MIDBLOCK

reimagining the role of the underutilized suburban midblock section

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THESIS ABSTRACT

Our society's inclination towards larger homes upon individually owned land titles has produced vast suburban sprawl, attributing a great deal of societal division and infrastructural strain. A feature exacerbating the situation in Papamoa's suburban development is the inadvertent creation of midblock sections, primarily due to a lack of development foresight. Due to the rapid conversion of certain rural plots' land-use from orchards to residential development and the stagnation of others, a mismatch of land sizes, shapes and orientations were left to be developed upon. These underutilised spaces often remain as untenanted interstitial spaces despite a dramatic regional population growth, a record low national home ownership and growing demand for housing from the Auckland market.

This thesis examines the complexities of the midblock and the difficult New Zealand social and historical contexts that disrupt their development. It investigates how architects can use these conditions, as well as the spatial contexts of their locale, to inform design principles that can be used to integrate midblock designs into the suburban grain. Design within this research, thus, seeks to test these strategies as well as the development potential of these sites through investigating the efficacy of various alternative programmes. Furthermore, this research explores the potential of small scale public participatory consultation with local residents as a catalyst for architectural processes and design evaluation in analysing the appropriateness of midblock development strategies. It argues that participatory design consultation is a substantial tool for architects in both aligning development with local communities and critically analysing the effectiveness of design within the context of the midblock.

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INTRODUCTION

DEFINITION OF ABBREVIATION:

NIMBY ('Not In My Back Yard'): Extreme opposition (often organised campaigns) against local unwanted land-use changes that dismiss the 'broader implications' to society. Commonly considered a selfish 'emotionally-driven' position by planners and architects: residents 'protecting own turf' at the cost of a societal good. (Ruming, Houston, and Amati 2012, Gibson 2005, p382)

Note: All figures not attributed are author's own.

1.1 PROBLEM STATEMENT

Our society's inclination towards larger homes upon individually owned land titles has produced vast suburban sprawl, attributing a great deal of societal division and infrastructural strain. A feature exacerbating the situation in Papamoa's suburban development is the **inadvertent creation of midblock sections**, primarily due to a lack of development foresight. Due to the rapid conversion of certain rural plots' land-use from orchards to residential development and the stagnation of others, a mismatch of land sizes, shapes and orientations were left to be developed upon. These underutilised spaces often remain as **untenanted interstitial spaces** despite a dramatic regional population growth, a record low national home ownership and growing demand for housing from the Auckland market.

A solution is required to successfully integrate developments upon these midblock sites into the wider community to combat additional sprawl.

1.2 NATIONAL CONTEXT INTRODUCTION:

Suburbs are a unique area of contention within New Zealand - whilst local councils and architects decry the wasteful, selfish nature of sprawling low density suburbia, an equally fervent defence of this 'kiwiana' lifestyle is raised by those that live within this context. Essential to unlocking the potential for underutilized midblock sites is understanding the inherent complexity of both the site's defining qualities and analysing the difficult social context faced when challenging well-established suburban development norms in New Zealand.

Fig.1.01 Sketched artwork on suburban lifestyle

This section extends the thesis problem statement through examining the challenges and opportunities of suburban New Zealand residential development. It primarily investigates the sociocultural and historical rationale of suburbanite's opposition to land-use change, intensification and infill. Through exploring notions of the quarter-acre sentimentality which underpin the NIMBY suburban social-climate, it is theorized that a more culturally nuanced and compassionate design ethos can be established for realistically integrating development upon such sites into the suburban grain.

1.3 NEW ZEALAND SUBURBAN HISTORY:

Perhaps the most pertinent issue for implementing change within the New Zealand context is in fact societal opposition. In order to provide meaningful analysis of New Zealander's reluctance to change within the realm of suburbia, it is essential to delve into the deep-rooted moral qualities that have been embedded and reiterated upon throughout the country's short history. These examinations, in conjunction with modern theory and national survey findings, will be used as a foundation for providing contextually appropriate principles of design and as a social background for extrapolating data within my own investigations throughout this thesis.

Fig.1.02 William Smith: Painting of Petre Settlement (1841)

Land-use within New Zealand has been an issue ever since widespread European immigration was propagated by the New Zealand Company in the 19th Century. Colonisation of the country and the subsequent establishment of a shared New Zealand "standard of morals and manners" was essentially based upon falsities and profitability, yet persist as primary beliefs to this day (Mein Smith 2011, p58). The New Zealand Company's main proponent Edward Wakefield sought to use the dire conditions and social-ills of European industrial life in the early 19th century as a foundation of hope within immigration to New Zealand (Dalley and McLean 2005, p96, Vallance, Perkins, and Moore 2005). Whilst never setting foot in the country, he fabricated accounts of the beauty, possibilities and prosperity that would await emigrants, using hyperbolic descriptions that were embedded within European fantasy. The country would be described with flavourful comments such as: '...the fittest country in the world for colonisation, the most beautiful country, the finest climate and the most productive soil' (Mein Smith 2011, p56). This language, accompanied by picturesque landscape paintings, were used as fuel for propaganda that sought to capitalise on the emotion of low and middle-class Europeans seeking a better quality of life (fig.1.02) (Wright 2013, p62).

Fig.1.03 Unknown: Manawatu family's first home (ca.1880s)

This premise leads to an important and cyclical concept of 'kiwi culture': that turmoil and hard work is necessary to reach the pinnacle of all New Zealand aspirations – Land Ownership. Wakefield provided a foundation to this notion by forming a business model that took advantage of easily influenced individuals that believed that mere hard work could afford them a home, stating: '[land] should be sold at a price beyond the means of labourers... their migration could be encouraged by the expectation of one day buying land with their savings' (King 2012, p171). or struggle alone through (fig.1.03) (King 2012, p182, Dalley and McLean 2005, p107). Historians note that the endeavour of pioneers through the inhospitable conditions of tribal warfare, marshland settlements, raupo reed housing and extreme labour, described as: 'Pakeha culture of individualism' was the backbone of a 'recurring political emphasis on self-reliance' (fig.1.03)(Mein Smith 2011, p61). These ideals, whilst forming out of necessity, became elements of a continued social-engineering that framed land-ownership as a bastion with 'mystical and moral properties' - an aspiration worth struggling for (Vallance, Perkins, and Moore 2005). The New Zealand central and local governing bodies have persisted with this rhetoric, continuously promoting The New Zealand Company's founding principle that land has an almost mythological status within society (Vallance, Perkins, and Moore 2005).

The Worker's Dwellings Act 1905 and the subsequent Housing Act 1919, were certainly the most profound of these policies, in which the state would lend easy-term mortgages to working families with as low as 5% deposits (Mein Smith 2011, p146). This increased the rate of homeownership in the country from 35% in 1916 to nearly 60% in 1926, theorized as the highest rate in the world at the time (Dalley and McLean 2005, p256). It was during this formative period that New Zealand cities were reimagined - suburbs brimming with quarter-acre sections, sprawling roads and low-density detached dwellings now became the dominant feature of the urban landscape (Dalley and McLean 2005, p261, Wright 2013, p286) (fig.104).

Fig.1.04 Unknown: NZ Railway poster - suburban life (ca.1930s)

Whilst disruptive, International economic hardship, widespread war and fearfulness of communism over the 20th Century acted only to reaffirm, even bolster, the insular beliefs of New Zealanders. Hardship, violence and fear would be interchanged with the security of conformity, normality and above all: the haven of suburban life (Dalley and McLean 2005, p308). King raises parallels between Adelson's analysis of post-war America and New Zealanders' desire to return to the comfort of home: "...[it was] in our genius, in our intoxication with perfectibility, [that we] invented an imaginary reality, the idyll of suburban domesticity, which would readdress the grievances of the past and ensure a perfect future" (2012, p413, 1972, SM26). This 'unreality', a metaphorical safety blanket, expressed itself in a suburbia of isolation and conservatism. Neighbourhoods were accordingly designed to reduce interaction with neighbours, increase 'sense of security' and promote lavish, fortress-like homes (Bryson 2017, p24, Mitchell 1972, p110). This lifestyle of solitude was a welcome respite to many, whose hard work saving for a home would be replaced with an insatiable appetite for home and garden manicuring and a pride that bordered on narcissism. Mitchell aptly described the 'bloated' pride of New Zealanders' love affair with the home nearing the height of national homeownership rates in 1972 (70%):

“The home is the focus of the nation’s life... Kiwi homes are so much bigger, better and more beautiful, veritable people’s palaces, that the occupants don’t want to leave. The homes are also so expensive they can’t afford to... it’s the New Zealander’s mistress” (fig.1.05) (p110-11, Pool and Du Plessis 2011). This description, whilst fragrant, remains incredibly relevant to this day with numerous authors citing New Zealand’s history of suburban and home pride as the primary consideration to its infamous opposition to change (Bryson 2017, p3, Cunningham 2018, p22, Vallance, Perkins, and Moore 2005, p43).

1.4 CURRENT SUBURBAN RESISTANCE:

Resistance to suburban change in the form of infill development has become an increasingly controversial topic within the country over the past two decades (Bryson, 2017). As discussed, New Zealand’s social history of low-density suburban housing is complex and intertwined into the cultural norms, traditions and morals of the population. Consequently, nostalgia for the ‘Kiwiana’ quarter-acre lifestyle and an attitude of conformity has manifested itself in extreme asset protection in the wake of a changing national urban-strategy. These concerns have prompted broad opposition to suburban development, yet often

this resistance has been dismissed as superficial and disruptive by the built environment professions. Key to this thesis is investigating the shortfalls between suburban homeowners and the parties within the residential development process (regional councils, architects, developers) to seek a mutually appropriate, sympathetic methodology for integrating midblock infill into the suburban realm.

Fig.1.05 Gibbard: ‘lifestyle’ of kiwi suburbanites (1972)

Fig.1.06 Brake: NZ Suburbia, Unknown location (ca.1960s)

Fig.1.07 Walker: New Zealand suburban sprawl (2013)

Over the previous decades there has been a collective realization that the low-density greenfield development that New Zealanders strive for is unsustainable due to externalities of increasing sprawl and land limitations at the urban fringes (listed on previous page) (Vallance, Perkins, and Moore 2005). Responding to economic and governance pressures of this urban expansion, the New Zealand Government narrative has changed from a strong historical support of policies directed at supporting suburban expansion to a more sustainable model of development. The governing policies on residential development, consequently, have shifted from a system that has allowed for seemingly unrestrained, sporadic growth at city boundaries to a rhetoric supporting an international shift to intensification of residential land-use (TCC 2018, WCC 2013, ADM 2018).

Further negative externalities attributed to Urban boundary expansion (low-density development) are cited by McConnell and Wiley (2010, p2) and Puustinen et al. (2018) to include:

- Increased infrastructure costs
- Duplication of facilities and social services
- Economic stagnation and poor community cohesion
- Resource-draining from existing neighbourhoods
- Decreased city centre investment
- Increased car reliance, not public transport conducive
- Traffic congestion and increased commute times
- Increased land consumption, decreased open space
- Environmental, ecological and biodiversity strain
- Lack of housing diversity

SmartGrowth in particular has become a key calling card for regional councils seeking to provide more efficient housing strategies than the historic approach of extending city margins for greenfield suburban development. The principles of SmartGrowth are based upon prioritising intensification of already established neighbourhoods through redevelopment of obsolescent greyfield sections and infill development of brownfield sections (Dieleman and Wegener 2004, Newton and Glackin 2014).

Advocates of these principles emphasise the importance of planning growth that is concentrated at existing settlements, allowing both current neighbourhoods and new development to reap the benefits of increased amenity and infrastructure investment (McConnell and Wiley 2010, p2).

Further benefits of SmartGrowth are cited by Downs (2005), Ruming, Houston, and Amati (2012) to include:

- Compact settlements with limited outward expansion
- Preservation of open space
- Raised residential densities and diversity in housing stock / lifestyle choices
- More mixed land uses, local small businesses
- Prioritizes pedestrian friendly layouts
- Minimisation of car trips, public transport emphasis
- Loaded public cost of new development on consumer (impact-fee) rather than community
- Revitalization of older neighbourhoods
- Creation of more affordable housing stock
- Reduced developer entitlement obstacles
- More diversity in aesthetic, street layout and design
- Conservation of infrastructure cost

This change of tact has prompted a divergence of government and citizen desires regarding residential development trends. Whilst council planners and architects alike support the benefits of a changing policy of residential development, there has been widespread disapproval by suburbanites that still overwhelmingly support the historic premise of a low-density lifestyle. Subsequently, there has been broad opposition to an increased prominence of infill development within communities across the country (Bryson 2017, Page 2017). National surveys indicate the primary reasons for condemnation by local opponents is fear of sunlight and privacy being infringed on, as well as the belief that substandard development would compromise their suburban lifestyle and negatively affect house values (2.4.1)(Bryson 2017, Vallance, Perkins, and Moore 2005, Kusumastuti and Nicholson 2017, p2698).

Media reports have compounded fears of infill through commentary of invasion of privacy and off-street parking issues raised by a 'vocal minority'. These reports act only to bolster the division between the two parties, each decrying the unfair nature of the other, with remarks either denouncing 'big corp' imposing unwanted changes or 'selfish NIMBYs' halting progression at the expense of the 'common good' (Vallance, Perkins, and Moore 2005, Gibson 2005).

"We used to have perfect privacy"

"I hugely resent the loss of privacy. I hugely resent it!"

"The value of this house could plummet quite drastically... we'll be left living in a slum area"

1.4.1: Anonymous Survey Quotes
(Vallance, Perkins, and Moore 2005)

Fig.1.08 Walker: Anti-intensification sentiment (2013)

Gibson further notes that there has historically been a bias from architectural and urban planning academics to favour the 'common good' rhetoric of the authority figure over the 'special interest' NIMBY. This, he states, can be observed by the vast number of 'rational-technical' papers on the topic dedicated to 'offering strategies to diffuse and overcome resistance', with few providing home-owner aligned insight to the phenomena. This information was important for providing impartial critical analysis of international literature within subsequent chapter.

1.2 DEFINING THE MIDBLOCK SECTION:

Figure 1.09 provides a graphic overview of the site qualities present in a typical midblock section. Simply, a midblock section is a large comprehensive site positioned internally within a block. The key property of these sites is the difficulty of their isolated nature and close proximity of neighbouring dwellings' private spaces. Inherently, these sites may feel claustrophobic due to being enclosed, promoting insular development design, only exacerbated by their prevalence of long-winded and disproportionate accesses. Their occurrence typically stems from uneven suburban-sprawl growth patterns where greenfield land is developed in a piecemeal fashion, unintentionally enclosing certain plots. This is an element explored within 'the Anatomy of Sprawl' in which Scheer asserts that poor development trends originating from haphazard rural redevelopment produces "scattered and disordered suburban environments that are difficult to plan or change as they are structurally flawed" (2001). This is a narrative supported by Whitehand and Larkham's criticism of incremental greenfield growth patterns, where they argue for "sensitive management in the micro-scale" (1991). Also of note within their writing is their acknowledgement that high pressures of land shortage and affordability promotes fast-paced, sporadic urban fringe growth and thus spatial wastefulness.

These circumstances are highly relevant to the current development climate within New Zealand, where housing is falling far short of that required by the fast-growing populace and a 'severely unaffordable' property market (Gjerde 2017). Thus, there is a real potential that without change this may be a heritage that persists well into the future.

Government policy in limiting ability to develop in a 'leapfrog' or sporadic, incremental manner could provide a response to future growth patterns that promote the occurrence of midblock sites. This could be managed through disallowing the ability to isolate such sites from the community grain, imposing rulesets that prohibit subdivision that hinders adequate access to adjacent sites, and encourages consolidation of neighbourhoods. While these could surely be implemented, the primary concern for this thesis is providing direct response the currently affected sites which lay dormant due to their inherent difficulties.

One of the difficulties surrounding the midblock is planning restrictions in the Resource Management Act which limits the ability to provide alternative responses to deep-rooted site issues.

'Side setbacks', minimum car-park rules and daylight recession planes create difficulties in providing different opportunities upon internally defined sites. A common thread within discourse is removing such "restrictive and out-dated suburban" protocols, allowing greater diversity in development choice (Marriage 2014). This is an element promoted within regional SmartGrowth principles in "advocating increased development intensity" and provision of infill exemptions as a means of pacifying outward growth trends (Gjerde 2017, TCC 2018b).

However, despite the advantages of a more 'consolidated urban form' promoted by government, infill as a strategy to placate urban fringe development has been a highly contentious issued with local residents. Vallance et al provides retort to the idea that a policy based approach can solve the issue of continuous outward sprawl:

"Interpretations and responses to change occurring from infill cannot be separated from cultural history that has emphasized the virtues of suburban or low-density urban living... Changes to urban policy and planning context (RMA) interact with symbolic elements of the residential built environment to affect profoundly the everyday lives of residents."

- (2005)

Approaches within this thesis, thus, seek to understand and provide meaningful response to these fears rather than a dismissal of public desires and subsequent rubber stamping of unfavourable rules. Trudeau repeats this concern stating: "...debate turns on the question of who best represents the 'wider public interest'...", where the public believes policy should be aligned to retaining low-density suburban lifestyle, or "protecting 'us and 'our interests" (2013). Empathy, education and inclusivity should consequently be championed to "reconnect architecture with its users — where we meet, listen and truly collaborate with the public, speak a common language and still advance the art of architecture" through "meaningful community engagement" (Bingler and Pederson 2014, Melcher, Stiefel, and Faurest 2017, p209). Understanding the complex social narrative that underpins suburban resistance in New Zealand is a significant step in allowing this discourse with suburbanites and will provide a strong foundation to tease more substantial design responses further into this thesis.

Illustrations outlining difficult properties of a typical Midblock site – example located in ‘Churton Park’ suburb of Wellington.

1.2.1 SITE SHAPE COMPLEXITY:

- Angular sites with areas of difficulty due to lack of developer foresight during subdivision
- Site size is appropriate but site features are not conducive to larger scale developments eg. Car manoeuvrability, internal division difficulties, etc.

1.2.2 LIMITED SITE ACCESS:

- Typically, only a single access way to a comprehensive or ‘consolidated site’, no secondary exit is common
- ‘Awkwardly’ situated within neighbourhood, setback far from the road down narrow driveway
- Access is not proportionate to the large size of site: planning regulations typically do not provide means of developing effective multi-residential access
- Suburbs prioritize travel by motor vehicle thus onsite car parking is typically required by council

1.2.3 SUBURBAN PLANNING:

- Limited possibilities regarding the design of midblock due to privacy issues, sunlight and views of existing neighbouring dwellings which are protected over intensification measures within RMA
- Limitations to land-use due to 'suburb standards' imposed within local council rules or covenants from developers, lack of 'mixed land-use' provisions
- Regulations bias single dwellings upon large sections and provide a first in, first served approach

1.2.4 OUTWARD ORIENTATION:

- Properties are oriented toward road with backside of dwelling poorly considered for neighbouring midblock sites, unattractive to potential occupants
- Backyard 'amenity' or 'outdoor living' space distances relationship to neighbouring properties, thus no cohesion between neighbouring sites
- Typical response of internally facing dwellings within midblock may reaffirm fears of claustrophobic, 'ghetto' neighbourhoods held by some suburbanites

1.3 RESEARCH QUESTION

How can architects evaluate the effectiveness of design strategies for **integrating underutilized midblock** sites into **existing suburban neighbourhoods**?

1.4 THESIS AIMS

In reviewing the historical and emotional ties to the suburban realm within New Zealand it was clear that a means of sympathetically designing to these conditions was a substantial focus within this thesis. As such, the aims of this research seek to investigate how research and design processes might offer new opportunities to midblock sites within New Zealand suburbs.

WHAT ARE THE AIMS OF THIS RESEARCH?

1. Provision of an appropriate development framework for the midblock site which considers, and accommodates for, the various different stakeholders
2. Consideration of various design possibilities upon the selected site in order to uncover otherwise unrepresented opportunities for the local community
3. Application of a sustainable design ethos

1.5 THESIS OBJECTIVES

To meet these aims, objectives catering to a thorough investigation of the both the practical and social elements of the midblock site were developed. To achieve aim one it was clear a broad range of factors would need to be researched to provide a strong foundation to which design could respond. While literary reviews and site analysis would act as over-arching catalysts for design, participatory consultation would be a core means of testing both the efficacy of previous academic research on this

topic, as well as evaluating the appropriateness of different design strategies under aim two of the thesis. To achieve aim two it was posited that a number of programmes and strategies would need to be investigated and developed to draw out alternate site potentials that may otherwise be omitted within conventional infill design processes.

HOW WILL THIS THESIS ACCOMPLISH THESE AIMS?

- AIM1**
- a) Thorough research into sociocultural and historical trends regarding the issue as well as investigations into regional / site specific conditions to seek an appropriate development framework.
 - b) Facilitation of participatory design and consultation (small scale focus groups) with affected parties to achieve a more meaningful / empathetic design process.
- AIM2**
- a) Provision of multiple design programmes which will then be evaluated for appropriateness.
 - b) Stimulation of design investigation through alternative processes and techniques including participatory design components and exploration of social conditions as a design catalyst.

1.5.1 OBJECTIVE EVALUATION

AIM 3: Application of a sustainable design ethos

The aim to adhere to a sustainable design ethos (aim 3) is addressed by following the goals and principles outlined within the United Nation's '17 Sustainable Development Goals' (UN SDGs) and the Tauranga City Council's 'Principles for Sustainable Regional Urban Growth' (fig.1.11). The UN SDGs provide a globally recognized set of goals, adopted by world leaders in 2015, was implemented to promote global prosperity whilst protecting the planet from climate change. Alongside these core goals are guidelines and examples of how these may be met within development activities (fig.1.10). These goals will be used within this thesis to prompt and frame reflection on the affect of development upon the community, resources and local environment within evaluating the designs posed. The TCC set of principles are specifically catered to the region of Tauranga where the site for this research is located. These principles were sought through consultation with the local populous, thus allowing a greater level of accountability in evaluating design strategies.

Fig.1.10 The United Nations: The 17 Sustainable Development Goals (2018) - (Icons 3, 8, 9, 11, 12, and 15 relevant to Thesis)

ENVIRONMENT

- Protecting and enhancing our natural environment
- Natural hazard resilience

CITY TRANSFORMATION

- Promoting strong sense of place and identity
- Aiming towards a compact city / well-planned urban form
- Promoting enhanced lifestyle, amenity, liveability
- Improving built form quality, maximising natural assets

ECONOMIC DEVELOPMENT

- Enable vibrant visitor economy, enhance tourism assets

COMMUNITY & CULTURE

- Promote community pride and belonging
- Healthy and active communities
- Safe and resilient communities

TRANSPORTATION

- Creating well-connected communities and local services
- Enhance attractiveness / liveability of urban environment

Fig.1.11 Tauranga City Council: 'Our Story' (2017)

1.6 METHODOLOGY

This thesis subscribes to a research-led design methodology. This process follows the **PAOR** strategy outlined within Action Research and the Practice of Design (extrapolated below) (Swann 2002). This method was initiated for its holistic approach to research-based design processes and emphasis on facilitating cyclical evaluation and community engagement techniques. These are important factors for providing meaningful design solutions and integrating development that is appropriate for local environs and social climate - key provisions within this researches aims.

(fig.1.12)

PLAN – Problem analysis and conditions:

Context will be defined through a thorough process of data collection and observation of elements critical to implementing design iterations. This approach seeks to examine contextual conditions that will provide nuance to more meaningfully respond to the phenomenon of the midblock (Cowan and Melika 2015).

These conditions include: (1) New Zealand context, historical trends and social background, (2) international literature context and solutions, (3) relevant regional and (4) site conditions, including a thorough investigation of how the Midblock site was formed throughout history.

ACTION – Implementation of strategic plan:

Facilitation of an iterative design strategy which follows a cycle of presenting design response, critical examination / reflection, and synthesizing of revised solutions based upon findings. Within chapter (5), design acts as a vessel for examining the overarching issues of infill and posits nuanced perspectives through artistic mediums. Chapters (6) and (7) integrates these ideas into an iterative set of alternative strategies (listed fig.1.12).

OBSERVATION – Critically evaluate action:

This will be addressed through a participatory approach, focusing on integrating users into the design process and as a means of critically reviewing developed designs implemented within the 'action' process with relevant parties. This follows techniques for general populace engagement addressed by key precedent Muf and through examination of academic discourse of Participatory Action Research (PAR). (8)

REFLECTION – Evaluation result, holistic review:

An important aspect of this thesis is developing principles that can realistically support more meaningful future midblock developments. As such, reviewing methodologies and processes pertaining to research, design, engagement and evaluation throughout the thesis is imperative. Rather than develop a 'final design', this research seeks, rather, to contribute overall findings within a framework that can offer information, processes and solutions to both architectural professionals and the wider community (9).

Fig.1.12 Thesis methodology map

1.7 CHAPTER CONCLUSION:

In this chapter the socio-cultural climate of home-ownership within New Zealand was investigated throughout history, providing an argument for the seemingly inherent kiwi opposition to infill development. The concept of the midblock was then discussed, the reason for their existence was examined and the difficulties to providing infill development solutions upon these sections was questioned. A collaboration between well-established international research on the topic of infill within the following chapter and the nuanced exploration of New Zealand cultural values within this chapter provide a solid foundation for socially-empathetic design studies within this thesis.

In reflection to this foundation information the thesis question, aims, objectives and methodology were posed.

Fig.1.13 Accompanying this chapter was a series of concurrent sketches and artworks investigating rationale for opposition and providing potential solutions to the discussed issues. These works are explored within Chapter 5 where they are chronicled with ideas and sketches formed during following chapters.

2.1 CHAPTER INTRODUCTION:

New Zealand is an incredibly young country relative to the rest of the world and has thus far had a reasonably conservative approach to infill. As such, this chapter researches a more established international body of literature on infill development and the issues surrounding it, potential solutions that can be applied. Whilst these studies may provide a rich source of content, due to New Zealand's complex relationship to the suburban environment and strong historic opposition to infill development, these solutions were probed for their ability to be replicated within local environs.

2.2 INTERNATIONAL INFILL LITERATURE:

International literature sources corroborate some of the circumstances within national research. Perhaps the primary instance of this is a large portion of academic research into homeowner fears of lowered house resale opportunities arising from infill development adjacent to their property. Taylor's research into the phenomenon of this reasoning of opposition found that house prices for an area is a "significant and positive determinant of dispute level" (2013). Downs continues this rhetoric "most people resist change from the status quo unless there are specific benefits of them... are accustomed to sprawl... are uncertain with Smart Growth... [and] have a strong desire to maintain market values of the houses they occupy" (2005). Doberstein et al and Brunes et al's studies into these fears concluded that there was no loss of capital value for adjacent properties when researching a number of infill development projects (2016). One of the arguments made by Fischel is that while the profession may bemoan "irrational, far-fetched anxieties" of residents fighting infill, some insight is needed to sympathise with this group's fears (2001). He explains that there is no means for residents to insure their largest, and often only, asset against devaluation, thus, they resort to the next best thing in protecting their home: opposition to planned changes in their environment.

Another factor that should be noted within the international body of literature is a strong correlation of occupancy duration by resident and fearfulness of nearby development (Holden 2016, p32). Survey respondents in the 'long-term occupancy' category were more likely to cite 'reduction in desirability', 'not aligned with neighbourhood character' and more frequently used terms such as 'slums', when discussing neighbourhood infill (Brunes et al. 2016, Carswell 201, Fischel 2001).

In the previous section the widespread academic demonization of residents opposing 'the common good' of intensified development was noted (Gibson 2005) (fig.2.01). Puustinen et al posits that this stigmatization and down-playing of "NIMBY's" as selfish is not conducive to the profession's relationship with its constituents. Rather, they suggest more "palatable options" could be sought in development where "sufficient uplift or amenity improvement for owners would result" (2018). Their studies concluded that where greater perceived advantages than disadvantages are present, there is a far lesser degree of opposition. Another key factor discussed to placate opposition from suburban residents is inclusion of this population into the process of design. Ellerbusch states that within observed infill projects that "ongoing community involvement... is a key factor in distinguishing successful redevelopment projects" (2006).

Doberstein et al state: "focus groups with residents represents an opportunity to add qualitative layers to academic analysis and retains the potential to introduce experimentation of framing and measurement of the response" (2016). Genuine participation is a significant element for establishing trust and allowing dialogue between the 'power-position' of the architect and infill 'affected' parties (Ryan 2004, Jenkins and Forsyth 2010). These concepts call to attention the potential power that participation and testing of amenity-based approaches within this thesis could hold.

Fig.2.01 Alfred Twu: San Francisco Anti-NIMBY cartoon (2015)

2.3 PERIMETER BLOCK & THE KIWI MODEL:

One of the key differences between New Zealand and European development trends is the mixed-mode approach to providing residences. This is shown within the perimeter block typology that reverses the spatial relationship of building to land, seen in suburban models.

2.3.1 THE PROCEDURAL PERIMETER BLOCK:

The perimeter block, typical within urban Europe, is a higher density, terraced typology built flush to the street, surrounding a central outdoor living quarter. Within this model, intensification of the perimeter dwellings follows naturally as supply follows demand (fig.2.03). The blocks are built both up and back from the road front and rear facades act as passive security for shared rear backyards. Shared party walls maximise the use of the site space by enclosing a secure, shared and publicly inaccessible backyard green space (Nunns 2017). This specific allocation of amenity, sometimes a conglomerated backyard, provides efficient, concentrated green space due to its omission of front and side yards (Marriage 2014). Of note with this typology is the reallocation of the midblock to an area of opportunity and amenity, where a large cohort of surrounding residents can actively engage with the space.

Fig.2.02 The perimeter block with central green amenity

Fig.2.03 Nunns: analysis of perimeter block (2017)

Fig.2.04 Google Maps: Vienna, Austria (Aerial - 2018)

2.3.2 THE SUBURBAN SECTION MODEL:

Fig.2.05 Suburban model with green setbacks to boundaries

Conversely, the greenfield suburban model, implemented internationally and prevalent within the New Zealand context, prioritises distance from neighbours and private outdoor living quarters (Nunns and Marriage 2017). Large boundary setbacks to sides, rear and front of the building limit meaningful greenspace to narrow perimeter strips.

Fig.2.06 Google Maps: Papamoa , Tauranga (Aerial - 2018)

Generally, properties are set back to back with boundary fences providing privacy to inhabitants (fig.2.05). As discussed within section 1.2, this becomes a significant issue to the midblock, which is effectively blocked off from the street network and limited to an internal-facing orientation.

2.4 DISCUSSION ON APPROPRIATENESS:

It is clear that the perimeter block is a development typology that strives off of the reversal of the principles of the typical suburban model. While many of the principles within this model were influential, the implementation of a perimeter block within the context of the midblock, however, would not be appropriate. This is due to the inherent issues of the site's isolation from the road and conditions that force solutions to be internally facing. Not only this, Marriage states that there is a suburban narrative in New Zealand that "raising density ratios and loss of side yards would be lowering housing standards and creating a "slum" in the area" (2014). This stems from an impression that multi-unit housing is in some way low cost, low quality, "generally inferior", and "inconsistent with suburban character". Thus, whilst the overall typology of the perimeter block should not be transplanted, there are important lessons to be taken from its spatial use, amenity and lifestyle that it can afford. The following pages discuss further international 'internal-oriented' case studies important to consider.

2.4.1 CASE STUDY 1 - GRØNNEVIKSØREN DORMS:

Achitects: 3RW Arkitekter
Location: Bergen, Norway
Year: 2013

Fig.2.07 3RW: Grønneviksøren green space (2015)

Fig.2.08 3RW: Grønneviksøren internal green space (2015)

POTENTIAL INFLUENCE ON THESIS DESIGNS:

- Central landscaped area surrounded by dormitories
- Features to cue movement around the large site
- Passive surveillance of central green area by large balcony areas and vertical circulation spaces
- Negative: Limited areas of quiet green-space, more aligned to social space and semi-public activities
- Student activity contained within specified zone

CONSIDERATIONS:

- Far denser environment than within national context
- Dormitories for local student populace
- Suburban environment but spatially separated from dwellings by river and green spaces

Fig.2.09 3RW: Grønneviksøren diagram of green areas (2015)

2.4.2 CASE STUDY 2 - FLEET STREET HILL:

Achitects: Peter Barber Architects
Location: London, United Kingdom
Year: Unbuilt

Fig.2.10 PBA: Fleet Street Hill commercial activities (2016)

Fig.2.11 PBA: Fleet Street Hill site layout & train tracks (2016)

POTENTIAL INFLUENCE ON THESIS DESIGNS:

- Townhouses with shared party walls at density that is more appropriate to New Zealand context
- Commercial activities central to the residential development offering amenity / alternate lifestyle
- Inherently internal due to train lines limiting access
- Entrances to site limited, yet draw people into the site through visual cues and landscaping

CONSIDERATIONS:

- Greater local populace than within national context

Fig.2.12 PBA: Fleet Street Hill perspective drawings (2016)

2.4.3 CASE STUDY 3 - ELEPHANT PARK:

Achitects: Gillespies Landscape Architects
Location: London, United kingdom
Year: Planned 2020

POTENTIAL INFLUENCE ON THESIS DESIGNS:

- Multiple small internally-oriented gardens for public quiet areas, one large park for recreational use
- Landscape features used to promote site traversing
- Sweeping pathways intersected by areas of activity
- Framed as sort of oasis amongst dense residences
- Social spaces are dedicated to certain areas where louder activities can be pursued (entertainment).

CONSIDERATIONS:

- Far denser environment than within national context
- Apartment living regarded highly in this location

Fig.2.13-17 Gillespies: Planned elephant park expansion (2015)

2.4.4 CASE STUDY 4 - VANDER PARK:

Fig.2.18-19 de Architekten Cie: Vander Park Renders (2014)

Architects: de Architekten Cie.
Location: Moscow, Russia
Year: 2018

POTENTIAL INFLUENCE ON THESIS DESIGNS:

- Commercial activities within central plaza (gym/cafe)
- Residences oriented around central landscape
- Landscape used as semi-public area with thoroughfare afforded to local community
- Alternative lifestyle than typical suburban environs
- Passive surveillance from apartments above creates a safer inner courtyard

CONSIDERATIONS:

- Far denser environment than within national context
- Apartment living regarded highly in this location

Fig.1B.20 de Architekten Cie: Vander Park Courtyard (2018)

2.5 MAKING SPACE IN DALSTON:

The London-based artist and architect conglomerate Muf architecture / art is a humanitarian practice based upon the experimentation of social and spatial interaction within the public realm. The practice's seminal text 'Making Space in Dalston' manifesto, spanning a number of projects during the 2005-2011 period within the Dalston suburb of inner-fringe London, captures the essence of this work ethic, providing a grass-roots approach to urban planning that centres on the participation of the end user. Whilst not specifically tackling the issue of midblocks within this context, this set of projects explores fundamental issues of providing infill revitalization through exploring solutions appropriate for the complex historic, present and anticipated sociocultural relationships within the region. Therefore, it aims to build upon the body of knowledge established within literature over the course of the thesis thus far and seeks relevant and replicable processes that contribute to my own studies into midblock development.

Fig.2.21 Muf: The three overarching principles of the Making Space in Dalston manifesto (2009)

A keystone concept of the practice's manifesto which repeats itself throughout their entire body of work is the mantra of: "Value what is there, nurture the possible, define what is missing" (fig.2.21)

The entity 'what is there' may be essential positive factors: vintage cobblestones adding essential character to a Victorian high street; or be seen as wholly negative: a nuisance such as a long-term informal dumping ground within an underutilized park (fig.2.22) or an eyesore, such as a forlorn hull of a yacht left to rot where it beached a decade prior (fig.2.23) (Muf 2009b, p19). These are no doubt items seen by many as having no inherent positive worth. To Muf, however, they are meaningful aspects of the urban grain, phenomena of societies' spatial habitation to be investigated, and in some circumstances re-conceptualized and celebrated (Long 2013). These attributes provide them with important consideration for how particular places have been utilized by different user-groups, and uncover patterns developed over the course of its social history. These symbols whilst once having had a heritage of negativity, may be re-examined as objects or actions of cultural empowerment or beauty (Fior 2010). This intrigue with the local history of use resulted in a number of interconnected projects "diverse in their nature but rooted in a deep understanding of the area" (Long 2013, p1).

Fig.2.22 Muf: The Feral Arcadia project: 'Signs of Human Activity' aimed to uncover the local communities' litter-footprint within a public section of land (2009)

Fig.2.23 Muf: Evento Bordeaux Commission - 'As if', a collaborative report of the area's heritage with residents (2009)

Fig.2.23 Muf: Participatory studies (2009)

One of the premises to this understanding was through a thorough investigative foundation of field observations, facilitation of community meetings and collaborative workshops, where constituents could voice what they desired for their community (fig.2.23). These processes fall under the “define what is missing” principle which afforded the Muf Architects both abstract (“sense of community”) and tangible aspects (“there are no green spaces”) that they could strive to meet (Muf 2009b, p19). Furthermore, this facilitation also prompted execution of

Fig.2.24 Eastern Curve Ecopark (2009)

the “nurturing the possible” principle, in that already existing potentials, such as local grass-roots organisations, would be assisted to promote “trust and confidence” with the local populace and cultivating a sense of ownership in the region. While a rigorous partnership with the local populace and public sector stakeholders drew out invaluable knowledge of the region, Long does note that the process did reveal difficulties in managing the breadth of “concerns and desires” (2013, p6). This should certainly be considered in later studies into participatory design.

Whilst difficulties in facilitating public discussion did slow progress with Muf's ability to provide development, this collaborative approach did allow for designs that were more engaging and aligned directly to the needs of the community. This is noteworthy within the major project 'Eastern Curve Ecopark', which was a specific response to a derelict infill site and public desire for a greater number of green-spaces within the community (fig.2.24). By promoting public participation in the construction and planting of a landscape that suited their needs, the Muf were able to create a vibrant, safe and well-populated design intervention which could host a variety of social groups. A local governance body of volunteers was also established to protect the asset and promote entertainment activities for the community (Long 2013, p17). This area became a 'hub' of sorts that resonated with other interventions in the suburb, creating a network of activities in the area. Both participation and network-based approaches were, thus, identified as important elements within my own preliminary analysis (fig.2.25). As with the previous case studies, the idea that local amenity could be an alternative solution to residential development was a catalyst for broadening the scope of the midblock to potentially host a range of other opportunities.

Fig.2.25 Sketches drawn in tandem with Muf study, in particular exploring network-based design options as well as participation as a design catalyst within later their research

Fig.2.26 Muf: Neighbourhood Masterplan (2009)

Fig.2.27-30 Muf: 'host spaces' for various community activities (2009)

One of the opportunities revealed through this research was discovered through examining the Muf 'host spaces' which were implemented for numerous economic, cultural and recreational activities (fig.2.27-31). Of note within this selection was providing allocated breakout zones where bands could perform, community gardens could be grown or art workshops could be run. These once dilapidated spaces was simply opened to pedestrian access with a "pack-away playground, and projection equipment "for local-use and events (Muf 2009). This intervention acted as a 'live test' to study the effects that could be achieved by future master planning. This exercise, Long states:

"...demonstrated the potential to interpret [future design] with input from the local constituency, taking broad-brush aspirations and articulating them in ways the community can understand and experience" (2013, p13).

Communication of the potential of development prior to the building stage within this thesis is certainly an important concept within later facilitation of community participation. These projects clearly show opportunities in how Muf was able to communicate how the local residents could benefit from, and the role they could play in shaping, 'social spaces' (Mullo 2017, p14).

2.6 CHAPTER CONCLUSION:

This chapter provided response to the national literature researched in the previous chapter. Firstly, considerable knowledge was gained on why residents are typically oppose infill development and methods of collaboration to work with these affected parties were studied. The European model of the procedural perimeter block was then analysed for its appropriateness to the midblock section. It was concluded that while some of the concepts of this typology could be influential to a New Zealand model, the insular nature and access difficulties of the midblock would disallow a complete implementation. Subsequently, research into international 'internally-oriented' case studies inspired the possibility of alternative programmes for the midblock. These programmes were corroborated by a variety of activities designed for the Dalston suburb of London. This Precedent was particularly poignant to the methodologies used within this research, specifically the strong facilitation of collaborative processes to align the variety of programmes to community needs.

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3.1 CHAPTER INTRODUCTION:

Tauranga is one of the fastest growing regions in New Zealand, both in population and land-use growth (TCC 2018a). The rapid expansion that has occurred over the past three decades has resulted in inefficient growth patterns and widespread sprawl at the city fringes. The Papamoa suburb of Tauranga, in particular, is an example of the uncontrolled nature of suburban sprawl detailed within chapter 1A. To contextualise the development patterns that have resulted in suburban midblocks, this chapter will detail the suburb's history of growth, consider the features that have been important in its development and analyse the resultant urban forms. Alongside this information, regional amenity and local demographics will be researched to provide background information integral to proposing design solutions that are appropriate to the context.

Fig.3.01 Map showing the Tauranga region of the Bay of Plenty. Highlighted are the primary business and tourism areas: Tauranga City (100) and Mount Maunganui (200); as well as the location of the chosen thesis site within the Doncaster suburb of Papamoa, outlined in orange (211).

3.2 REGIONAL GROWTH PATTERNS:

Tauranga, located in the Bay of Plenty region of the North Island, is an area known for its mild climate, beaches, orchards and thriving port. Historically the area has been populated due to its large agricultural economy, primarily its vast kiwifruit and avocado industries. Since the early 1990s, however, the region has seen unprecedented migration from a burgeoning Auckland market, consequently, over this period there has been accelerated residential growth in the area (TCC 2017, 2016, p11). This growth has been generally characterised by large scale, low density, greenfield development within the urban fringe. This such development has been largely uncontrolled, “designed by private land developers paying little regard to relationship outside their subdivision boundaries” and built in an ad-hoc manner distinctive of sprawl (Scheer 2001). The Papamoa suburb of eastern Tauranga, (outlined in orange: fig.3.01) has been particularly buoyant in residential growth during this time and has continued to expand east along the coast to the district boundary. This expansion, shown in figure (3.02-.03), illustrates some of the inefficient growth patterns, particularly ‘leapfrog development’ which has resulted in a deconcentrated urban form, reliance on private vehicles and residential areas that are isolated from services and public amenity (Dieleman and Wegener 2004, p310).

Fig.3.02 The Papamoa suburb shows traits which are particularly distinctive of rural ‘leapfrog development’ during the 1990-2000 period, leading to wasteful land utilization.

Fig.3.03 Tauranga City Council: map outlining leapfrog growth patterns over the 1959-2017 period. (2017)

Fig.3.04 Doncaster located along the Papamoa beach has been central to vast growth along the coast. Cheap rural land reestablished for large scale development is key to this expanse.

Doncaster, circled within both figures (3.02-.03) is enlarged within figure 2A.04 where the extent of expansion can more readily be examined. In these images the transformation from large swathes of rural and coastal sections to residential development over the period is striking. This seemingly unrestrained growth occurred in numerous locations as certain pastoral and agricultural sections were developed upon and others laid dormant. The remaining areas, in which infill was introduced at a later stage, were haphazardly developed upon using the grain of the prior land-use.

This phenomenon is described by Scheer (2001):

“Suburban growth develops in patterns strongly conditioned by the pre-urban fabric, such as farm roads and fields – [this] can produce scattered and disordered suburban environments that are difficult to plan or change as they are structurally flawed... [consequently], subdivisions seem arbitrarily shaped and capriciously related to the street network”

A lack of council planning intervention during the inception of this suburb has resulted in areas that remained underutilized or dormant as residential development occurred around them, only perpetuating poor growth strategies.

Dieleman and Wegener attribute inappropriate suburban development trends, such as those described in this situation, to: “changes in government policy towards a neo-liberal deregulated and privatized free-market economy” (2004). Whilst policy can be implemented to discourage these practices in the future, the development trends discussed remain a problematic heritage within established areas such as Papamoa. Consequently, introducing development upon dormant parcels into the suburban grain, especially that of the midblock, remains a difficult issue to amend. The reality of the situation, currently, is that these practices are due to continue as yearly dwelling construction rates rise to keep up with a blooming migrant population growth, hence negative externalities may persist in the decades to come (fig.3.05) (TCC 2016).

Fig.3.05 TCC: data shows rising rate of construction within the region with growth within greenfield areas continuing to be the dominant form of expansion. (2017)

3.3 REGIONAL PUBLIC AMENITIES:

Previously discussed was the nature of Tauranga, and more specifically, Papamoa’s growth over the previous decades. The core reason for the increased regional population was attributed to a rising migration from other urban areas, especially from the Auckland market. An increased migration can be explained due to a number of economic, recreational and lifestyle factors. Tauranga City Council’s analysis of the opportunities that the Bay of Plenty can offer include:

- Coastal setting, safe, sandy surf and swim beaches
- Temperate climate, high sunshine hours
- Access to wide range of recreational activities
- Proximity to Auckland and Waikato (‘Golden Triangle’)
- Diverse economic opportunities
- New Zealand’s largest export port

(TCC 2018b, p18)

Perhaps the element most attributed to the Papamoa region is the popular beach to the north of the suburb which runs down towards the iconic Mount Maunganui (fig.3.06). This 12.5km stretch is the premier attraction for tourism, both domestic and international, due to its high quality surf and swimming areas (TCC 2017).

This coastal strip is also a key recreational area for the Papamoa population, supplemented only by a riverside reserve which divides the suburb into two distinct 'sides' (fig.3.07). This area is frequently used, although a lack of pedestrian connection from the street network, imposing fence lines and sparse planting detract from the walkway (fig.3.06). Recreational amenity, thus, is an important aspect to be considered when proposing locally-significant design strategies upon the chosen site.

Fig.3.06 Key recreational areas: the Papamoa beach and the Topaz Drive River Reserve, highlighted as B and C in the following image respectively.

Fig.3.07 Map indicating the primary public areas of amenity within the Doncaster suburb, including recreational areas:

A Papamoa Plaza Mall	B Beach Reserve & Access
C Riverside Recreation Zone	D Location of Thesis Site

- 100 Food & Drink**
- 101 Papamoa Beach Tavern
 - 102 Papamoa Mini Golf
 - 103 Kentucky Fried Chicken
 - 104 Canton Kitchen
 - 105 Big Bake bakery
 - 106 Subway
 - 107 HELL Pizza
 - 108 rain Bar & Restuarant
 - 109 Thai Thani, Mumbai Masala
 - 110 The F&C
 - 111 The Flying Mullet
 - 112 Domino's Pizza
 - 113 McDonalds
 - 114 Great Spice
 - 115 Double Teaspoons
 - 116 Pizza Hut
 - 117 Robert Harris
 - 118 Hot Woks
 - 119 Doug Jarvis Deli
 - 120 Bundy's Cafe
 - 121 Oceanview Takeaways
 - 122 Turkish to Go
 - 123 Monroes Coffee & Icecream
 - 124 Domain Takeaways & Bakery

- 200 Commercial**
- 201 Super Liquor
 - 202 Thirsty liquor
 - 203 Westpac
 - 204 PAKn'SAVE
 - 205 Mitre 10
 - 206 Papamoa Liquor Store
 - 207 Dollar Value, Postie
 - 208 Max, Cotton on, Amazon
 - 209 Merric, Hardy's Organic
 - 210 Postie+ & Typo
 - 211 Dotti & Meccano
 - 212 Portmans & Just Jeans
 - 213 JayJays & Jacqui-e
 - 214 Bendon & Barkers Outlets
 - 215 Cotton On
 - 216 Spark Mobile & Repco
 - 217 LJ Hooker Real Estate
 - 218 Refresh Beauty & Salon
 - 219 Snap Gym & Pilates Fitness
 - 220 ASB Bank

- 200 Commercial**
- 222 Physio & General Practice
 - 223 Papamoa Pharmacy
 - 224 Papamoa Plaza
 - 225 Stirling Sports
 - 226 Paperplus
 - 227 Ocean Blue Healthclub
 - 228 2degrees
 - 229 Spark Store
 - 230 The Warehouse
 - 231 NZ Post and KiwiBank
 - 232 My Pharmacy
 - 233 Countdown
 - 234 Z Palm Beach
 - 235 Harcourts Advantage Realty
 - 236 Papamoa Four Square
 - 237 Fenton McFadden Lawyers

- 300 Public Facilities**
- 301 Papamoa Community Centre
 - 302 Papamoa Public Library

- 400 Green Spaces**
- 401 10 Domain Road
 - 402 Overflow Carparking
 - 403 Under Construction
 - 404 Plaza Extension Space

Fig.3.09 Papamoa Plaza, the suburb's 'town centre'

The Papamoa region is serviced by a concentration of retail and public services at the Papamoa Plaza Mall including a Pak n' Save Supermarket, Public Library and a variety of small retailers (fig.3.06). A common part of the retail landscape is the high rate of low cost fast food, outlet clothing and liquor stores, indicating a lower socioeconomic customer base for this catchment area. Of note for this town centre is a distinct lack of restaurants, common pedestrian areas or landscaping appropriate for servicing the neighbourhood as an economic and civic hub, instead, vast carparks and vehicle-centric entries dominate the area. This, however, generated opportunities within the local market for providing alternative design strategies within this thesis.

Fig.3.10 Urban Effects: Papamoa Plaza (2018)

Fig.3.11 TCC: Papamoa Region Flood-Risk Mapping (2018)

Fig.3.12 TCC: Local Tsunami Risk and Evacuation Zoning (2017)

Fig.3.13 NIWA: data maps on climate averages over the 1981-2010 period, extrapolated within body text (Chappell 2013)

3.4 CLIMATE AND WEATHER EVENTS:

The Bay of Plenty has a mild climate, appropriate for year-round recreation, beach activities, sports and gardening, making the area attractive to tourists and migrants alike. The following attributes are key in considering developmental potential for the region:

A - Average Temperature: The district has little variance in temperature comparative to other New Zealand districts. The December-March period averages above 20°C most days, contributing to a local 'surf-culture' lifestyle.

B - Average Windspeed: As the region is sheltered by mountain ranges to the south, east and west, Tauranga experiences considerably less wind compared to the rest of the country. Low-speed south-westerly winds are the most common.

C - Average Rainfall: 'Wet days' occur an average of 112 days each year within the Tauranga area. The region does, however, show wide variance in rainfall annually, with 'dry-periods' common each year. Conversely, there have been instances of extreme events which have resulted in flooding (refer opposite).

D - Total Sunshine Hours: The region is known as one of the sunniest areas in the country, an important aspect to its popularity as a holiday destination for New Zealanders.

While the area is revered for its weather conditions, there are severe environmental risks which are important to consider with development in Papamoa:

Due to the low-lying topography of the area, coastal soil conditions and low street networks, there is significant flooding, risk of rising sea levels due to climate change and tsunami risk within the suburb (3.11-12) (TCC, 2018). These are very real concerns for the suburb of Papamoa and should be accounted for within design development.

3.5 REGIONAL DEMOGRAPHIC MAKEUP:

Implementation of development can have numerous unintended externalities; the negative effects are only exacerbated when the “sociocultural dimensions of ‘the environment’ are ignored” (Vallance, Perkins, and Moore 2005). Subsequently, this section considers the social aspects of the Tauranga region, primarily researching demographic data and analysing trends that may be important in providing location-appropriate development solutions. Information from this section will be used to more effectively align design strategies to a socially sustainable model outlined within the thesis goals and objectives.

The first investigation undertaken in researching local demographics was seeking information readily available within the vicinity of Papamoa’s town centre. This included the collection of circulars and obtaining photographic evidence of community notice boards within the Papamoa Public library and the Papamoa Plaza (denoted fig.3.09).

This follows the methodology of Muf, discussed within the previous chapter, wherein ‘found objects’ were analysed for their ability to ‘demonstrate the diversity of activities’ as well as provide demographic and cultural information (2009b, p22-23). These items provided a vibrant source of information at a ‘ground level’, allowing a greater understanding of the reality of those living within this area (fig.3.14). Interestingly, the majority of items included both a strong representation of both young families and especially the elderly – a clear indication of the prominent populations within the area. Furthermore, amongst these documents was the vast source of realty sale information, including a large number of yard-picket advertisements, seemingly pointing at a particularly buoyant real estate market occurring currently in the area.

Fig.3.14 Local flyers and community notices found within proximity to town centre

Fig.3.15 A: Population age breakdowns for regions

Fig.3.15 B: Regional projected age breakdown (30years)

Fig.3.15 C: Current / projected households for region

Fig.3.15 A: Current / projected ethnic breakdown of region

The findings from these studies, whilst archaic in nature, were largely confirmed by official Tauranga City Council demographic data (fig.3.15). A clear indication from this data was the high percentage of the population being 65 years and older (21%), when compared to the rest of the nation (~13%) (fig.3.15a)(TCC 2016). This, combined with a low relative percentage of youth and young professionals, shows that the region is relatively mature. Tauranga City Council notes that the prevalence of elderly is due to the region's large retirement economy, which they state is predicted to grow greatly within the next 30 years (TCC 2018a). This is predicted to have a significant impact on the overall makeup of the region as the births in the region begin to fall below expected annual deaths (fig.3.15b). This trend is continued through to present and projected household compositions which show an overwhelming precedence of childless homes within the region (64%) rising to an expected (74%) by 2048 (fig.3.15c). This is an important deviation from local flyers which had an expansive collection of family services as well as a prevalence of schools and childcare facilities within the area. This may suggest the Papamoa population subset of Tauranga may have a larger proportion of families with children. Another note corroborated between these two investigations is the proportionately high rate of both European (Pakeha) (81%) and Maori (18%) populations in the region, with relatively low ethnic diversity compared to national statistics, (72%) and (14.9) respectively (fig.3.15d).

Fig.3.15 (A-D) TCC: Regional Demographic Data (2017)

A key opportunity for change is regionally homogenous residential development trends which TCC says attributes to a lack of lifestyle diversity. Of concern is the large proportion of homes with three or more bedrooms (78%), despite (64%) of households within the area being occupied by single residents or couples (2018). Furthermore, both TCC and national data shows housing is above severely unaffordable and dramatic projected population growth is expected to only exacerbate the issue. This has prompted calls for far more homes to be built over the following 30 years (35,000), greater diversity in housing stock (medium density etc.), initiatives for affordable dwellings and reiteration of the need for intensification through infill development – a rich catalyst for providing alternative development (Brownless 2018, TCC 2018b).

Fig.2A.16 The Papamoa region is dominated by single storey dwellings, primarily brick constructed with tiled hip roofs.

3.6 CHAPTER CONCLUSION:

Aspects important to the development potential of the Papamoa area were explored within this section in seeking to provide a meaningful basis for regionally-specific solutions. Fundamental to understanding the phenomenon of the resultant midblock was critically analysing the suburb's growth patterns. This information provided greater understanding of the process of local suburban development, a research branch important for considering the integration of alternate solutions into the established community. Through reviewing amenity features of the region it was assessed that there were inadequate community spaces and a lack of cohesion within the suburb, supporting the need to investigate different design options. Demographic analysis of the local populous further reiterated the necessity of a different approach to development within the region, aligning with local government's rhetoric for diversifying suburban environments. Whilst these various investigations uncover a complex local environment, both spatially and socially, this context clearly supports the implementation of a design intervention for the purpose of this thesis.

4.1 CHAPTER INTRODUCTION:

Within this chapter the chosen midblock site, 74 the Gardens Drive, will be investigated for its developmental potential as a foundation for iterative design studies within the following chapters. This process examines landscape features, environmental risk and spatial opportunities through consulting evidence on the site's history of land-use and subdivision, analysing government data and maps, as well as photographically documenting prominent site features. Subsequently, previous site designs by third party developers will be critically reviewed to seek knowledge on standard New Zealand practice when developing upon midblock sections. Through assessing a broad range of perspectives on the site context, including investigations within the previous chapter, it is anticipated that a more meaningful approach to providing design alternatives can be sought.

Fig.4.01 Journey to the town centre located 1.5km to the north

Fig.4.02 Original Subdivision Documentation (superseded)

Fig.4.03 Historic Aerial Photography showing site formation through prominent land features (red).

4.2 SITE FORMATION ANALYSIS:

The formation of 74 the Gardens Drive was a complex process of land-use changes and subdivision over a number of decades, closely following historic landscape features. This macro-level examination further asserts Scheer's conclusion that wasteful suburban development practices are determined by pre-urban landscapes, justifying a change to established development trends toward a holistic, affects-considered planning (2001).

1943-1963: A well-defined dune zone is shown with estuary land spanning from this zone to the beach to the north. Land is primarily used for pasture at this period.

1977: Estuary land is gradually reclaimed with homes upon the beachfront showing the first sign of the formation of Doncaster as a suburb.

1985-1997: Farmland to the south is divided into smaller lots for use as orchards and a large pastoral section is expanded (squared-off). Large mounds and shrubbery of the original dune forming a defined angle remain present. Large scale development to the north is established in seemingly sporadic fashion at numerous locations.

2015: Site is subdivided, being defined by the previous northern expansion and angular landscape features of historic dunes; massive growth closes site upon all sides.

Fig.4.04 Aerial Photography of 74 the Gardens Drive over the period of 1977-2017

Micro-level examination of larger scale aerial photos gives even greater insight to the foundation of the site and brings to light some of the issues stemming from its history of underutilization. The following images show the morphing landscape of 74 the Gardens Drive with the present-day boundaries (and those of adjacent sites) overlaid to provide better understanding of the site's heritage of change.

1977-1992: Northern boundary is extended and squared-off, eastern boundaries are defined as new parcels are introduced. The site continues to be used as farm-land.

1997: Development of the Gardens Drive subdivision begins with roads introduced and land graded to the northern boundary. Large quantities of soil are piled at this boundary. Restrictive covenants are placed upon sites within this subdivision by a private developer, including 74 the Gardens Drive.

2003: Houses are built upon north, west and southern boundaries with land prepared for additional housing to the east. Soil from regrading adjacent properties is piled upon 74 the Gardens Drive, the beginning of the site being used solely as storage. Land sold privately and subsequently land-banked.

2007: Site is now completely blocked in with only a single 4m access at the north allowing access from the street network. Vast amounts of sandy soil on the site is redistributed for grading adjacent developments.

2011-2017: Site continues to be land-banked due to covenants and site difficulties. Native tree and plant species were introduced in areas of the site to test growing potential. Secondary access created at south-western boundary through neighbouring property right-of-way easement in attempt to provide greater development potential.

Fig.4.05 Photography of site conditions including evidence of development debris, overgrown vegetation and sandy topsoil

The resultant site has laid dormant for 20 years as the neighbourhood around it has established itself, creating a difficult situation for providing a development response appropriate to the neighbouring properties. A key concern is the relatively close proximity the site has to the backyard living areas of its neighbours, essentially forcing an internally facing development, isolated from the grain of its location. A secondary negative attribute from its dormancy is the accumulation of objects, neighbours' additions and sandy earth from its previous use as a storage area from the adjacent development. These elements create poor baseline conditions for development, yet provide evidence of a narrative between the site and its neighbours. Perhaps the most explicit example of this is the use of the site by a neighbour for their two horses (fig.4.05). While the context discussed is certainly difficult, this element of social connection begins to provide opportunities to assimilate appropriate architectural solutions into the neighbourhood.

Fig.4.06 Tauranga City Council data on surveyors spot levels mapped in raw form (top) and modelled contours (bottom)

As discussed within the previous chapter, the Papamoa region of Tauranga has real risk with both flooding and tsunamis. These issues are highly relevant for 74 the Gardens Drive due to its low elevation ($\sim 5.75\text{m RL}$), sandy soil, low surface grade and locations of pooling on-site. Shown in elevation contour mapping (fig.4.06) is a relatively low average grade upon the site with an overall height difference of 800mm between extremes. The highest site point, a large central mound, seemingly mirrors that of previously stored soil from adjacent earthworks (fig.4.07). This zone runs-off and pools within the north-eastern area of the site at the boundary edge, creating a significant potential risk to neighbouring properties (pooling denoted in deep blue).

Fig.4.07 2003 Aerial Image showing large soil mound

Council flood risk mapping reiterates this issue, showing pooling upon the street network and upon 74 the Gardens Drive (fig.4.09). Due to the limited access to the site, a secondary flow path to the storm water network cannot be attained, thus onsite storm water management must be sought within design solutions to limit the risk to both on-site development and the surrounding neighbours. This cannot be understated as there have been numerous severe flooding and liquefaction events in the area which were compounded by poor infrastructure, flood mitigation and development planning (fig.4.08,10).

Fig.4.08 Blacklock: 2005 Flooding and Liquefaction (2005)

Fig.4.09 TCC: Flood Risk Mapping (2018)

Fig.4.10 John: July 2004 Papamoa Flood Aerial (2004)

Fig.4.11 TCC: GIS Maps with graphic overlays showing 1.5km radius and travel distance to town centre or 'movement network information', and site specific conditions important for development within NZ (2018) (ADM 2018)

Fig.4.12 74 the Gardens Drive site dimensions / access

4.3 SITE PHOTOGRAPHY INVESTIGATIONS:

The previous chapter delved into 'ground level' investigations within the Papamoa region through archiving activities and services documents found whilst on-foot in the local community. This section builds upon these techniques by providing a first person account of site conditions through a series of chronological photographs evidencing important site features (fig.4.13-15). This approach gave a greater level of understanding than top-down planning, which whilst according a large amount of technical knowledge, abstracted the site drastically. These studies allowed for far more insight into the reality of the spatial qualities present at 74 the Gardens Drive – most importantly that of how enclosed the site was due to the close proximity of neighbouring dwellings. This is certainly an important note to take into the design phase of this thesis as methods should be implemented to provide privacy to both neighbours and site users / occupants. Alongside these findings was a clearer indication of the neighbourhood characteristics, including local dwelling aesthetic, road condition and infrastructure, public transportation and an overall idea of the lifestyles present. It was clear through seeing these details that the area is well-established with a particular 'look and feel', which may indicate a social expectation for similar development within the midblock site – this narrative will be explored through further studies during the design phase of the thesis.

Fig.4.13-14 Panoramic photographs of site during June and October 2018 showing bulk of site condition (oriented south). Of note within these images is the close proximity to neighbouring properties and a rather imposing site boundary fence which varies between 1800-2100mm in height. Due to variance in elevation upon site there are areas where visibility into neighbouring homes is noticeable.

Fig.4.15 (Refer following page) A sequential 'photographic journey' around the site noting evidence of site history, artefacts, plant growth, privacy and adjacent conditions. (Photographic evidence undertaken during June 2018)

4.4 PREVIOUS 3RD PARTY SITE DESIGNS:

The following assessments explore previously designed subdivision plans by third party developers over the course of the Midblock existence. Not only do these drawings provide insight into the reality of development planning for midblock conditions, they also show shortcomings in some of the planning philosophies typically implemented within practice. In saying this, the intended purpose of this exercise is not to criticise the designers but to find gaps within the profession that this thesis may learn from and provide alternative solutions to.

Key traits readily noticeable within these designs are:

- Sparsity of shared amenity upon site
- Car centric design philosophy, private garages with no measures for pedestrian access and maneuverability
- No indication of affect on neighbouring properties
- All solutions earmarked as 'low-density detached dwellings' despite local government and consumer desire for alternatives in the region
- Designs not conducive to public accessibility
- Orientation, shape of some sections inappropriate

These designs are for the purposes of review only and were contributed by the owner of 74 the Gardens Drive for the following assessments within this thesis.

Year Proposed:	Circa 2005
Site Land-Use:	Residential
Intensity:	7 Dwellings / Hectare
Private Amenity:	N/A
Public Amenity:	N/A
Dev Typology:	Dual Cal-de-sac

Author Notes: A very low density design which is seemingly arbitrarily subdivided with no amenity features present. Little attention is considered regarding one-way southern access despite majority of dwellings located here with maneuverability within site difficult.

Fig.4.17 (M-Tec Consultants)

10 50m

Year Proposed:	Unknown
Site Land-Use:	Residential
Intensity:	24 Dwellings / Hectare
Private Amenity:	N/A
Public Amenity:	N/A
Dev Typology:	Dual Cal-de-sac

Author Notes: A more intensified approach to site design, however this is done in a fashion that is disjointed and unfavourable to a number of the sections. Again, no provision has been made for single accessway to multiple dwellings. There is a distinct lack of shared amenity which would be typical of environments with this density.

Fig.4.18 (Momentum Design)

10 50m

Year Proposed:	2017
Site Land-Use:	Residential
Intensity:	23 Dwellings / Hectare
Private Amenity:	Two moderate shared green areas
Public Amenity:	7 Guest 'On-street' Carparks
Dev Typology:	Consolidated, 'Village Green'

Author Notes: A more welcoming approach to public access as there is green space easily accesible from both entrances and far easier 'journey' through site (could act as shortcut). Car access and movement more appropriate than previous examples and is clearly defined around central green area.

Fig.4.19 (Momentum Design)

Year Proposed:	2017
Site Land-Use:	Residential
Intensity:	32 Dwellings / Hectare
Private Amenity:	One moderate shared green area
Public Amenity:	2 Guest 'On-street' Carparks
Dev Typology:	Consolidated, Street Network
<p>Author Notes: East-west orientation inappropriate for sunlight access for the majority of sections upon site. Using a street network upon site discourages public access as there is no visual indication as to where exits are - this is also costly and uses an extensive proportion of the total site area. There is also clearly advantaged sections in this proposal.</p>

Fig.4.20 (Momentum Design)

Year Proposed:	2017
Site Land-Use:	Residential
Intensity:	34 Dwellings / Hectare
Private Amenity:	One moderate shared green area
Public Amenity:	9 Guest 'On-street' Carparks
Dev Typology:	Consolidated
<p>Author Notes: Central dwellings may have difficult access and may feel as if they have a 'spotlight' on them due to majority of dwellings oriented towards them. Opportunity may arise, however, if this area was used for amenity or commercial purposes (dairy, coffee): highly visible, central and due to a distinct lack of these premises in neighbourhood (premium).</p>

Fig.4.21 - TCC (2018): Of final note for the site is the newly implemented 'Urban Growth' status that has been given to the Doncaster sub-area of Papamoa. This provision allows for greater design lenience in what local government calls their centres-based urban form strategy:

"Residential intensification in and around town centres [to] enable more people to live within easy walking distance to efficient public transport, shops, community facilities, employment and public amenity... providing housing choices at a wide range of price points, typologies, and locations necessary to meet the needs of an increasingly diverse population"

- TCC (2018b, p29-30).

4.5 CHAPTER CONCLUSION:

A key tenet of the thesis process thus far has been the thorough examination of the evolutionary process of midblock development from both a spatial and social perspective. This chapter has facilitated a more in-depth inspection of these qualities in regards to the site specific to this research. This was achieved through focusing on how the site was formed, the difficulties and opportunities that site features pose and reviewing designs that have been considered previously. Through inspecting these aspects from multiple viewpoints – heritage maps, GIS information, design reviews and photographic 'journeys' – a large amount of practical information for effectively initiating later design processes was discovered. Critical within this information was the experiential element of on-site studies which afforded a more empathetic vantage, where proximity to neighbours reiterated concerns for potential negative design externalities. This knowledge is invaluable in seeking to develop purposeful alternatives with a more holistic perspective - an aspect that will be developed upon throughout a conceptual phase in the following chapter.

5.1 CHAPTER INTRODUCTION:

Within the previous chapters a broad range of conditions were outlined as a foundation to drive a series of iterative design processes. Chapters 1A and 1B provided an examination of the sociocultural and historic elements important to developing infill midblocks within New Zealand, with international narratives and solutions evaluated for their relevance to these conditions. Chapters 2A and 2B narrowed the scope of the investigation by assessing the background information regarding a midblock within the Papamoa area of Tauranga, delving into the environmental, socioeconomic and spatial elements necessary to support a compassionate, nuanced design approach. This chapter seeks to visually reinterpret some of the important elements of these previous sections through teasing out ideas integral to unearth unrepresented design perspectives. This process includes sketches created in parallel with background research, exploration of spatial, social and emotional concepts through a range of expressive mediums, and developing a greater understanding of the effect of infill within the suburban landscape. Through ruminating upon emotive and often intangible aspects of development it is hypothesized that a more empathetic and contextually relevant set of design principles can be sought for effectively integrating midblocks into the suburban realm.

Fig.5.01 Gregory Crewdson 'Untitled: Sunday Roast' (2005)

Fig.5.02 Ian Strange 'Suburban Nightmares: SOS' (2015)

Fig.5.03 Tim Burton's Suburbia in Edward Scissorhands (1990)

5.2 SUBURBIA DEPICTED WITHIN ART:

The suburban dream has been a source of artistic venture for a number of decades, both within New Zealand and internationally. A global fascination with the uniquely rich topic of the effects of suburban life upon modern society has prompted a number of wildly differing perspectives and artistic responses. Perhaps the most frequently portrayed aspect of suburbia within popular media is the representation of isolation and conformity. The former is beautifully captured within the haunting imagery of Crewdson and Strange's photography, presenting a glimpse the debilitating loneliness, the "repression and internal angst", of modern suburban life (fig.5.01-02) (Crewdson, 2005). Conversely, rows of duplicated bright pastel houses with manicured lawns is an image that has become synonymous with consumerism, mass conformity, oppression and egotism. This concept is depicted within Tim Burton's suburban film sets, Malvina Reynold's song 'Little Boxes', Chwast's vibrant illustrations, Marr's wearable art pieces amongst countless other occurrences (fig.5.03-05). These representations are important in deciphering internalized aspects of suburban culture often not considered within architectural research. The following sections attempt to expand upon this topic to further uncover the emotions, desires and needs of the populace through a range of art mediums.

Fig.5.04 Margaret Marr: 'Kiwi 1/4 Acre' Wearable Art (1997)

Fig.5.05 Seymour Chwast: Interpretation of Malvina Reynolds' Little Boxes on the Hillside (2006)

5.3 INTRODUCTORY SHORT STORY:

A fictional written exploration of the whimsy of suburban life, influenced by the activities seen and heard during the numerous site visits to 74 the Gardens Drive in 2018. An attempt to tease out the peculiarities and energy of life in the suburbs, often omitted by architectural academics.

The street awakens to the faint murmuring of Radio New Zealand emitting from a trusty AM radio as a rotund old-mate scrums a sack of potting mix over one shoulder through a maze of immaculately pruned Buxus hedging.

Laughter echoes through the cul-de-sac where two young daredevils are testing their bravery, one-upping each other on their brand new BMX's over ramps made from old fence pails and clay found at the stream next-door. A disapproving glare scans the neighbourhood, camouflaged between gaps of the rustling blinds of an old weatherboard house.

The sweet smell of fresh grass clippings wafts amongst the backyards, an olfactory treat that is paired with the delicate sneezes of the poor lass down the road. A sprinkler repositions itself with the rhythmic percussions of 'jutt, jutt, jutt' for yet another round at soaking a pristine grass berm - tactically falling short of the neighbours' unkempt section.

Fig.5.06 Gibbard: Noisy Suburb, Quiet City (1972)

Tacky-pattering of rubber against the sticky tar of fresh asphalt reinvigorates the irritating yapping of the ugly toy dog across the road, which is accompanied - and subsequently ignored, by an equally irritating counter-yapping of “Princess, come here!”

The sensational orchestra crescendos with the rumbling resurrection of a far-too-rusty lawn mower competing for attention with the deafening roar of an outboard motor gushing a torrent of salt-brine water into the gutter.

An aroma of onions and mince gently simmering in a thick tomato sauce fills the neighbourhood as the frantic happenings soothe to the soft hum of the evening-news jingle.

Only whispers can be heard now, they supplement the soft light peeping through tightly closed curtains – lightbulbs buzzing on and off, off and on - a gentle Morse code lullaby gently rocking the households to sleep as one by one they fade slowly but surely into the night.

...

Silence.

...

The calm delight of silence finally falls upon the street, such a feat unimaginable merely hours ago. It is a sweet silence, peppered only with the gentle procession of wind rustling through the pines of the kauri standing sentinel at the street corner. Time seems to meander lazily, almost at a halt, yet it does not falter: the night drains away to reveal the deep-blue of morning come.

One concluding snore – a thorough nasal knock-out, jolts old-mate awake in alarm. He sits up wide-eyed, full of impractical ideas for the garden, chucks his best overalls on and reaches for his trusty AM radio.

The street awakens to the faint murmuring...

by Peter Stichbury

Within this exercise elements of the suburban lifestyle often dismissed within academic analysis of suburbia were investigated. These observations acted as a foundation to core concepts visited within this chapter, specifically how architects may design sympathetically to the social context and emotional underpinnings of the suburban environment.

Fig.5.06 Interpretation of Mitchell’s bemusement in ‘The Half-Gallon Quarter-Acre Pavlova Paradise’, that Kiwi cities were, in stark contrast to their European counterparts, deserted outside of weekday business hours. The suburban ‘paradise’ instead seemed to exhibit the noise, activity and excitement that the city street typically would, contradicting the international ideal of quiet and peaceful suburbs.

5.4 ARCHITECTURE - LOSS OF MEANING:

"Architecture's disconnect is both physical and spiritual. We're attempting to sell the public buildings and neighbourhoods they don't particularly want; in a language they don't understand... At what point does architecture's potential to improve human life become lost because of its inability to connect with actual humans?"

- Bingler and Pederson, 2014

One of the primary narratives that was investigated within a number of sketches was the idea of a disconnect between the built environment and the general populace. This is an issue that has persisted for a number of years and has been discussed en masse within both popular culture and within architectural theory. Whilst the numerous branches of design 'isms' have resulted in the vast expansion of architectural design theory and 'vibrant intellectual debate' amongst architects, the insulated, self-referential design tropes that were introduced have led to the alienation of the public we aim to serve (Bingler and Pederson 2014). This disconnect between the profession of architecture and the public has, in some instances, resulted in environments that do not reflect the desires of, or meaningfully engage with, the general lay person (fig.5.09).

Fig.5.07 Olivier Schrauwen: "But I want that one!" (2014)

An idea that reaffirmed itself again and again within this series of sketches was the theoretical branch of architectural semantics and memetics: the idea that our built environs can be 'read' through repetition of 'signs' and 'symbols' (Swann 2002). These elements can be incredibly simplistic: the idea 'house' conjuring up a specific collective image; or may be more complex: the language, rhythm and syntax of suburban streets feeling right or 'reading' correctly. As described by Melcher et al, the built environments we reside in are 'symbolic representations of intangible cultural heritage practices' which is important for grounding and comforting us (2017, p12). Through actively engaging with the notion that architectural solutions upon the site may influence the connectivity that both existing and new residents feel with their environment, we can more empathetically respond to the needs of the community.

A

B

C

D

E

Fig.5.08 (A-E) An introductory drawing exercise, simplifying a photograph of clearly articulated objects around the site through numerous drawing techniques to consider differing levels of legibility of spatial language

Fig.5.08 Architecture expressed literally as language. In this case it is difficult for those not literate in architectural conventions to truly understand the spaces they inhabit

Fig.5.09 With a lack of literacy or understanding, perhaps architecture is merely a spatial device, or husk, with no meaningfulness or connectivity to those that use it

Fig.5.10 Initial probing of architecture through semantics and memetics. Of note was the consideration of local street names which reference Caribbean islands, American beaches and jewels - references entirely hollow within the local context.

Fig.5.11 Design as superfluous to context: self-reflection on the relevance of my own design choices and their ability to provide a solution to the issue

Fig.5.12 'Arbitrary Lines on Site Plan' - Commentary on the rational-technical process of top-down development - Meaningless lines on a page devoid of the nuance of reality

Fig.5.13 The profession of architecture typically favours aestheticism and glossy representation. This montage counters this assertion by expressing human space as complex, gritty and multifaceted - a 'living entity' not a museum exhibit husk

Fig.5.14-15 Exploring the idea of internal and external spatial divisions, especially important in considering how the site may be used - eg. Do members of public feel welcome upon site if there are residences upon it? Is it visually but not spatially accessible? How do these attributes affect the neighbourhood?

Fig.5.16 Exercise in understanding the meaning of site entrance and how thresholds may visually restrict or welcome use of site by different users (Public, private, club affiliation?)

Fig.5.17 Montage exploring binary opposites of scale and the proportionality of humans to space - these spatial conditions may feel restrictive or foreboding, freeing or comforting

Fig.5.18 Lewis: the phenomenon of love-locks (2016)

Fig.5.19 Can the instinctively occurring social phenomena of love-locks be actively planned for upon site?

5.5 ARCHITECTURE AND AUTONOMY:

Closely related to the concept of the legibility and contextual relevance is the idea of how people use different spaces. Vallance et al's studies into suburban responses to intensification have emphasized the 'historically embedded conventions and discourses' that have influenced how people interact with suburban spaces. They describe this aspect through the term 'social spatialisation', or as they describe: "cultural formation through which residents know 'what to do, when and where'" (2005, p721). This conformity to an unspoken suburban moral code is well-established within a New Zealand context (as discussed within section 1.3) and may prove difficult in promoting site-use that contrasts or disrupts these behaviours. In seeking alternatives to this issue, the following sketches attempt to develop unique methods to attract discourse with the site, an aspect integral to any design solution favouring public-use. Accordingly, a main pursuit within these studies is the idea of self-projection and spatial autonomy as a means of encouraging site population and collective 'ownership'.

Fig.5.20 A theoretical study into how introducing an element, in this case stones and sandpits, could be used by people as a means of autonomous self-expression and projection upon the site. A number of responses were considered as potentially occurring - stacking, writing, drawing upon them, disseminating across site, hiding them etc.

Fig.5.21 An early exploration into how this design might be framed to encourage multiuse, creativity and spontaneity

Fig.5.22 Physical layering and montage highlighted the importance of understanding the complexity of people and how they may potentially interact with the built environment

Paradoxically, despite being a human-centric artistic and technical field, the profession of architecture has historically exalted the built environments for its pure visual aesthetic, representing this largely void of humanity's trace (Bingler and Pederson 2014). The dogma of actively ignoring the occupancy of buildings by humans is clearly inappropriate within a human-centric design basis as is posed within this thesis. Therefore, represented within the vast majority of the sketches within this chapter is the pursuit of human spatial inhabitation, reaction and use of the built environment. This closely follows experiential theories of human engagement with architecture set forth by within the book 'People and Spaces':

"It is said that architecture lives in three-dimensional space – 'lives' because that space, designed and built by human beings, also includes human beings themselves – their comings and goings, their actual presence – throughout time and in ever-changing patterns. We ourselves, therefore, are the quality peculiar and unique to architecture, the dimension that distinguishes architecture from all other arts... A building standing empty is not a whole building. It is only a beginning. We cannot understand it until we fill it with people, if only in our imaginations."

- Abramovitz (1979)

Fig.5.23 'Filthy Little Buggers': a montage imagining the duality of experience between children and adults. How might designers approach the disconnect sometimes present between these two groups without alienating either one?

5.6 ISOLATION AND TERRITORIALISM:

Fig.5.26 Home as sanctuary: a comfort that protects us, and that we in turn must protect. An overarching theoretical concept for understanding mentality of constituents - written about by Casey and Ellerbusch (key quotes on opposite page)

Within chapter 1A the historic premise for Kiwi's uniquely protective relationship with land ownership was discussed. This is an important factor when seeking to provide reasonable and executable principles for future midblock development within the country – thus, a large portion of these theoretical exercises have considered the impact that intensification may have upon midblock neighbours. As such, this section observes the incidence of territorialism, isolation, disenfranchisement and social marginalization within suburban environments in pursuing important aspects to consider within future designs. A particularly interesting trend noted by social theorists, alluded to within these sketches, is the contemporary global deviation from “the traditional bonds of family and community”, a phenomenon that they conclude has resulted in increasingly socially isolated populace (Melcher, Stiefel, and Faurest 2017, p12) Furthermore, they assert that prioritisation of private vehicle travel and the systematic segregation of land-use has created isolated suburbs, devoid of pedestrian presence and social interaction. This narrative is heightened within New Zealand suburbia, where housing preference survey findings have concluded that perceived safety by the public is the ability to separate yourself from others, in contradiction to global idea of comfort in ‘togetherness’ (Bryson 2017). Montage and sketches explore the ideas behind these circumstances, building upon representations of suburban isolation noted at the start of this chapter.

Fig.5.27 With a constant bombardment with information through news media on TV, radio and on the internet a modern day state of fearfulness is constantly perpetuated

"Where we live and in particular our home-place is something abiding enough to maintain our own actions or thought... In standing in my home, I stand here and yet feel surrounded by the building's boundaries there. A person in this situation is not simply in time or simply in space but experiences an event in all its engaging and unpredictable power"

Casey (1999, p314)

Fig.5.28 A paranoid manifestation of fearfulness to change, sketched in parallel to reading vehement statements of opposition to infill by defensive residents

(In response to Casey) "This may explain our mental linkage of place and property; by gaining security from one we gain it for the other. So, the risk of loss of one will evoke a loss of the other; inevitably we will attempt to protect both as if we were protecting ourselves. By extension our collective mental image of property develops through community. Our community further identifies our place and allows us to ascribe additional dimensions such as value and belonging."

Ellerbusch (2006, p571)

ROLE - CHANGES FAMILY YOUNG	ROLE - CHANGES PROFESSIONALS	CONSTANT NEIGHBOUR	ROLE
[SAMANTHA 28 (P) CRAIG 31 : EMILY 3	[DOUG 42 ASUKA 37	NIGEL 63 (WIDOWED) (CHILDREN: GROWN-UP)	NAME / AGE
PREGNANT STAY-AT-HOME QUANTITY SURVEYOR	IT SPECIALIST ACADEMIC / CONTRACTOR FINANCES	SEMI-RETIRED BUSINESS OWNER (UNIVERSITY ETC)	OCCUPATION
FAMILY-ORIENTED LIBERAL HUMBLE	CAREER-ORIENTED FRIENDS LIFESTYLE URBAN LIVING HIGHLY EDUCATED	WORK-FIRST CONSERVATIVE HOUSE/GARDEN PROUD SELF-MADE	TRAITS
FUN, SAFETY, FAMILY FRIENDLY, SCHOOLS / ACTIVITIES	TRAVEL, FUN, CAREER PROGRESSION, LIFESTYLE FINANCES	RELAXATION, QUIET, RESPECT, ASSET APPRECIATION FULLY RETIRE	NEEDS/ WANTS
CONSTANT OWNER OF SITE	CONSTANT COUNCIL STAFF	SEMI-CONSTANT SITE WORKER	ROLE
JAMES 55	REWA 40	RAWRI 26	NAME / AGE
BUSINESS OWNER	URBAN PLANNING TCC (RMA)	SITE LAND-USE SPECIFIC JOBS	OCCUPATION
CONSERVATIVE FAMILY-ORIENTED HARD WORKER DOWN TO EARTH	PROBLEM-SOLVING COMMUNITY ORIENTED RULES & LAW COMMON GOOD HUMBLE	COCKY, WORK HARD/PLAY HARD ATTITUDE SOCIALLY-ORIENTED UN-EDUCATED	TRAITS
ASSET APPRECIATION SITE SUCCESS COMMUNITY & (GIVE BACK TO) TO RETIRE	REGIONAL SUCCESS CAREER-DEFINING PROJECT, TO BE RECOGNIZED & APPRECIATED	STABLE OCCUPATION FUN, UNDEFINED ASPIRATIONS/STUCK	NEEDS/ WANTS

Fig.5.29 A theoretical exercise in developing fictitious neighbourhood 'characters' (based on regional data and first-hand accounts upon site) in attempt to understand their ambitions, lifestyle choices and feeling about the Midblock

Fig.5.30 Nigel was a particular character that represented the territorialism and loneliness that might fester within the suburban environment. This persona was based upon Lincoln University infill survey responses referenced within chapter 1A

Fig.5.31 The final image produced shows the fearfulness Nigel has to a changing social environment within the neighbourhood. Is there some sort of duty of care that we as architects must provide to maintain his lifestyle or is this thinking unfeasible?

Fig.5.32 A vivid representation of the turmoil of isolation and oppression some individuals feel within their living environments (as influenced by Crewdson and Strange's 'suburb' photography)

Fig.5.33 Sketches of elderly passer-by's whilst visiting the site

Fig.5.34 Home as womb: A sketch representing the idea that New Zealanders find safety in the ability to separate themselves from others rather than global concept of collective power or 'safety in numbers'

Fig.5.35 Suburbs are made up of a collective of characters. Whilst all of their desires cannot surely be met within a design solution, it is important to identify and address areas where parties are negatively affected or disadvantaged

5.7 CHAPTER CONCLUSION:

This chapter initiated a grass-roots approach to understanding design affect through delving into a more nuanced, conceptually engaging series of emotive sketching and montage. The process undertaken played upon differentiation from typical architectural methodology by instigating creative experimentation of otherwise unrepresented perspectives. Through exploring innate emotional responses to different spatial conditions and changes to living environment, these techniques allowed insight into areas important to consider when providing developmental solutions appropriate to the numerous stakeholders - notions which allowed for a greater understanding of what provisions are required to meaningfully engage with thesis aims and objectives. These values, thus, act as a foundation that stimulate a more purposeful design iteration series within the following chapters - furthermore, they provide an additional critical framework to which these iterations' impacts can be reviewed.

Fig.5.36 Within this chapter artistic rumination, rather than traditional architectural methodology, was the primary source of seeking understanding - in effect expressing site conditions and context as a canvas to probe complex ideas

Fig.6.01 Drone Photograph of site and surrounding suburb

6.1 CHAPTER INTRODUCTION:

This chapter details the preliminary design processes undertaken for this thesis. This involved building upon discoveries from the previous conceptual stage in attempt to develop abstracted qualities to specific programmes that could cater to the neighbourhood.

6.2 WAYFINDING AND SITE IDENTITY:

An important aspect explored within the early stage of the preliminary process was understanding how pedestrian and motor vehicle travel could be managed. Due to the interesting shape and orientation of the site, a number of pathways were employed that could be used for a number of different programmes. These pathways were loosely based upon elements discussed within the seminal text 'the image of the City' by Kevin Lynch (1960) (fig.6.02). The wayfinding concepts within this text, while academically dated, were important in analysing the space in a simplistic manner. Breaking the experience of movement on-site into 'journeys' was a key finding from this study. The most important devices manifested were the 5 core pathways shown in figure 6.03. These journey's through the site could be used in numerous ways to inform travel to specific nodes, maximise build potential, create visual intrigue ('landmarks') and split the site into 'districts'. This quickfire exercise was also reactive to the limitations of the reviewed third-party designs, a number of which obstructed line of sight through the site, thus inhibiting public way finding.

Fig.6.02 Author interpretation: Lynch's 'The Image of the City' (1972)

Fig.6.03 Exploration of site movement and spatial hierarchies

Public perception of the site was not only considered from a spatial perspective, this idea also permeated into how the idea of the site could be appealing to the wider population. This was considered within sketched graphics that could inform the public of access through signage and disseminated advertisements. While this technique could successfully be employed, there was a limited site-specific identity drawn from these graphics and subsequently other means of representation were sought that could be more successful.

Fig.6.04-06 Exploring site identity through symbolism

• SEVENTY-FOUR THE GARDENS DRIVE, PAPAMOA

BRAND/IDENTITY/NARRATIVE/RHETORIC
COHERANCE

SITE BECOMES ACTOR

PUBS/CAFES/
PARK? RECREATION.
DEMOGRAPHIC COMMODITY

MUTUALITY - A COMMON
FORCE BEHIND PATRONAGE
SIMILARITIES, SHARING
OF TIME AND SPACE

7010 'YOUR LOCAL'
WATERING HOLE

PLACE OF
CONVERGENCE
MEETING SPOT

"CHARM"
"CHARACTER"

Fig.6.07 Site-specific features explored as identifiers

The result of this shift in focus came in the form of reimagining historic site features, a method discussed within the previously mentioned projects by the architecture firm Muf (Section 2.5). Site investigations revealed numerous adhoc built elements - a particularly intriguing device found around the site was the tree cage. These were located in numerous locations on site, built with crude materials and reflected other such devices used in the region for young orchard growth. Following the Muf principle 'value what is there', these cages acted as a catalyst for providing a more regionally and site specific identity than the previous exercise (Muf 2009). While many concepts were considered for these elements, an effective approach to celebrating these structures was to reimagine them as way finding tools. Through physical montage these structures became frames for colourful art that could be easily discernible to those traversing the site (fig.6.08). It was imagined that local artists could be involved in creating regionally specific pieces that could draw the public into the site and guide them to areas of interest. Overall, these concepts reworked the shortfalls of the previous abstract graphics to a more locally understood narrative and became iconic symbols for the site design.

The following spread iterates upon these montages, as well as experimenting with how these devices could be used as a graphic representation for the site.

Fig.6.08 Montaged site photography and painted graphics

Fig.6.09 'Tree Cages' measured and detailed for recreation

Fig.6.11 Consideration of 'Tree Cages' as representation

Fig.6.12 Final graphic that was conceptualised for this series, developing symbol and an aesthetic for the site design

One concept that sketched throughout this process was how the edge treatment to the boundary would affect neighbouring properties. One of the ideas that became influential was how fauna could be used to create a less imposing boundary line than the hard edge of the current fence. This was in part due to the current state of the site which is heavily overgrown along certain parts of the boundary fence. This was particularly influential because it allowed some visual permeability whilst allowing a natural setback from the boundary, (thus, privacy and noise reduction for neighbours) (fig.6.13-19).

Fig.6.13 Imposing nature of hard fence line versus soft edge

Fig.6.14 Garage setbacks or optional garage if required

Fig.6.15 Different border types that could be implemented

Fig.6.16 Daylight over typical NZ setback method TCC (2018)

Fig.6.17 Massing study of resident dwellings to test setbacks

Fig.6.18 Consideration of neighbours backyard perspective

6.3 PROGRAMMES AND CONSIDERATIONS:

Within chapter 2 a number of case studies were reviewed to understand if alternative programmes could be achieved with an internally-oriented site. Within this research a variety of potential land-uses were identified, including landscape, commercial, residential and 'cultural' activities. While infill literature suggested alternative typologies could be more prone to opposition, it was important to test these programmes within a New Zealand context. Due to the broad nature of designing 5 different concepts, each of the programmes were examined within quick-fire design brainstorming sessions, where resultant concepts would be developed to a presentation state for focus group facilitation. Within the following design iterations it was pertinent to consider how test subjects within the participatory consultation sessions could engage with the different concepts. Using principles of identity, representation and isolation probed within earlier drawing studies to frame these iterations was important in designing in a manner that surrounding residents could be positively affected by the programmes. (Fig.6.18-19).

Fig.6.19 Planted borders as a soft edged fence

6.4 LANDSCAPE DESIGN SOLUTION:

The initial typology that was developed through sketches was a landscape design which was mainly based upon principle of movement within the site. First concepts were more general in their application with limited contextual relevance, however became solid stepping stones on which latter iterations could build upon (fig.6.14, 16). Core to bringing local context to these initial designs was looking at site features (flood risk, existing fauna) and its history of use as an agricultural site (fig.6.15). This narrative spawned a number of designs that sought to imagine the site as a celebration of the important local history of orchards (Fig.6.17-20). It was assessed, however, that as a recreational masterplan it had very little space to provide meaningful activity space. Through reworking these designs to 'pockets of activity' and using previously developed 'tree cages' as symbols of local history of orchard growth, a middle ground was investigated. These devices doubled as both a means to visualise the local story (as imagined through cooperation by local artists) and as cues to inform movement upon the site.

Fig.6.14 Initial sketches used pathways previously developed to inform a generic park space that could be used for recreational purposes.

Fig.6.20 Flood risk and existing fauna as design initiation

Fig.6.21 Investigations into how different pathways could inform different types of public landscape use within design.

Fig.6.22-23 Agriculture and orchards used as a contextual basis, however little usable land for recreation was a negative theme within this series of iterations.

Fig.6.19 Site sectioned into 'agricultural plots' in a more abstracted masterplan and exploration into how previously conceived 'autonomy stages' could be managed (circled areas)

Fig.6.25 Planning on how previously designed orchard concept could be changed to afford more recreational space and locating areas that could be better utilized.

Fig.6.24 Agriculture as a contextual catalyst explored in community gardens, influenced by Dalston temporary gardens by precedent Muf.

Fig.6.26 Archaic sketch that was important in consolidating different elements within the previous sketches to particular zones of activity and maximized recreational potential

Fig.6.27 Final preliminary design for development

The final design for this series of iterations built upon the successful elements of the previous concepts and corrected some of the glaring faults, namely providing greater levels of space for recreational use. This was achieved through redistributing wasteful spaces (fauna) to the periphery which would also afford neighbours privacy and noise reduction. A playground, carparking, 'stage' and public toilets were also added at this stage so that the site could cater for users from a larger catchment area. The flood risk zone was reimagined as a ponding area that could lower the risk of pooling from on-site and neighbouring flowpaths. Tree cages were also implemented as visual cues to guide users between the two entrances.

6.5 RESIDENTIAL LOW-DENSITY SOLUTION:

The second iteration set was a low density option that could be used within focus groups to prompt reaction to an alternative 'efficient' model. This was primarily a response to national literature from section 2.3 where a number of academics cited removal of boundaries through shared party walls as a solution to suburban housing. While third party designs attributed large sites to each dwelling, it was thought that a duplex typology could be an intermediate between the current level of density and medium intensity models often opposed by local residents. The designs were based upon maximising the on-site amenity for both owners and neighbouring dwellings whilst also developing built forms that were informed by existing dwellings, as not to alienate local residents through forms that could offend local character.

Fig.3A.28 Planning satire of a previous design's shortcomings

Fig.6.29 Numerous sketches were drawn to provide different sized dwellings. Smaller 2.5 bed homes at 90m² were chosen after reviewing local housing trends and desires in section 4.5.

Fig.6.30 Affected parties diagram showing appropriate setbacks for privacy and light for neighbouring residents.

Fig.3A.31 By splitting roof line to smaller gables a less visually imposing, and proportionally relevant silhouette was formed.

Fig.6.32 Justification of form, based upon local suburban identity and meaning - scale, shape, texture.

Fig.6.33 Forms developed through splitting of gable forms to dampen affect of a larger duplex scale.

The key item addressed through these drawings was understanding how form and layout could be integrated into the neighbourhood - being different enough to elicit genuine response to an 'alternative', yet similar in form so that residents would recognize and understand the architecture. Numerous floor plans were sketched with a 90m², two and a half bedroom unit being the chosen as an appropriate size to meet the changing community requirements (as alluded to within section 3.5). One of the issues in providing a duplex typology of these dimensions was providing a roof line that was in keeping with the surrounding dwellings. A number of forms were considered through examining photography of the surrounding neighbourhood - it was clear that a hip or gabled form would be the most sympathetic to the context. To keep a 8° pitch, as standard within the local subdivision, the roof line had to be split as comply with surrounding building heights. This also prompted the use of offsets to combat the overbearing scale of the monolithic initial designs (fig.6.32). Using the previous pathway principles, neighbour sight-lines, and sun orientation as a catalyst, an efficient plot setout was achieved that offered a generous area of shared amenity to site residents as well as the local community.

Fig.6.34 Final master plan based upon sun orientation, efficient pathways for residences and micro spatial context.

6.6 RESIDENTIAL MED-DENSITY DESIGN:

The medium density solution was highly influenced by Peter Barber Architects' concept for 'Fleet Street Hill' (Section 2.4.2). It was, however, noted within section 2.4 that simply transplanting these such perimeter block typologies would be inappropriate. Thus, through testing this theory within figure 6.35 it was concluded that the scale would, indeed, be far too disproportionate to the neighbouring properties. Whilst this limited the potential to use this precedent, a number of significant design concepts were influenced. The overall external form was the key issue for this solution, thus a large number of sketches and models were made to establish an appropriate form. As with the previous low density section, the form and roof line of the dwellings were a key issue to limit the imposition on neighbour's amenity. Here, Fleet Street Hill played an important role in influencing a comb-like roof form that would split the massive scale of the terraced dwellings into more palatable forms and allow sunlight into private and shared green spaces (fig.6.36-39). These sketched exercises also prompted the use of some of the previous strategies for visualising journey through the space within section 5. Figures 6.40-41 were significant visualisations of how this typology could, through concentrating form, create larger shared recreational areas for site residents and the larger community.

Fig.6.35 Many different layouts were influenced by precedent Peter Barber Architects' Fleet Street Hill 'plaza' typology

Fig.6.36 initial sketch response to the split-roofed terrace forms used within Fleet Street Hill (refer section 2.4.2)

Fig.6.37 Investigation of a two-storied variant to the typology

Fig.6.38 Internal ramifications of this form and how it could be celebrated for layout and spatial 'feeling'

Fig.6.39 Examining split-roof versus form setbacks, a mixture of both were considered to break the scale of the terraces

Fig.6.40 Montage of potential lifestyle that could be afforded by creating distinct, shared community green space

Fig.6.40 Further investigation of form in relation to distance from dwellings, sunlight penetration and resultant floor plan

Fig.6.41 Dwelling form ensemble investigating how external form could contribute to the internal living areas.

Fig.6.42 Scale model of terraces, frame and clad to test dimension and inserted sketched floor plans

Fig.6.44 Final sketched masterplan for medium density design

Fig.6.43 Final sketched floor plan - it was envisioned a number of orientations could be achieved for different lifestyles

Figures 6.41-6.42 extrapolated upon previous exercises through sketching and model-making, testing how scale could be managed. These were used to set out appropriate grid spacing to meet local building rules, where floor plans were then developed (fig.6.43). As the terraced dwellings condensed the overall structural footprint, a larger proportion of the site could be allocated to amenity purposes (fig.6.44). One of the key elements was attempting to create this space as both a positive aspect to those that would live in these dwellings and contribute to a lack of high quality green space for the community. This was considered an incredibly important aspect to develop within the following stage of iterations.

6.7 ART / CULTURAL DESIGN SOLUTION:

For this process it was important to test a broad spectrum of land-uses - one of the more obscure solutions influenced by Muf was implementing a design for art and cultural purposes. Through examining their highly successful temporary art spaces within their Dalston master plan it was questioned whether such a design could be adapted for the local context. A multi-use community centre was the core of this solution where the site could attract a wide variety of patrons. Initiating the design process was defining the site into two quadrants of activity (A/B). Within figure 6.45 a series of tests stimulated how the site could be populated by tree cages as a primary catalyst. The form of the structures, a large hub (B) and a quiet reflection space (A) were based upon the abstract shapes created by these initial tests (fig.6.46-48). The narrative of this concept followed the outward reaching angles formed by the site constraints and the tension framed between the two built entities. While the scale of the planned hub was far greater than that of the residential units surrounding, a design strategy was implemented through vast setbacks for fauna and development of a low-lying form so that it could be effectively camouflaged to neighbours. Meandering pathways were planned to cater to a peaceful journey through the site where artworks could be disseminated within the green space (fig.6.49).

Fig.6.45 Spatial tests on how the tree cage art developed within section 6.2 could be used to inform travel within the interstitial space created between the quadrants A and B.

Fig.6.46 Outward reaching form framing central green space

Fig.6.47 Refining floorplan based upon setback restraints

Fig.6.48 Implementation of public carpark for broader reach

Fig.6.49 Final master plan for preliminary stage

Fig.6.50 Overall form finding exercise to test scale and affect

Further considerations within this set of iterations, explored within figures 6.48-50, was how the site could be accessed by the wider community and how fauna could be used as a soft boundary edge (refer section 6.2) as well as passive measures to combat flood risk on-site.

One measure, that would be influential on further development of the previous programmes was using a higher building pedestal (piled) to combat site flooding in areas of risk (refer fig.4.09) as well as to allow storm water run-off to drain to perimeter fauna for drainage.

6.8 COMMERCIAL DESIGN SOLUTION:

The final concept of this series was prompted to test the appropriateness of providing commercial activities on-site. A shared multi-use workspace for small businesses was posited after reviewing a large number of community flyers which included a number of small, home-based start-up businesses (section 3.5). Through this investigation it was clear that a space that centralizing small-scale commercial activities to a shared space could be effective within the community. While the previous programme iterations used forms sympathetic to the surrounding environment, within this concept, however, a more striking design was envisioned to draw patrons to the site. Working to the internal nature of the site, a narrative of encapsulation was formed as a basis to sketches (fig.6.51-52). This narrative's main driver was the deep setbacks that were initially implemented to distance the activities on-site away from potentially affected neighbours (fig.6.53). This effectively compressed the resultant building to a central circular form. Due to similar site constraints, a key contributing influence for this design was Vander Park by de Architecten Cie. (Refer Section 2.4). This circular set of buildings were framed in a circular manner, encapsulating a courtyard heart of a variety of fauna. This was a poignant concept in informing and celebrating the introspective element of both site and structure.

Fig.6.51 Initial sketch of possible forms

Fig.6.52 Sketched iterations of form and environmental affects

Fig.6.53 Testing implications of setbacks on pathways and form

Fig.6.54 Investigating the opportunities of submersion

Fig.6.55 Testing possibility of submerged and introspective structures to imitate enclosed nature of the site itself

Fig.6.56 Examining appropriate depths for accessibility

Fig.6.58 Final preliminary design for development

Fig.6.57 Sketched test of road layout for one-way system

Through developing these iterations this notion became an important stepping stone to unravel a narrative of an insular oasis. Submerging the overall form of the structure became important for both lessening the visual impact on neighbours as well as framing the internal space as its own microcosm (fig.6.54-56). Within master planning the setbacks and circular form created a challenge for how the remainder of the site would be managed (6.57-58). Reviewing the previously developed pathway principles, however, provided a logical response through a diverging pathway that further encapsulated the site. A key concern for this concept, to be developed within subsequent design was how the building could be occupied and integrated into the neighbourhood without affecting neighbours.

6.9 PROCESS CRITICAL REFLECTION:

One of the primary issues with such a broad spectrum of programmes was the divergence of attention that had to be afforded to each of the sets of iterations. One of the opportunities investigated within section 6.2, however, was allocating a series of shared principles that formed a foundation to concepting. Developing a series of pathways, as influenced by Lynch (fig.6.02), was a powerful tool to inform master planning, acting as a catalyst for how different programmes manages journeys throughout the site. While quick fire sketching played an important role in teasing out concepts, a drawback within this series of preliminary plans was how the abstracted drawings would be managed within reality. Core to this issue was how scale would be managed in a way that would be appropriate to the neighbouring properties. While tests were employed to conceptualize this notion throughout the series, it was imperative to investigate how ground elevation and scale of building would be managed within a scaled environment. Furthermore, while external form was developed based upon setbacks, narrative and affect upon neighbouring properties, exploring the internal aspects and street scape of these concepts was limited. Through reflecting upon these problems it was clear that the developed design phase would require a greater level of representation so that the designs could be clearly communicated to a non-architecturally-trained populace.

6.10 CHAPTER CONCLUSION:

The preliminary set of iterations within this chapter examined a variety of broad programmes to test within the midblock section. Initially sketches established over arching design strategies that could be used as a foundation for each of the programmes. This basis was used to prompt different narratives and solutions in response to the different restraints initiated by the varied programmes. This process was then evaluated to offer insight to opportunities and drawbacks that could be examined through the developed design stage within the following chapter.

7.1 CHAPTER INTRODUCTION:

The previous chapter discussed the justification and progression of development concepts for 74 the Gardens Drive. This chapter displays the overall outcome to this process where these ideas were developed into more tangible forms. One of the purposes of these designs was to effectively communicate the 'lifestyle' afforded to the community in a relatively simplistic way so that the designs would be understood easily by the lay-person. In essence the design outputs were to be a main focus within participatory consultation, thus could not be too abstracted, nor jargon-heavy. The following sections report on significant changes, critically evaluates the designs against the UN SDG's and TCC goals and presents the visual outputs to be used within consultations (example graphic shown within fig.7.03).

7.2 EVALUATION ATTRIBUTES RECAP:

To evaluate the broader implications of each of the proposed programme designs, the TCC regional growth goals (2017) and the UN sustainable development goals (2018) will be used to provide a foundation for critical reflection (section 1.5.1)(fig.7.01). Whilst they are broad in their scope, these objectives set a framework for considering holistic affects that the designs may pose regionally and environmentally - items outside of the scope the following chapter's participatory evaluation.

Fig.7.01 The United Nations: Relevant SDGs (2018)

ENVIRONMENT

- Protecting and enhancing our natural environment
- Natural hazard resilience

CITY TRANSFORMATION

- Promoting strong sense of place and identity
- Aiming towards a compact city / well-planned urban form
- Promoting enhanced lifestyle, amenity, liveability
- Improving built form quality, maximising natural assets

ECONOMIC DEVELOPMENT

- Enable vibrant visitor economy, enhance tourism assets

COMMUNITY & CULTURE

- Promote community pride and belonging
- Healthy and active communities
- Safe and resilient communities

TRANSPORTATION

- Creating well-connected communities and local services
- Enhance attractiveness / liveability of urban environment

Tauranga City Council Goals: 'Our Story' (2017)

Fig.7.02 'Blank Canvas': unchanged site as possibility

7.3 SITE REMAINS UNCHANGED:

One of the options that should be considered, especially for the purpose of evaluation within consultation, is keeping the site unchanged (fig.7.02-03). While this option doesn't offer any new opportunity to the site, it certainly could be a preferred option to those living in close vicinity site, thus, should not be dismissed within focus group facilitation.

Fig.7.03 Consultation graphic for 'site unchanged'

ORIGINAL SITE - UNCHANGED

ORIGINAL SITE - UNCHANGED

7.4 LANDSCAPE DESIGN SOLUTION:

The final landscape design solution built upon previous iterations by developing a variety of activities that could draw people throughout the site. The primary entrance was considered the hub of the site with public carparking, restroom facilities, playground, stage and plaza that could be easily accessible for more public activities. A recreational field was framed as a central area for free-play and acted as a buffer between the potentially loud playground area from a more meditative pond area. This demarcation of zones by activity noise and energy was an important aspect for the narrative of movement through the site and offered a number of user groups opportunities upon the site. While acting as a landscape feature, the pond would be an important control for flooding, planted with dense riparian grasses and secondary overflows to combat potential pooling on-site. As this programme packed a considerable amount of amenity upon the site, it was the programme that aligned the greatest with both TCC and UN SDG goals. The items deemed achieved within this particular design was: Natural hazard resilience, enhancing sense of place and identity, providing amenity and enriching lifestyle of the locale, and promoting healthy and active communities

Fig.7.04 Landscape render of reticulation pond area

Fig.7.05 Render of public toilet facilities and amenity space

Fig.7.06 Landscape master plan

- 1 Feature & Reticulation Pond
- 2 Open Recreational Space
- 3 Public Toilet Facilities
- 4 Public Stage
- 5 Children's Playground
- 6 Public Carparking

- 7 Tree Cage Visual Guides

Fig.7.06 Landscape render of playground area

Fig.7.07 Analysis of how this programme could connect with local greenspace network

Fig.7.08 Landscape render of reticulation pond area

7.5 RESIDENTIAL LOW-DENSITY SOLUTION:

The developed low density option iterated primarily on the dwelling form and lifestyle of its users. As an alternative to the low density typologies surrounding the site, this programme achieved a similar density level of 16 dwellings per hectare. However, while it remained at a similar intensity, it sought to maximise the amenity of shared green space that could be used by both residents and those in the vicinity of the site. As such, a primary goal of this design choice was testing, within focus groups, the feasibility of residential design that could offer the community advantages over standard development types. The dwellings themselves were framed against TCC data on trends towards lower household sizes, thus were designed for two bedrooms at 85m², providing diversity to the local residential market. This aligned primarily with the TCC and UN goals of providing diverse lifestyles, opportunity and equality within the community. Specific items explored within this iteration was a central services core and inter tenancy walls which were key items that were used to lower the overall footprint and materials of this typology. The external form, as discussed within the preliminary stage aimed to limit the affect of the building height and monolithic form by splitting and offsetting the form and roof lines. This was an important provision in exploring forms in-keeping with the locale.

Fig.7.10 Render of duplex typology street scape

Fig.7.11 Render of duplex typology exterior conditions

Fig.7.12 Master plan of low density residential solution

- 1 Shared Amenity (Courts)
- 2 Resident Carparking
- 3 Duplex Dwellings
- 4 Public Carparking
- 5 Shared Amenity Space

Fig.7.13 Render of low density duplex typology outdoor space

Fig.7.14 Render of internal conditions of low density dwelling

Fig.7.15 Floor Plans of the low density duplex typology

Fig.7.16 Elevations / sections of the low density duplex typology

Fig.7.17 Render of internal conditions of low density dwelling

Fig.7.18 Consultation graphic and model for low density residential solution

7.6 RESIDENTIAL MED-DENSITY DESIGN:

Alike the low density model discussed within the previous section, the medium density option explored the possibilities that residential variance could offer the community. This was primarily sought through examining how a denser dwelling form: terraces, could provide a greater concentration and variety of shared amenity. Core to this typology was research into Peter barber Architect's Fleet Street Hill project (section 2.4.2), where a number of the principles applied within this project would influence and subsequently be tested within a smaller scale design.

Most influential of these design solutions was, as with the low density option, split roof lines to break the large resultant built form into a more palatable and sympathetic silhouette. Furthermore, a variety of amenity zones were created for each block of houses in the form of open green space and formal gardens as well as an enclosed central pool area that would cater to the development and vicinity. To align with the over arching goals, it was posited that diversity in lifestyle choice afforded by the terraced dwellings achieved TCC's objectives of promoting housing choice, intensification at their projected requirement levels (30 dwellings / Ha) and greater local amenity.

Fig.7.19 Render of entrance viewpoint of terraced dwellings

Fig.7.20 Medium density master plan and pool render

- 1 Shared Amenity (Pool)
- 2 Terraced Dwellings
- 3 Formal Gardens
- 4 Shared Amenity Space

GL

Fig.7.21 Floor plans of the medium density duplex typology -
Option A: 2 Bedroom, Garage and 1.5 Bathroom | Option B: 2.5 Bedroom, 2 Bathroom

L1

Fig.7.22 Render of internal conditions of terraced dwelling

Fig.7.23 Elevations / sections of the medium density duplex typology

Fig.7.24 Consultation graphic and model for medium density residential solution

7.7 ART / CULTURAL DESIGN SOLUTION:

The cultural design solution posed within the preliminary stage was influenced by thesis precedent 'Muf's cultural host spaces (section 2.5). While these designs were of importance in discovering an otherwise omitted design possibility, this design diverged from this precedent through examining how a larger community facility could function upon the site. It was probed within preliminary studies that a multi-use space based upon education and cultural functions could provide the Papamoa area of Tauranga facilities that had not yet been implemented.

In regards to the evaluative goals, this design achieves in celebrating the importance of local culture as well as promotes a 'strong sense of place and identity' (TCC, 2018). A key aspect of achieving this goal was nurturing a number of different spaces that could be used by the community including a quiet work space, isolated from the main building to afford a less stimulating environment, as well as private workrooms and a large open work hall. Furthermore, a gallery space and tree cages were important items for celebrating local culture and art, a response to a stark lack of cultural facilities within the Papamoa region.

Fig.7.25 Render of entrance viewpoint towards community facility

Fig.7.26 Art / Culture design solution master plan

- 1 Main Community Building
- 2 Public Carparking
- 3 Tree Cage Visual Guides
- 4 Quiet Teaching Building
- 5 Shared Amenity Space

Fig.7.27 Floor plan of main building and quiet teaching space

Fig.7.28 Renders of internal conditions of gallery space

Fig.7.29 Render of tree cages and main community building

Fig.7.31 Render of quiet teaching space interior

Fig.7.30 Render of quiet teaching space entrance

Fig.7.32 Night render of main community building

Fig.7.33 Consultation graphic and model for art & culture design solution

7.8 COMMERCIAL DESIGN SOLUTION:

Within preliminary studies into a commercial design solution a narrative of enclosure was developed to celebrate the insular nature of the site and its deep setback constraints. The core purpose of this programme was to facilitate a shared co-op workspace that could be used by local start up businesses requiring more substantial work areas than home offices. This programme, thus, aligned with both SDG and TCC goals of economic and community vibrancy through support of local business and creating shared community facilities.

A key item that was addressed within this iteration of the programme was building upon previous notions that the building would need to draw in patrons to its premises. One key provision was extrapolating the current native site fauna to a densely planted site, both for further distancing the visual impact of the building and the framing the design as a natural oasis within the heart of suburbia (fig.7.35-36). Within this, it was envisioned that the site could act as an environmentally friendly alternative to the standard work place, thus drawing in potential clientele. Solar arrays, green roof systems and precast modules offered new opportunity in both narrative and environmental goal,s and thus, would further align the building to this rhetoric.

Fig.7.34 Render of lobby for co-op workspace

Fig.7.35 Render of internal court through surrounding fauna

Fig.7.36 Render of solar array and green roof amongst canopy

Fig.7.37 Commercial design solution master plan

- 1 Co-op Workspace
- 2 Central Courtyard
- 3 Public Carparking
- 4 Dense Native Fauna

Fig.7.38 Render of internal court planting

Fig.7.39 Render of solar array and internal court

Fig.7.40 Co-Op workspace floor plans

Fig.7.41 Consultation graphic and model for commercial design solution

7.09 EVALUATION OF SDG / TCC GOALS:

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Additional Notes /5.0

Potential site dumping

0.0

Lack of cohesion within suburb

0.0

Potential decrease in capital value

0.0

Private green space, practically unused

1.0

Not applicable

n/a

1.0

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Reticulation pond, fauna, natural filtration

4.0

Community pride and vibrancy

3.0

Limited in economic benefit

0.0

Public green space, variety of amenity

1.0

Increased congestion, public carparking

1.5

9.5

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Site Planting

2.0

Remains at current density, diversity

2.0

Increased population, limited benefit

1.5

Increased amenity, courts and green space

2.5

Thoroughfare, increased congestion

1.5

9.5

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Site planting

2.0

Increased density levels, diversity, amenity

3.5

Increased local population for local business

2.0

Formal social spaces and pool for amenity

2.5

Increased congestion at locale, thoroughfare

1.5

10.5

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Sustainability focused, dense native planting

4.0

Potential to disrupt residences, diversity

1.0

Small business development potential

3.0

Limited. Potential to disrupt local lifestyles

0.0

Less commute for local workers, congestion

1.5

9.5

ENVIRONMENT

CITY TRANSFORMATION

ECONOMIC DEVELOPMENT

COMMUNITY & CULTURE

TRANSPORTATION

Site planting

1.0

Increased local amenity

2.0

Potential job creation

1.5

Celebration of local culture and creativity

4.0

Increased congestion, thoroughfare

1.0

9.5

7.10 PROCESS CRITICAL REFLECTION:

Within the previous sections a brief reflection on the development of the different programmes was explored. However, as a broad set of designs, it was pertinent to holistically review the design processes and objectives of the overall approach to seek useful findings. During these exercises there was a specific requirement for testing the potential of alternative programmes for the site in line with overarching objectives of the TCC and UN SDG's. While these played an invaluable role in aligning and evaluating the potential success of the site designs, there was a secondary goal for retaining strong visual representation in accordance with previous principles developed (refer section 5.4). Specifically, this requirement was so that visualisations could afford focus group participants the ability to identify and understand the potential drawbacks and / or successes of the designs in regards to their neighbourhood. In iterating upon the designs from a preliminary stage these two strains of objectives were the core drivers which framed how design was approached. Primarily, these objectives were tools that were useful in drawing out how design could be used for the betterment of the neighbourhood. Amenity such as the medium density pool, recreational green spaces and the low density court, were simplistic concepts for creating on-site activities that could be used within the community.

Fig.7.42 Interchangeable site model and slot-in designs

Whilst perhaps simple additions, these items were of significance in testing how small changes on site could manifest new opportunity for the current residents and prompted questioning as to if these aspects would lessen opposition within focus groups.

In developing the preliminary set of iterations to a more formal representation, the UN SDGs and TCC goals allowed insight into abstract qualities that were useful in coordinating the programmes to the needs of the community. Through this investigation it was clear that the site programmes each offered new opportunities for both the immediate neighbourhood as well as at a regional level. Furthermore, core to this reflection was that no one design allowed full compliance with all of the goals, however, each clearly held specific traits that could be worthwhile to the locale. While this evaluation was not comprehensive, this process afforded a critical analysis on items that would not be plausible for evaluation processes within participatory consultation, thus allowing further provisions of accountability to programmes tested. Environmental and economic impact were two of the traits that were hypothesised as being within this category.

7.10 CHAPTER CONCLUSION:

Within this chapter, the five final preliminary site programmes were developed for the purpose of being presented and evaluated by residents within focus group consultation. A core issue within refining these designs was to emphasise the lifestyle potential for both those living upon the site and those that currently reside in close proximity to the site. Representation of these lifestyles in a manner that could readily be understood by lay persons was thus of great importance. A significant visualisation that aided the representation of these designs was the heavy use of populated renders, influenced by previous spatial studies in section 5.4. While these items would be key to engage with non-architecturally-versed residents, a variety of other representation mediums were used to give a holistic perspective of the different programmes, including the use of architectural plans and scaled massing models which could be inlaid within a neighbourhood model. Within the following chapter these items are posed to focus group participants, where they are evaluated against their own desires for the future of 74 the Gardens Drive.

8.1 CHAPTER INTRODUCTION:

This chapter implements a participatory consultation process in seeking a greater level of engagement with directly affected residents, cross-examining 'design specialists' to discover any divergence in their reflections. This will be investigated through small scale focus groups using techniques for exploring participant desires, facilitating discussion and creativity, as well as evaluating the appropriateness of the designs posed within the previous development sections. Discussion on the results of this process will be prefaced through an elaboration on the importance of participation within this thesis and justification of the methods used. The results of this process aim to give insight into agreements and deviations between design specialists and their constituents regarding midblocks as well as critically exploring the potential shortcomings of the process thus far. This consultation, therefore, is an important control for aligning this thesis to the reality of the issue of the midblock as well as honing principles that can more realistically be implemented within the following chapter's evaluative findings.

Fig.8.01 Author interpretation 'negotiating a shared image'

8.2 PARTICIPATION JUSTIFICATION:

“The true nature of architecture is a participatory one”
- Katoppo and Sudrdjat (2014)

The participatory component within this thesis is an important step in more meaningfully aligning research to the reality of the midblock with priority on examining both the parties that design for and those that ultimately use or are affected by the space. To provide this analysis, research adopts a Participatory Action Research (PAR) approach which investigates “processes of direct engagement, cognition and social change” in regards to the built environment (Deming 2011). This particular model of engagement was chosen for its holistic approach to critical analysis and emphasis on enhancing methodologies used in practice. More specifically PAR accommodates for architectural research whilst not at the “detriment of rigorous design processes and production” (Herr 2015). Its mixed methodology model allows designers to investigate architecture both quantitatively (experimental innovations) and qualitatively (experiential, participatory framework provision and critical evaluation). Herr continues: “Alternative modes (PAR) provide comprehensive understanding and new values to the field of architecture, in virtue of its design innovation and response to its social context”(2015).

Fig.8.02 Elemental: Participatory design techniques

Social participation within architectural discourse is “complex and rarely studied” due to the profession’s tendency to be ‘self-referential’ and isolated (Jenkins and Forsyth 2010). Additionally, architects inherently live in a perpetual state of power due to their ability to control and shape the “image of society” (Deming 2011). However, design research is beginning to once again question the established rhetoric of architect-imposed built environs and are seeking new methodologies that are “more receptive to social rather than purely aesthetic or technical considerations” (Cowan and Melika 2015). As such, one of the key properties explored within PAR is acknowledging and addressing the inherent power imbalances between architects and their constituents. This involves expressing sensitivity to the perspective of the participant by removing jargon, engaging in neutral locales and planning strategies to allow genuine community engagement that affords participants control to steer results (Herr 2015). Important to this is empowering participants by “ensuring that the active creativity of each participant is elicited and valued so that it contributes to the give-and-take from which emerges a shared vision”(Melcher, Stiefel, and Faurest 2017, p30). This should be facilitated by designers and researchers recognizing “that users have a particular expertise different than, but equally important to, that of the designer” (Cowan and Melika 2015).

PAR techniques were researched through a number of projects including Elemental Architecture’s extensive consultation process in providing affordable housing (fig.8.02), Marcus’ studies into emotional ties to home (fig.8.03) and previously discussed public engagement by Muf Architecture (1995)(refer section 2.5). Marcus’ and Elemental’s collaborative planning consultations were significant as they involved participants being asked to write and draw their emotional response or ideas about their living environments, a far more intriguing approach for the general populace. Examining documents from these studies, hence, influenced a variety of activities within this research, inspiring alternative ‘fun’ strategies of engagement, such as creative drawing and sticker ‘voting’. The creative drawing activity was hypothesized as being particularly important in empowering the participants to take control envisioning their own environment, thus lessening the inherent power imbalances and gaining knowledge potentially unobtainable through pure discussion. These were paired with more traditional techniques of prompting group discussion and a ranked ‘community preferences’ survey adapted using qualities deemed important to the New Zealand context, discussed within studies by Bryson (2017) and Vallance et al (2005). These techniques are detailed within the following spread using information from the focus group schedule.

Fig.8.03 Marcus: drawings 'Home as Mirror of Self' (1995)

HOW DO WE DESIGN FOR SITES LIKE THESE?

By participating in this focus group, you will contribute to an ongoing Masters Thesis project on suburban infill development integration. Sessions will be one hour of architecture, design and discussion. Refreshments and biscuits will be provided at each focus group time slot!

Focus groups will take place at the following times:

Please feel free to contact Pete through [redacted] for an information sheet.

Fig.8.04 Tear Poster Recruitment

8.3 DATA COLLECTION METHODOLOGY:

Resident participants were invited to focus group consultation through mail-drop invitations to in close proximity to the section (~500m radius). 'Specialists' from the Victoria University School of Architecture had the opportunity to register to a focus group time through a tear-off poster invitation (fig.8.04). All participants were able to sign up to a time slot via email, call or text message. Three time slots were available for participants to register to for each demographic, however only two were required for the resident cohort.

Each group was aimed to cater for 4-8 participants, with ideally 6 participants to each of the sessions.

Neighbourhood Stakeholders participated in focus groups at a neutral community centre meeting room.

Victoria University specialists participated in focus groups in a seminar room at the Wellington, Te Aro campus.

Due to the architectural content of the study, there was a focus on the use of visual media: drawing, collaborative planning, and a large interactive model. Central to motivating discussion was the large architectural model of the neighbourhood surrounding the site in question, with an interchangeable central piece that could display alternate concepts from the developed design chapter.

SCHEDULE:

QUESTION 1: What do you think of the site?

Photos and model depicting the current state of the site will be laid on the table for participants to consider.

– Discussion as group prompted (audio recorded).

QUESTION 2: "I have identified through previous studies in New Zealand a series of qualities that are deemed important within suburban communities (**). I will ask you in to rank the following neighbourhood qualities in order of importance to you"

– Participants given qualities matrix to rank (fig.8.07)

FOCUS GROUP CREATIVE TASK:

"What do you think should be done with the site?"

The participants will be given paper with numerous means of depicting their ideas for the site, including an outline of the site they can draw or write on and any additional materials required for expressing their vision. (fig.8.06)

– group discussion on ideas prompted (audio recorded).

QUESTION 3: The Participants will be shown a range of designs prepared in advance by author to which they will be asked to rank with supplied stickers of different colours denoting positive, negative and neutral. (fig.8.08)

– group discussion on choices prompted (audio recorded).

** 'Important' suburban qualities were adapted from Bryson (2017) and Vallance et al (2005) to investigate deviations between each cohort's perspective on 'community values'.

Fig.8.05 1m diameter interchangeable site model (laser-cut)

Neighbourhood Quality	Rank	Why is this more / less important? Discuss
Privacy is retained:	3	• To feel safe and relaxed in my own home
Sunlight is plentiful:	1	• Because I love the sun - needed for drying clothes - garden - wellbeing
Visually appealing:	4	• sense of pride
Sense of community:	7	• I prefer my own family / friends company and don't often get involved with community stuff
Perception of safety:	2	• To feel safe and relaxed in my own home
Enjoyable lifestyle:	6	• again, important but not as much as other options
Greenery / open space:	5	• This is also important but less so than the others ↳ can also get this quality by going to a park etc.

Fig.8.07 Phase 1: Neighbourhood Qualities Matrix (example)

Fig.8.06 Phase 2: Participant Drawing Exercise (example)

Fig.8.08 Phase 3: Rating of Author's Concepts (example)

8.4 SAMPLE SIZE:

RESIDENTS: ~160 invitations posted (expected 10%) = 16

Actual participants: 8 (5% Retention rate)

SPECIALISTS: Open poster invitation (Expected 15-20)

Actual participants: 16

8.5 PARTICIPANT GENERAL DISCUSSION:

Due to the small focus group scale chosen, a thorough discussion was afforded by the participants that attended.

Firstly, an unintended result of discussions amongst design specialists within the School of Architecture was the high occurrence of those had lived within close proximity to midblock sites prior, allowing for a greater level of engagement from these participants on the issue:

"I think it's quite interesting because back home we have a similar, smaller site next door to us which has never been built on... and it's privately owned too, and it kind of added a sense of community as everyone parks their cars or trailers in there."

"I grew up in suburbia so we always used [these sites] for miscellaneous activities but that's because they were looked after by the council"

Some of the conversation did however provide hints of some disconnect between how the design specialists and neighbouring residents view the potential of the site.

Residents were intrigued by the experience but some did note they weren't confident in how they could be of help due to their lack of understanding of architecture and urban design conventions. At one point with this group discussion turned to some of the recent developments within their community where the participants expressed their disappointment in the outcome and complained about their 'boxy and ugly' appearance. This was followed by numerous objections to local council, 'Auckland architects' and further animosity towards current development processes in the region. There was a clear divide between 'us and them' within this discussion. This conversation, whilst not directly engaging with the topic of the midblock, shows that these participants have previously felt powerless to control their local environs, expanding upon the need for greater levels of engagement between built environment specialists.

The design specialist cohort was generally supportive of providing neighbourhood enhancement and amenity as well as suggestions for community aligned approaches to the issue. While these statements suggested there should be community facilities there was little discussed on public involvement within this process, as transcribed:

"You know there is a housing shortage and you know about the practical reason for having x amount of housing, but then a community needs more to enrich it."

"Inherently because the plot of land... it's going to be disconnected from the neighbourhood... So if you did do like a courtyard style housing with some sort of public space that would actually offer the neighbours something to use, which is more than they get right now."

"I'm looking at more community focus, not like a school or a hub, but something that gives the focus back to the community so they're in charge of its success or failure."

"I think it depends on what type of activities are going on there, like if you had a something community focused..."

"I like the idea of a community centre and parks so that grandparents can take their grandkids to the park..."

"You create a green space there, it might increase the value of the properties surrounding... it might encourage development around it.... Because another risk of developing housing on the site as well is it might mean that it's quite an exclusive area in the neighbourhood."

However, there were also reservations regarding the neighbouring properties with two of the three groups from this cohort discussing concerns of NIMBYism from the houses surrounding. This also extended to fears that site alterations would be used only by neighbours and that approaches should be for the extended community:

"...so it's not just those houses that surround the site that it's used by, but it radiates further."

"...not just stuff there that those few houses around the site can use but like playgrounds or community gardens that for the wider community they have a reason to get to that space."

"If something happens in there that isn't residential, the neighbours might have a negative viewpoint."

This contrasted with resident discussion in which some respondents did not wish for their 'backyard' to be used by the community, but rather, should be for those in the immediate neighbourhood which was an important deviation in understanding how the two groups view the role of architecture as well as ownership of a locale. This division in the scope of development would be reiterated within the following activities.

While being a small sample size, overall discussion and activity results allowed for a greater understanding of the potential disconnect designers may have in providing appropriate responses to the issue of the midblock and confirmed some of the theoretical implications discussed within previous chapters. This discussion clearly shows that approaching community to participate within the development process provides new insights and is a useful method in evaluating design.

8.6 PHASE 1 NEIGHBOURHOOD QUALITIES:

Participants were asked to rank the neighbourhood qualities from 1 to 7 based upon their importance level to them (1 being the most favourable and 7 being the least desired neighbourhood quality).

The results from this study were highly varied amongst both of the participant cohorts, a strong indication that a larger sample size would be needed to provide clearer evidence for contrast or agreement. Whilst this may be the case, there were some interesting findings from both the matrix results and the written justifications that some respondents gave. The most intriguing of these results was the difference of resident versus specialist response on the 'sense of community'. One resident respondent justified their low ranking with: "I prefer my family and friend for company and don't get involved with community stuff". Specialist respondents, however, cited "long-term integration", "social interaction" as key for this value being more important. This perhaps signifies a more overarching concept from specialists that architecture should have a greater reach within the populous. This assertion follows discussion remarks of a similar nature within the previous section, where specialists felt a design upon the site should be regionally impactful.

The value 'privacy is retained' was voted as least important to residents (mean extrapolated), this was supported by one respondent who asserted the justification that: "no one cares what I'm doing". This result was in stark opposition to previous research and consequent theorized concepts (refer chapter 5) that privacy was a key attribute for designing within suburbia. This result clearly shows that there is weakness in a purely research based approach to design and further iterates upon the need to test the validity of design justification through greater dialogue with constituents.

SECONDARY RESULT FINDINGS:

The values 'greenery and open space' and 'sunlight is plentiful' showed the least difference between cohorts.

The value 'privacy is retained' was the resident's least important attribute, whilst 'visually appealing' was least important to specialists.

The value 'enjoyable lifestyle' was the resident's most important attribute, whilst 'sunlight is plentiful' was most important to specialists.

The value 'visually appealing' was the least important factor overall when combining both cohort's results, whilst 'enjoyable lifestyle' was the most important.

RESIDENTS VOTING:

SPECIALISTS VOTING:

Fig.8.09 Graphs of resident and specialist weighting of neighbourhood qualities with mean extrapolated ranking

8.7 PHASE 2 PARTICIPANT DRAWINGS:

Participants were given a template of the site and asked to write/ draw what they thought the site should be used for .

12 of the 22 ideas (4 of the 6 resident drawings provided) were primarily devoted to a 'landscape and community recreation' land-use, with many of these designs having secondary functions. The remainder of the drawn master plans were primarily used for residential land-use with the majority of these being denoted medium density development. Residential development options were particularly popular amongst design specialists.

Fig.8.11 Resident: Green space design

RESIDENT'S DRAWINGS:

Fig.8.10 Resident: Community recreation

Fig.8.12 Resident: Housing and green space

Fig.8.13 Resident: Extended sections for existing residents

Fig.8.14 Resident: Community gardens

SPECIALIST'S DRAWINGS:

Fig.8.15 Specialist: Medium density housing and green space

Fig.8.16 Specialist: Medium density housing

Fig.8.17 Resident: Walkway and green space

Fig.8.19 Specialist: Church and recreational area

Fig.8.18 Specialist: Recreational area

Fig.8.20 Specialist: Medium density housing and green space

Fig.8.21 Specialist: Medium density housing

Fig.8.23 Specialist: Community led garden

Fig.8.22 Specialist: Medium density housing

Fig.8.24 Specialist: Green space design and recreational area

Fig.8.25 Specialist: Medium density Housing and green area

Fig.8.27 Specialist: Community hub and recreational area

Fig.8.26 Specialist: Housing and green area

Fig.8.28 Specialist: Housing and community recreation

Fig.8.29 Specialist: Community garden and recreational area

Fig.8.30 Specialist: Community hub and gardens

A distinct departure between the specialists and residents drawn plans was the complexity of activities on-site. While residents drew and discussed mainly single ideas, typically housing or recreation, specialists devoted the site to a large number of diverse functions. Resident's ideas were fairly conservative and functional in their designs - the restrained nature of these choices may have been due to a lack of architectural insight and confidence. This however does not disqualify their insights, as there was a clear rationale to what they thought would be appropriate for the site based on their local experience. The specialist master plans, conversely, were more likely to be whimsical and many involved sophisticated narratives:

"I'm thinking of residential, and then break up part of it with a break out space for [surrounding dwellings] and turn this into more of a public park, maybe a café and hub to draw people in from outside".

While there was limited programme types considered, for example a distinct absence of civic or commercial designs, there was a vibrant array of configurations and details within the land-uses that were chosen. Many of these ideas hadn't been contemplated within my own brainstorming and iterative processes. This offered some insight into alternative potential avenues for progressing design iterations and a comparative means of evaluating the effectiveness / appropriateness of my own work.

8.8 PARTICIPANT CONCEPT 'VOTING':

Participants were asked to rank the developed design programmes, as displayed within a number of visual representations (refer chapter 7) from 1 to 6 (1 being the most favourable and 6 being the least desired midblock programme).

This activity was particularly insightful due to the incredibly close overall ranking by each group, indicating a strong agreement between these cohorts on the appropriateness of each of the land-use types for the midblock section.

Fig.8.31 Graphs of resident and specialist voting

RESIDENTS VOTING:

SPECIALISTS VOTING:

Fig.8.32 Resident focus group participation (voting)

Perhaps the most glaring outcome in the results of this activity was the unanimous dislike of having commercial activities on the site, with the fiercest opposition coming from residents. A common argument was that they didn't like the idea of "heavy traffic, loud noise or deliveries 24/7". Specialists agreed with this sentiment, asserting that this land-use type would be inappropriate within a residential area.

The resident group weighted their votes towards the medium density option more than that of an alternative low density model, which also tended to reflect specialist choice. One resident reasoned their weighting of this through explaining that their grandchildren couldn't find a first home and a house like this may help with the situation, whilst another agreed that the housing shortage was a big concern. Conversely, one of the comments by a specialist, agreed upon by others in the group, was: "why are they worried about their neighbours on this site when their current neighbours nearly that close anyway?...", suggesting a preconceived notion that an alternative density option would be inherently opposed by the other cohort.

The resident group were neutral on the site remaining unchanged, opting not to vote on this item, whereas the specialist groups were adamant both in voting and within verbal discussion that the site should be developed upon and leaving it dormant was not appropriate.

Landscape design was the most popular by both cohorts, favoured for its neutrality and ability to provide amenity to the houses surrounding the site. This finding, in collaboration with the drawings produced in the previous activity, suggests that landscape and recreation is the least polarizing land-use type for the section.

8.9 CONSULTATION RESULTS DISCUSSION:

The process undertaken within consultation with both residents and design specialists was important to understand the intricacies of the relationship between architects and their constituents. Phase one of the focus group facilitation was perhaps the most insightful in regards to how these parties diverged in their values. Privacy, which was hypothesised as being the primary issue to residents, was in fact a far lesser issue to this cohort than the architecturally-educated group. This also disrupts some of the theoretical underpinnings that were discussed earlier within this thesis showing there is a weakness in a purely objective and literature-based approach. This over generalisation was also present within phase three where both the specialists and the author incorrectly presumed that a medium density approach would be panned by the local populace. These sweeping assumptions surely detract from the profession's efficacy in providing appropriate design solutions to this issue. Furthermore, throughout phase two where participants were asked to draw what they thought would be the best solution to the 74 the Gardens Drive, there was a noticeable difference between what the two groups produced. The specialist's drawings were complex and all-encompassing, to be used by greater society and not just those in the immediate local. Resident ideas were conversely understated and tended to be designed for the use by a smaller number of the populace around the site.

This departure was continued in discussion where the surrounding populace wished for quiet activities for the local, in contrast to the specialists' beliefs that site designs should "radiate further" to a more regional approach.

No doubt important in understanding this difference was the voting on the value 'sense of community' within phase one. This had by far the largest the voting difference between cohorts, further indicating a more 'societally significant' built environment rhetoric driven by the architect group. This conversation reiterates upon Bingler and Pederson's critique of the profession of architecture's narrative that the built environs should be grand gestures of art that should engage with society as a whole (2014). Rather, they state "We must rethink how we respond to the needs of diverse constituencies by designing for them and their interests, not ours", in this case understanding the desire for residents to maintain an existing lifestyle.

In conclusion to this process two final concepts were produced as a quick-fire exercise that engaged with some of the desires and criticisms taken by both of the cohorts (fig.8.33-34). One of the main concerns was that there weren't any options that mixed land-use types, especially a more holistic medium density residential and landscape concept (the two most desired land-uses voted upon). Community engagement in this case afforded the process a far more direct design response than the previous iterative progression of designs which favoured traditional academic and subjective evaluation techniques which theorized effectiveness based on far-removed pretences.

8.10 CHAPTER CONCLUSION:

This chapter detailed the process of undergoing a focus group consultation with both residents in close vicinity to the site and with Victoria University 'design specialists'. Overall, this participatory investigation reiterated the need for community engagement processes that enhance the dialogue between architects and the community. As stated by Herr: "Architecture constantly shifts cyclically between the two domains of Academia and Practice, it is inherently collaborative and socially oriented, thus should be investigated as the totality of actions and being" (2015). By omitting public engagement and prioritizing self-referential academic practices, the profession surely cannot provide meaningful and appropriate spaces for those we aim to serve. As such, this process shouldn't be feared for its potential to limit creativity, but as a tool for more effectively aligning our processes to the needs of the public. Furthermore, within the issue of the midblock this exercise did not act as a restraint, contrarily, it acted as a means to invigorate new, and otherwise unrepresented, options for the development of the site. Not only this, it afforded a greater knowledge of the desired values for the local populace which prior to this study was interpreted through abstracted means, such as conducting field investigations and data analysis typical within practice and academia. These elements will act as a key proponent in positioning findings to realistically assist architects design for midblocks within the following chapter.

Fig.8.33-34 Author drawings post evaluating results of participatory study implimenting participant critiques and most common desires

9.1 CHAPTER INTRODUCTION:

Fig.9.01 Process graphic for linking areas of study together

This chapter takes a consolidates the processes undertaken within this thesis in seeking replicable principles that can be used to assist in the development of future midblock sites. Firstly, the initial development of this framework will be examined and its strengths and weaknesses analysed. Subsequently, the final model will be explained and its uses within practice will be explored.

“Value what is there, nurture the possible, define what is missing”
- Muf Architecture / Art, 2009

“paths, nodes, districts, edges, landmarks”
-Lynch, 1960

9.2 THESIS FINDINGS FRAMEWORK:

Initial explorations into providing a framework that could offer architects assistance into midblock site development took the form of network matrixes. These first iterations were theorized as step-by-step problem solving processes that could aide in specific actions that could be taken. Many different approaches were looked at, including rubrics, smartphone applications, networks and comprehensive guidelines. The basis for these experiments was the categorization of important discoveries within this thesis with means of achieving them through a number of specific pathways. This proved difficult to implement in any meaningful way.

One of the biggest shortfalls of these approaches was the complexity and length of engagement that would have to be afforded by architects to utilise them (fig.9.04). They were presumed to be too convoluted and thus would be ineffective in genuinely aiding in the issue of providing effective development. Reflecting upon previously studied principles by Muf and Lynch (refer left) it was deemed more suitable to seek a more straightforward and realistic means of framing the thesis findings. Through shifting the focus of these frameworks to a more holistic and easily followed set of principles, a far more useful outcome was envisioned. This involved condensing ideas formed within these exercises into a more succinct set of over-arching guidelines that could be used within practice.

Fig.9.02 Preliminary study into a network-based approach that would address elements of midblock sites within a rubric.

Fig.9.03 Testing concepts that informed problem-solving rubric

Fig.9.04 Expansion of network-based solution
"IPS": a tree network following a workflow of
'Issue', 'Principles', and 'Solution'.

Fig.9.05 Theorized method for untangling complexities

9.2.1 THE 5 'C' PRINCIPLES FOR MIDBLOCKS:

Fig.9.06 The 5C Principles for Midblock development

The adaption of the previously theorized approaches to a more simplistic tool came in the form of five principles, aptly named '**The 5C's**': '**Community, Context, Communication, Creativity and Critical Analysis**'. These elements were regarded as the most important aspects of the research undertaken within this thesis and form a simplistic framework for engaging in socially-aware design practices. The following section examines these principles and investigates how they could be replicated within a design methodology for other midblock sites.

COMMUNITY

This study revealed the importance that community engagement has upon developing the midblock section. As such, a key principle within these guidelines is the facilitation of collaborative processes in defining resident desires, hostility and opportunities at a preliminary stage, as well as evaluating the appropriateness of development with affected parties once designs are posed. This is especially important in empowering residents to take charge in the expression of their living environment, and so that they can "actively engage with [their built environs] and enrich their lifestyles" (Herr 2015). This is a fundamental issue with the suburban midblock where a number of parties are directly affected by development and can too easily lose the lifestyle they strive for. Faurest does concede that organizing and undergoing a consultation is complex and time-consuming, however, it is a premium well-spent: "Because local [participants] decide the vision, [collaboration inherently] addresses local needs and issues, assuring that local identity and culture are consistently represented in all activities." (2017, p209).

Community engagement acts as an over-arching agenda within this framework whilst the following attributes function to bolster, or are formulated through actively engaging with, this principle.

CONTEXT

Creating our community's built environments should have a foundation based upon strong research into the conditions set by the social, spatial and climatic parameters of the locale, as well as an understanding of historic underpinnings. Field observations and seeking knowledge of local resident desires can be useful tools in broadening our perspective and tailoring a response that more directly caters to the needs of the local populace. This is important to the Midblock environment for ensuring we as architects consider and empathetically design for both site-users and the affected residents surrounding the site.

COMMUNICATION

Architects come from an advantage, having "privileges of knowledge", that can be unintentionally alienating to the non-architecturally-versed lay-person (Deming 2011). It is thus important within our creative pursuits to acknowledge and address the legibility of both our representations and built forms so that they can be understood and engage with constituents. This is also a concept that should inform meaningful engagement with the community, where jargon and theoretical justifications should be simplified to terms that can be readily understood by all participants.

CREATIVITY

Some of the previous terms may incite nervousness amongst architects for their ability to constrict the creative process. Incorporating these techniques should, however, be considered as tools that can encourage alternatives not contemplated through traditional means. Within the context of the midblock, involving parties within the community instigated new opportunities and revitalised the creative process towards options that were more suited to the requirements of the locale. As discussed by Cowan and Melika: "designers shouldn't abandon their expertise [creativity & technical], but rather make it available and responsive to the needs of the community" (2015).

CRITICAL ANALYSIS

A fundamental element to all architectural output is a strong evaluation process. As stated by Sawnn: "A mature profession needs to be more self-critical and more systematic in providing evidence of the process of creation from beginning to end" (2002). Analysing the positive & negative externalities of implementing midblock development is imperative to providing designs that are appropriate to the environs. This is directly achieved through extending evaluation to constituents, as shown within this thesis, to gain knowledge and perspectives that can't be sought through distanced research.

Fig.9.7 Roadmap as to how principles could be implemented

9.3 RECOMMENDATIONS:

the 5C principles can be utilised as over-arching goals within the design of midblock developments, or, can be implemented into processes through the devised methodology envisioned above (fig.9.07). In this framework a strong contextual research into the midblock location acts as a foundation to activities.

Subsequently, community engagement is facilitated to address the relevance of this information and collates community responses (needs/wants/ideas etc). This phase aligns the following creative processes to a direct response to the social and spatial conditions of the site. In seeking design options, the designer involved actively acknowledges and addresses the communication of their outputs so that the general public can have greater understanding and confidence in their ability to give criticism. Following the iterative design stages, the output/s are evaluated with the community, where criticism can be used as catalysts to further design iterations or resolution can be made. Concluding these process, the architect debriefs through critically analysing the process and outputs. Here, positive and negative lessons should be noted for subsequent projects.

This framework allows a greater level of assistance whilst not being detrimental to specific design workflows of the practice. It clearly demarks where principles can be realized, allowing architects to decide the level of engagement they desire to achieve their own goals. This element of choice was important in empowering the architect to shape the framework to their design and engagement processes, rather than to restrict their ability to practice architecture in the manner that suits them.

Fig.9.08 The 5C hierarchy, informed through collaboration

9.4 FRAMEWORK CONCLUSION:

This framework focused on evaluating the successes and drawbacks within research to provide a holistic set of principles that could assist architects with the context of the midblock. Initial studies into these principles were suspected to be ineffective in realistically aiding the processes, they did however act as a catalyst to streamline a more appropriate framework. The resultant '5C Principles' were devised as a simplistic means of facilitating community engagement within general processes and were extrapolated within an additional road map that framed how they could be used effectively.

The research within this thesis investigated the infill development of a midblock site in regards to the numerous parameters of its context. This review critically analyses the different elements researched, in attempt to draw out findings that were significant in understanding and addressing the intricacies of the midblock.

10.1 NATIONAL & INTERNATIONAL:

This section of the thesis undertook an investigation into primarily the social context of New Zealand and sought concepts from international literature and precedents that could frame a more empathetic design methodology. The former of these explorations was deemed as highly important in adjusting design perspectives to that which aligned with the complex sociohistoric pretence of New Zealand suburbanites. Understanding these notions did cause restraint within initial design concepting, however, creative responses were invigorated through examining community-engaging international precedent. Muf's 'Making Space in Dalston' was the most intriguing and constructive of these case studies as they responded directly to restraints posed by the contexts investigated by transforming these difficult attributes to elements to celebrate. Seeking a strong contextual knowledge was a substantial lesson taken from this review, underpinning field studies undertaken, data analysis and extensive research into the social implications of design (fig.2.21).

10.2 CONTEXT & CONCEPTS:

The first section of this thesis prompted the need for strong research into both regional and site specific contexts. This exploration uncovered opportunities for the region that hadn't been considered within previous development (community amenity), regional trends particularly important for seeking alternative design options (demographics and technical ramifications), as well as understanding how the midblock section was initially formed (fig.3.14). The latter unravelled shareable knowledge on how suburbs evolve as well as stimulated spatial considerations that would be more sympathetic to the surrounding neighbours, explored within section three. Field observations were also of great importance in seeking specific site features that could be utilised as catalysts for design, reiterating the importance that research has upon the design process.

Conceptual drawing was used to evaluate and theorize upon the conditions researched within previous chapters and uncovered ideas that could inform a more socially-aware design process. The three umbrella terms given to these studies were 'loss of meaning', 'autonomy' and 'isolation & territorialism'. While all of these elements would be explored within the preliminary design stage, 'loss of meaning' was the idea that was most substantial in informing the processes and outputs within this thesis.

Core to these studies was examining the emotional ties that suburbanites have to their living environs, representation of architecture and deviations between the profession and its constituents. This involved actively recognising the implicit complexity that we as architectural professionals seek to portray. Rather than pursuing modes of representation that would impress an architectural peer-group (abstracted line drawings and technical jargon), simplistic and recognizable portrayals were sought as not to alienate the lay-person. This became an important step in engaging in consultation as we were able to “speak a common language”, meaning that participants could easily articulate concerns and criticism in response (Bingler and Pederson 2014). Preliminary studies used these concepts as a frame to which designs could respond.

10.3 ITERATIONS & CONSULTATION:

Through a variety of programme designs the potential of the midblock was investigated and the efficacy of alternative strategies was analysed. This iterative process was inherently very broad due to the five different programmes that were developed upon, yet this aspect allowed for a far greater scope to which ideas could be investigated. These designs took a number of the conceptual principles, built upon them to form tangible solutions, and sought to frame these appropriately to the context.

Due to the wide-ranging nature of the programmes involved, critical analysis of early iterations was important in evolving the designs quickly. When developing the designs to a more resolved state, a key idea, touched on previously, was simplifying both built forms and modes of representation to be more accessible to engage with the constituents surrounding the site. This phase also included developing a variety of visualisation tools including populated renders, architectural plans and an interchangeable site model to be used as a foundation for participatory design consultation. This was primarily to allow participants within focus groups to ‘feel’ the spaces and understand the programmes through multiple perspectives.

This collaboration with the community was of utmost importance within this thesis for allowing new concepts to be envisioned, testing the relationship between the design profession and residents, as well as evaluating the appropriateness of each of the designs produced directly with the affected parties. Without this element, the theories researched and formulated within this thesis could not be verified and would remain distanced to the reality of this section type. There were a few deviations between the specialist and the residential groups participating, showing that a greater level of engagement between these parties could be a strong catalyst for the positive development of other midblock sections.

10.4 SIGNIFICANCE OF FINDINGS: :

It was clear through the research undertaken that public participation is an invaluable tool for architects assessing the appropriateness of design strategies within the context of the suburban midblock. While this thesis tested the validity of alternative processes through an assortment of programmes, the evaluative strategy of including resident participants to contribute their own desires for the site was pertinent in assessing the most appropriate course of action. A voting approach was the primary means of testing resultant designs, accompanied by evaluative and comparative studies against residents' desires. While these were used to afford shareable knowledge on programme appropriateness, it was during these exercises that participatory consultation's potential as a design catalyst and framing architectural development was discovered. Expanding the scope of participation from a tool of pure assessment to a more holistic approach of including residents in the design of the site allowed for more tangible insight into what programmes would be more effective within the community. These drawings, no matter how archaic, were incredibly rich in their ability to empower the residents. Thus, whilst evidently time-consuming and unpredictable, such participatory processes have an important role within academic research and professional development in aligning the built environment with the diverse needs of the constituents we serve.

This thesis' primary outcome was a replicable framework that could realistically be used within research and design processes for midblock sites. The framework, aptly named 'the 5 C's' approach, consolidated the key findings of this thesis into a simplistic and replicable set of principles:

**Community, Context, Communication,
Creativity, Critical Analysis.**

This series of principles relies heavily upon providing and strengthening community engagement and participatory approaches to effectively manage the design and development of midblock sites. Whilst the core mechanic of this framework is robust community engagement, the remaining properties seek to underpin how this relationship can be fostered within the architect's workflow. Critical within this set of principles, and a core aspect of research within this thesis, is the use of effective communication and visualisation. These elements should provide non-architecturally trained members of the public the ability to discuss the ramifications of design in a common language, where discourse between parties is not hindered by illegibility and power imbalance.

Assessing and celebrating the invaluable knowledge and desires of those potentially affected, through legitimate consultation, is pertinent to unlocking the potential of the underutilised midblock section.

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