Urban | Suburban

An investigation into the effects of transport and planning on Auckland’s built form.
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A Research Project submitted in partial fulfillment of the requirements for the degree of Master of Architecture Professional.

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Supervised by Hugh Byrd
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I would also like to thank my friends for their time and company during this chapter of my life, making it so very enjoyable.

Lastly, I would like to thank my family, in particular my parents, for their constant support and encouragement throughout this project and my time at architecture school. Without them I would not be able to achieve all that I have.
The History of Auckland’s urban form has been defined by trends in planning and the way that we move around the city. The major uptake in public transportation and the implementation of the Auckland Unitary Plan signals a shift in what has become the status quo of sprawl. Most of this change will occur in our suburbs creating a more compact city.

The issue with these changes is that in the pursuit of a more compact city the Unitary Plan can cause major disruption to the way we live. The fact that the Unitary Plan is developer and density focused has resulted in pushback from those who feel that intensification would ruin the suburbs, communities and cause overcrowding. There is very little preventing developer forms creating a purely utilitarian urban form, not too dissimilar to the tenement style apartments that have emerged in our inner city. There is also very little heritage protection for the commercial buildings which define many of these local centres, especially in the isthmus suburbs.

This project focuses on the effect that these changes will bring to the Dominion Road Area. It highlights the disconnect between the Unitary Plan and proposed transport infrastructures such as light rail, proposing an alternative that better integrates the two. It also aims for design outcomes that help to preserve the built and cultural diversity seen in some of these suburbs. In the process, the project creates a more walkable compact community that does not encroach on the suburban characteristics that define these neighbourhoods.

Many solutions overcome these problems. Most major cities have design guides or manuals to assist developers in creating neighourhoods that maintain existing character. By better analysing the context of development and analysing the effect that multiple developments will have on a location will better ground any interventions. Through a more compact form, diversity, heritage, as well as the character of our local centres, can be preserved. More local amenities should also be provided to the community to prevent the feel of overcrowding.
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1. Introduction

1.1 Background

400,000 new dwellings need to be built in Auckland over the next 30 years to accommodate an expected population increase of 1 million. The new Unitary Plan for Auckland aims at housing about 65% of these dwellings within the current Urban boundary. The remainder will be constructed on greenfield sites around the city. "At its heart, the plan aims to achieve a higher quality, compact city with more townhouses, terraced houses and apartments on smaller sections and less urban sprawl in Auckland’s rural land." This idea of intensification has brought about fears from many Aucklanders that it will contribute to the city’s traffic woes, destroy the city’s character suburbs and result in slum-like living. Whether or not these fears are to be realised or a ‘high quality, compact city’ is created remains to be seen. Jane Jacobs suggests that “it is so easy to blame the decay of cities on traffic, or immigrants, or the whimsies of the middle class. The decay of cities goes deeper and is more complicated. It goes right down to what we think we want and to our ignorance on how cities work.”


This advocates for a deeper understanding of the communities, their history and their future to prevent their decay.

The Unitary plan is a change in how Auckland has historically been planned and therefore we run the risk of overlooking problems that we have not yet encountered. The change in our urban form from a dispersed city to a compact city brings with it issues of how we live in and move around the city.

1.2 Outline

Interrogate a solution to Auckland’s intensification plans that take into considerations the suburban context and local communities, realising the potential for these communities to become localised centres through this intensification.

This research investigates the history and changes in Auckland’s planning to understand how the city and its neighborhoods work. It looks at how the Unitary Plan and transportation affects the urban fabric, bring about change in the way that we inhabit the city.

1.3 Aims & Objectives

- To work on a solution that allows us to increase Auckland’s density in a way that is appropriate to its context and form. This investigation will hopefully contribute to public knowledge on density and the effect that it will have on their communities. It will attempt to address issues that cause people to oppose intensification, looking at the possibility of what Auckland urban form might be.
- To retain the qualities that we enjoy about our neighbour-hoods, such as open green space and privacy and introduce new qualities needed for more urban living. These qualities often show themselves in certain characteristics that we associate with a suburban way of living. Identifying good design practice and implementing it in the design of these centres should help address this.
- To look at how local centres can play a role in catering to the communities need to retain. Looking at how these centres have historically provided for this need and how the Auckland Unitary plan addresses the issue. How the sense of ownership over these local centres formed and play a role in their future.

1.4 Research Question

How can Auckland intensify its local centres yet retain the characteristics that define it?

1.5 Scope & Limitation

The scope of this project explores how the urban form of our suburban centres will develop. It looks at how the introduction of the Auckland Unitary Plan (2016) and changes in transportation will influence the urban form. The project...
The proposal explores what can be done to improve the integration of density without the complete disruption of context. This exploration includes the built and cultural context.

1.6 Methodology

General research into the history of the urban development of Auckland will be undertaken to understand what is likely to affect its current urban environment. This knowledge of Auckland has developed will then be applied to the focus area of Dominion Road.

Dominion Road is being used as a focal area due to its current state as an underdeveloped part of the city in facing large amounts of change. This change is being driven by the implementation of the Auckland Unitary Plan and the proposed improvement to public transportation. By analyzing similar developments around Auckland and abroad we can hope to learn the possible outcomes of this change.

An analysis of the Auckland Unitary Plan will detail its purpose of increasing density and help investigate the effects that development might have on this part of Auckland. This can then be compared to numerous sites of density such as permeability, form and privacy to see what is being done right or what can be changed. Further comparison between these outcomes and methods of best practice seen in international design guides and the Auckland Design Manual.

Better research into how the local centres along Dominion Road work and how they can be improved will address the concerns of their locality and character being lost through development.

The final outcome will be a comparison between what is likely to occur under the current planning environment and what should occur to create more livable local centres. It compares the Unitary Plan linear zoning with the nodal form usually associated with transit oriented development and the transit along the corridor does not support the development of a linear corridor also brought up questions relating to heritage. Such a development with its limited focus on the local centres along Dominion Road, threatening their heritage and diversity.

Research into the current developments taking place along Dominion Road, the Auckland Unitary plan and light rail, showed a disconnect between the two. What the Unitary Plan has instated for a linear urban form, the light rail and its focus on efficiency between the city and airport call for a nodal form to occur. The comparison between the two shows a disconnect between the two avenues to amenities, the loss of the individual identity each centre has and the affect on neighbouring sites.

1.7 Results of Research

Research into the history of Auckland showed us the cities urban form and growth has been largely affected by the way we move around the city and the way that we plan it. This happens to be the areas with the most heritage as they are currently the centers of community along Dominion Road, retaining their heritage and diversity. A nodal form of development would free up land around the steps, reducing the pressure on these heritage sites to be redeveloped. The linear form has often times meant that the access to amenities, the loss of the individual identity each centre has and the affect on neighbouring sites.
2. Planning Towards the Unitary Plan

2.1 Phase One - Planning Through Ideology

2.1.1 The early years 1840-1900

The early years of planning in Auckland were dominated by the ideological intention of recreating European life in a new land. Auckland was originally founded in 1840 as the new capital of New Zealand. Plans were drawn up by the surveyor general, Felton Mathew, and land sales commenced in April of 1841. The original plan was based on Mathew’s hometown of Bath, England. Similarities included the public squares Hobson and Wellington along Hobson Street, similar in size to Queen’s Square in Bath, and a grand circus where Albert Park is today. An idea similar to the Royal Crescent was adopted along the steep coastal banks, looking out to sea, and along the gullies of Grafton, Newton and later Kingsland and Arch Hill. These gullies were intended to form a town belt and serve as recreational spots. This plan suited the volcanic terrain of Auckland, however as town planning during this time was mostly concerned with the subdivision of land and the capital was moved to Wellington in 1865, due to the ongoing New Zealand land wars, (1860-1872) a more cost-effective and profitable grid form was adopted. By the turn of the century, Auckland had become New Zealand’s largest industrial centre. This growth resulted in overcrowding in the City and what has been described as slum-like conditions. In a bid to counteract this the City started to extend outwards. There was a great desire to “avoid the mistakes of the mother country, where slums created an environment where a healthy race cannot be reared”.


By the turn of the century, Auckland had become New Zealand’s largest industrial centre. This growth resulted in overcrowding in the City and what has been described as slum-like conditions. In a bid to counteract this the City started to extend outwards. There was a great desire to “avoid the mistakes of the mother country, where slums created an environment where a healthy race cannot be reared”.


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2.1.2 Early 20th Century; the Garden City

The Garden City movement introduced the idea of self-sustained communities with greenbelts separating residential areas from polluted industrial areas. The Garden City movement advocated for monumental grandeur in cities which was believed to promote a harmonious social order. It was thought that town planning along the Garden City or City Beautiful movement would make urban areas healthier and socially stable. This thinking was influential architects such as Reginald Hammond, who designed the garden suburb of Orakei and would later influence the state housing movement.

Hammond’s plan for Orakei portrayed an idealised society that included public amenities such as education facilities, children’s playgrounds, baths, sports fields, a town hall, a church and sports fields.


2.2.1 Growth of the suburbs

Planning during the early 1900’s was not driven as much by ideological reasoning but rather the practicality of technology. The growth of suburbs corresponded with the growth of the middle-class who sought cleaner and more spacious areas to live. Suburban areas appeared in the inner areas of Remuera and Epsom. During this period the tram system became the predominant form of commuting in Auckland. Styles such as the Villa, Californian Bungalows and Spanish Mission house appeared throughout the region, creating the character suburbs we know today.

2.2.2 Introduction of the tram system

This outward growth resulted in a more dispersed city and brought with it the issue of transportation. The introduction of the tram enabled this growth and grew with these newly formed suburbs. Local centres such as the shops in Remuera, Meadowbank, Mt Roskill and Balmoral sprang up around the suburban stops. These local centres still form the communities and suburbs of today.


2.2 Phase Two - Planning Through Pragmatism

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Public transport in Auckland reached its peak during the Second World War with about 100 million annual trips across the 25 During this period most Aucklanders used the tram system on a daily basis. It was described as “a mobile meeting place while travelling in and out from the city.”

In comparison to Auckland peak public transport usage, the 2014-2015 year only saw 79 million trips across Auckland’s entire public transport 22


The demise of the tram

The tram system was eventually removed between 1949 and 1956 to open up the roads to cars, as Auckland committed itself to the LA model in the 1950's. This decision to base Auckland development around the motorways rather than public transport, which had occurred in the past, drastically changed the urban nature of the city and resulted in the rapid suburban expansion.15

Auckland’s “Master Transportation Plan”

The “Master Transportation plan” for metropolitan Auckland proposed the development of a radial motorway system in 1955. One reason for this disunion was due to the already dispersed nature of the region.17 It was seen as providing people more flexibility and freedom of movement, as well as allowing for the cheaper and faster transportation of goods. This lack of emphasis on public transport helped further fuel the dispersed nature of the region.

Between the 1960's and 70's, Auckland pursued an entirely car-based approach to infrastructural development. It was during this period that most of today's motorway network was built. Projects such as the central motorway junction forcibly removed over 40,000 people from the area which had a major

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13 Stewart, From Rails to Rubber, page 8

Figure 6: Auckland’s original tram network.

Figure 7: Proposal for the Wider Auckland Motorway Network

Figure 8: Auckland’s built up area until 1964. Significant growth due to motorway network and the creation of state housing suburbs.
Figure 9: Annotated history of Auckland’s public transport ridership. The Kingsland, Arch Hill, Newton and Graham Gullies were used to lay the motorway system. This discarded Felton Mathew’s plan that used these gullies as a town belt. By this time these gullies, especially “Grafton gully was regarded as one of Auckland’s premier beauty spots.” It was forever seen as more cost effective to run the motorway through public land.

2.2.5 From grid to cul-de-sac
At this point, there was also a change from the regular grid system with local shops being the predominant form in planning, to the cul-de-sac form we see across the region today. Although the cul-de-sac had gained prominence in the Garden City movement as a way of fostering community, cul-de-sacs were now being used as a way of providing a sheltered street off busy roads. This along with planning trends that separated commercial areas from residential-only increased people’s dependency on the car. Where once people were able to walk to their local centre to do their shopping or to catch transport into the city, they now had to drive as a result of new neighbourhood serving regional rather than local centres.

As people could now travel further small localised and walkable centres were impractical. Regional shopping centres replaced the local centre. The department stores and arcades that were once congregated in the cities and allowed for convenience in shopping now took the form of big box stores and shopping malls on the cities outskirts and suburbs. The efficiency of consolidation triumphed over the convenience of locality. There was an urban decline as a result of this.

2.2.6 The 1951 Regional Development Plan
The 1961 Regional Development Plan stated that Auckland should comprise of an “orderly, coherent, decentralised metropolitan region comprising the main area, surrounded by a cluster of communities. Each of the decentralised regions would have its functions but would rely on the central city for more metropolitan functions such as white collar employment.”

In 80’s and 90’s public transport patronage reached an all-time low. There were serious plans by the Auckland Regional Authority to abolish the Auckland railway system altogether.

It was only in the early 2000’s that a renewed focus on public transit was seen as a solution to Auckland’s congestion problems. The implementation of transport hubs such as the Northern Busway and Britomart Transport Centre was seen as a way of encouraging transport orientated development. Since transport hubs have been created in the areas of New Lynn, Panmure and Manukau.
2.3.1 Town and Country Planning Act of 1977
Growing awareness of sprawl and the introduction of the Town and Country Planning Act of 1977, which brought environmental considerations into the planning process, resulted in infill starting to occur, particularly on the fringes. The rise of urban expansion lead to these urban fringe areas being termed “sausage flats” (long, single story dwellings) and concerns about parking, noise, privacy, loss of trees and monotony all resulted in opposition to infill. However, this infill was in the form of poorly designed buildings such as the ‘sausage flat’ (long, single story dwellings) and concerned about parking, noise, privacy, loss of trees and monotony all resulted in opposition to infill.22 (The term ‘sausage flat’ was in the form of poorly designed buildings such as the ‘sausage flat’ (long, single story dwellings) and concerned about parking, noise, privacy, loss of trees and monotony all resulted in opposition to infill.)22


2.3.2 The Resource Management Act of 1993
The Resource Management Act of 1993 further expanded the environmental considerations and environmental management into planning. (Auckland Regional Council, “A brief history of Auckland’s urban form,” page 10.)


2.3.3 Growth through infill
Urban growth that is focused on infill, such as the Unitary Plan of 2016, is an extension of this philosophy. In fact, the Unitary Plan encourages much more infill and infill will be part of the strategy for urban growth. The type of infill, however, can differ considerably from the suburban form created by sprawl. The Unitary Plan discourages further suburban development on the fringes of the city. The type of infill encouraged by the Unitary Plan requires a lot more capital to undertake, resulting in property being used as a commodity. The issue with this is that these kinds of development often draw on and deplete existing neighbourhood amenities without adding to them. This is in stark contrast with Auckland’s development lead by amenities such as the tram, highway or transport hub.


Figure 10: Auckland’s built up area until 1975. A slow down of sprawl due to infill is evident. 2016, is an extension of this policy as it is a market-driven form of development. This type of growth differs considerably from the suburban form created by sprawl. The Unitary Plan discourages further suburban development on the fringes of the city. The type of infill encouraged by the Unitary Plan requires a lot more capital to undertake, resulting in property being used as a commodity. The issue with this is that these kinds of development often draw on and deplete existing neighborhood amenities without adding to them. This is in stark contrast with Auckland’s development lead by amenities such as the tram, highway or transport hub.


Figure 11: The typical Auckland ‘sausage flat’, long and single story in form, often facing away from the street and towards a shared drive.

Figure 12: Another version of the Auckland ‘sausage flat’, more compact in form with external stair to the upper units also often facing away from the street and towards a shared drive.

Figure 13: Auckland’s built up area until 1975. A slow down of sprawl due to infill is evident.
2.4 Phase Four - Planning Through Demographics

2.4.1 Household composition

Changing demographics, such as an increase in household composition and lifestyle choices, led to a growth of inner city apartments. These changes could also be seen in North American cities. Demographer Arthur C. Nelson observed that roughly 50% of American households were households with children, while 25% are one person households.

Currently, 40% of Auckland's households are households with dwellings with outdoor space for families with children. Another factor that has contributed to this growth are the central city's growth of the financial and similar office-based industries in New Zealand. The implementation of the ozone layer in the 1980s caused the focus of the economy from industry to services, resulting in a decline of manufacturing. The growth of finance, insurance, property and business industries favor a centralised city form rather than a dispersed or segregated one seen with the manufacturing industry.

Figure 15: Auckland's Built up area until 2008. Renewed sprawl as a result of motorway construction.

2.4.2 Economic factors

The shift from transport use in Auckland edges itself with the shift of people moving towards the central core of the city and in more suburbs. Just as the highway system of the 1950s encouraged development through sprawl, it helped that the expansion of public transport infrastructure will encourage development through intensification.

Although this form of development is not the outward growth we have seen historically, it is similar to "the way we grew before the automobile age transformed our sense of scale and distance." We are searching for the consequences of urban living which require a change in scale back to the walkable city or neighborhood. The way that we move around our cities encourages the scale of our planning. Change in demographics from a family oriented city means that our reliance on the car is no longer as significant, opening up possibilities for transport and urban living.

The development of town centres on existing transport routes such as New Lynn, Stanmore and Freemans is a way of tapping into our existing infrastructures. Most of Auckland's town centres were formed by transport of the past, especially those for the railways (Hicks 1998). The History of Development in Auckland. It has been a matter of redeveloping these centres so that they once again become centres and reconnected friendly.

This comes as many planners in the late 1980's started to recognize the disconnect between transportation design and land use. This issue is being addressed in Auckland by focusing on connector services and creating a new bus network. The same planners that recognized the disconnect recommenced clustering retail into walkable nodes in a way to further reduce traffic congestion.

3. Current Development in Auckland

3.1 Density Through Transport

The shift in transport use in Auckland edges itself with the shift of people moving towards the central core of the city and in more suburbs. Just as the highway system of the 1950's encouraged development through sprawl, it helped that the expansion of public transport infrastructure will encourage development through intensification.

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3.1.1 Resurgence of light rail

Since the 1980's many city authorities have viewed the light rail as a way to free up traffic congestion and improve quality of life. 78 cities have opened new networks since 2000 with Europe and the United States have been at the forefront of this resurgence.

The implementation of the ozone layer in the 1980s caused the focus of the economy from industry to services, resulting in a decline of manufacturing. The growth of finance, insurance, property and business industries favor a centralised city form rather than a dispersed or segregated one seen with the manufacturing industry.

Figure 16: Model 1- Diagram of the old bus network. Model 2 - Diagram of the new bus network.
3.1.2 Tram vs Light Rail

Light rail and tram systems are both a form of surface rail that mostly use existing city streets in determining their routes. There is, however, a considerable difference between the two forms of transport. The term tram is often used to refer to the smaller and slower moving vehicles that were historically in our cities before World War II. The term light rail refers to a more advanced, frequent and faster vehicle that tends to be segregated, as much as possible, from other forms of traffic such as the car.

3.1.3 Transport on Dominion Road

The introduction of light rail down Dominion Road is for the similar purpose of freeing up traffic congestion and improving urban amenity.80 A light rail system is being looked at due to its ability to transport more people than a bus system. The less frequent stops, roughly 1km between stops, allows for a much quicker and convenient commute. The current bus network favours the dispersed suburban form that currently surrounds Dominion Road with stops every few hundred meters.

Figure 17: Light rail numbers around the world.

The Light rail system being proposed by Auckland Council is a 2-vehicle, 66-meter set that can carry up to 420 people. The frequency of these vehicles is planned to be every two and a half to ten minutes, with a supposed reliability of close to 100%.81 The line will have to be fully grade separated to achieve this. Doing this will have significant ramifications on car turning right from Dominion Road onto its side streets. It is likely to result in car turning of Dominion Road at the major intersections, hopefully, dispersing and reducing the volume of traffic.

Figure 18: Dominion Road light rail 800m walking catchment, population and employment.

80 Auckland Transport, “Light Rail.”
3.1.4 Visual and physical permanence

One of the main benefits light rail offers over the use of busses is its visual and physical permanence. Its infrastructure is always visible allowing potential users to know that it is there. The issue of sight out of mind does not occur. Before the removal of the tram network in Auckland, there was a common saying - “Always a tram in sight.” This shows us that people could rely on the tram network for its frequency and widespread availability.

Auckland Transport recognises that the light rail system as a piece of permanent infrastructure that will encourage urban development, productivity and economic growth along the transit corridor.

43 Auckland Transport, “Light Rail.”

3.2.1 The need for density

400,000 new dwellings need to be built in Auckland over the next 30 years to accommodate an expected population increase of 1 million. The new Unitary Plan for Auckland aims at having about 65% of these dwellings within the current Urban boundary. The remainder will be constructed on greenfield sites around the city. In fact, the plan aims to achieve a higher quality, compact city with more urban clusters, terraced homes and apartments on smaller sections and less urban sprawl in Auckland’s rural lands.

45 Auckland Transport, “Light Rail.”

3.2.2 Auckland Unitary Plan and density

The Unitary plan is a change in how Auckland has historically been planned. Historically most of Auckland development has been designated greenfield sites with occasional periods of infill occurring. The Unitary Plan is the first time that Auckland has made a concerted effort for large-scale intensification.

3.2.3 Dominion Road and density

Auckland Council has recognised Dominion Road as an ideal position to encourage residential growth. The road sits between and connects two of Auckland main employment hubs, the Airport precinct and the city centre.

47 Dunham-Jones and Williamson, Retrofitting Suburbia, page 82.
48 Dunham-Jones and Williamson, Retrofitting Suburbia, page 82.

3.2.4 The issue of rezoning for density

Once rural roads, such as Dominion Road, were not necessarily designed for walkability and efficient traffic flow at high density. As they became arterials, they were often zoned by local councils for commercial use along the length of the road. This linear form of development and the “lack of interconnectedness between the newly developed parcels means that every trip into, out of, or between uses along that road now has to be made by car.” This is especially true since the removal of the tram system in the 1950’s.

50 Dunham-Jones and Williamson, Retrofitting Suburbia, page 82.
51 Dunham-Jones and Williamson, Retrofitting Suburbia, page 82.
strip becomes evident. Designed for through traffic and mobility but zoned for uses requiring access, it no longer functions well for either. The current Unitary Plan is aimed at making it bus network, but will have a 'limited-stop' network with the implementation of light rail.

4.1 Transport and Form

4.1.1 Transit-orientated Development

Transit-orientated development is a form of development that relies on the use of public transport infrastructure as a precursor to development. The idea is that the density of the development, whether it is commercial or residential, will be located along or near the bus or rail corridor.

Architectural historians such as Miles Lewis observed in his book, “Mount Eden,” that development in Melbourne’s suburbs tends to have a sense of place, walking and cycling, and defining amenity without adding to the neighbourhood. “If we intend for our suburbs to grow with density, then we need to ensure that amenities are added either by the developer or the council. Places like Wynyard Quarter have done this where there has been additional development created by the council with amenities to encourage development.”

In Auckland, “Nodal” development patterns are typically in the weather corridor. The Linear Plan is largely aimed at developers who are attracted to the financial and amenity returns. Most intensification has occurred on areas where amenity can encourage greater returns. These areas are typically in the smaller suburbs along transit corridors. The inner city has this where "market-driven intensification has in many places permitted a flourishing and renewing of urban value and amenity." This has been done under the guise of creating a compact city.

New public space for Wynyard Quarter has been created in this manner. The idea is that the density of the area can be increased with transit-friendly development that encourages more walkable and cycleability.

4.1.2 Nodal

The model is one where when development is clustered around transit stops. These are usually for a high level of high-capacity transport, such as heavy rail. This type of transit-orientated development tends to have stops that are further spaces, encouraging the private mode of travel. Transit-orientated development is usually a single mode of development where the linear form occurs along a single transit corridor.

Nodal development is defined by its compact, clustered form which achieves the creation of community and place by clustering the development that occurs. This creates of community and places where a sense of character and consistent design features emerge.

4.1.3 Linear

The Linear Plan is largely aimed at developers who are attracted to financial and amenity returns. Most intensification has occurred on areas where amenity can encourage greater returns. These areas are typically in the smaller suburbs along transit corridors. The inner city has this where "market-driven intensification has in many places permitted a flourishing and renewing of urban value and amenity." This has been done under the guise of creating a compact city.

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4.2 Transport and Communities

4.2.1 Transit Oriented Development and Public Space

More of the public realm and development is exposed to the linear city model only works, however, for the few who live along arterial corridors. There will be large amounts of traffic congestion caused by those who are travelling through the area. On the other hand, nodal development encourages growth outwards from the corridor. The congestion of density helps to foster mixed-use functions and makes local amenities easier to access.

4.2.2 Creating Transit Oriented Communities

Vancovuer recognizes six steps to creating transit-oriented communities; they have called them the six D’s -

- Destinations (the coordination of land use and transportation)
- Distance (the creation of well-connected street networks)
- Design (Creating places for people)
- Diversity (The encouragement of a mix of land use)
- Demand Management (The discouragement of unnecessary living)
- Distance

In reality, due to these corridors often being arterial there will be large amounts of traffic congestion caused by those who are travelling through the area.

4.3 Case Studies

4.3.1 Transit Oriented Development in Auckland

Auckland has a history of transit-oriented development. (Recono to Section - The History of Development In Auckland) The key difference between what has occurred in the past and what is currently occurring in Auckland is where the growth is taking place. Transit orientated development in Auckland is no longer a form of outward growth but is instead being used to encourage more intensification in existing suburbs. Development of this kind can be seen along Auckland train lines at suburban centres such as New Lynn and Manukau.

4.3.2 New Lynn

The New Lynn development on Auckland’s Western Line is an example of intensification in one of Auckland’s suburban centres. The plan for the redevelopment introduces 17 significant areas of residential development and rezoned areas for ‘working’ to ‘community’.

The Development also serves as a transport hub enabling an easy transfer between different modes of transport. The key enabler of this new mix of amenities to support these
new functions. A new medical centre, bicycle facilities and shared space has been created on McCrae Way to enable a more walker-friendly and community-friendly environment.

4.3.2 Wilshire Boulevard

Wilshire Boulevard is an arterial road that stretches from downtown Los Angeles to Santa Monica. The corridor is densely developed along most of its length with a dramatic change in density directly off of the arterial. Most of the cities skyscrapers are located along the corridor. Although not as extensive in height, the current zoning for Dominion Road encourages this form of linear development.

The corridor is also similar to Dominion Road in that it is serviced predominantly by the private car but also serves as a major regional transit bus corridor.

The planned extension of the metro will see the Purple Line extend along the entire length of the Boulevard.

\[\text{New Lynn TOD Transit Oriented Development: Architectus, “New Lynn TOD Transit Oriented Development.”} \]


\[\text{UCLA Department of Architecture and Urban Design, 99% Preservation, 1% Densification, (Los Angeles: The NOW Institute, 2016), page 36.} \]

Having this dependence on cars has resulted in the boulevard being up to ten lanes wide at some points. The corridor is notorious for its traffic congestion, and it has some of the busiest intersections in the city. The effects of car dependency can be seen in the oversupply of parking at ground level and on the first few floors.

In a study on the congestion of Wilshire Boulevard, transit-oriented development was recognised as the best way to address its traffic issues. The study suggested that if the metro line were extended and stops “properly located, such development can capture up to 25% of the home-work trips” The formation of Transit nodes surrounding these stops was considered to be the best solution.

\[\text{Nancy Hill-Holtzman, “Westside had L.A’s Busiest Intersections: Traffic: A city survey attributes the rush of cars to population flock and the area’s attractions,” Los Angeles Times, January 6, 1991.} \]

\[\text{The city of Beverly Hills, “Circulation Element White Paper no.2, Wilshire Corridor Congestion,” page 5.} \]
4.3.3 Toronto’s Avenues

The city of Toronto is undertaking a redevelopment of their major avenues in a similar way to what is planned for Auckland’s arterial roads. Most of these avenues are already serviced by light rail and bus networks. This new development is aimed at building out communities and revitalising streets.

One of the main distinctions identified in densifying these avenues is that developers find it difficult to assemble the different parcels of land and architects found that city planning was restricting the creation of significant medium-scaled density. Toronto has approached these issues by creating this avenues study, with the intent of aiding development by treating them as special zones in the city.

One of the main differences between Dominion Road and Toronto’s Avenues is that the light rail in Toronto frequently stops, encouraging the linear form of development. Whereas the light rail planned for Dominion Road will have roughly 1 km between some stops, this is double the international average of 484 m between stops. The effect of this is that Dominion Road’s light rail will be more akin to heavy rail than the tram service typically associated with on-street rail.

One way Toronto has ensured that the street can support the increase in density is by setting the maximum height of the buildings to the wider of the avenue and and by restricting the development if there is not enough sidewalk space. Otherwise, a similar height to boundary ratios is used like in the Auckland Unitary Plan.

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Gee, “The avenues.”


Figure 32: A map showing the focus areas for Toronto’s Avenues plan.

Figure 33: The current built form on many of Toronto’s Avenues

Figure 34: (above) The proposed built form of Toronto’s Avenues, not too dissimilar to what is planned for Dominion Road.

Figure 35: (right) Sections showing the application of height restrictions in relation to road width.

Figure 36: (left) The proposed built form of Toronto’s Avenue, not too dissimilar to what is planned for Dominion Road.
5.1 Public and Private Space

5.1.1 The Singular and the Connected

One of the reasons the singular, monumental object does not work in an urban environment is because of the unclear distinctions of space, causing an issue with privacy. When a building addresses or is built to the street, it is evident where public life ends, and private space begins. The building itself serves a "spacial separation of life" by working as a transition between the public and the private. The problem of privacy arises when the building is surrounded by a sort of semi-public space, the space between the street and the front door. This uncertainty is where privacy becomes unclear. We assume suburban life is a more private and secluded one. We assume that in the suburbs we all know our neighbours and that in an apartment we do not? Jane Jacobs points out that life with no common ground or neutral space, such as shops or local centres, results in no public life and therefore, life outside the house is just an extension of our private life.


We can see this in Auckland with neighbourhoods such as Stonefields, where locals complained about children making too much noise on a nearby playground. The children also complained that the children rode their bicycles on the footpath outside their houses as a result of the playground. These residents felt that their privacy was being encroached upon, despite the activities happening in the public domain.

5.1.2 Visual Permeability

"Visual permeability between public and private space can enrich the public domain. If wrongly used, however, it can confuse the civil distinction between public and private."

This permeability helps keep the public domain safe by ensuring that there are eyes on it at all times. The visual and physical separation between private outdoor space and public outdoor space needs to be clear to prevent an intrusion into the private realm. The most common method of invasion occurs at the entrances of buildings. "Private


Figure 36: Housing Project in Detroit, an example of public and private space becoming confused. The space has no ownership and bad visual connection between the public and private space.

Figure 37: Buildings addressing the Campo in Siena. Clear distinction between public and private with good visual permeability. Shutters are used to allow occupants to control their privacy.

Figure 38: Buildings addressing the Campo in Siena. Clear distinction between public and private with good visual permeability. Shutters are used to allow occupants to control their privacy.
be visible to only those who know of them will use them.

5.2.4 Permeability and Form
To maintain the distinction between the public and private realms two spaces need to be separated and defined. “The easiest way of meeting these demands (the implications of physical and visual permeability) is by designing perimeter block ... other kinds of layouts nearly always lead to permeability problems.”

Visual permeability is of particular importance when it comes to public space. Public space needs multiple routes of entry so that it is easily accessible. These routes, however, need to be clear and distinct from the private space. A good example of this is the Newmarket Station Square in Auckland, which suffers from a lack of visual permeability. All entrances from the street to the square are hidden or covered, resulting in its neglect.

5.2.5 Providing Greater Local Connectivity
Auckland’s streets were originally laid out with long, narrow residential sites with very few cross streets. Although this cost-cutting measure was effective in minimising the amount of stormwater, sewage and roading needed to develop the city, it did very little for helping connect the city’s streets to one another. The majority of streets end in dead ends that often run between the city arterial roads, meaning that movement in the opposite direction of these blocks had to occur on the arterials.

The consequences of this are that “longer streets can form pools of economic uses.” Dominion, Remuera, Manukau and Great North Roads are all prime examples of this. The pooling of economy can be advantageous at lower densities, as it provides a focused centre, but it does very little for diversity and walkability. When the density of the area does inevitably increase, the pooling results in an increase of traffic and pressure on the main road. This occurrence leads to the degradation of the street environment.

The residents of these streets become isolated from each other, preventing the forming of a community. Jane Jacobs explains the advantages of smaller city blocks in reference to New York: “If these long east-west blocks had an extra street cat...”
across them - not a sterile ‘Promenade’ of the kind in which super-block projects about, but a street containing buildings where things could start up and grow at spots economically viable….. the eight-eight street man would no longer need to walk a monotonous, always-the-same path to a given point.”

By breaking up these super-blocks, we enable people to see more of their neighbourhood than just the street on which they live.

5.2.2 Social Connectivity
If streets are socially and physically isolated from each other, then the community is fragmented as people overlook what is happening on other streets where they do not live, rather than looking at the neighbourhood as a whole. It becomes hard for its residents to take up action on pressing local issues as they are “literally blocked off from one another.” Additionally, it can make people adverse to changes on their street. When the street is long, rather than broken up into blocks, that whole street becomes one’s turf, which could make one opposed to any change which occurs in it. If that same street is taken and broken up into three or four blocks a degree of separation is created. This intervention is especially important when increasing a neighbourhood density.

5.2.3 Street Connectivity
To encourage people to move through an area they need to have a choice of route, and they need to be aware of these choices. Choice of route is created by providing smaller blocks or a gridlike structure, both of which provide greater local connectivity. The use of existing streets and connections as a guide to these new routes can help with the transition from one area to another.

Making people aware that they have a choice is a matter of connecting these streets with what is already there. This connectivity will enable those who are not familiar with the area to orientate themselves.

“The Placement of new streets will be influenced by two principal physical considerations. First, they must tie in with streets beyond the project borders, because the prime object is to link the site with what lies around it. Second, the new streets must also tie into the few fixed features within the project site.”

Figure 42: An analytical image of the blocks surrounding Dominion road and how they might be broken up (red inserts).

Figure 43: A comparison of block sizes on Dominion Road, in Ponsonby, Melbourne, San Francisco and Vancouver. The incisions into the block show how they have been further divided to accommodate more dwellings, all but Vancouver’s block has needed these incisions. The dotted lines with numbers show the composition of the blocks and how it has been divided in line. The numbers represent the amount of dwellings. This diagram makes it evident that the blocks along Dominion Road needed to be divided to increase walkability.
6. The Built Form

6.1 History of the Built Form

6.1.1 The European Built Form

The traditional perimeter block or courtyard block is one of the oldest urban forms. “...a block structure defined by a network of interconnected roads has been the predominant form of housing layout for centuries.”


The perimeter block is characterised by being built to the edge of the block with an open, semi-private space at the back and public space at the front.


One reason for the popularity of this form, before World War II, was that it made the subdivision and subsequent development of land easier. Hussmanns subdivision of Paris into an orderly block format was, to a certain extent, due to this reasoning. “The Parisian block remains a collection of independent parts, built by different developers. It is rationalisation, which happened in the quest for maximum possible rent obtainable from the available volume, shows itself in the loss of autonomy of the plot - the courtyards are joined together to occupy the least possible area.”


This maximisation of land by blocking was further encouraged through the development of the gridiron road system. This made the measurement of land easier to calculate. The length and depth of the block would often determine the amount of land devoted to streets and services. This resulted in cities creating streets that are often a lot deeper than they were wide. Auckland’s streets were originally laid out with long, narrow residential lots with very few cross streets.

6.1.2 Auckland’s Built Form

The old tram neighbourhoods of Auckland typically saw the early stages of this typology form along the arterials. Although detached, Auckland’s Victorian Villas addressed the street by being built up to the front perimeter and with very little space on either side. This left the backyards of the plots open with development and subdivision only occurring in recent years, arguably due to the restriction on density and form. “Only recently have structures created primarily for the car resulted in formless residential environments.”


Panerai, Castex, Depaule and Damuels, Urban Forms, trans. Olga Vitale Samuels, page 156.


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Figure 44: Hussmanns orderly block format with its joined courtyards.
Incremental development is a pattern of growth that is far more accommodating of change. It allows the city to "adapt to the demographic, economic and cultural changes that mark its evolution." This is important as incremental development permits change to happen gradually rather than all at once. A city without formal zoning is a city that changes faster than what society does. It's much quicker to respond to even the modest evolutions of market demand.

Incremental Development also allows for greater diversity. This is due to the development occurring over a period, as opposed to rapid development dominating the city and function. If development occurs over a longer period, it is more likely to have a mix of old and new, which helps to keep rents down and prevent total redevelopment.

New Zealand tends to go through periods of boom and bust in its construction industry. This boom-bust cycle is often a case of demand outstripping capacity and supply. Although these cycles are a symptom of economic volatility, the incremental development offers a far more adaptable process which could counteract them.

The problem is our planning regulations inhibit the occurrence of incremental development.

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6.2.1 The Decline of Incremental Development

The decline of incremental development coincides with the rise of the automobile. It becomes difficult to accommodate parking without disrupting the context of the development, in particular with an increase in density.

Development, particularly in our suburban areas, are often opposed by locals or heavily regulated. One reason for this is the current car orientated form of planning and development, "progressively abandoning any reference to the city" by allowing ordinary buildings such as houses to be "treated as a monument or single object." This provides no consistency of form in these neighbourhoods, which results in the need to regulate the developments form heavily.

Panerai, Castex, Depaule and Damuels, Urban Forms, trans. Olga Vitale Samuels, page 166.
6.2.2 Incremental Development Under the Auckland Unitary Plan

In the Auckland Unitary Plan, the Single House Zone is aimed at maintaining the suburban character of an area by discouraging and restricting the amount of development that can occur. The zone is used in a grand manner as a small area of preserved heritage. Some local points note that “...” - the purpose of zoning for deliberate density should not be to freeze conditions and uses as they stand. That would be death. Rather, the point is to ensure that changes or replacements, as they do occur, cannot be obliterating of said kind. This means, often, constraints on too rapid a replacement of too many buildings.” The Single House Zone allows for a slow change in conditions but at the expense of density.

The Mixed Use, Town Centre and Apartment and Terraced Housing Zones, which are often placed around large commercial centres of these neighborhoods, do not protect against rapid development. They, therefore, face the threat of losing their diversity and heritage.

We have also moved away from the idea that density is the cause of crime, and we are making a gradual change in the transportation within our cities from car orientated growth to urban living which took the form of the detached house. The density that the perimeter block brought was seen as unnecessary and even slum-like. Time has however shown us that slum conditions are not a symptom of density and that suburban slums can occur. Urban Historian Kenneth Jackson declared in the 1980’s that “the cycle of decline has recently caught up with the suburbs.”

Many of the homes in our affluent character neighborhoods, such as Ponsonby, would not meet these regulations today. These neighborhoods offer a more urban lifestyle as we see the growth of our inner cities continue. This trend correlates with the resurgence of public transport as the convenience of the car is replaced by the convenience of locality.

6.2.3 The Regulation of Form

Current planning regulations that aim to protect sunlight and privacy by controlling the height of buildings, such as the perimeter block, from overshadowing of neighboring property prevent the creation of terraced or perimeter block housing. All types of housing were still permitted at this point, with the exception of large apartment blocks still giving the appearance of a connected city form. The height of these apartment blocks were soon restricted by floor area ratios and height controls.

The purpose of these restrictions was to encourage suburban living which took the form of the detached house. The height that the perimeter block brought was seen as too rapid a replacement of too many buildings. ”

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An emerging trend in Auckland is the amalgamation of multiple sites. This is a direct result of the Auckland Plan high to boundary restrictions. These restrictions, along with Auckland council’s narrow plots of land, make it difficult to develop the site to its permitted height. Faced with the possibility of urban developing the site cannot develop instead choose to purchase

6.2.4 The Disruption of Form

The resistance to more green revolutionaries, which we may soon see change to new growth or intensification under the Auckland Unitary Plan, is partly due to the disruptive nature that new development can bring.
multiple adjoining sites in order build to the maximum height.

The pressure of buying out surrounding land either by waiting for it to go on the market or by negotiating with homeowners directly slows down and inevitability results in higher construction costs.

This amalgamation is also a disruption to Auckland’s urban form with a change from small plots and street fronts to ones much larger in scale. However, what it does do is encourages the buildings to face the street again.

6.2.5 Certainty of Form

The incremental development provides certainty of form and development pattern. Whether a building is a Victorian Villa, a multi-family dwelling or a row of shops they all follow the same principles of addressing the street and being built close together to create the identifiable urban form of the perimeter block.

This is created not by extensive regulation but rather by the street. “It is the street that distributes, feeds and orders development and it is the continuation of this relationship - capable of modifications, extension and the substitution of buildings - whose resides the capacity for the city to adapt to the demographic, economic and cultural changes that mark its evolution.” This role of the street as the regulator of developments is largely lost today as it is instead seen as a method of circulation, specifically for the car. The consequences of this are that buildings often turn away or isolate themselves from the street.

The influence of the car is also a major disruptor on the form of a building. Unless the costly options of parking on the first level or underground is used, then the car either needs access to the back of the plot by running a driveway down one side or, the entire building has to be pushed back to accommodate the car at its front. The first of these two options breaks up the block and the second dilutes the building’s connectivity with the street. Both of them, however, disrupt the simple form of the block. Interconnected street life is diminished by the chopping up of footpaths with vehicle access ways, creating fewer opportunities for socialising in public space, further isolating the building.

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This is created not by extensive regulation but rather by the street. “It is the street that distributes, feeds and orders development and it is the continuation of this relationship - capable of modifications, extension and the substitution of buildings - whose resides the capacity for the city to adapt to the demographic, economic and cultural changes that mark its evolution.” This role of the street as the regulator of developments is largely lost today as it is instead seen as a method of circulation, specifically for the car. The consequences of this are that buildings often turn away or isolate themselves from the street.

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The lack of development on most of Dominion road has meant that its heritage buildings remain well-preserved examples of what Auckland’s suburban centres used to be. Despite being described as having a ‘heritage landscape’, potential development on Dominion Road could place its heritage character in jeopardy. Only three of the many heritage buildings along Dominion Road are protected by Heritage New Zealand, the Capitol Theatre, Church of St Alban the Martyr and the Dominion Road Methodist Church.

7.1.1 Heritage and Development

The complete loss of heritage due to redevelopment is one possible scenario that faces Dominion Road. The Unitary Plan recognises the heritage and character of the residential, single house suburb but does not acknowledge commercial heritage and the character that it brings. This oversight combined with the Unitary Plan’s focus on redevelopment and intensification could potentially result in many heritage buildings demolished for redevelopment. The placement of light rail stops at the centre of these commercial areas makes these prime locations for redevelopment.


The Unitary Plan recognises the way we read a built environment as an important part of our heritage. This perception is why it restricts development in some suburbs, ensuring the single and detached nature of housing is preserved. The way we read the built environment of the local centres along Dominion Road is just as important. The perception of a series of individual centres such as Mount Eden shops, Balmoral shops and Mount Roskill Shops gives these individual neighbourhoods their character and community. This characteristic of Dominion Road is potentially compromised by the linear development proposed by the Unitary Plan.
7.1.2 Façadism
Often trumpeted as heritage saved, façadism is the skin-deep preservation of heritage. This “unsophisticated retention of historic facades tends to be the default position for heritage preservation in Auckland.”

This approach retains some of the historic characters that these buildings at the expense of their interiors. When the interiors of these buildings are lost so are their original functions and the multiple layers of built history. Many of the buildings along Dominion Road still have their original interiors and shop fronts; they have remained largely untouched due to the underdevelopment of the area. The redevelopment of these buildings is likely to push up the low rent prices that have attracted its immigrant community.

7.1.3 Pastiche Heritage
The Pastiche approach to development is the imitation of the heritage that there. Although this allows development to occur while retaining the heritage character of a neighbourhod it has similar issues to that of façadism.

7.1.4 Context Driven Design
Rather than redeveloping the heritage building themselves, context driven design acknowledges their presence by following design cues. It differs from pastiche as it uses contemporary materials and technologies, following the form and rhythm of the heritage buildings. Cities like Vancouver require a streetscape analysis as a way to allow for development yet preserve character. Jane Jacobs describes this harmony as well as the streetscape as a uniﬁer. A uniﬁer supplies only the visual suggestion of entity and order; the viewer does most of the job of seeing the hint to help him organize what he sees. If he sees exactly the same uniﬁer in otherwise desperate place and scene, he will soon unconsciously discount it. Although the rent of the heritage buildings will undoubtedly go up, due to gentriﬁcation, they will still be cheaper than a complete redevelopment, encouraging not only greater diversity in the built form but also in the type of retail present.

7.1.5 Preserving Diversity

To counteract the diversity lost through gentrification small, adaptable interventions such as parklets can be added to the street environment. These kinds of interventions allow the urban environment to react to the changes and needs of the community. For example, a parklet selling coffee during the day could be a reaction to a commuter environment or an area with a high number of office workers. Additionally, a parklet that sells food could do so at a much lower operating cost, opening up opportunities for more local and new types of businesses. It can also help bring other needed amenities such as seating or bicycle parking.

Ensuring diverse and adaptable use of public space can contribute to creating a sense of diversity from day to day, making them more inclusive. Night markets were initially introduced to Auckland in 2010 due to a lack of family afternoon activities.


Figure 78: Parklet used for cafe seating.

Figure 80: Parklet used for selling food.

The five basic elements which people use to construct their mental image of a city are considered pathways, district, edges, landmarks and nodes. These five elements can be employed to help ensure that a sense of place is created through intermediaries.

7.2 Creating Place and Identity

The five basic elements which people use to construct their mental image of a city are considered pathways, district, edges, landmarks and nodes. These five elements can be employed to help ensure that a sense of place is created through intermediaries.

7.2.1 Pathways

Currently, the local centres along Dominion Road lack a network of pathways. Dominion Road itself serves as the main pathway on which most activity occurs. The linear form of development will reinforce this image of the area while a nodal approach would emphasise the areas district.

7.2.2 District

Dominion Road is seen as a district itself. Its reputation for Asian cuisine and its growing reputation as the Chinatown of Auckland give it a unique identity amongst the rest of the city. This district status makes it an attraction for those who live out of the area.

7.2.3 Edges

A hedge is created by the highway network to the north and south of Dominion Road. However, as a whole, it currently lacks any hard edge along its length. There is a slight edge created in the change between residential and commercial function. This edge is reinforced by the form, scale and materiality of the two typologies. Along the length of Dominion Road, the edge of form and scale will be lost under the current Unitary Plan proposals.

7.2.4 Landmarks

There are a number of external and internal land mark that can be seen along Dominion Road. Potten Park, Capitol Theatre, Mount Eden and the Sky Tower are all notable landmarks. Less notable but still considerable landmarks in the urban landscape of Dominion Road are the separate local centres of Mount Eden, Balmoral and Mount Roskill. All these landmarks help people to orientate themselves along Dominion Road. The Unitary Plan responds to none of these landmarks.

7.2.5 Nodes

Nodes of activity are formed by the series of shops along Dominion Road. Although the implementation of Light rail will aid in reinforcing these nodes, as they tend to be placed at their centres. The Unitary Plan sees development in likely to blur their boundaries.
8. Design Manuals and Guides

8.1 Auckland Design Manual

The Auckland Design Manual is a series of step-by-step guides focused on the concept and development stage. It is intended to sit alongside the Auckland Unitary Plan. Although the Design Manual is not compulsory, design is overlooked by the Urban Design Panel as part of the resource consent process.

The Design Manual covers a range of project types from detached residential to mixed-use developments and mainly uses examples of local and international buildings to get the point across. The following steps are a guide to mixed-use developments.

8.1.1 Site Design

An analysis of the local site is set as one of the first steps by the design manual. Ensuring that local connections such as existing walkways, streets, and transport routes are maintained. The intent of this is to enhance the street as a place for people. Depending on the scale of the site, the manual suggests ensuring that pedestrian, cyclists, and vehicle routes are cohesive.

8.1.2 Street Front

Looks at ensuring that the design quality of the development extends to the street. This measure is to create a public realm and neighbourhood. It recommends creating a passive street edge with commercial at ground level fronting the street. If residential units are at ground level, then it suggests that designing for privacy is implemented through the use of fencing, wall plantings or terraces while still maintaining outward permeability.

The public realm can also be enhanced by providing pavements, signage, high planting, and landscaping. A safer and more coherent street can be designed by creating a more defined entrance to residences.

8.1.3 Outdoor Spaces

This section is aimed at improving occupant wellbeing and improving occupant value of the development. By providing quality outdoor space, some of the adverse effects of small apartment living can be mitigated.

The manual recommends placing balconies on the street facade as it not only contributes to creating variety in the façades but it also helps to improve street safety and liveliness by way of casual overlooking. If sufficient private outdoor space cannot be provided, then it recommends the use of communal outdoor space such as a rooftop terrace. These

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120 Auckland Design Manual, "Mixed Use."
8.2 LA Downtown Design Guide

Like Auckland’s Design Manual the implementation of the LA Downtown Design guide is not compulsory but rather encouraged. The design of developments is carried out by the Downtown Implementation Committee which works similarly to the Auckland Urban Design Panel. The guide works with set standards as a way of ensuring the application of the guide by developers.

8.2.1 Purpose

Focusing specifically on the downtown area of LA the design guide is intended to help design for a high quality of development at a human scale. The guide mostly deals with the relationship of the building to the street, ensuring a safe, walkable and pleasant pedestrian environment.

8.2.2 Setbacks

One of the main focuses of the guide is setbacks and podiums. This measure is intended to minimise the impact of taller buildings on the street environment. These setbacks vary depending on the district and its street conditions. The guide uses clear and understandable diagrams of implementation, showing how, for example, how a sidewalk treatment might vary with the ground floor treatment. This makes it easier to understand the guide’s core objective.

8.2.3 Architectural Detail

Looks at the design characteristics of the building, focusing on the facade. The guide encourages vertical variation by breaking the facade down into horizontal levels, colour changes and discourages blank walls. Following the rooflines of historic buildings is also encouraged as a way of preserving their presence.

8.1.4 Parking

Various types of parking are recommended, underground, semi-basement, ground floor, surface and multi-story. The manual recommends that all these parks do not adversely affect the public realm or street front by remaining out of sight.

8.1.5 Massing

The Manual encourages that the massing of the building relates to the size, shape and elements of its surrounding context. Setbacks are also recommended to mitigate the effect on the street. Minimising the depth of the building to encourage natural ventilation is encouraged.

8.1.6 Open Space

Spaces can be suitable for families and children but need to have casual surveillance and clear ownership to ensure safety and maintenance.

8.1.7 Public Realm


125 Auckland Design Manual: “Mixed Use.”
126 Auckland Design Manual: “Mixed Use.”

128 Figures 84-86: Diagrams from the LA Downtown Design Guide.
8.3 Making Townscape

The book Making Townscape analyzes a Contextual Approach to Building in an Urban Setting. Although not a set manual or guide for any one city, the book looks at how the character of Britain’s small towns and villages can be preserved.

8.3.1 Local Context

It acknowledges that each town has its context and character, influenced by the local building materials and methods. This has resulted in individual characters appearing across the country. The book notes that although there is a British tradition of variety within the townscape, there has been a shift from the local vernacular since transport changes in the Victorian era. Since then, local materials and building methods have not been the regulator of form.

They add that this change adds to the richness of variety in British towns but that there is no reason why new developments should not respond to their traditional contexts. “Although the Georgian style is ubiquitous, local adaptations can be found, especially in coastal areas where balconies have added purpose.”

131 Tugnutt, Robertson, “Making Townscape.”

8.3.2 Site

The site and immediate context are used as a way of anchoring a development to its surroundings. It points out that most buildings on a street were not designed as a whole yet retain similar characteristics due to an overall pattern created by the plot widths, scale and the fenestration pattern.

The creation of narrow sites is recognized as greatly helping improve the chances of this ‘harmony’ naturally occurring. However, it is pointed out that these sites are often impractical and undesirable in a contemporary setting due to economic reasons regarding the accommodation of the core and services. The book suggests that if larger sites are developed, or if smaller sites are amalgamated, then broad sites should be visually broken to relate to surrounding sites.

135 Tugnutt, Robertson, “Making Townscape.”

8.4 The Vancouver Achievement

The Vancouver Achievement analyzes some of Vancouver’s planning regulations. The ‘Character Zoning’ of Vancouver’s heritage suburbs has a similar status to Auckland’s Single House Zone. It limits development as a way of preserving the suburban character of a neighborhood.

8.4.1 Site

When applying for construction in one of these character neighborhoods, a developer has to analyze the street on which the development sits to determine a norm in the built form. This norm will determine the setback, landscaping, depth and width of the house.

8.4.2 Facade

As with the site, the built form of the entire street has to be analyzed. Once done, the high and levels of the building can be determined with appropriate fenestration to follow.

8.4.3 Subdivision

Unlike with Auckland’s Single House Zone subdivision is allowed in Vancouver’s character neighborhoods. These subdivisions have to still the street form and character of the neighborhood.

136 Punter, “The Vancouver Achievement.”

Figure 87: Diagram from Making Townscape, showing how to keep to the plot width on an amalgamated site.

Figure 88: An example of a Vancouver application document showing form, composition, details and landscape.

Figure 89: Design methodology guideline for Vancouver’s heritage areas.

Figure 90: The Vancouver Achievement recognizes some of Vancouver’s planning regulations. The ‘Character Zoning’ of Vancouver’s heritage suburbs has a similar status to Auckland’s Single House Zone. It limits development as a way of preserving the suburban character of a neighborhood.
9. Site Selection

9.1 Dominion Road
Dominion Road was chosen as a possible site region due to its underdevelopment and suburban nature, especially around its midsection. The prospect of light rail running along its length means that the site is a topical selection and has the potential for rapid development in the near future. All these factors call into question what the area's urban form will look like a few years from now. Dominion Road also has many similarities to Auckland's other arterials which could potentially develop in a similar manner.

Narrowing down the site selection was determined by the proposed light rail. Naturally, most development, or at least the first instances of development, is likely to occur around these stops.

9.2 Balmoral
The intersection of Balmoral and Dominion Road is a major node of the area and sits almost at the centre of Auckland Isthmus, making it a highly accessible part of Auckland. It was for this reason that the Balmoral Shops area was selected as the first site. The site also has other challenges that are relevant to the intensification of Auckland's local centres. The first being Heritage. Many of Auckland's centres were formed in a similar fashion and a similar period. The second challenge is car dependency. Over-dependence on the car has degraded...
the pedestrian environment around Balmoral shops. Roads have been widened at the expense of sidewalks and parking, dominating the space between the suburbs and shops.

9.3 Lambeth Place

Lambeth Place was chosen as it is almost the complete opposite of Balmoral when it comes to serving the community as a local centre. It has no dominant features, other than Dominion Road, and no commercial core. Its opportunity lies in the prospect of creating a completely new local centre with the implementation of a light rail stop.

10. Site Analysis

10.1 Dominion Road Under the Unitary Plan

The massing of potential development under the Auckland Unitary Plan. The canyon effect created by the amalgamation of sites for development is evident.
10.2 Planned Development of Balmoral

A new Warehouse development with apartments built on top of the present building is currently planned for the area behind Balmoral shops. The proposed development does very little to address the street or the neighbouring single-storey suburb.

The Unitary Plan protects the adjacent buildings zoned under 'Single House Suburban' as a way to protect the character of the single house suburb. It, however, rezone some of these buildings to commercial purpose so that the Warehouse can create a loading zone for delivery trucks. This is in direct conflict with the unitary plans intention to preserve the suburban feel.

The proposed development also does not attempt to address the local centre of Balmoral, instead, turning its back on the development. Heritage buildings are ignored, and the transition space between the old and the new is used for apartment parking.
10.3 Unitary Plan Development of Balmoral

Figure 95: (above) East - West section of possible Unitary Plan development in Balmoral.

Figure 96: (right) Perspective of possible Unitary Plan development showing the change in scale.
10.4 Unitary Plan Development of Lambeth

Figure 97: (above) East - West section of possible Unitary Plan development development in Balmoral.

Figure 98: (right) Perspective of possible Unitary Plan development showing the change in scale.
10.5 Character Analysis

Figure 99: Analysis showing the different characters of the shop rows, car oriented developments and the single house.

Figure 100: Elevation of the Balmoral Section of Dominion Road.

Figure 101: Elevation of the Lambeth Section of Dominion Road.
11. Design

11.1 Balmoral

11.1.1 Key Elements

The form of the proposed development is shaped by its connection to surrounding features, anchoring it to its location. The main public space is formed by creating a view shaft between the back of the Capitol cinema, the most prominent built landmark in Balmoral, and Mount Eden, one of the most prominent landmarks in the area. The New North-south streets are terminated with a view on one end and for a heritage building for the one on the south end. The heritage character of Balmoral is preserved by exposing the heritage to the new development. Exposing the back of the heritage buildings to the public and using it as another street front helps to double the amount of heritage that is visual from the street. Having the roads terminate with a heritage building also improve the perception of more heritage.
11.1.2 Outlook

Controlling the permeability from public areas to more residential ones is particularly important with density. Buildings that might contain residential dwellings at ground level here a green barrier between the imitated sidewalk and the main road. This will help with the visual permeability and also indicate to pedestrians that the area is more residential.

Increasing the physical permeability into the newly built commercial area and its public space is vital to its success. By tapering and curving the corners of buildings people can be encouraged move around a corner and into the new space. It is also a welcoming indication to passers-by compared to a hard corner. Similarly, buildings can be used to block the visual permeability of residential areas.
11.1.3 Typology and Form

Three new typologies and forms are present in the Balmoral design. The perimeter block form, the stand-alone apartment and terraced house. The gradation of these forms helps to ease the transition between the denser areas of the proposal and the Single House Zone that the Unitary Plan aims to preserve.

The different forms also encourage different types of living. The perimeter block form, which is based in the centre of the community, tends not to be compatible with the accommodation of cars. This has been implemented to encourage a more walkable environment. The stand-alone apartments are similar in that they are likely to only offer car space to some of their residences. They also have more green outdoor space than the perimeter block which would make it more appealing to families.

![Figure 106: Typology and form.](image1)

![Figure 107: The transition between the single house form and the perimeter block.](image2)
11.1.4 Overview

Figure 108: Diagram showing the transition between a densely built environment to a dispersed area, the intensity of green space and private space.

Figure 109: The transition of density.
11. Design

11.2 Lambeth

11.2.1 Key Elements

The current suburban character of the Lambeth Place stop means that the area lacks any distinct and defining features. The proposed project helps to give the neighbourhood its own character by connecting the sports field (Pollard Park) with the Dominion Road. At present, it is roughly a 700-meter walk to get to the sports field. This proposal shortens that down to 150-meters, helping improve the interconnectivity of the neighborhood.

Lambeth Place currently has no commercial activity directly around the proposed stop. This difference makes it almost the complete opposite to Balmoral in terms of activity. It also presents the opportunity to create a local center that is more suburban when compared to Balmoral and Mount Roskill, allowing us to see how density can fit into this context. The sports field activities should help reinforce the suburban nature of this stop.
The same idea of using plantings along the sidewalk to prevent visual permeability has been applied to the Lambeth stop. It has also been used to restrict new commercial activity to the area directly around the light rail stop and a small area around the sports field.

Unlike Balmoral where the commercial activity has been concentrated to aid in the transition from urban to suburban, the commercial activity by the Lambeth stop has been dispersed. This contradiction is due to the types of activities likely to be found at each centre. Where the concentration of commercial activities create a more urban environment for Balmoral, resulting in the need for separation between these activities and the suburbs, the dispersed activity at Lambeth will encourage functions more suitable to this environment.
At present, the housing surrounding the Lambeth stop is mostly new buildings, single-story houses with some still created by the ‘sausage’ flat. In the proposed design the two main forms will become stand-alone apartments and terraced housing, with the possibility of the complete perimeter block forming at a later date.

Just as the concentration of commercial activity was broken up to create a more suburban environment, so too are the forms. By mixing the two forms, a varied landscape that lacks a focused centre of mass is created. This allows the built form to transition into the suburban context more easily. It also allows incremental development to occur and for a focused centre to be created over time as the stop becomes more developed.
11.2.4 Overview

Figure 117: Diagram showing the transition between a densely built environment to a dispersed, the intensity of green space and private space.

Figure 118: East - West Section.

Figure 119: North - South Section.
11.3 Street Design

Figure 120: Parklet showing the extension of seating for a restaurant.

Figure 121: Parklet showing a covered shelter or a market setup.

Figure 122: Parklet showing temporary food stands with shared seating.

Figure 123: Parklet showing a temporary coffee stand with seating.

Figure 124: An example of multiple parklets in proposed Balmoral project with parking still available.
Figure 125: New Public space in Balmoral using the large back wall of the Capitol Cinema as projection space for an outdoor Cinema.

Figure 126: Temporary stands for outdoor market in new public space.
This project aims at figuring out what the possible urban form of a future Auckland might be. Obviously, there are many factors, both social and economical, that might influence the actual outcome. Auckland, however, has a history of following international trends in urban planning and infrastructure. These precedences help us to analyse a possible outcome through other cities. Ultimately these outcomes do not take into consideration the unique context of Auckland and the possibilities that this context provides.

By investigating how Auckland’s local centres had grown in the past, the aim was to explore the most appropriate way for them to grow. This project recognises that by ignoring the individual characters and communities that define Auckland’s suburban landscape, we run the risk of creating destructive development. Development can either enhance the communities in which it occurs or completely change them. To preserve the character of these neighbourhoods we need to understand how they work and what has led to their cultural and social structures. This perception is a part of Auckland’s heritage that is not understood or recognised by the Unitary Plan. In our attempts to preserve the diversity and heritage of our suburban neighbourhoods, we run the risk of destroying their cores.

There is no guarantee that development will not destroy the qualities of our suburbs that give them their character. The project, however, suggests that by defining what is at our core, we can enhance them through development. The issue with this is that there is no way of ensuring that private development will follow through on this. The research paper suggests that the council could create a development like Wynyard quarter or New Lynn. The issue with this is that the majority of these developments occurred on council-owned land. The actual implementation of such a plan in our local centres will be far more difficult. The project also shows development occurring outside of the traditional development districts.

This project explores the difference between the nodal urban form and the linear urban form of development in some depth. It successfully highlights the type of neighbourhood environment the linear option is likely to create and why it might work for some cities like Toronto but will not necessarily work for Auckland. The research could have looked at more examples of the nodal form to gain a greater understanding of its negatives.

12. Conclusion

Looking at best design practice from local and international design guides gives insight on what issues cities and people considered to be important in creating successful environments. Looking at the effects that connectivity and contiguity have on an area helped further influence the overall forms of the project by using the values of these principles. The lesson behind this project can be applied to other sites around Auckland.
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Figure 23. Levels of influence that the SDTs have on transport outcomes: from: http://www.reconnectingamerica.org/assets/uploads/20120718TransitOrientedCommunitiesDesignGuidelines.pdf, page 11.

Figure 24. A typical Auckland ‘sausage’ (Author).


Figure 84. Diagrams from the La Downtown Design Guide. From: City of Los Angeles, “Downtown Design Guide.”

Figure 85. Diagrams from the La Downtown Design Guide. From: City of Los Angeles, “Downtown Design Guide.”

Figure 86. Diagrams from the La Downtown Design Guide. From: City of Los Angeles, “Downtown Design Guide.”

Figure 87. Diagram from Making Townscape, showing how to keep to the plot width on an amalgamated site. From: Tugnutt, Robertson, “Making Townscape.”

Figure 88. An example of a Vancouver application document showing form, composition, details and landscape. From: Punter, “The Vancouver Achievement.”

Figure 89. Design methodology guideline for Vancouver’s heritage areas. From: Punter, “The Vancouver Achievement.”

Figure 90. Proposed light rail stops along Dominion Road. (Author)

Figure 91. Focus Areas. (Author)

Figure 92. Analysis of allowable development between two focus areas. (Author)


Figure 95. East - West section of possible Unitary Plan development in Balmoral. (Author)

Figure 96. Perspective of possible Unitary Plan development showing the change in scale. (Author)

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Figure 100. Elevation of the Balmoral Section of Dominion Road. (Author)

Figure 101. Elevation of the Lambeth Section of Dominion Road (Author)

Figure 102. Analysis showing the key physical elements such as open parks, prominent buildings, main roads. With analysis potential development. (Author)

Figure 103. Key Elements in Balmoral Design. (Author)

Figure 104. Outlook and permeability in Balmoral Design. (Author)

Figure 105. New road with heritage outlook at termination. (Author)

Figure 106. Typology and Form. (Author)

Figure 107. The transition between the single house form and the perimeter block. (Author)

Figure 108. Diagram showing the transition between a densely built environment to a dispersed, the intensity of green space and private space. (Author)

Figure 109. The transition of density. (Author)

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Figure 123. Parklet showing a temporary coffee stand with seating. (Author)

Figure 124. An example of multiple parklets in proposed Balmoral project with parking still available. (Author)

Figure 125. New Public space in Balmoral using the large back wall of the Figure 125: Temporary stands for outdoor market in new public space. Capitol Cinema as a projection space for an outdoor Cinema. (Author)

Figure 126. Temporary stands for outdoor market in new public space. (Author)
14. Appendix

The appendix contains all design work presented during the final examination.

Development of Dominion Road Under the Unitary Plan

Dominion Road
Proposed Development
Proposed Development at Balmoral Shops
with varying block forms

Proposed Development at Lambeth Road
with varying block forms
Plan perspective of new Balmoral public space, showing the transition in character between the heritage on Dominion Road and residential areas.
Perspective Showing the focus on providing new amenities with development and the preserving the area's diversity.

Plan perspective of new shared space serving as a connector between the heritage and new.
Plan perspective of new road connecting the two key features of the Lambeth area, Pollard Park and the proposed Light Rail stop, creating an identity for the area.
Plan perspective of Dominion Roads Lambeth stop, showing its more residential focus.

Perspective showing the new connection with Pollard Park, making local amenities more accessible with development.
Full name of author: Ryan Van Per Westhuizen

ORCID number (Optional): ..................................................

Full title of thesis/dissertation/research project ('the work'):

An Investigation into the Effects of Transport and Planning on Auckland's Urban Form

Practice Pathway: Architecture

Degree: March (Prof.)

Year of presentation: 2017

Principal Supervisor: Hugh Byrd

Associate Supervisor: Jeanette Budge

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Name of candidate: Ryan van der Westhuizen

This Thesis/Dissertation/Research Project entitled: Urban/Suburban

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