a major transit node. The strong and unique form of the station, and its setting (Central Square), confirms the significance of rail transit, and the suburb; and organising the suburb in reference to the railway, an essential design concept in transit oriented development, returns the railway to its rightful place at the centre of the suburb. The connection of the northern and southern quarters of Addington via the station also reconnects the old workshop site, drawing it back into Addington.

The location of a creativity focussed university around the station, whilst acting as a people generator, and a nexus for the creative class; also makes reference to the ingenuity and innovation of the railway workshops. A key example of which is the water tower, one of the world’s first structures of reinforced concrete construction, and the only physical remaining link to the workshops. The story of the railway is also infused through the design detail at Addington.

The materials proposed in the transit oriented design all reference the railway and industrial past of the site (refer Figure 6-11). The paving inlays at the Seed Shed and at the entrance to the station reflect the form of rail lines. At the Seed Shed the curved nature is an interpretation of the junction of the northern and southern lines at the workshops. At the entrance to the station, bluestone paving inlays, and metal inlays interpret textually and visually a rail journey with rhythmical repetition. Metal stormwater grates across the site, tree grates, and service covers all reference the trains constructed on the workshops site with imprints of the carriage and engine numbers (e.g. A435 etc). The highline, and viewing gantries, are an allusion to the physical form of the workshops themselves, and the scaffold structures used in rail construction. Glass inlays in the high line reveal the old workshops site through silk screening a historical map of the site on the underside (refer Figure 6-12).
As sun or artificial light passes through the panels the map is revealed in shadow on the Central Square surface; an ephemeral, ever changing reminder of the railway story. Similarly the seating throughout Central Square interprets a traditional rail carriage seat with the wooden construction, and flipping seat back (refer back to Figure 3-40).

The illustration is a map of the historic workshops site. This map was used as the basis for the glass panels in the high line.  
(Source: Brown, 2009, Image: Barry O’Donnell  
Reproduced from ‘Addington railway workshops: working with wood’ with permission from the New Railway & Locomotive Society Inc.)
TEMPORAL PENS –

Time in the landscape is perpetually liminal; an ever evolving state between past, present and future. Bernard Lassus, a French landscape architect, suggests that the marking of time within the landscape can be a key contributor to telling the story of place. In his proposal for Duisburg-Nord Park, rather than obliterating the sites past as an industrial plant, Lassus recognises “different visions of the past that could be reinvoked to enrich the experience of the place” (Bann, 2003, p.15). To do this Lassus takes fractions of time, and spatially reveals these in juxtaposition to each other using planting as a medium (Bann, 2003). In using ‘temporal pens’, rather than selecting a particular era or period to give sense of place, Lassus creates “an ensemble of associated structures mutually given significance by their temporal differences” (Lassus, 1998, p.71).

To mark the passage of time, and contribute to a sense of place within Addington, temporal pens were used to guide the planting strategy. The demarcation of time using plant signatures had two purposes. Firstly, in combination with forms and materials, it made visible the ‘layers’ that comprise Addington’s narrative; effectively forming a dialogue between the past and the future. Secondly, the temporal fractions are a physical contrast to the compressed perception of space and time associated with transit, and provides a different experience in the landscape.

There are five distinct plant assemblages in the design for Addington, each referencing a different layer in the story. The kahikatea forest to the west of the train station and along the main south line, recalls the original wet plains ecosystem of the site using native species that would have been present (refer Plant Strategy in Chapter 3 – Results). The use of climax species Dacrycarpus dacrydioides (kahikatea) and Prumnopitys taxifolia (matai) rather than seeding natural succession is a nod to the compression of time through transit.

The tracts of kahikatea forest also serve additional functional, experiential, and place purposes. The two areas of planting act as stormwater detention and treatment basins before discharging to wetlands, pipes, and eventually the Avon River to the north, and the Heathcote to the south. Experientially, the forest provides a distinct landscape for arrivals and departures from the station with travellers finding an unexpected and distinctly non-urban space. This strong contrast is intended to highlight the distinct urbanity (rather than suburbanity) of the space for arrivals, and act as a pause for those departing, a welcome ‘breather’ at the end of the day.

Station users can also immerse themselves in the forest via a covered viewing deck on the western atrium. In referencing place, the kahikatea forest makes a symbolic and literal connection. The use of kahikatea is intended as a symbol of strength and permanence; reinforcing Addington’s position in the regional context. It is also grand gesture in keeping with the status of the station as the crux of the transit oriented form, and punctuates the landscape giving Addington local presence.

The wetland pen to east of the station extends north along the northern railway corridor, and to the south east along the southern corridor generally following historic river tributaries. This assemblage serves to carry, detain and treat stormwater from the site, and contributes to ecological corridors linking with Hagley Park, Riccarton and Addington Bush. The use of wetland vegetation also makes reference to the historic presence of water on the site, and uses iconic Canterbury Plain species such as the Cordyline australis (cabbage tree) and Carex solandri (sedge).

In parallel to the change of Addington from an industrial hub to a vibrant urban space, the regeneration pen makes visible natural succession from a barren brownfield to climax vegetation. The colonising species, Leptospermum scoparium, dominates this pen, and acts as a nurse crop to facilitate succession. The strong sculptural forms of the Cordyline australis and the tight, divaricating habits of Discaria toumatou and Coprosma propinqua, recall the industrial past of Addington. In contrast the soft movement of the Anemanthele lessoniana (wind grass), and bright colour of the Libertia ixioides are a reference to the creative, vibrant future of Addington.

The use of exotic tree species across the transit oriented development is further temporal pen that recalls the European settlement of Christchurch, and its vision as the ‘Garden City’. In contrast to the informal native planting of the kahikatea, wetland and regeneration pens; the exotic planting follows formal lines. This formality makes reference to both the grid form of the city, and the linear shelterbelt and ‘quilt’ forms of the Canterbury Plains; and marks Addington as a space that mediates between the two.

The exotic species chosen for Addington’s public spaces were selected based on their specific properties and qualities, particularly their ability to give a sense of identity to the suburb. All species chosen are associated with difficult environments; for example the Platanus acerifolia (London Plane tree) is often linked with industrial settings, and the Gleditsia triacanthos f.inermis with tough urban situations.
Fay and Sellbach suggest that “when we are moved by a place, it is often not because of its grandeur or architectural qualities, but rather by the ways individuals inhabit it and make it their own” (2008, p.254). The experience of place is a combination of both the physical and spatial elements, and the community that those elements enables. Place is experienced from the public realm, and is therefore influenced by the public spaces, such as squares, parks and plazas, and the architecture that surrounds these spaces; the streetscape; where detailing enriches walkability; the civic buildings that facilitate our everyday life (e.g. the train station), and above all the activity within those spaces. In the previous chapter pedestrian friendly landscapes, and liveable environments were explored, and these elements are equally relevant here. Therefore to avoid repetition, experience is explored through the eyes of those who might live in Addington 2041.

Experience -

THE LOCAL –

Have a good day you shout as Molly sets off down the road to school. Mark has already left for work on the early train; they start at seven on the construction sites out at Kaiapoi. You don’t need to be in the studio until ten, but you have a busy morning ahead. You bundle Sam into his jacket and as you leave you see Mrs James next door reading the paper on her front steps. Sam waves and Mrs James comes down to say hello. You ask how she’s getting on with the EQC; all fixed she says, not much damage this time.

As you start walking towards town, you feel that winter is definitely on the way. The trees are all orange and red, and as you pass through Church Square, Sam delights in kicking up the leaves. At the community centre you see a group of boys getting some early basketball in before class, and you laugh as one misses the hoop. You settle Sam in at his kindergarten, and make your way to the council service centre next door; you need to pay the rates, and order a new recycling bin.

It’s almost time for work, but you quickly dash into the bakery for something for morning tea, and the coffee shop for a takeaway. As you walk along the mainstreet you remember it’s your Mum’s birthday on Saturday. You duck into a gift shop, picking up the perfect scarf. As you arrive at work on Bernard Street you can see those enjoying an early morning tea in the cafe seats. Your class starts soon, so you can’t linger at the gallery windows. You arrive at the dance studio, your students will be here in an hour, and you still haven’t picked the music for today’s class.

Time flies by, and already its four o’clock. As you rush out of the studio you remember you still need to collect the drycleaning, and post the scarf. You also call into the deli and fruit shop, picking up dinner for Molly and Sam. On the way to picking up Sam, you can hear laughing and yelling from the indoor pool, and you remind yourself to take the kids there in the weekend.

Mark arrives home at six, and by this stage the baby sitter has arrived. You head out for dinner at a small Thai restaurant on Lincoln Road, it’s not flash but the food is great, and sometimes you can’t even get a booking. It’s almost eight so you make your way along Wise Street to the Workshop Theatre – a local production of ‘Chicago’ is playing. The theatre steps are busy as people watch an old silent movie at the outdoor theatre.

The show was great! On the way home you stop at the dessert shop for a coffee. The cafes are busy as the Mill Theatre has let out at the same time. It’s a nice night, although you are glad you have a coat, as winter is definitely on the way. Once home, you check the kids while Mark walks the babysitter to the bus; she only lives in Halswell so it’s a quick ride home. As you drift off to sleep you wonder what next months show will be...
THE VISITOR –

Have you got the tickets? you shout as you dash out the front door. A quick walk up the road and you’re on the loop tram gliding east along Moorhouse Avenue. The tram is full; it’s the evening races at Addington, part of Cup and Show week. At the old Salesyard, the tram empties and you all make your way through to the station. People in the apartments overlooking Lester Lane lean off their balconies watching the passing parade of fancy dresses and sharp suits.

In the distance you can hear music, it must be the band in the Square, and you wonder if they’ll still be there later after the races finish. As you enter the station you see the colour flags, representing each of the jockey’s colours. Someone is making a mock track commentary over the loud speaker, picking out people in the crowd; your mates hat gets a special mention, and you all cheer.

As you spill out into Central Square you see the party is in full swing. There is a band playing on the Seed Shed stage, and there are a few people up and dancing. The races don’t start for another hour so you grab a table at the university garden bar, and have a couple of glasses of champagne and some dinner while you wait. You look out over the square watching all the dressed up people make their way to the raceway or down Wise Street where the restaurants and cafes are. You laugh as some of the girls already have their high-heels off, walking in bare feet; and yet the night has just begun. Those on the highline are enjoying watching the people go by; you can hear them whistling at those that catch their eye.

It’s time to go; you don’t want to miss the first race! As you move along Walsall Street you pass buskers and musicians, there’s a buzz in the air; and the crowd moves in time with the music. At Whiteleigh Avenue, a friendly policeman is controlling the traffic so you don’t have to wait, you can continue off to the races.

You sigh as the last race ends – you didn’t win anything but it was fun. You and your friends join the crowd returning to the square. There is a different band on, but they’re still good. Dinner was hours ago, and you grab a hot-dog from a vendor in the square, you couldn’t resist the smell. You spend the next could of hours dancing and singing along to the band. At midnight, you race up the station roof to get the best view of the firework display going off from Hagley Park. The booming of the fireworks echoes through the square, a bit like the earthquakes of a few months ago! As the fireworks end you watch the square start to empty. People make their way to the train and bus stations, and you join the throng walking through the station to catch your tram from the Saleyard stop. You are tired, and your feet hurt but it was another amazing Show Day!

THE COMMUTER –

It’s finally five o’clock! As you walk along the Wise Street boulevard, the smell of coffee from a ground floor roaster fills the air, tempting you in to pick up a takeaway. Class has obviously just finished as students flood out from the university to fill the sidewalk cafes and food bars. At the Mill Theatre you duck in and pick up a programme of what’s on this month; it looks good, there’s a couple of comedy shows to make note to catch. The theatre crowd is just starting to arrive, they spill out onto Walsall Street enjoying their wine before the early session of Othello.

Approaching Mill Plaza the banner on the gantry reminds of the Friday night market, this week, with a mardi gras theme to celebrate the passing of the shortest day. Yay, summer is on the way. You make a mental note to bring a shopping bag in with you to work that day, and to text a few friends to meet for margaritas at the market.

Passing the Workshop Theatre there is an exhibition of short films playing on the outdoor screen. People, mostly students, are spilled over the theatre steps, enjoying their takeaways as they watch. You stop to catch the joke as the audience laughs with the film. Across the square the high line lights the way to the station. People above are watching the commuters moving across the square to the station. The rain earlier in the day has stopped, although you can still see puddle patterns in the pavers as you cross the square, and you wonder what shape they make today. You pick up your step to be in time with the jazz band busking on the colonnade steps, and skirt the bean bags littering the square as the audience enjoys the free concert.

You come together with your fellow commuters at the station entrance, and are guided into the central hall. The floor of the station is lit in a pattern resembling a map of the old workshops site, but in the hustle and bustle of rush hour all you see is the flicking of lights as people go past. On the way to the platform you pick up some milk, and at the last minute a bottle of wine for dinner. The outdoor food court in the kahikatea pavilion is full, and the smell of curry makes you hungry. Using the escalator to move down to the platform you top up you travel card at the booth, check the real time display for your train, and take a seat on the platform. You barely get settled when the 5.45 to Rolleston rolls in; and you board quickly. As the train passes through the kahikatea on its way south, you sigh and shed the day, looking forward to your glass of pinot.

6.3 SUMMARY –

Whilst spaces may be liminal, they are not lost. These middle landscapes are rich with opportunity and identity. It is these elements that will take Addington, as a transit oriented development, from a space to a place. It is these elements that will enliven the public realm, and in combination with a pedestrian friendly landscape and a liveable urban environment, will create a transit oriented community.
CONCLUSION -

So what does all this mean? Is transit oriented development an appropriate design concept for liminal urban spaces; those that exist between the urban and suburban realms? Is the concept applicable locally; and what would it look like? And, finally, and perhaps most importantly, does transit oriented development create neighbourhoods that make us feel good?

Liminal urban spaces, such as Addington fall into a policy blindspot, with the resulting design programme retreating to the suburban default. Although we expect such spaces to be more than suburban; to achieve regional growth management goals, we fail to amend the design programme, merely creating a compact replica. This compact suburbia simply compresses suburban characteristics into a smaller parcel; with no uplift in the quality of public space, transport or urban experience to compensate for reduced private space. It is little wonder that these (sub) urban environments are rejected by urban dwellers who continue to flock outwards, decaying the city core, and pushing the periphery. We cannot take with one hand, and not expect to offer something more with the other.

If the intensification of these liminal urban spaces is key to reducing suburban sprawl, a new design programme is required. Such a programme would create a new way of living; where suburban values are repackaged, reinterpreted, and delivered in an urban context. Transit oriented development fits the profile for this new urban space. Focussed around pedestrianisation and mass transit, this compact, mixed, and diverse urban space it is the happy medium between urban core, and suburban sprawl. However, simply changing space is insufficient for changing place.

Kunstler suggests that we sense something amiss in the places that we live; a general unhappiness, a lack of community and character; a sense of placelessness (in Macionis & Parrillo, 2010). He links this absence of place to suburban development, suggesting that “suburbia fails us in large part because it is so abstract. It’s an idea of a place rather than a place” (in Fay & Sellbach, 2008, p.251). Transit oriented development must be careful not to fall into this trap. Throughout this thesis I have shown that transit oriented development is not a recipe or ‘paint by numbers’ concept; it is situational and locational. Achieving the spatial elements of a transit oriented development may well create a neighbourhood, but will not necessarily create a community. I am of the opinion that the retrofitting of existing liminal spaces provides the basis for elevating a transit oriented development from a space to a place.

The urban fragments of Addington, or the ethnic diversity of Footscray, provide the pre-existing conditions that give a transit oriented community identity and sense of place. This in turn allows the evolution of liveable places; places which make us feel good.

It is these local elements that facilitate the introduction of a foreign urban form into the New Zealand environment, and contribute to making a compact, higher density form more palatable to the local urban dweller. However, whilst these local elements are key elements of the transit oriented design for Addington and to some degree for New Lynn, their presence whilst contributory, cannot alone predict or determine the success of a transit oriented development. It is imperative that once constructed as a transit oriented development, that New Lynn be assessed and critiqued. However as there are inherent difficulties in assessing transit oriented development, as it is a situation and locational paradigm; further research into identifying a set of evaluation indicators, appropriate to the local context, would need to be established and tested. It would also be useful to apply these indicators at varying stages of New Lynn’s lifecycle to understand at what point does the accumulation of transit oriented elements (e.g. mass transit network, pedestrian network, higher density housing, retail and commercial core, and quality public space) tip the neighbourhood from traditional development to transit oriented. Such knowledge would assist in the staging of transit oriented development, establishing public/private partnerships for development, and getting the ‘biggest bang’ for the development ‘buck’.

In testing transit oriented development in the local, liminal setting of Addington, I have shown how the concept can be applied locally. I accept that as a design experiment an evaluation of the success of the design is difficult; however the Addington 2041 design contains the key elements of a transit oriented development, coupled with a celebration of the local. The design of a creative hub, through the development of a university, at the core of the design provides programme, people and definition for the public realm, creating both a ‘stage’ for the performance of Addington, and a diverse pool of actors from which to draw. The design satisfies both the node and place characteristics of a transit oriented development; achieving the regional urban growth and transportation goals, whilst still creating a local place. Overall, Addington 2041 is a positive new design programme for a current liminal space.
What this thesis was seeking to achieve through urban growth and intensification, the earthquakes of September 2010 and February 2011 have initiated through central city destruction. They have essentially become a catalyst for urban change in Addington, reinforcing the space as an inner suburban hub. The current predicted loss of 5,000 homes in the eastern suburbs, and the relocation of displaced central city businesses, reaffirms damaged Addington as a key piece in the city’s urban growth puzzle. My desire to make Addington a creative hub is also being realised with the relocation of the Court Theatre from the damage Arts Centre to the old railway workshop site. The earthquake, whilst tragic, is acting as a catalyst for the revitalisation of Addington; what might once have appeared unfeasible, is now a realistic scenario.

At the start of this thesis I wondered what a city for friends and lovers would be like. It is certainly not the city we have now (setting aside the effects of the earthquake), with a struggling core, an expanding periphery, and an auto centric focus. Addington 2041, as a city for friends and lovers has human streetscapes, vibrant public spaces, a bustling main street, and diverse and fun land uses. Addington 2041 shares our memories, tells a story, and is a place of experience. Addington 2041 is elevated from a space to a place, and a neighbourhood to a community.

**When can I move in!**

It is another creative initiative enabling us to look at these suburbs with new eyes. No one suburb is absorbing all that we have lost in the city centre, but instead, businesses we know and love are popping up in areas we haven’t yet learned to appreciate. There have always been reasons to drop into Addington, Sydenham and Woolston, but now there are people making sure we stay a good while longer (Preece, 2011, p.27).


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ADDINGTON 2041 - A PLATFORM FOR CHANGE


