The Togetherness of Strangers.

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THE TOGETHERNESS OF STRANGERS

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“We are living in one crazy globe, that you can even feel distant to your neighbours”

- I.K

Preface

How well do you know your neighbour? It's surprising how many responses I've gotten from family and friends that go along the lines of 'not so well'. Despite the many differences we have as individuals, one thing that we all have in common is that we all need a roof over our head, yet instead of this being something that can bring us together, the way we live in New Zealand tends to make that possibility challenging, which can lead to many negative problems such as elitism, prejudice and social exclusion.

In New Zealand, we are an increasingly diverse society, and with this comes many different cultures that need to occupy in the same space. However, we do not see much of a mix of these cultures, especially in terms of living, and a lack of this contributes to – in my opinion - a very boring society.

I was born in India, and moved to New Zealand at the tender age of 8. Having grown up in both these countries, I was able to understand the very distinct differences in the way people live in each. In India, the importance of an 'extended' family is in close association with the culture there. While growing up, I was always surrounded by people, most of them that turned into this 'extended' family. However, once I moved to New Zealand, I felt first-hand the disconnect of people around me, as a result, I felt rather isolated. The difference of these two societies sparked an interesting conversation in my mind and having lived in both scenarios, I had stared to compare attributes of each. This, which was once just a thought had developed into a topic that I found myself very interested in, and thus eventually formed the foundation of the following research.

How can someone from a collectivist background live happily in an individualistic society such as New Zealand? How can someone traditionally from New Zealand live happily in what they are used to yet still be more connected? These questions along with my experiences in the built environment growing up are the basis and motivation behind this design research portfolio.

Acknowledgements

Firstly, thank you to my supervisors Jacqueline McIntosh and John Gray. Jacque, thank you for your guidance, advice and understanding throughout this year, and also for your help and support. John, thank you for your help in getting me over the line, your vast knowledge and patience was warmly appreciated and crucial to my learning.

To my wonderful family. Thank you for your continual support, love and encouragement. Your support and prayers have, and always will keep me going.

To my amazing friends, thank you so much for the support and help over the last five years. From scrambling late nights together, enjoying a well-deserved brew at the end of the week or words of encouragement when I most needed it. We made friendships that I know will never fade.

Finally, thank you to Victoria University of Wellington. The opportunities that I've gotten, both within my studies and out of it has been extremely valuable for me.

And of course, thank you Jesus! None of this would be possible without you in my life.

Abstract

New Zealand is a progressively ethnic diverse yet individualistic country. The population is constantly increasing and among this is cohort of people belonging to collectivist cultures, with forecasts of these cultures such as Asians said to be rising 120 percent to 600,000 by 2021. The current social patterns in individualistic societies such as New Zealand suggest that the dominant style of living is singular in nature, meaning small clusters of individuals. However, in collectivist societies people live in a more integrated manner with others and their surroundings, contributing to an arguably healthier lifestyle and greater acceptance. This shift in the identity of New Zealand demands for a change in the way that different cultures can live with each other, to better reflect the needs of these different groups while increasing the social aspects within them.

This thesis investigates how medium density architecture can address the problem of housing different cultures within the same space, along with finding ways to increase the sociability among dwellers in New Zealand. Adopting Hofstede's cultural dimensions of individualism and collectivism to aid in designing for different societies, Newtown in Wellington was used as testing grounds to identify ways that people can live integrated among themselves as well as different groups and styles of living, forming a more 'cohesive' culture overall. Coupling conventional medium density housing techniques and specialized 'social' design in a semi-urban setting; this thesis aimed to find ways to create a model that allows for facilitating the togetherness of strangers without forcing them to fully assimilate. The research challenges how contemporary architecture can create an environment where people of different ages or backgrounds can be housed together to form a 'living community'. It finds that flexible inclusive design that adapts to the existing fabric and allows for integration with the wider community as well as the examined groups can offer a successful model for the togetherness of strangers.

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01. INTRODUCTION

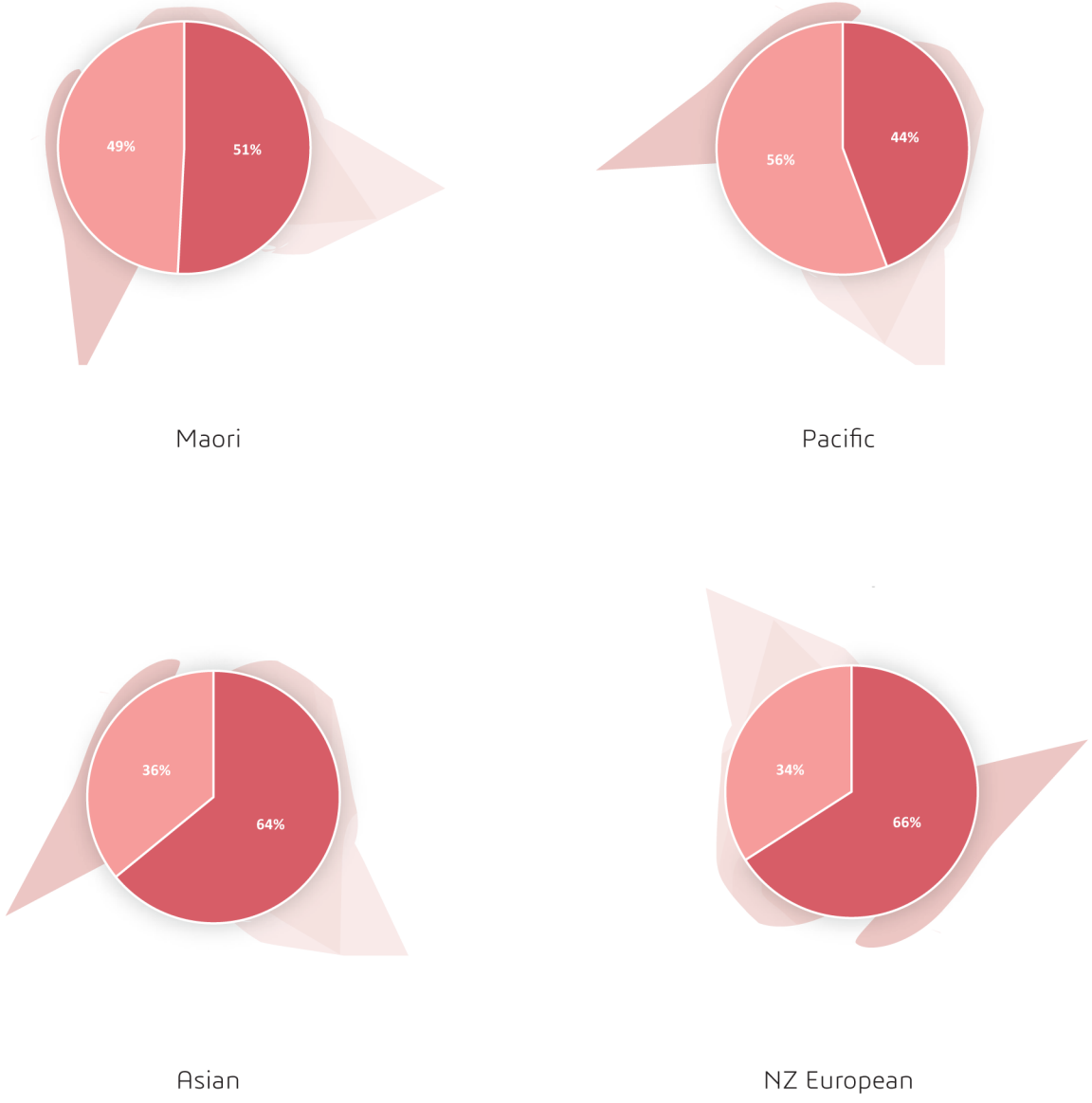


Fig.1.01. NZ societies and problems with housing

Introduction

New Zealand is officially a bicultural country, while steadily moving into a multi-cultural society (Te Ara, 2012). The dominant culture in its mainstream society adopts an individualistic approach for the country. This 'individualistic' nature is defined as a "social framework in which individuals are expected to take care of only themselves and their immediate families" (Hofstede, 2018). This type of behaviour is found in New Zealand as well as other Western countries such as USA, UK and Australia (Smit, 2012). Collectivist societies however are those that 'look after each other in a tight-knit group setting' (Hofstede, 2018). This trait has been found in minority immigrant groups of New Zealand, such as Indian, Chinese and Pacific cultures. However, the increase in population of this country threatens to disturb the dominance of the individualist orientation. Statistics New Zealand reports that all ethnic groups will increase by the year 2038, with Asians (collectivists) being one of the fastest growing groups, rising 120 percent to 600,000 by 2021 (Statistics New Zealand, 2004).

This potentially creates a problem as traditional housing has been designed for nuclear families to live in detached dwellings that are commonly only one storey high (Statistics New Zealand, 2014). A report by the Centre for Housing Research, Aotearoa New Zealand in 2011 noted that New Zealanders had an "overwhelming preference for detached housing" (CityScope Consultants & Curious Research, 2011). This limitation for the collectivist cultures in an individualistic society disconnects them from their known wider community and as a result many have mental health problems (Ministry of Health, 2001). These detached dwellings also tend to be too small for collective families who are usually quite large. This means that either these families cannot afford to stay close to the city or they do not have many places that they can socialize in, especially in the outdoor realm (Lovelock, Lovelock, Jellum, & Thompson, 2012).

Additionally, almost half of Maori and more than half of Pacific people are reported to have problems with their housing, with over a third of the Asian community experiencing the same (Statistics New Zealand, 2010). Lack of consideration of elements such as staple needs, size, quality, accessibility and human interaction can lead to different problems among users of the space over time. This provides an avenue to be exploder where the future society in New Zealand can live 'collectively' in the same space, not only amongst particular groups, but instead in a place that is well integrated with different people and facilities.

Majority of issues related to these groups in terms of housing in New Zealand are a result of a lack of different cultural considerations and also places for public social interaction. This design-led research portfolio aims to challenge conventional living methods in New Zealand and create a more 'inclusive' community model where the people from different backgrounds and cultures can co-exist in the same space. A major aim for this thesis is to design housing that is inclusive of different cultures, with specific attention to spaces that surround the built form in order to promote social interaction to boost both mental and physical well-being among its' users.

Kiwis although having a strong sense of belonging to their country, reported to only have a mean rating of 6.5 out of 10 for a sense of belonging to their community, in the 2016 consensus (Statistics New Zealand, 2017)

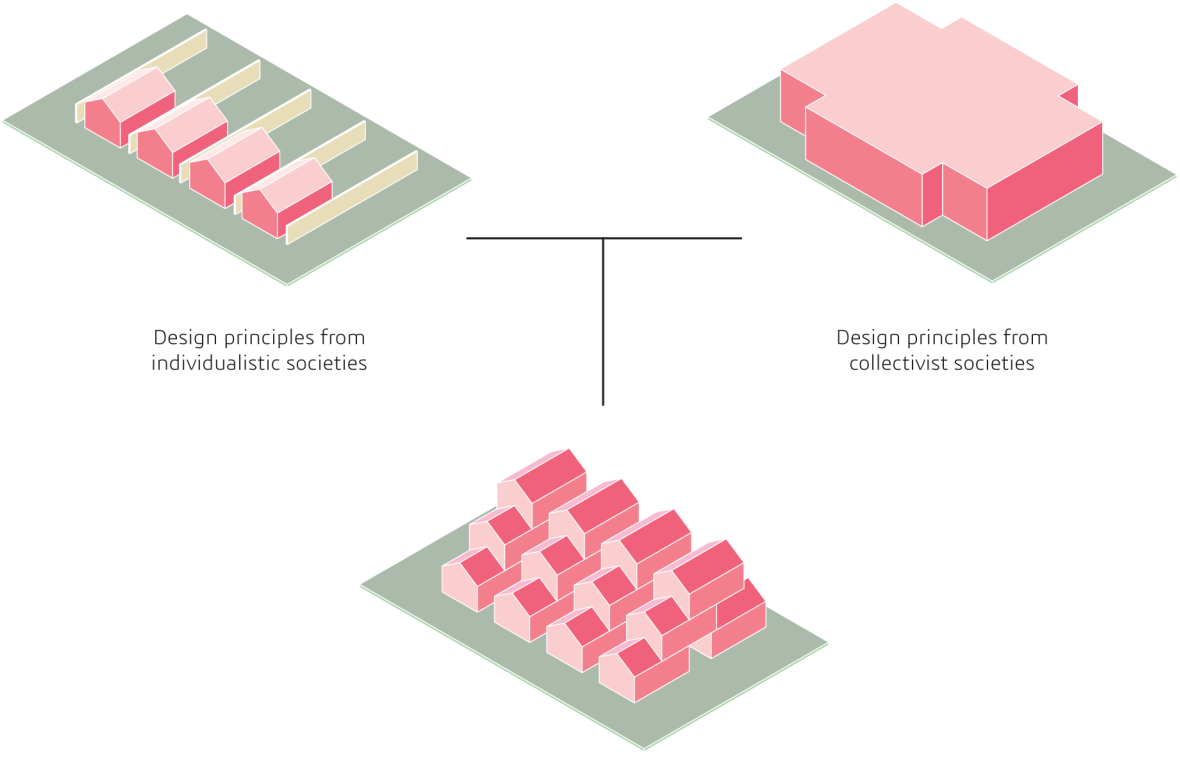


Fig.1.02. Aim for research

What's Missing

In centres such as Wellington and other large New Zealand cities, different cultures and living styles are reasonably evident and the density allows for some interaction to be had. However, communities and the architecture that it embeds often does not do well to support the acceptance of different groups (Mullins, Western, & Broadbent, 2001). In suburban contexts the typology of detached dwellings take precedent, so while we see a slight mix of different cultures, there is no place for them to interact or 'accidentally' meet. There is a lack of diversity on two scales, firstly on the larger scale where people who don't fit in get pushed outward and on the smaller scale where there is little variety even within a building in the city. The gap in diversity means that there are plenty of opportunities lost for a variety of people to come together which leaves opportunity for a middle ground to be established. Currently – much like many places in New Zealand - there is a shortage of homes in Wellington. The Wellington City Council reports that in addition to the deficit of housing already present, there are about 30,000 new homes required by 2043 to meet the city's needs (Wellington City Council, 2018b). Housing facilities that form a 'community' feel within a suburb are lacking, furthering the divide between 'individualistic' and 'collectivist' societies in New Zealand. This thesis looks to investigate a new housing typology could bring together these different groups, further enhancing the life of these people and all those who come in contact with them. This revised model will look at conventional techniques from 'collectivist' societies and borrow their attributes so they can be implemented into New Zealand to better prepare for the further diversification of cultures yet to come.

“The aim of architects and planners is to implement effective housing concepts that reflect differentiated social conditions of the future users and consider the fulfilment of their requirements”.

(Jan Tucny, 2011)

Potential for Social Living

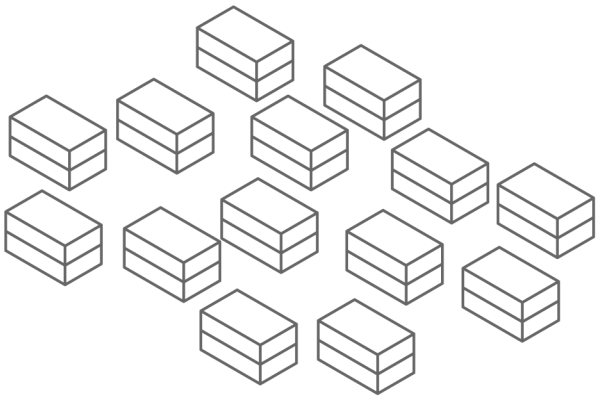
-

Although the current ‘individualistic’ way of living in New Zealand is preferred by many, it does not fully attend to the needs of all types of people in terms of cultural desires, wider social interaction and well-being. Furthermore, it tends to create a divide between certain groups and the rest of the community, contributing to negative implications and inequality.

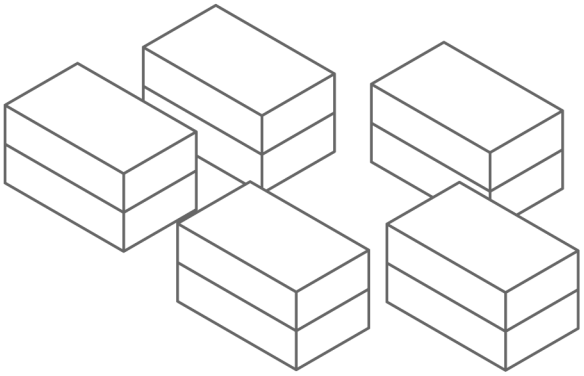
Social interaction between people from different cultures is an advantage in itself. Benefits of this include the sharing of knowledge; perhaps from an older to younger generation, the infusion of culture and traditions and the acceptance of others’ perspectives.

Research on relevant Wellington suburbs show that there are not many ‘socially’ inspired housing developments or even places where the public can join and interact -apart from parks or community centres- leaving dwellers from individual properties to be segregated from even the ones closest to them.

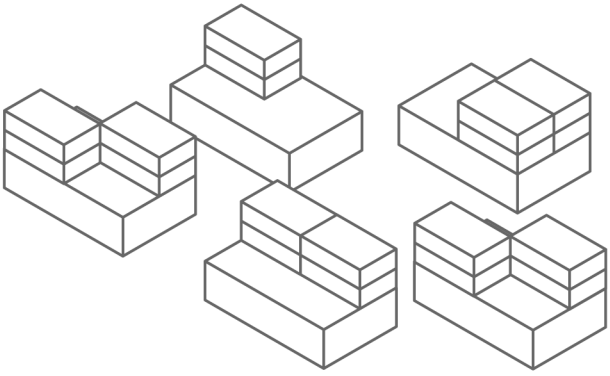
In recent years, Wellington City Council and many other national authorities are said to favour the development of medium-rise dwellings in semi-urban areas and aim to intensify housing around transport nodes (Sarah, Howden-Chapman, & Early, 2013). Therefore, a conclusion has been formed that there is scope for research into designing a medium density housing project that aims to collectively alleviate the troubles stated above.



Design for group one



Design for group two



Opportunity for togetherness

Fig.1.03. Aim for design

Aims and Objectives

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Aims:

- To investigate how architectural interventions can create a cohesive housing facility that allows for individuality yet provides opportunity for the 'togetherness of strangers'

- To propose a new approach to medium density housing that caters for the different cultural and demographic needs of its' surroundings

- To facilitate social interaction and integration among residents and the wider society

Objectives:

- Promote the benefits of social and intergenerational interaction by providing spaces for contact

- Create architectural features that both foster individuality yet stimulate togetherness

-Use site conditions to generate form and function

- Create flexible housing options to cater for the different needs of different people

- Create a new model for community living that can be implemented in semi-urban pockets of spaces as the population of New Zealand continues to grow

- Manipulate layout and program to give a better 'social' feel within the design

- Integrate architecture with the surroundings and urban identity

Research Question...

How can medium density housing facilitate the *integration* and *interaction* of different cultures to encourage the '*togetherness of strangers*'?

Methodology

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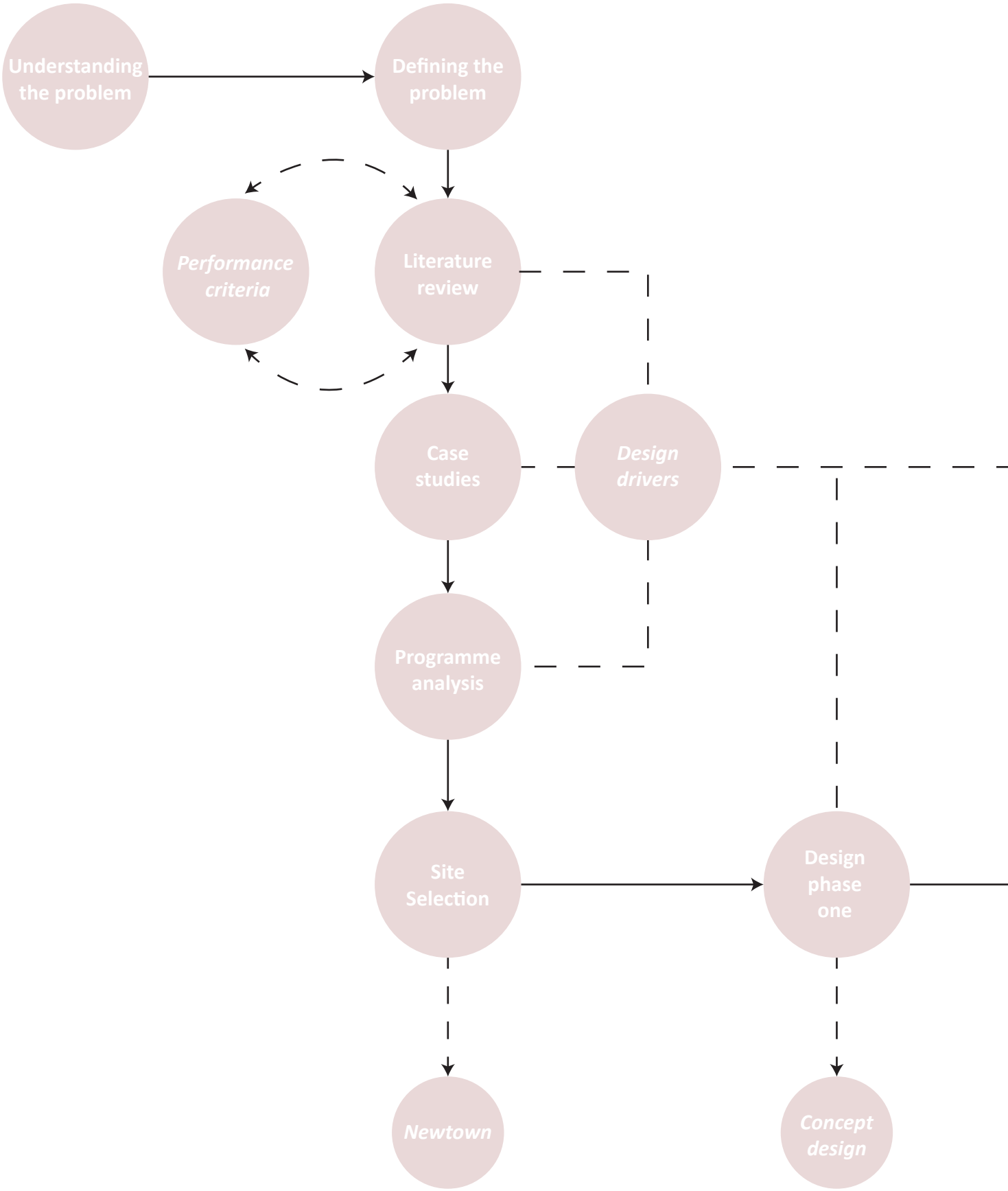
This thesis is generated by a design-led process that is divided into three design phases; first, research ‘for’ design and the second and third, research ‘through’ design. Due to this thesis addressing a topic that is prevalent locally as well as internationally, relevant data is extracted from similar housing, culture and integration concerns internationally to properly understand the problem being examined.

An interdisciplinary review of the literature was carried out to find different architectural theories as well as the importance of flexible options, the significance of social interaction and the challenges of designing a medium density housing facility for different cultures. Key theorists that address some of the objectives set out were examined and from this stage 6 design performance criteria were formed, which were then used to critique and analyse a relevant selection of related work as well as to evaluate against in the 3 design phases that followed.

The site of Newtown was then chosen and critically analysed to understand the context and problems that are faced with designing on it. Following on from site analysis, an extensive program analysis was considered to understand the scope of the project, as well as the importance of the needs this specific clientele has.


Understanding the problem
Defining the problem
Performance criteria
Literature review
Case studies
Design drivers
Programme analysis
Site Selection
Design phase one
Newtown
Concept design

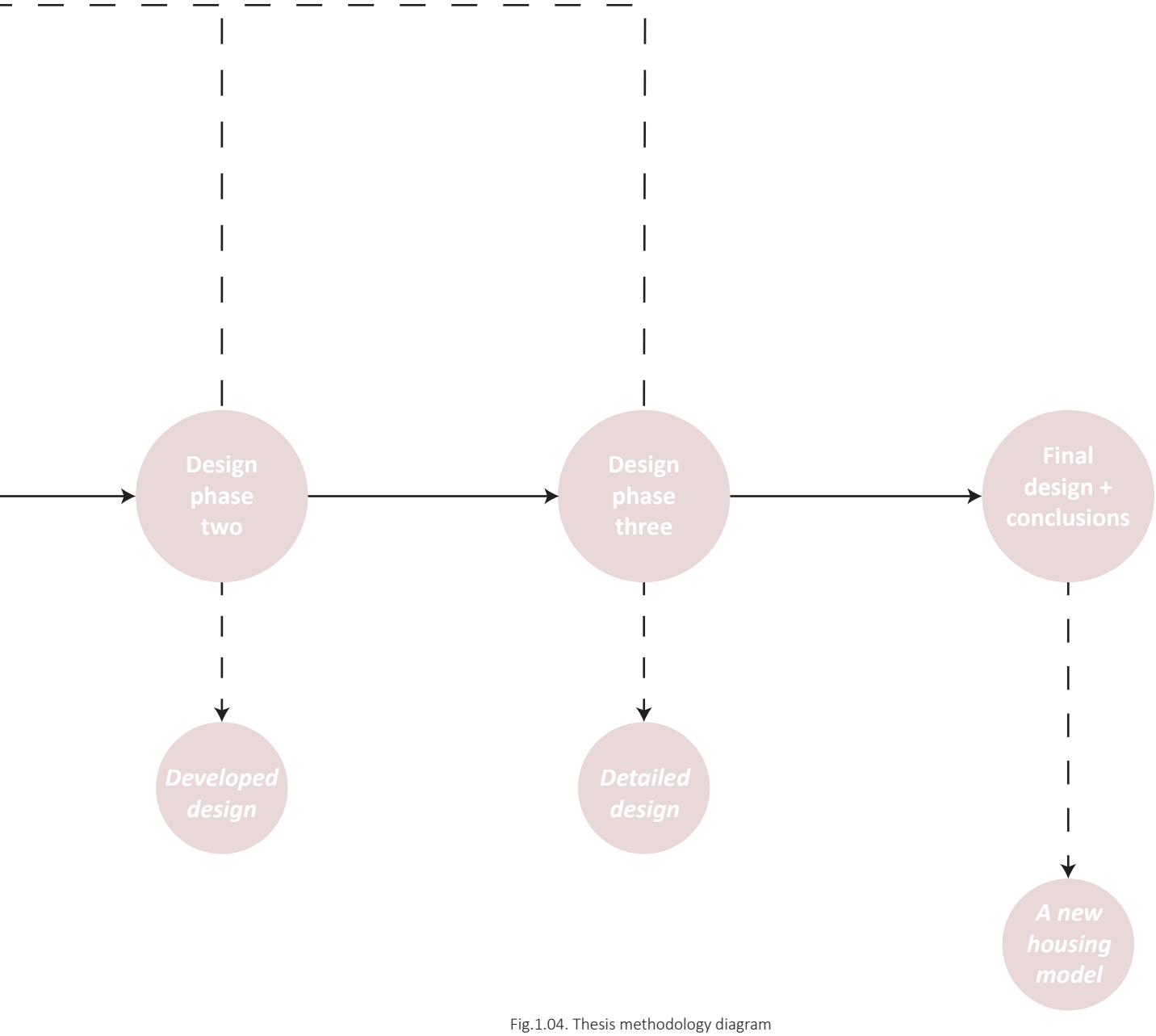


Fig.1.04. Thesis methodology diagram

02. LITERATURE REVIEW

The researched literature is divided into three main sections:

- Designing for different groups
- Medium density in NZ
- Designing for social interaction

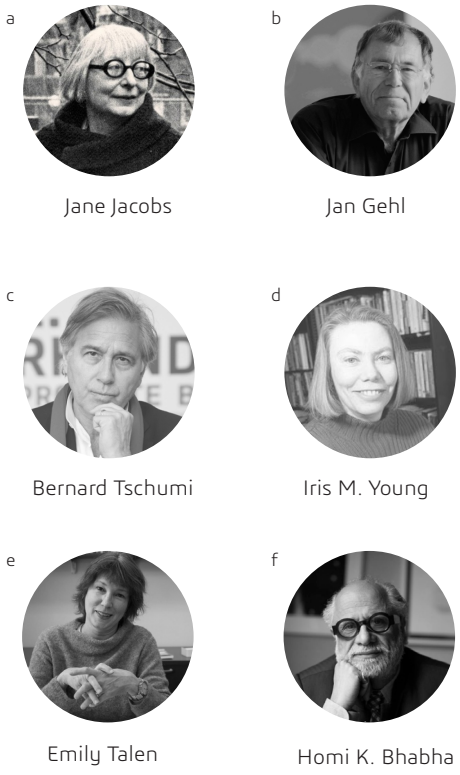


Fig.2.01. a-f. Key theorist of literature review

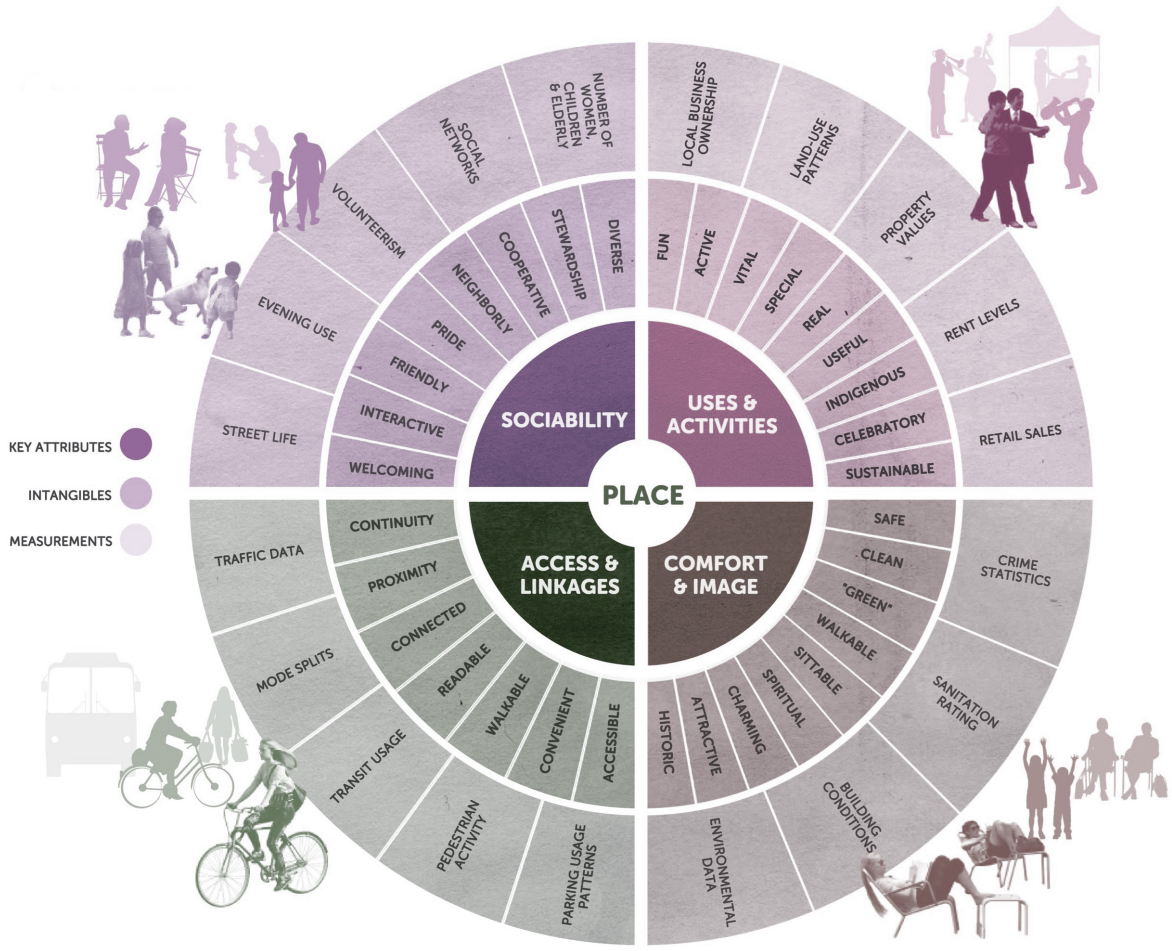


Fig.2.02. Project for Public Space's graphic of a "great place"

Designing for Different Groups

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In order to design housing that is enjoyed by many different groups, the architecture created must be inclusive in the way it is planned and reflect the needs of its users (Tucny, 2011). Inclusive design is defined as 'an environment which can be accessed and used by as many people as possible, regardless of age, gender or ability (Inclusive Design Hub, 2017). Given the broad nature of this topic, this inclusiveness should be designed for on two scales; one with the design itself and the other with the wider community in mind. Urban theorist Gerald Frug comments that the duty of cities on a whole should be to foster 'inclusiveness', stating that the role of these centres should be 'designed to deal with difference' (Frug, 1999). Political theorist Iris Young further elaborates on this same idea, suggesting four key values along the lines of 'variety', 'eroticism', 'publicity' and 'social difference without exclusion' which an inclusive environment should aim to have (Young, 1990). On a smaller scale, researchers in the UK advise that similar principles need to be adopted into the design that helps deal with this "difference".

The United Kingdom's Commission for Architecture and the Built Environment suggest that in order for a design to be usable by different groups of people, it should have qualities of "inclusiveness, responsiveness, flexibility, convenience, accommodation, welcoming and realistic" (Fletcher, 2006). Designing on these two scales is therefore important, and with the help of these principles will give the final outcome a balance that has the potential to be adopted into the New Zealand living context.

Emily Talen, Professor of Geographical Sciences and Urban Planning at Arizona State University in the United States speaks of how architecture has the potential to enable social diversity with the use of two significant design strategies; mix and connection. This method of the 'mix' is divided into two components by Talen. The first, housing options that provide a variety of living options which facilitate 'social mobility' and the second, a mix of facilities and services, uch as a mix of small business or public amenities that are carefully designed to cater for both the individuals and wider community (Talen, 2012). In addition to a mix, Talen's subsequent design principle is connection. Talen suggests that a successful connection in a design is one that provides two types of spaces. Firstly, an "identity space" and secondly, a "collective space" (Talen, 2012). An "identity space" refers to an area that focuses on cumulating people of similar interests, so they have a space in common that represents their needs and requirements. The other, "collective space", refers to a space that is designed for all, where different people can interact and communicate, allowing diversification to occur (Talen, 2012).

Cultural theorist Homi K Bhabha offers the concept of hybridity as one way to bridge the gap in interaction between disparate clusters, saying that this concept identifies a state of 'constant alteration', continually reshaping and re-imagining the surroundings (Hernandez, 2010). Bhabha states that cultural rudiments generally tend to transform due to the influence of neighbouring cultures, altering to accommodate each other as they 'hybridize' (Hernandez, 2010). Although complete hybridization is not what is desired within this housing model, the facilitation of different groups in the same space can provide opportunities or engaging with and accepting various different cultures.

Medium Density In NZ

While there is evidence of successful medium density housing in New Zealand, there is little which accommodates the needs of different cultural models of living (Housing New Zealand, 2018).

Research on Medium density housing in Wellington reports that despite the normal three bedroom house still being popular, smaller, two bedroom houses are becoming more regular in new medium density developments with singles or couples being accommodated well (Gray Partners Limited, 2016). However, this model does not seem to suit majority of the families that live in these locations and therefore these groups are often made to look in places further from city centres and in a detached house environment (CityScope Consultants & Curious Research, 2011). This unofficial barrier of suitability to what is being built creates bubbles of no-go areas and therefore segregation in communities.

Medium density housing in New Zealand although being on the rise, is also described as often 'lacking in character' (CityScope Consultants & Curious Research, 2011). To achieve medium density housing that is successful in not only its character but also the way that it serves the people it houses, many design guides were consulted to find key characteristics that should be considered.

The Auckland Design Manual indicates that a successful medium density development in general considers: a public front that faces the street, private open space away from the street, driveways and carparks that do not impact the quality of the street front and service areas that are screened from the public (Auckland City Council, 2017). In addition to these, Wellington City Council suggest that these developments should be affordable, have good access to community facilities, schools and open spaces, have good access to public transport networks and explore services and local employment (Wellington City Council, 2018a).

Further research into various different cultural housing guides reported on the detailed needs of these separate cultures, for example a pacific housing design guide curated by Housing New Zealand reports that multipurpose spaces and a flexible design are two of the most important features to consider when designing for pacific people (Housing New Zealand, 2002).

Designing for Social Interaction

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Social spaces, or the "third space" as described by Bhabha (Aparicio et al., 2010) are important features in any design that aims to foster the interaction of various different groups and ages. This "third space" – or group of spaces- has been added as a vital component to the design of this medium density housing project in order to allow for the togetherness of these cultures to take place. Research into local projects of medium density housing report that the spaces around these buildings are often left out, resulting in a lack of places of contact for residents (CityScope Consultants & Curious Research, 2011). In his book Life Between Buildings (2011), Jan Gehl states that "architects and planners can affect the possibilities for meeting, seeing, and hearing other people", and therefore should aim to create an open space that is clearly visible by all, as "People are attracted to people. They gather with and move about with others and seek to place themselves near others" (Gehl, 2011).

The use of 'micro-publics' – also known as semi-public spaces- in areas where contact between different cultures is desired is a strategy suggested by Ash Amin, Geography professor at the University of Cambridge. These settings can be made up of a various mix of activities where discussion and conversation becomes inevitable (Amin, 2002). The encouragement of the coming together of 'strangers' in these carefully designed environments allow them to participate in common activities that could then encourage the break-down of barriers and stereotypes. This will then provide these individuals with an opportunity to form their own "patterns of social interaction" (Amin, 2002).

Further emphasising the idea of social spaces urban theorist Jane Jacobs suggests that the four main design principles of a social space are; permeability, mixed use, density and natural surveillance (Jacobs, 1992). Permeability refers to providing users with the opportunity to intersect and connect, mixed use refers to strengthening the identity of place by housing a mix of residential and commercial buildings, density refers to quantity of these mixed uses and how the right level can bring people together and lastly natural surveillance, which refers to building a public space where the activities of different people can be observed creating a safe environment and a strong sense of community (Chantry, 2018).

Emily Talen however suggests that it would be naïve to consider that good design alone would create a 'togetherness' of a community, advising that rather than just aiming to design a space that has a sense of community, "the aim should instead be to increase the probability of this happening" (Talen, 1999). One way to increase this probability is to adopt the use of architectural concepts of cross-programming and dis-programming, as explained by architectural theorist Bernard Tschumi. Tschumi describes his concept of cross-programing and dis-programming as a scheme where "programme A contaminates programme B and B's possible configuration (Tschumi, 2012). The concept of dis-programming is defined as the ability of one programme to inform the function and configuration of another's (Tschumi, 2012). This dialogue between the two does not mean that

one will define the other to be the same, but instead how one's function and programme can be modified to allow for the other to be active in tandem. The concept of 'cross-programming and disprogramming' therefore directly relates to the idea of interaction among spaces. Tschumi also describes architecture to be both the built form and the experience within it, suggesting that this then should be merged together to create "unprecedented combinations" that can lead to more social interaction amongst the built form (Tschumi, 2012).

Additionally, Jane Jacobs also states that mixing forms a complex pool of use, by including facilities that complement each other by generating different activities at different times during the day. Therefore, by designing a mixed use development and providing different programmes for the variation of potential cultures, opportunity is created for interaction between the dwellers and visitors, enhancing the building of relationships between the several groups. This design technique although implemented in a physical way, has the potential to perform as an important source of well-being for individuals as well as the wider community (Cattell, Dines, Gesler, & Curtis, 2008).

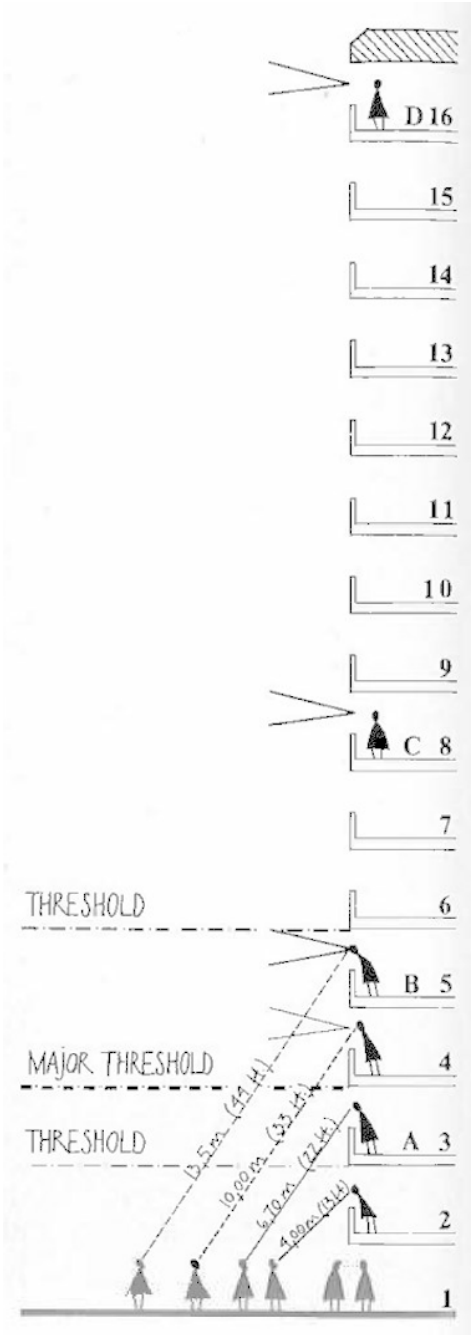
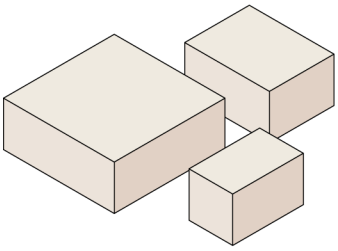
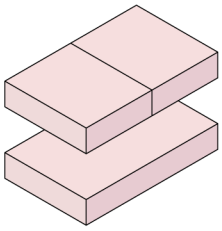


Fig.2.03. Jan Gehl's space section

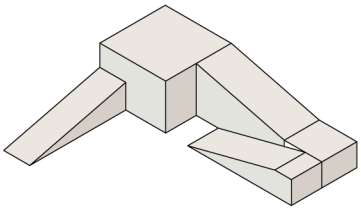
Performance Criteria



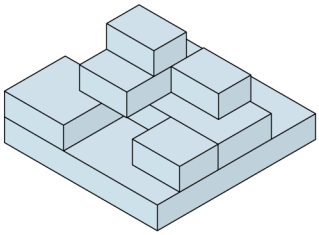
Living options
that cater for groups of different size and requirements



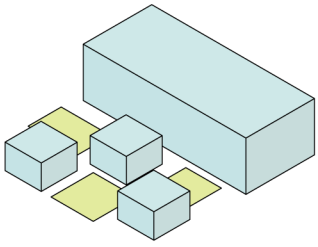
Flexibility
of living and recreation spaces for different activities to occur at the same time



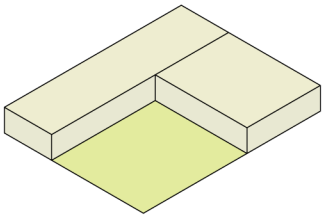
Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space



Mixed use
that introduces different levels of interaction and engagement on site



Green spaces
that allow people to come together when desired

Summary and Reflection

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Analysing the current related literature, it has been identified that there is a deficiency in appropriate housing for different cultures in a semi-urban context.

Examining relevant researchers and theorist in the field of architecture has allowed for a better understanding of possible solutions through the identification of various different design principles that can help solve the problem that has been recognized.

Furthermore, these design principles have helped to form key architectural performance criteria that will be used to generate design experimentations throughout this design research portfolio.

In order to meet the aims of this portfolio which; seek to develop a new model of medium density housing that aims to be more inclusive of different cultural groups and styles of living, taking into account the needs of both the individualistic and collectivist styled societies so that they can all exist within the space without having to fully hybridize and using architectural strategies to promote the quality and quantity of social interaction within the “third” space following a more ‘collective’ model, the following performance criteria have been generated:

-Living options that cater for groups of different size and requirements

-Flexibility of living and recreation spaces for different activities to occur at the same time

-Density through more dwellings and people in a space

-Green spaces that allow people to come together when desired

-Mixed use to introduce different levels of interaction and engagement on site

-Internal and external accessibility to make movement of residents and public easy

A new model of housing is required that looks to create an inclusive design and foster a stronger sense of togetherness among people of different ages backgrounds. This new model will need to address the performance criteria stated above to ensure that key aspects of designing for this specific audience are met.

03. ANALYSING THE EXISTING

Related Works Study

-

A review of the literature indicated that multiple different approaches can be taken to implement the likes of inclusiveness, interaction and integration in a housing complex for different cultures. Six case studies of related work have been inspected to generate ideas that will accompany the performance criteria in the experimental stage of this thesis. These examples have been selected as a mix of architectural projects that exhibit relevant outcomes desired in this research.

- 8 House, Denmark- Bjarke Ingles Group

- Saltholmsgade, Denmark- WE Architecture

- Nursery in Paris, France- De Alzua+

- Drommehagen, Norway- Drommehagen

- The Commons, Australia- Breathe Architecture

- Mieres social housing, Spain- ZIgZag Architecture

Method:

A critical analysis of each case study has been carried out, along with the strengths and weaknesses to obtain an in-depth understanding of opportunities to be extracted for this research portfolio. The following performance criteria will aid in identifying key approaches to be taken in the design and development stages of this thesis:

-Housing options

-Flexibility

-Density

-Green spaces

-Mixed use

-Internal and External accessibility

An evaluation and reflection of these projects will allow key aspects and features to be taken into the designing of the new proposed model.

Fig.3.01. View of 8's inner courtyard

Fig.3.02. View of 8's cut walkway

8 House

-

Bjarke Ingels Group
Copenhagen, Denmark
2009

8 House

8 house in a mixed use project consisting of housing and business spaces formed in an un-traditional form that creates “added value” (arcspace, 2012). This large-scale horizontally orientated structure is made up of 10 levels with business spaces located at the bottom and housing above that. The ‘8’ shaped form creates two internal courtyards that can be viewed from all apartments surrounding it, allowing residents to have views into the space. Architectural elements such as heights and shapes of buildings allow maximum sunlight into the development while also providing interesting views of the surroundings.

Construction of this building consists of mainly steel and powder coated panels that give the exterior consistency but lack in character. Materiality is carefully considered on the inside, with either plain white or brightly painted walls that control the emotion of spaces such as corridors and shafts. Wood is used in the houses along with concrete to form a soft palate and give a homely feel. Various different corridors are carefully planned and colour coordinated to guide the residents through the spaces. There are both private and semi-private areas in the form of small courtyards on the inner side of the development, allowing neighbours to walk by and start a conversation (BIG, 2010).

The roof of the building consists of 18,300 square feet of green roof which has been specifically designed to reduce urban heat island effect (Minner, 2010). The rest of the roof space is designed as a ramp that wraps itself around the building, allowing residents to cycle up to the top and therefore into their apartments. Circulation on the ground floor is well thought out, with wide 9m access ways cutting through the building allowing the public to stream

Fig.3.03. 8’s inner circulation

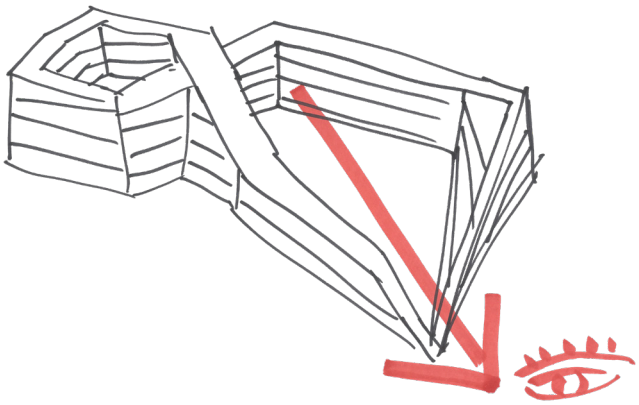


Fig.3.04. Sketch of created viewpoint

Strengths:

- Interesting layout with private and semi-private spaces for residents

- Heights and form frame views and encourage natural light in courtyard

- Residents have many points of interaction with each other

- Mixed used development that has contact with public

- Good use of colour and circulation

- Use of materials give a homely feel

- Variation of housing sizes

- Good use of roof

Weaknesses:

- Inner courtyards not developed enough

- Lack of vegetation

- Too many people share a corridor

- Lack of diversity of materials on exterior

Principles from this study to adapt into thesis:

- Allowing a mixed use of facilities for many scales of engagement

- Providing housing options for different people

- Create layout that provides different areas with their own social spaces

- Using different forms to maximise sun and views

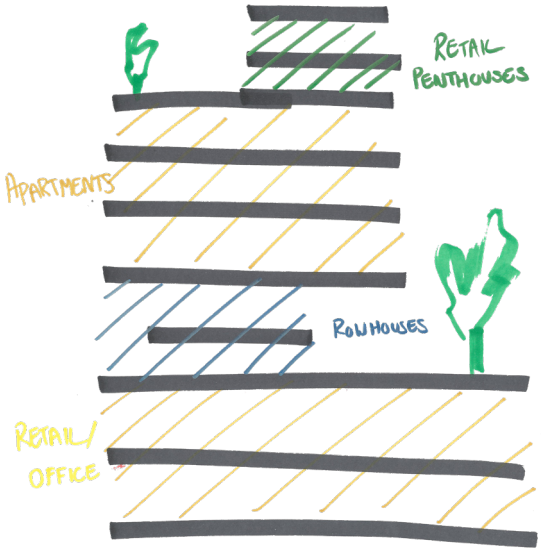
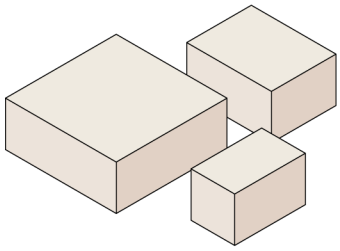


Fig.3.05. Sketch section of 8 house

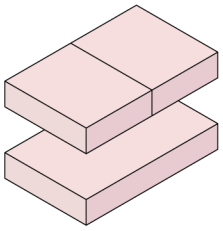
Fig.3.06. Materiality of interior

Fig.3.07. Outdoor hallway

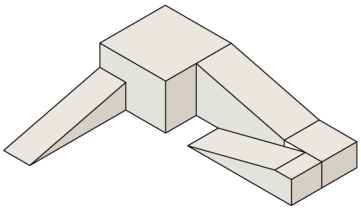
Suitability to performance criteria



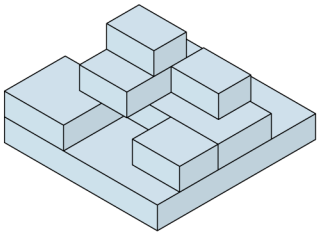
Living options
that cater for groups of different size and requirements



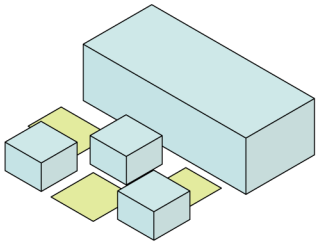
Flexibility
of living and recreation spaces for different activities to occur at the same time



Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space



Mixed use
that introduces different levels of interaction and engagement on site

Green spaces
that allow people to come together when desired

Fig.3.08. Relation of Saltholmsgade to surroundings

Saltholmsgade

-

WE Architecture
Aarhus, Denmark
2017

Saltholmsgade

Completed recently, Saltholmsgade is a social medium density housing project in the small city of Aarhus. This development on a tight piece of land looks at how housing can be added into a small site without losing the green space it occupies (WE Architecture, 2017). One way that this project does this is through the extensive use of the roof space, which incorporates the lost land at the bottom and starts to activate different people on the top.

The roof space consists of unique areas that use reflected forms from surrounding buildings and pay respect to the identity of the city's historical houses. This therefore fits into the urban fabric well as it uses different components of its surroundings to help drive the design of the spaces. Additionally, this new space allows for people to come together and recreate through different activities while enjoying the view of the neighbourhood.

The material qualities also reflect what surrounds the building, with materials such as brick and stone extracted from particular buildings. The positioning of the mass is cleverly done, as the vertical black are staggered to create niches that act a meeting points on the street side of the building. Parking, laundry and storage facilities are moved to the basement, which saves on valuable space but does not encourage that much interaction within them. In the inner courtyard does however allow residents to engage with each other, providing dense and open areas for fun. The layout of the houses is open to both sides of the development, again drawing connection to the courtyard and the bustling street outside.

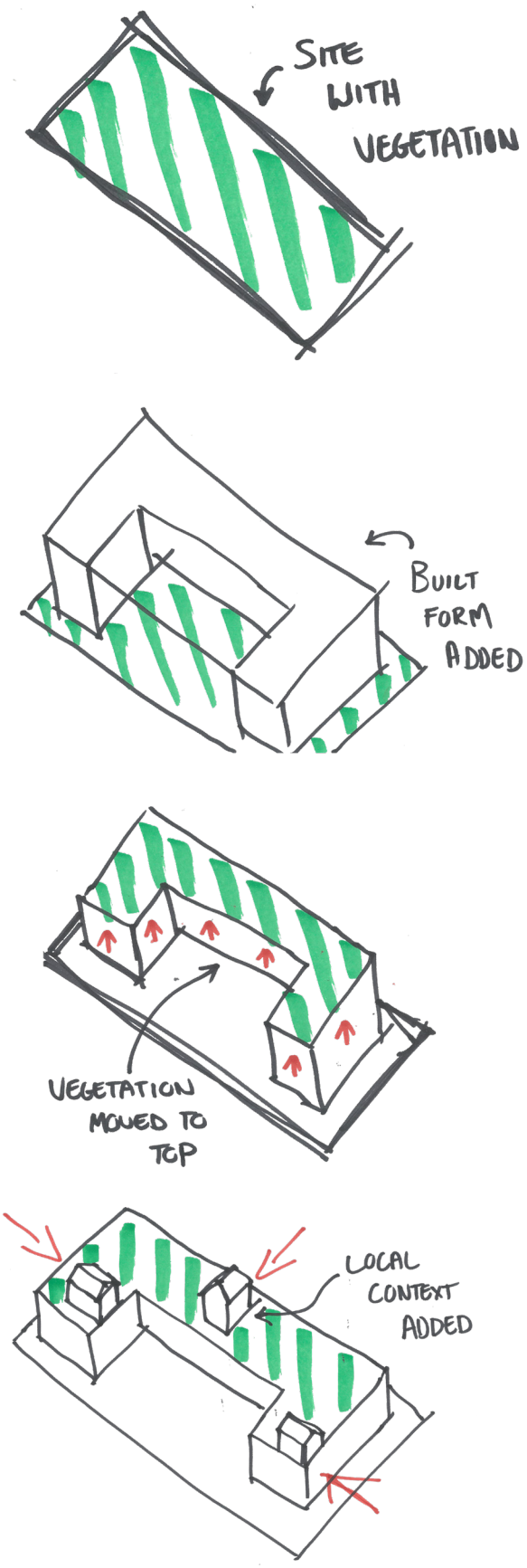


Fig.3.09. Sketch evolution of Saltholmsgade

Strengths:

- Great use of roof space

- Various different activities to increase interaction

- Strong relationship to context

- Use of materials influenced by surroundings

- Good density achieved through layout

- Apartments are cross ventilated

Weaknesses:

- Lack of variation in living types

- Only one type of use

- Linear layout prevents views of other residents

Principles from this study to adapt into thesis:

- Integration of surrounding context to allow design to fit better into site

- Use of rooftop for different activities to save space and bring people together

- Maximise density by iterating potential ground usage

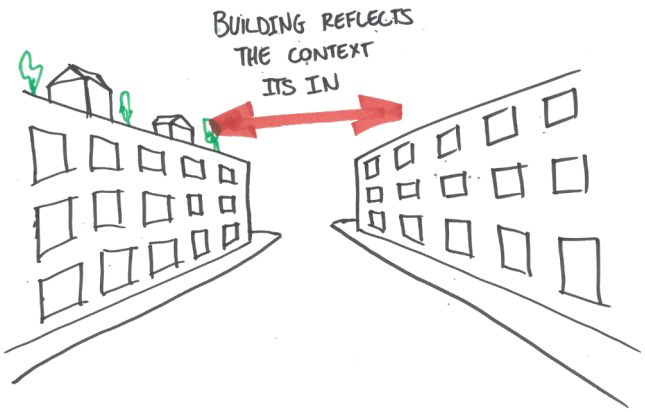


Fig.3.10. Sketch of surrounding aspects

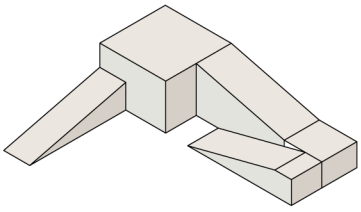
Fig.3.11. Rooftop

Fig.3.12. Street elevation

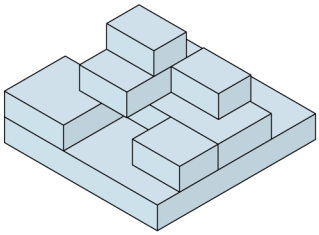
Suitability to performance criteria

Living options
that cater for groups of different size and requirements

Flexibility
of living and recreation spaces for different activities to occur at the same time

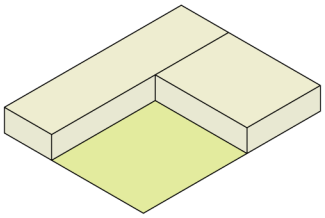


Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space

Mixed use
that introduces different levels of interaction and engagement on site



Green spaces
that allow people to come together when desired

Fig.3.13. Inner courtyard

Nursery in Paris

-

De Alzua+
Paris, France
2014

Nursery in Paris

This multidisciplinary building with a floor size of 1300m2 is located in a dense suburb of the outer city in Paris. The structure sits snug between two existing buildings and blends in reasonably well with its surroundings. The program appeals to a verity of groups including the public with retail and business spaces on the ground floor. It is split into three main uses; a childcare centre, housing for students and housing for the elderly, which allows for interaction of different age groups on the same compact site.

The layout is carefully considered, as the more public spaces such as the day care are housed on the ground floor, with the residential units sitting on top allowing for privacy in a semi-urban context. The composition of the areas are also well planned out, ensuring plenty of sunlight into the day care during the day and sufficient daylight into the housing in the evening (ArchDaily, 2016).

The use of materiality is good on the outside, with the use of light textured brick that blends in with the neighbouring buildings . The extensive use of frosted glass provides contrast to the brick, calling subtle attention to the building and random colour bricks on the lower façade have a relation to the playfulness of the children. The inside however is rather industrialized, with white walls and long corridors making the common spaces bare and boring.

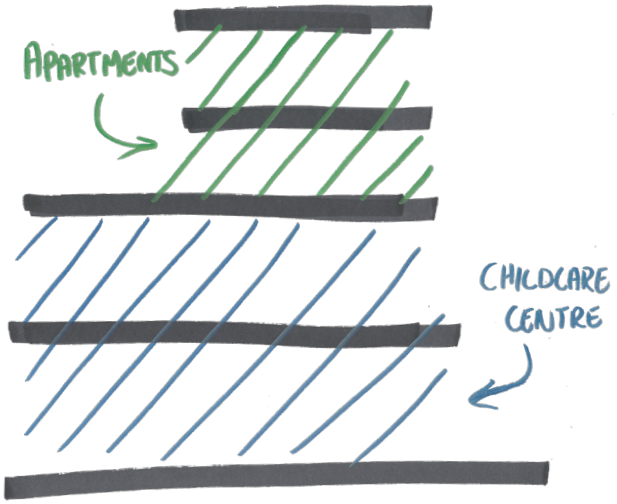


Fig.3.14. Sketch section of design

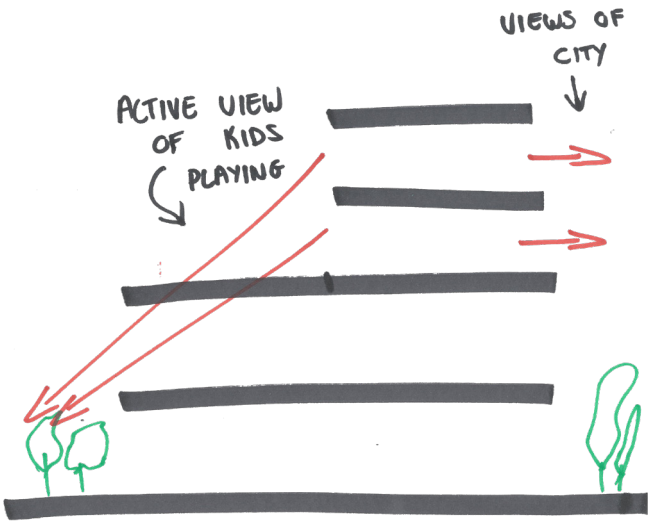


Fig.3.15. Sketch section of views

Strengths:

- Cohesion between the building and surrounding materials

- Encourages intergenerational interaction through layout

- Different uses in one building

- Vertical layout responds to sun and privacy conditions

- Fits well in site and does not alter the public realm too much

Weaknesses:

- Doesn't connect with the outdoor natural surrounding as much

- Materials on the inside are bland and lack character

Principles from this study to adapt into thesis:

- Use of different housing options that start to build relations between different age groups and therefore people.

- Exploration of form to maximise sun for specific groups at specific times

- Different scales of contact with the building, temporary and long-term and also different times of the day

Fig.3.16. Inner hallway

Fig.3.17. Street front + materiality

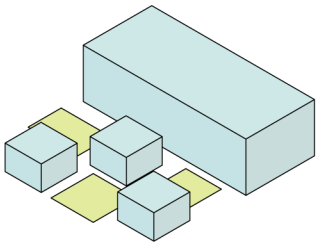
Suitability to performance criteria

Living options
that cater for groups of different size and requirements

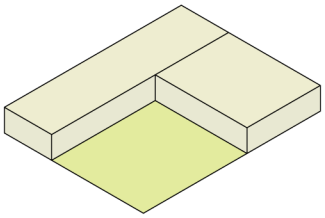
Flexibility
of living and recreation spaces for different activities to occur at the same time

Internal and external accessibility
that makes movement of residents and public easy

Density
through more dwellings and people in a space



Mixed use
that introduces different levels of interaction and engagement on site



Green spaces
that allow people to come together when desired

Fig.3.18. Drommehagen streetfront

Drommehagen

-

Haptic Architecture
Drobak, Norway
2016

Drommehagen

This compact housing complex in Norway encompasses different typologies of homes that sit around a common courtyard. Various different communal areas encourage interaction between the users and generate a community feel within a wider community. This interaction is encouraged with external parties as well, as the spaces of the courtyard lead to the adjoining streets of the site, opening the whole complex up. The thresholds between the internal and external spaces are subtle, which adds to the welcoming aspect of this design.

The complex has various different functions, including houses, shops and restaurants that contribute to the flexibility and diversity of the design (Haptic, 2016). The structure of the houses itself represent vernacular Norwegian architecture, and the extensive use of wooden elements such as cross laminated timber not only give it a warm feel but also represent traditional construction materials (Frearson, 2016). The multi angled roofs represent the mountains in the background and also create large dramatic spaces within the dwellings.

The layout of individual houses is well planned out and give the users personalized views with residents on the ground floor also having their own small private yards. The access of this development seems to work well for the sloping topography, with varying terraces creating access way and also spaces for interaction.

Fig.3.19. Drommehagen inner courtyard

Fig.3.20. Sketch of material scales

Strengths:

- Materials used are very warm and welcoming Inner courtyard opens to the public and allows for foot traffic through

- Various different spaces allow for interaction among residents and public

- Spaces are flexible and there is a variation in house size

- Form and materials are informed by the surroundings

Weaknesses:

- Designed for a specific group, which might only house specific people

- Density is low, which houses less people

Principles from this study to adapt into thesis:

- Use of retail facilities in the prominent street fronts to increase contact with the site

- Open courtyard that has two points of entry to allow public to flow through

- Usage of soft and local materials

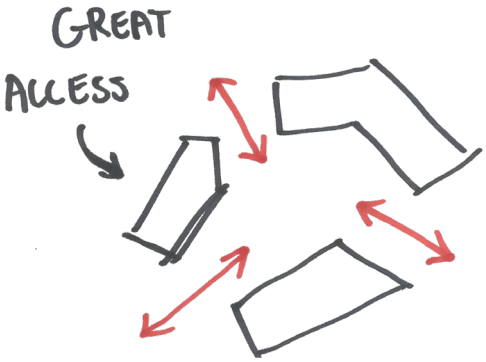
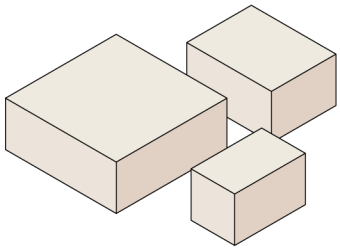


Fig.3.21. Sketch of site access

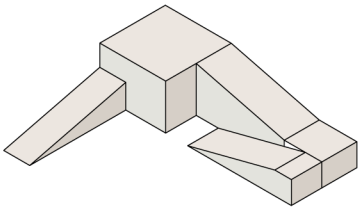
Fig.3.22. Entry to Drommehagen

Suitability to performance criteria



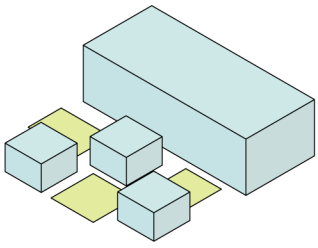
Living options
that cater for groups of different size and requirements

Flexibility
of living and recreation spaces for different activities to occur at the same time

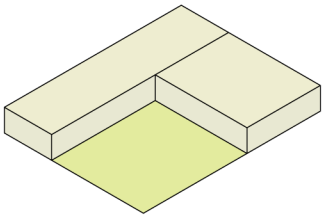


Internal and external accessibility
that makes movement of residents and public easy

Density
through more dwellings and people in a space



Mixed use
that introduces different levels of interaction and engagement on site



Green spaces
that allow people to come together when desired

Fig.3.23. Exterior facade of the Commons

The commons

-

Breathe architecture
East Brunswick, Australia
2014

The Commons

This medium density housing project located in Melbourne Australia is a new proposed model of sustainable apartment-style living (Lavars, 2014). This mixed-used development is home to apartments on the top with shop and studio spaces on the ground. The spaces are divided up vertically but still have visual and special flow. The rooftop consists of seating and a vegetable-garden that encourages residents to come together and interact over activity.

The basis that makes this design special is that it is generated by a tri-model principle, where social, financial and environmental aspects all take priority. This model is driven by the contribution from the public, meaning that potential users and locals have a say on what should be incorporated and why. This process itself sets up the design and residents with a community feel, further enhancing the experience by including what is actually wanted (Breathe Architecture, 2015).

The materials used reflect a mix between a modern and industrial era, matching with the surroundings it is set in. The use of wood and metal complement each other and boost the feeling of warmth and solidarity. Vegetation on the rooftop makes up for the lack of green space in the urban area, and creeper plants cover some of the façade giving it a suburban feel. The layout is reasonable, but a lack of options for home size attracts only one type of demographic, risking the potential of diversity.

Fig.3.24. Indoor garden

Fig.3.25. Rooftop garden

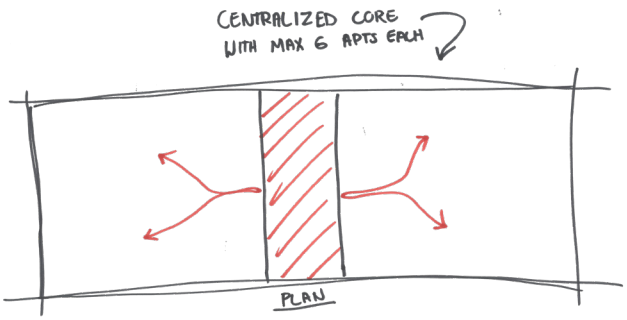


Fig.3.26. Sketch of horizontal access

Strengths:

- Great housing model that allows public input

- Density level is fair for small sized plot

- Mixed uses in the building allow for variation

- Green space on roof allows for interaction and socializing

- Neighbours all know each other

- Design and material works well with surroundings

Weaknesses:

- No variation in room sizes, basic layout

- No public engagement through building apart from bottom floor

- Mostly focused only on middle aged clients, not much thought put in for very younger or old users

Principles from this study to adapt into thesis:

- Design process that includes the views and requirements of potential users

- Model built around environmental and economical sustainability

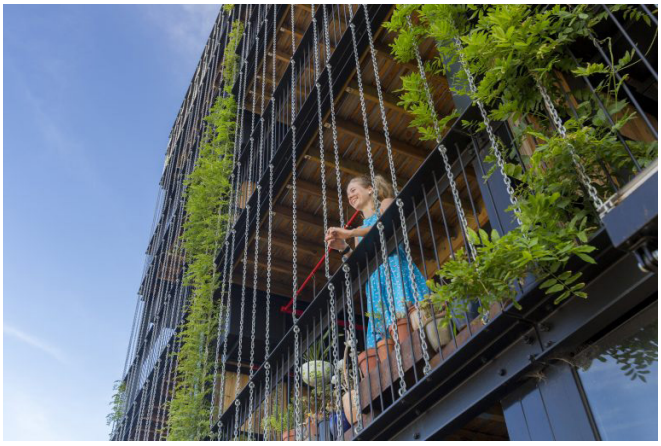


Fig.3.27. Outer balcony + vegetation

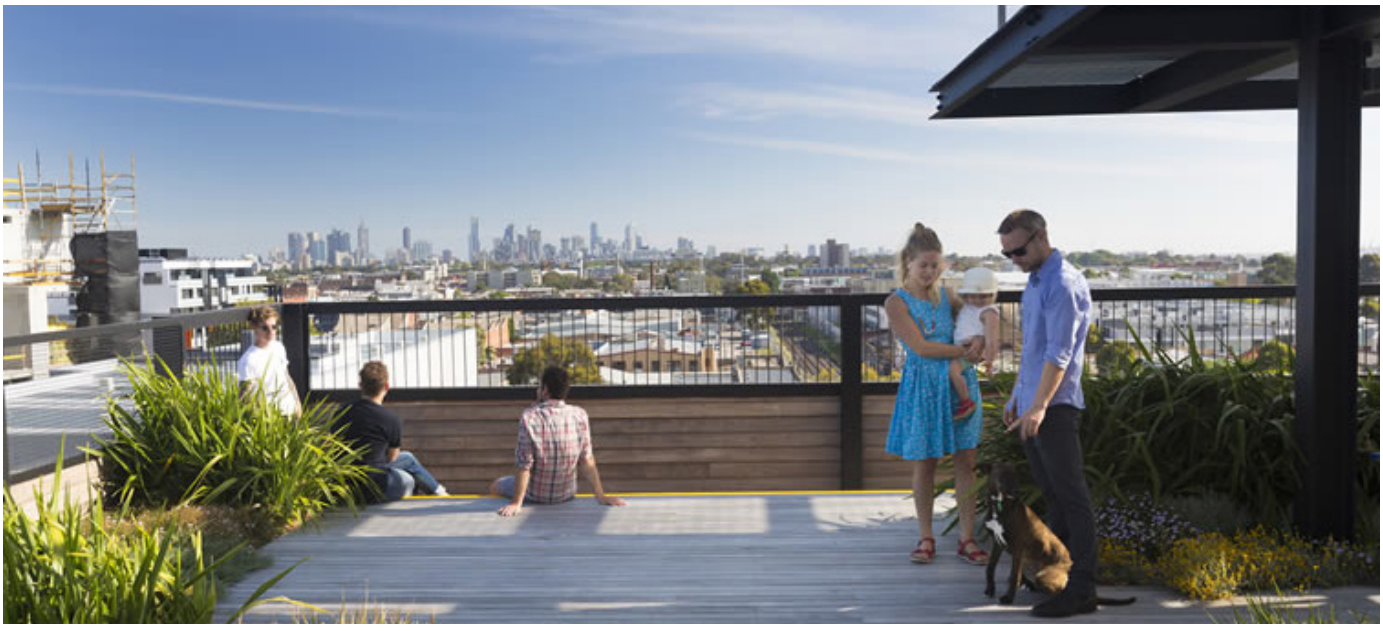
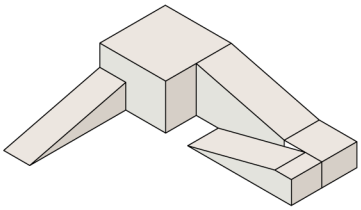


Fig.3.28. Shared rooftop

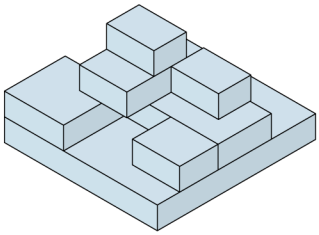
Suitability to performance criteria

Living options
that cater for groups of different size and requirements

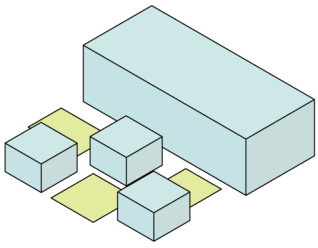
Flexibility
of living and recreation spaces for different activities to occur at the same time



Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space



Mixed use
that introduces different levels of interaction and engagement on site

Green spaces
that allow people to come together when desired

Fig.3.29. Street elevation of Mieres

Mieres Social Housing

-

Zigzag Arquitectura
Asturias, Spain
2010

Mieres Social Housing

This social housing project in Spain reflects a well-designed medium to high density complex. The massing of the buildings makes up different heights that respond to the large mountains that surround the valley (ZigZagArchitectura, 2018). The porous wooden façade allows for views through the spaces of these mountains, while still keeping the interiors semi-private.

There is a duality to this project. There seems to be two main approaches to the way this is design has been formed. One is more industrial which we can see in the use of steel and zinc of the cladding on the outside parameter of the site, while the inside is composed of thin wooden elements, composing a warm and welcoming feel. This feeling is built upon more ad the whole inside of the site is designed as a big courtyard, with paths and green spaces that encourage usage. This courtyard is opened up at two ends, allowing the public to flow into the development and engage with residents and the architecture (ArchDaily, 2013).

The layout of the houses is well thought out, with opening on both the inside courtyard and the outside street edge allowing for cross-ventilation and views of both sides. There is also good variation between the sizes of homes, catering for a larger cohort. Multiple entrances for the houses make it more private for the users, but also risk a lack of interaction that could potentially take place there. The accessibility is also good, with stairs and lifts both servicing each household, making it suitable for people of all ages.

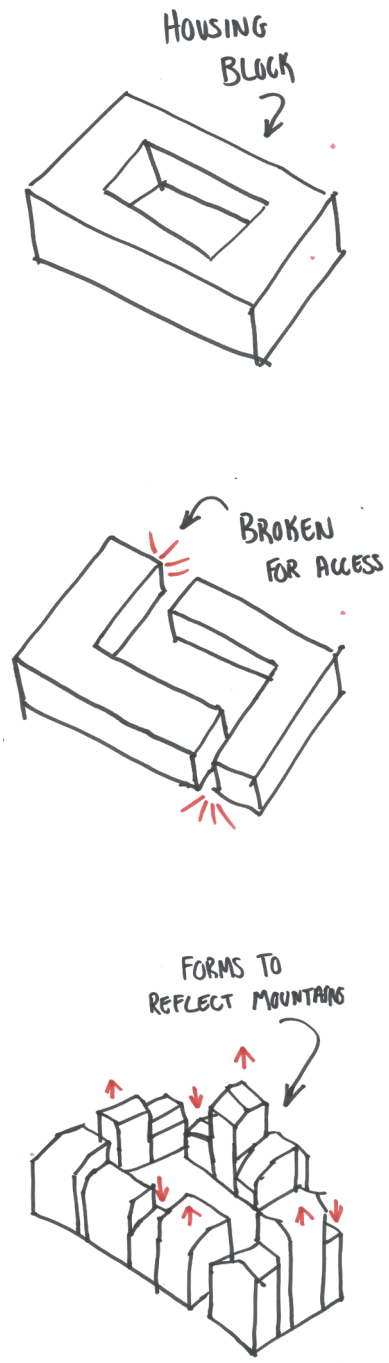


Fig.3.31. Evolution of Mieres

Fig.3.30. Inner elevation

Strengths:

- Inner courtyard design that creates space for interaction

- Homes overlook both inside and outside of development

- Materiality matches that of surroundings

- Good variance in housing sizes

- Accessibility caters to all parties

- Open courtyard allows external engagement

Weaknesses:

- Not enough spaces for contact and interaction

- Singular access ways prevent people getting to know each other

- Inner courtyard good but lacks activities

Principles from this study to adapt into thesis:

- The variation of living types that are segregated vertically to help with access and needs

- Courtyard that is surrounded by housing to allow people to view activity on the inside

- Variety of forms and heights to distract eye and grab attention

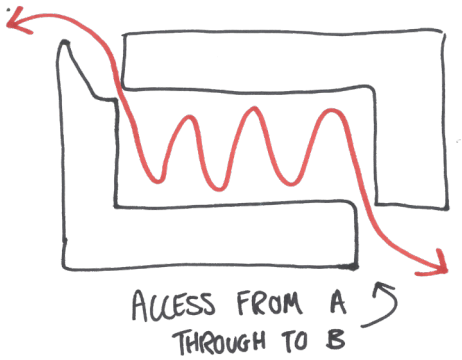
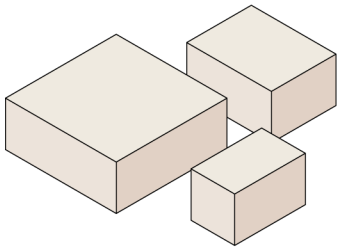


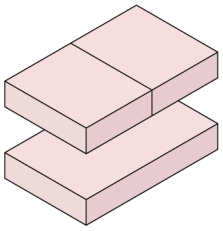
Fig.3.32. External access of Mieres

Fig.3.33. Inner courtyard of Mieres

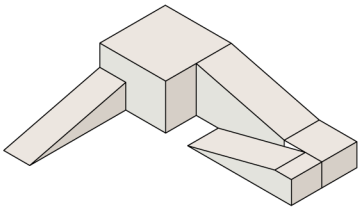
Suitability to performance criteria



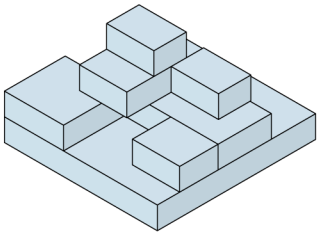
Living options
that cater for groups of different size and requirements



Flexibility
of living and recreation spaces for different activities to occur at the same time



Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space

Mixed use
that introduces different levels of interaction and engagement on site

Green spaces
that allow people to come together when desired

“The nuclear family is not by itself a viable social form”

(Alexander et al., 1977)

Summary + Reflection

-

A critical analysis of each case study has been carried out, along with the strengths and weaknesses to obtain an in-depth understanding of opportunities to be extracted for this research portfolio. The following performance criteria will aid in identifying key approaches to be taken in the design and development stages of this thesis:

-Housing options

-Flexibility

-Density

-Green spaces

-Mixed use

-Internal and External accessibility

An evaluation and reflection of these projects will allow key aspects and features to be taken into the designing of the new proposed model.

The analysis of the previous 6 case studies provided insights on design techniques that could be explored in the design phases. Additionally, critical analysis also informed weaknesses in those projects which should be evaded in the iterative process.

This review has provided the following strategies that should be considered in the process of designing a housing scheme that aims to foster the “togetherness of strangers”. It examined a series of successful strategies that:

- Provide a variation of living typologies for different groups

- Design spaces that people can come together in and generate social interaction

- Explore adding mixed uses into the development to house a variance of functions

- Produce a design that reflects the surroundings it sits in

- Work in multiple scales to achieve different architectural attributes

- Provide housing that is reasonably private but also facilities that people can share when needed

04. PROGRAMME ANALYSIS

Traditional New Zealand semi-urban living prefers a standalone typology (CityScope Consultants & Curious Research, 2011). However, in order to fulfil the severe needs of housing in New Zealand and to create housing that is more adaptable to its diverse users a new typology is needed that also looks to increase the density and interaction between these groups.

This Programme Analysis helps establish a strategic set of design principles that can be incorporated into the design experiment. **This will be divided into two areas of focus, one the individual requirements of space and the second the collective's need of spaces.** An overview of site limitations will also inform what the opportunities of the site can deliver.

Individual Requirements

-

In order to gain an understanding of what is needed in terms of space for people, the newest version of the Metric Handbook (2008) has been used in order to provide basic minimum requirements of the individual users. To address the collectivist requirements for space, accommodation must be made for a wide range of age groups as well as increased housing size. As such, specific requirements for the aged as well as young children have been identified.

Requirements for the elderly:

-Circulation for wheelchairs
-Lack of obstructions
-Centrally located lifts and communal areas
-Good artificial and natural light, particularly on circulation routes
-Good visual access
-Considered use of tone, colour and materials
-Interesting corridors
-Protected sunny outdoor spaces
-Community services

Elderly planning allowances:
Single rooms: 9.6-12m2
Double rooms: 14.8-16m2
Bathrooms: 3.5m2
Communal lounges: 2.3m2 pp

Students and young professional requirements:

-Potential of sharing
-Proximity to town
-Comfort on a basic level
-Reasonable room sizes
-Facilities for self-catering

Planning allowances:
Single room: 10-12m2 (including bathrooms 13-14m2)

Family requirements (floor area minimum):

One person dwelling= 25-30m2
Two person dwelling = 40-45m2
Four person dwelling= 70-80m2
Six person dwelling= 100-110m2

Shared Requirements

Additional to the requirements of different groups or ages, attention should also be given to the shared needs and facilities for all. The overall joint required facilities arising from the Programme Analysis include:

- Houses/apartments – a variation of these

- Carparks – preferably hidden from street fronts

- Play spaces – for younger audiences

- Outdoor spaces – for both public and residents

- Community centre facilities – variance of sizes

- Mixed use – exploration of retail and commercial spaces within development

- Easy access – both to dwellings and site itself

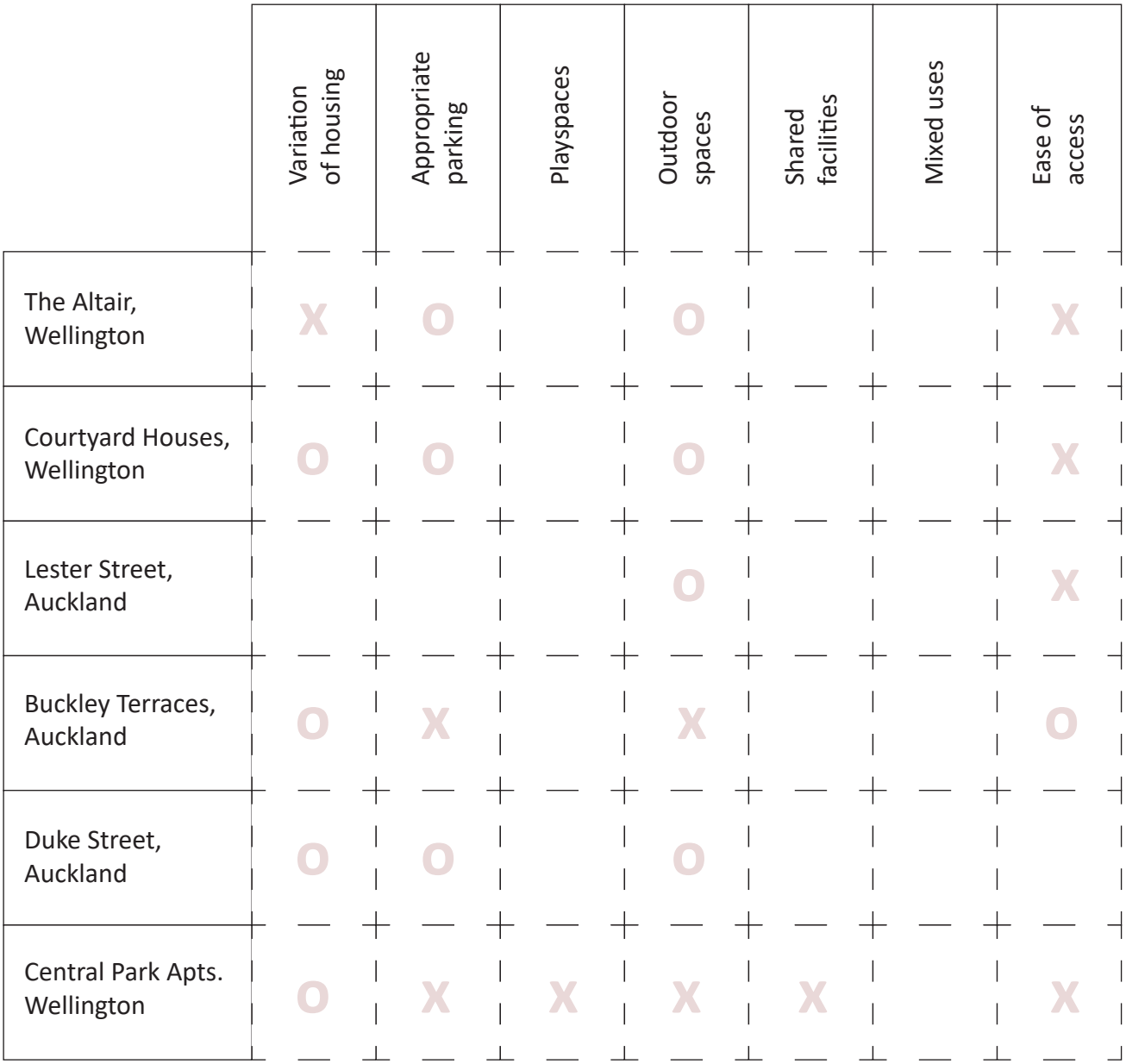


Fig.4.01. Analysis of national developments and performance criteria

Programme Summary:

The programme analysis combined with the principles from the literature review indicated that special attention to the following design elements should be considered in the new design:

- Setting on the site – maximise sun and minimise prevailing winds

- Flexibility – formal and informal spaces

- Multipurpose spaces – community rooms

- Openness – flow between indoor and outdoor spaces

- Landscaping – allow for spaces for relaxing and recreating

- Separation spaces – separate the private and public areas, terraces

- Moments of interaction – rubbish, laundry, entrances, notice boards, study rooms

- Transitional space – relationship and transition between outdoor and indoor

- Economic growth – stores on the ground

05. SITE ANALYSIS

Site Selection

Due to the diversity, increasing population and large presence of diverse cultures in Wellington, the capital has been chosen as a logical region to test a potential housing complex for different cultures. Additionally, although Wellington's semi-urban and suburban context largely consists of low density housing, 25% of all housing types are classed as 'medium density housing', which is projected to increase 10% in the next few years (Page, 2016). Despite this thesis being based on one particular site, the underlying principles gained from this research are aimed to be implemented in any similar setting in Wellington or the wider New Zealand context.

THESIS CONTEXT

NEW ZEALAND

Fig.5.01. Research context map

Newtown

Of the different suburbs in Wellington surveyed, Newtown was chosen due to its multicultural society and its existing reasonable density and exciting cosmopolitan atmosphere. Newtown is the home to 8,418 individuals as per the 2013 census, although that number is said to be reasonably higher since then (.idcommunity, 2018).

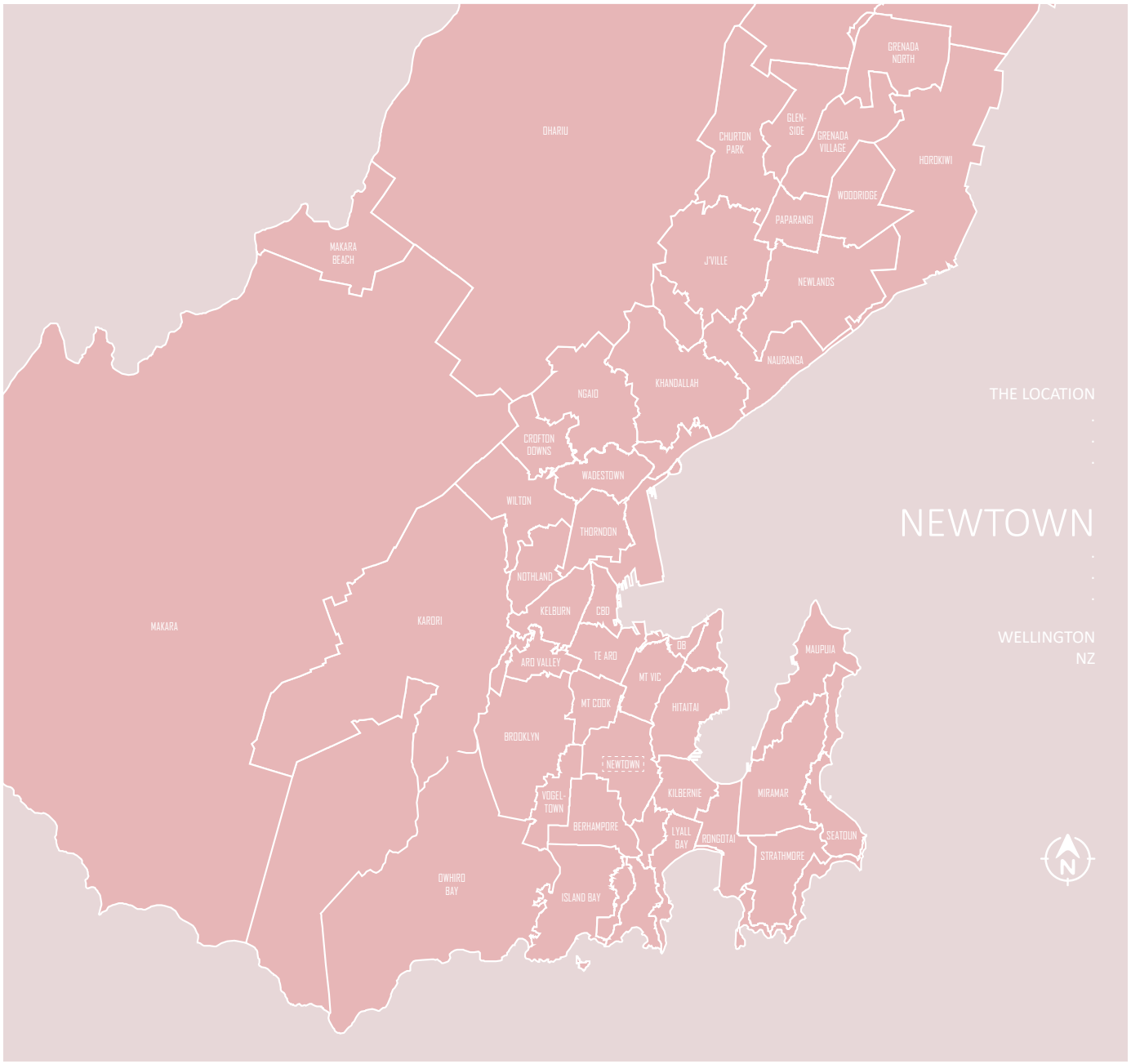


Fig.5.02. Design context map

Newtown's ethnic make-up and willingness of change is what makes it stand out as a suburb, with 24.2% being that of either Maori, Asian or Pacific decent – higher than other suburbs in Wellington (.idcommunity, 2018). Additionally, these more collectivist societies are also growing within Newtown, as along with Maori, Pacific and Asian groups, those belonging to Middle Eastern, Latin American and African cultures are also on the rise (.idcommunity, 2018). These range of ethnicities allows there to be acceptance to even more diversity, enhancing the community spirt that Newtown is famous for and enriching the lives of all people that could possibly live there.

Fig.5.03. Comparison between Wellington and Newtown

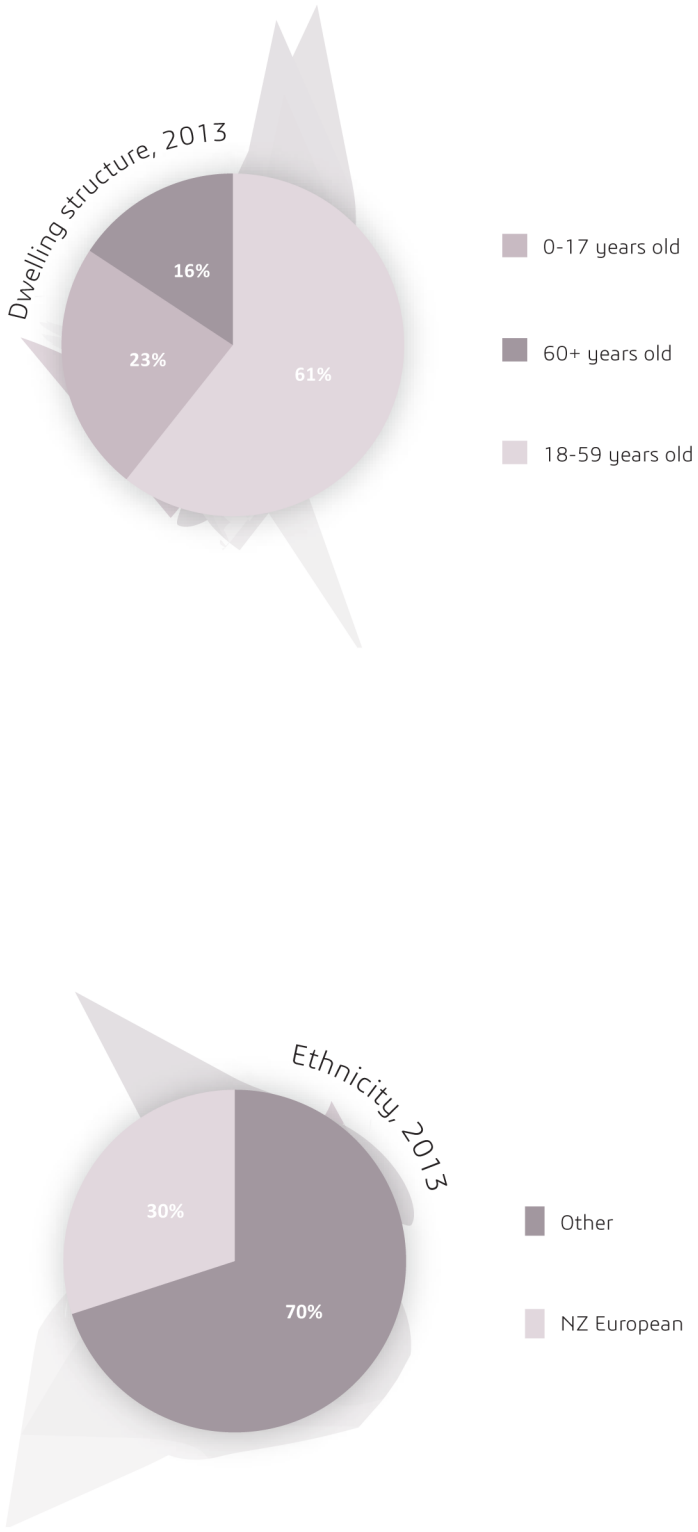


Fig.5.04. Dwelling structure and ethnic group structure of Newtown

Context

The testing grounds for this thesis is the block surrounded by Rhodes, Ferguson and Daniell Streets in Newtown, Wellington. The accessibility of the site to different amenities is significant, allowing its users to still be connected with various different services. It sits between three quiet streets, yet is only a minutes' walk from Newtown's main road, creating a balance between convenience and peacefulness.

Fig.5.05. Site aerial

Site Analysis

-

Amenities are close to the site; from food outlets to retail stores to therapy services. Wellington hospital is also only a few minutes' walk down the main road, allowing healthcare to be accessed easily if needed. As the site sits in the inner fringe of Wellington city, it is the perfect locstion to test the potential of this new housing model, as the aspect of closeness to the city is often a deciding factor for different types of people.

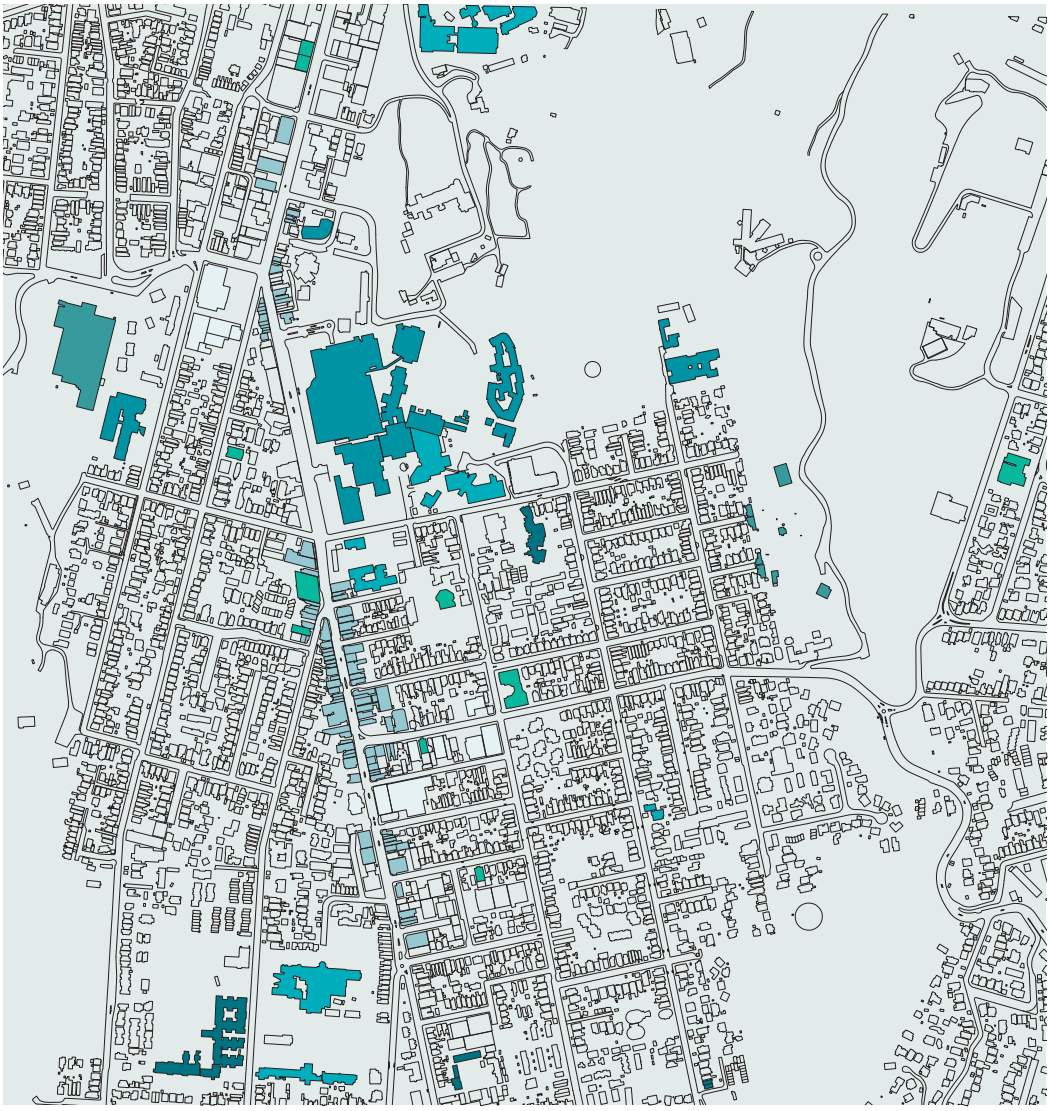


Fig.5.06. Newtown context analysis

Religious institutions

Health facilities

Recreation facilities

Industrial buildings

Food + Retail

Medium density housing

Education facilities

Riddiford Street is considered a main artery for movement through Newtown and acts as a major route for public and private transport to and from the city. Due to the location of the site, residents of this facility will not have to walk all that much to reach services such as taxis and busses, making it highly accessible for both the users and visitors of the site. A benefit of this location also lies in its orientation. It is exposed on three street-fronts, allowing for activation of all these sides to encourage social aspects within the development. It is also sheltered by hills in the south and low-line buildings on the North, diffusing some of the wind that flows through Newtown and allowing for maximum sun. The selection of this site allows architectural elements to be implemented alongside site and program, in an environment that is accepting of change and diversity. This then allows for opportunity to address the research question at hand though an iterative and experimental process that could be implemented in settings with similar issues at hand.

Context Transport Nodes

Fig.5.07. Newtown accessways

Context Greenery

Fig.5.08. Newtown green spaces

Fig.5.09. Current usage

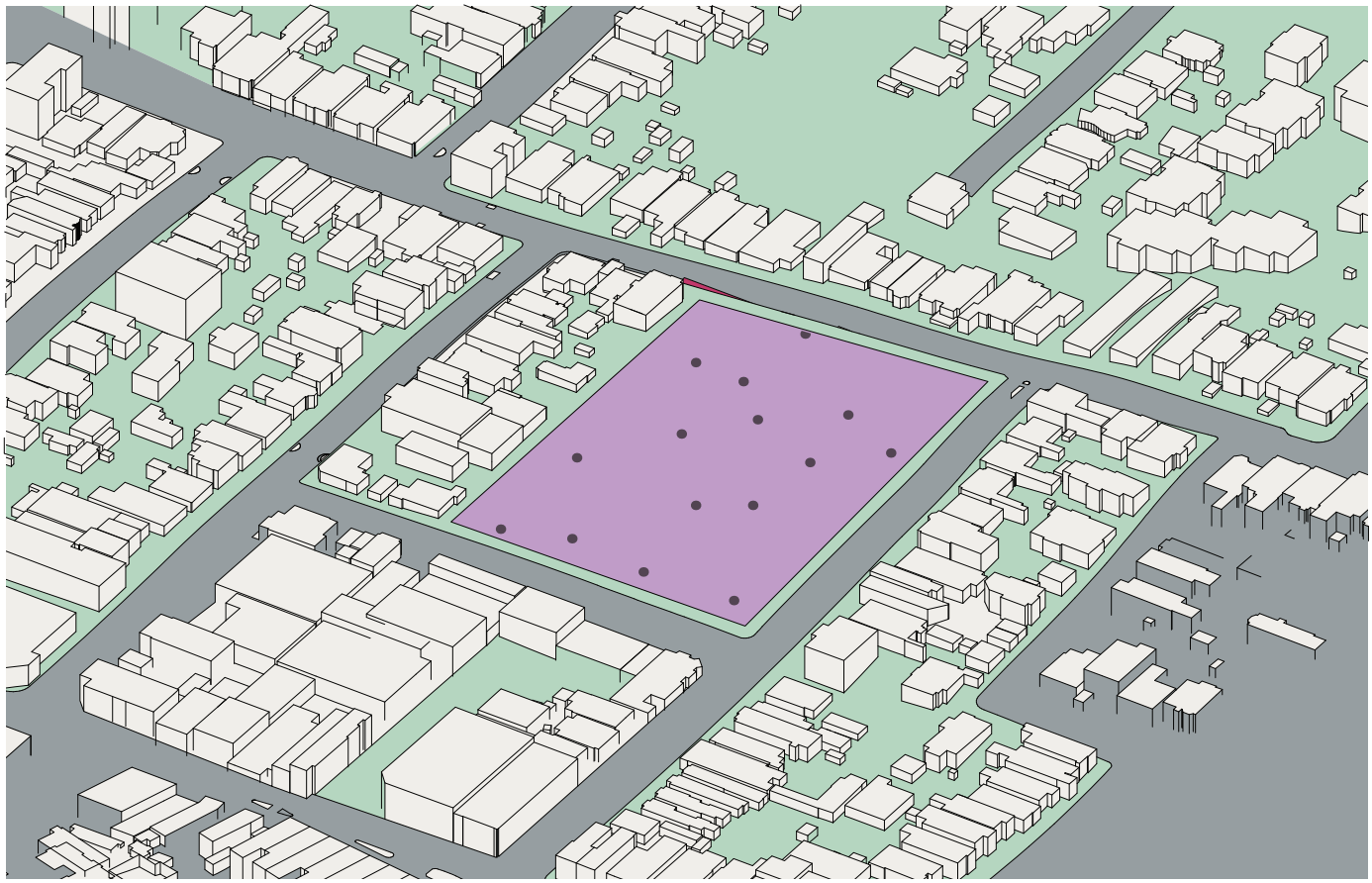


Fig.5.10. Proposed usage

“In most cultures, housing is considered a foundation for well-being. Not only does it provide basic shelter and security, a home’s location also affects access to economic opportunities, quality food, social services, and material goods”

(Smith, 2012)

Site Conditions

-

The site currently consists of a large industrial warehouse that is underutilized and a handful of old houses that could be demolished to leave something like 8000m2 of potential useable land.

The dimensions of the site measure 80m by 100m in length, making the total usable area 8000m2. As per the district plan rules (Wellington City Council, 2009), the maximum height for residential buildings in Newtown is 9m high, making the total useable volume of the site 72,000m3.

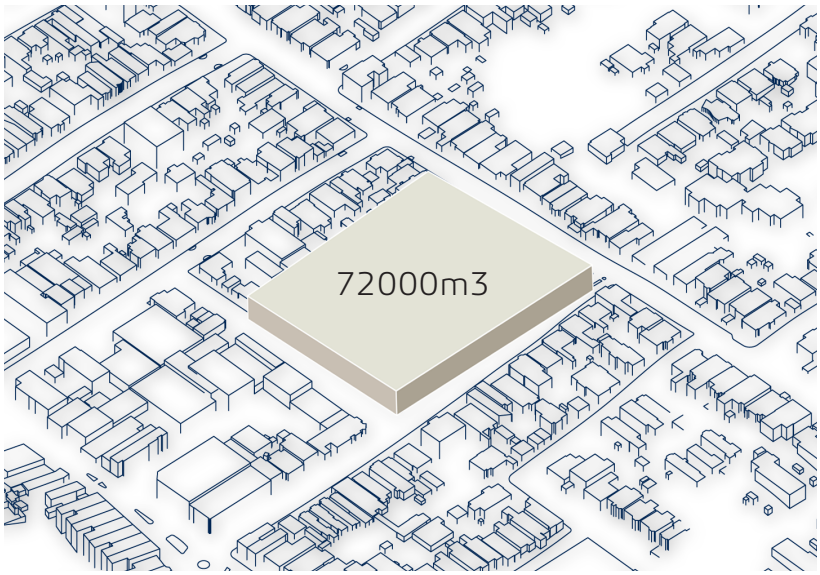


Fig.5.11. Potential site limitation

Fig.5.12. Photos of surrounding accessways

Fig.5.13. Photos of surrounding shapes

Fig.5.14. Photos of surrounding colours

Fig.5.15. Riddiford Street south end

Phase 1
Concept design
Phase 2
Developed researched design
Phase 3
Detailed researched design response

Structure

-

The 3 design exploration phases were used as a testing ground where different ideas were experimented iteratively with reflection on recommendations from local, national and international housing design guides to later propose a final design solution. The first design phase – research 'for' design - begins with proposing an initial concept that has been derived from prior research in the form of related works that fulfils identified research goals (Daniel Edelson). Aspects such as the living typologies that collectivist and individualistic cultures are accustomed to were explored and flexible living arrangements among these cultures had started to also be tested.

The second phase – research 'through' design - included a much more in-depth study of these typologies and site conditions to help generate a massing form that was then further iterated. These forms were split into concepts that were rotated, shifted pushed and pulled to propose a final layout that complimented the site conditions, density requirements and wider urban fabric. The internal layouts of the houses were regenerated where different living options were explored that related to the needs of the different groups that could inhabit it.

The third and final phase of the design process included further development of all aspects previously explored, along with sections such as the in-between spaces and landscapes that aimed to bring people together. The internal spaces and thresholds were refined and three scales of design were explored, where the large focused on form, context, connections and distances, the middle scale focused on density, block layout and division of public and private spaces and the small scale focused on the characteristics of the apartments and spatial arrangements of the rooms in different possible scenarios. The interaction spaces along with the green spaces and vegetation in the landscape were fully developed to compliment the needs of the different cultures, and placement and accessibility of these were carefully considered to move both the dwellers and the public through the space. The community centre, the retail and the office spaces were then developed around the housing to provide occupants for a place to come together as well as to bring external contact into the site to build a strong connection with the wider community.

The conclusion of each of these phases included a self-evaluated reflection of the work completed and future steps to be taken. A final design proposal was then compiled and ready for submission at the end of design phase 3, that displays all work produced and encapsulates all knowledge and skills gained during this thesis.

06. DESIGN PHASE ONE

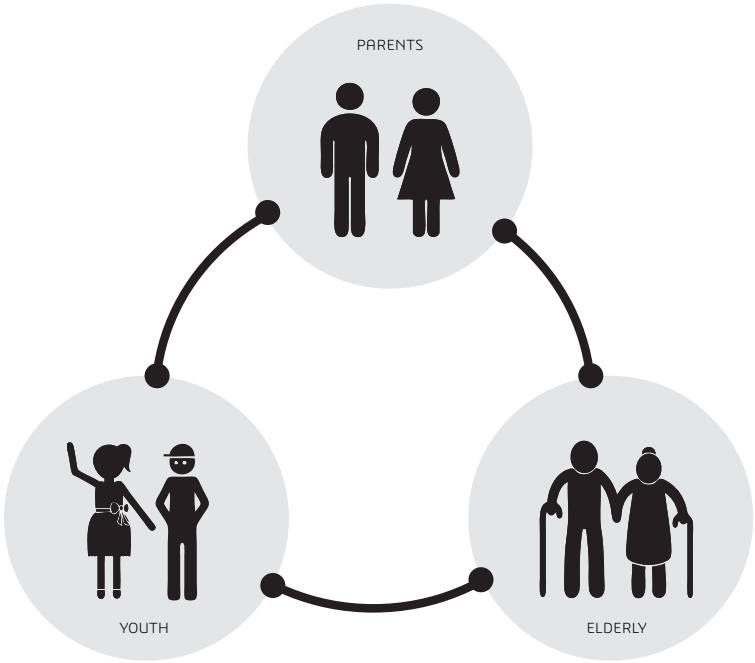


Fig.6.01. Demographics to design for

Design Phase One - Concept Design

-

The concept design of phase one followed four main steps. These are as follows:

- Site massing
- Form massing
- Internal layout that is flexible and suits both cultural orientations

It then:

- Develops a conceptual design
- Analyses performance criteria
- Provides critique and reflection

Site Massing

-

The initial concept design phase started off with sketches of potential forms that could be designed on the site. This then was accompanied by quick 3D modelling iterations that generated spatial and sun/shade qualities. These iterations were informed by typologies commonly found in NZ. These were a mix of both housing (blue) and community facility block (red).

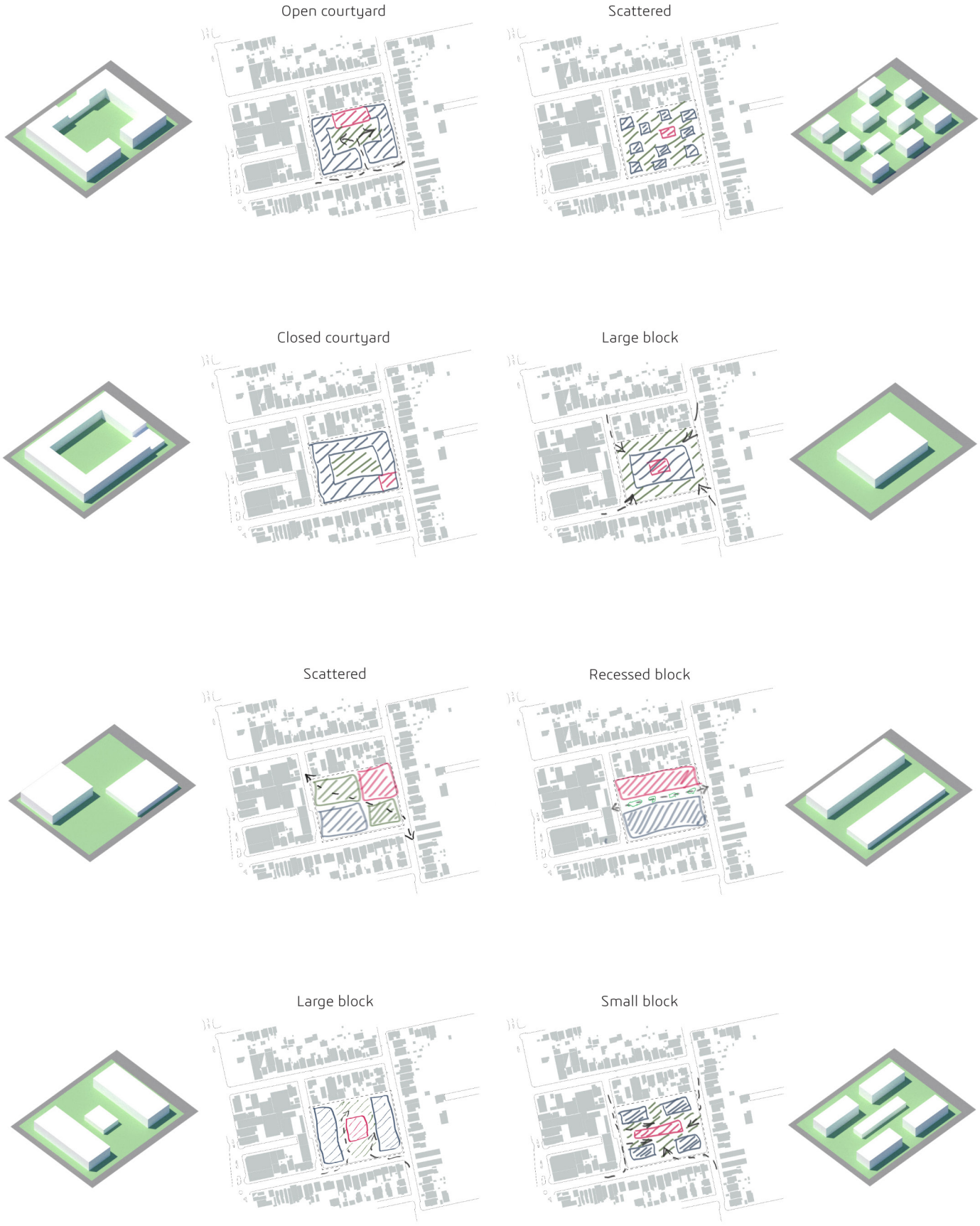
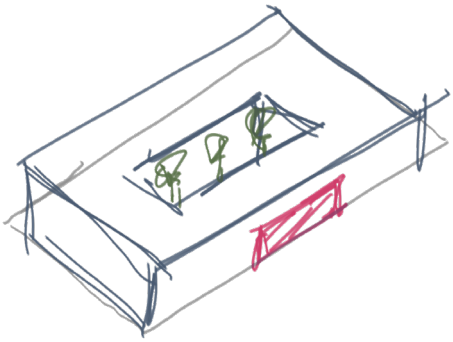
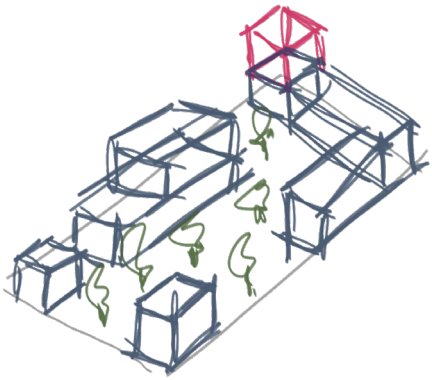


Fig.6.02. Early model and sketch massing

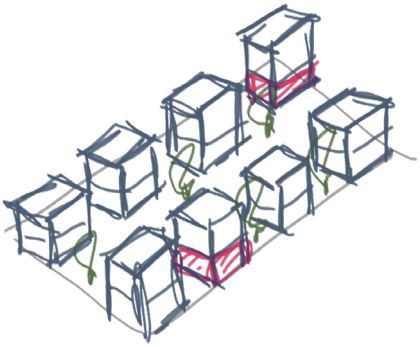


Courtyard

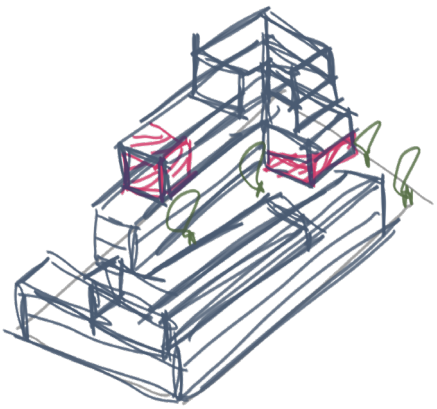


Split blocks

A combination of these masses were merged together to give four concepts of potential forms for the new housing scheme.



Individual houses



Densified blocks

Fig.6.03. Sketched concept types

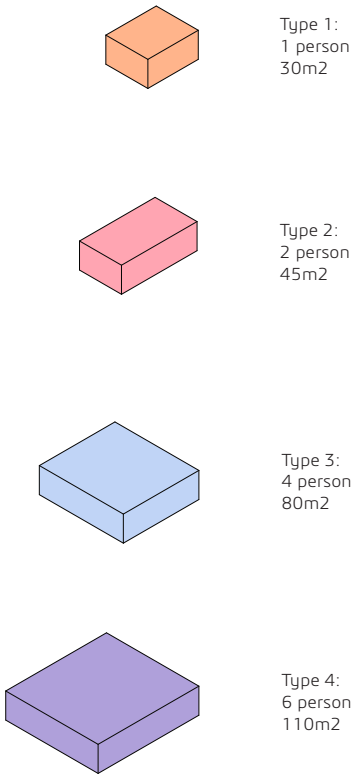


Fig.6.04. Targeted minimum floor area

Form Massing

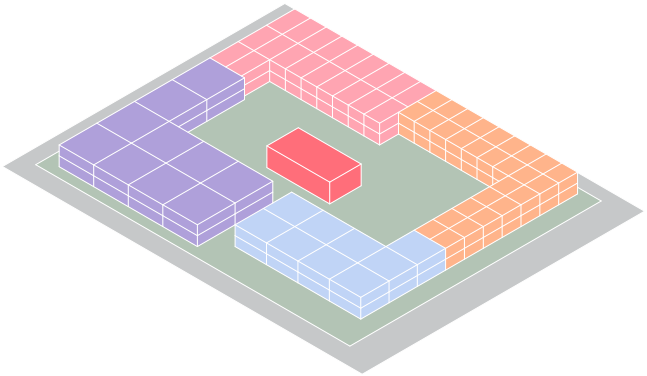
-

From the initial sketches two typologies were chosen; the courtyard typology and the individual block typology.

Four housing sizes were then generated with reference from the Metric Handbook and combined with the two massing types to produce the designs seen below.

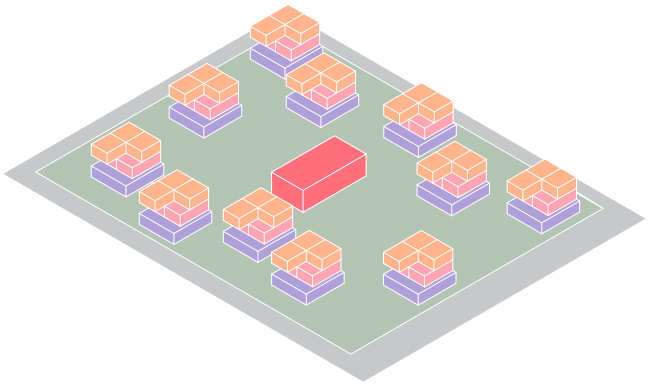
The two concepts follow the case studies of Drommehagen and Mieres Social Housing in terms of composition, with advantages and disadvantages coming from both.

Courtyard type



+ Centralized green space
+ More privatized
+ View of activity
+ Typologies better connected
- Less public interaction
- Could create ghetto

Block type



+ Different areas for green space
+ People can live with different groups
+ Public allowed to walk through
- No interaction between external residents
- Creates indidivual rights to areas
- Inefficient use of space

Fig.6.05. Two conceptual types of living

Flexible Internal Layout

-

From the external massing, attention turned to the inside of the mass, with potential layouts being examined.

These layout were developed with flexibility in mind, so that this internal layout could then be adapted to wither of the two typologies explored previously.

The outcome of this process delivered a design that looks the same from the outside but would be configured differently internally. This block could be placed individually or collectively to form different masses on site, catering to various different people.

Here, the internal layout can be divided into three different entities, being occupied by a family at the top, youth or young professionals in the middle and the elderly at the bottom.
Similarly, the three levels can be combined to form one large house that caters for various ages within the house itself, allowing larger families to inhabit this space. This makes for an inclusive design were different people and therefore different cultures can live side by side.

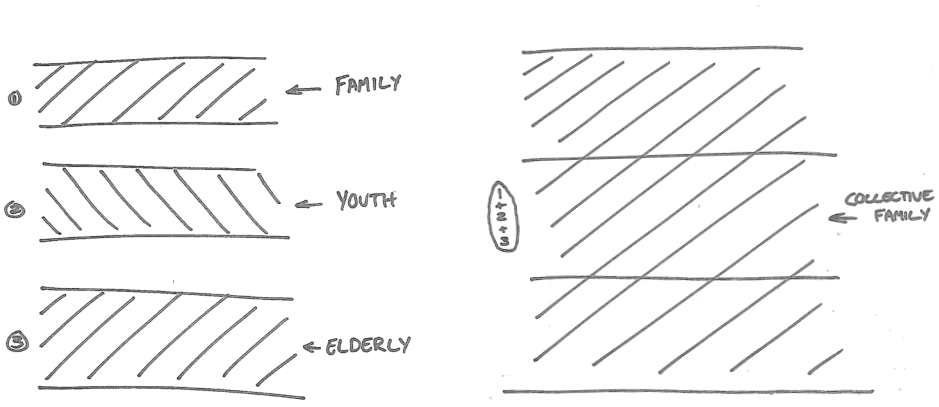


Fig.6.06. Sketch of desired options through same model

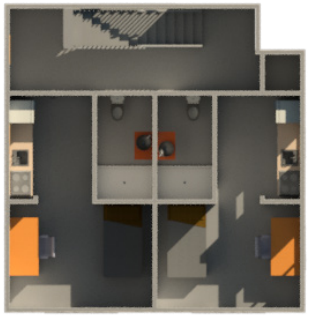
Separated 3 level dwelling

Merged 3 level dwelling

1

1

2



2

3

3

Fig.6.07. Two different living outcomes through same external model

Concept One

-

Concept one follows an individual-type style of living. Here these three level blocks are scattered around the site but form their own titles.
This design is a response to the fact that New Zealanders prefer the detached style of living.

Additionally however, there will be space for a common block where these people can come together when desired.

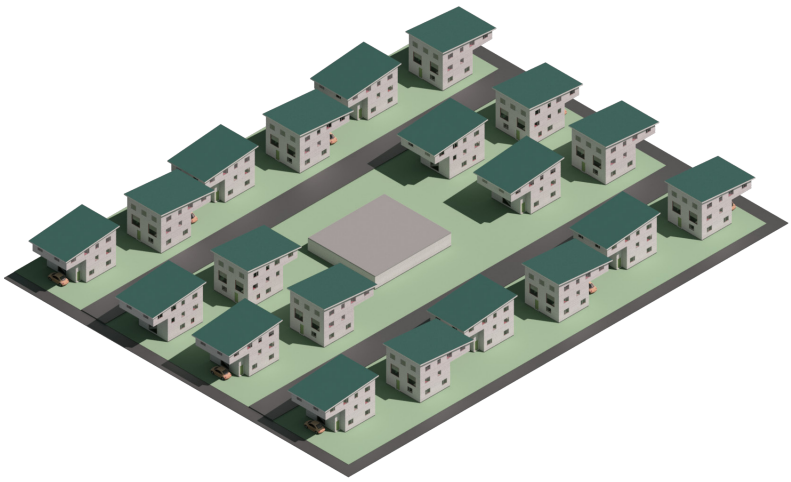


Fig.6.08. Concept one aerial

Fig.6.09. Parking spaces

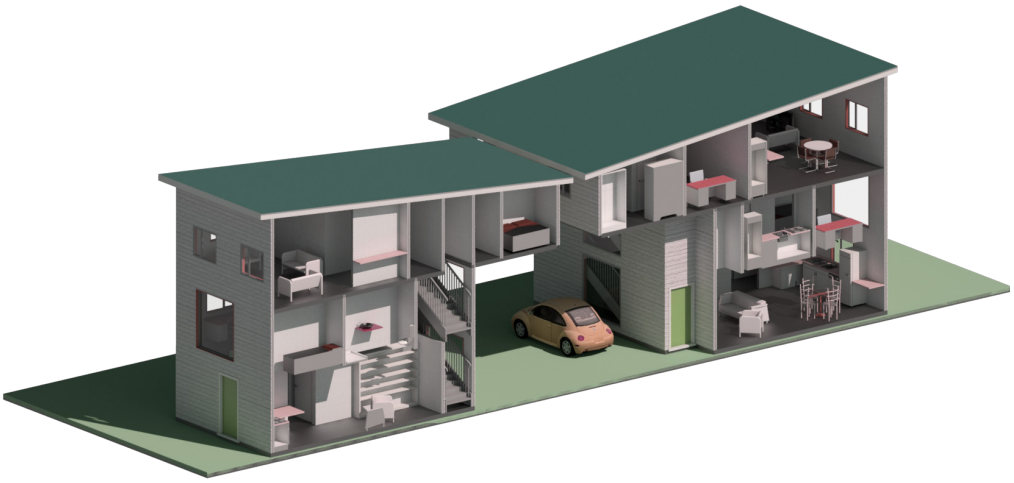


Fig.6.10. 3D Section

Fig.6.11. Lounge layout

Fig.6.12. External render

Concept Two

-

Concept two follows a more collectivist-type style of living. Here these three level blocks are merged into a courtyard-style block that is connected all around, meaning more opportunity to walk past someone's house or see activity in the middle

This design is a response to the fact that in New Zealander, there is very little contact with neighbours and the surrounding context. Additional to the grouped design, there will also be space for a common block where these people can come together when desired.

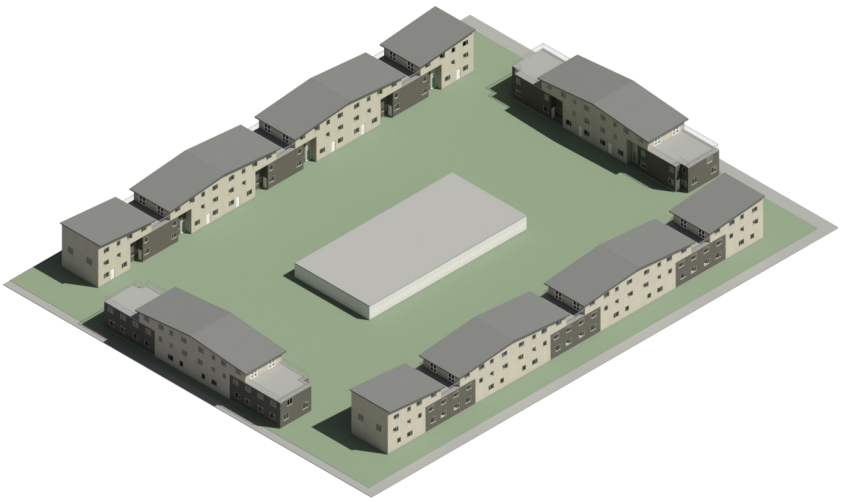


Fig.6.13. Concept two aerial

Fig.6.14. Large block render

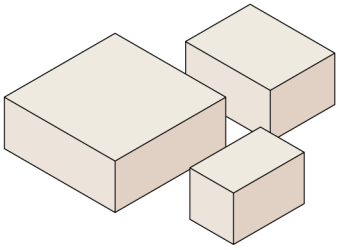
Fig.6.15. 3D section

Fig.6.16. Lounge layout

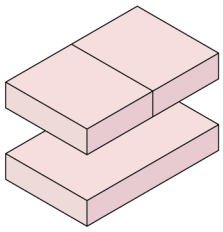
Fig.6.17. Shared terrace space

Analysis of Performance Criteria

-



Living options
that cater for groups of different size and requirements



Flexibility
of living and recreation spaces for different activities to occur at the same time

Internal and external accessibility
that makes movement of residents and public easy

Density
through more dwellings and people in a space

Mixed use
that introduces different levels of interaction and engagement on site

Green spaces
that allow people to come together when desired

Design Review One Critique

-

On the 18th of May, a design review on the first phase of work was conducted. Feedback was received from internal and external academics and also architectural professionals. This feedback is as follows:

Strengths:

- Good topic that is dealing with a real New Zealand problem.

- They found that I had completed a good body of work and that my process was clear

- Good space was given to the outside areas but not enough focus on what it might look like

- Good detail in the interior spaces and exploration of these for different people

- The terrace between the top houses are very interesting and create spaces for interaction

Future considerations:

- The design didn't respond to the site in terms of sun, and I was advised to focus on sustainability of the housing as well.

- Needs to focus more on the transitional spaces so that people feel more comfortable.

- Focus on how this can grow vertically – maybe give potential for this to happen.

- Consider adding a store to the complex too – for a lot of collectivist cultures a store is the core business for the family (create potential for economic growth).

- Create more moments that facilitate social interaction through different generations (playground, study rooms, laundry, rubbish)

- Explore the housing as a horizontal layout compared to a vertical one – what is needed for different people, old and young?

- Provide flexible options within that can adapt to each family and what they might need.

Design Review One Reflection

-

The method that was used was good as a starting point, but needed to be more refined in order to really create and plan for how to move forward. Some of the case studies were good in that it indicated ways of addressing scale and options. The performance criteria that set were decent, but the design did not fully address them well in terms of making the most of each one.

The selection of site was chosen well due to the need for housing in the area but also in terms of the diversity that it includes – it made for a good testing ground but greater attention to context and linking to the surroundings as required. Massing models were carried out both by sketches and digitally which was good for quick explorations. From this, two schemes that could work were chosen – one that reflects individuals and one that reflects collectivists. This was a good study as provided ideas of how to divide these spaces up, either separately or as blocks.

From here the internal qualities were explored. Four different housing scenarios were generated which could cater for the different people it hoped to attract. Within this, options were explored and therefore created a successful amount of outputs for different families and cultures. Although this was successful, there were still a couple of aspects missing such as orientation, entrances, access and privacy.

The middle 'courtyard' and transition spaces were not sufficiently developed. In the future, elements will need to be added here where people are encouraged to stop and meet, integrate and live. The whole idea of this thesis is about how these different societies can live together despite of their differences, so there needs to be ways providing them with spaces to do so.

Overall, this process has been good, although it could be much better moving forward. Addressing the thesis question at hand needs to be more of a focus and working to the performance criteria should be the main goal. This can be done by addressing more of the practical issues such as site conditions and narrowing down the two societies and designing for their specific needs.

This phase ended in interesting schemes but ones that encouraged the 'hybridization' of the cultures, which is not what is desired. Additionally, it lead to only one of the 6 criteria being met, meaning future work had to look back and give reference to the research a bit more. The next phase would benefit from breaking the tasks up addressing them individually before bringing them together.

Fig.6.18. Chosen successful concept two render

07. DESIGN PHASE TWO

Phase 1

Concept design

Phase 2

Developed researched design

Phase 3

Detailed researched design response

Design Phase Two - Developed Design

-

Phase two looks at the developed design of the scheme; focusing mainly on how the design needs to reflect on what both these individualistic and collectivist societies need. In order to do this, research has been undertaken on existing design guides of different cultures to extract both common and different needs of these groups so that these can start to be implemented into the scheme where need be.

The starting point of this phase will revisit the criteria that is yet to be met, while also reanalysing site conditions and boundaries in order to respond to what is needed for both the users as well as the wider community.

This design phase will be sectioned into the following focus areas:

- Identifying the two societies in more detail

- Analysis of existing

- Exploring external massing with reference to sun and site conditions

- Individualistic block

- Collectivist block

- Community block

- Landscape

- Working drawings

- Developed design proposal

- Second design review critique and reflection

Identifying The Two Societies

In order to fully understand the cultures that are being design for, phase two looked into digging deeper into Hofstede's Cultural dimensions of Individualism and Collectivism.

This step included deeper research into who these cultures are and what they might require from their housing.

The information gathered was then used to design for both of these societies individually so that their needs are met when it comes to living requirements.

individual and collective cutures

designing for different cultures using individualism and collectivisim

INDIVIDUALISTIC CULTURES

- New Zealand
- Australia
- England
- South Africa
- Ireland
- Germany
- Spain

COLLECTIVIST CULTURES

- India
- China
- Philippines
- Sri Lanka
- Samoan
- Japan
- Denmark
- Ghana

individual and collective cutures

and their differences, smililarities and common needs in housing

INDIVIDUALISTIC CULTURES

Differences

- balcony
- outdoors
- less noise
- separate entrances
- living separate to bedrooms
- views of surroundings
- open plan living
- views of surroundings
- study space
- no formal living
- parking

- privacy
- amenities
- lots of natural light
- easy access
- safety

Similarities

- storage
- more noise
- Flexibility
- Multipurpose spaces
- flow between indoor and outdoor spaces
- spaces for relaxing and recreating
- Separation spaces, terraces
- views of active people
- transitional space
- community growth
- large outdoors

COLLECTIVIST CULTURES

Analysing The Existing

-

Before starting to design the various different components of phase two, another round of case studies was performed.

Local Wellington developments were analysed in terms of strengths and weaknesses to help inform what the new design in both phase two and three should and should not include.

comparing similar projects in Wellington

Owen St, Newtown

Strengths:

- Modern design
- 36 one bedroom units
- Terraced for views
- East-West facing
- Carparking

Weaknesses:

- Dull colours
- No housing options
- No communal spaces
- Little landscaping
- Little interaction potential
- Low density for site

Arlington St, Te Aro

Strengths:

- Good location
- Community room
- Good density
- Small central green area

Weaknesses:

- Monotone
- Basic materials
- Copy-Paste design
- No exterior greenery
- No compliment to surroundings

Fig.7.01. Analysed local developments

comparing similar projects in Wellington

Owen St, Newtown

Strengths:

- Modern design
- 34 one bedroom units
- Good vegetation
- Good sun exposure
- Warm materials

Weaknesses:

- Dark colour
- No housing options
- No communal spaces
- Little communal landscaping
- Low density for site

Hanson St, Mt Cook

Strengths:

- Good location
- New materials
- Good density
- Designed for people with disabilities

Weaknesses:

- Monotone
- No communal sprit
- No space for interaction
- No exterior greenery
- Little compliment to surroundings

Fig.7.02. Analysed local developments

comparing similar projects in Wellington

McClean Flats, Te Aro

Strengths:

- Modern design
- 34 one bedroom units
- Different design styles
- Good sun exposure
- Compliments surroundings

Weaknesses:

- Dark colour
- No housing options
- No communal spaces
- No landscaping
- No interation points

Phillip St, Johnsonville

Strengths:

- Good location
- 21 one bedroom units
- Designed for mature people
- Good location

Weaknesses:

- Low density
- No communal design
- No space for interaction
- No internal greenery
- No housing options

Fig.7.03. Analysed local developments

Exploring External Massing

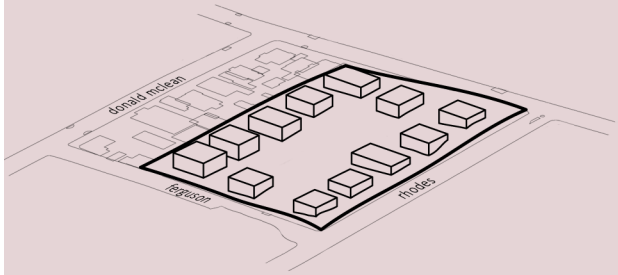
-

The external massing of the project was re-done, but this time had looked at the living typologies that are present in both individualistic and collectivist cultures.

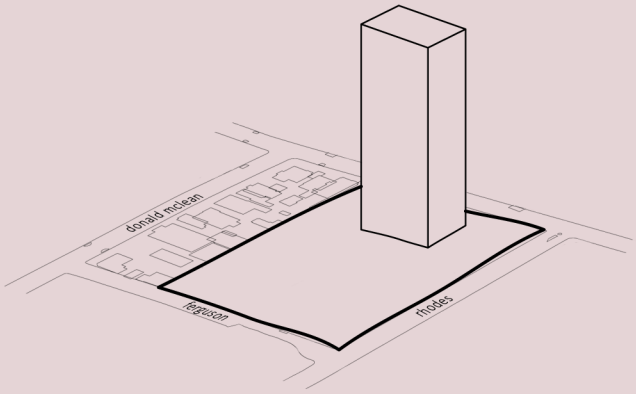
From this general research, different types were able to be merged together to see what outcomes it provided. This stage was important as it ensured that both these living types would be included into the overall design, meaning that there would effectively be a place for everyone to live.

typical individualistic society typologies

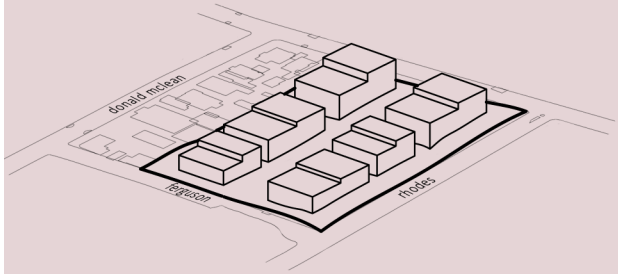
and where they are usually found



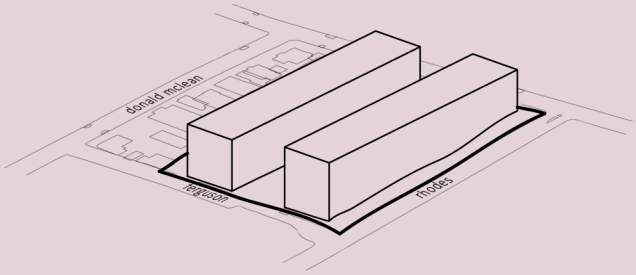
detatched dwellings
(most on NZ suburbs)



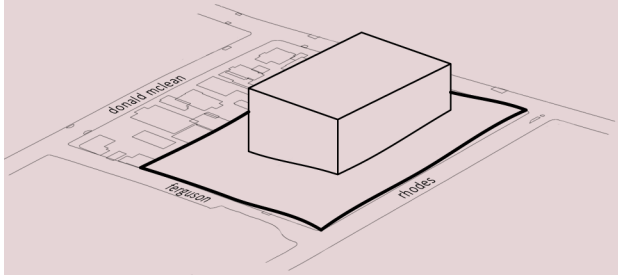
apartment tower
(only urban centers)



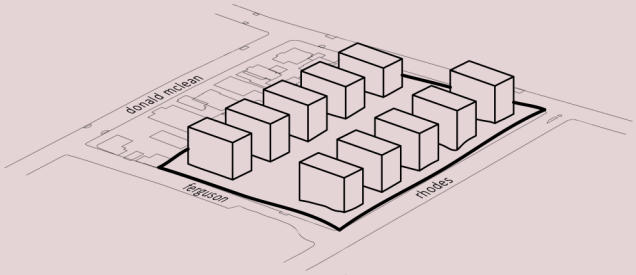
terraced houses
(newer denser suburbs)



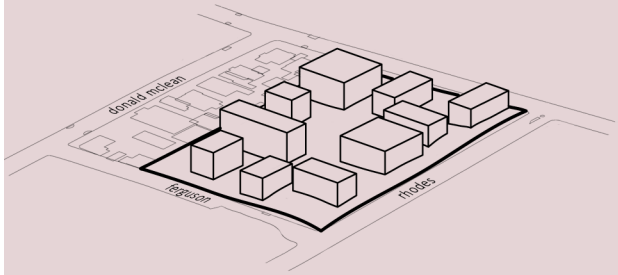
row houses
(old suburban centers)



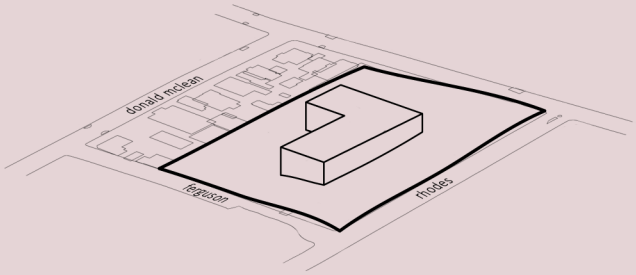
low rise apartments
(some suburbs with economy nearby)



town houses
(newer denser suburbs)



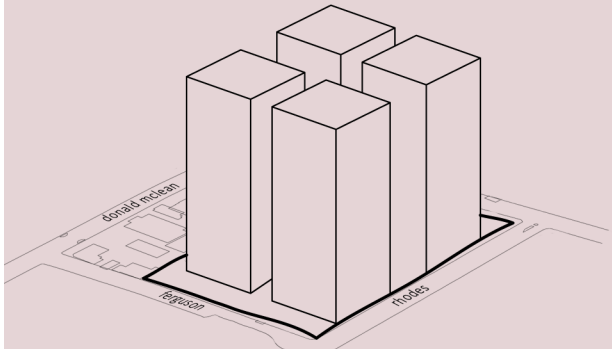
infill housing
(most already sense suburbs)



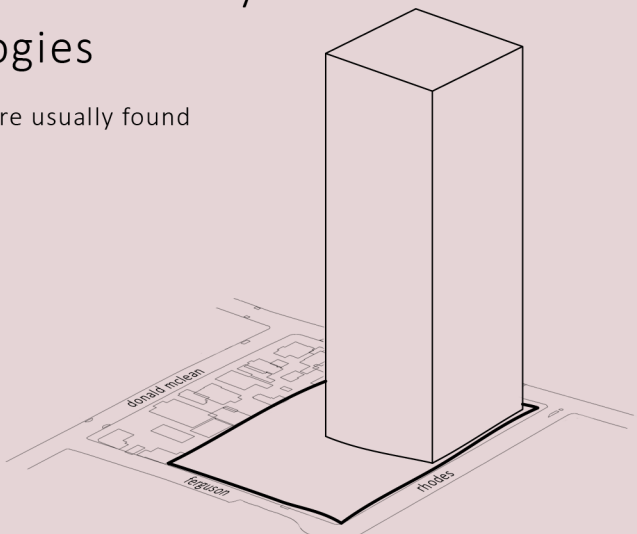
acre houses
(countyside/lifestyle plots)

typical collectivist society typologies

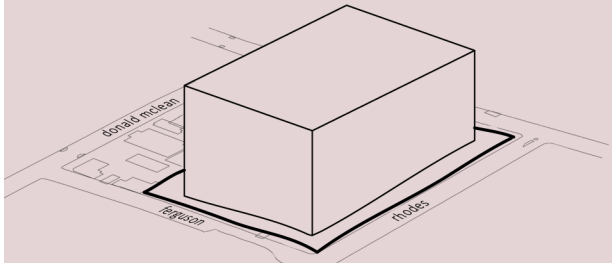
and where these are usually found



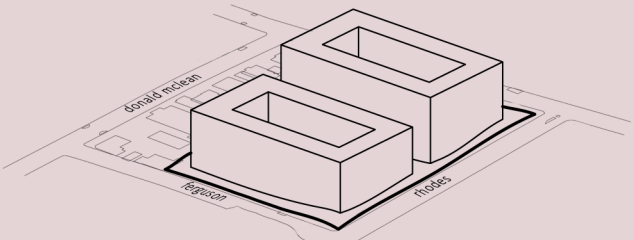
dense mid-rises
(fringe of cities, colonies)



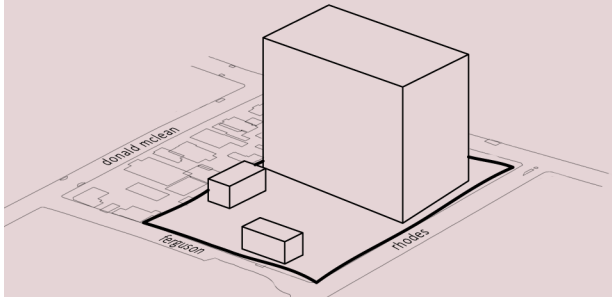
single large apartments
(mostly urban centers only)



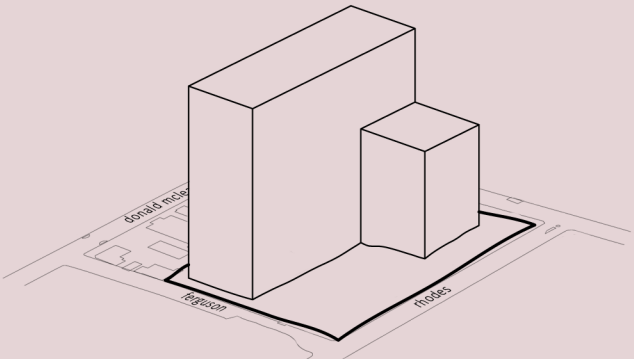
Large block apartments
(dense, old suburbs)



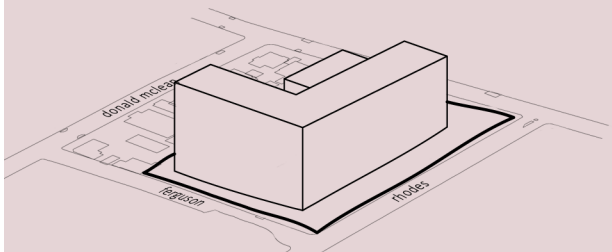
small courtyard blocks
(low-mid dense suburbs)



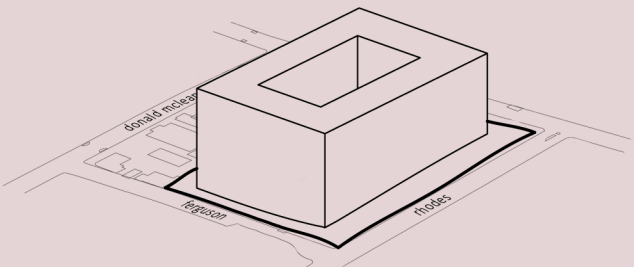
block with amenities
(fringe of cities, colonies)



apartments + offices
(economic suburbs)

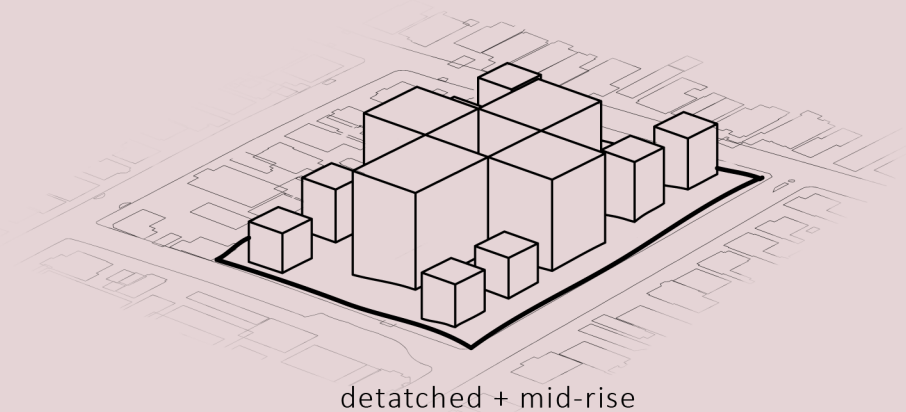


apartments + retail
(mid-high dense suburbs)

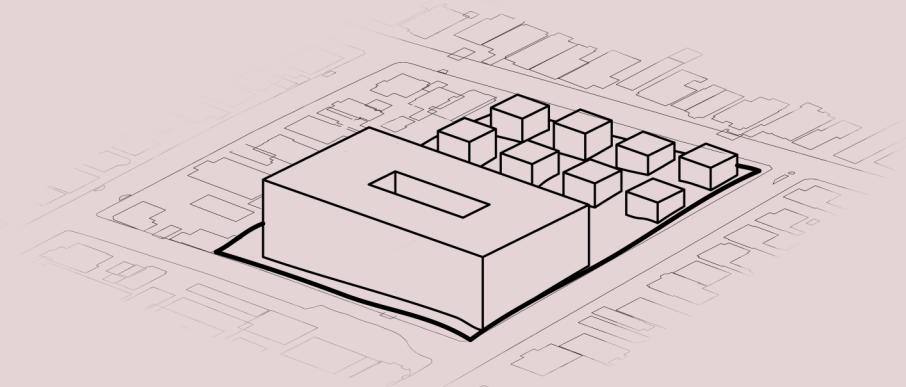


large courtyard blocks
(dense suburbs)

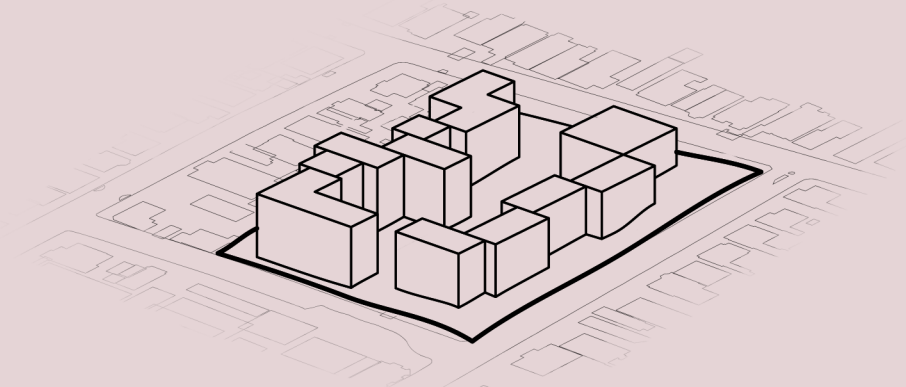
concepts of merged dual society typologies



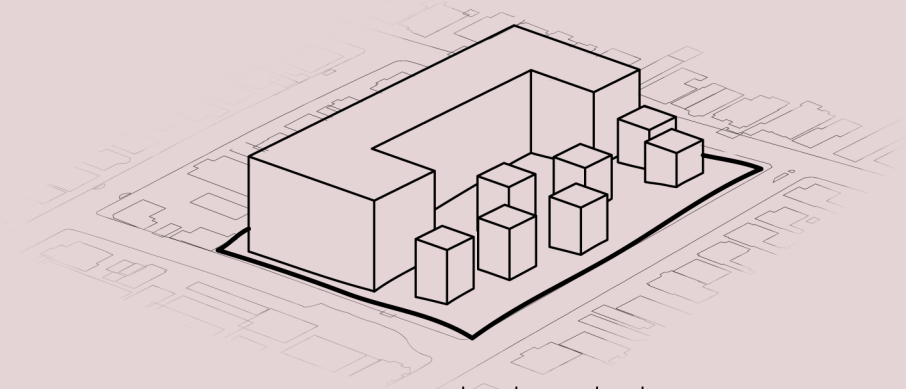
detatched + mid-rise



courtyard + townhouses



infill + dense blocks



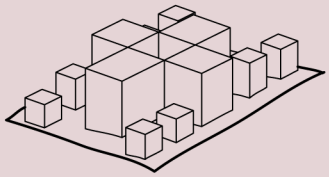
courtyard + detatched

concepts of merged dual society typologies

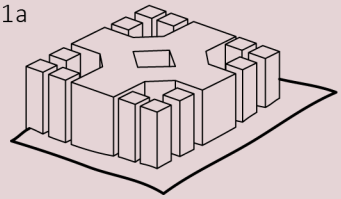
concepts

development

1

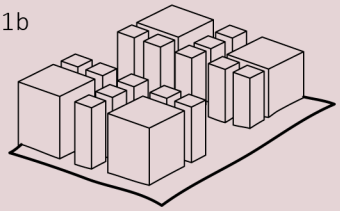


1a



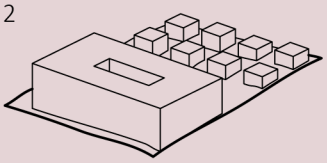
raise all levels to create density

1b

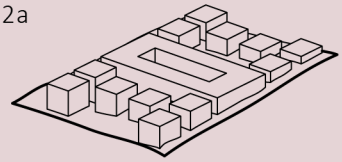


move ‘individual’ groups to inside to force interaction

2

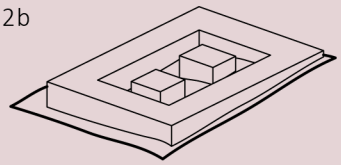


2a



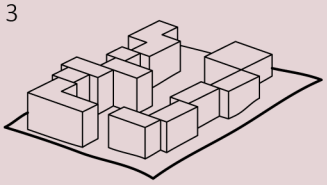
collectivist moved to the center to give individualis the views

2b

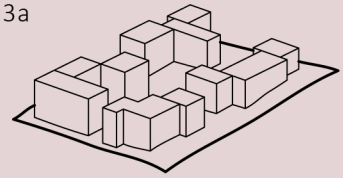


individualist blocks merged into two and moved into center to force interaction

3

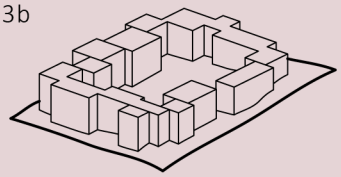


3a



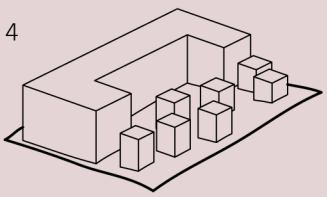
buildings grouped and staggered to replicate surrounding footprints of buildings

3b

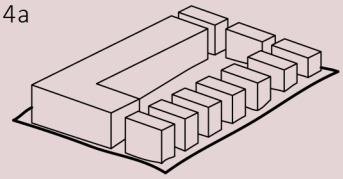


densified further and closed off to make only one point of entry and exit

4

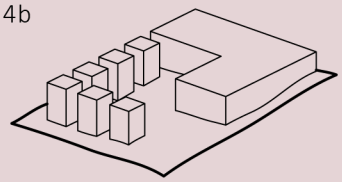


4a



two types separated, individualists given preference of views and easier access

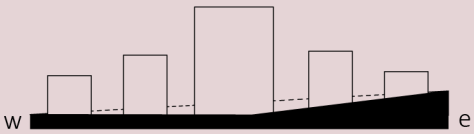
4b

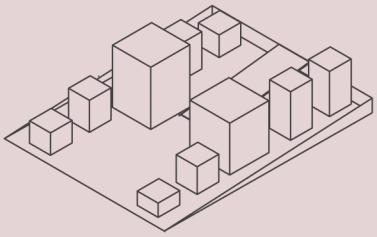


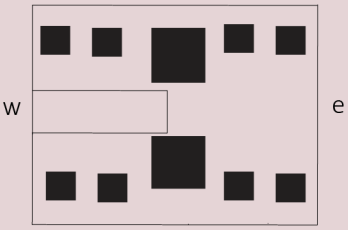
collectivist moved to the ‘outside’ as they typically are louder than individualists

final concepts of early massing typologies

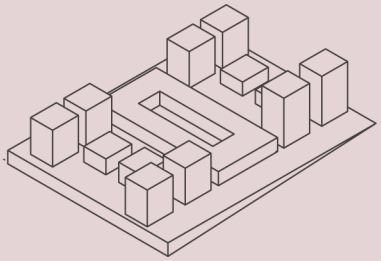
concept one: central attraction



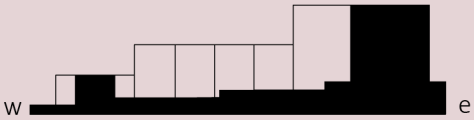


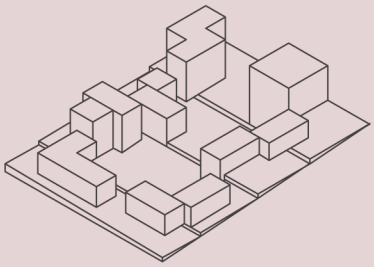


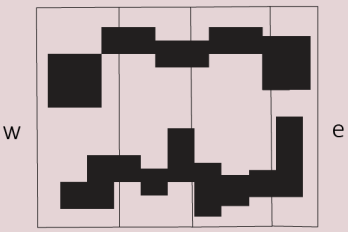
concept two: sandwich



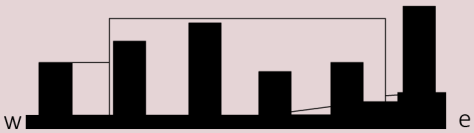
concept three: mixed, east-west blocks

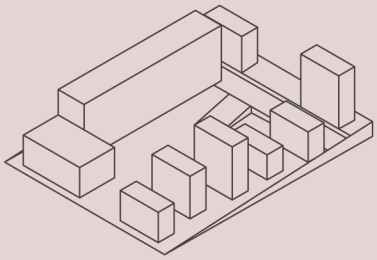


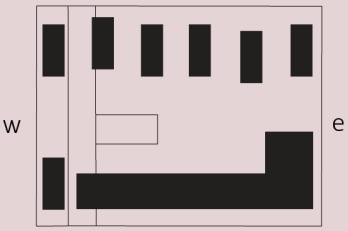




concept four: yin-yang







Forming Zonal Layout

-

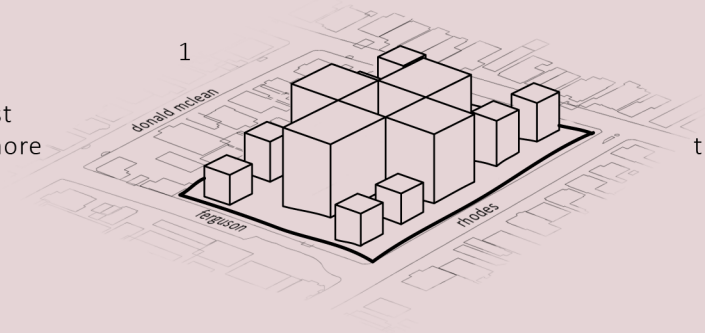
The zonal layout stage saw the four concepts being developed further in regards to aspects such as sun, wind and typography.

Each concept was iterated to find the best solution for the design and finally one was chosen to be developed further.

The final working concept was conceived after different considerations as seen on the following pages. The end product consisted of four zones that would then be addressed in an iterative and integrated manner to form the final design concept.

selected concepts for further development

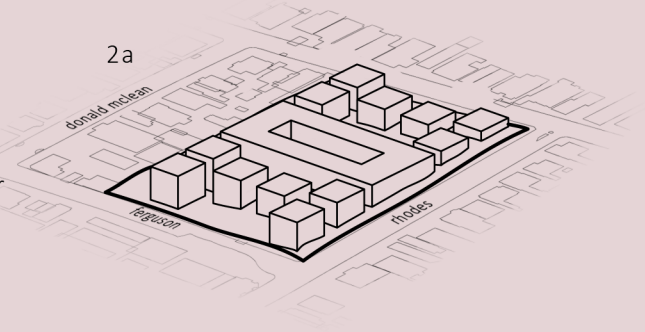
1



weaknesses:
High buildings can cast heavy shadows on the more smaller buildings

strengths:
the density and the situation of the collectivist block

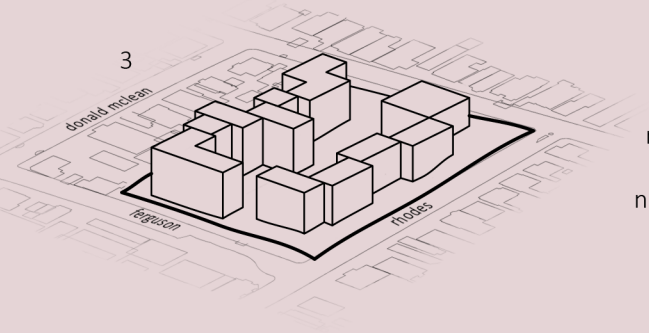
2a



weaknesses:
lack of views in some of the areas and buildings can be too close to eachother

strengths:
low-line nature of all buildings and equal heirarchy of the two 'cultures'

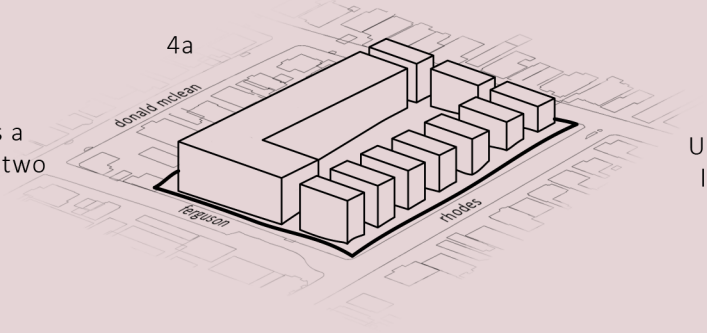
3



weaknesses:
Orientation around the site can be difficult, no difference between the two 'cultures'

strengths:
randomness of heights and orientation that replicates neighbouring figure grounds

4a

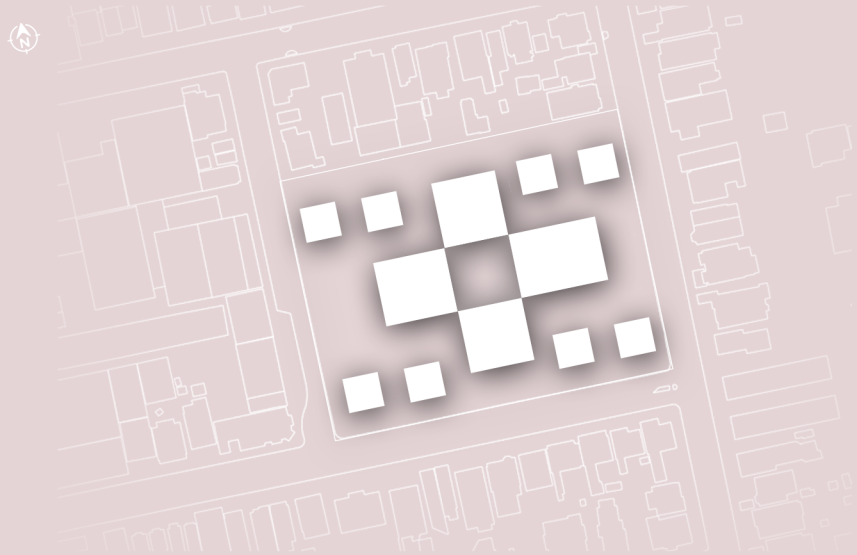


weaknesses:
division can be seen as a 'barricade' between the two 'cultures'

strengths:
Uniformity and structured layout of both 'cultures'

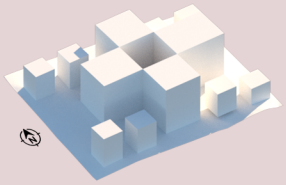
concept one: central attraction

initial concept



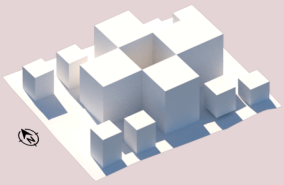
sun study (W)

8am



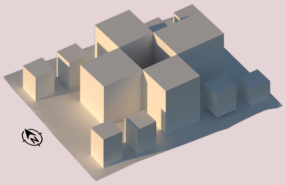
half of buildings
miss out on morning sun

12pm



courtyard space lacks
important afternoon sun

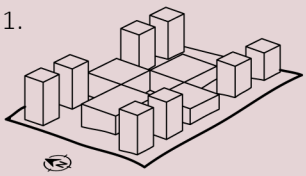
5pm



half of buildings
miss out on evening sun

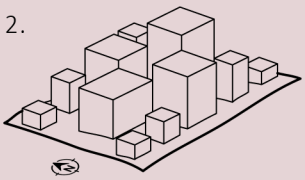
height dev.

1.



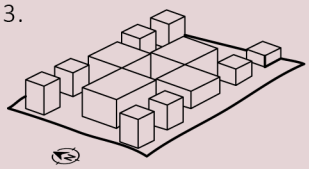
'towers' look into
collectivist and
courtyard space

2.



all blocks are staggered
to create rooftops for
social spaces

3.

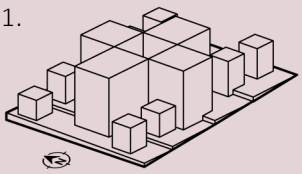


all blocks are kept in line,
max 2 floors to match
surrounding heights

topography dev.

terraced

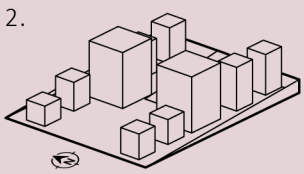
1.



no horizontal flow
around buildings

excavated + flat

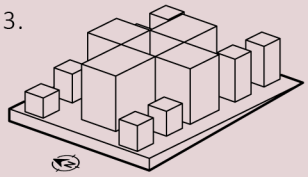
2.



open central space
brings people through

elevated + flat

3.



flat but no land to
recreate in

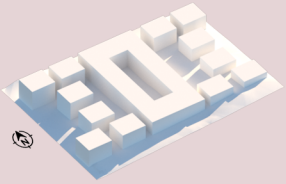
concept two: sandwich

selected concept

initial concept

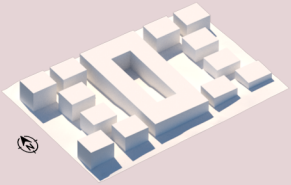
sun study (W)

8am



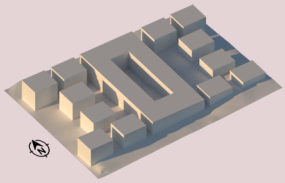
most buildings get decent sun due to low-line

12pm



some pockets between buildings are too dark

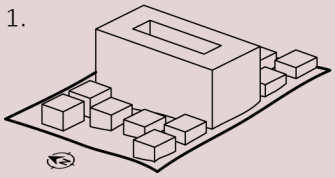
5pm



east side misses out on evening sun due to low-line

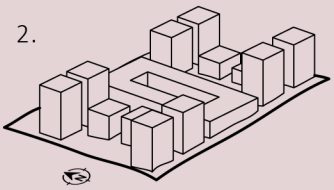
height dev.

1.



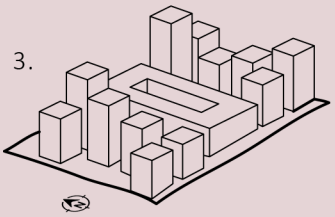
collectivist block high, surrounded by low individualist detatched housing

2.



individualist blocks rise to look into courtyard and more social space

3.

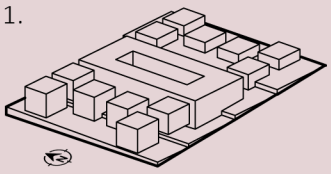


various individualist heights to copy randomness of surrounding houses

topography dev.

terraced

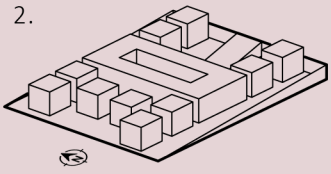
1.



no horizontal flow around buildings

excavated + flat

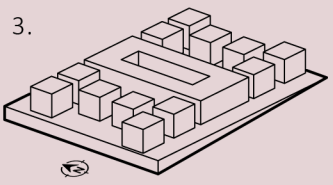
2.



no herarchy and too low into context

elevated + flat

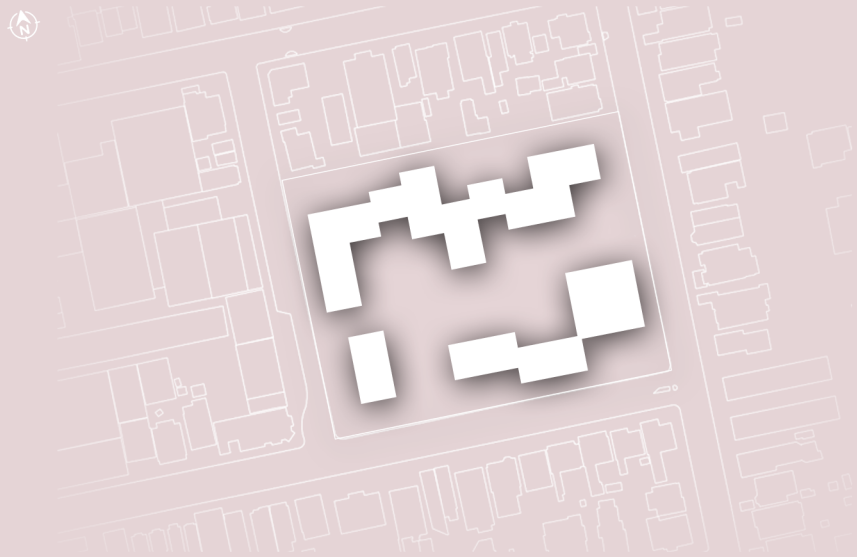
3.



flat but no heirarchy or additional space

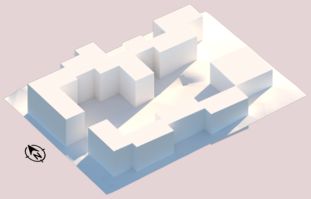
concept three: mixed, east-west blocks

initial concept



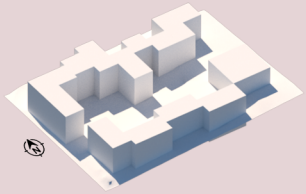
sun study (W)

8am



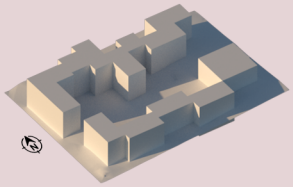
some patches get less sun due to design extrusions

12pm



decent amount of sun let into center of plot

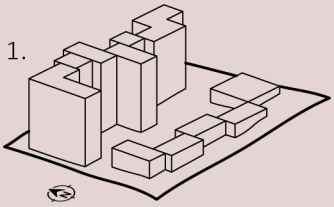
5pm



some patches get less sun due to design extrusions

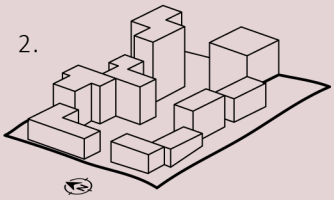
height dev.

1.



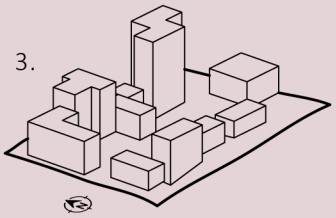
north block 4 stories with housing, south block with amenities

2.



housing staggered to make most of the morning and evening sun

3.

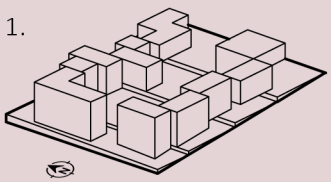


housing staggered to make most of the morning and evening sun (2)

topography dev.

terraced

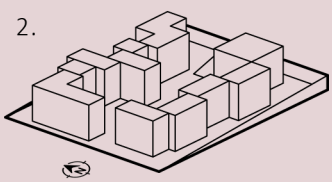
1.



terrace creates nice central seating area

excavated + flat

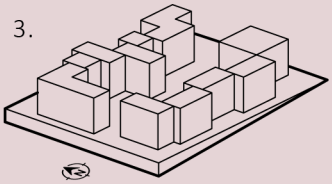
2.



flow between internal and external of site

elevated + flat

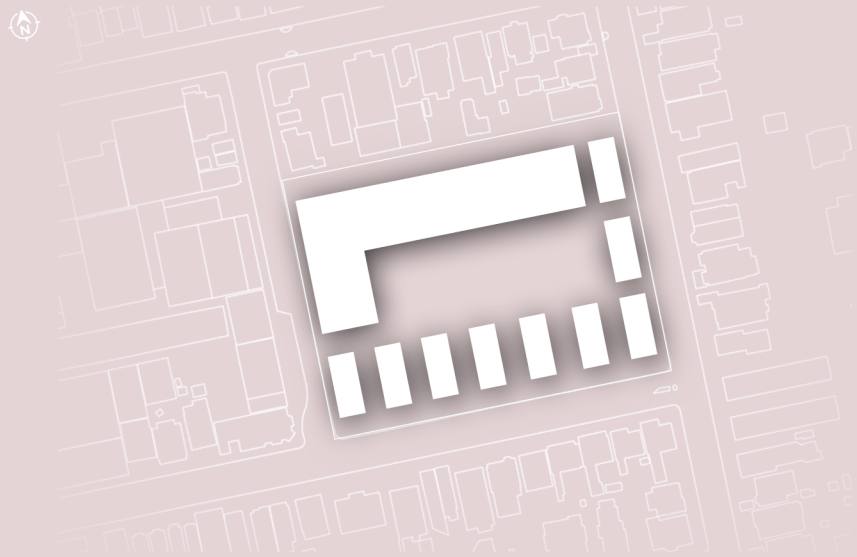
3.



height props development up and allows for good flow

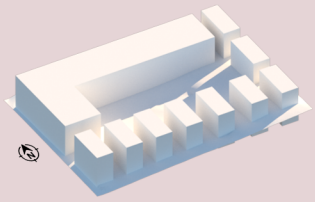
concept four: yin-yang

initial concept



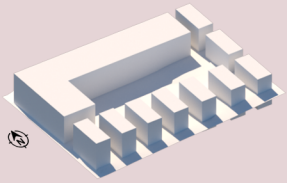
sun study (W)

8am



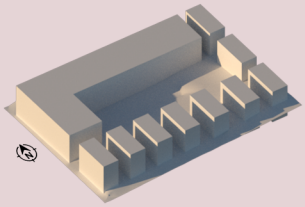
buildings close together miss out on vital sun

12pm



majority afternoon sun reaches all blocks

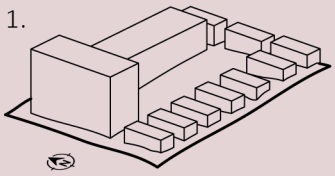
5pm



buildings close together miss out on vital sun

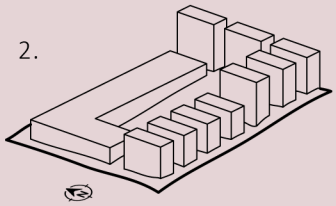
height dev.

1.



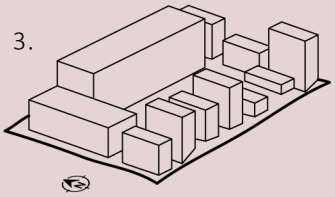
collectivist block high and dense, individualist blocks low + gets street view and access

2.



individualistic blocks high to block southerlies and get views of couryard

3.

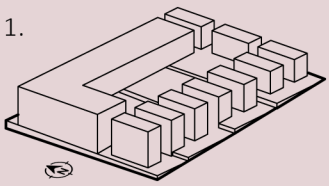


blocks randomized to make most of the sun and add character to site

topography dev.

terraced

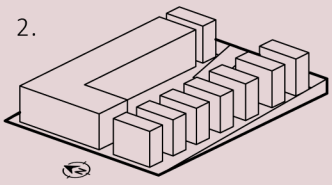
1.



terrace creates interesting entries into buildings

excavated + flat

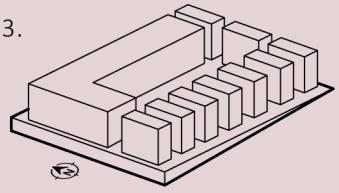
2.



flow between internal and external of site is good

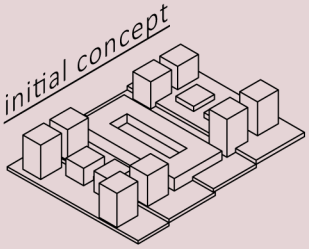
elevated + flat

3.



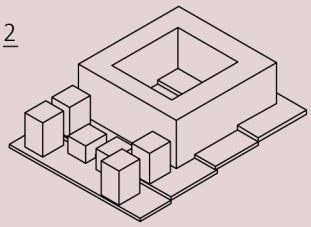
creates too enclosed design, not as inviting

chosen concept development



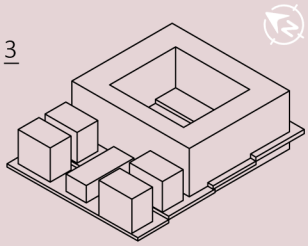
Design starts off with the twoindividualistic typologies separated by the collectivist. Individualistic people might not want crowds walking through their blocks.

2



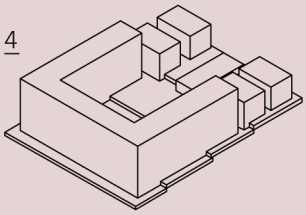
Collectivist area is moved to the east of the site. As it will be higher, putting it here will mean that the site will follow the terraced-aesthetic of the surrounding houses.

3



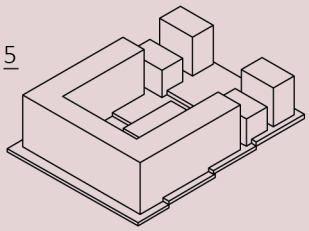
Here the building footprints have been made larger by extending the mass to the edge of the site. This allows more opportunity for housing and a larger courtyard.

4



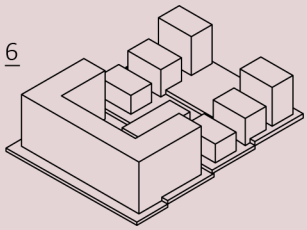
The whole design is flipped 180 to put the collectivist mass on the west side now. This makes it more welcoming from the main street due to the chunky block being moved west.

5



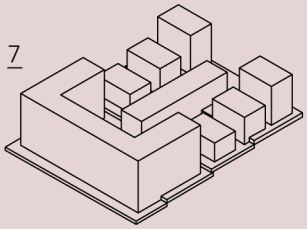
The small recreation block has been moved to the middle of the site to give it importance and allow all people to access it with ease.

6



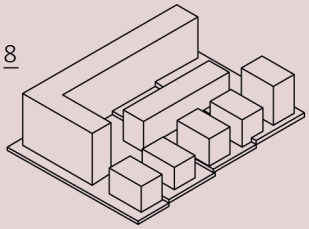
The collectivist block has been reduced in mass and the individualistic blocks have been increased in number to represent the two groups better, physically.

7



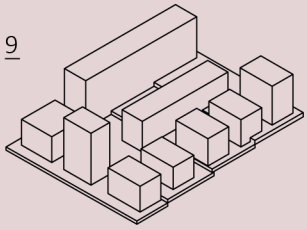
The recreation block has been extended in volume to allow for there to be more activities for people to engage in.

8



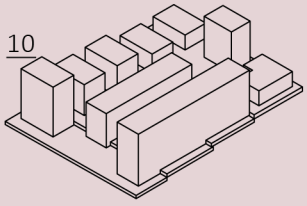
The collectivist block has been moved to the north of the site to allow the collectivist blocks to all have views of the street due to this being something they value highly.

9

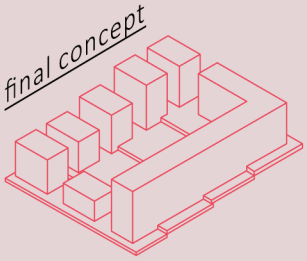


The collectivist block has been broken up to allow for better flow from east to wesr for residents and the general public, this also allows more sun into the central area.

10



The design has been flipped 180 once again, this time to allow for the individualist blocks to have their own pice of land behind their houses, on the north side where there will be more sun.



Here the collectivist block has been increased in mass and moced to the south-west in order to block all the cold southerlies that channel its way through daniell st.

Design note:

The final design is one that is much more responsive to the site conditions. The collectivist block is better suited on the south side as the apartments here will have balconies facing north to make the most of the sun and protect it from the wind. The individualistic blocks are terraced to have rooftop balconies so they still get an external view, as well as a view into the main courtyard

chosen concept physical model

the making - process

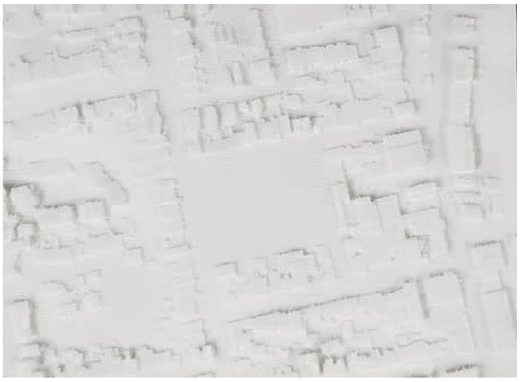
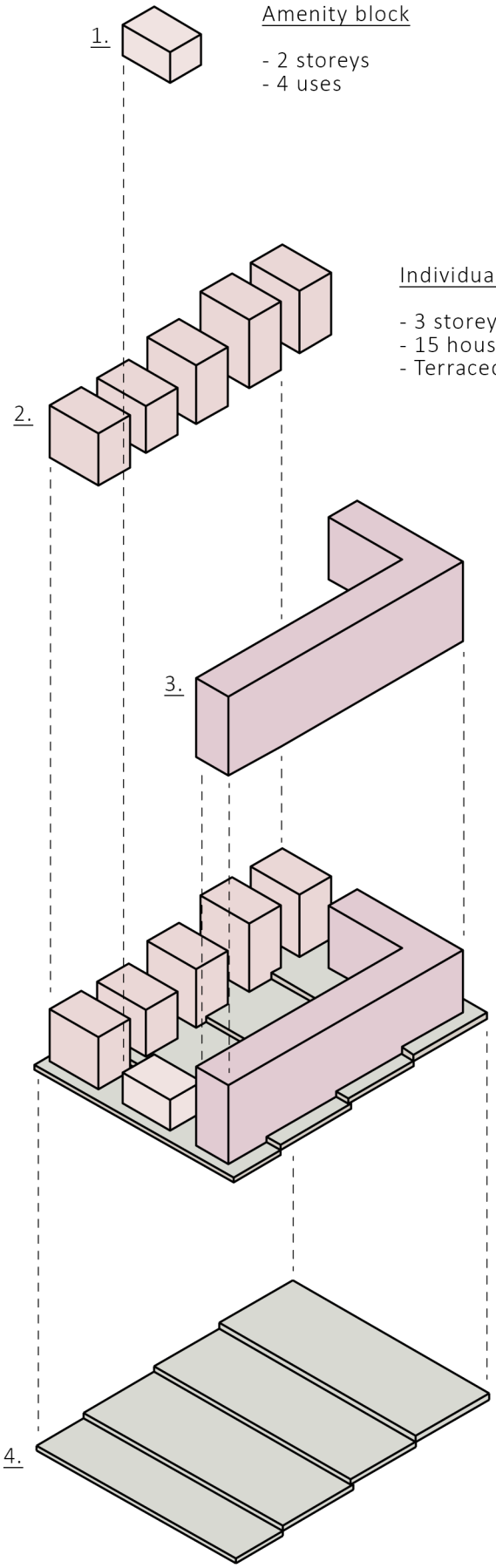


Fig.7.04. Physical model making process

The following four zones were created as a result of the development process for the mass and zonal studies.

These four zones were then developed individually with reference to each other to form a final concept design response.

zonal division for development



1. Amenity block

- 2 storeys
- 4 uses

2. Individualist block

- 3 storeys
- 15 houses
- Terraced design

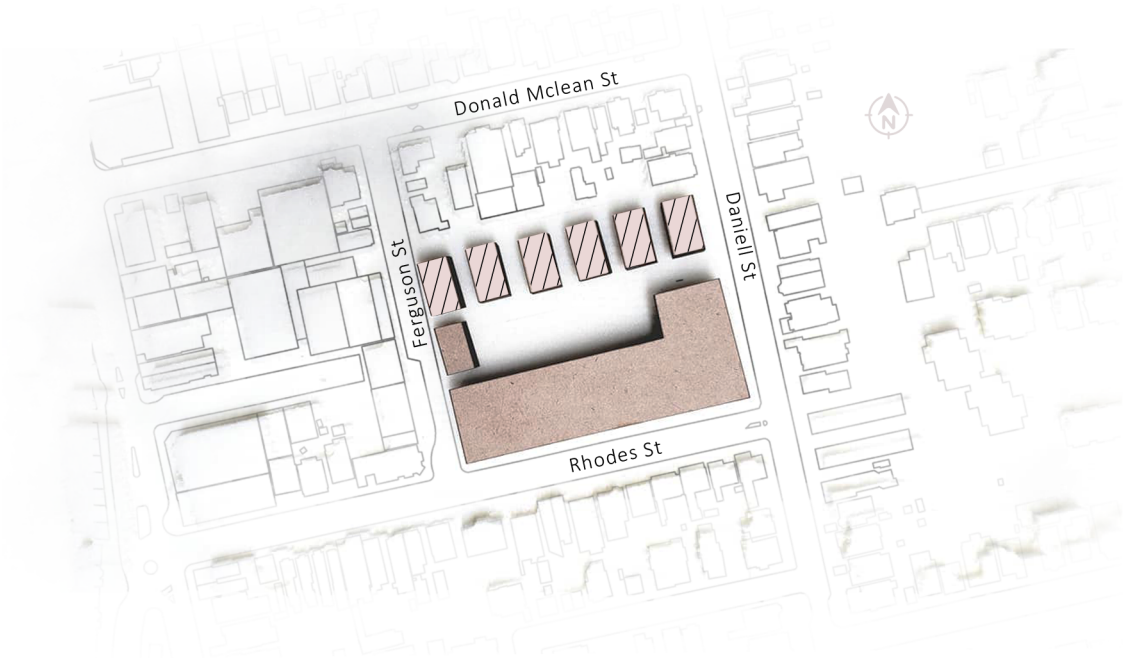
3. Collectivist block

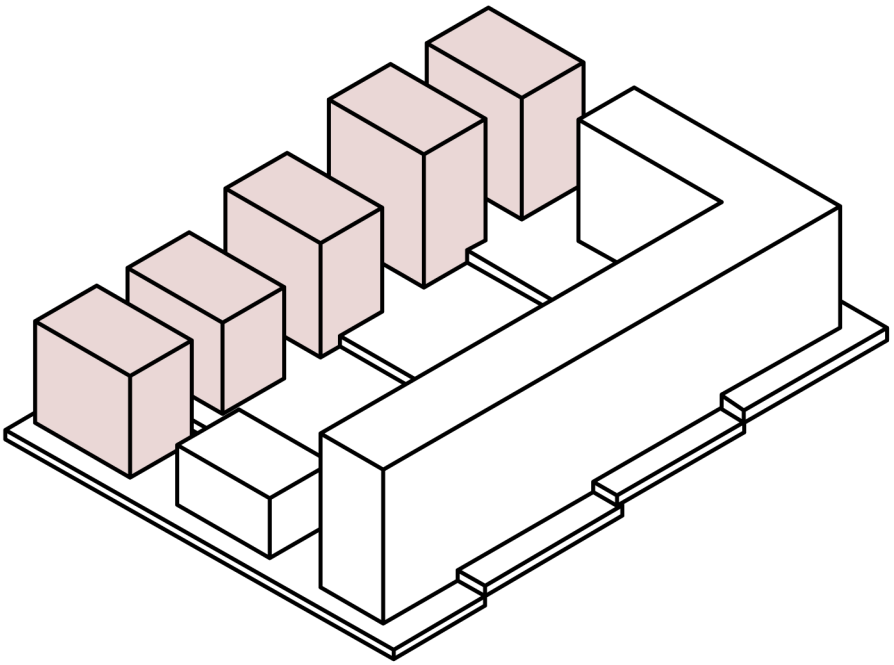
- 4 storeys
- 28 apartments

4. Topography

- Terraced design
- Concrete and grass
- 2,400m^2 of courtyard space

individualist block

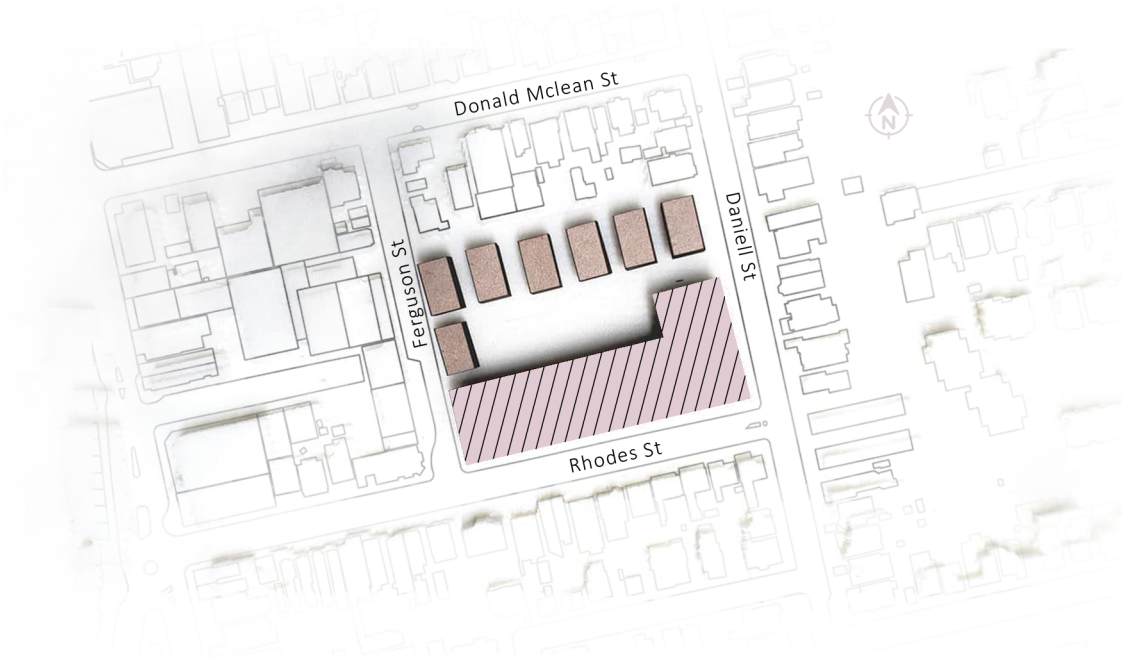


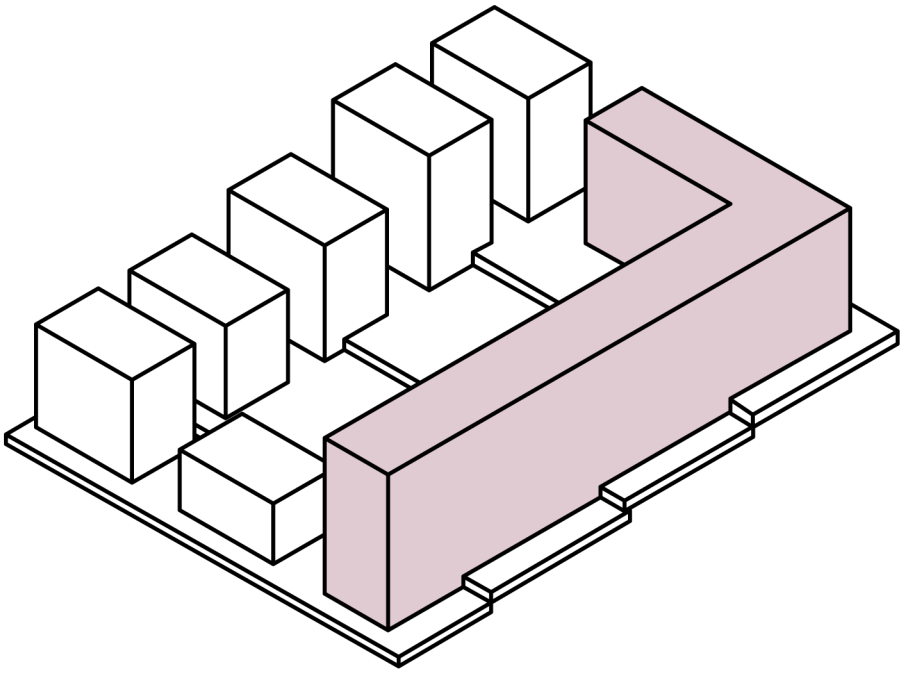


Design criteria to address

- living separate to bedrooms
- open plan living
- lots of natural light
- views of surroundings
- study space
- no formal living
- parking

collectivist block

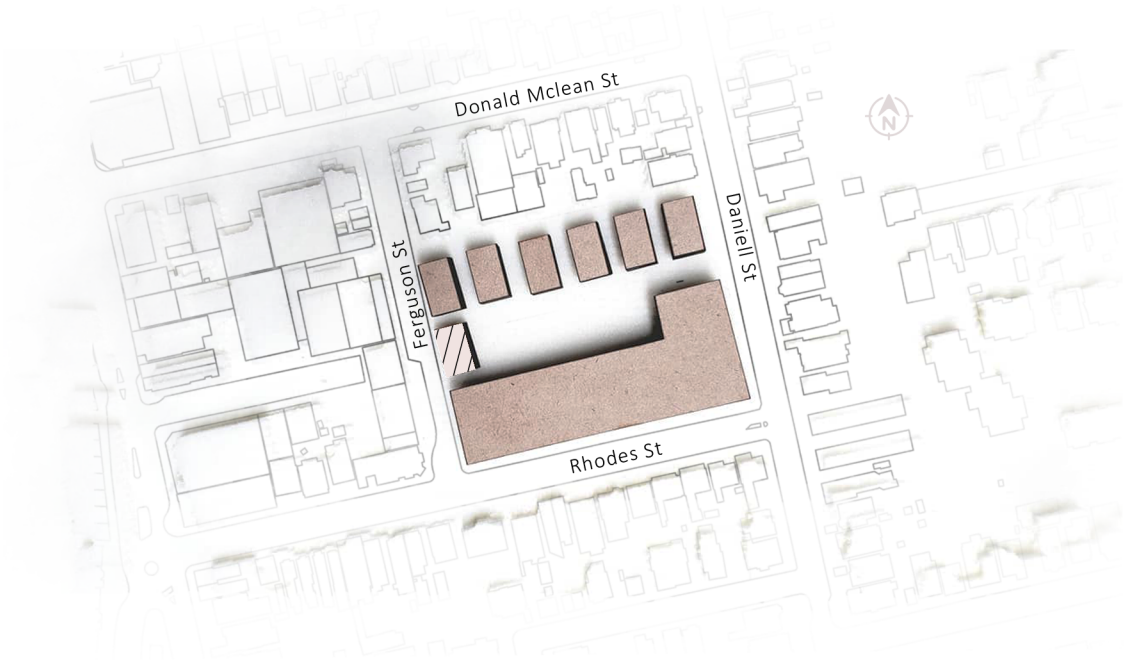


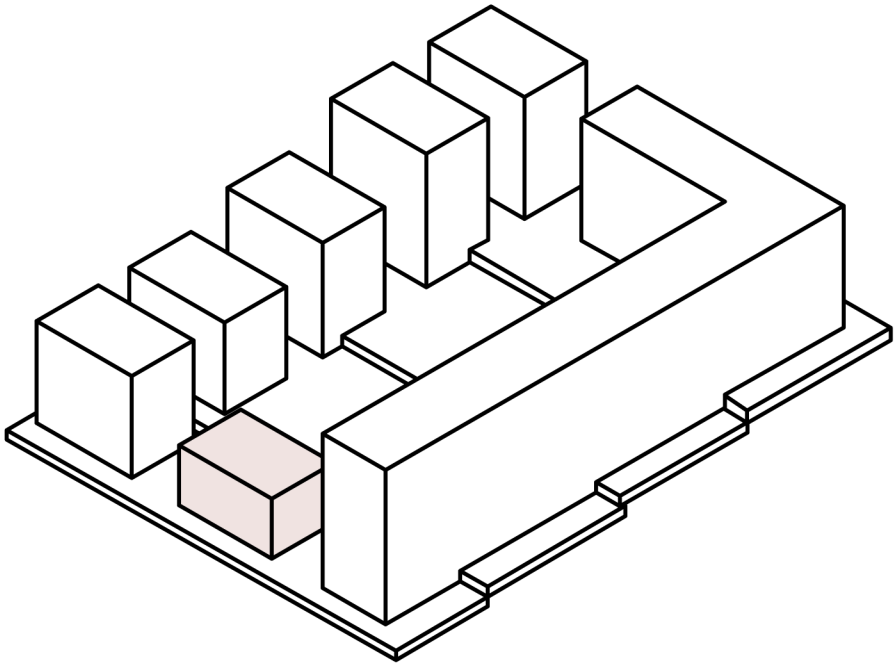


Design criteria to address

- Setting on the site – maximise sun and minimise prevailing winds
- Flexibility – formal and informal spaces
- Multipurpose spaces – community rooms
- Openness – flow between indoor and outdoor spaces
- Landscaping – allow for spaces for relaxing and recreating
- Separation spaces – separate the private and public areas, terraces
- Transitional space – relationship and transition between outdoor and indoor
- Community growth – vege gardens, community farming

facilities block

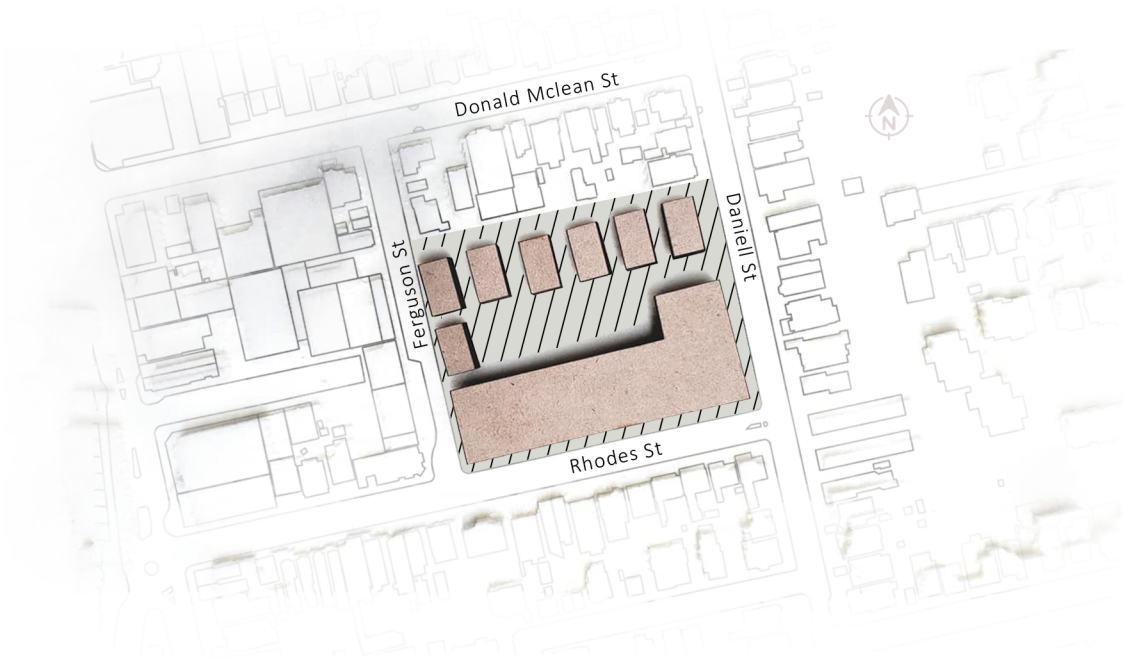


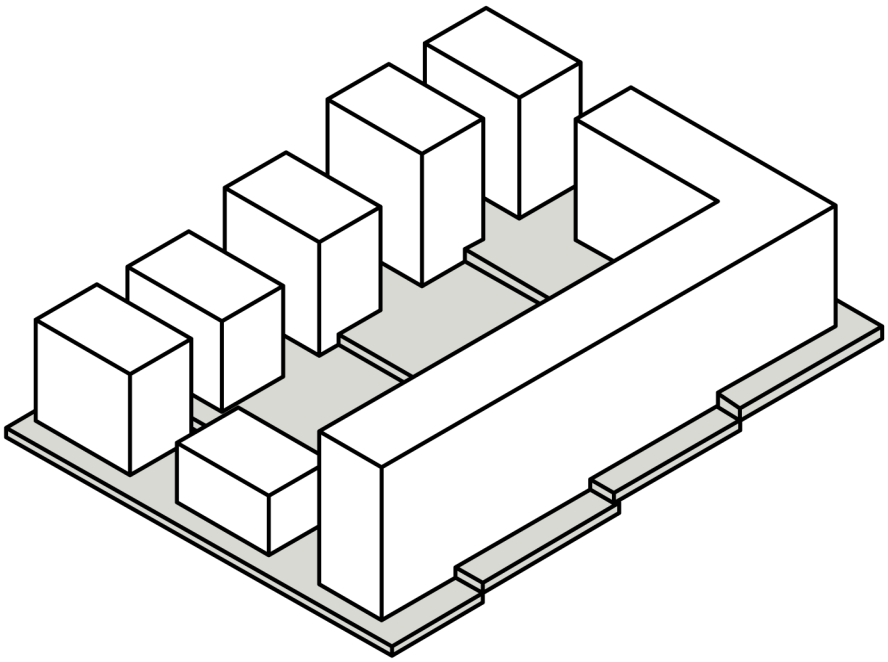


Potential areas of development

- Laundry
- Games room
- Prayer room
- Community room
- Study room
- Body corporate
Rubbish room

landscaping and access





Potential areas of development

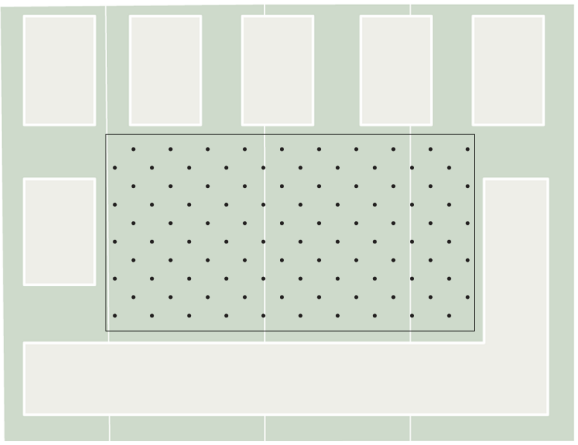
- Playground
- Accessways
- Rest areas
- Seating
- Plantations
- Boundaries
- Entrances

chosen final concept

Site plan

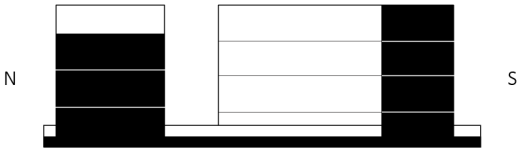
Main entrances on the east and west side allow both residents and the general public to flow through the site to reach their destinations

Landscape



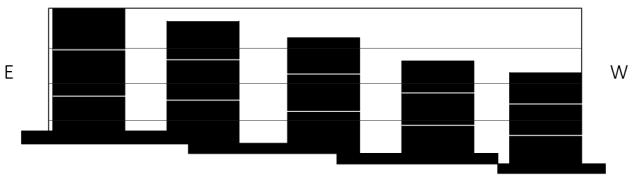
A rough area of 2,400m^2 will be up for use in the 'oublic' space to encourage interaction among residents

Cross section



Large distance wetween north and south buildings mean plenty of light can enter 'courtyard'.
Collectivist houses: 28

Longitudinal

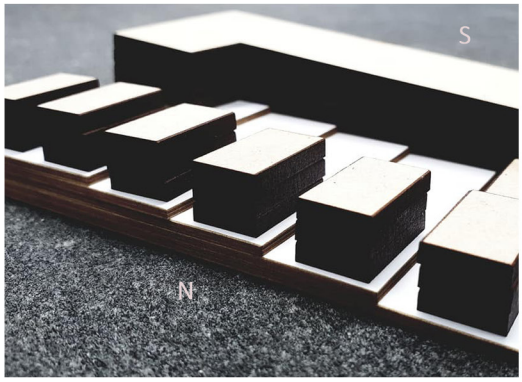


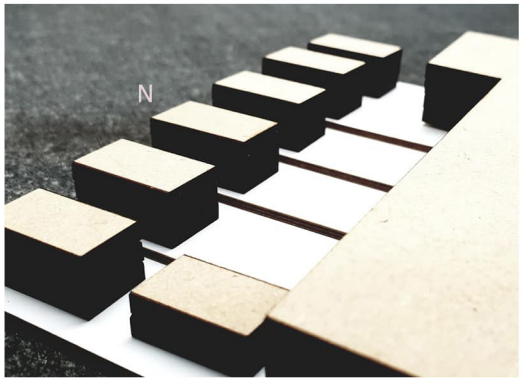
Distances between the individual buildings are narrow and might not let in much light
Individualist houses: 15

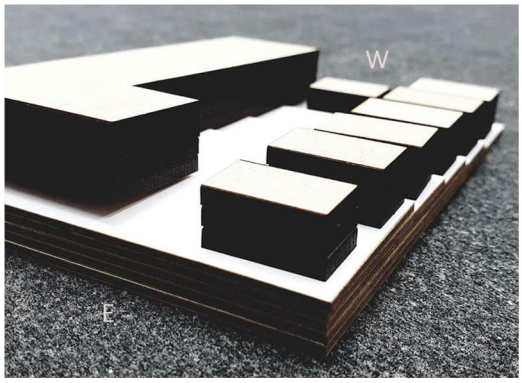
chosen concept physical model

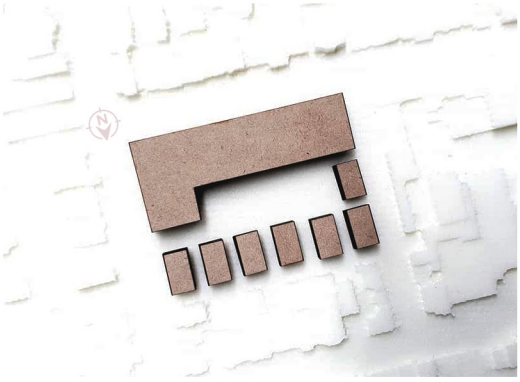
design concept

design on site









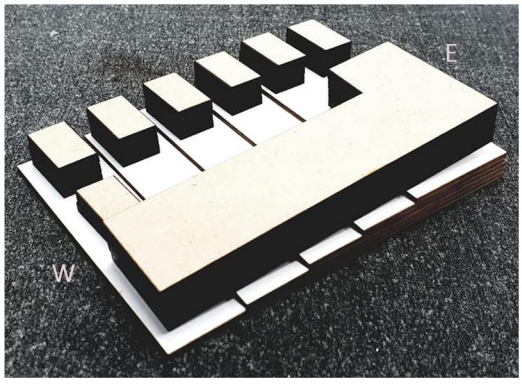
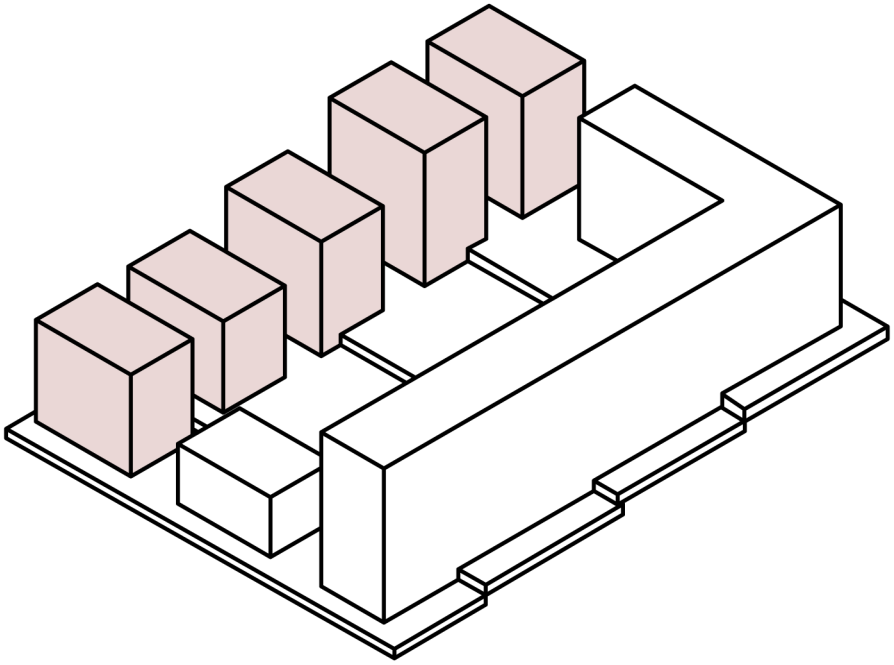


Fig.7.05. Phase two early physical model



Individualistic Block

-

The next stage involved the development of the individualistic block

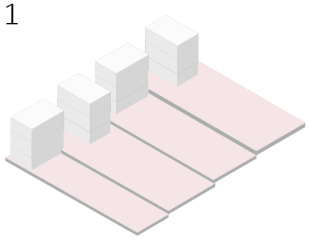
Here, this zone went through an iterative process that included reference to aspects such as size, orientation, access, flexibility, circulation and context.

The individual block was divided into two typologies - both that looked at creating a flexible design that can be adapted to create large or small house typologies for different people. Typology 1 can be divided into three levels or combine to make one large flat, while typology 2 can either be a 2 three-story houses

individualist typology development

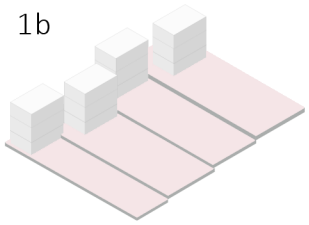
mass study to find best external design for individualist block

1



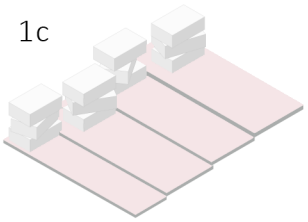
flip

1b

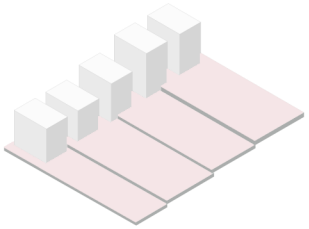


in and out

1c

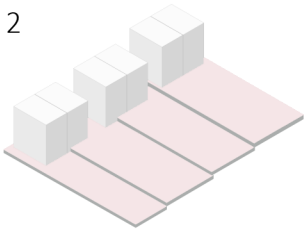


twist



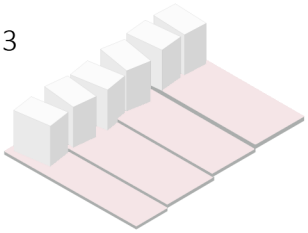
ORIGINAL block

2



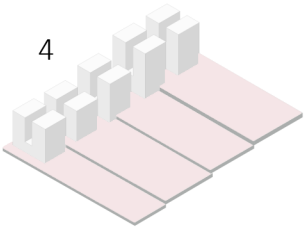
coupled

3



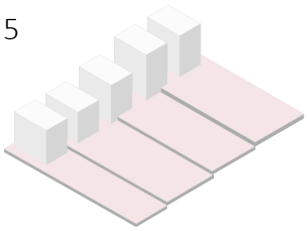
pivot

4



face-off

5



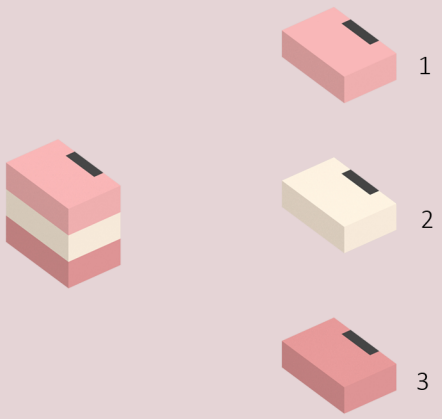
original terraced

There are two chosen typologies for the individual culture group. The first is a twist design that creates different view points of the site and also provides natural balconies for the users by the twists. The second is a more uniform and linear design that features the terrace-like 'steps' of the surrounding housing in the area. These two typologies provide two different options for this particular group - something that is important to for them.

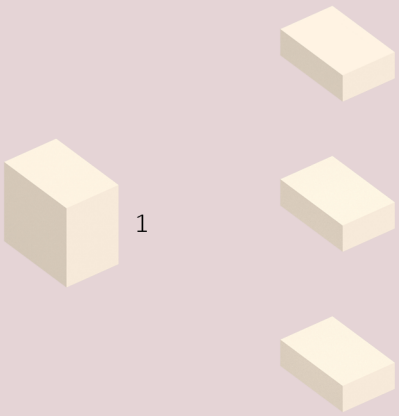
individualist typology development

exploded of internal composition for individualist block typology 1 module

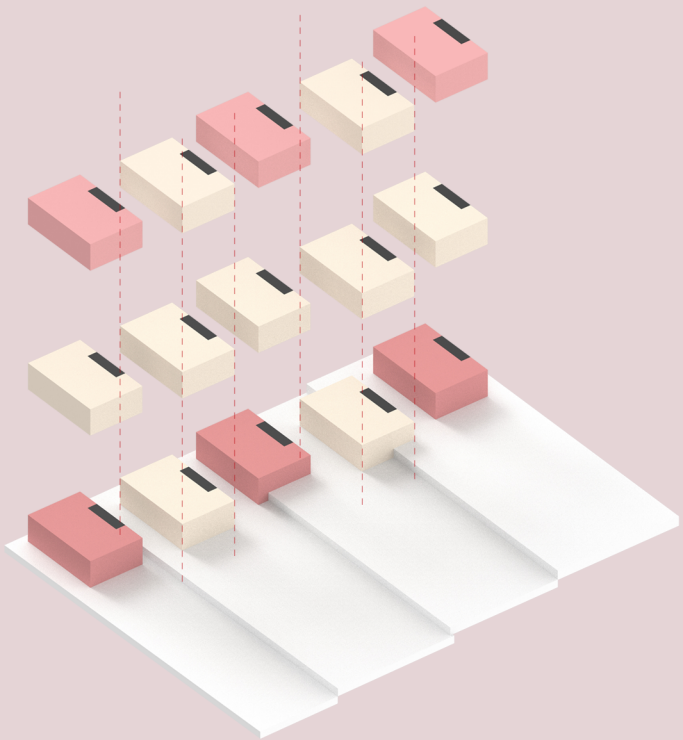
tri-generation model



large family model



typology 1 structure

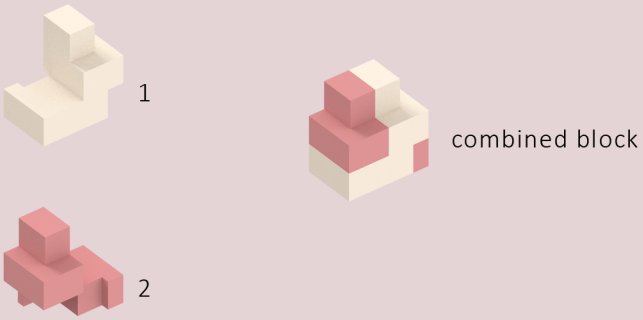


For this particular typology, there are two different options in terms of living structure. First, there is the tri-gen model, where three different generations can live together under the same roof, but have separate access and 'freedom' of their own space. The second model caters for larger families, where all three stories belong to all and internally is seen as one house and externally has no significant difference, giving flexibility to the design and creates cohesion.

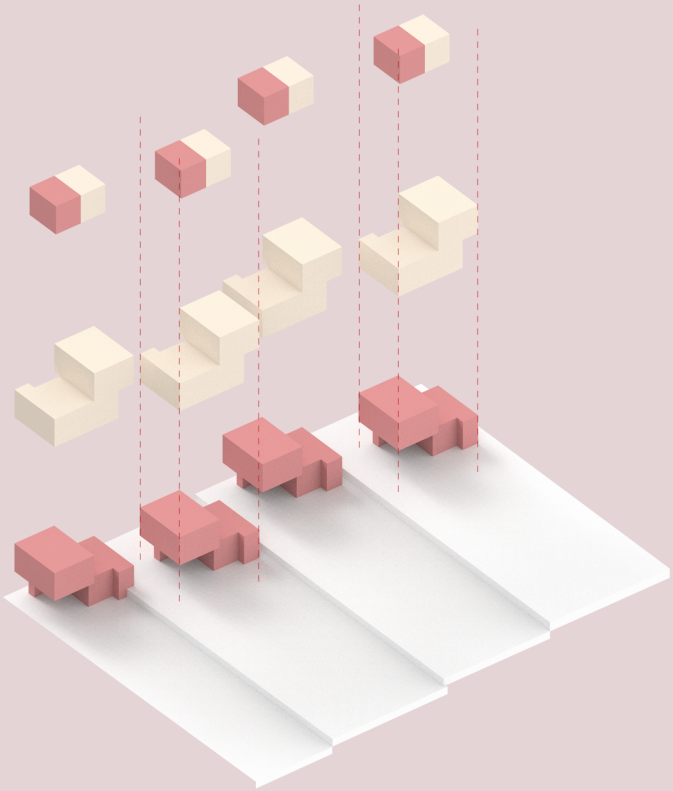
individualist typology development

exploded of internal composition for individualist block typology 2 module

dual-module typology



typology 2 structure



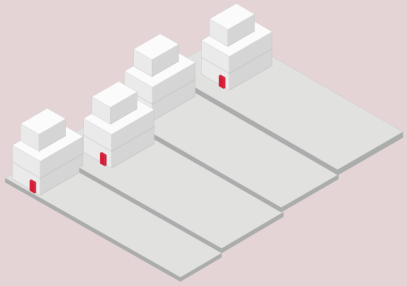
The *second* typology consists of a yin-yang-like structure. Here, each house is two stories high but is intertwined with the adjoining dwelling- creating one block that is harmoniously connected. This contributes to the feeling of 'togetherness' while still being separate, catering to the specific needs of the 'individualist' culture. Furthermore, this scheme allows the dwellings to get different views of the site, another important criteria for this specific group. Additionally, the third storey can act as extra room for each house or alternatively a separate flat with a large balcony space.

individualist typology 1 development

developing the entrance and landscape options for individualist typology 1

circulation development

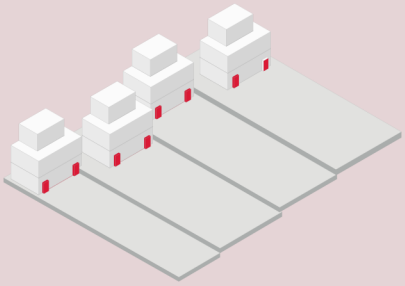
1



side entrance:

entrances on the side allow for privacy when entering and exiting the house, which is important when considering young children or the elderly

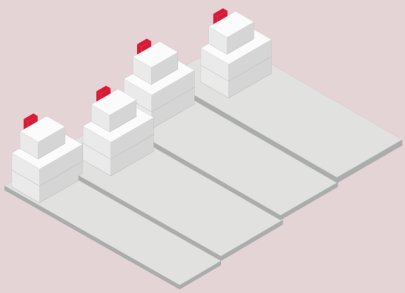
2



front entrance:

entrances on the front are good as they subtly force dwellers to go out into the main courtyard when accessing the house, meaning there is more opportunity for social interaction

3

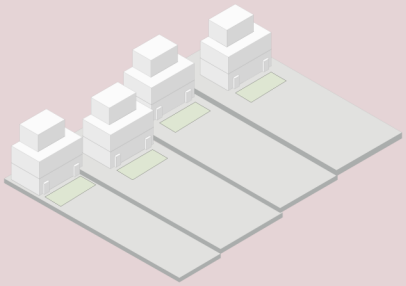


rear entrance:

entrances on the rear are the best in terms of privacy, but lack in terms of interaction and can risk isolating the people in these houses from the rest

landscaping development

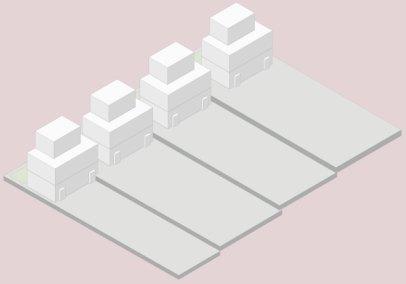
1



front yards:

having a yard in the front for these houses could act as private land that other people in the development might feel is too confronting

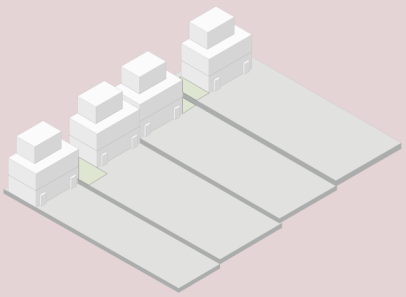
2



back yards:

back yards are great for allowing the individual group to have some privacy amongst all the public land in front of their houses and is often something they require

3



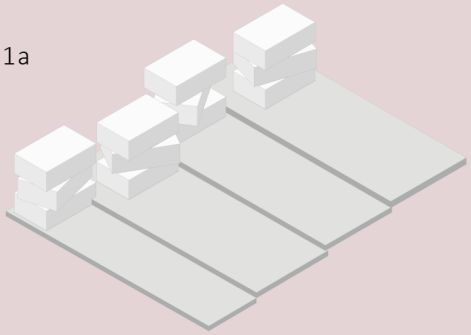
side yards:

side yards are a great compromise as they are a decent amount of privacy but sill are engaged with the rest of the landscape on sit and allow for this group to still have views into the middle

individualist typology 1 development

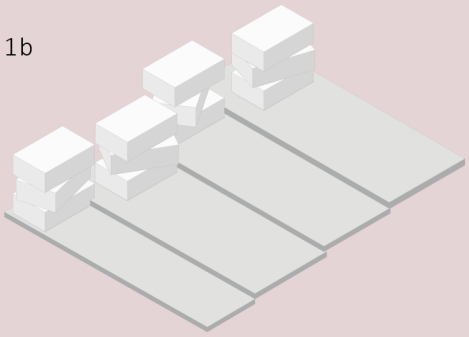
developing mass for individualist typology 1

1a



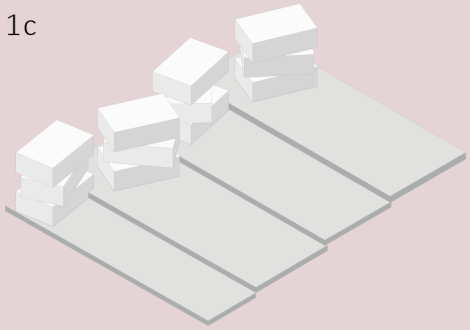
Original

1b



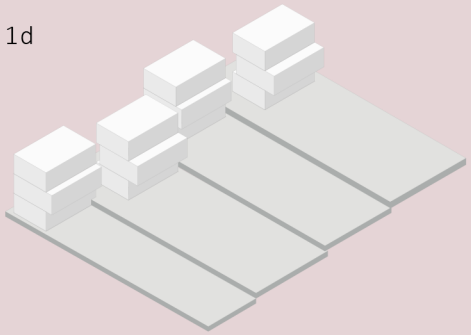
intensify twists to awaken design

1c



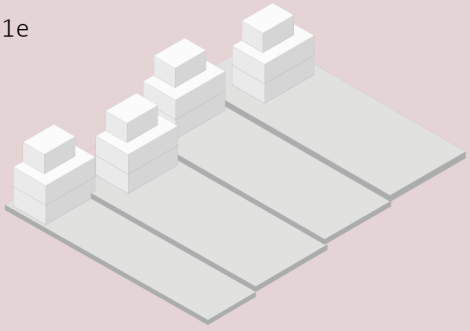
twist whole blocks to add movement

1d



add uniformity as twists take up too much room, keep balconies

1e

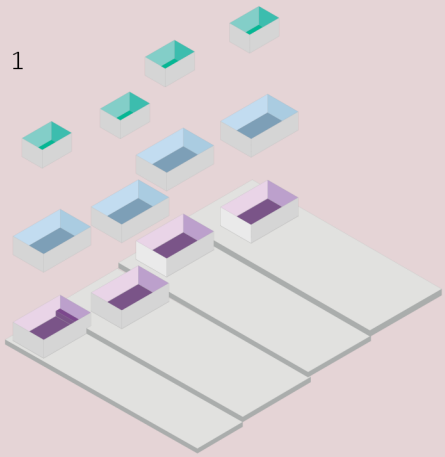


move balconies to top storey to stop unwanted shadows

individualist typology 1 development

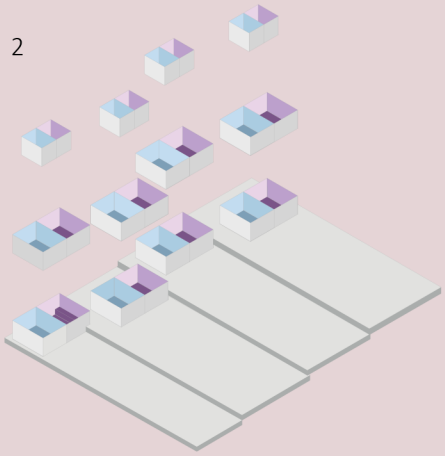
developing internal layout options for individualist typology 1

1



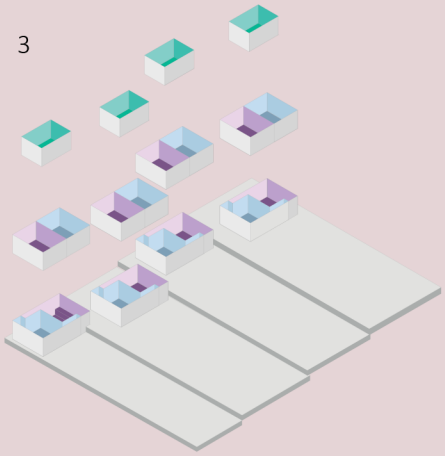
three separate floors for
three different dwellings, two
large dwellings and one
smaller one with a
large balcony

2



three floors for one dwelling.
townhouse style

3



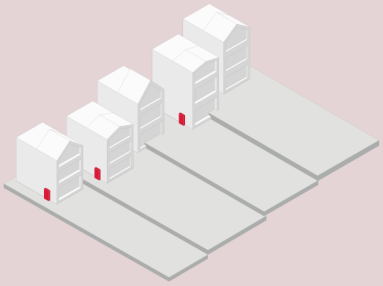
CHOSEN CONCEPT:
two floors for each dwelling but
with opposite orientations to create
different views and more connected design -
top level can be separate dwelling or
joined to create rooftop access

individualist typology 2 development

developing the entrance and landscape options for individualist typology 2

circulation development

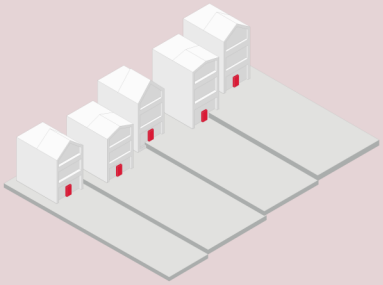
1



side entrance:

entrances on the side allow for privacy when entering and exiting the house, which is important when considering young children or the elderly, additionally allows full views of the inside courtyard

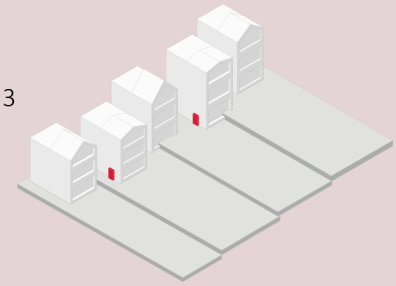
2



front entrance:

entrances on the front are good as they subtly force dwellers to go out into the main courtyard when accessing the house, meaning there is more opportunity for social interaction, although also compromises privacy

3

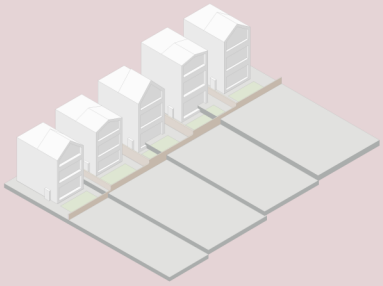


facing side entrance:

entrances that are in the side and also facing the house next to them solve the issue of no interaction, as they are still resonably private but allow the opportunity to bump into your neighbour and spark a conversation

landscaping development

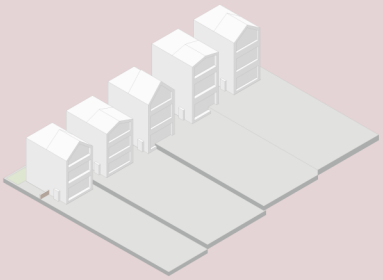
1



front yards:

this design benefits the front yard as it allows the individualist group to have their own private space, but the fact that it is in front means that they can still see and communicate with the other group while still feeling secure

2



back yards:

back yards in this design are great for allowing the individual group to have some privacy amongst all the public land in front of their houses but in this case can disrupt the interaction between these two groups altogether

3

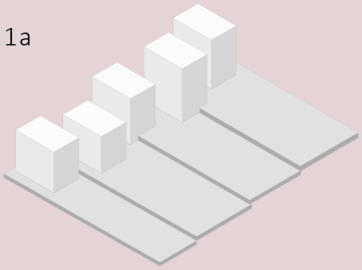
side yards:

side yards are a great compromise as they are a decent amount of privacy but sill are engaged with the rest of the landscape on site and tie all of the green spaces together well

individualist typology 2 development

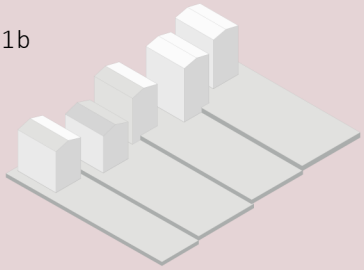
developing mass for individualist typology 2

1a



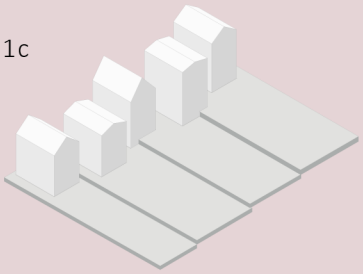
original stepped blocks

1b



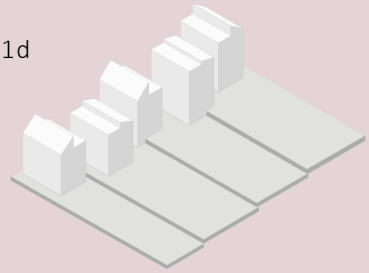
roof line extracted to match surrounding dwellings

1c



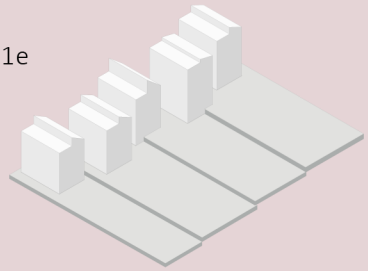
roof line intensified to contrast surrounding dwellings

1d



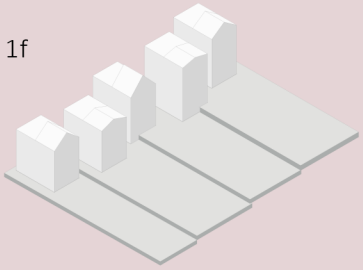
roof halved to accomodate for roof terrace

1e



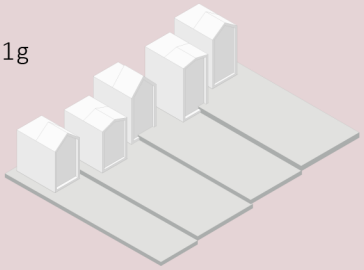
roof terrace oriented to face views of neighbourhood

1f



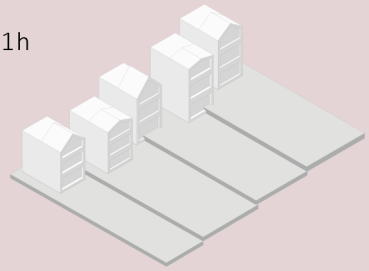
roof terraces moved to back to provide privacy from the middle ‘courtyard’

1g



extruded front face to give 3d effect and make dwellings more approachable

1h

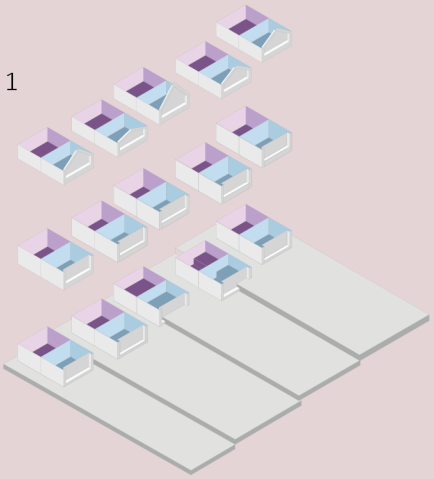


extruded further to create balconies on front face that are more engaged

individualist typology 2 development

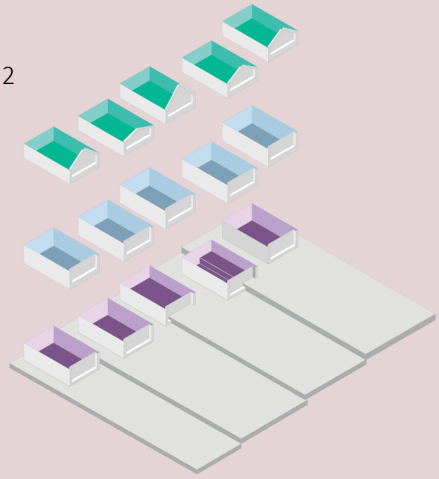
developing internal layout options for individualist typology 2

1



three floors for each dwelling
and two dwellings side-by-side
like townhouse style to which
orients the east-west axis - however
drawback is that only one gets a
view of the internal courtyard

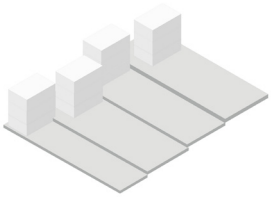
2

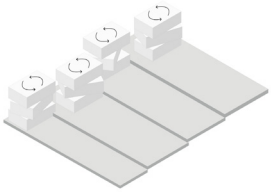


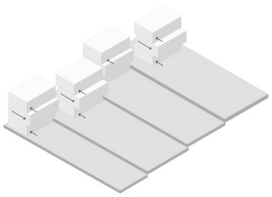
three separate floors house three
different dwellings, all have views of all
four sides and are accessed through
an external staircase

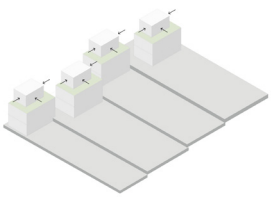
3

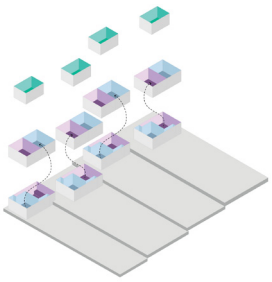
CHOSEN CONCEPT: “tri-gen model”
three floors can be either occupied by one
large family, with vertical access through
the interior OR alternatively can be occupied
by three different tennants or three different
generations of the same family, which all have
access internally but dwellings are made to
be separated - giving the essence of
a ‘united’ or ‘tri-gen’ house

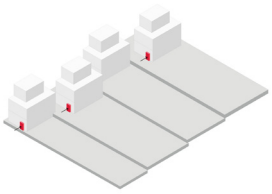


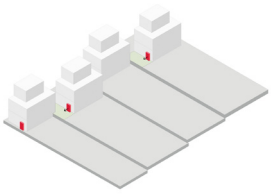


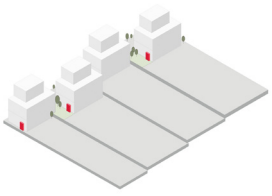






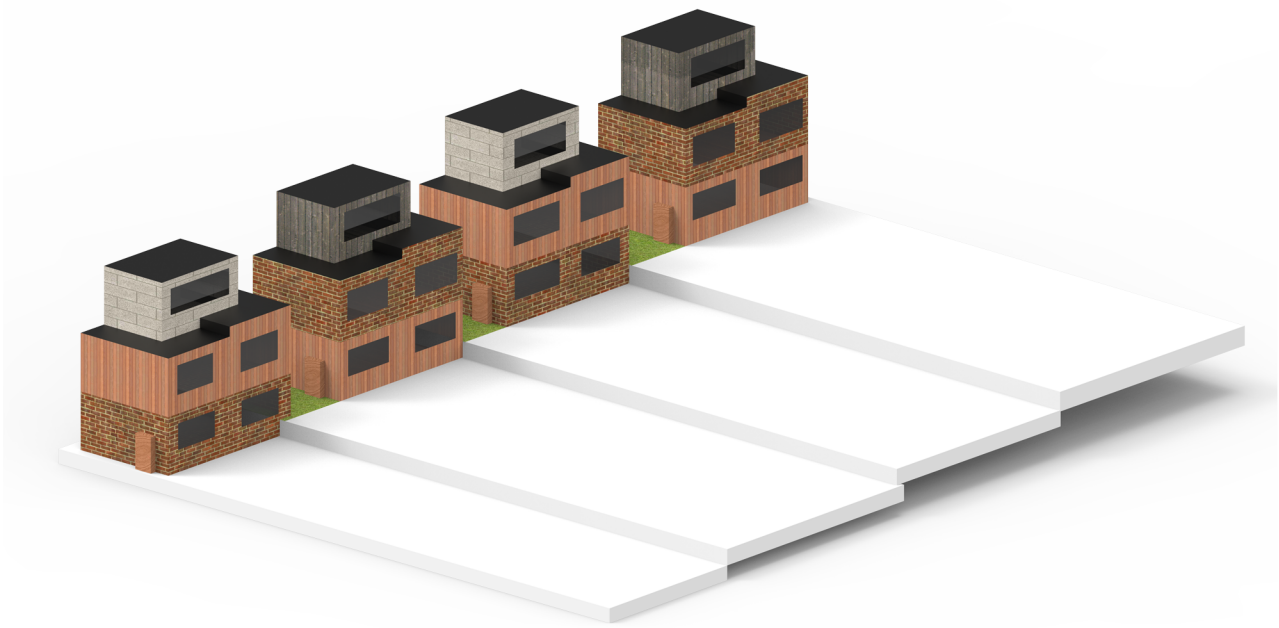




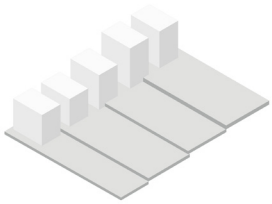


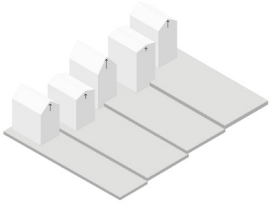
individualist typology 1

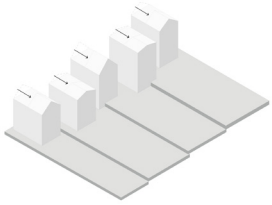
exterior images of individualist typology 1

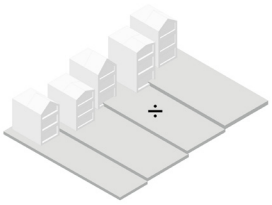


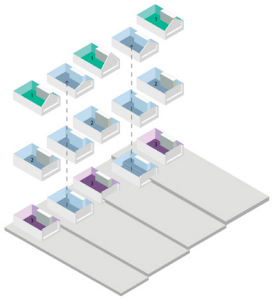
The individualist typology 1 consists of 4 houses orientated east-west to make the most of the sun as well as views into the central courtyard. Internally, it crosses over at the second level- giving occupants different views of the site, and literally fusing two families together. The top and third level can either be part of the two houses or a separate dwelling by itself, allowing flexibility to cater for different people. The rooftop balcony area can be shared by both the dwellings, increasing interaction among the families and also neighbouring houses.

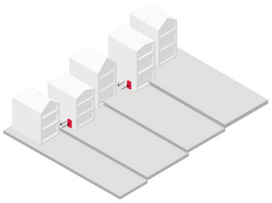


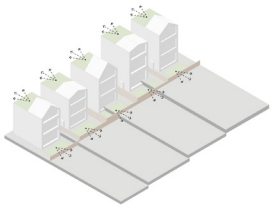


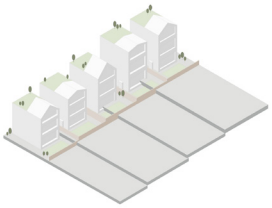






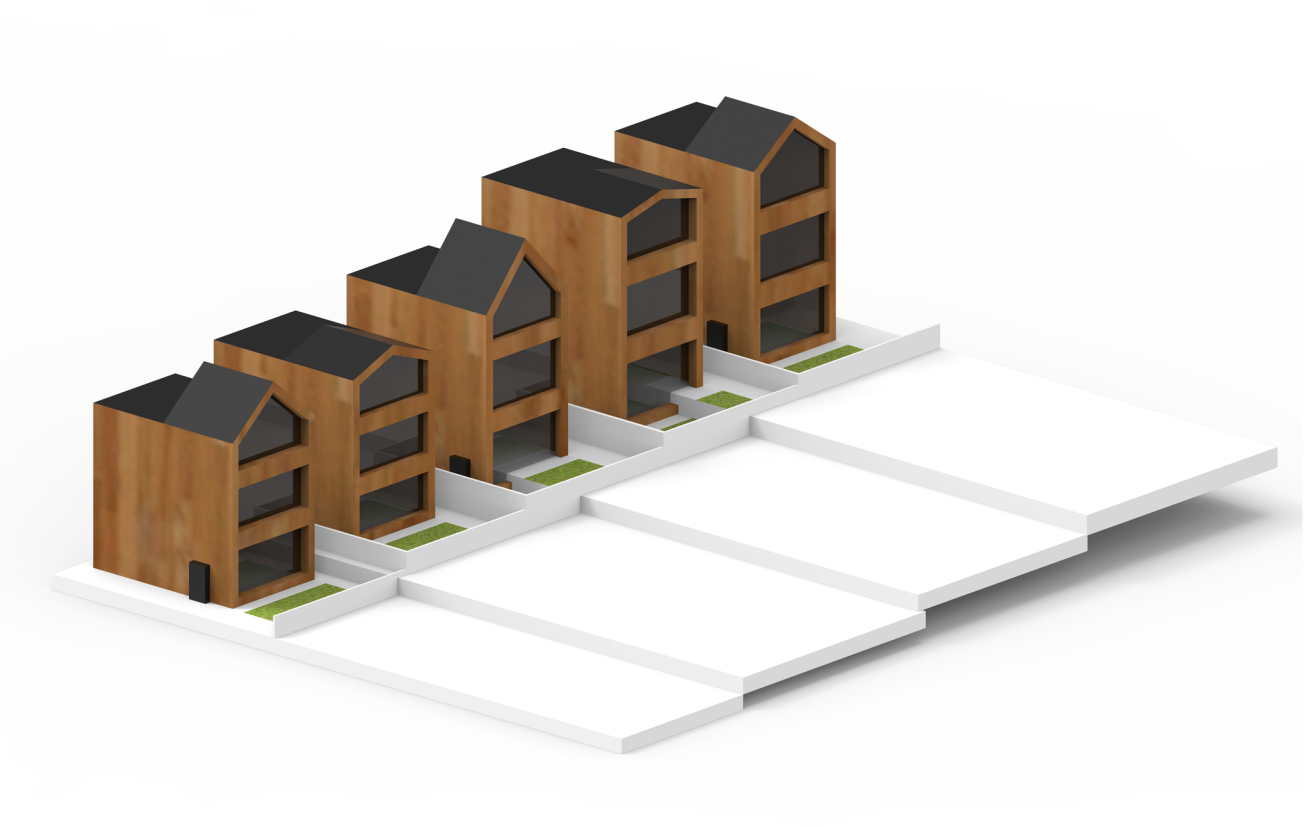




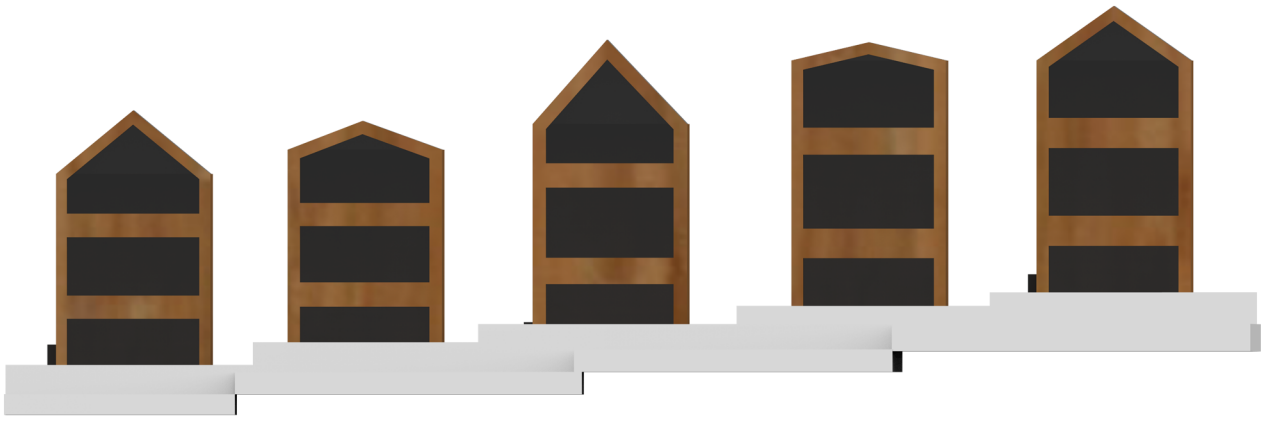


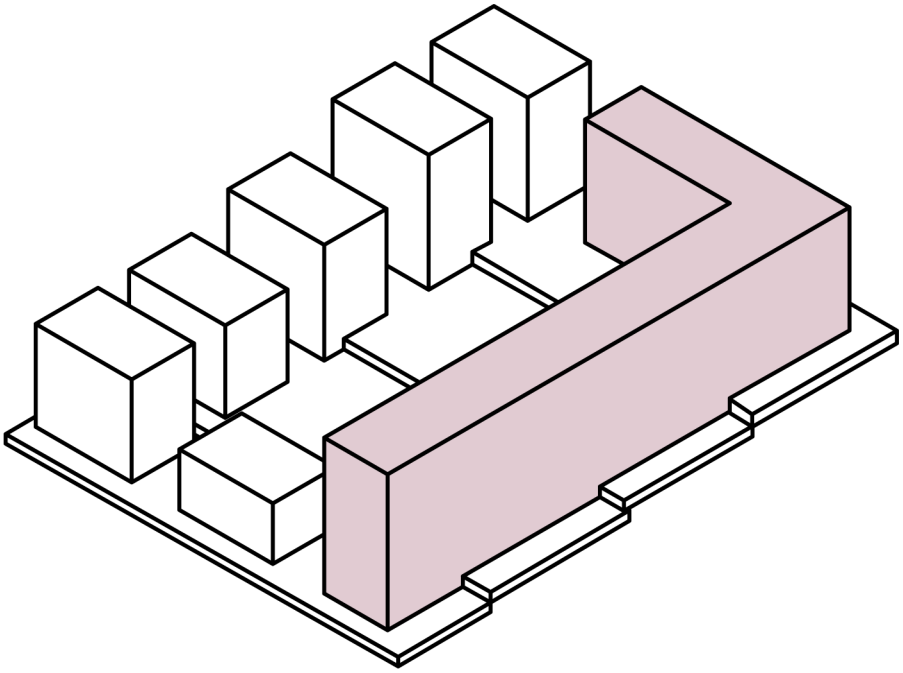
individualist typology 2

exterior images of individualist typology 2



The individualist typology 2 consists of 5 houses placed in a row with minor changes to the exterior that mirror the different roof tops of the surrounding suburb. Internally, it can act as one large house that can host a tri-generation family or convert into three different flats to house smaller families. All circulation is kept internal. allowing flexibility to choose which model is used in each dwelling as well as increase the chance of interaction within the interior of the household.





Collectivist Block

-

This stage involved the development of the collectivist block.

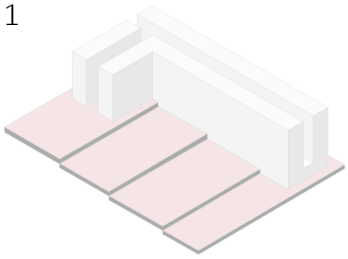
Here much like the individualistic block, this zone went through an iterative process that included reference to aspects such as size, orientation, access, flexibility, circulation and context.

The collectivist block consisted of one large mass divided into two blocks. Here density was a large aim, and including the various different living types within it was a key focus.

collectivist typology development

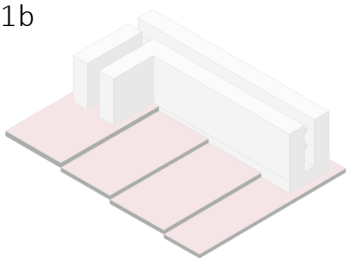
finding best internal layout and circulation for collectivist block

1



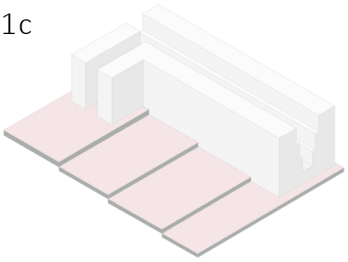
internal void

1b

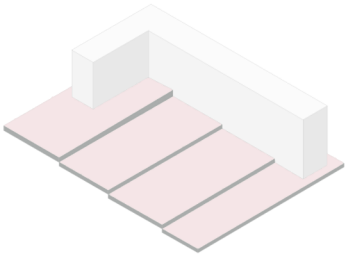


internal balcony

1c



internal terraces

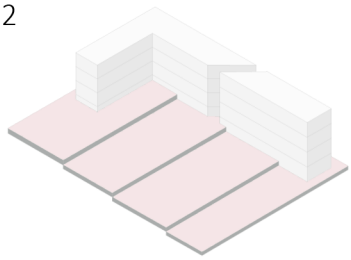


ORIGINAL block

These concepts above are influenced by my recent trip to Greece, where the polykatoikias (apartment buildings) are facing each other closely, and residents have an opportunity to sit in the balconies and talk (scream) to each other- fostering 'community'.

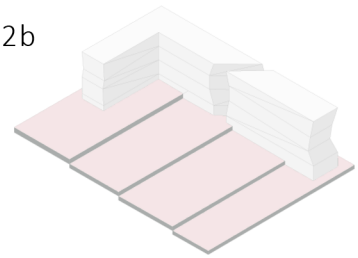
These concepts below are influenced by international medium to low density housing, where buildings are usually in single or paired configurations, commonly with views of only one side of the development

2



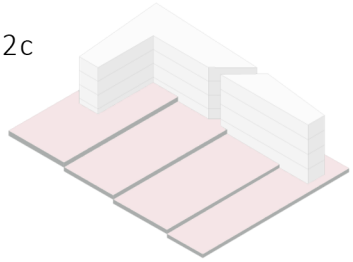
slice

2b



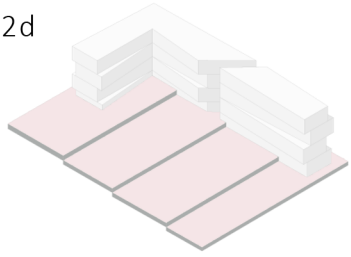
refraction

2c



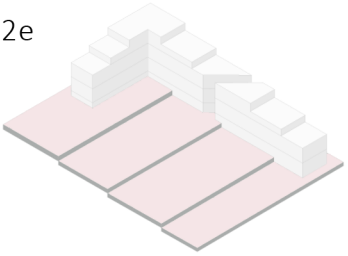
thinning

2d



shift

2e



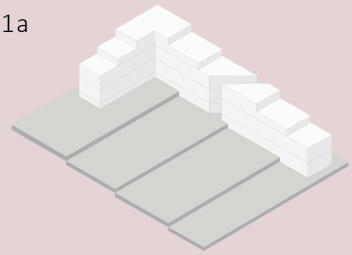
terrace

Chosen design (2e) has been selected due it it being found as the best option for the current site. The terraced design allows for separated views of the suburb or segregated use of the rooftop. This stepped feature also mirrors the neighbouring houses as they also step down along with the topography of the terrain it lies on.

collectivist typology development

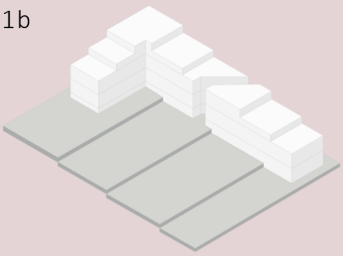
finding best internal layout and circulation for collectivist block

1a



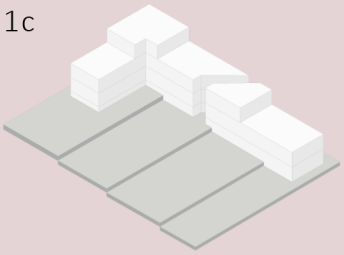
original block

1b



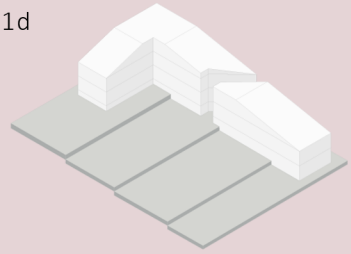
thicken mass

1c



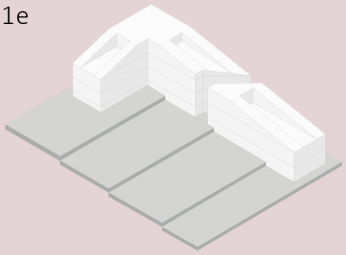
simplify terraces

1d



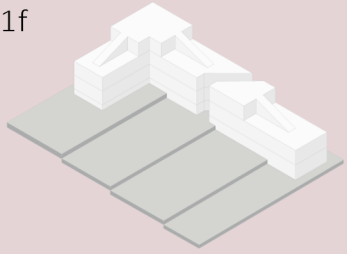
slope roof

1e



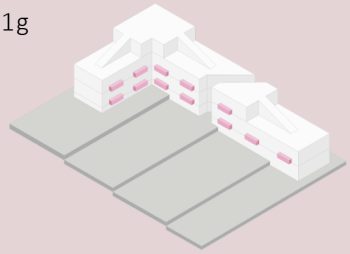
enclosed roof space

1f



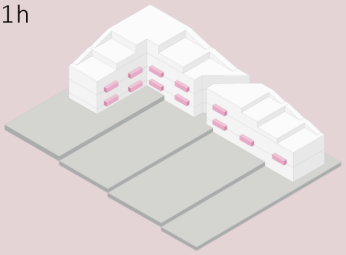
inverse- more roof space

1g



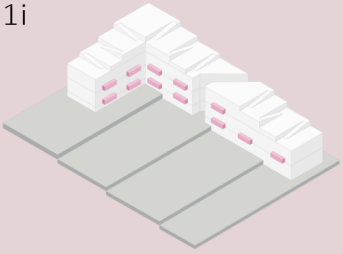
add internal balconies

1h



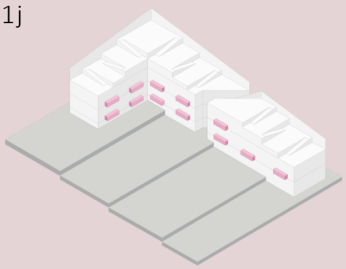
intensify terraces and
move ramps to outside

1i



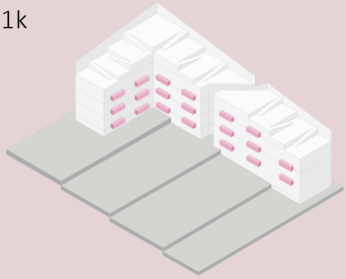
zig-zag ramps to
add journey feel

1j



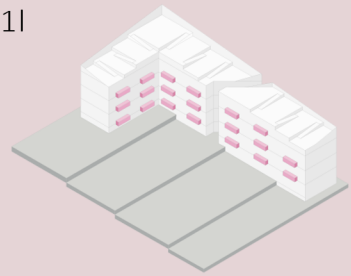
create wind shield

1k



increase density

1l



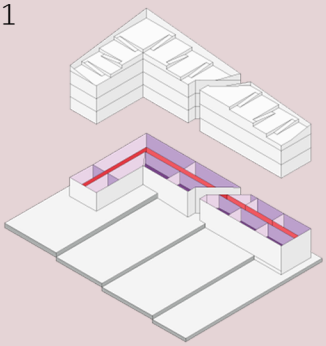
decrease terrace heights

collectivist typology development

finding best internal layout and circulation for collectivist block

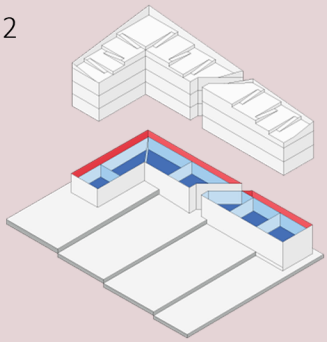
internal layout

1



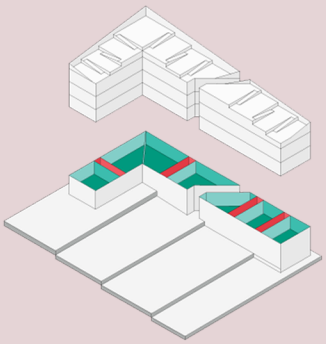
smaller houses on both the external and internal sides of the building

2



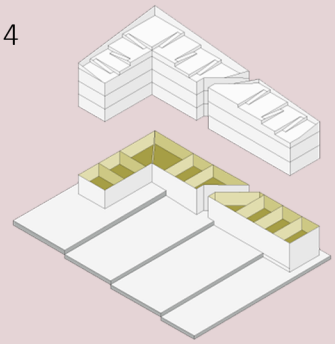
larger dwellings- all houses facing the internal courtyard of the development

3



larger dwellings- all houses separated by horizontal corrirors and have views on the inside and outside of development

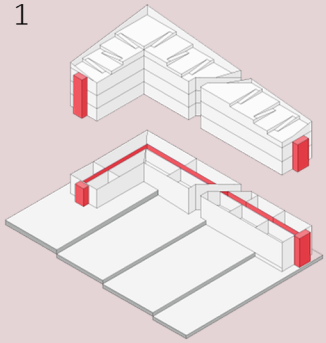
4



larger dwellings- all houses have views on the inside and outside of development, no covered access

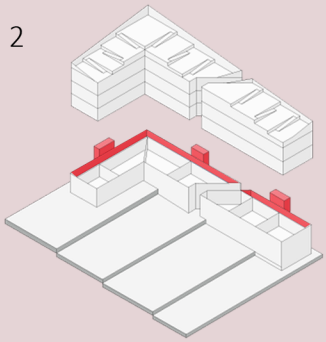
circulation

1



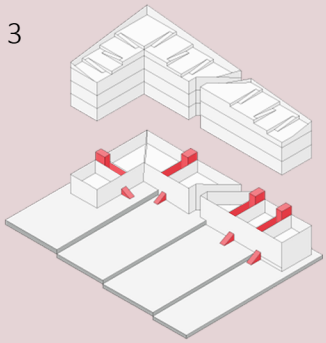
vertical circulation through end of both wings on buildings, horizontal

2



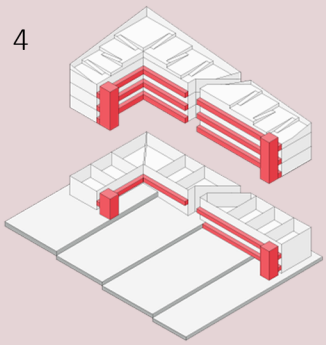
larger dwellings- all houses facing the internal courtyard of the development

3



larger dwellings- all houses separated by horizontal corrirors and have views on the inside and outside of development

4



larger dwellings- all houses have views on the inside and outside of development, no covered access

*none of these schemes were chosen

The central corridor:

A vital part of the collectivist block was the circulation of people within it.

This was designed inspired by BIG's VM Houses in Copenhagen, creating a tri-module of housing that is connected via a long central corridor.

This central corridor is accessed by all three flats, and subsequently the entire row of apartments spanning three floors- creating one large shared corridor where people can come together and meet when passing by.

collectivist typology

generating tetris-like scheme for internal of collectivist block

apartment 1

+

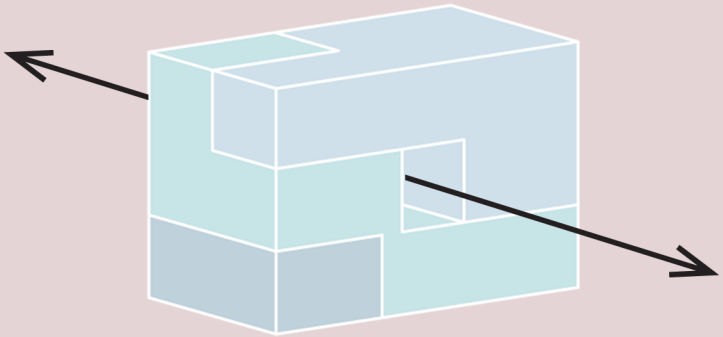
apartment 2

+

apartment 3

=

apartment tetris block

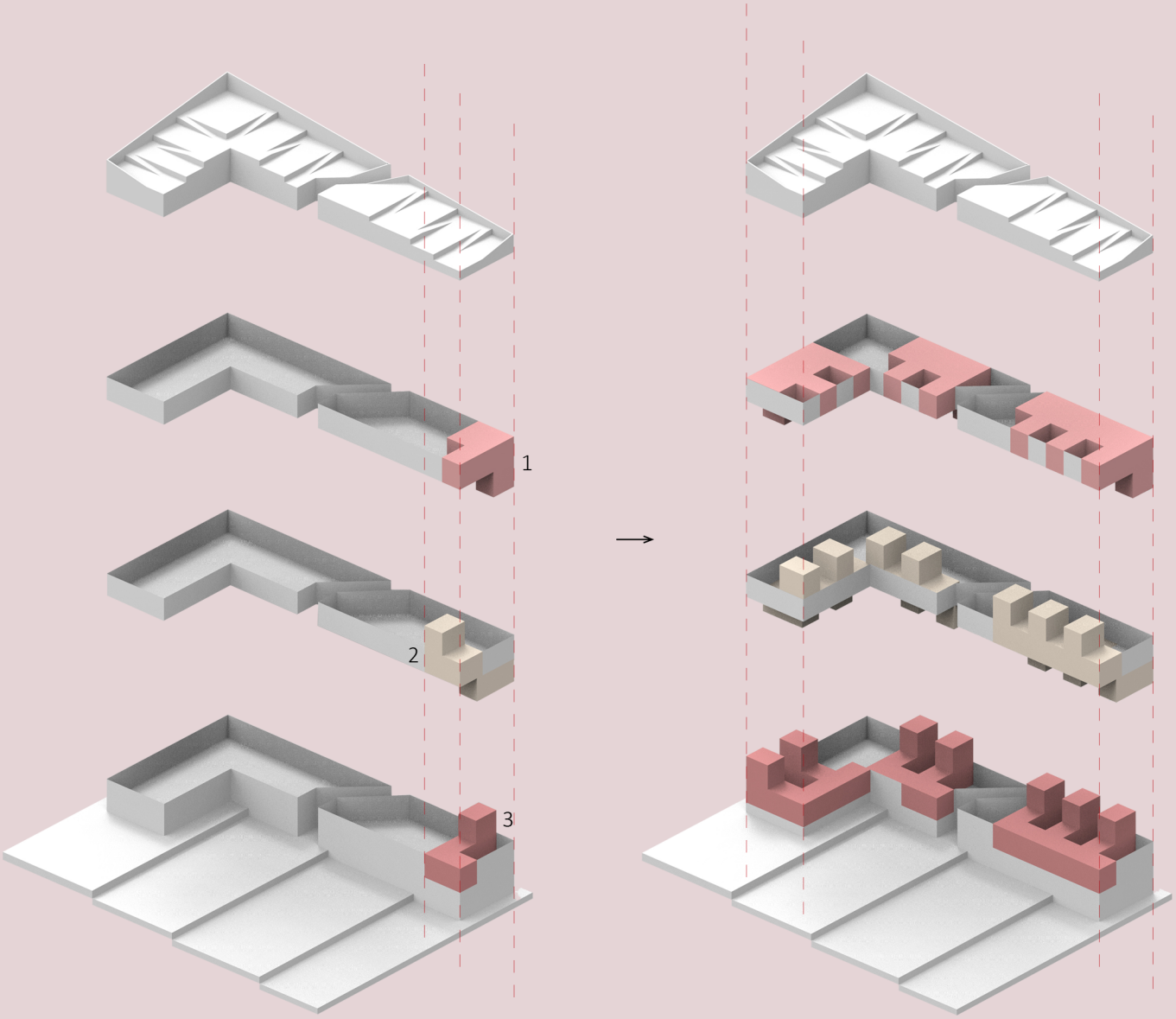


collectivist typology development

exploded of internal layout for collectivist block tri-module

single tri-stack

grouped tri-stack



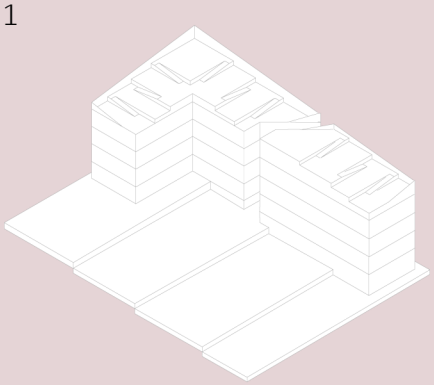
The three stack module fits into each other along three floors of the overall mass. Here each dwelling gets three floors of space, meaning three different levels of living, views and engagement with the site.

This module is then copied and pasted along the mass to create 21 new apartments that follow this structure. Other dwelling types can then be infilled around these to make the most of the space left over.

collectivist typology development

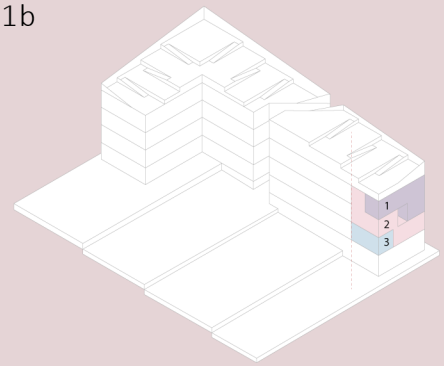
fitting the tetris-like scheme into the collectivist block

1



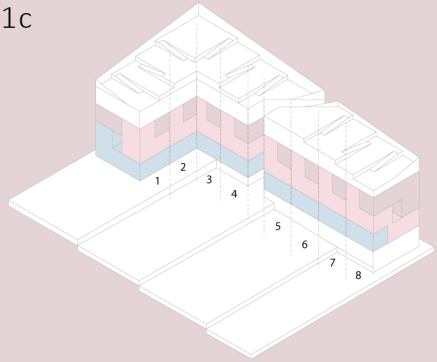
empty shell

1b



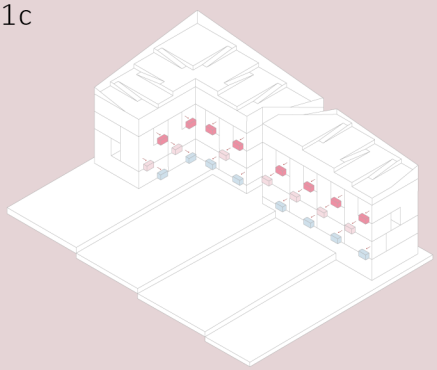
adding 3 level tetris block

1c



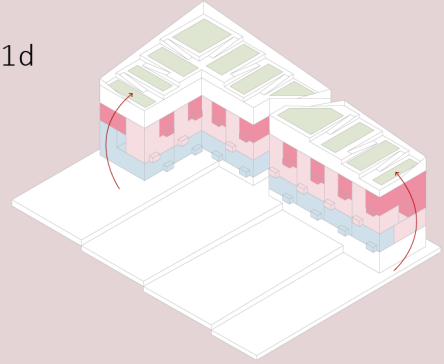
multiplying tetris block

1c



extending horizontally

1d



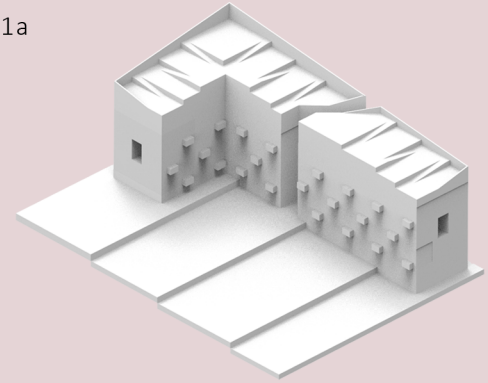
adding removed vegetation
back on top

Originally starting as a plain three separated floor design, this new concept incorporates the three different apartments from the same one floor, increasing the opportunity to run into your neighbours and create social interaction. This block is then replicated along the two wings of the collectivist block, to create a network of 24 homes that have the potential to create a small community within the walls of the larger building.

collectivist typology development

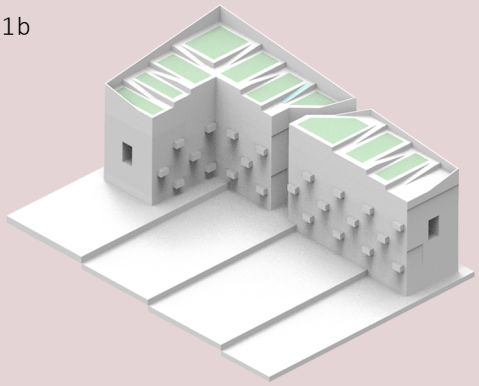
finding best internal layout and circulation for collectivist block

1a



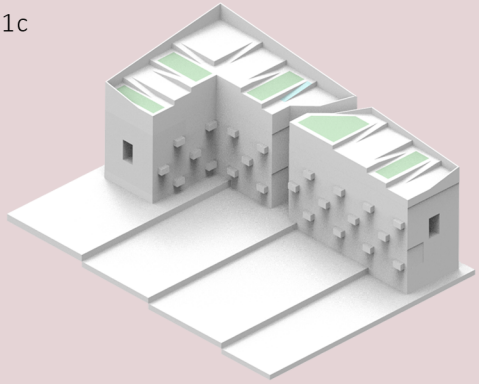
original mass

1b



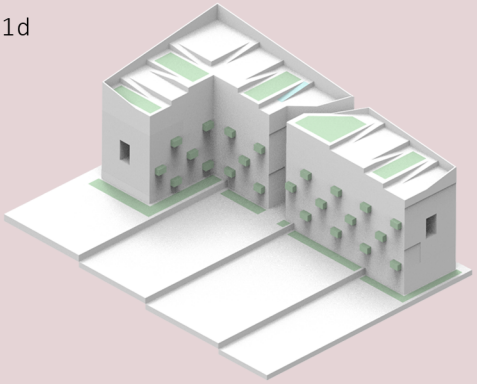
adding landscape
on top

1c



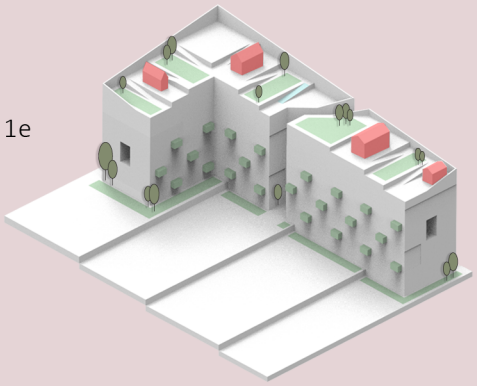
removing some patches to make
way for other activities

1d



transferring landscape to
other parts

1e



adding house-shaped rooms
for different activities

The final development of landscaping on the collectivist block includes the addition of the vegetation that was originlly on the site and would be removed during clearance. This vegetation has been placed back on the rooftop of the building to allow for this space to be activated and used by the residents so that more opportunities for socializing can be present on site.
Finally, the shapes of the buildings that were demolished have also be re-added on the roof, giving reference to the structures that surround the site and also ones to what was originally on it. These house-shaped blocks on the roof can be used for different uses that will be explored in the future.

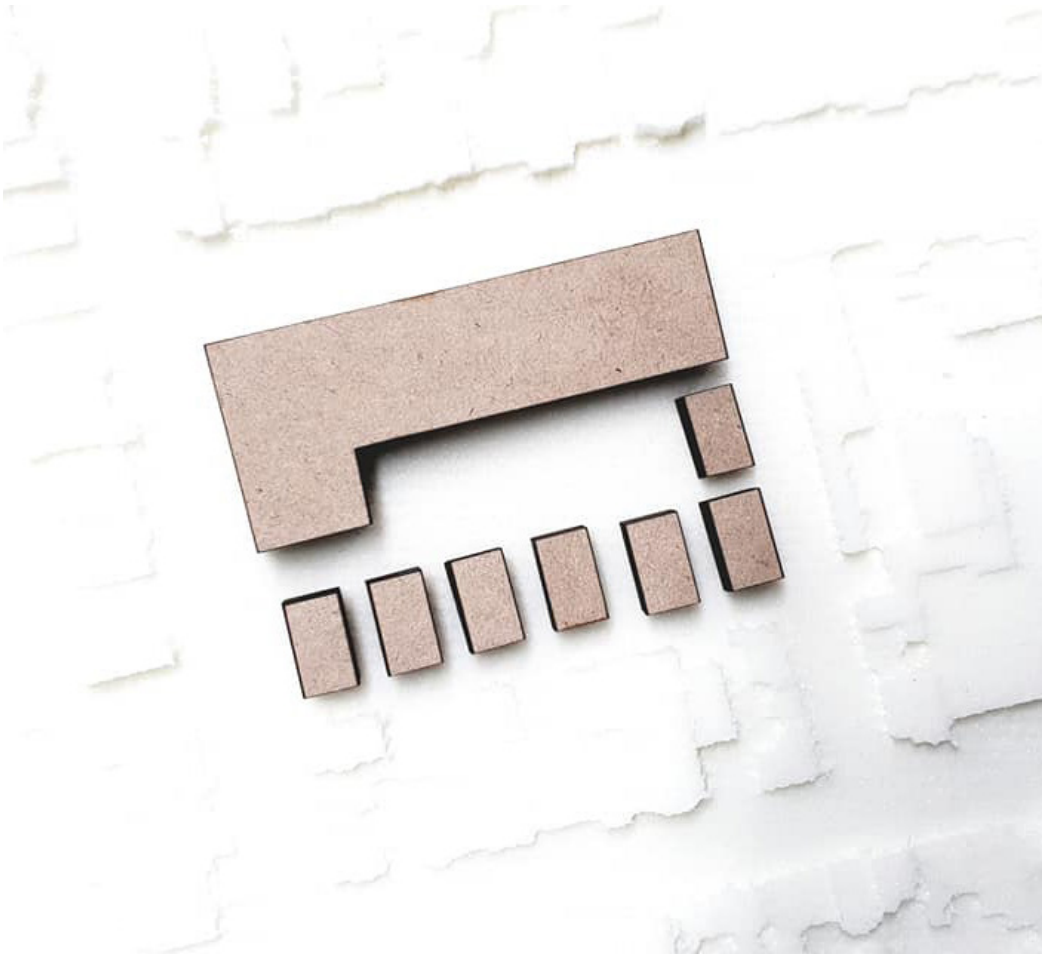
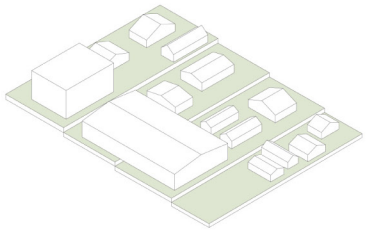
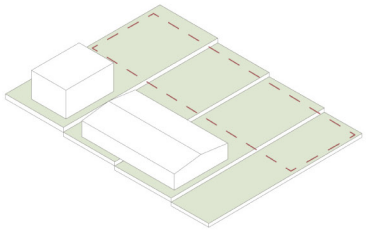


Fig.7.06. Final mass outcome model

1



2



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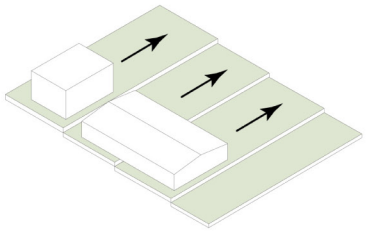

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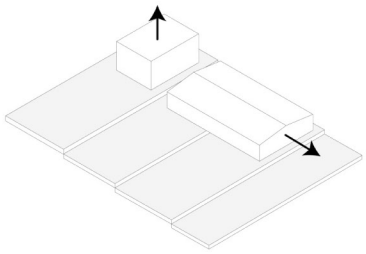

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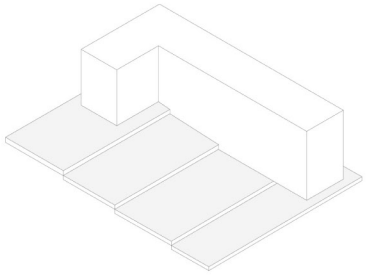

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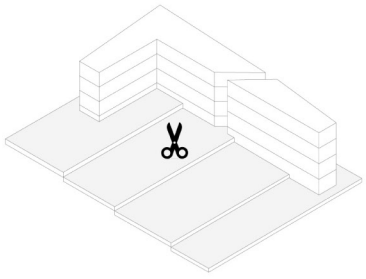

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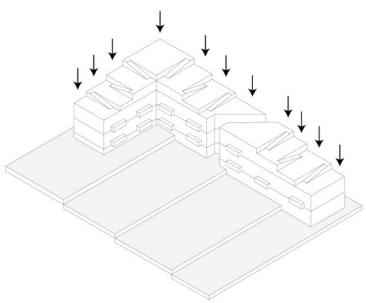


8

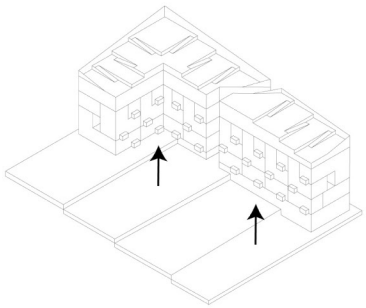
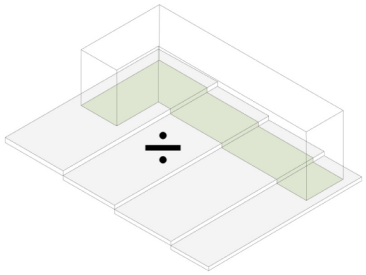


Fig.7.07. Animated series of phase two design development

9



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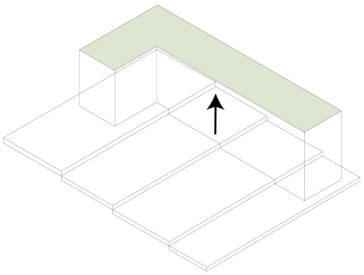

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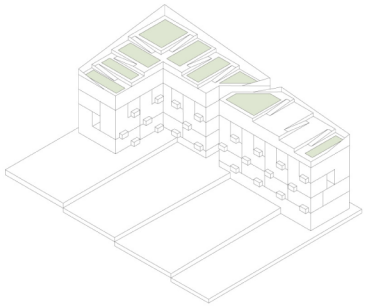

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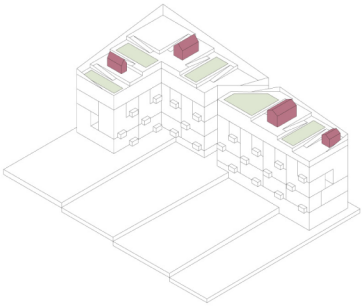

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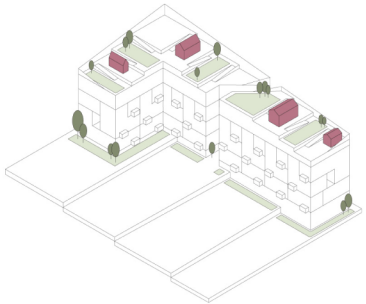
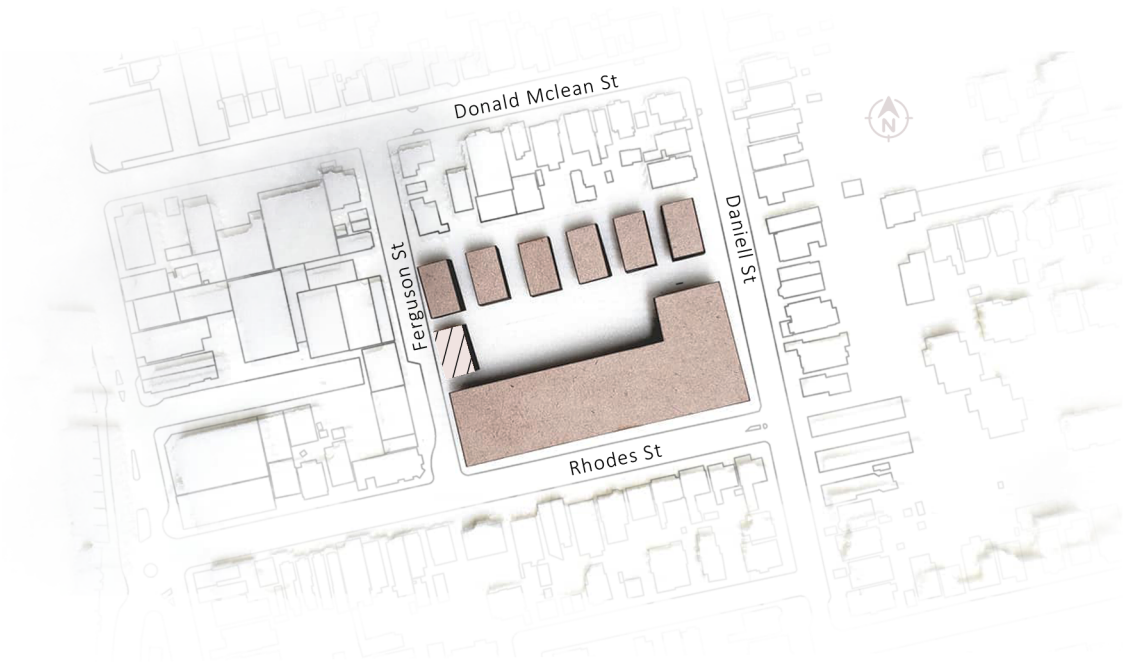
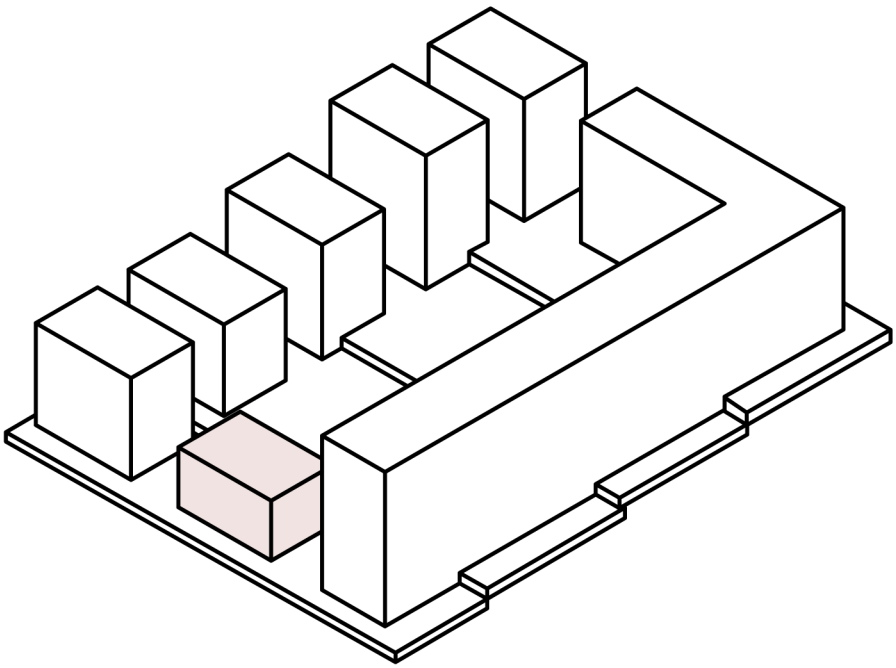


The series of images seen on this spread represents an overview of the development process of the collectivist block of the project. Here we see the progression from the occupied site to demolition to re-design of the new housing scheme

Fig.7.08. Animated series of phase two design development

facilities block





Potential areas of development

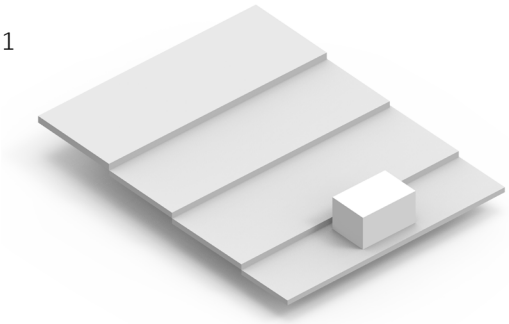
- Laundry
- Games room
- Prayer room
- Community room
- Study room
- Body corporate
Rubbish room

amenity block

developing the amenity block and its' functions

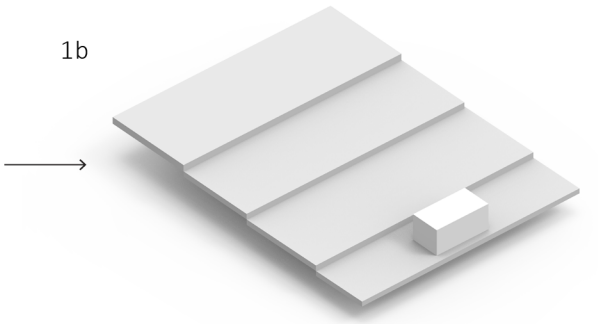
external development

1



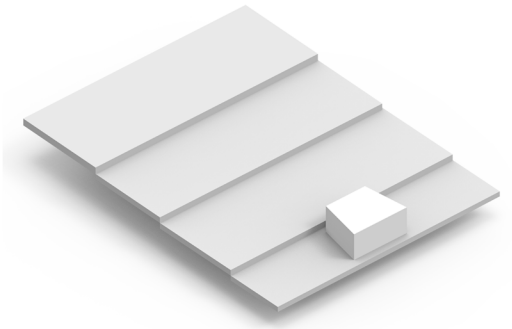
The amenity block sits on the west side of the site, and is located inbetween the two groups, easing access

1b



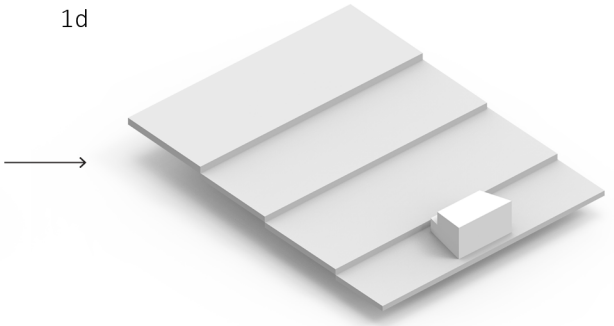
The block is slightly reduced in size to fit the allocated space, and is then divided into two levels of function

1c



The design is taprered towards the east side to make a soft edge that slightly filters people past either side of the building

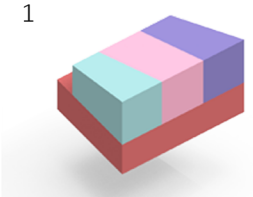
1d



The top level is recessed back to provide a balcony space that overlooks the courtyard and is extruded on the west wall to mimic a heritage building 50m down the road

exploring configuration

1



2

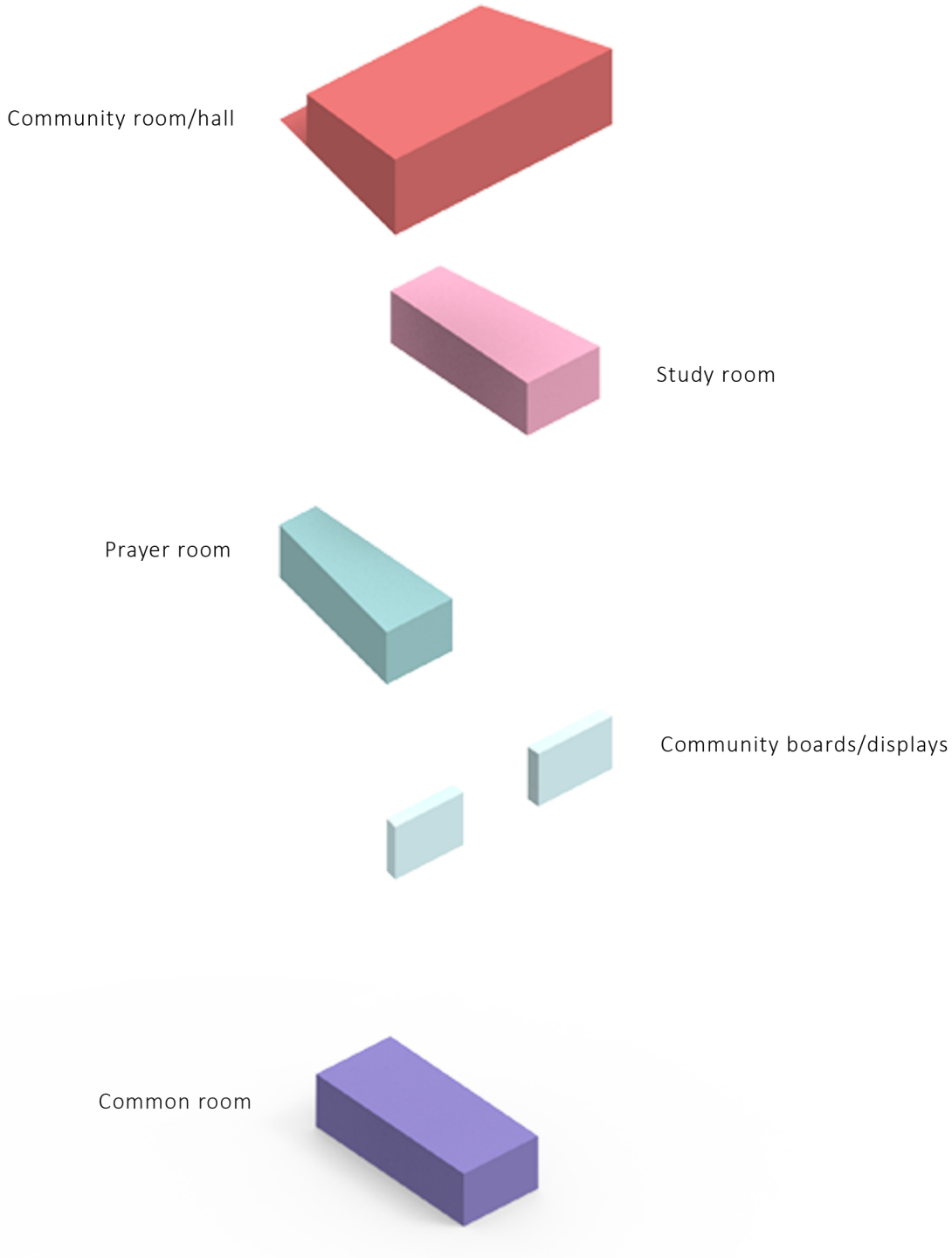
3

- Community room/hall
- Study room
- Common room
- Prayer room

Having the community room at the tops allows for a nice large space with a balcony view of the courtyard and gives privacy for when tennants hire it out for functions. The common room is situated in the middle and will have access from both sides. Within this room will branch the prayer room and study room, whuch can open out into the yard when more space is needed.

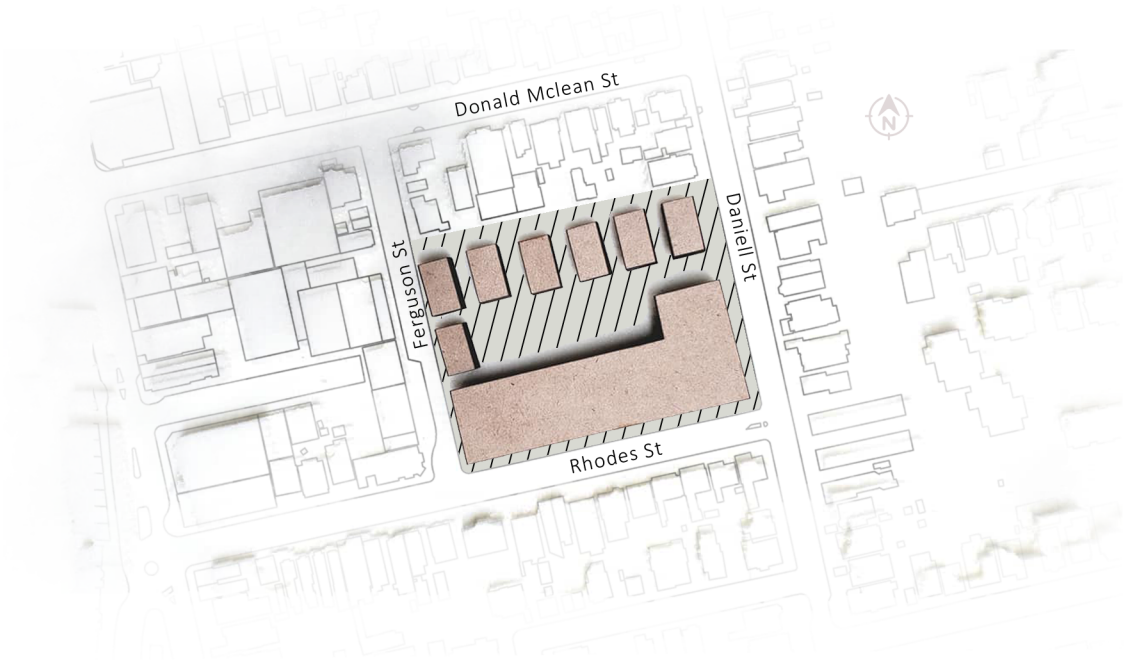
amenity block

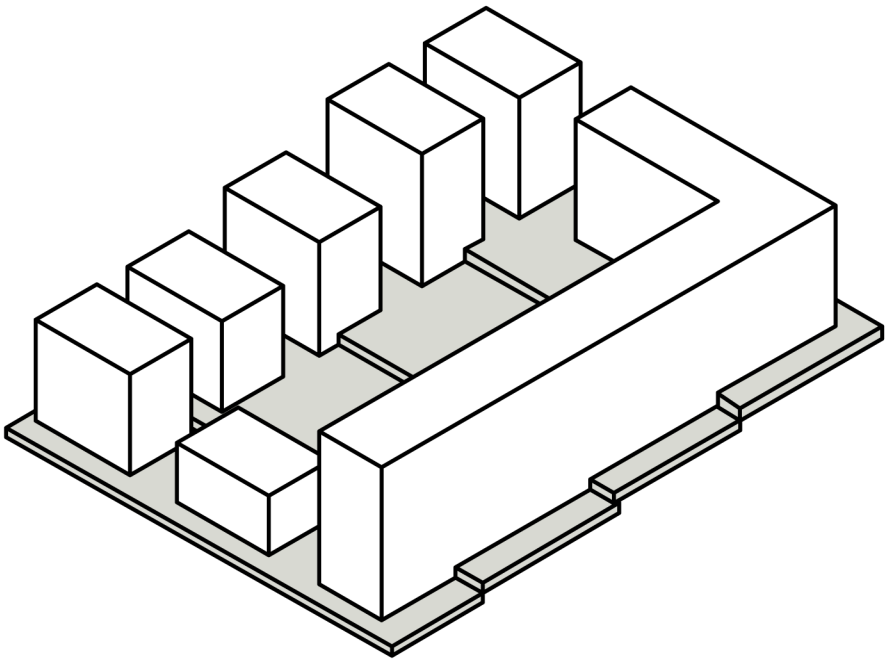
exploded functions of the amenity block



The common room, prayer room and study room are all on the ground floor making access easier for this semi-private areas. The community hall is on the top, allowing a larger space and a balcony to allow events to sprawl out into the site, providing all residents to participate indirectly. Two community displays can house all news and community notices, as well as any artwork donated by local artists, encouraging people to be kept in the loop as well as providing a space to stop and meet

landscaping and access

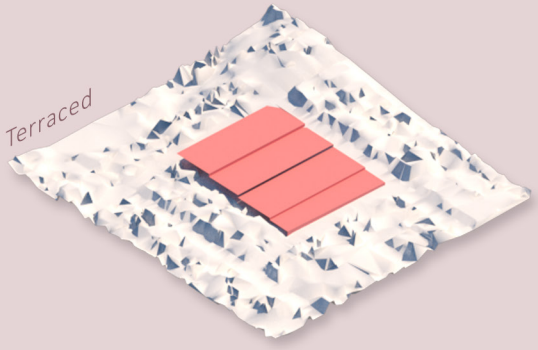


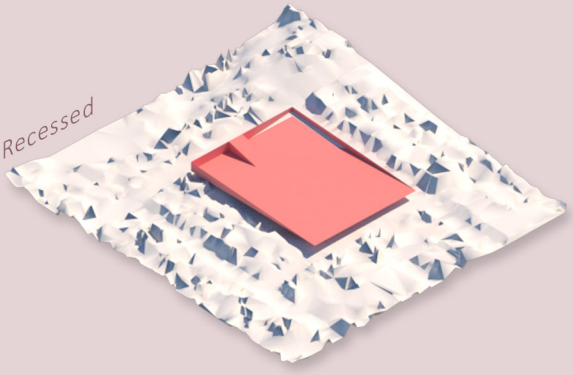


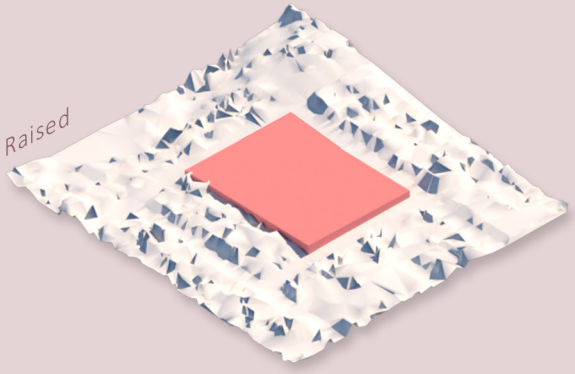
Potential areas of development

- Playground
- Accessways
- Rest areas
- Seating
- Plantations
- Boundaries
- Entrances

exploration of new topography



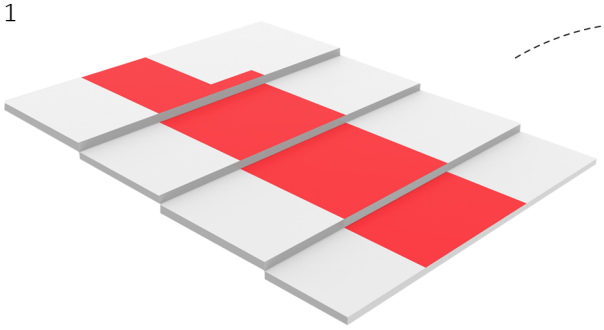




general site landscape

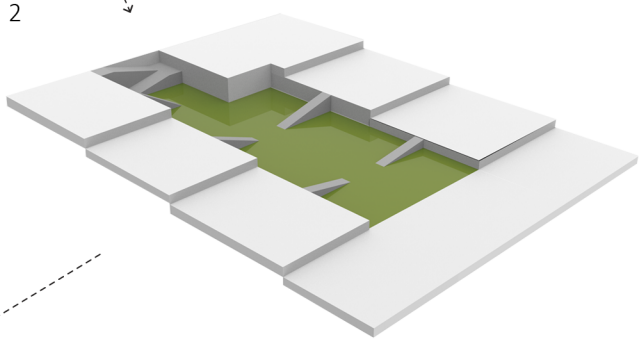
development of general site landscaping

1



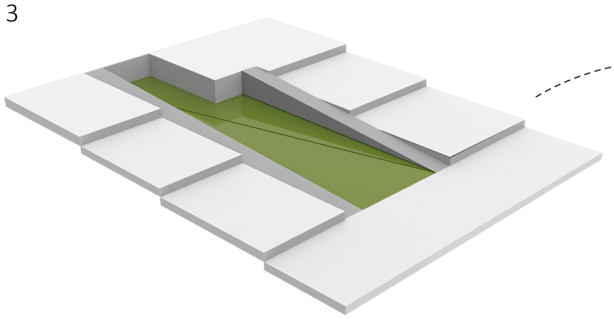
The red patch above indicates the open space yet to be developed on the site

2



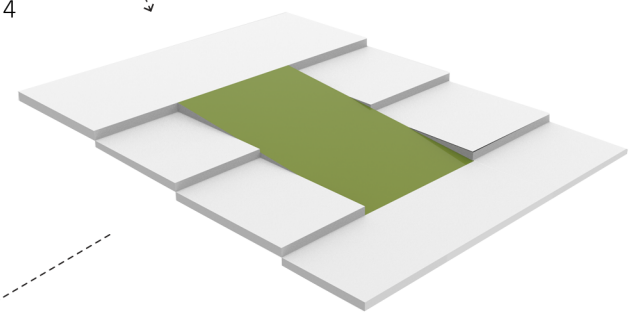
The central area has been dropped down to make a flat park that is easy to use, with access ramps from the dwellings meeting at a central point

3



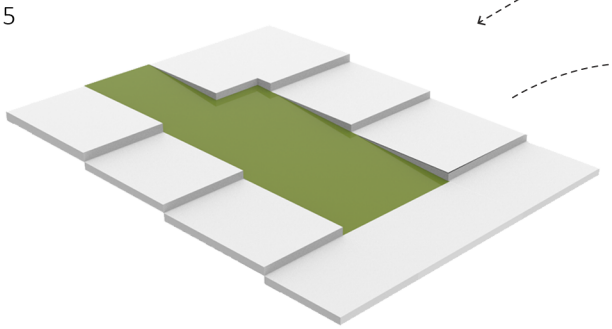
The small ramps have been removed as they create too many obstructions. Instead, two long ramps have been added on the sides to guide people through the site

4



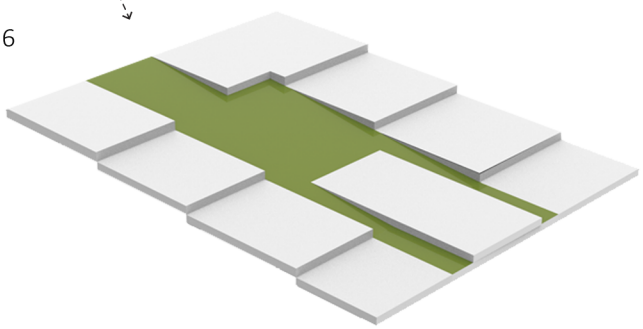
The central area is sloped down in the middle of the site to create a park that has no obstructions or doesnt feel secluded

5



The central ramp has been extended to the east side to make the gradient of the slope easier to walk on for children and the elderly

6



The central patch has been extended from east to west to make moving through the site an easy flow. A new building pad has been added on the west for the amenities block which projects into the center making it a focal point that engcourages engagement.

Final Phase Two Working Design

-

Testing and iterating different design techniques has allowed fore the conception of a final working design.

The following are technical drawings of what has been achieved from the phase two developed design process.

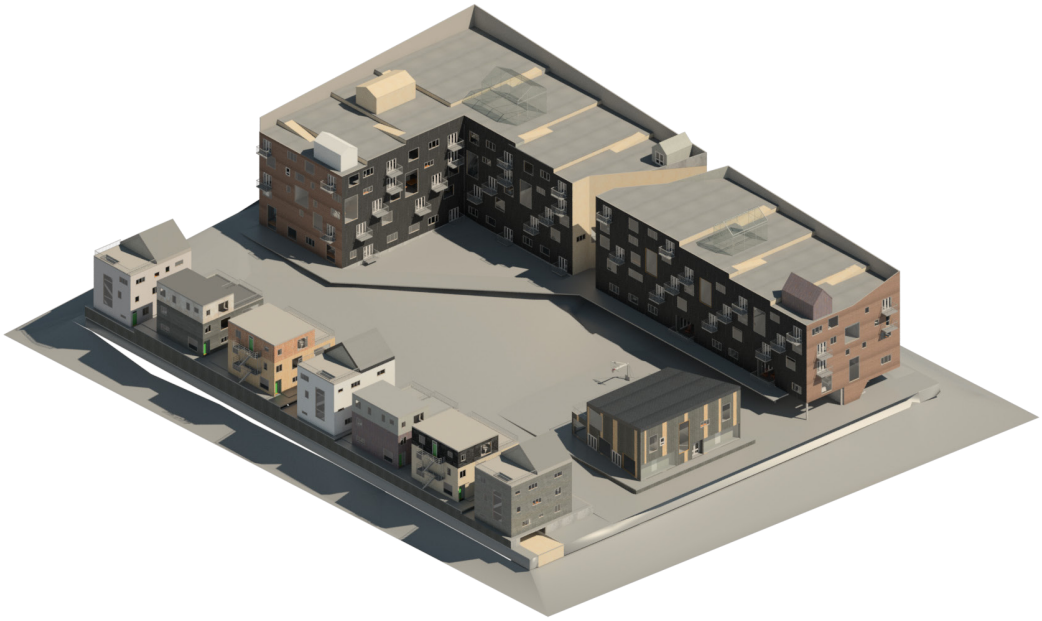


Fig.7.09. Phase two design outcome

Master Plan

Fig.7.10. Site plan

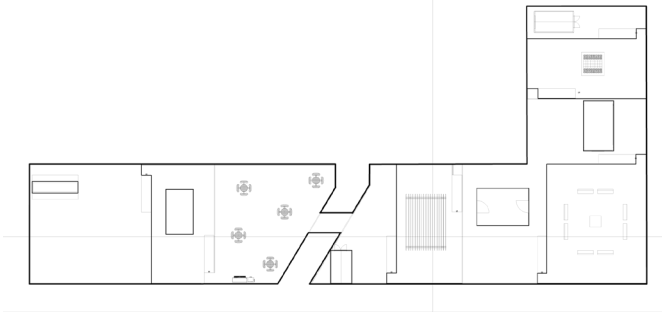
Plans

-

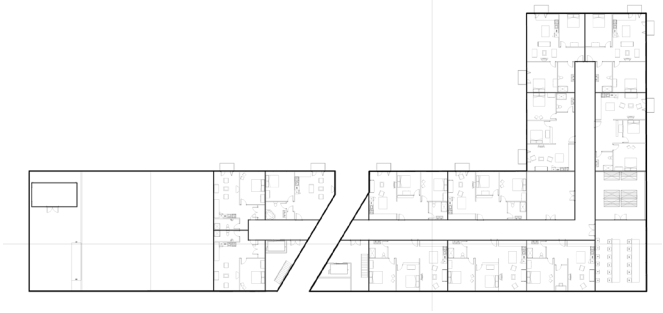
The following plans are of the various different levels of the design. The north of the plan shows the individualistic block and the south of the plan shows the collectivist block. On the west sits the community block that has been placed there to make access to this facility easy for all.

In the middle sits the landscape block, which takes the form of a central courtyard.

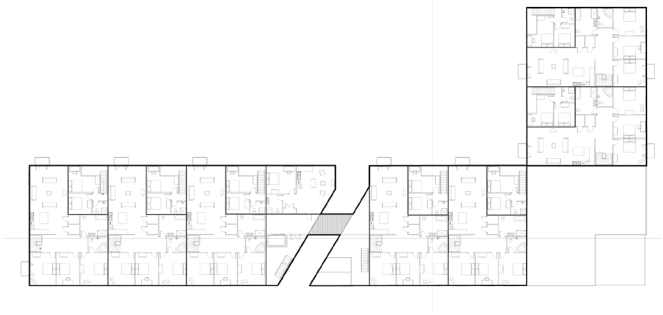
On reflection, this area has not been fully designed and therefore the outcome of this performance criteria not fully met.



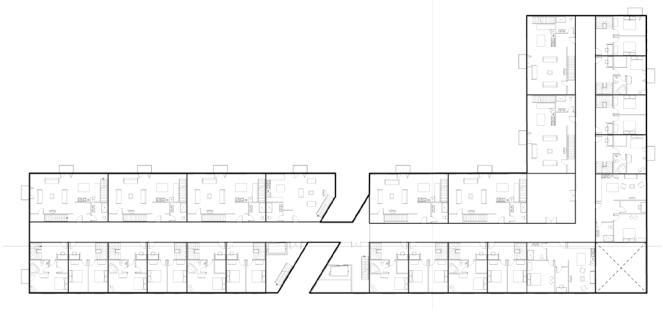
Rooftop Terrace
Elevation: 15.4m
Scale: 1 : 1000



Level 5
Elevation: 12.6m
Scale: 1 : 1000

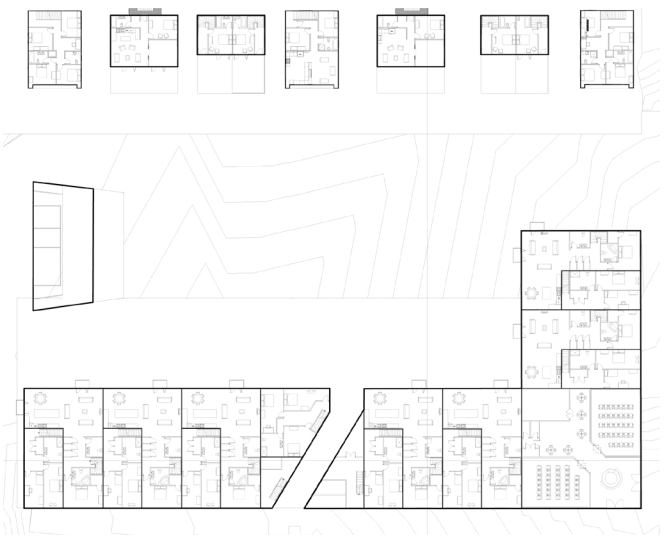


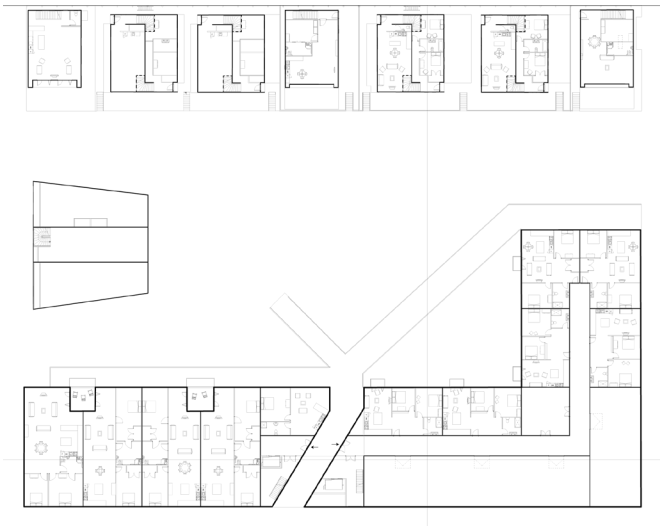
Level 4
Elevation: 9.8m
Scale: 1 : 1000

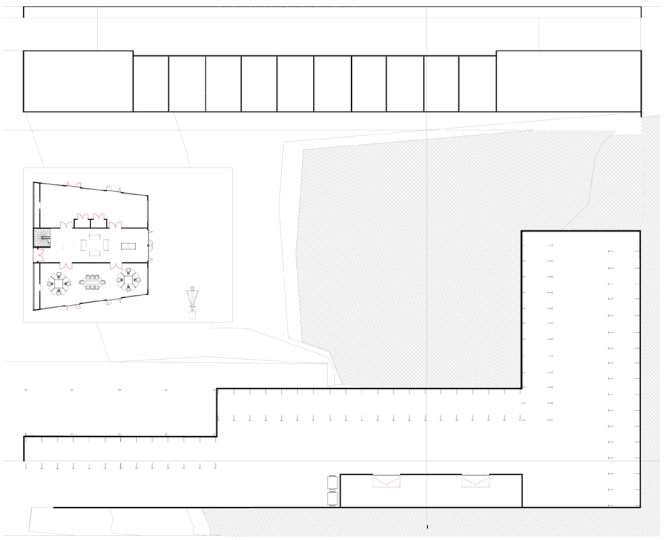


Level 3
Elevation: 7m
Scale: 1 : 1000

Fig.7.11. Working floor plans phase two







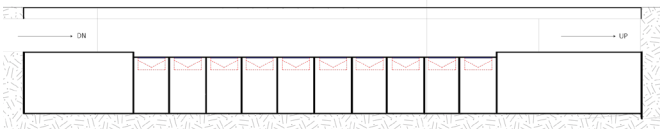


Fig.7.12. Working floor plans phase two

Individualistic Block

Fig.7.13. Individualistic style bock section

Collectivist Block

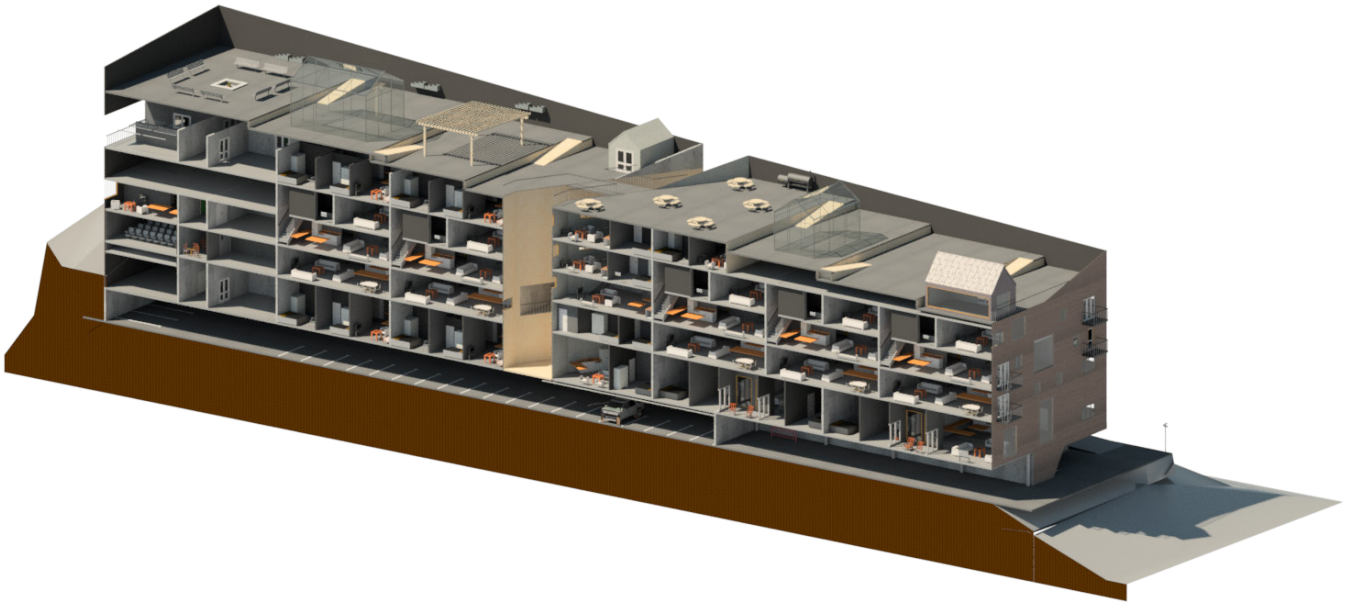


Fig.7.14. Collectivist style bock section

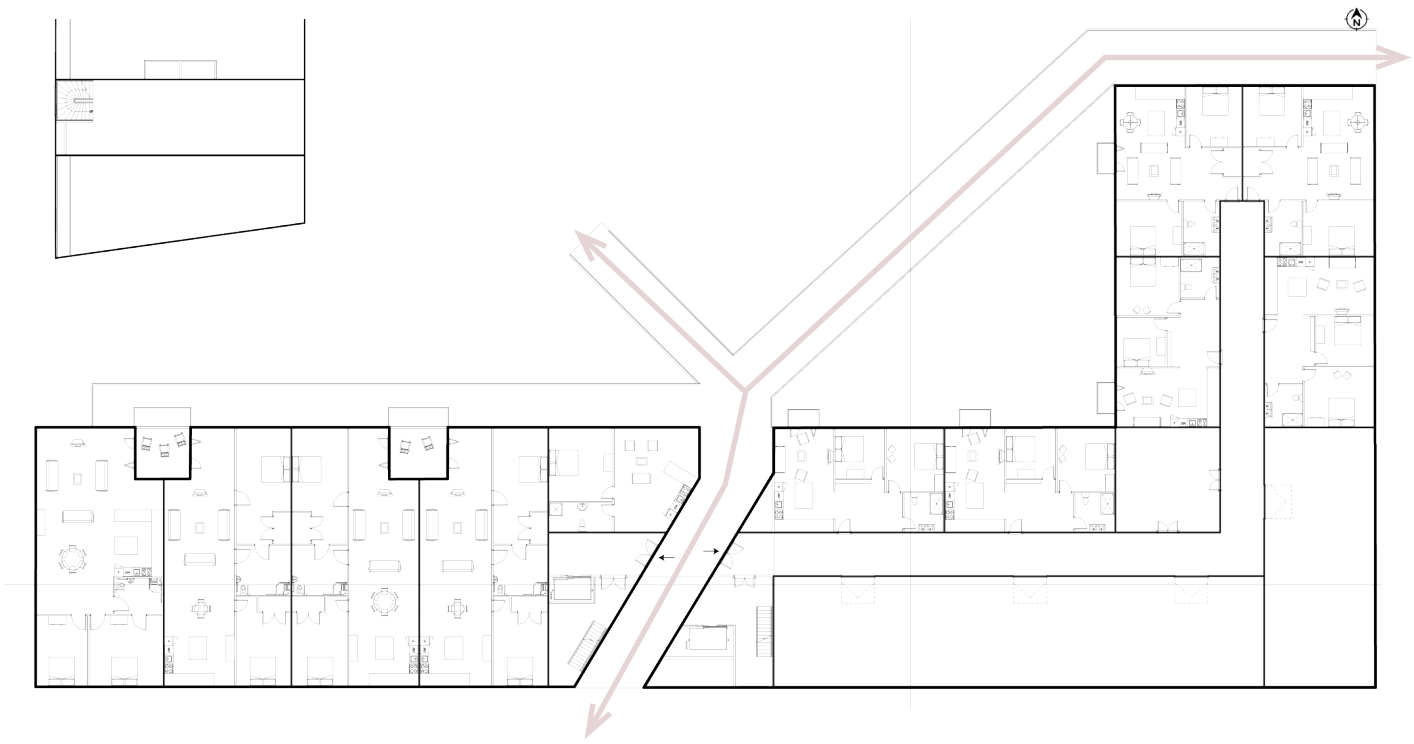


Fig.7.15. External access plan

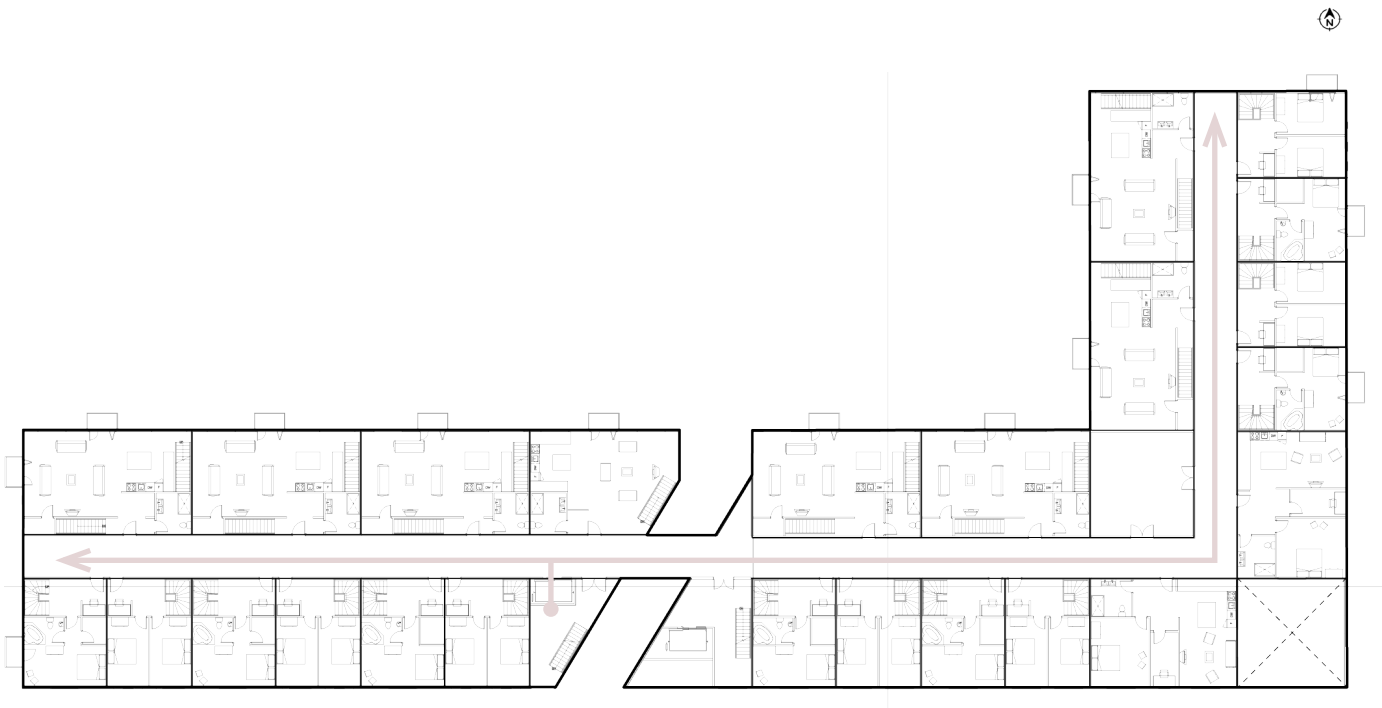
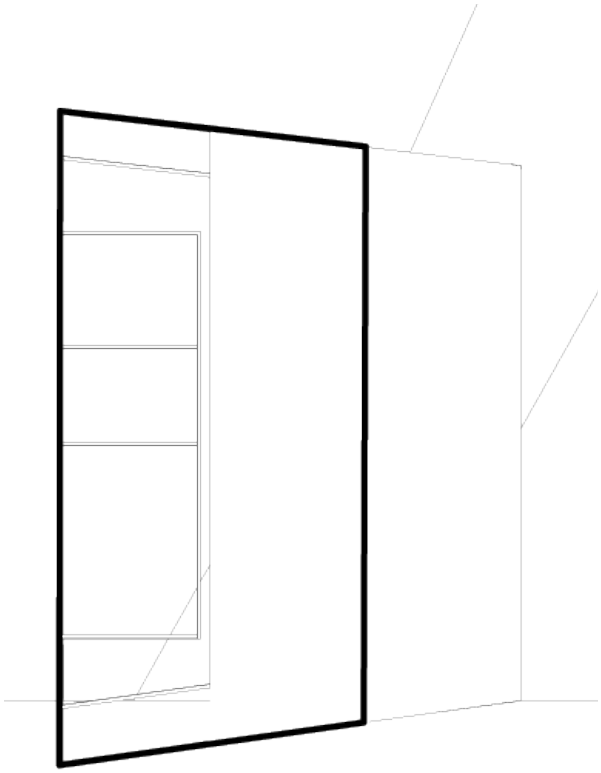


Fig.7.16. Internal access plan

Community Block

-



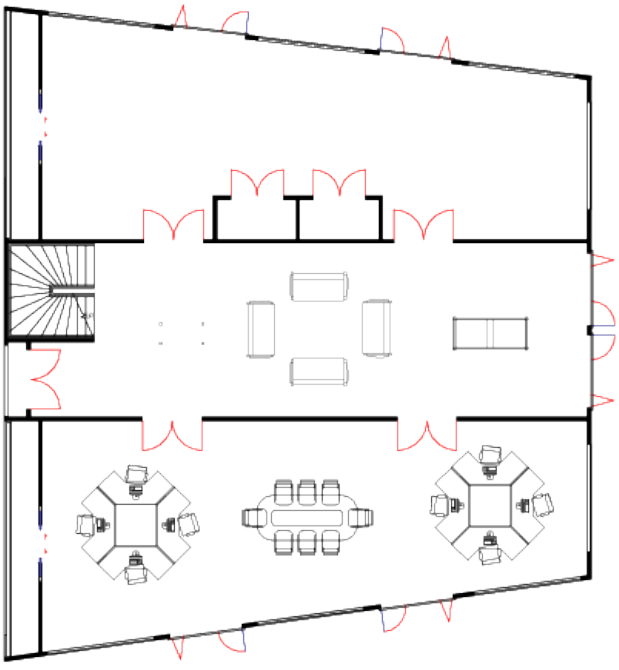


Fig.7.17. Community centre floor plans

The community block, located on the west of the site is a two story shared facility. In this includes a study room, prayer room, common room on the ground floor and a small community room with a spacious balcony on the top floor.

This aim of the community block is to allow and also increase the opportunity for people to meet. the shape of the building pays tribute to the large chunky building that was previously in it's place.

Fig.7.18. Community centre render

Central Courtyard

-

The central courtyard has been designed as a large open space where people can come together in activity. Access to this is through a wide walkway that draws people into the site and facilitates them into the middle.

The topography slopes slightly down the site, reaching the community block on the west side- where people are encouraged to come together and use shared facilities.

On the south-east corner a zig-zag path designed to allow people to stop and sit on top of the edging and possibly engage in conversation.

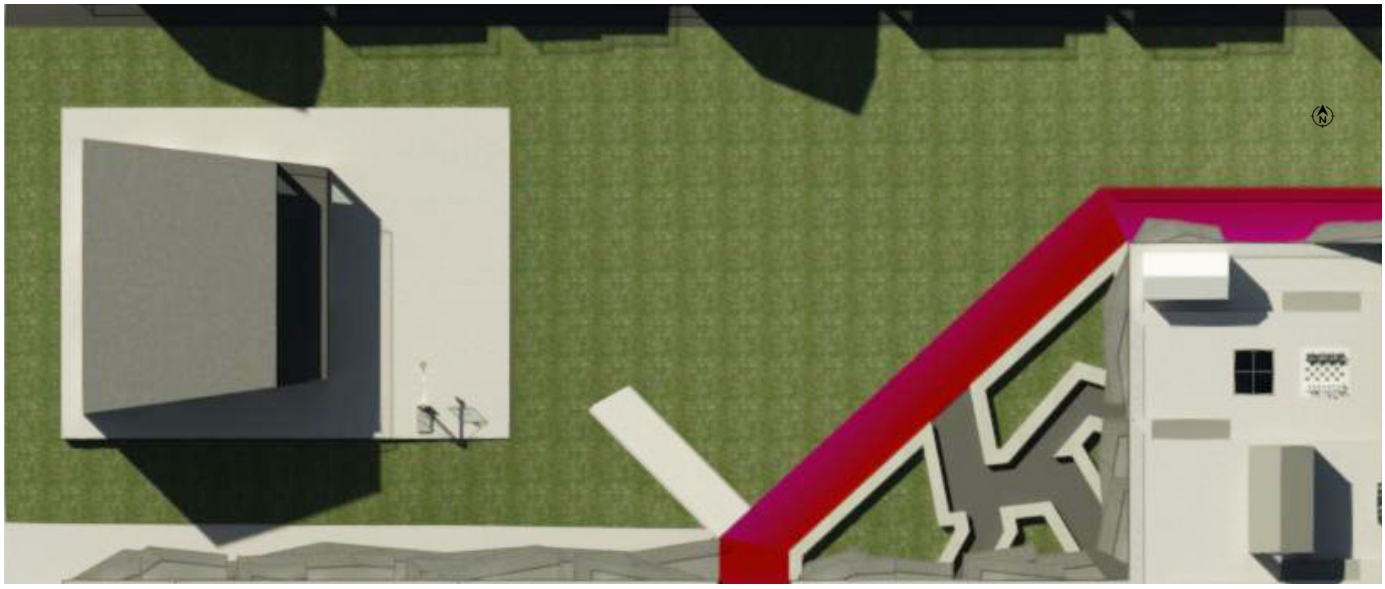


Fig.7.19. Access through development

Fig.7.20. Access to central courtyard

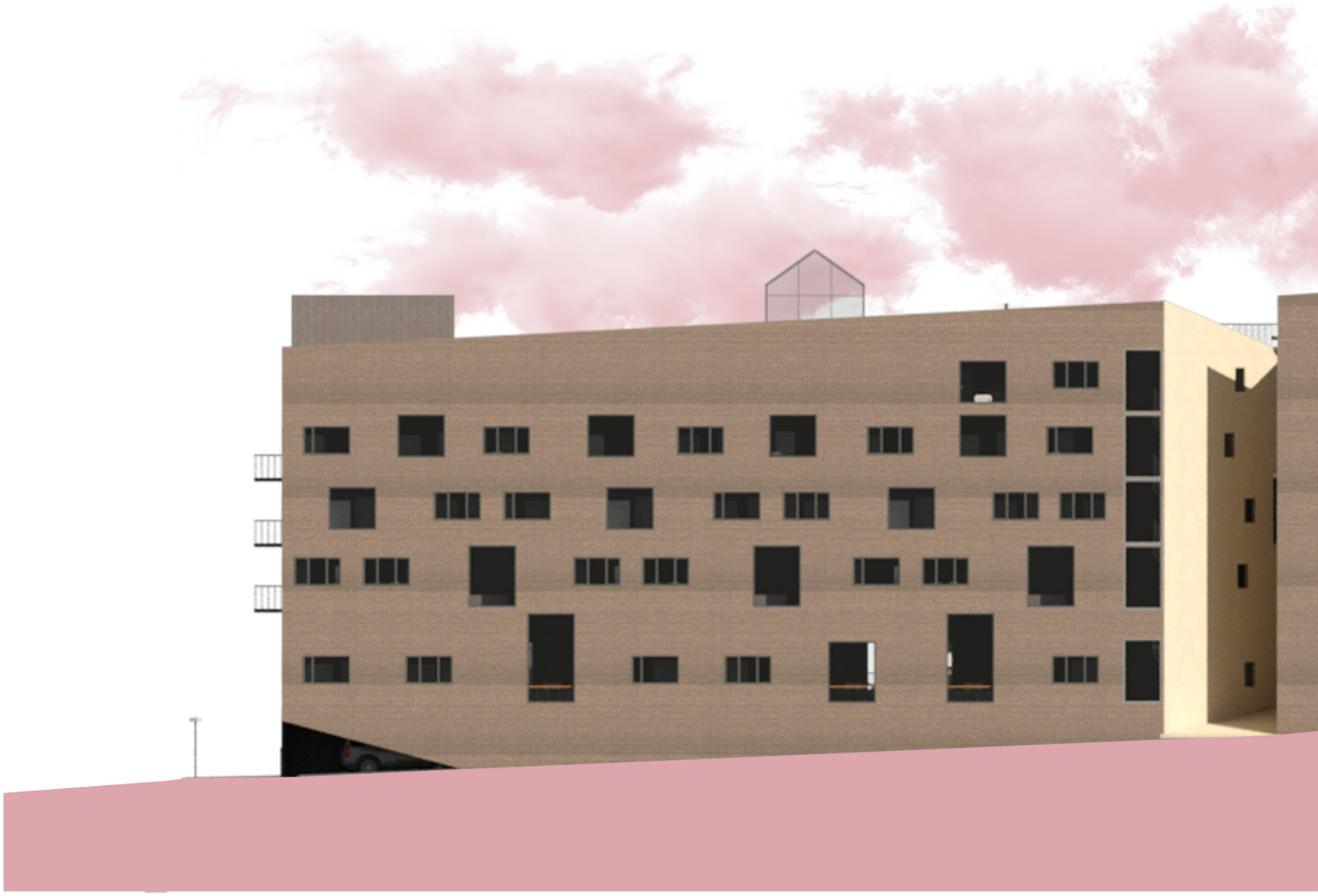
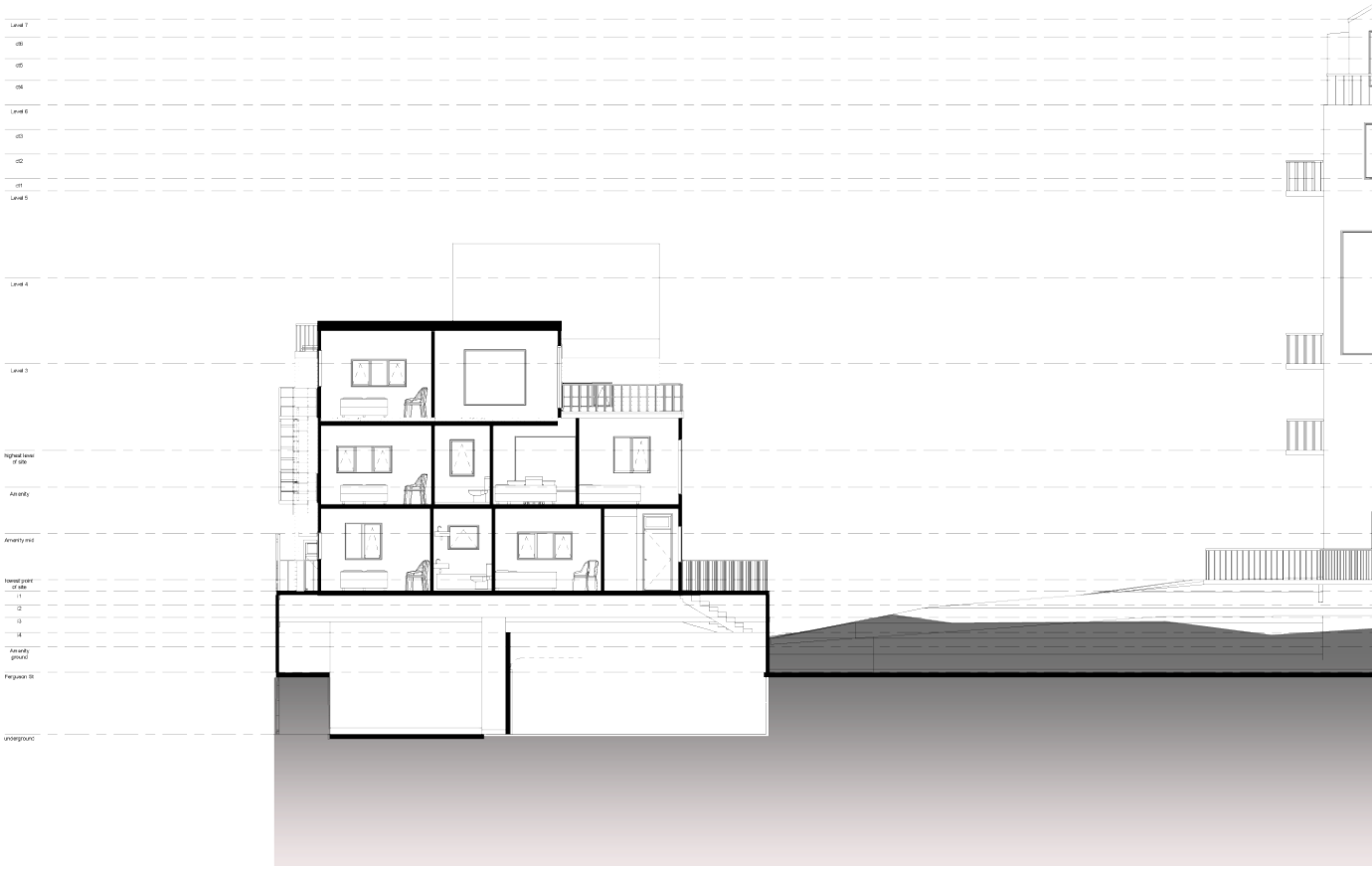


Fig.7.21. South elevation


Level 7
Level 6
Level 5
Level 4
Level 3
highest level of site
Amenity
Amenity mid
lowest point of site
Amenity ground
Ferguson St
undergrounc

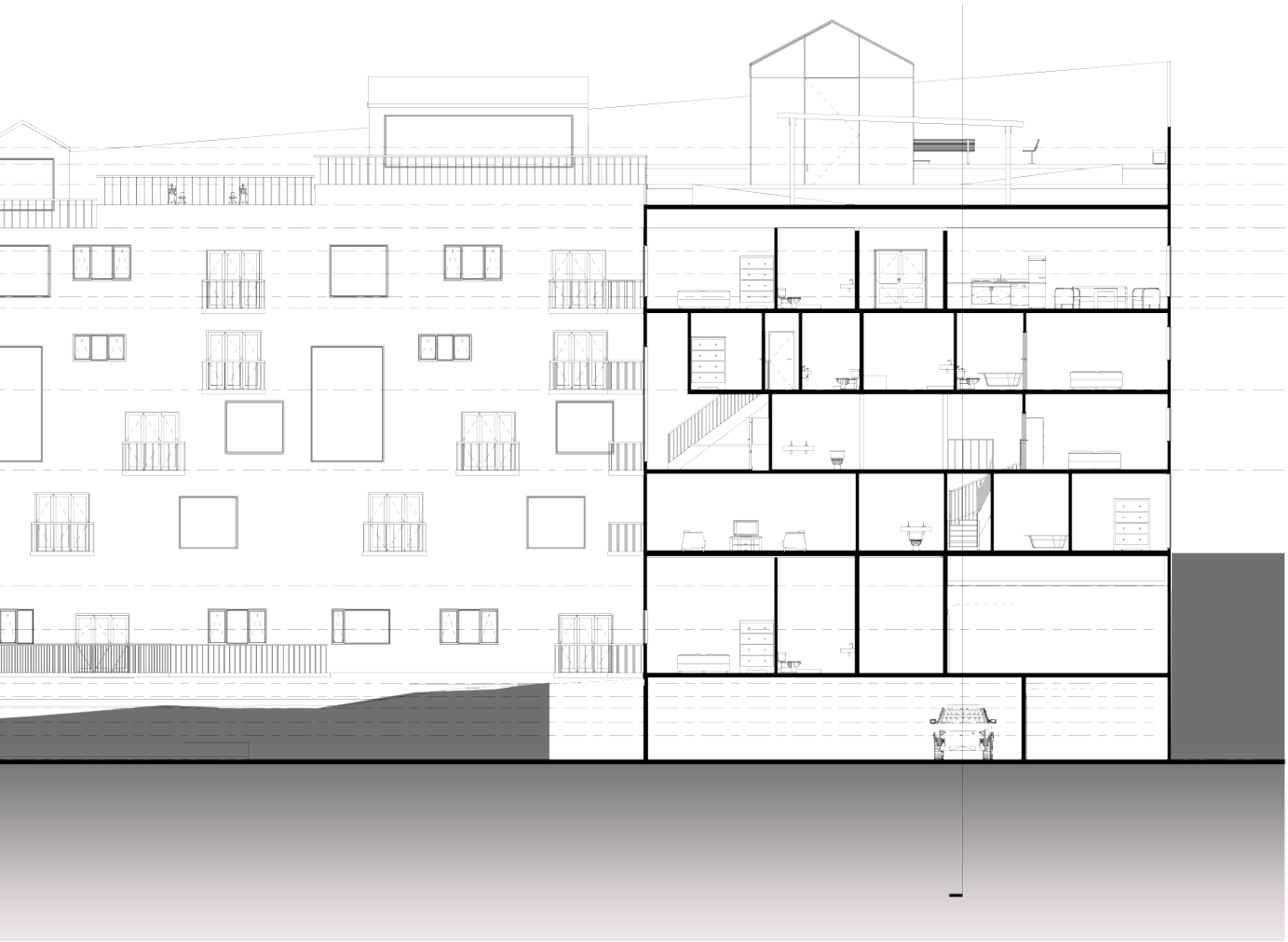


Fig.7.22. Transverse section looking east

Fig.7.23. Building to landscape render

Fig.7.24. Community centre to street render

Fig.7.25. Interior of community hall

Fig.7.26. Collectivist block shared corridor

Fig.7.27. Shared corridor view of courtyard

Fig.7.28. Individualistic block ‘streetfront’

Fig.7.29. Shared carpark through Ferguson

Fig.7.30. Individualistic block individual entrances

Design Phase Outcome

-

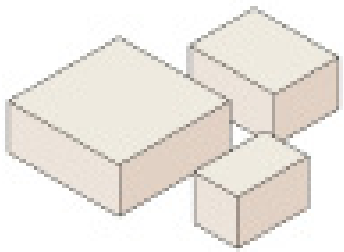
The design concept reached at the end of phase two is a complete process of the development of the four different zones of the project.

Compared to the first phase, this outcome reflects better the performance criteria that was set out from the start and has done so by following some of the key principles from the literature review and precedent studies.

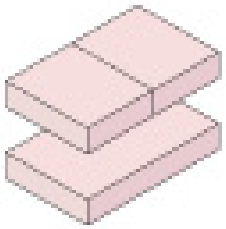
This new concept addresses the thesis question in the form of density, living options, flexibility and accessibility, but does not fully address the criteria of mixed use and green space. Future research in the next phase will investigate how these two criteria can be met to fulfil all of the criteria determined for a successful social medium density project.

Analysis of Performance Criteria

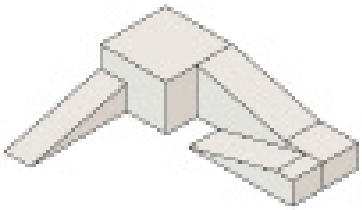
-



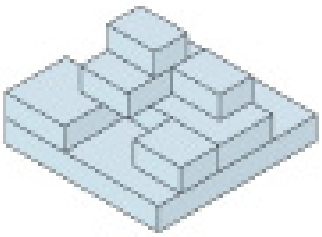
Living options
that cater for groups of different size and requirements



Flexibility
of living and recreation spaces for different activities to occur at the same time



Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space

Mixed use
that introduces different levels of interaction and engagement on site

Green spaces
that allow people to come together when desired

Design Review Two Critique

-

The design reached at the end of this phase responded much better to site conditions such as sun and wind, with the massing development being mostly generated by these factors. The transitional spaces were also addressed to make sure that people would be able to feel safe and included, although there are still aspects of these spaces that could be refined. From the initial low-line concept, the reviewers in the first phase challenged the project to go higher and see what this would result in. Having done that, – primarily for the collectivist block – it was realized there could be more people housed on the site which would mean more people to socialize with. However, this would also come with challenges such as privacy, larger hallways and district planning regulations. Commerce was also added to the complex in form of a cinema, as it was identified that many collectivist cultures believe a business is the core of economic growth for both the family and community. More facilities and points of interaction were added so that there is more chance of bumping into a neighbour and starting a conversation. Finally, the aspect of flexibility was developed, which resulted in interesting forms and orientations of internal layouts, making sure that different cultures and groups could slot into the design where it would suit them best without much discomfort.

Strengths:

- Impressive approach to planning of this scheme and analysis of the situation

- Amount and quality of work at this point is very high

- Tetris design has a lot of vitality – but needs to be pushed further internally

- Starting to form a universal design that will allow people maximum flexibility and possibility given the different cultures

- Very clear presentation and development of the stages
- Massing of the site seems to work quite well; there is a mix between the different cultures and what they might want

- Good points of interaction around the site - although showing this could be improved

Future considerations:

- Check the details of the planning against the larger scale planning of the design. Designing in three different scales will provide a better design outcome.

- Provide more detail of the internal layout and show how these spaces might speak to each other. Entrances and front doors need to be addressed – how do people feel safe next to each other? How many people share the same corridor?

- Give attention to how people might transit through and access public, semi public and private spaces. Design the internal and external spaces in relation to expected behaviours.

- Further elaborate on materials and what emotions they might create

- Focus on creating spaces where different communities can form within the wider community of the site.

- Expand on the relationship of the development to the wider area – how does it connect with the neighbourhood? How does the public move through the site? Elaborate on the movement.

- Show the diversity that is being allowed for, for people both in and out of the site. Are there places for them to stop and integrate themselves? How can this community contribute to the overall community?

Fig.7.31. Final design phase two outcome

Design Review Two Reflection

-

Phase two explored many different design iterations to come up with a final concept that aimed to solve all the problems identified with designing housing for different cultures. This phase consisted of vigorous testing of both overall mass as well as mid-scale detailed design that led to creating a full concept that was able to be presented at a critique. The process of developing each part separately allowed special focus on what needed to be achieved for that particular part, however, the main aspect that had aimed to bring these two groups together was underdeveloped and so meant that it would be under-utilized by the inhabitants. The zoning of the different parts on the site was helpful as it allowed the development process to be structured and thorough. However, the green spaces and 'courtyard' of the design still need a bit more work and consideration, to tie the whole scheme together.

On the micro scale, more attention needed to be given to the internal spaces and how they might communicate and interact with others. How can one culture use the space compared to another? For the next phase, the smaller details need to be developed further – for example the hallways that might seem too institutional should be fun instead, so more people are encouraged to spend time in there, as well as the entrances to houses, as privacy and thresholds are quite important in these areas. The linkage between these indoor spaces and outdoor spaces are also vital as it determines how people might behave in them.

On the larger scale, more attention also needs to be paid to how this development might fit into Newtown's context. The neighbourhood needs to be better reflected in the new development so people still feel a part of Newtown's rich and traditional setting.

Overall, the second phase was a lot more constructive and followed the guidance of the literature in a more succinct way, resulting in a positive second review and outcome. The quality as well as quantity of work produced was good, forming a strong platform for the detailed design phase.

08. DESIGN PHASE THREE

Concept design
Phase 2
Developed researched design
Phase 3
Detailed researched design response

Design Phase Three - Detailed Design

-

Although phase two was successful overall, it was still lacking key components of the social aspect of this design. The third phase aimed at addressing the green and public spaces as well as accessibility, context and overall detailed design of the project. In this phase all of the remaining performance criteria aimed to be met and were checked against the design and the research was divided into areas of focus to bring the final design together.

In addition to this, the spaces that provide mixed used facilities need to also be explored, before bringing the complete design together.

Phase three looked at the following:

- Refining the vertical and horizontal accessibility
- Refining connections
- Developing housing options
- Developing the community centre
- Improving relation to context
- Creating social spaces and internal 'courtyard'
- Exploring materials
- Adding different mixed uses to the site
- Finalizing detailed design

Note: These stages will be shown through both, the phase three and final design chapters.

Refining Accessibility

-

One of the key features at the end of phase two was the large internal corridor in the collective block which was designed as a smart interlocking system that aimed to increase the social interaction between users and create an interesting layout of apartment interiors.

However, this had turned out to be counter-intuitive as it raised many problems such as privacy and accessibility due to too many people sharing a space, lack of natural light and long walking distances, especially for the elderly.

Therefore, this corridor was revisited to formulate a better design outcome.

Case Study:

Central Park Apartments were visited in Wellington to get inspiration for better circulation within a building. These apartments were recently renovated by Novak + Middleton Architects; where they converted a long horizontal corridor into smaller vertical ones. This project was successful and on discussion with some tenants, the corridors were very fruitful in allowing people to get to know each other. Therefore, this design follows a similar change, where the large shared corridor is changed into various different ones along the collectivist block.

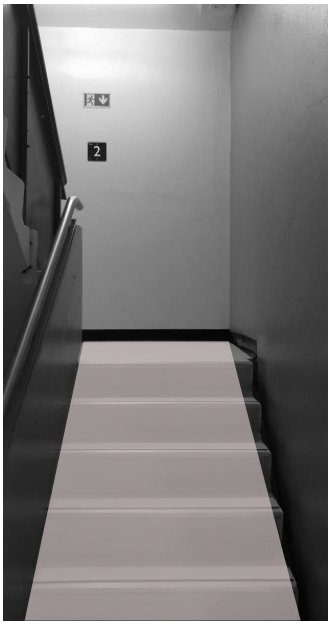


Fig.8.01. Author's images and vertical analysis of Central Park Apartments, Wellington

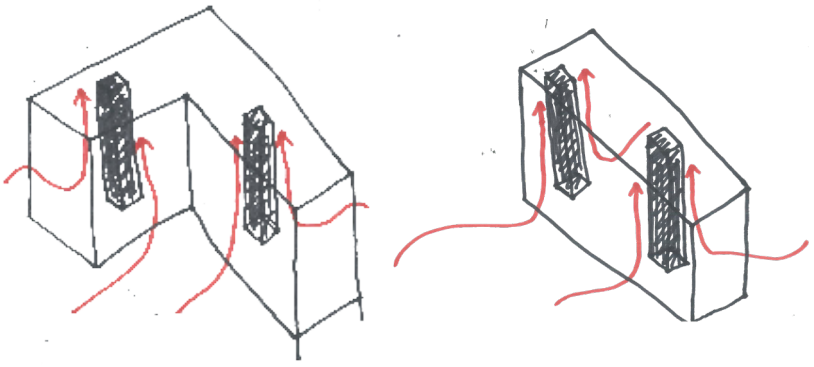


Fig.8.02. Sketch of desired vertical access in design

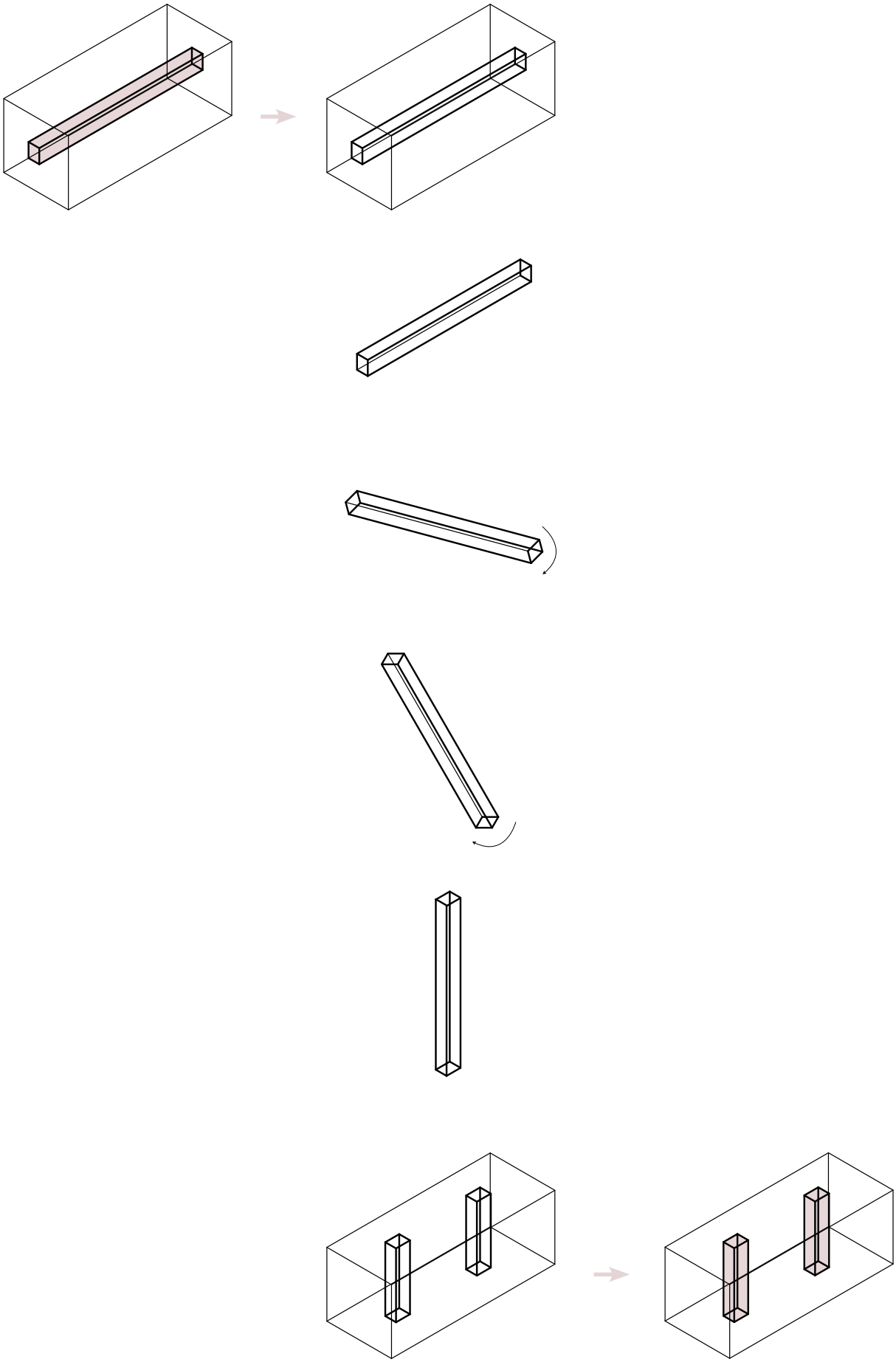


Fig.8.03. Development of design’s vertical access

Similarly, on the individualistic block, it was found that the original staggered floor slabs would be better to give the feel of individuality- much like what is found around Newtown.

However, it was identified that this would also mean separate entrances and therefore less interaction between these different families.

It was decided that the best solution would then be to flatten the shared access-way of the individualistic block, so that people could walk past each other on the same level and potentially interact.

This was also an idea extracted from the visit to Central Park Apartments, where the common access was on one level, allowing people to flow past each other in a more open way.

Fig.8.04. Author's images and horizontal analysis of Central Park Apartments, Wellington

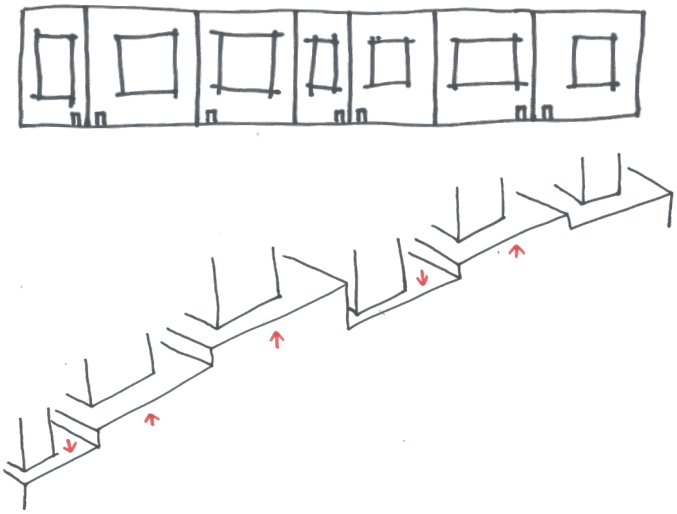


Fig.8.05. Broken and private access in phase two

The top two sketches are the layout of the individual houses on the north side of the site. Here all the houses are placed in a line with varying heights and private stair access.

This has been changed to one flat pad that these houses sit on to allow people that access it a platform to mix and mingle as they walk past into their homes. It has also been staggered in plan view so that it creates a bit of privacy between the houses and also is visually interesting on a street level.

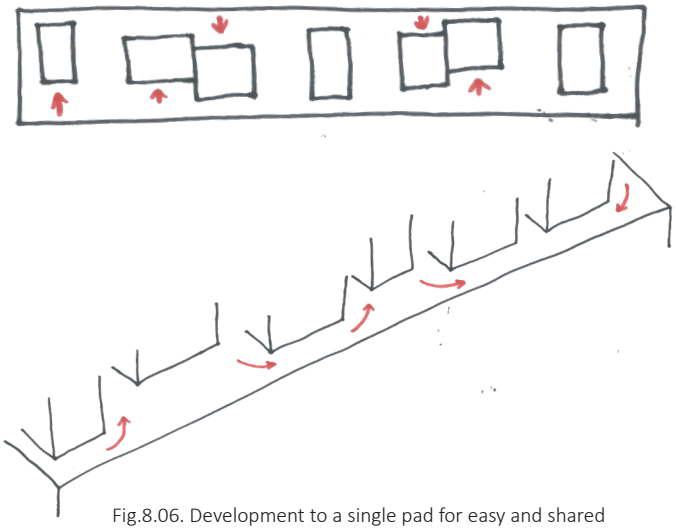


Fig.8.06. Development to a single pad for easy and shared access

Creating Green and Social Spaces

While the internal spaces were developed well and met multiple guidelines from the local and international design guides such as the Auckland design manual, Pacific housing guide and good solutions guide, the external public spaces and the relationship of the site to it's context was lacking and needed more attention. Articulation of the site as improved and how the public might connect with the development as considered.

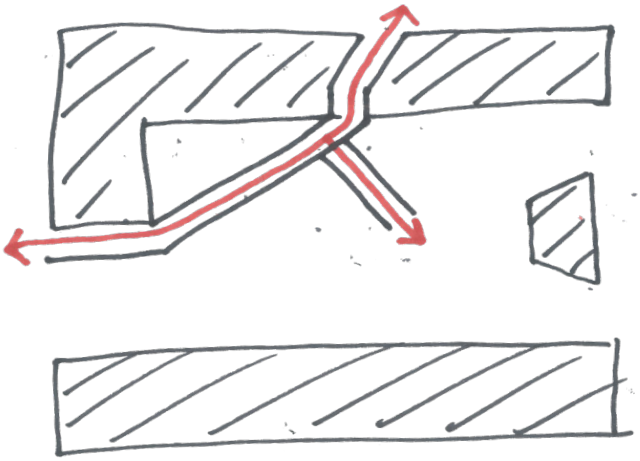


Fig.8.07. Green-space and access phase one

The sketch on the left portrays the main access circulation at the end of phase 2. Here we have a wide pathway that connects the East of the site to the South, allowing the public to walk through the development and take a short cut to the main roads of Newtown.

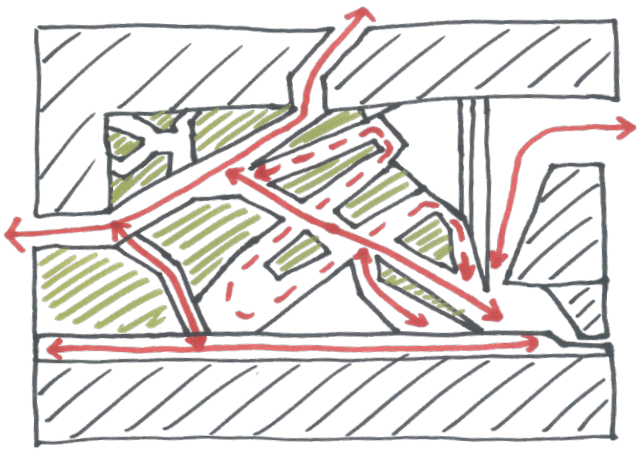


Fig.8.08. Green-space and access phase two

In phase three this was iterated further, and the central part of the site was given more attention in order to fulfil the requirements of the literature review. Here this wide path is extended on and cuts another axis through the site, drawing people into the middle to encourage more contact. The two level of flow are via stairs and also a ramp that has been specifically designed for elderly who choose to walk around the site for exercise purposes - something that is found in common in all cultures.

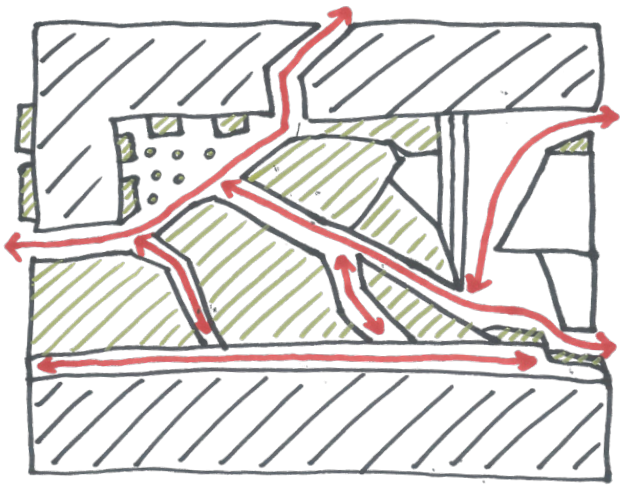


Fig.8.09. Developed green-space and access phase three

The final iteration of many in this series builds on the previous, but takes away the winding ramp to provide more flat green space that people can use. These green spaces are devided into different zones so that different people and activities can use them at the same time - as advised by theorist Bernard Tschumi. The area at the brink of the collectivist block has also been refine; circle planters and raised beds create privacy and add places where people can sit and chat.
These two levels of movement and activity allow for different levels of social interaction.

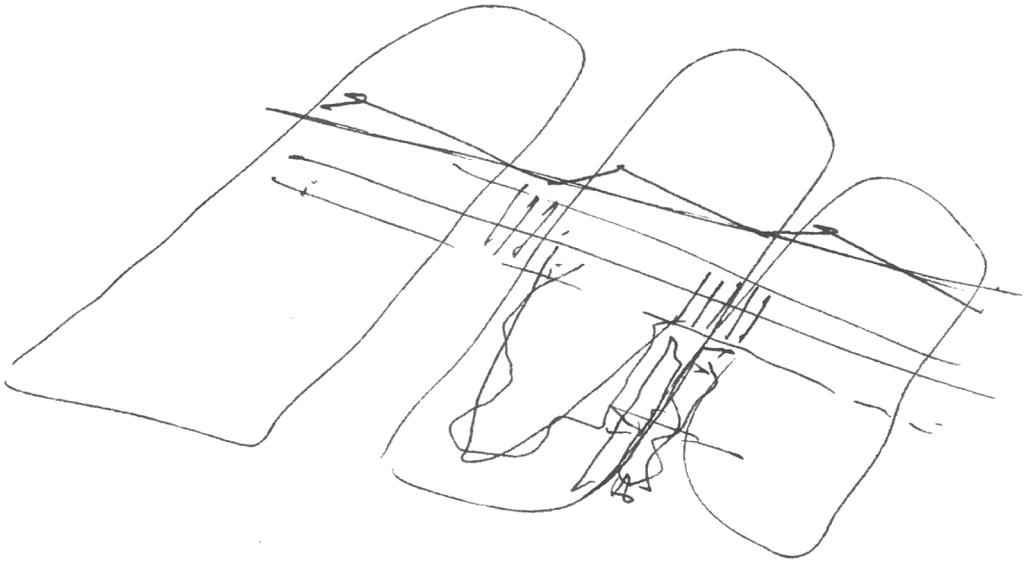


Fig.8.10. Sketch of desired courtyard design

Fig.8.11. Sketch of collectivist block entrance development

Fig.8.12. Newtown's different pathway styles to be incorporated

In addition to the large green open spaces, there have also been smaller, more intimate spaces to enjoy greenery. These have been places both among the individualistic pad and also on the collectivist roof. These are semi-private spaces where people who prefer quite space can recreate. This hybrid of large and small spaces are crucial for designing for different people.

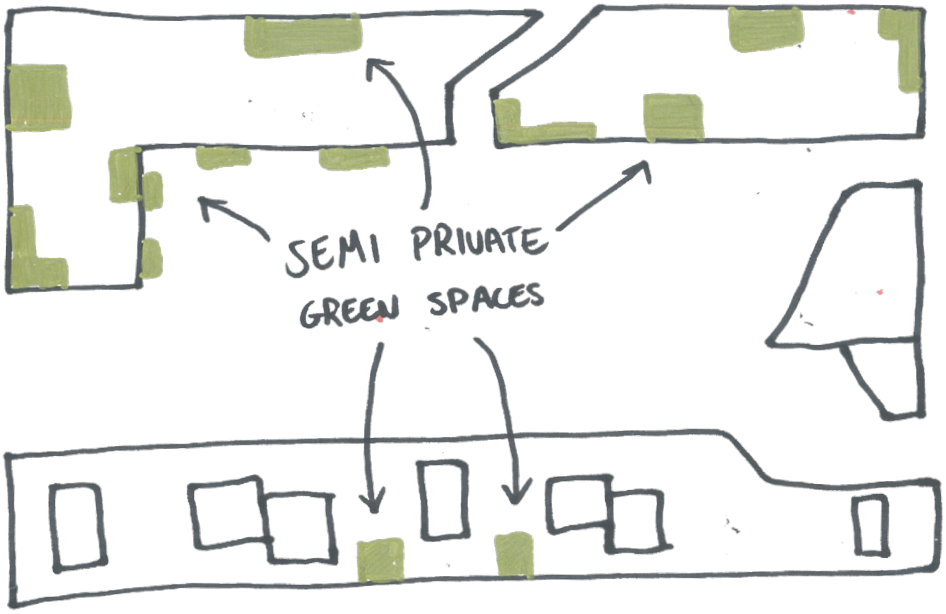


Fig.8.13. Green spaces for resident use

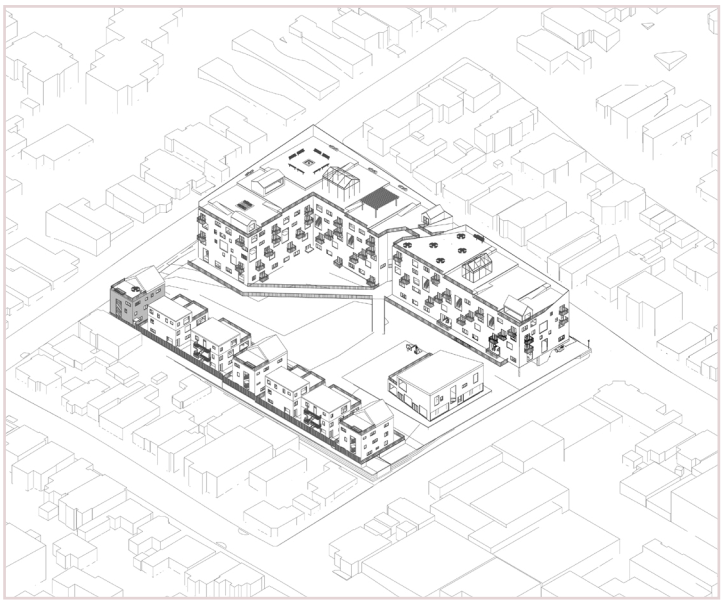


Fig.8.14. Courtyard and access at phase one

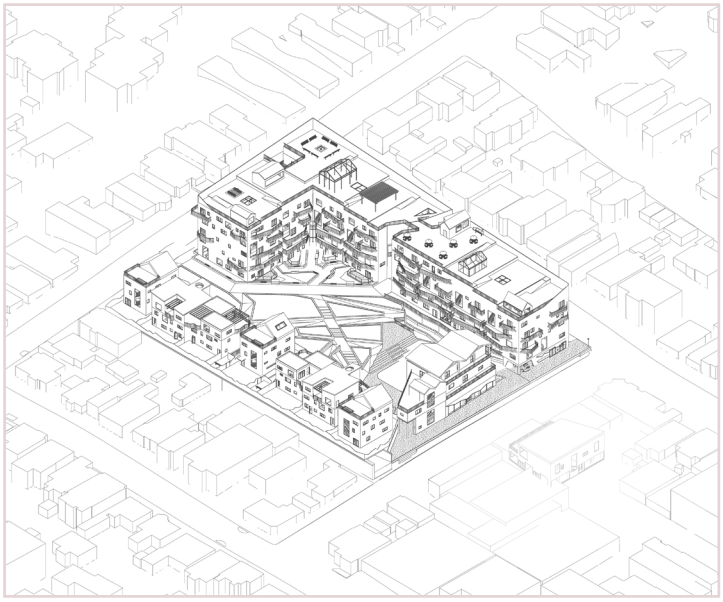


Fig.8.15. Courtyard and access at phase two

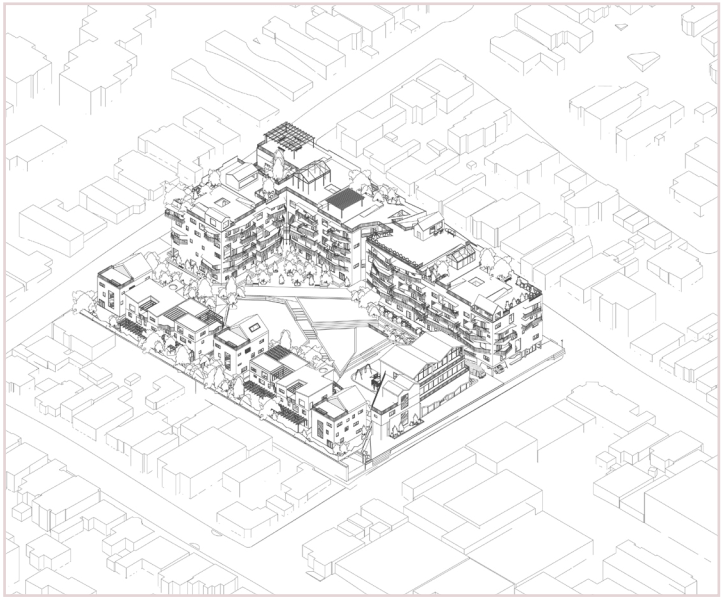


Fig.8.16. Courtyard and access at phase three

Redefining The Community Centre

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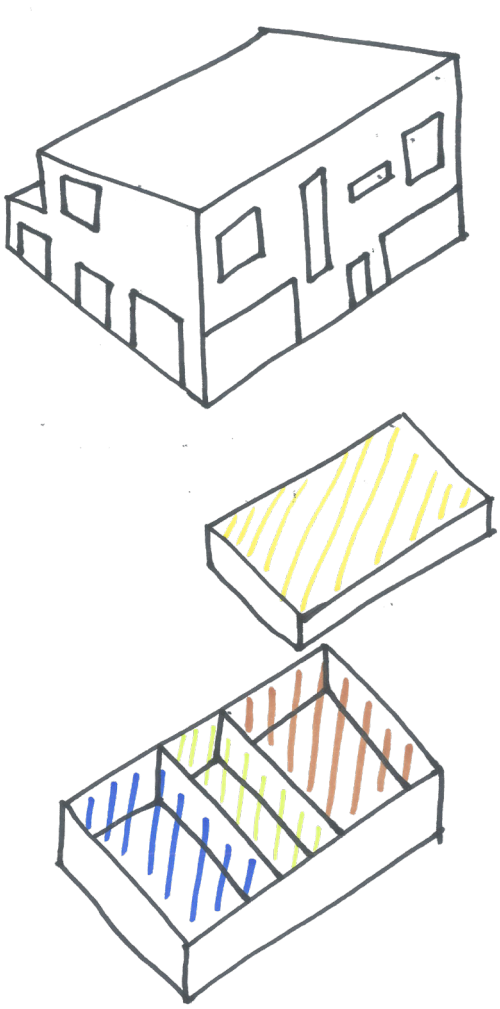


Fig.8.17. Community centre sketch of phase two

The community centre at the end of phase two had included different uses that could bring people together, however, was lacking in character and did not best reflect its' environment.

The development of the new community centre included more elements taken from its surroundings. For example, the large building that used to be on site is replicated in the new one with its mass and shape from plan view, and the building forms of the street opposite the community centre have been put into the roof, giving direct relation to what is reflecting it- satisfying also district planning rules.

The new form is a three level building with different activities on different floors, allowing programs to simultaneously occur. Each floor is also given a balcony so that this activity can spill outwards.

Fig.8.20. Site analysis of dominant forms

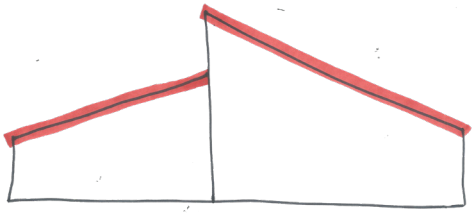


Fig.8.18. Dominant rooflines wanted

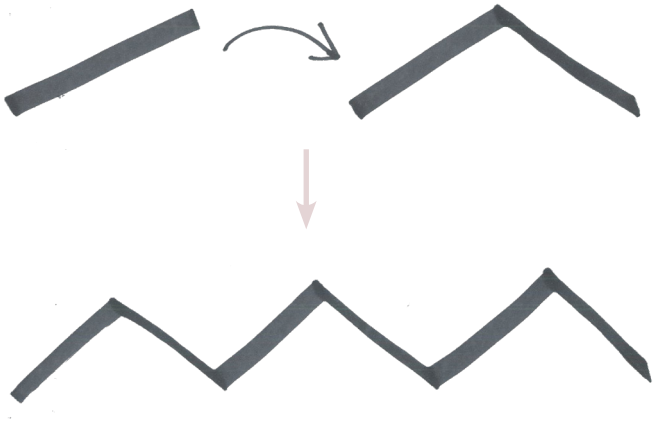


Fig.8.21. Dominant forms to be incorporated

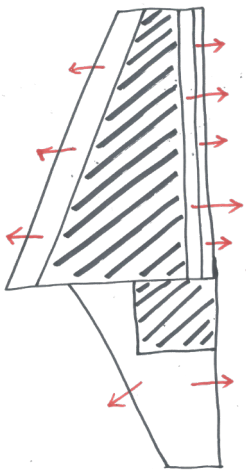


Fig.8.19. Creating viewpoints from community centre

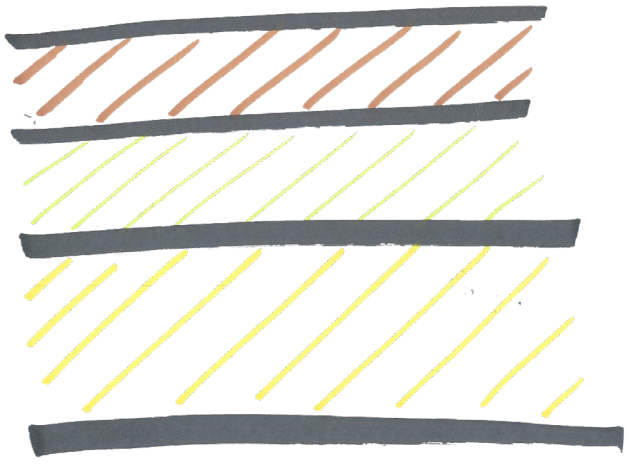


Fig.8.22. Section sketch of different uses of space

Fig.8.23. Community centre at phase two

Fig.8.24. Developed community centre at current phase

Relating To Context

-

Fig.8.25. Different surrounding window types

Site analysis in phase 3 found interesting shapes of bay windows of the old Victorian houses surrounding the site.

Additionally, there was a set of Victorian houses on Rhodes St that had beautiful extruded bays in the front of the houses- something that could be used on the Rhodes St frontage for the design.

Fig.8.26. Different surrounding heights

Fig.8.27. Interesting surrounding bay window typology

Fig.8.28. Sketch of incorporating the above

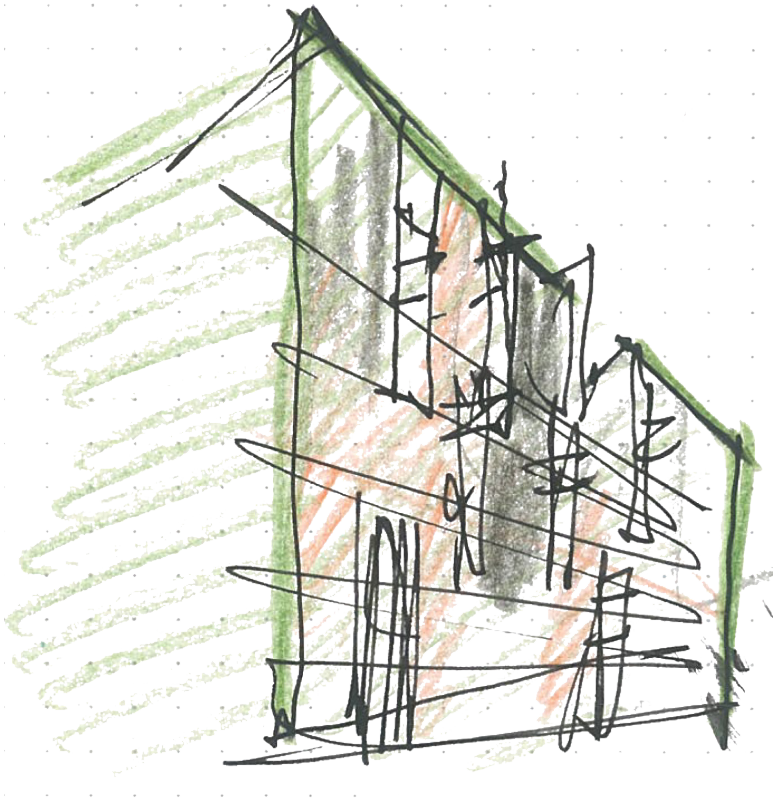


Fig.8.29. Sketch of propsed Rhodes St facade

These bay windows identified were put nto the Rhodes St frontage in scattered parts to represent the patchs that tis typology was fount in. These windows were also extruded out similar to the row houses seen on the previous page.

This aimed to confuse the eye and draw attention to the facade.

This sketch on the left shows the development of the roof-line of the collectivist block. Again, on Rhodes St, the existing houses across the road were all at different heights and varied in roof types so this was something that could be brought into the new design to add “eroticism” to the facade (Young, 1990).

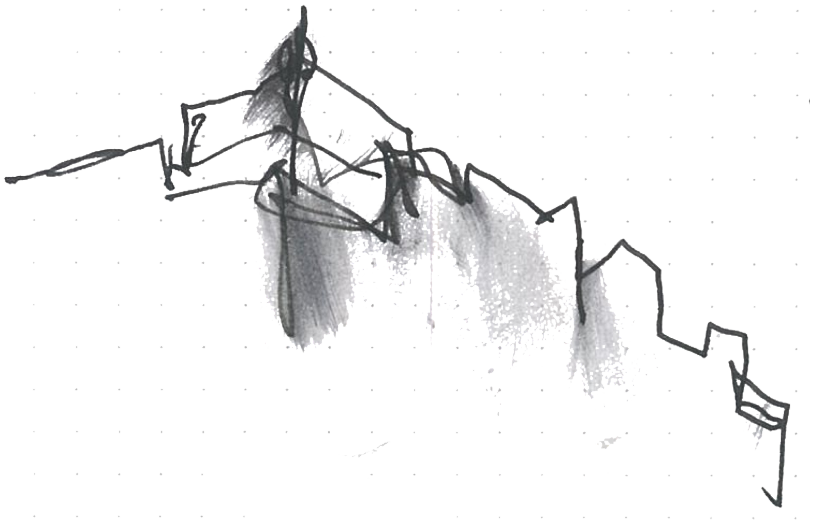


Fig.8.30. Sketch of propsed Rhodes St roofline

Fig.8.31. Rhodes facade and roofline at pahse two

Fig.8.32. Developed Rhodes facade and roofline at pahse three

The development of the individualistic block took a similar path. Site analysis informed interesting shapes and forms of different types of housing surrounding the development block. These different types of materials and typologies gave Newtown it's exciting mix, and this was something that could also be explored with the new design.

These different forms were integrated into the design of the individualistic block so that there is some variance of form. This was done so that people that choose to live here can still feel that the are individuals and unique, and so this does not look like a conventional development where everything looks the same.

Despite this need for variance, the individualist forms do tend to repeat themselves in order to fit with the internal layout that are designed. Variety is possible here within a controlled way.

Fig.8.33. Author's images of surrounding roof forms

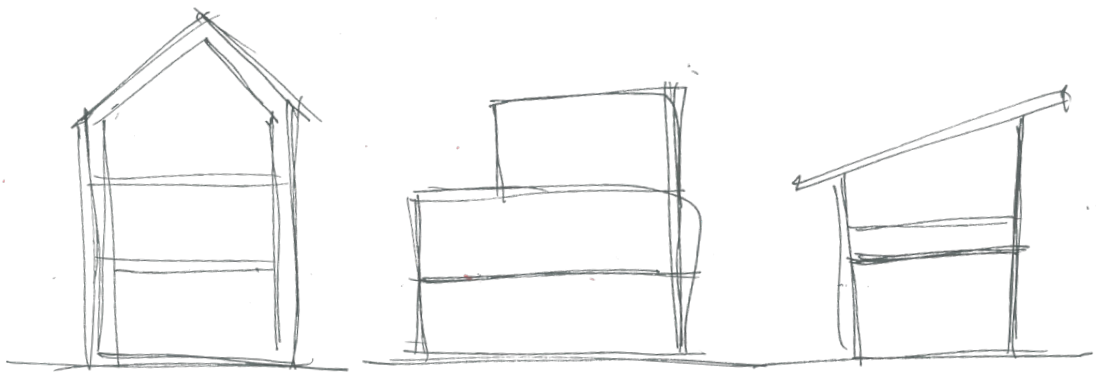


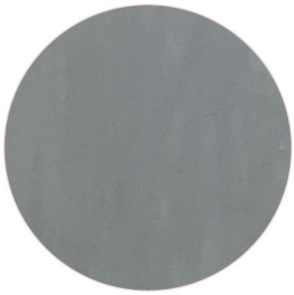
Fig.8.34. Sketch of desired variety in individualistic block

Fig.8.35. Variety achieved in individualistic block

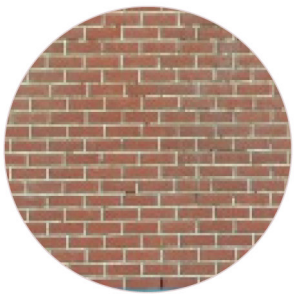
Weatherboards

Concrete blocks

Painted surface



Hardyboards



Brick

Fig.8.36. Materials extracted from surrounding to include in design

Materiality

The swatches on the left are taken from the different materials observed around the site. These materials show a different time and style of building and somehow seem to work well in together in the Newtown context.

Instead of picking just one of these to explore on the different houses for the individualistic block, advice from the literature review states that a veriety in designing an urban block is desired, so as a result all these different texture will be used in different places to give the idea of different and individuality.

“Natural materials express their age and history, as well as their story of their origins and their history of human use.

(Pallasmaa, 2005)

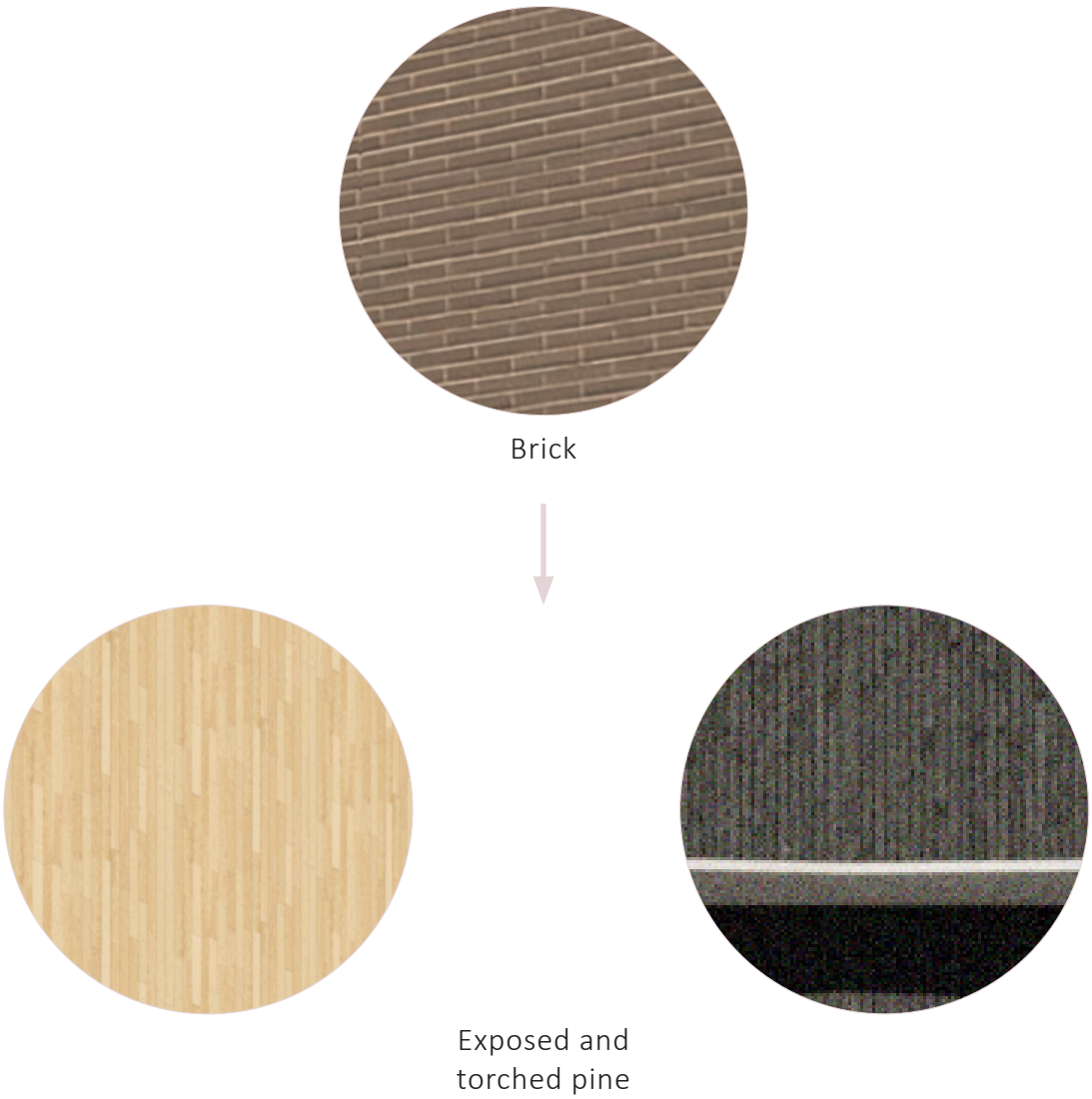


Fig.8.37. Development of collectivist block materials

On the collectivist block, the material originally was brick. Although brick has its qualities, it was not as suitable for a large structure. Additionally, it did not ware and have the warm and homely aspect of pine wood. When pine ages, it turns to a darker and duller shade and this transformation add character to the building over time.

Therefore, pine was chose as a more appropriated material given the quote on the previous page.

Exploring Mixed-Use Facilities

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As highlighted by Jane Jacobs and others in the literature review, mixed-use within any urban development is important. Therefore, this design should try and incorporate mixed uses within the housing model to add variety and help bring together different people for different uses and functions in one place.

Newtown currently has a unique work-live culture that is evident in most parts of the main streets. This work-live culture can be extended from the main street into the new development to enhance the typology of the suburb.

As identified by the analysis of related works in the form of Drommehagen, Nursery in Paris and 8 House, having mixed use facilities can bring a positive affect on living conditions as it encourages a mix of people at both permanent and temporary scales.

Therefore, this new development of housing for different cultures will aim to include a similar use. A mix of retail, office and leisure activity will be incorporated into the mix.

A development of potential spaces and uses were explored to be able to fit into the housing design, with aspects such as privacy and accessibility considered carefully.

These additional uses of this design include:

-A cultural cinema
-Small office spaces
-Small retial spaces

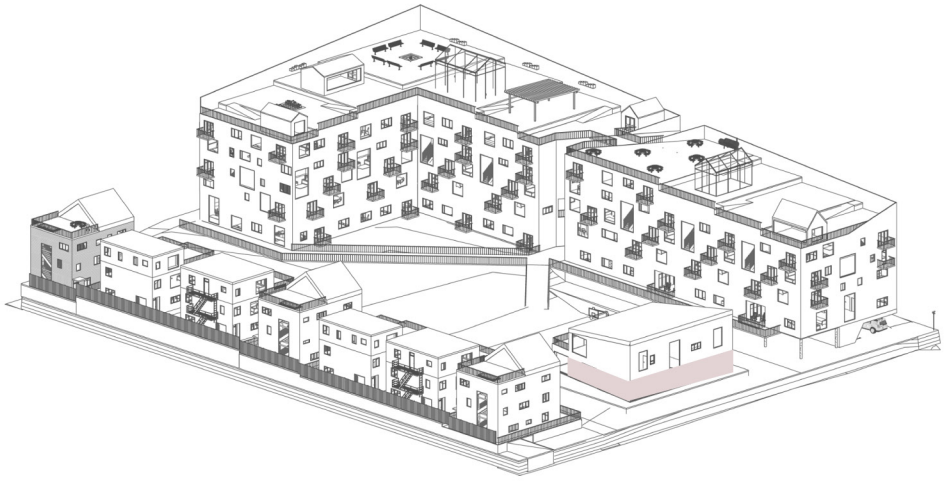
Fig.8.38. Drommehagen

Fig.8.39. Nursery in Paris

Fig.8.40. 8 House

Cultural Cinema

1

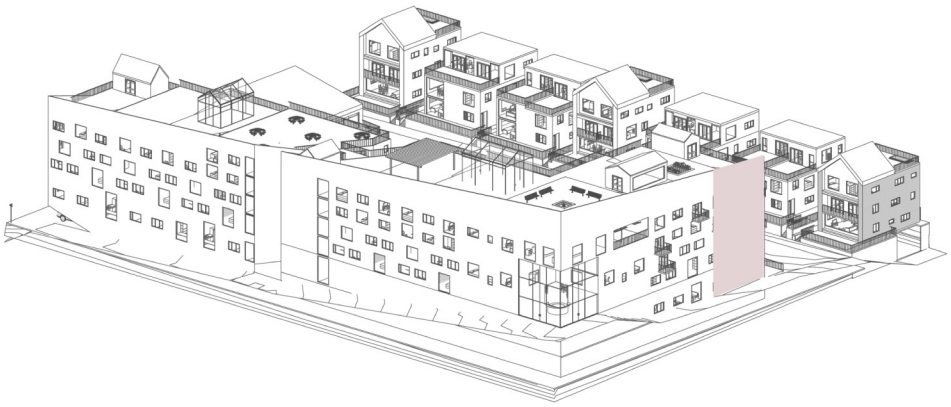


Cinema part of the community block so that all activities can be in the same building and extra contact between public and residents.

2

Cinema at the corner of Rhodes and Daniell as this is a dominant corner and is exposed to foot and car traffic from both streets.

3



Cinema attached to the east wing of the collectivist block so that it gets attention from people driving and walking up Daniell St.

Fig.8.41. Cultural cinema design

Placement for the new cinema needs to be strategic so that it can be exposed to as many people as possible.

As a result, the corner of Rhodes and Daniell Streets have been chosen as the location of this cinema (option 2). Daniell St is a main sub-artery of Newtown, with many streets branching off it. This means that many people drive and walk past this edge, making it exposed to more people compared to other locations on the site.

The public will be able to enter and exit the cinema with ease and without disturbing the residents; meaning more privacy for dwellers, especially in the evening.

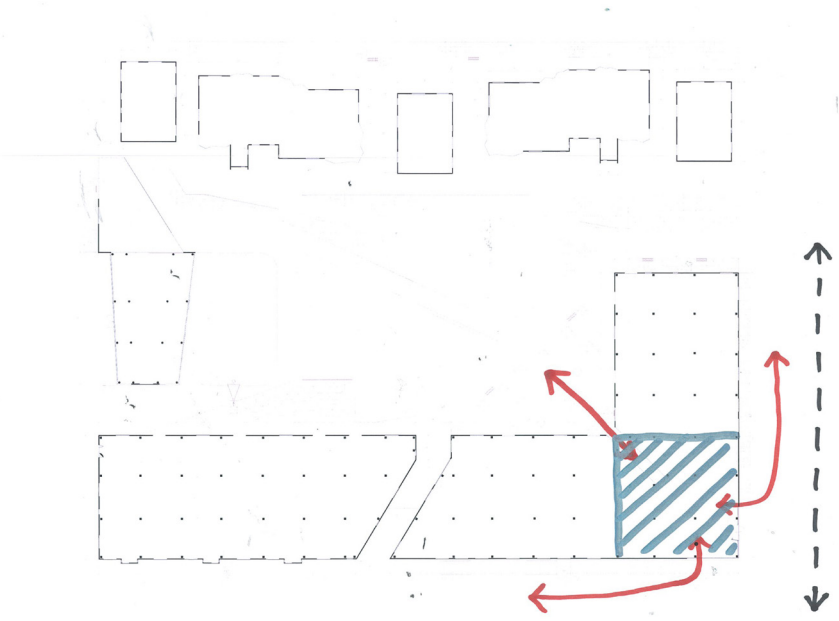
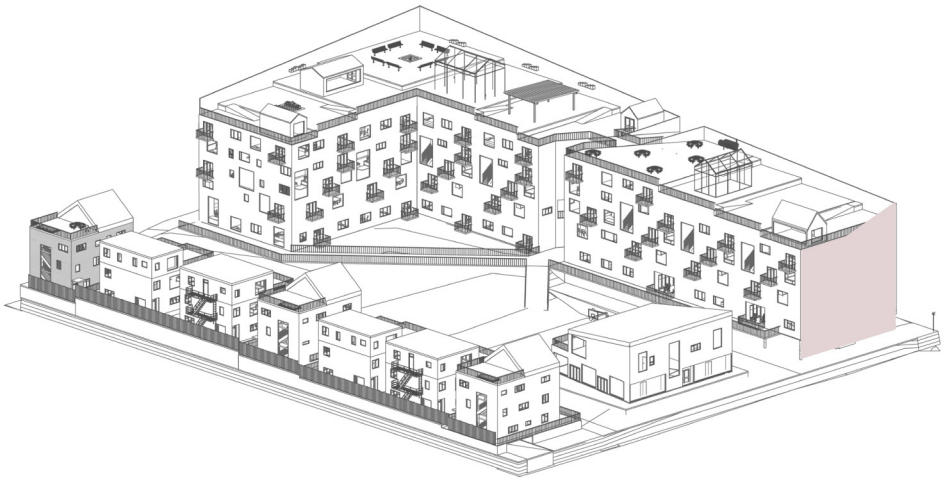


Fig.8.42. Cultural cinema location and access

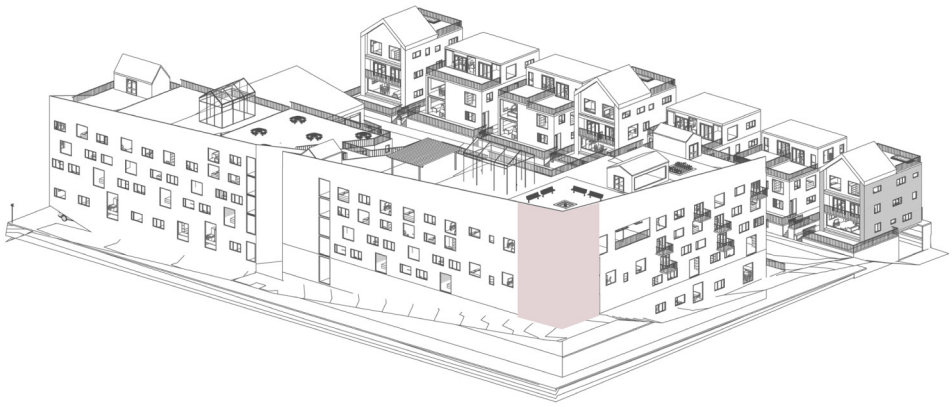
Office spaces

1



Office block located at the west end of the collectivist block so that it is closest to the main street and in site as you walk or drive up Rhodes St

2



Possibility of the offices being directly above the cinema, so that all the public amenities can be in the same place with minimal disturbances to layout

3

Office are to be tucked in the middle of the collectivist block, where the walkway cuts through to allow public access through the site

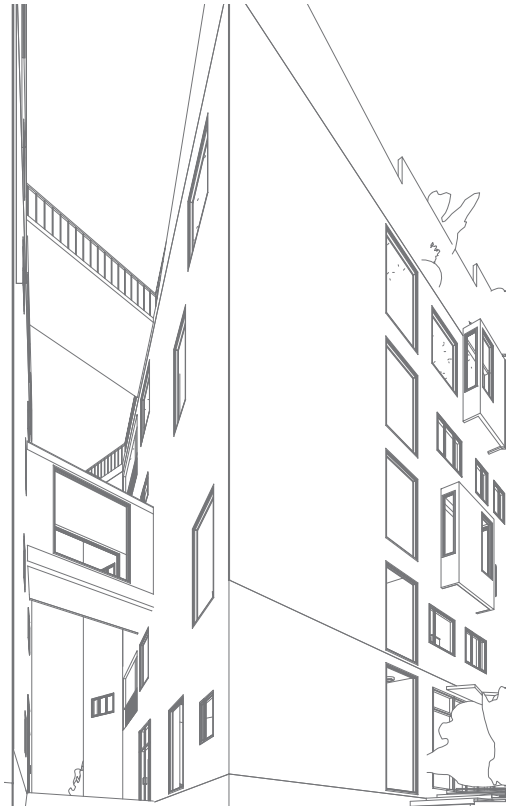


Fig.8.43. Office spaces design

The location that would best suit the office block has identified to be the middle of the collectivist block (option 3). This area is where the building is cut, providing space for a walkway and 'shortcut'. By putting the office spaces here, the public are encouraged to use the pathway to access these facilities. This allows for interaction between people from outside to intermingle with people that live there - adding a different variety of interaction and understanding between these people.

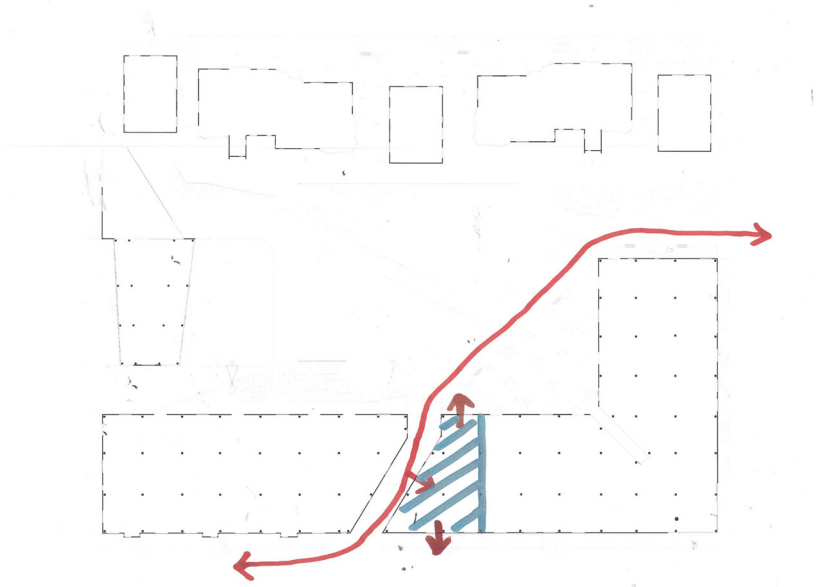


Fig.8.44. Offices location and access

Retail spaces

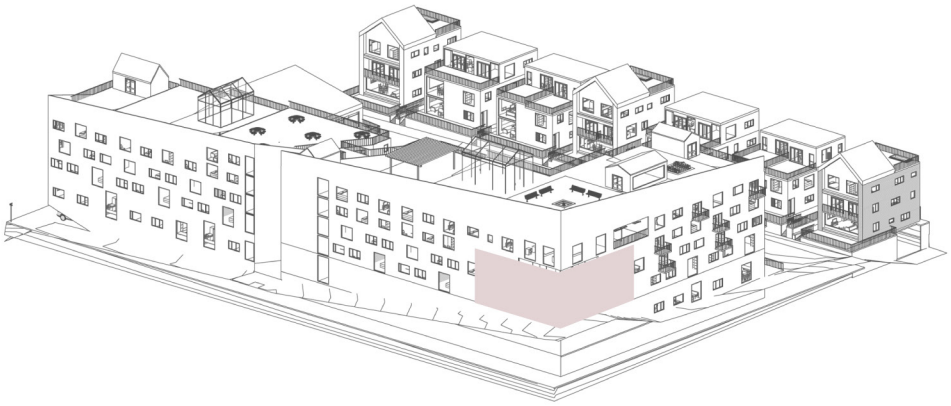
1

Retail spaces could be located on the Rhodes St frontage so that this street can be activated without much traffic driving past.

2

Retail could be located on the Daniell street-front so that its visible to more traffic

3



Retail spaces could branch off the cinema, so that more people can visit both these facilities and all is kept in the same space for layout purposes

Fig.8.45. Retail space design

The best location for retail spaces has identified to be Rhodes St (option 1). This street is not as busy as Daniell, meaning that people will feel more comfortable using that frontage. It is also the longest side, o more retail spaces can fit in. Due to the topography of the site, apartments wont be able to fit in these spaces anyway due to privacy reasons.

Additionally, having these spaces here allows people to come up from the main road, access these small retial spots and then flow through the cut walkway to access upper Newtown.

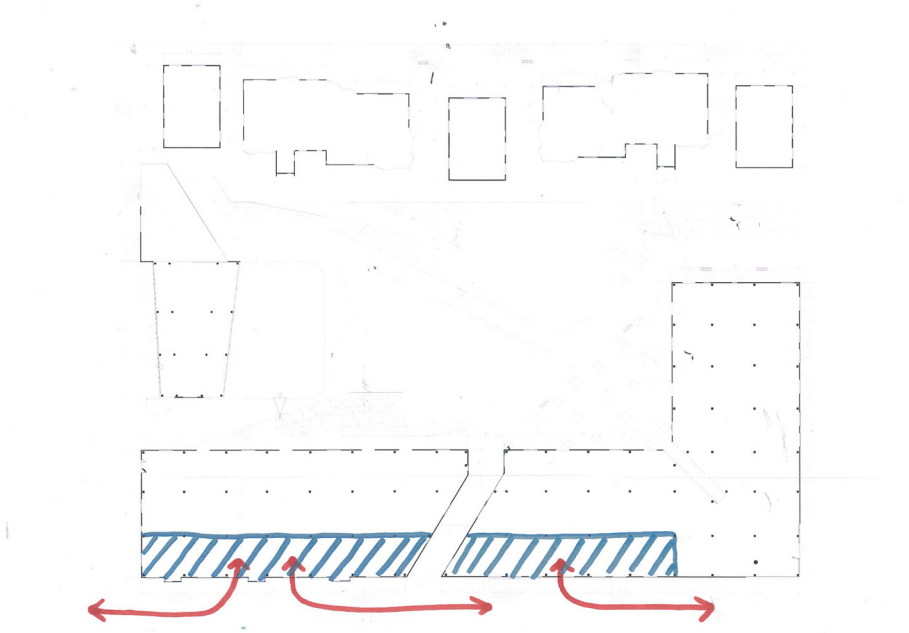


Fig.8.46. Retail space location and access

Design Phase Three Reflection

-

The third and final design phase involved addressing the 'green' and public spaces as well as accessibility, context, mixed use and the overall detailed design of the project. In this phase the remaining 3 of the 6 performance criteria aimed to be met and the process was divided into areas of focus to bring the final design together. Each of these areas were visited and developed to achieve positive design outcomes that would contribute to address the research question.

The decision to transform the long horizontal access route on the larger building with broken-up vertical routes has proved to be a much smarter way to design for privacy and social interaction. The new vertical routes allow for shorter walking distances to the apartments with an average of 2 units per floor and 10 per shaft. The lift shaft that separates the two entrances mean that users can have the aspect of privacy while entering but still be able to have contact via the journey. This new access way means that people will be more likely to stop and talk to their neighbours as they feel more comfortable in smaller groups. This allows for interaction of all ages and the opportunity to form 'micro communities' within the larger community. Similarly on the individualistic design side, the two main staircases that rise from the underground garages are aimed to provide users with a point of interaction while still allowing for private entry.

On the horizontal axis the access was carefully considered to move people around the large site. Here both the residents and the wider public were given access ways that would fit the need and usage of the site. Providing narrower pathways with more vegetation created informal barriers and allow the residents to have more private building entrances, while wider and more open pathways allowed for the public to move through and engage in the different uses of the site with ease of way-finding.

Movement of people on the site, spaces for interaction and viewpoints for natural surveillance were all aspects considered for the landscaping and public areas around the buildings. By dividing the main courtyard into sections that followed the topography, different areas were created that could house different activities at the same time. This will allow for individuals or groups to perform activities at the same time as well as encourage people to interact with one another due to being able to see other being active. From this large inner space, smaller, more intimate spaces with views of the courtyard are created to allow for individuals that wish to recreate on their own. Strategic placement of trees create 'soft boundaries' between public and private while also adding shade and local ecology into the site.

The critical exploration of internal layouts while considering various different cultures and living types demonstrated to be vital in providing different living options. The iterative process of possible configurations resulted in a robust selection of internal layouts, living types, apartment sizes and cultural considerations. The delivery of various different living options means that a wider variety of cultures, ages and families can occupy the dwellings leading to a more inclusive, supportive and diverse community. Furthermore, the placement of these dwellings in relation to each other mean that although there might be different cultures occupying these spaces, the living typology they share in common will allow them to come together and integrate.

The inclusion of mixed use spaces within the site rather than simply a housing complex means that there will be different types of people visiting the site at different times for different purposes. This encourages the wider Newtown community to engage with the site and therefore allow a more diverse scale of integration with the people that occupy it. Designing retail and office spaces within a housing development means that there is increased opportunity for interaction at any time and an acceptance of different use and opinions. The placement of these uses have been positioned on the 3 boundaries of the site, keeping the threshold of private and semi-public spaces intact.

Finally, the iterative process of the overall design while keeping in mind the surrounding context proved to be important in creating architecture that blended into the urban fabric. By using materials commonly found in the neighbourhood and using it on site meant that there could be relation to the surrounding setting but also provide each building with individuality, refraining from looking like a mass-developed project. The street front of Rhodes St forms the biggest and most exciting façade, reflecting the heights and shapes of the houses opposite it. This architectural consideration not only gives relation to context, but also provides the businesses along that street with an interesting feature that draws the public to it.

09. A NEW HOUSING MODEL

Site Plan

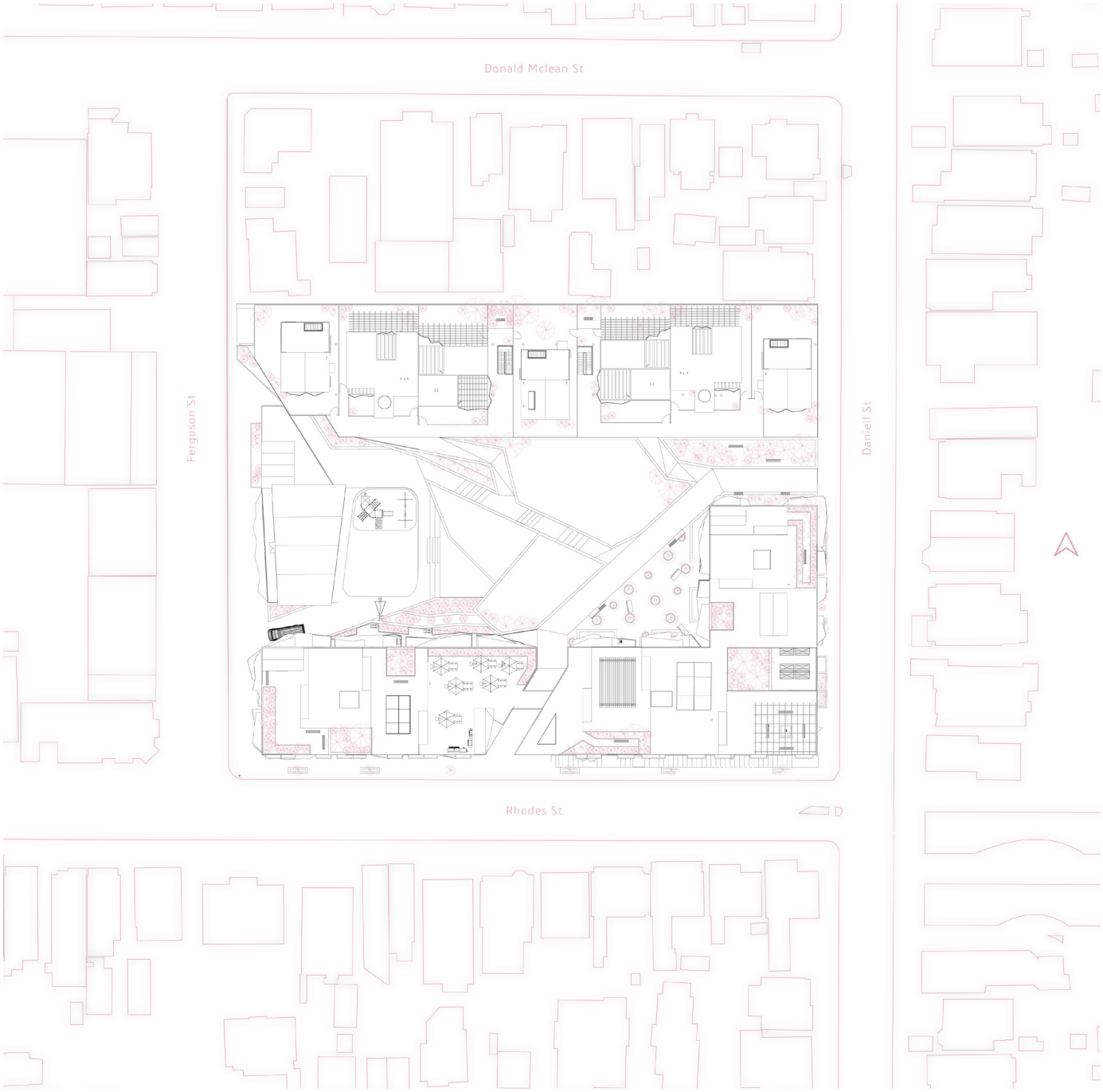


Fig.9.01. Site plan

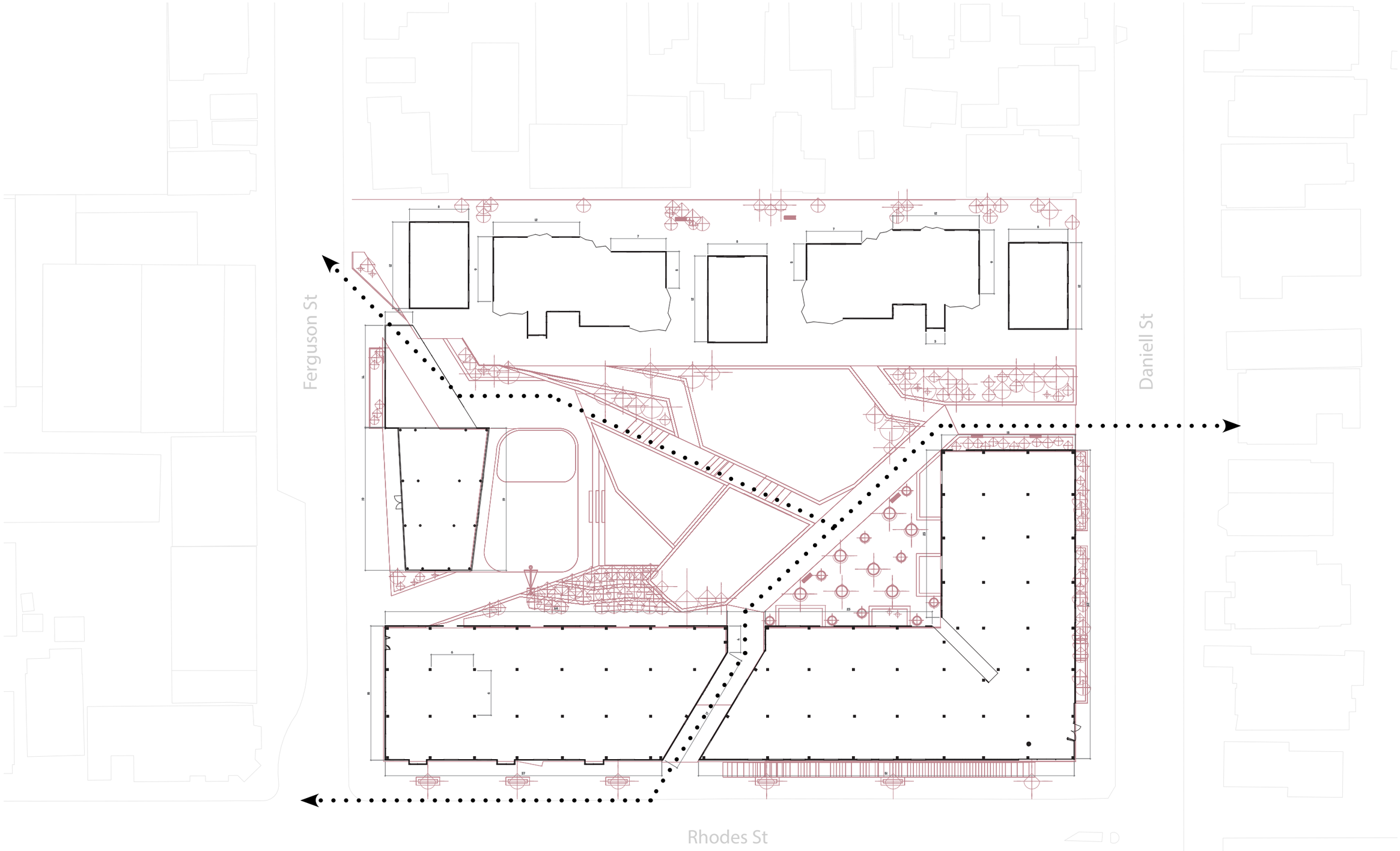


Fig.9.02. Site access plan

The final design is a large scale medium to high density project that is divided into 4 main sections. The three building sections are broken up into different styles of living along with a community block. Surrounding these is the 4th section, the landscape that is centred as the central courtyard of the development that includes various different activities aimed to improve interaction.

The form of the development is divided into 8 building pads at various heights of the site. The construction follows an in-situ concrete floor slab that is supported by a concrete beam and column structure and shear walls for horizontal loads on the bigger masses. The Smaller detached buildings consist of timber frame construction to reflect the two main structure types of the area.

The access follows the topography of the site and the main artery cuts through the development on two axis with an average of 3m in width.

On the medium scale the individual style block is located on the north side of the site and comprises of 7 semi-detached dwellings. Each block can be flexibly divided into 3 apartments or combine to make a whole, with a possible maximum of 21 separate dwellings 1-3 bedrooms each.

Arrangement has allowed each block to have its very own private yard and separate entrance, along with private terraces and singular garages hidden underground.

The collective style block is located on the south side of the site and encompasses 54 dwellings ranging from 1-4 bedrooms each with single and multi-level apartments. It takes up an L shape that is split in half and has been designed as a wind break for the southerly winds that stream down Daniell St. The total height at its highest point is 22m which is roughly 5 times the height of the neighbouring buildings, creating an interesting change of scale on the street fronts.

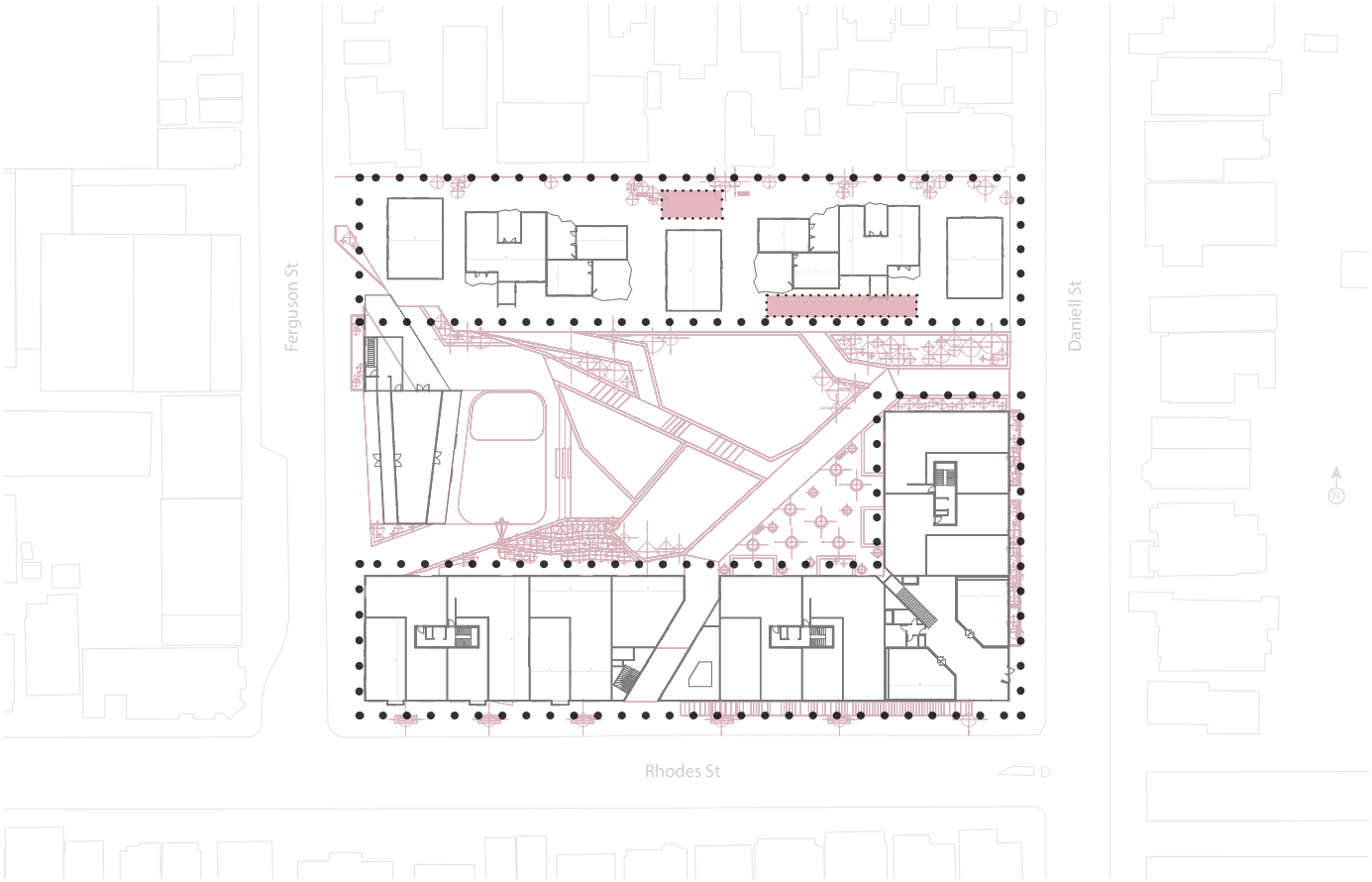


Fig.9.03. Medium scale site plan showing the two different pads

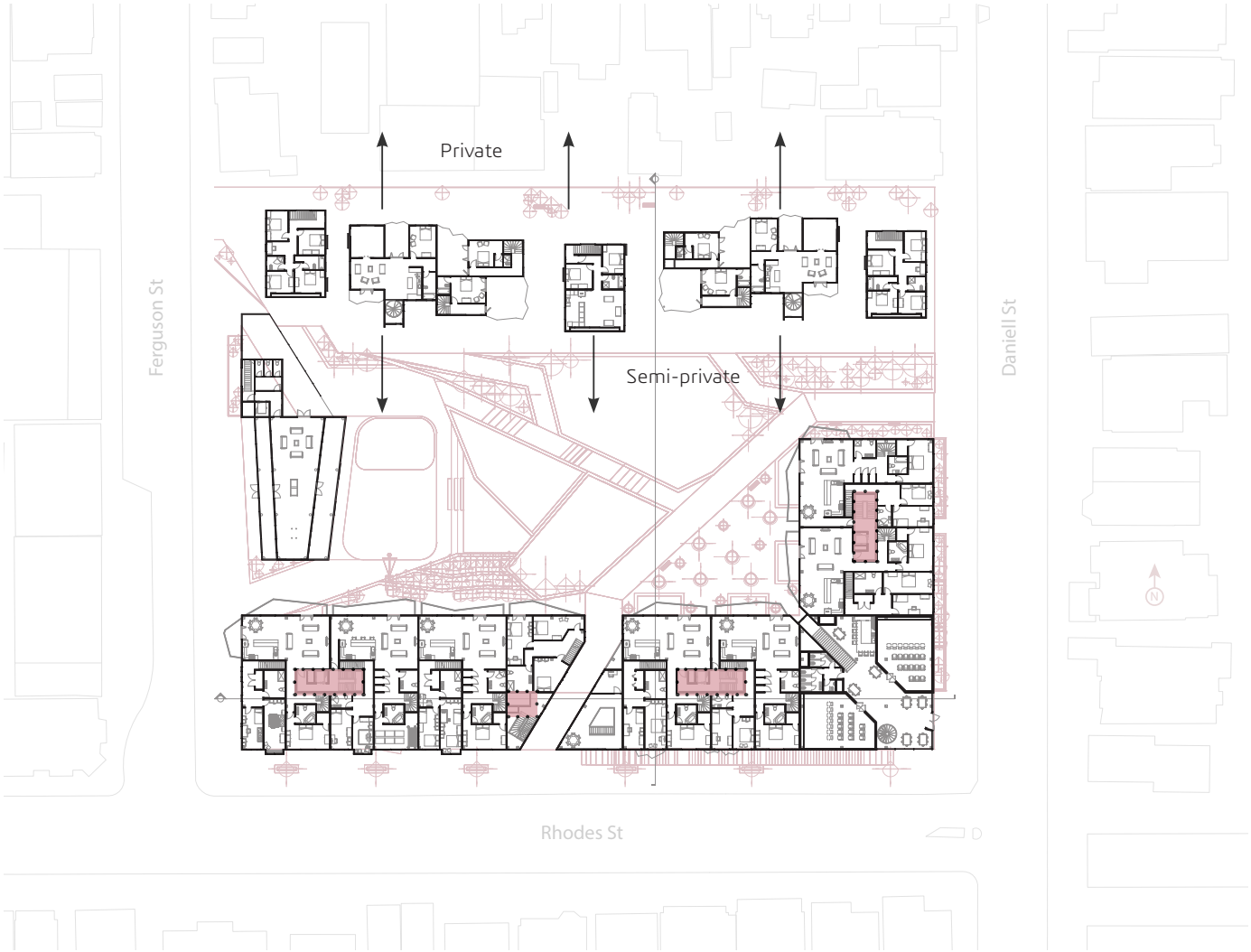
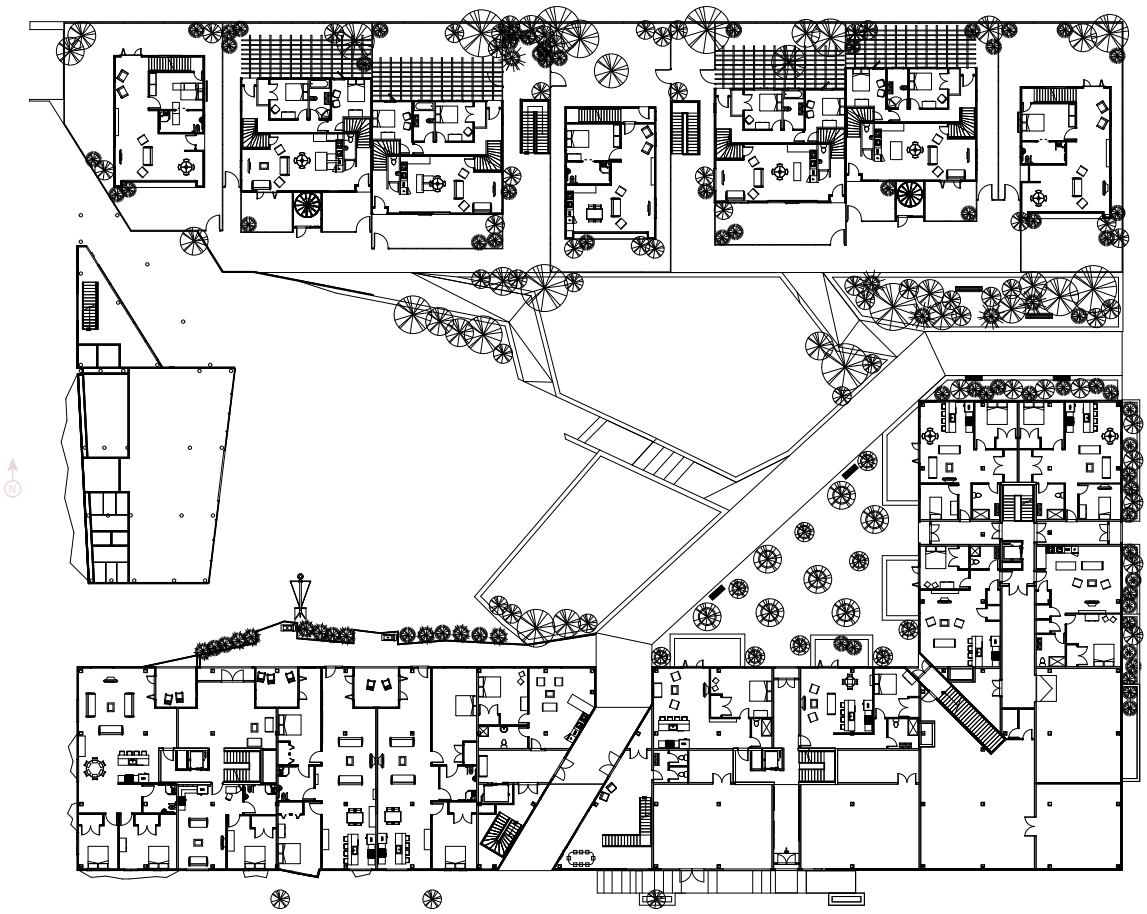


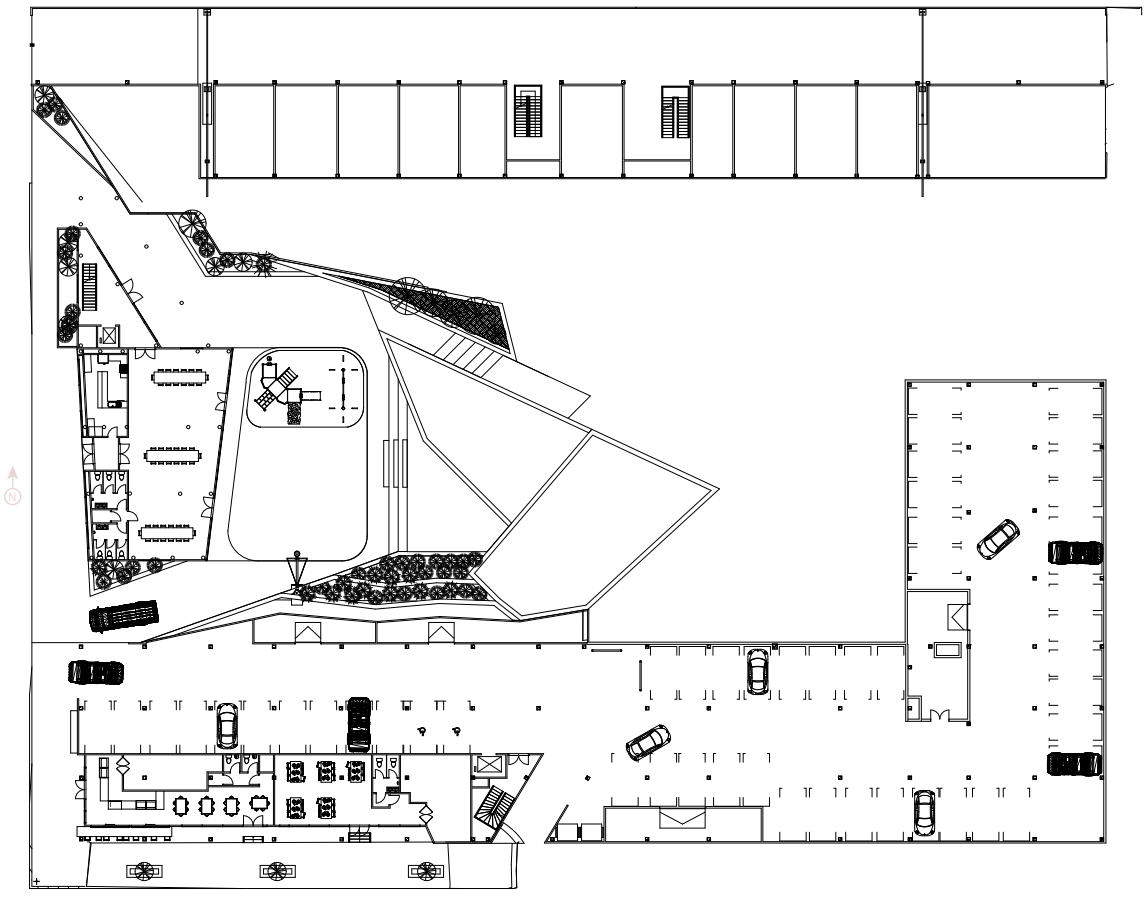
Fig.9.04. Small scale site plan showing access shafts

On the small scale the individual style block consists of modular housing, typically 8m in width and 10m in length. The private spaces are designed to face north for privacy and the living spaces are positioned to face the south, looking into the centre courtyard. Fences that change in height provide boundaries but also allow for conversation to be had among neighbours. Shift in positioning insures that most of these windows don’t align.

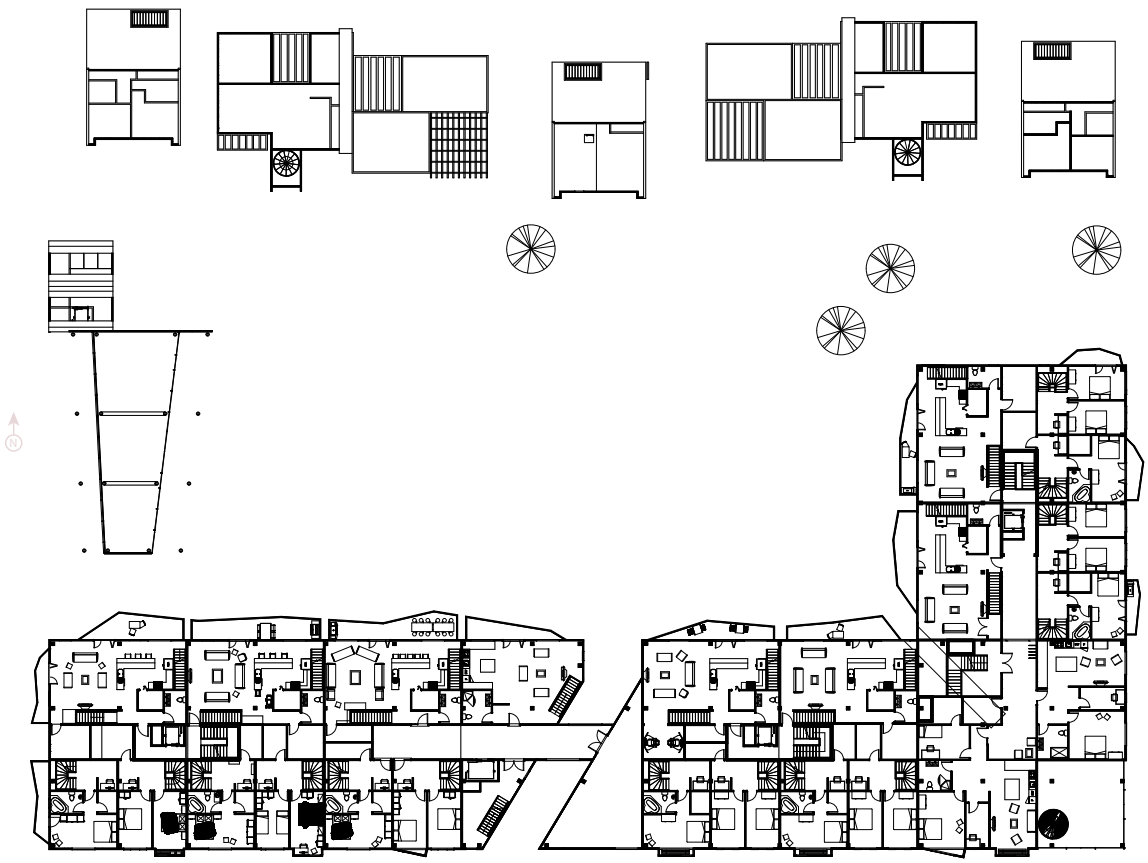
The collective block has a minimum of 7 and a maximum of 11 dwellings on each floor. The typical length of the larger dwellings is 18m with the width just under 9. The collective block has an active roof space that includes features like a community garden and bbq area. The vertical access is through 4 shafts that service an average of 10 units each and aim to increase the probability of interaction.



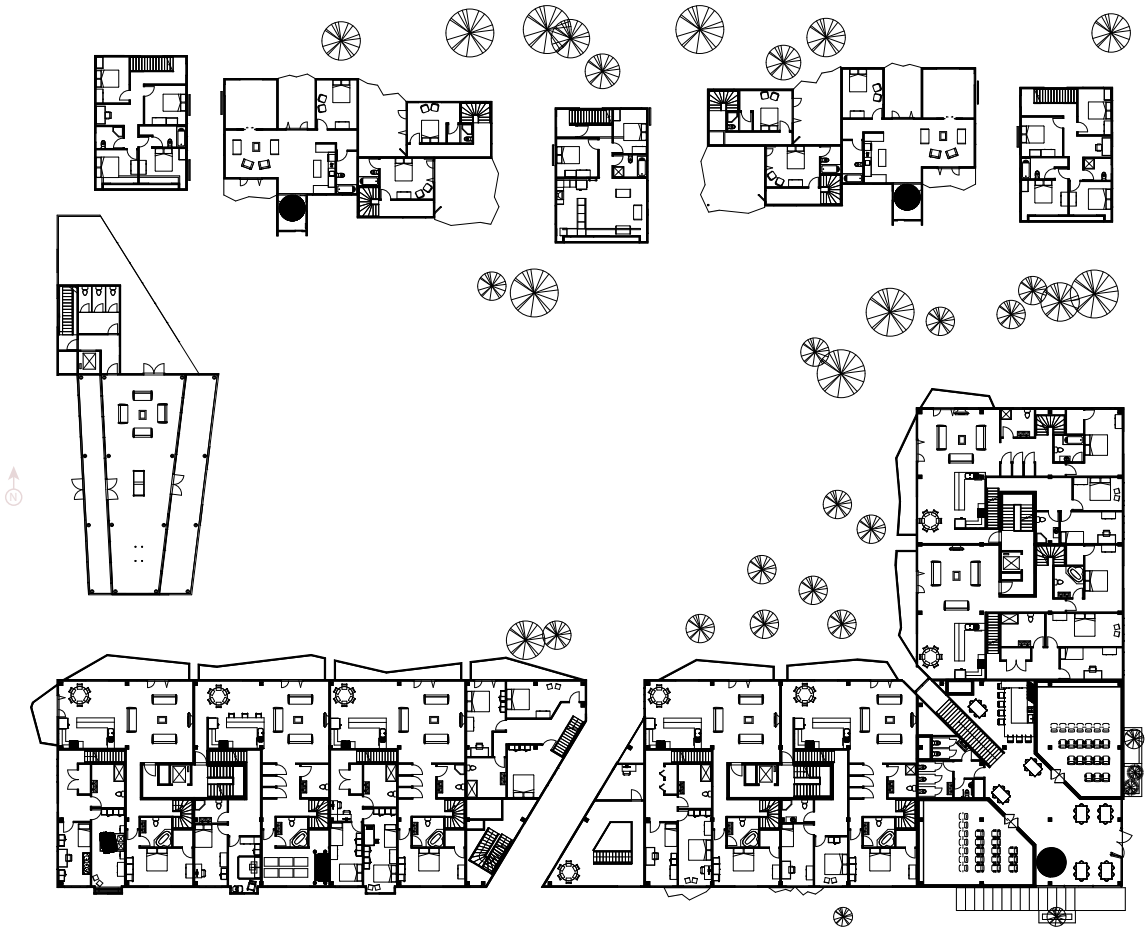
FIRST FLOOR PLAN



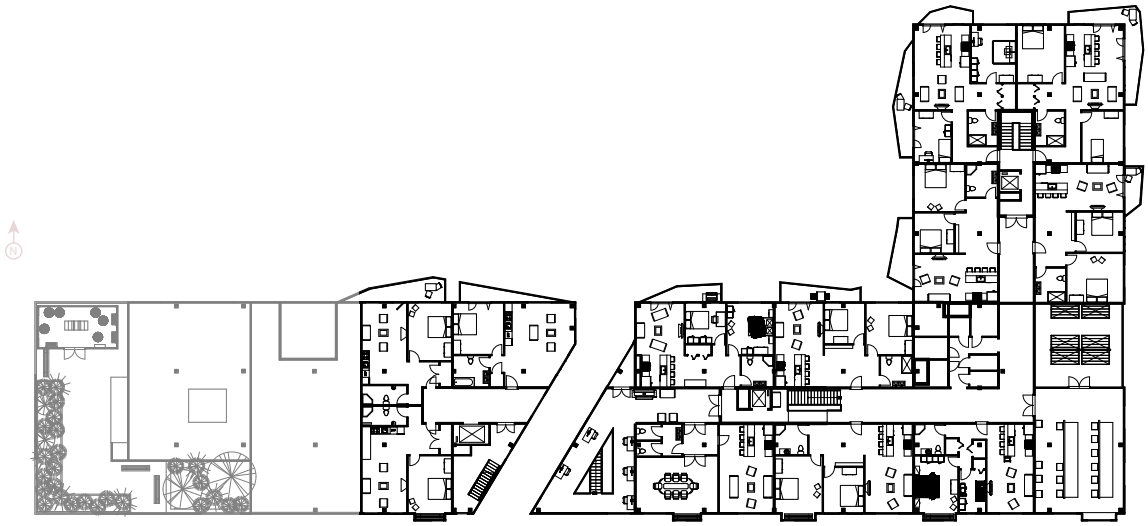
GROUND FLOOR PLAN



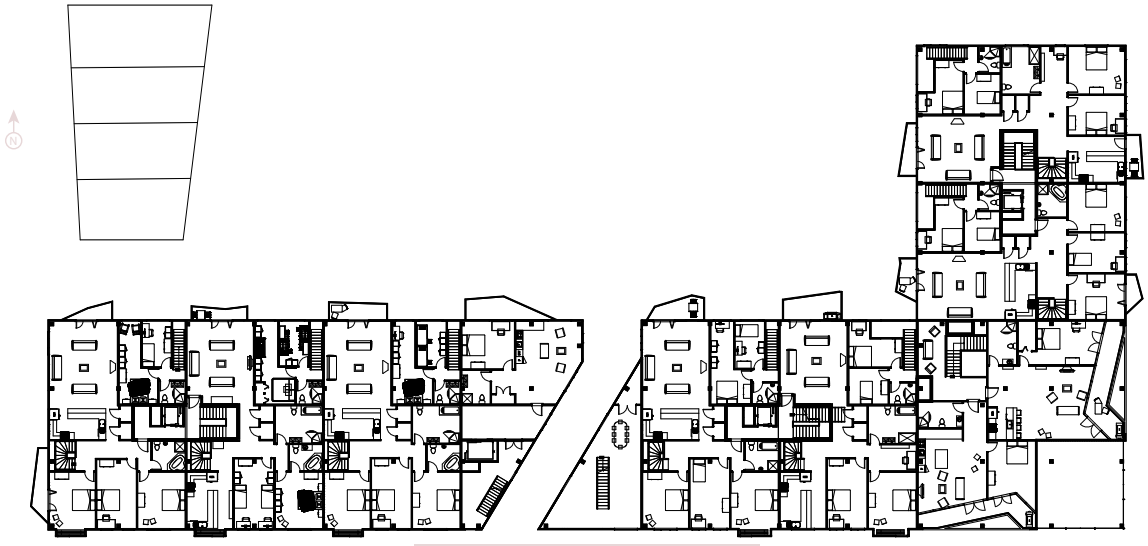
THIRD FLOOR PLAN



SECOND FLOOR PLAN



5TH FLOOR PLAN



4TH FLOOR PLAN

Retail and cafe spaces are added to Rhodes St to bring commerce and business opportunities to the development. A few office spaces are also merged with this block to match Newtown's work and live typology. A cinema that showcases different cultural films is located on the corner of Rhodes and Daniell St and above that lies a communal laundry facility that can be used by all. The most dominant façade lies on Rhodes St and reflects the typologies that surround it, bringing excitement to the shapes and forms created.

The community block consists of a community hall, community notice board area, a common room, a games room and a study room that all have adjoining large balconies that overlook the surroundings. The design of the community block is a reflection of what used to be on the site previously, allowing key design features to be included in the new building.

The materials used in all of these built forms is a reflection of the materials that can be found in the existing surroundings. These materials are paired with modern ones to provide and interesting twist and confuse the eye upon first glance. Similarly the typologies of buildings are a mix of typical forms picked up and placed onto the site, giving the development a strong relationship to context.

Fig.9.05. South elevation showing mixed uses

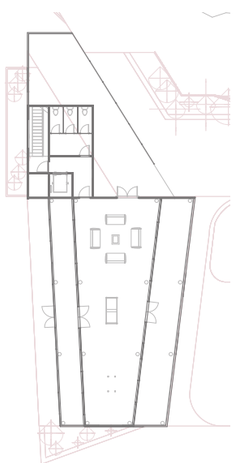


Fig.9.06. Plan of community centre

Response To Performance Criteria

-

The following are architectural design responses to the 6 performance criteria that have been set. Along with this are important considerations such as privacy, design features and relationship to context

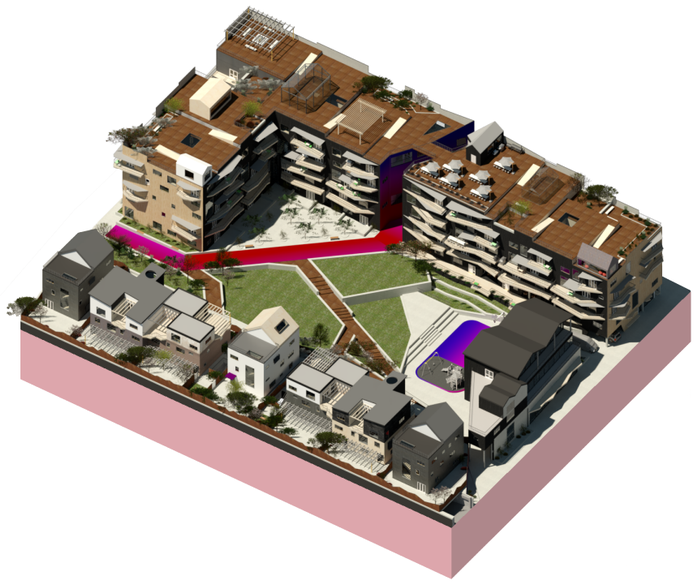


Fig.9.07. Iso of final design

Newtown Reflected Section

-

Fig.9.08. Longitudinal section

Newtown Reflected Section

Fig.9.09. Longitudinal section reflected

Fig.9.10. Collectivist block from Daniell Street

Density

-

Density: is achieved in two forms in the development. The more physical way it is achieved is by the dwellings per hectare, where it goes from 26 dwellings p/h to 75. This starts to address the issues that the WCC have raised, addressing the fact that there are 21,000 new homes required in Wellington by 2043. Which means that this sort of model will not only could shorten that deliverable time but also will be able to do it in a third of the space. More importantly in this scheme however, density in urban design relates to the human perspective according to Urban theorist Jane Jacobs, meaning that more space can lead to support of a variety of cultures in the same space. Homi Bhabha also touches upon this, saying that basics of cultural acceptance is built over time as different cultures learn to live side by side.

Jane Jacobs:
the four main design principles of a social space are; mixed-use, density, natural surveillance and permeability (Jacobs, 1961).

Homi K. Bhabha
“cultural rudiments generally tend to transform due to the influence of neighbouring cultures, altering to accommodate each other” (Bhabha, 2010)

Old Density: 26 dwellings per hectare New Density: 75 dwellings per hectare

Fig.9.11. Longitudinal section

Fig.9.12. North elevation

“Densification of our city suburbs is not an ogre to be feared, to the contrary: If it is designed well, it can offer extraordinary lifestyle opportunities and a solution to housing pressure in our major cities”.

(Anderson, 2017)

Collective Style Living Options

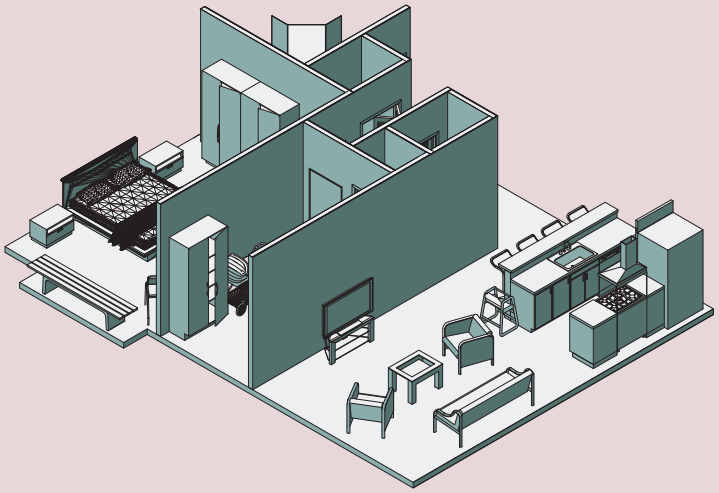
-

Different living styles were created in order to house the many different cultures that are present in both Newtown and Wellington on a whole.

Different sizes, configurations and layouts were explored in reference to the various housing guides consulted, to create diverse and flexible housing that can aims to be inclusive to all.

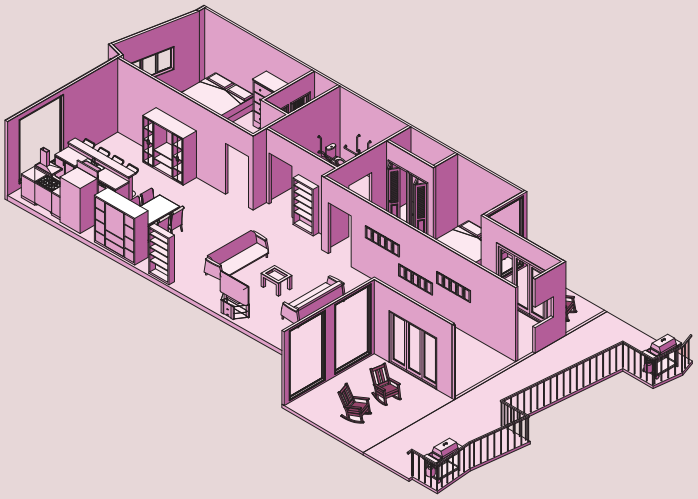
For the collectivist block, 11 different scenarios were explored, which ranged from a solo flat to a family of 12 to see how this scheme might be able to provide shelter for these different groups in one collective space. Here it is shown how different cultures might be able to adapt to the same layout- given their specific needs.

Fig.9.13. Collectivist perspective render



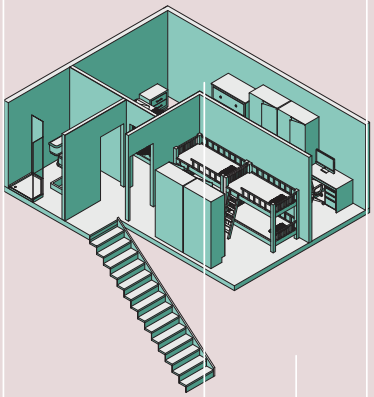
YOUNG FAMILY FLAT

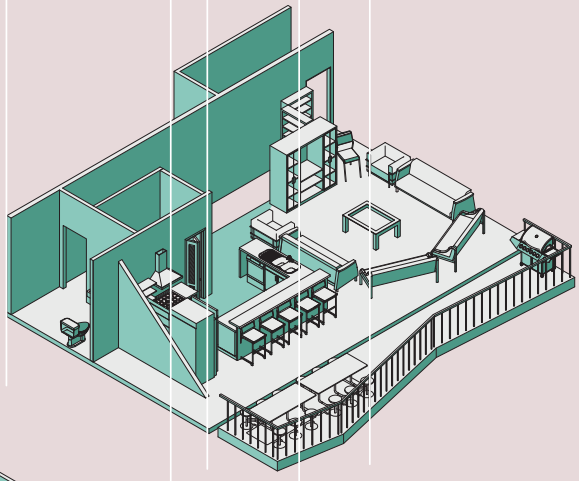
-2 bedrooms
-2 parents
-1 baby

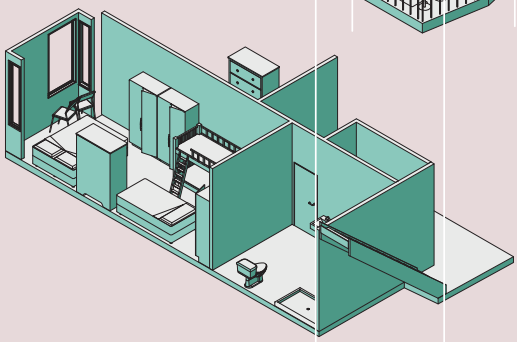


ELDERLY FLAT

-2 bedrooms
-handicap washroom
-private deck

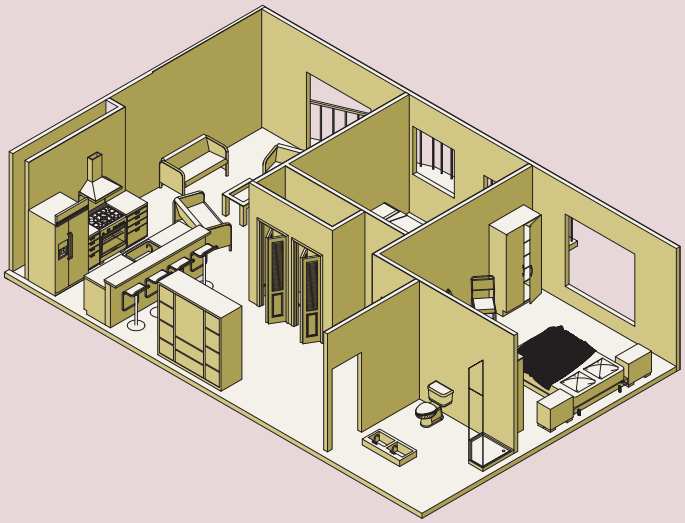






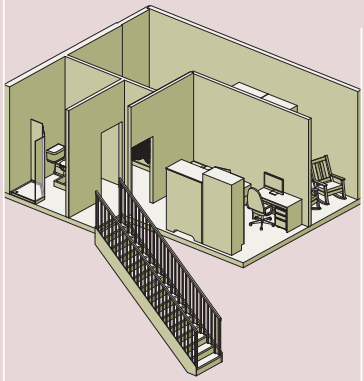
LARGE FAMILY FLAT

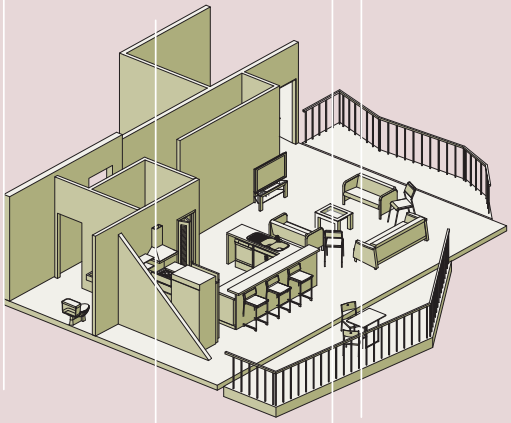
-4 bedrooms
-2 parents
-2 grandparents
-6 children
-study space
-extra storage

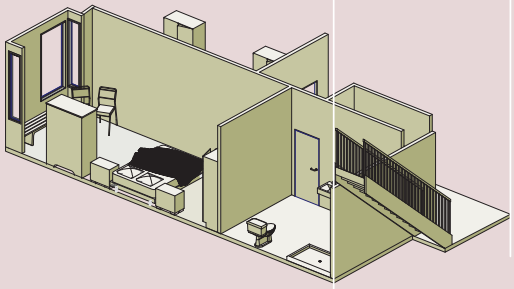


SMALL FAMILY FLAT

-2 bedrooms
-mid age parents
- one young child

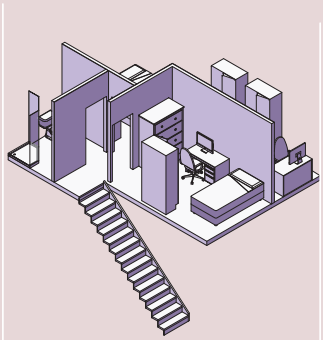


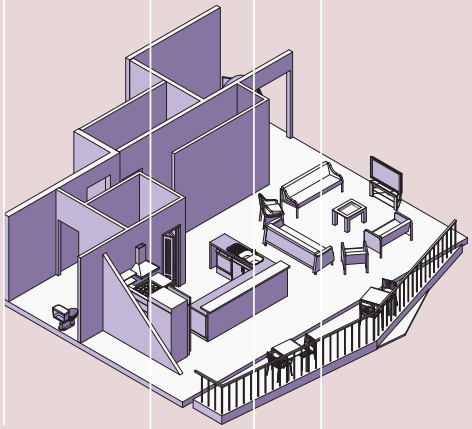


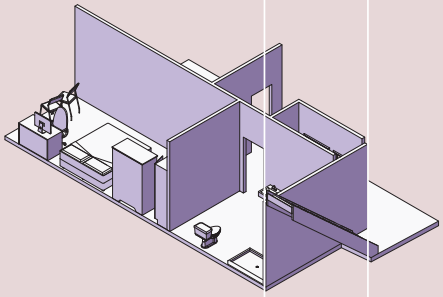


MEDIUM FAMILY

-4 bedrooms
-grandparents
-parents
-2 chilrden
-extra storage



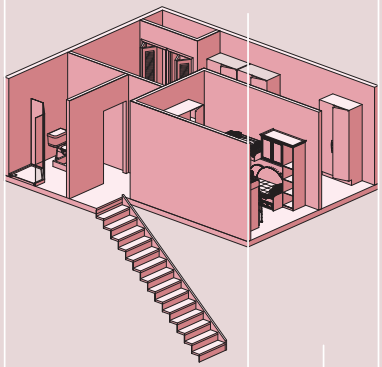


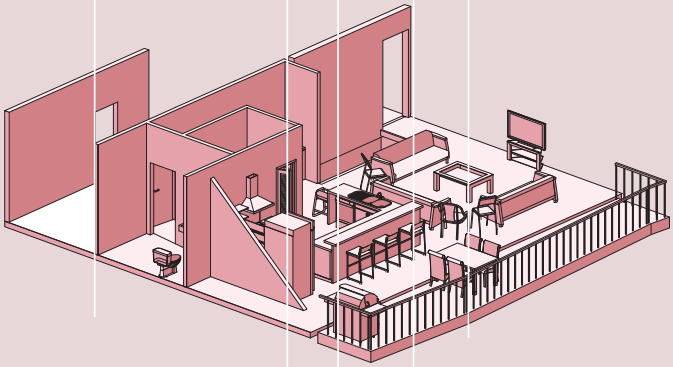


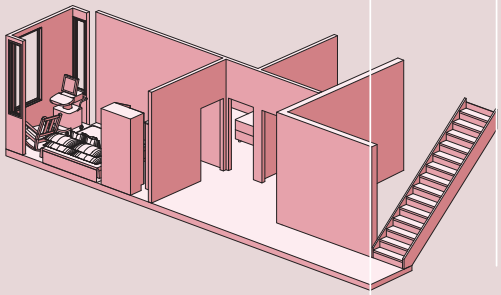
LARGE STUDENT FLAT

-4 bedrooms
-gaming room
-study spaces

Fig.9.14. Bedroom with study configuration





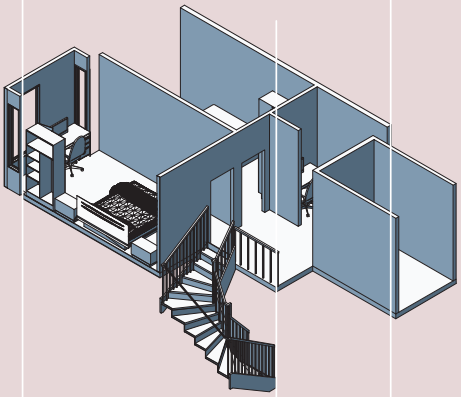


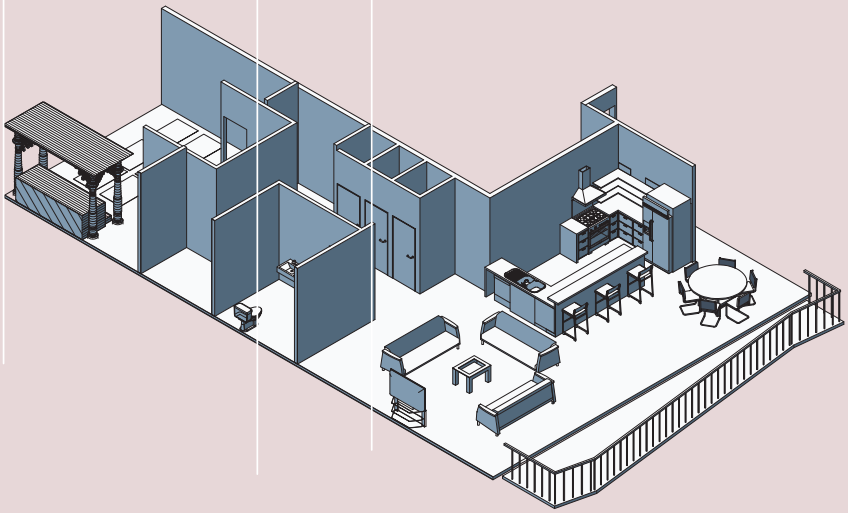
LARGE FAMILY FLAT

-4 bedrooms
-parents
-3 grandparents
-2 children
-1 toddler
-extra storage

Fig.9.15. Bedroom with leisure configuration

Fig.9.16. Lounge configuration of large house

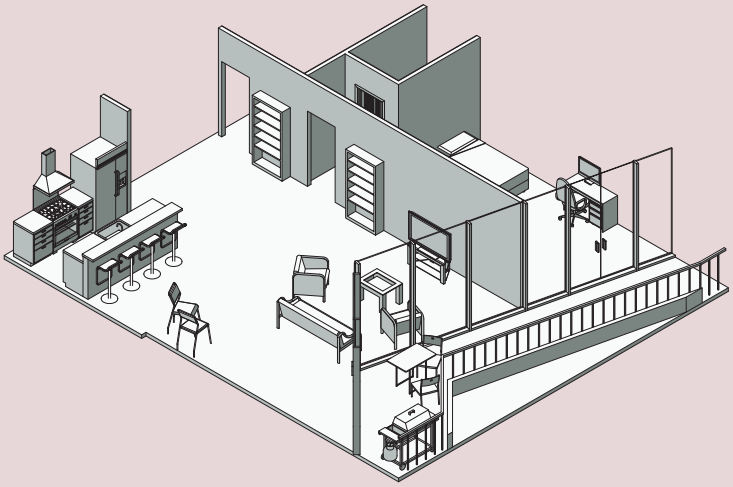




SMALL FAMILY FLAT

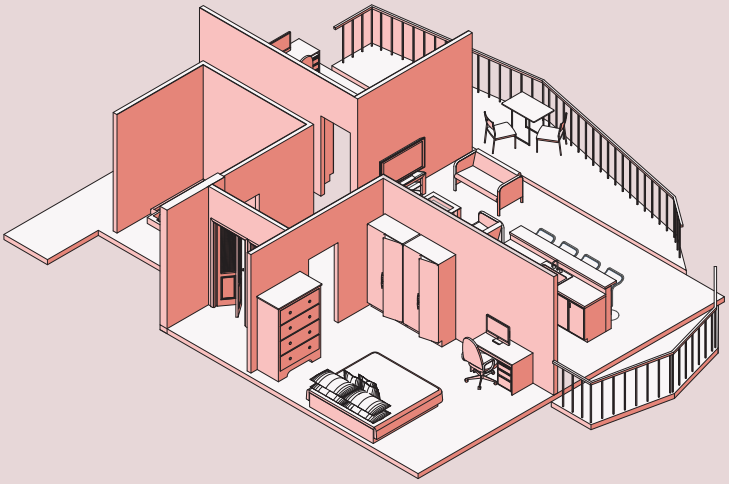
-3 bedrooms each
-2 parents
- 2 children
-home temple

Fig.9.17. Bedroom converted to prayer space



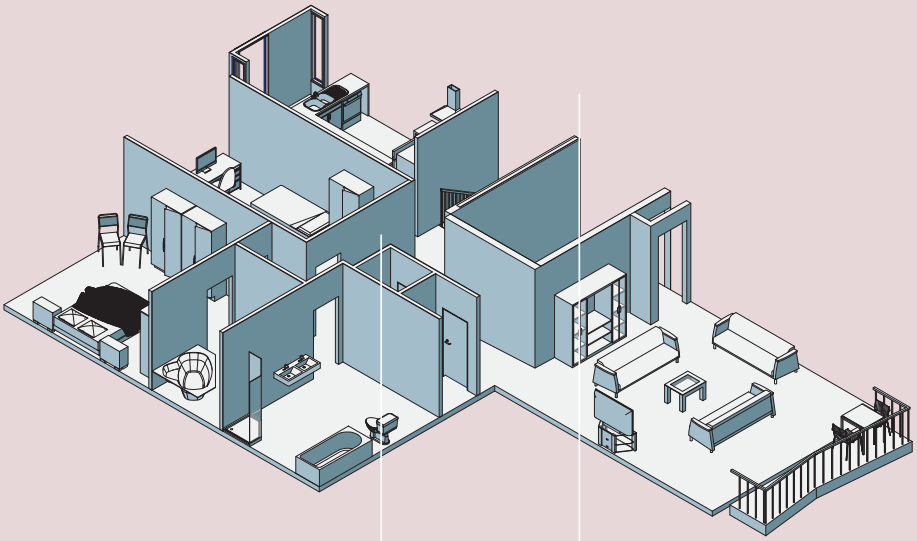
SOLO/COUPLE FLAT

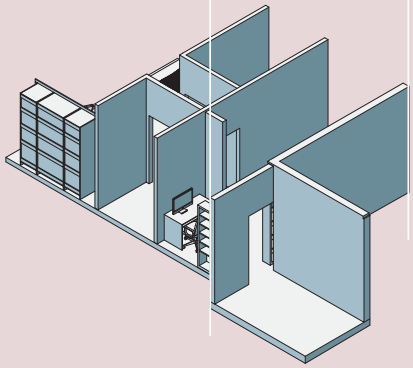
-1 bedroom
-private deck
-isolated location
-private entrance



SMALL STUDENT FLAT

-2 bedrooms
-study space





EXTENDED FAMILY FLAT

-3 bedrooms
-separate bottom floor
with small office space
-extra storage

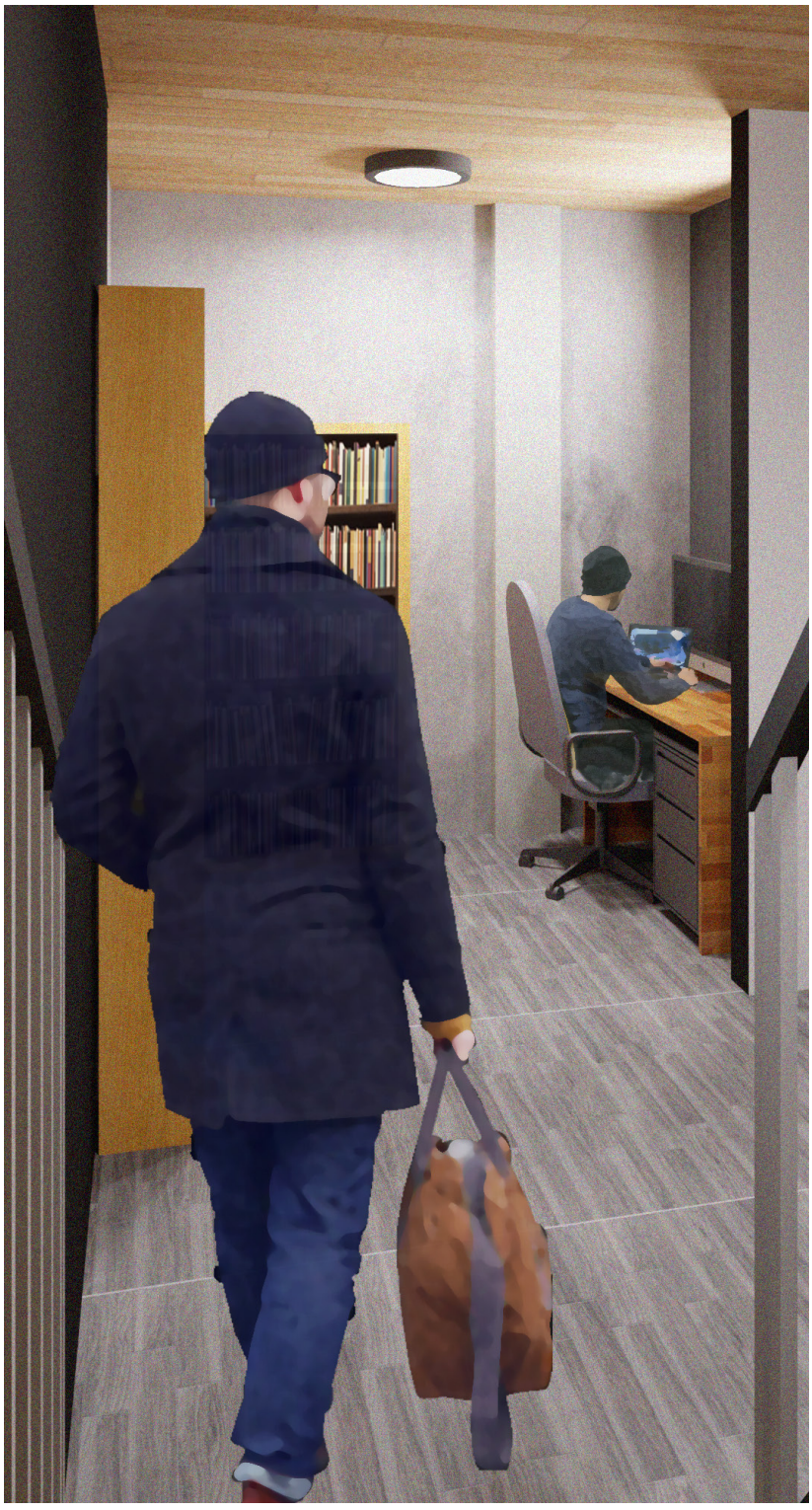


Fig.9.18. Informal office and separated living space
on different floor

Fig.9.19. Collectivist shared garage with storage and rubbish facility

Individual Style Living Options

-

For the individual style housing, options considered what these cultures most like within their housing. Features of these are:

- Own back or front yard

- Entrances that do not face each other to increase privacy while leaving and arriving.

- Fences dividing the plots are kept to max 1.5m high to allow for contact but still maintain privacy into houses

- Fences dividing the houses also allow space to stop and chat with your neighbour when entering or leaving the property.

- Access from basement garages at two points in the development to increase opportunity to bump into each other

- Private garages for each house (both single and double) for car and other storage.

- Bench and landscape area at garage stair access for opportunity to stop, sit and chat.

- Entrances are recessed into the building to give the feel of security.

- Large lounge spaces – proportionate to the house type.

- Rooftop spaces either face the back of the site or the front to prevent direct view of neighbour and allow for privacy in these spaces.

- All windows strategically placed so that they do not directly look into the neighbouring house.

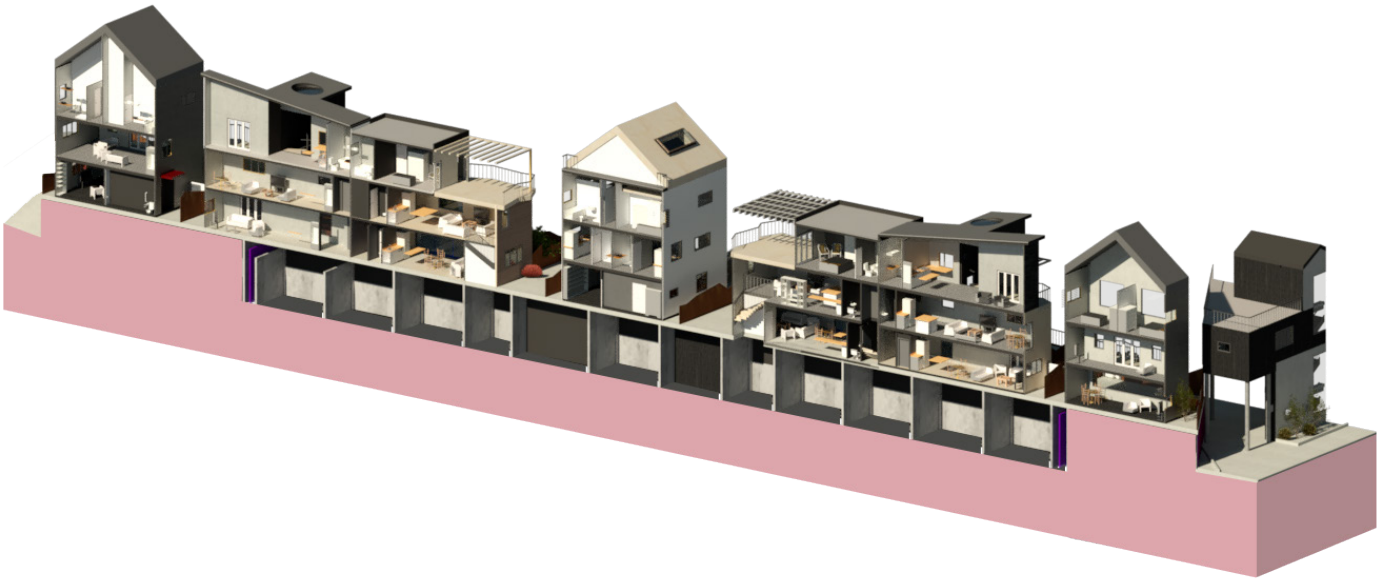
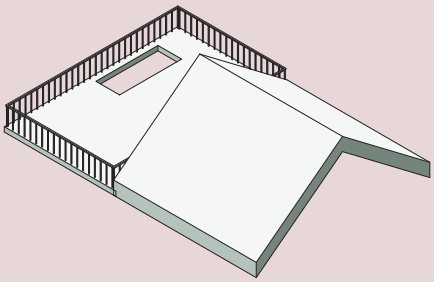
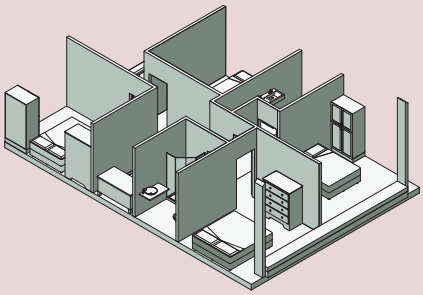
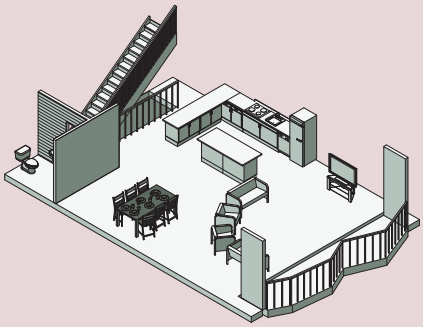
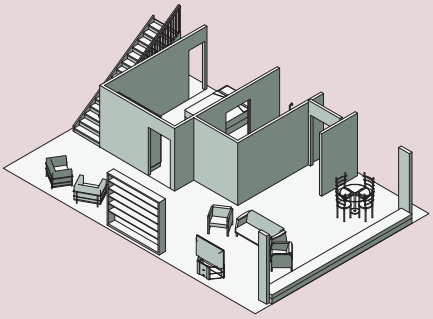


Fig.9.20. Individualist block perspective section





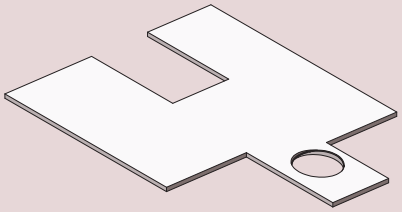


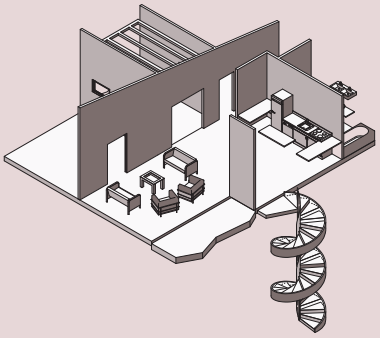


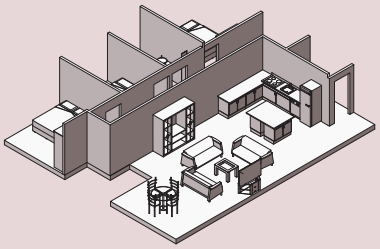
LARGE FAMILY HOUSE

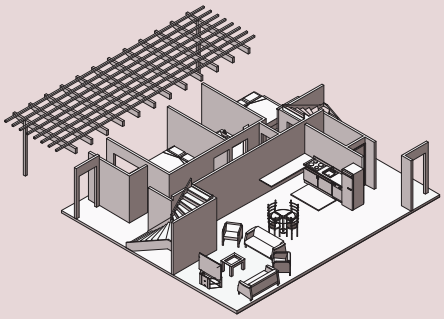
-5 bedrooms each -2 parents
-private yard -2 grandparents
-private garage - 2grandparents
-private terrace

Fig.9.21. Individualist house separated quiet space









MULTI FAMILY HOUSE

-3 separate flats, 2 bedrooms each
-private yards
-private terraces (top)

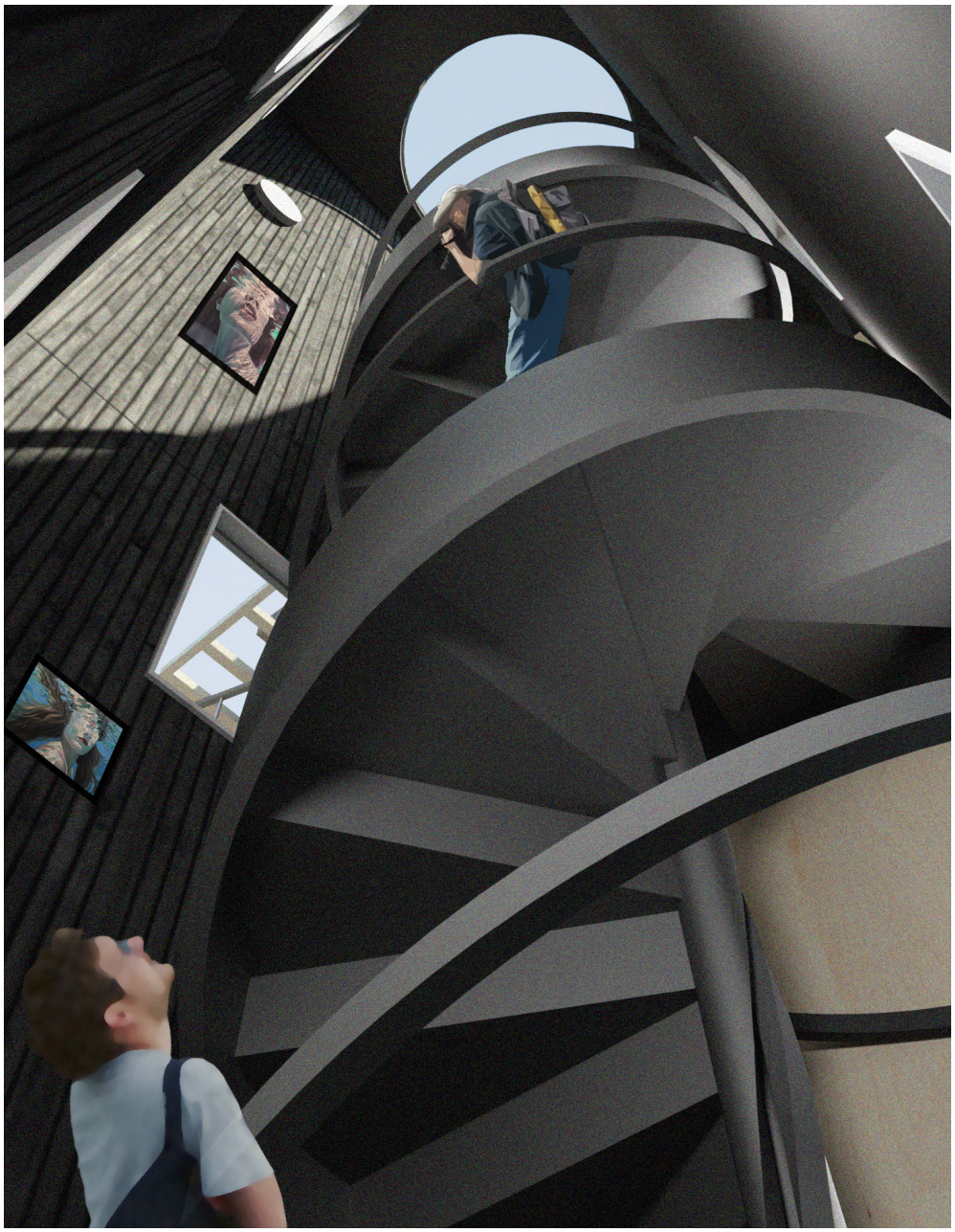
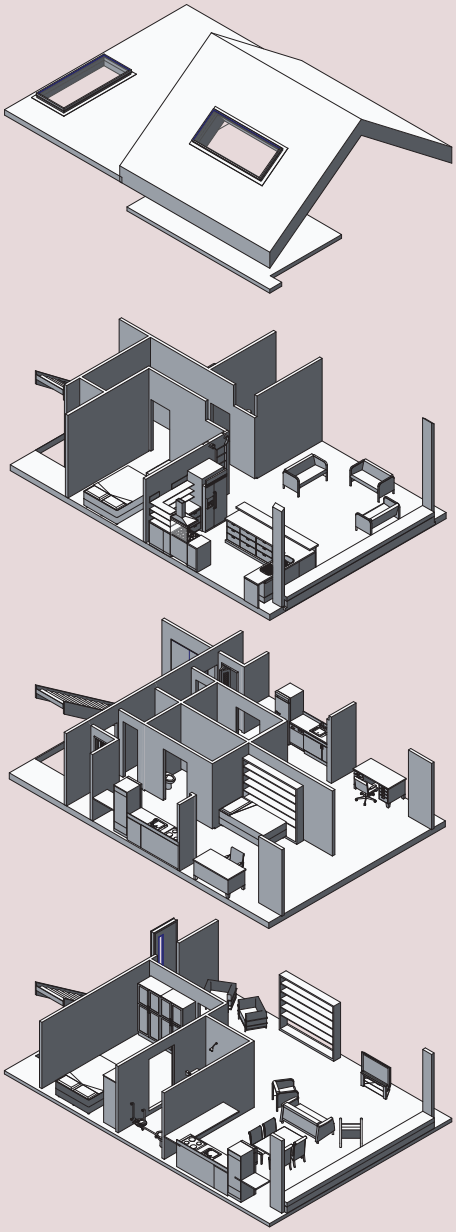


Fig.9.22. Individual house type 3 access and potential gallery space



SPLIT FAMILY HOUSE

-3 separate flats
-possible intergenerational living
-shared private yard
-private terrace (top)
- private garage

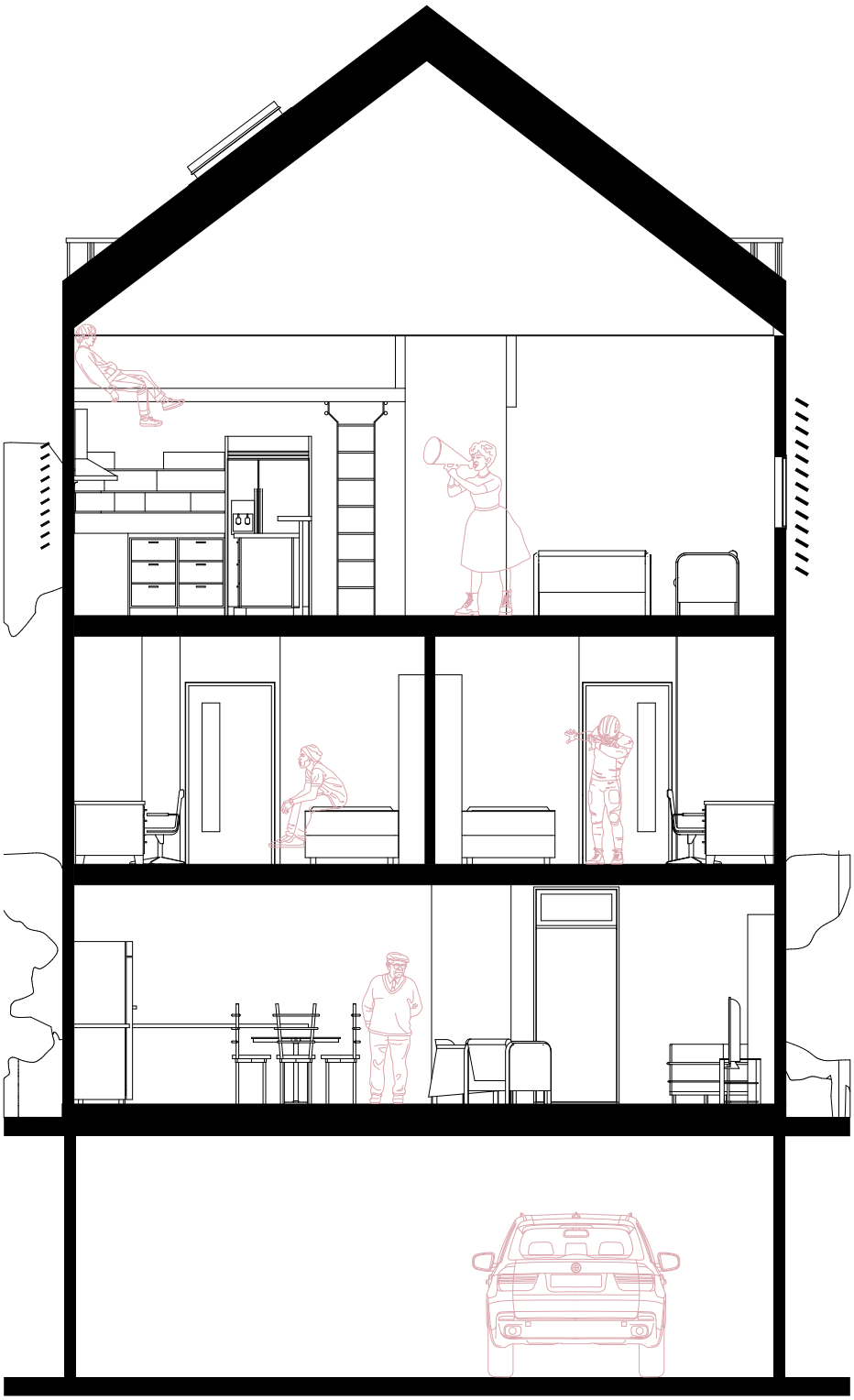
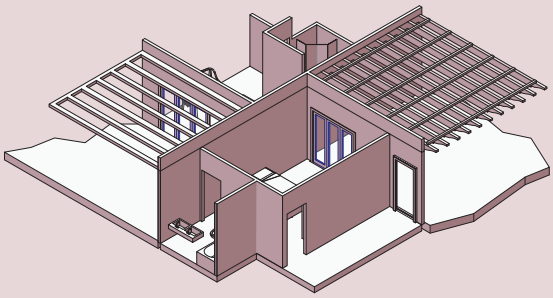
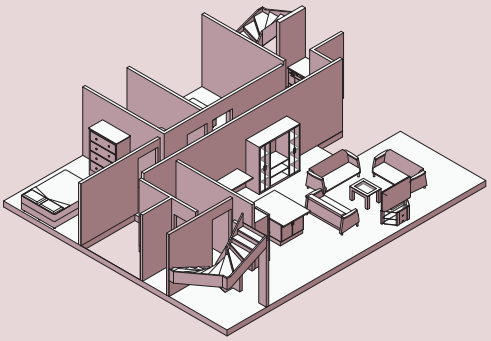
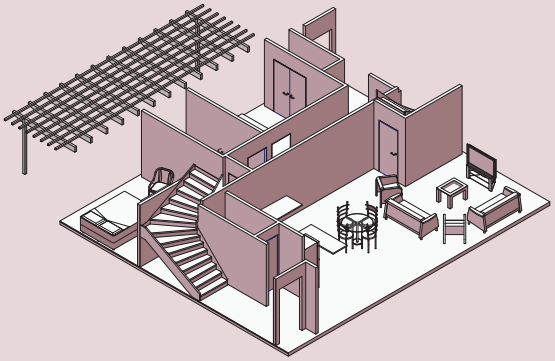


Fig.9.23. Individual house type 1 section showing mix
of different dwellers







DUPLEX FAMILY HOUSE

-3 bedrooms each
-private yards
-private garages
-private terraces

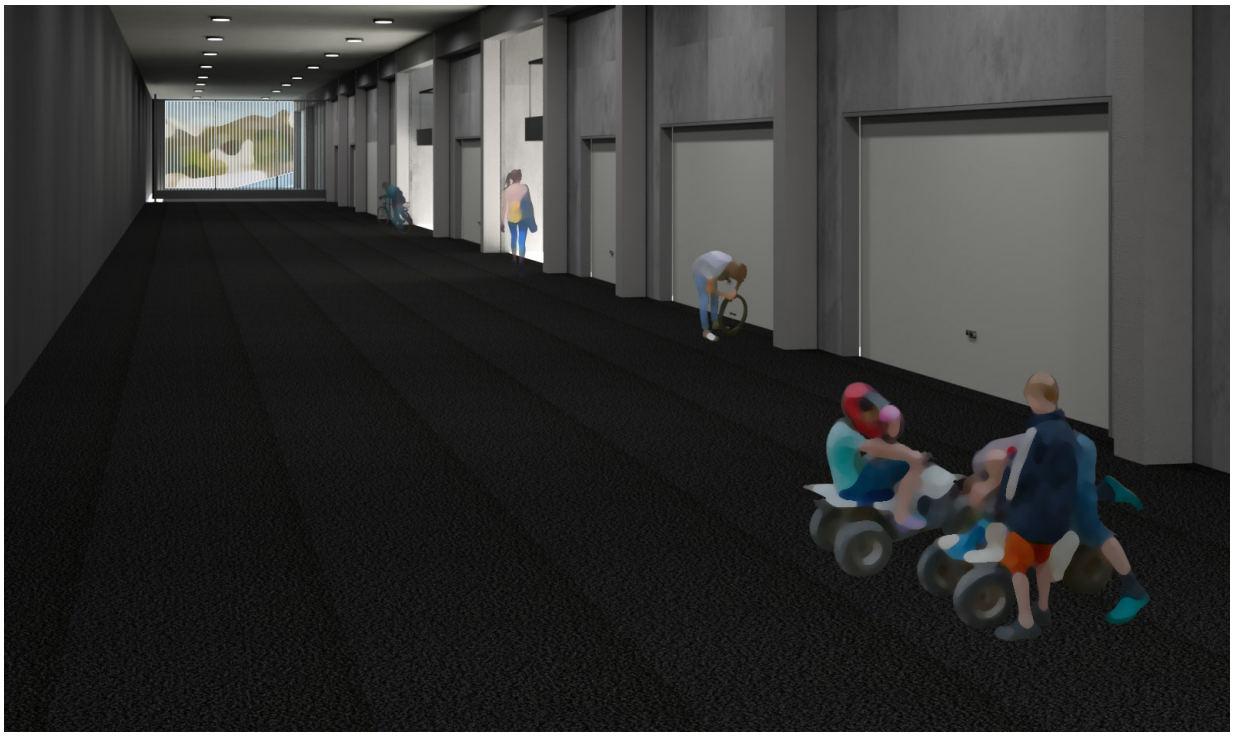


Fig.9.24. Individual block separate garage and access

Fig.9.25. Individual block street front showing different typologies

Internal And External Accessibility

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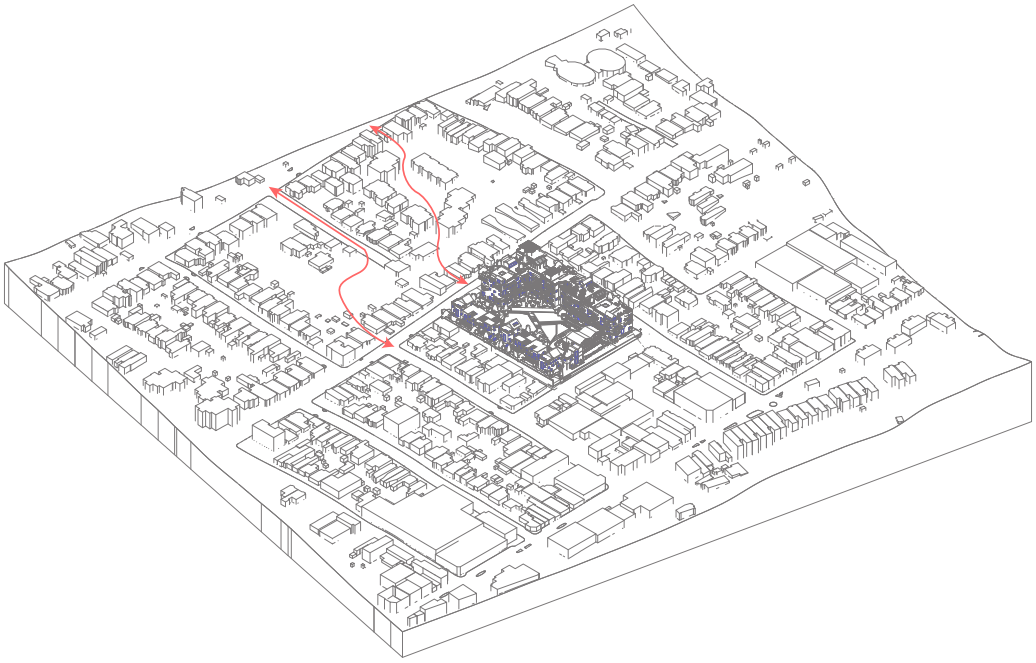

Fig.9.26. Original accessway

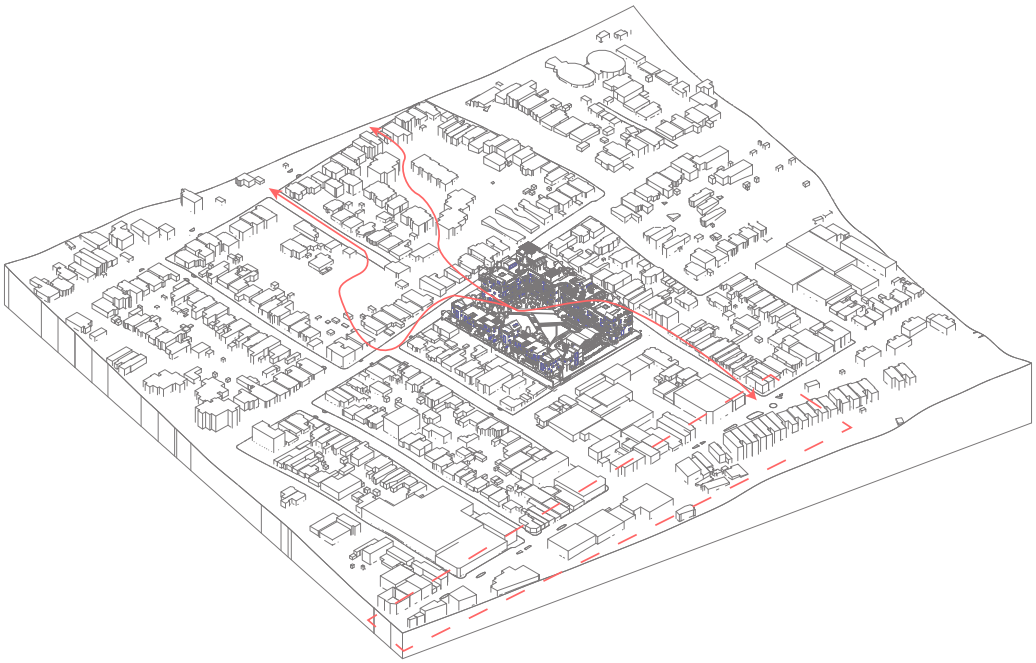

Fig.9.27. Revised designed accessway through site

Fig.9.28. Collectivist block cut-through access path

Fig.9.29. Collectivist block access path showing
colour to guide public through space

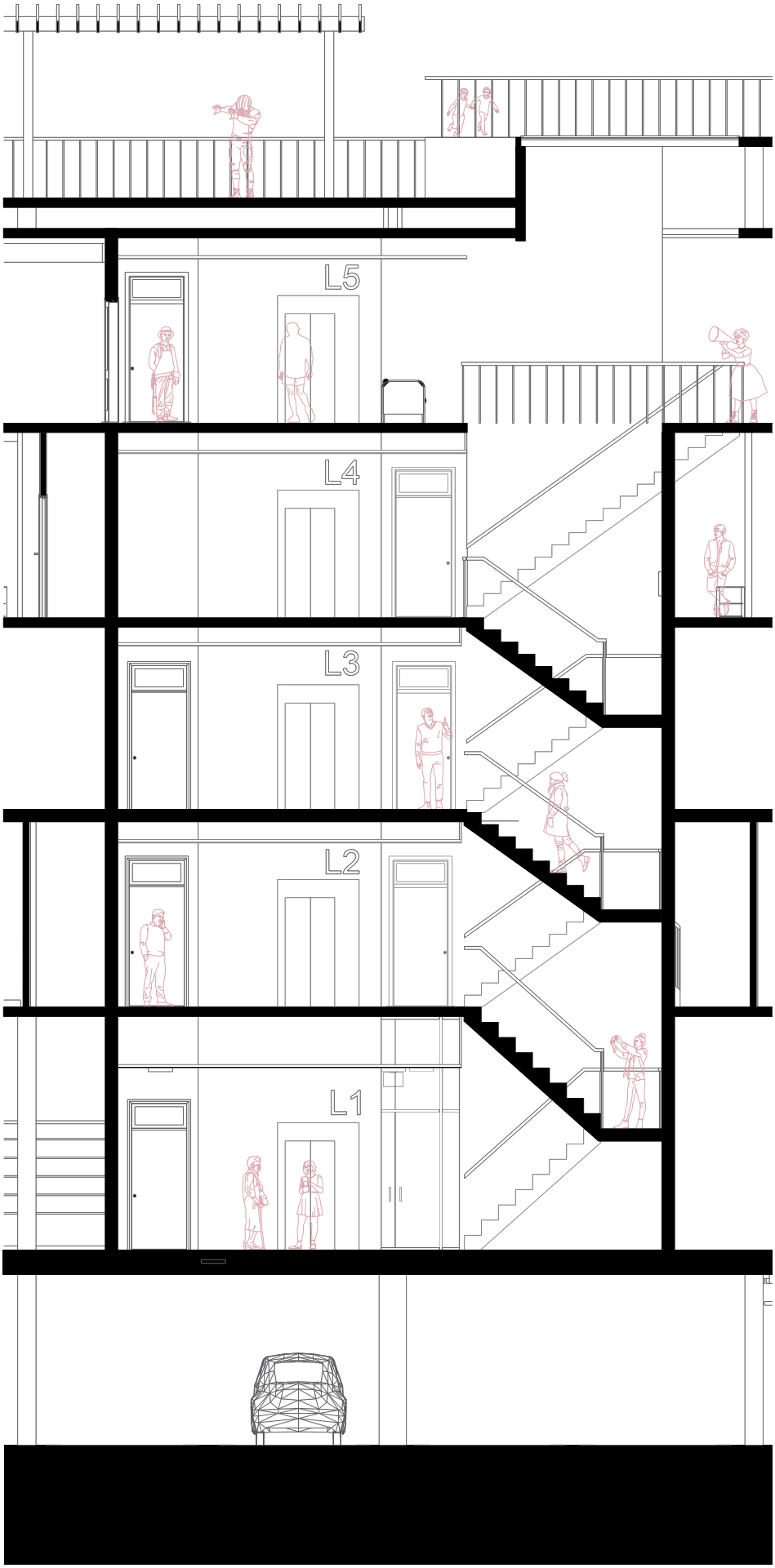

Fig.9.30. Collective block vertical access shafts
showing privacy and points of interaction

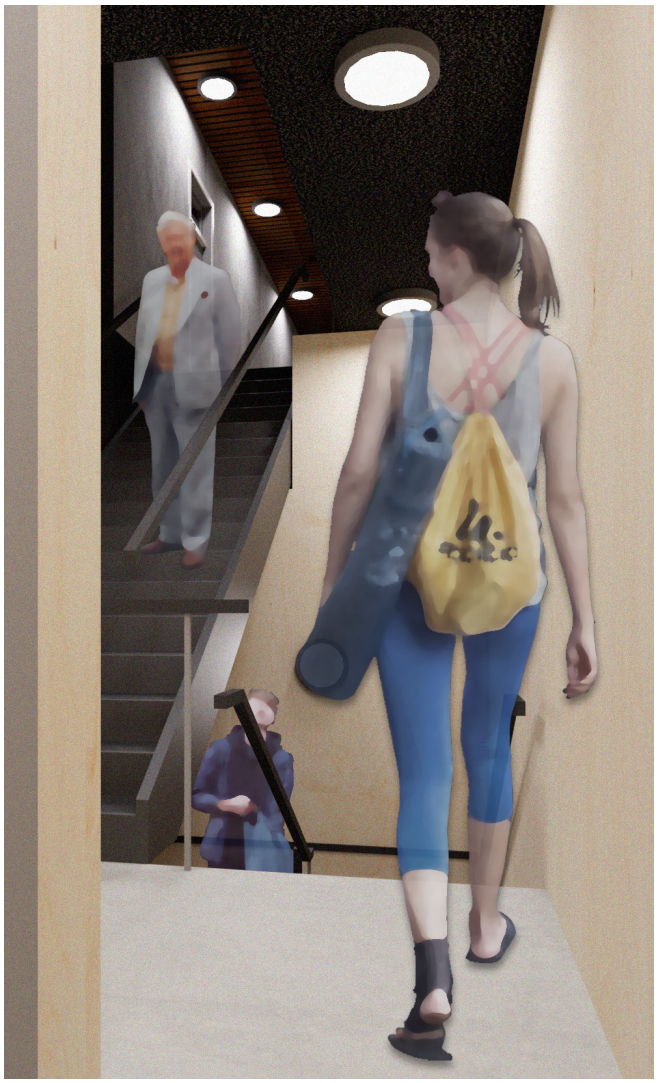

Fig.9.31. Collective block stair shafts showing possible points of interaction

Fig.9.32. Collective block entrance showing warm materials and bright lighting

Fig.9.33. Individual house type 3 section showing division of spaces

Design Features

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Fig.9.34. Smart hidden storage facilities for collectivist dwellings

Fig.9.35. Laundry facility to act as a point of amenity and interaction

APARTMENT BLOCK ROOF

-greenhouses
-benches and vegetation
- bbq/picnic area
-outdoor fireplace
-meeting room
-book swap library

Fig.9.36. Collectivist block shared rooftop community garden

SITE COMMUNITY HUB

-community room
-study room
-games room
-common room
-playground
-basketball court

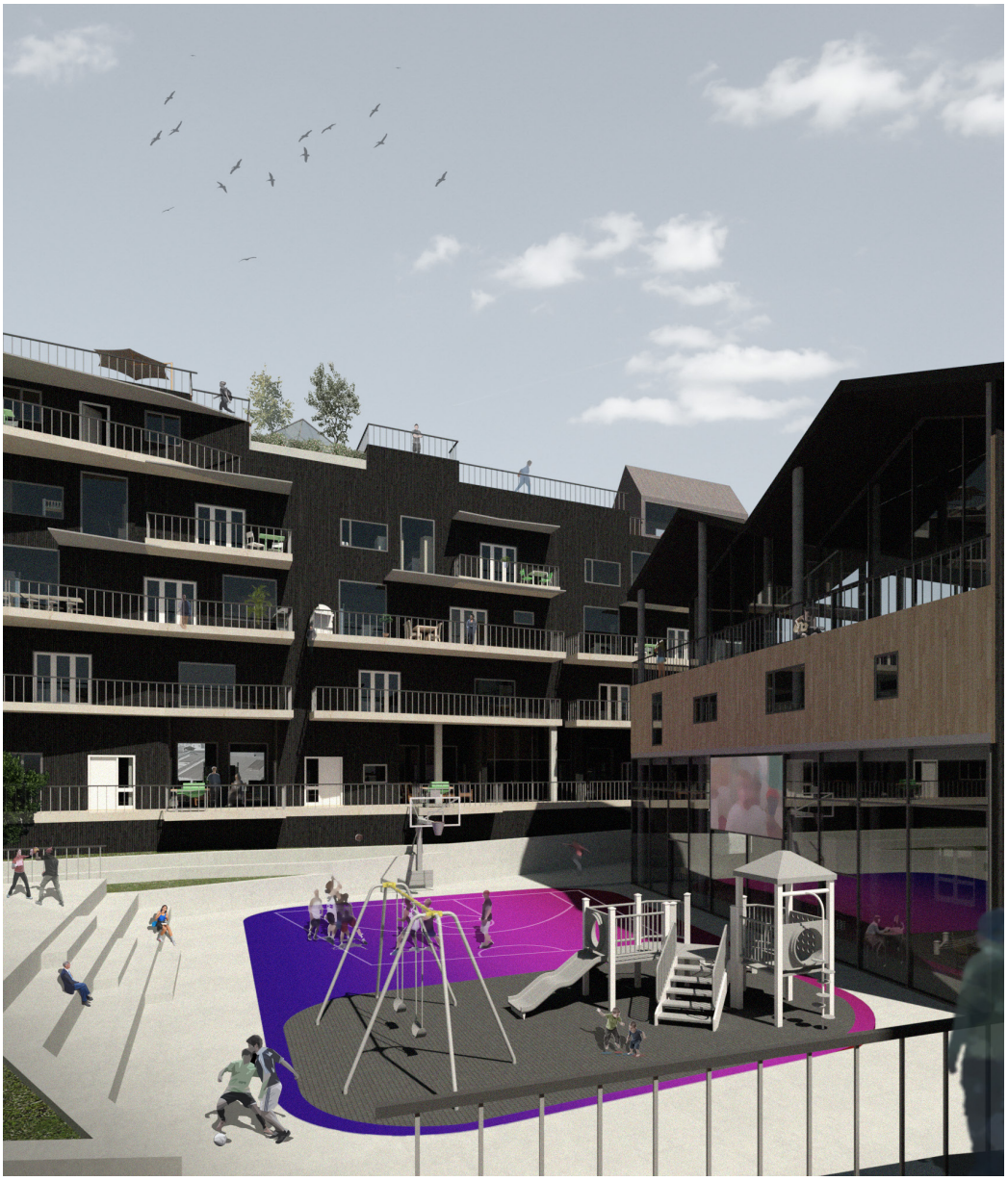

Fig.9.37. Basketball court and playground space

Fig.9.38. Community hall

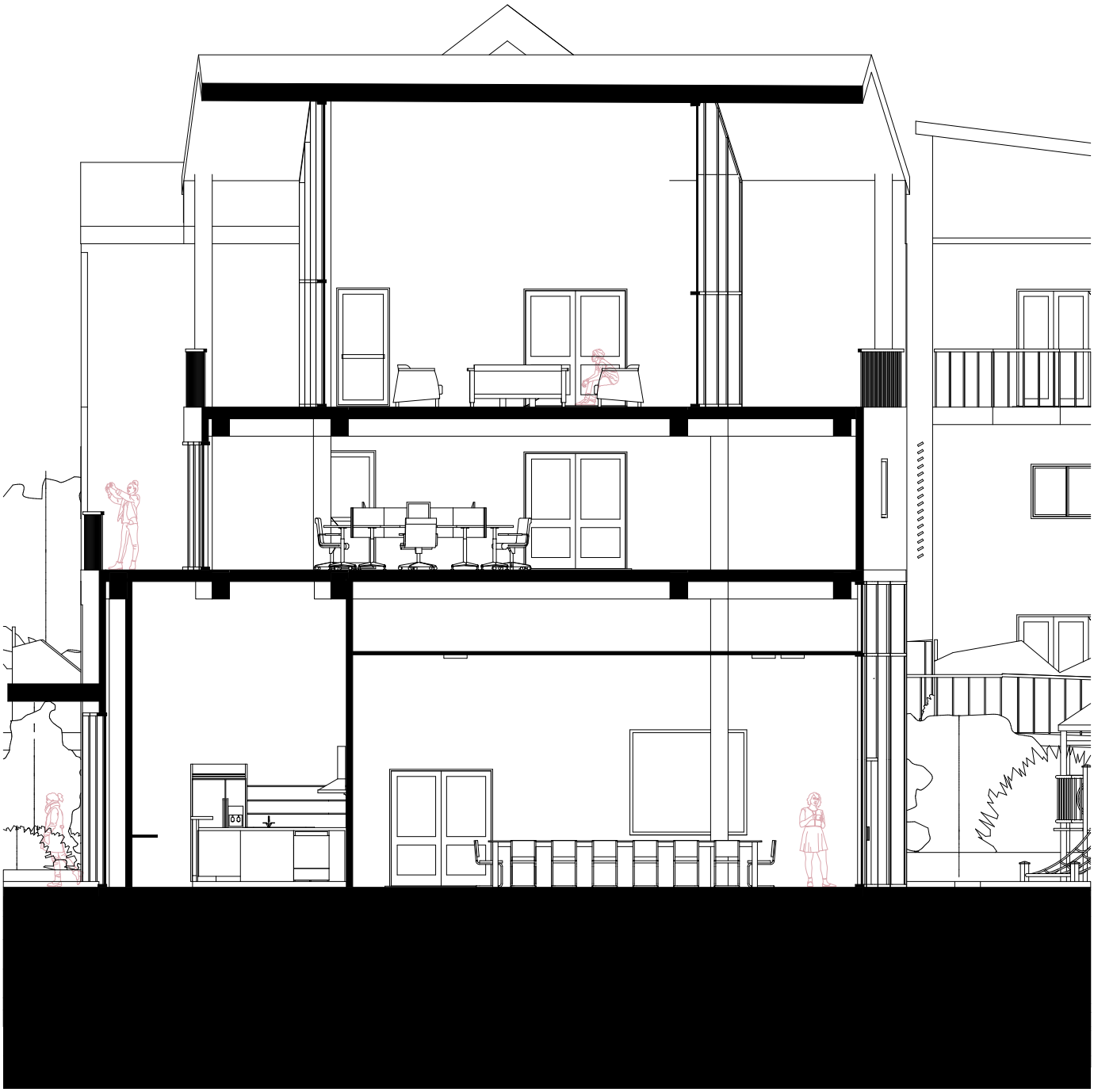

Fig.9.39. Community centre section showing different spaces, viewpoints and uses

Privacy

Jan Gehl
"People are attracted to people. They gather with and move about with others and seek to place themselves near others" (Gehl, 2011).

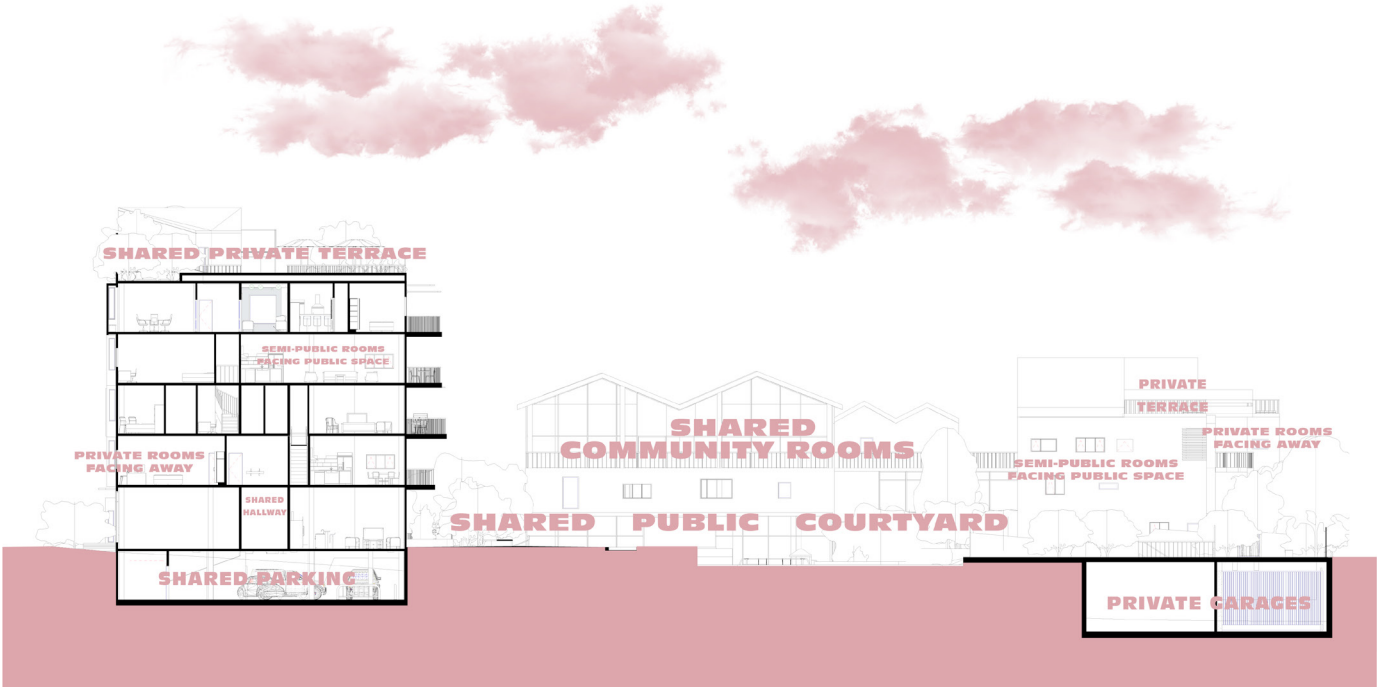

Fig.9.40. Public and private spaces diagram

Fig.9.41. Individualist terraces overlooking main courtyard

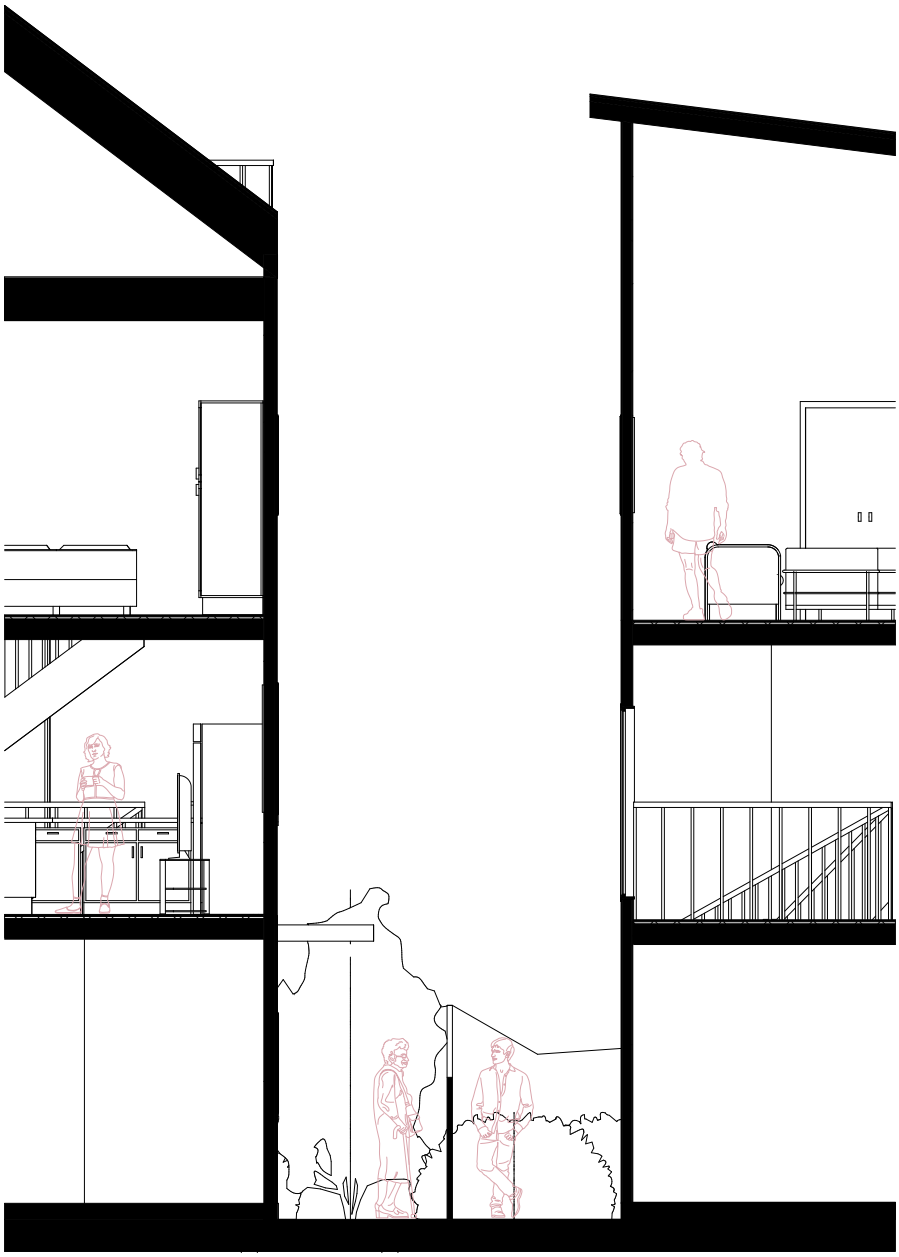

Fig.9.42. Individualist ‘third’ spaces showing privacy
and chance for interaction

Fig.9.43. Collectivist block entrance and courtyard
'soft' boundaries

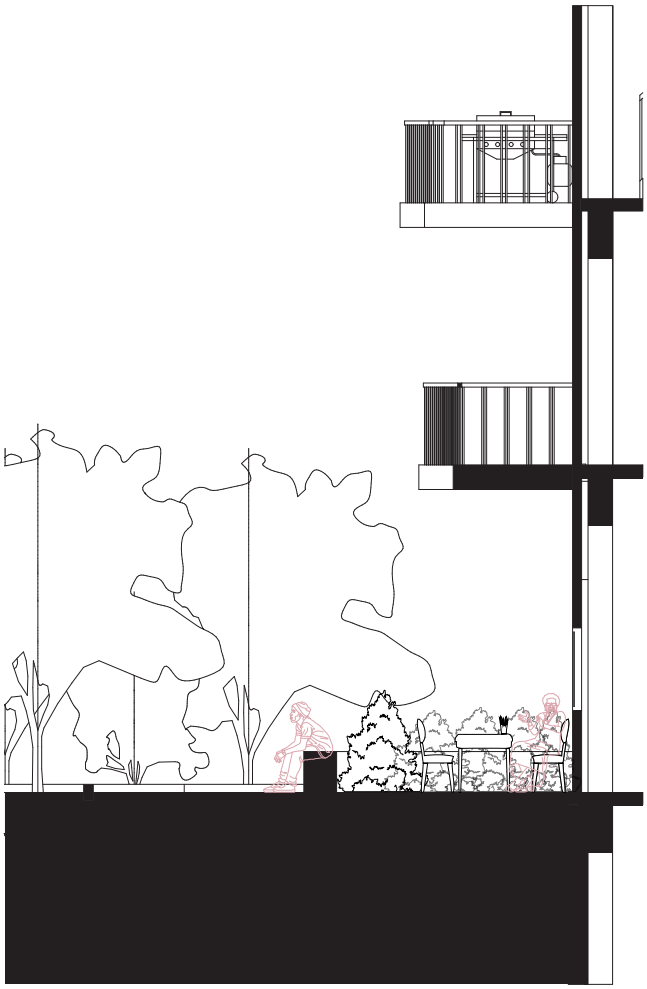

Fig.9.44. Collectivist block private courtyard ‘soft’ boundaries for privacy

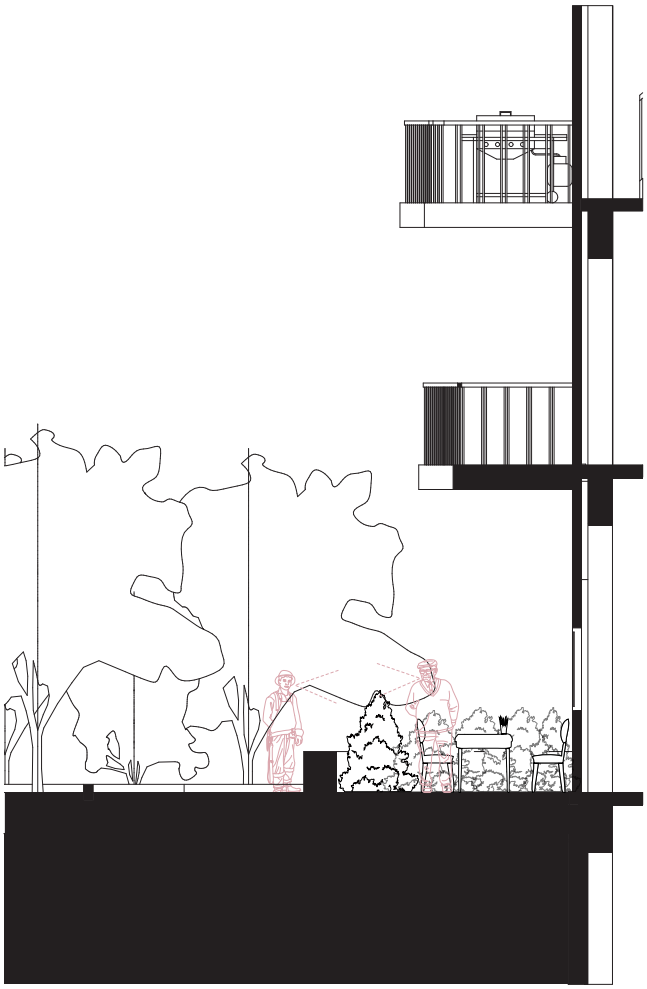

Fig.9.45. Collectivist block private courtyard ‘soft’ boundaries for interaction

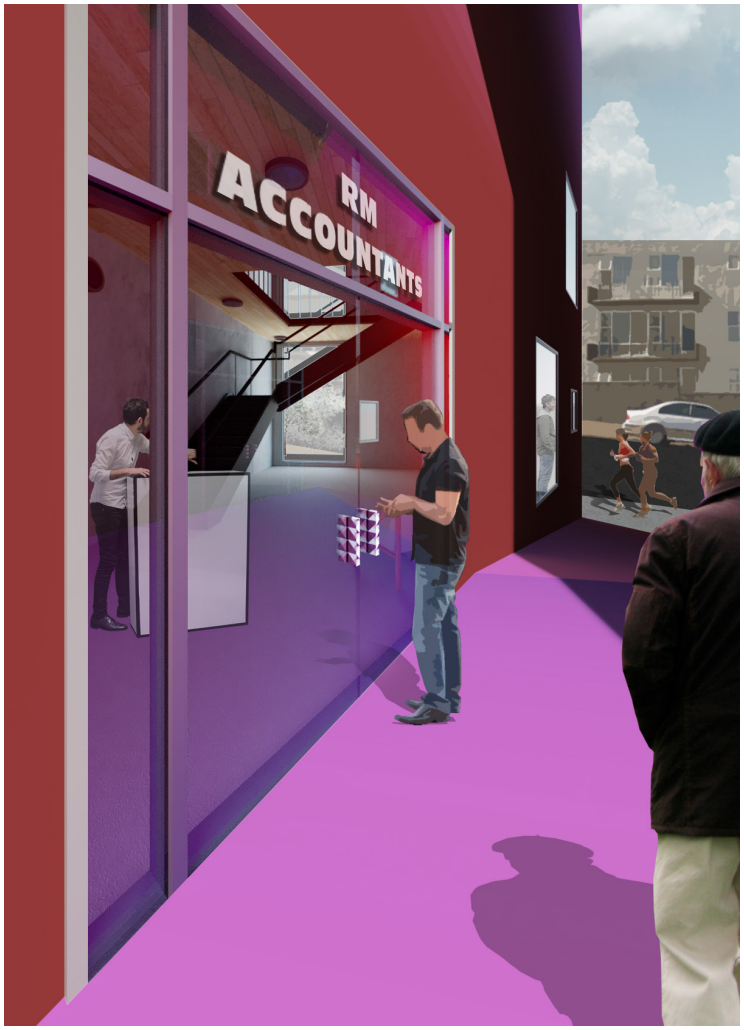

Fig.9.46. Double height ground floor office space

Fig.9.47. Double height top floor office space

OFFICE SPACES

-2 double height office spaces
-1 130m2 floor area
-1 200m2 floor area
-prayer room between

COMMERCE SPACES

-cafe
-2 retail spaces
- 1restaurant
-dominant streetfront

Jane Jacobs:
the four main design principles of a social space are; mixed-use, density, natural surveillance and permeability (Jacobs, 1961).

Fig.9.48. Iso of retail facade on Rhodes St

Fig.9.49. Cafe on corner of Rhodes and Ferguson Streets

SITE COMMUNITY HUB

-2 cinemas
-restaurant
-bar

Tschumi describes his concept of cross-programing and disprogramming as a strategy where "programme A contaminates programme b and b's possible configuration (Tschumi, 2012).

Fig.9.50. Cultural cinema corner of Rhodes and Daniell Streets

Green Space

Fig.9.51. Semi-public quiet green spots on individualist side

Fig.9.52. Semi-public quiet green spots on collective side

Fig.9.53. Central courtyard

Fig.9.54. Perspective section of courtyard

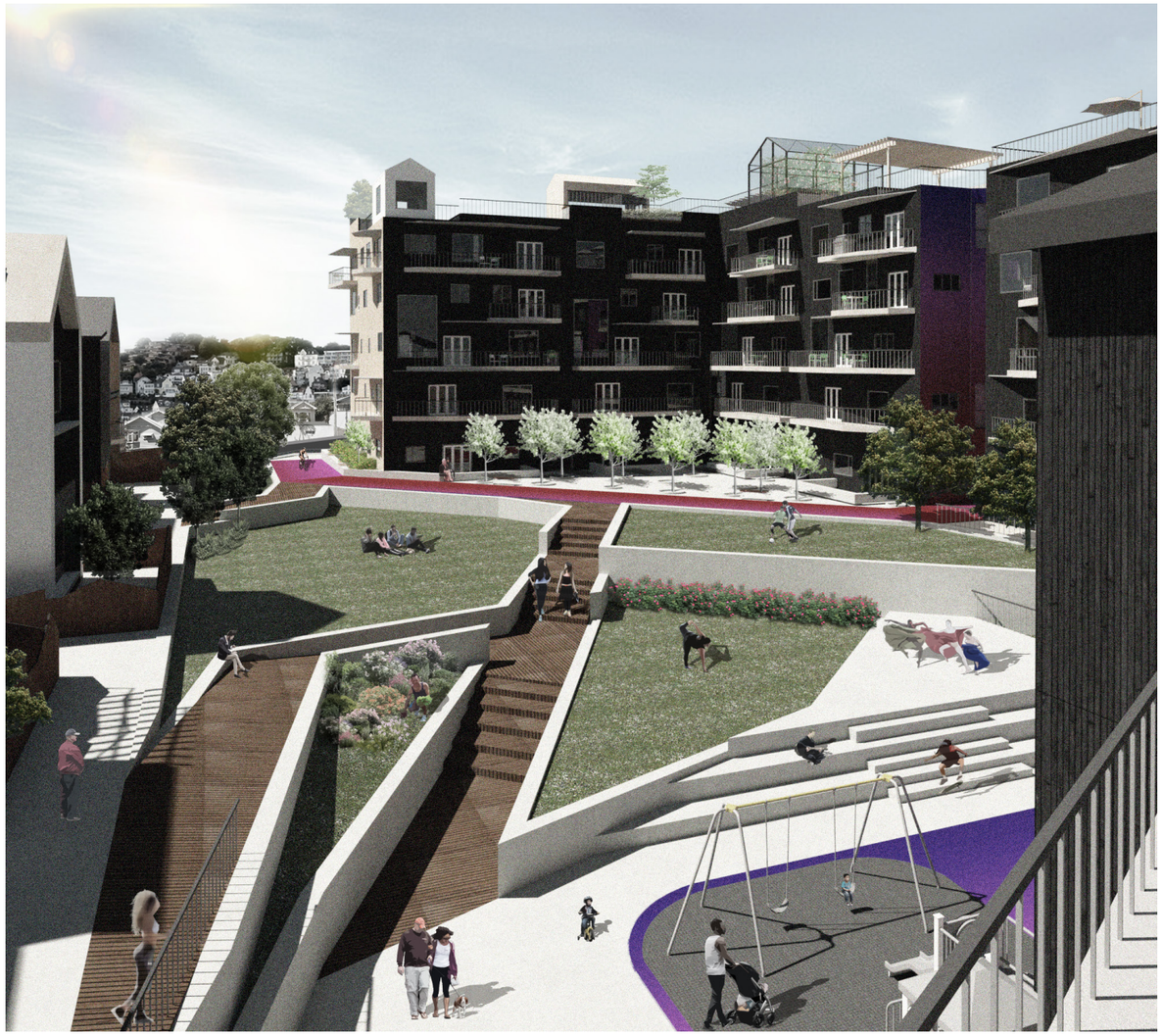

Fig.9.55. Central courtyard and green spaces

Context

-

Fig.9.56. Ferguson Street elevation showing community centre

Fig.9.57. Collectivist block rooftop space

Fig.9.58. Rhodes Street facade

Fig.9.59. Community centre entrance

Fig.9.60. Variety of individualistic style detached dwellings derived from surroundings

Fig.9.61. South-east elevation

Fig.9.62. Individualist block back facade

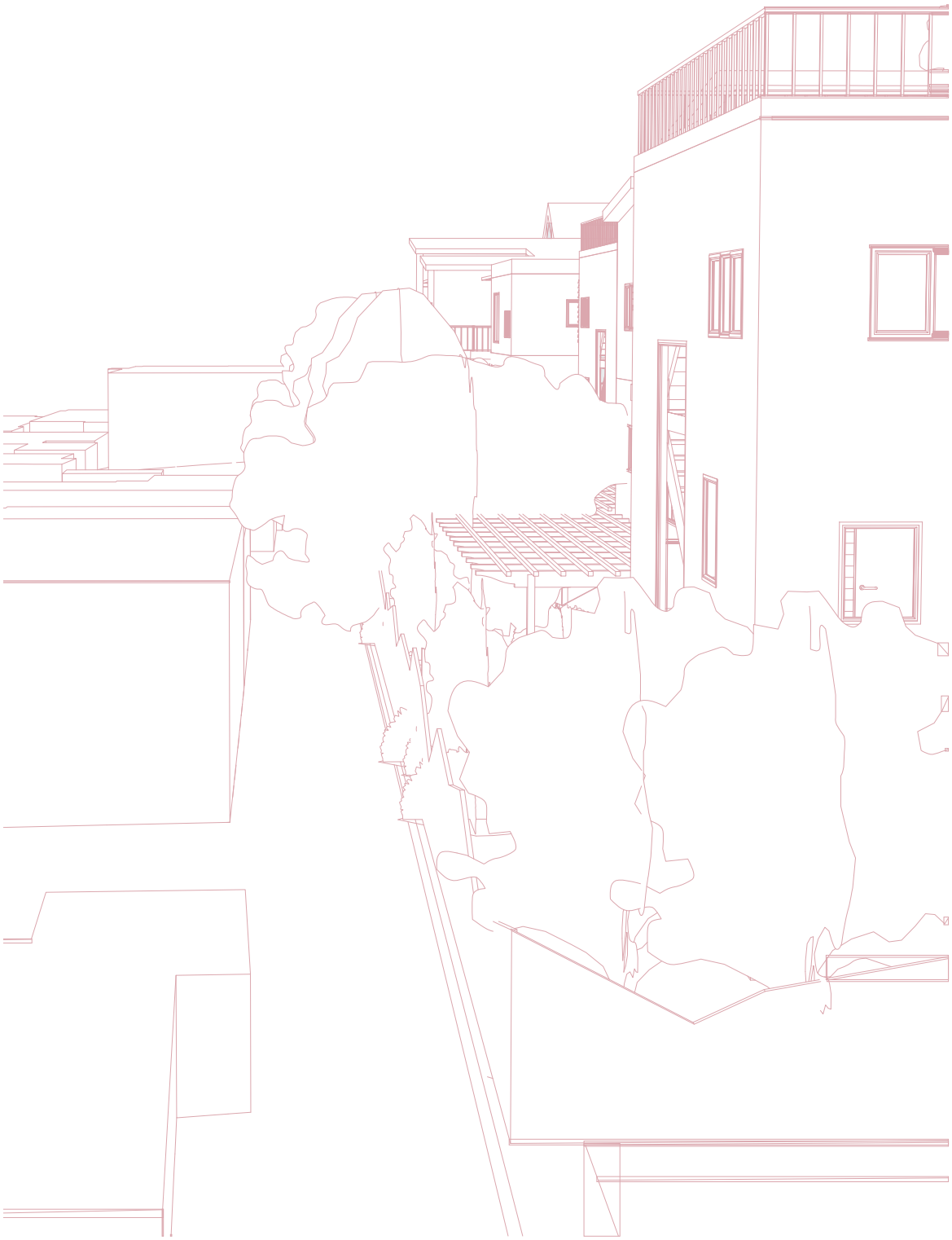

Fig.9.63. Individualist block relation to neighbours

10. CONCLUSIONS

Analysis of Performance Criteria

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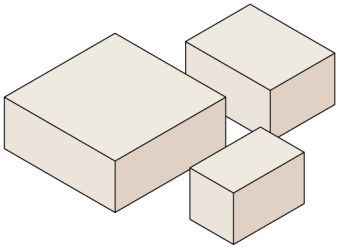
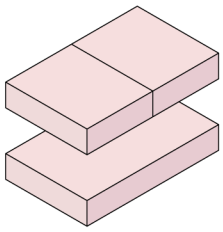
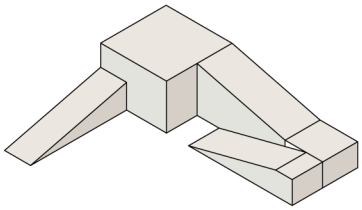


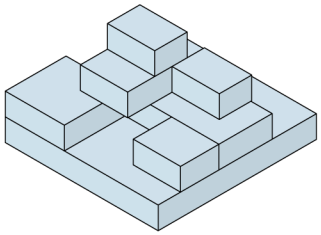
Living options
that cater for groups of different size and requirements



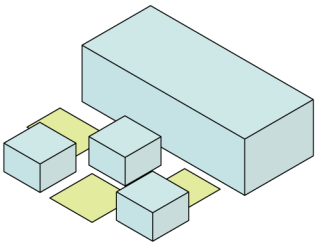
Flexibility
of living and recreation spaces for different activities to occur at the same time



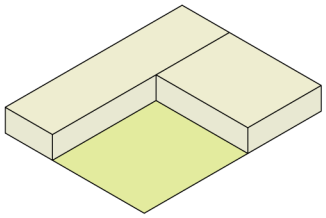
Internal and external accessibility
that makes movement of residents and public easy



Density
through more dwellings and people in a space

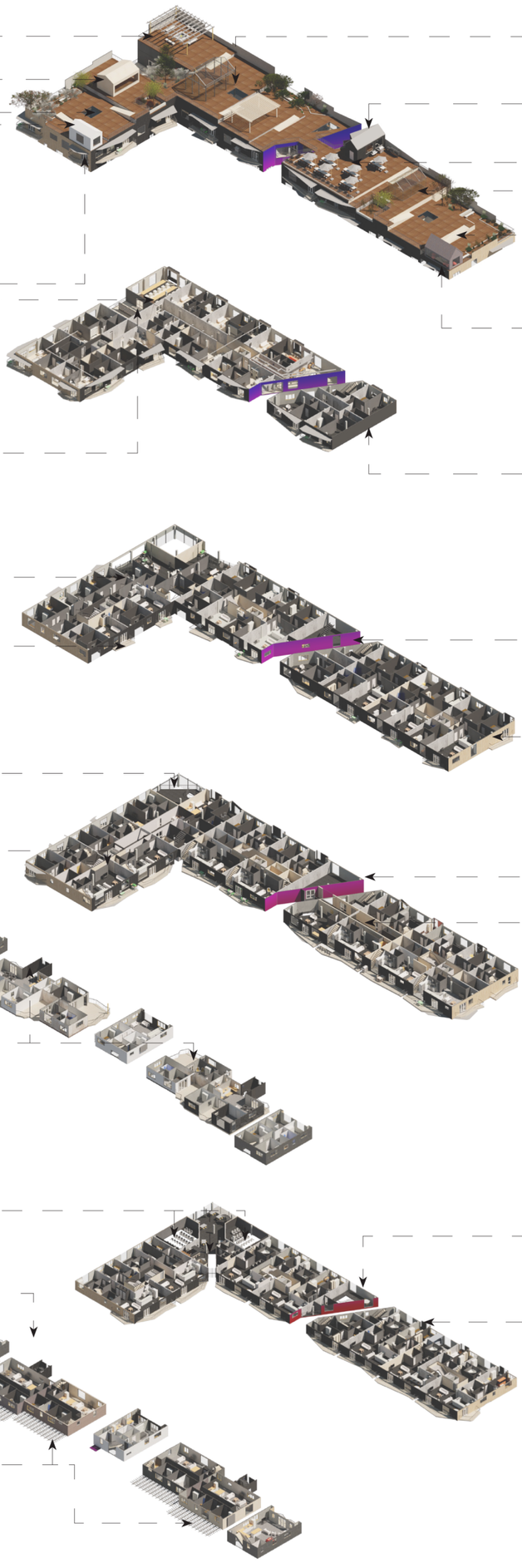


Mixed use
that introduces different levels of interaction and engagement on site



Green spaces
that allow people to come together when desired

Fig.10.01. Rhodes street context


Firepit and seating
Book swap library
Staircase light wells
Quiet reading spot amongst vegetation
Shared tools room
Shared laundry facilities
Shared open- air drying room
Multi level to divide living requirements
Balconies overlooking central courtyard
Cafe seating area
Storage rooms in each apartment
Merged or split 3 level houses
Private terraces that overlook either the central courtyard or north for privacy between dwellings
Cinema with cafe that showcases cultural movies and food - run by the entire collective
Different typologies of 'individualistic' housing
Different typology of 'individualistic' housing
Access for houses mixed at front and back to bring people past other entrances
Shared greenhouse and vege garden
Common elevator to rooftop
Picnic and BBQ area
Greenhouse #2
Ramps to maximise accessability
Shared meeting room
Shared meeting room
Smaller apartments grouped together on the 5th floor
Colour accents that guide public through development
Housing options from 1 bdrm to 5 bdrm flats
Prayer room
Shared vertical access with 2 flats per floor, 8-10 flats per shaft
Shared vertical access with 2 flats per floor, 8-10 flats per shaft
Office space to bring community into the development
Views of both inside and outside of the site for natural surveillance

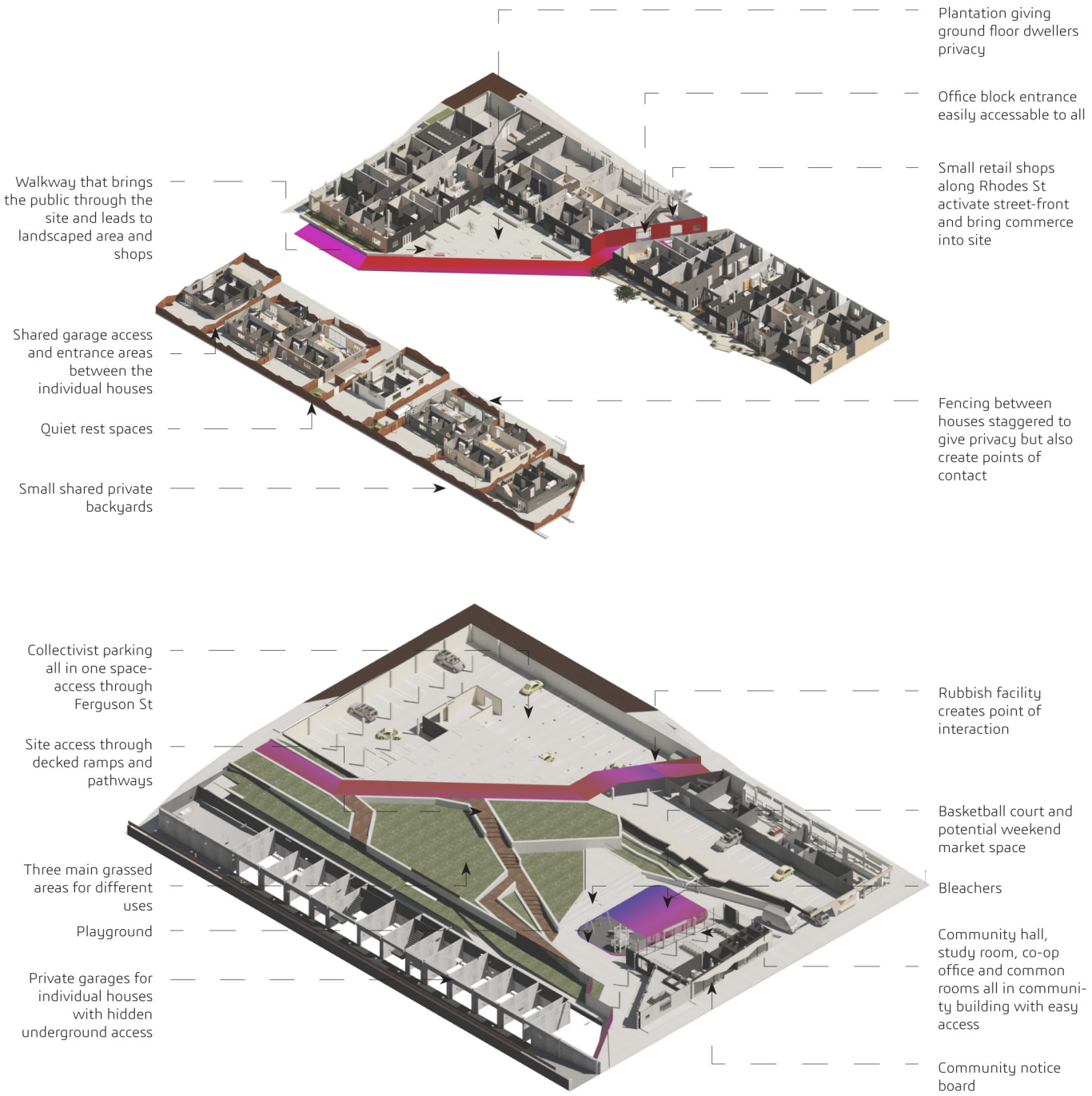


Fig.10.02. Design facilities and spaces

Fig.10.03. Internal facade of collectivist block

Conclusions

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The changing demographic of New Zealand proposes many challenges within the built environment that we live in. The increase of collectivist cultures in an individualistic society often leads to problems and as identified earlier one of these problems lies in the housing of these different cultures. Traditional housing in New Zealand favours a stand-alone dwelling that although has benefits of its own, fails to meet the changing needs of New Zealanders in this day and age. This then leads to many negative outcomes such as elitism and a deficiency of appropriate housing. Furthermore, the traditional typology also results in an absence of social interaction between different cultures, preventing the togetherness of these environments to reach full potential.

As a response to the lack of appropriate housing for different cultures, this design-led research portfolio investigates how medium density housing can facilitate the integration and interaction of different cultures to encourage the “togetherness of strangers”.

In order to achieve a successful design in this thesis, a literature review was conducted to inform the design on successful design techniques. This process followed the guidance of key authors and advisors in this field to identify 6 main performance criteria in the form of density, internal and external accessibility, flexibility, housing options, green space and mixed used facilities. These helped test different architectural iterations and were used as a reference to ensure these performance criteria were being met in order to resolve the issues being identified.

Following this, case studies of related works were analysed to find strengths that could be incorporated into the proposed design. Further analysis of local housing projects both in Wellington and around New Zealand informed that there was a lack of medium density developments that aimed to cater for the needs and requirements of different cultures in New Zealand.

The aim therefore of this research was to find a way that different cultures can live in one space without having to fully hybridize. As a result, different iterations and design techniques were explored to find how these different cultures can be housed according to their needs and how despite of having their own spaces, can come together easily to socialize when desired.

The diverse suburb of Newtown in Wellington was chosen as a testing grounds to generate a model of inclusive housing that could then be implemented in other suburbs around New Zealand in the future. From phase one through to phase three, many considerations were explored that helped to create a design that responds to the problems raised at the inception of this research project.

The final design response manages to achieve an architecturally interesting and spatially diverse housing scheme through the use of various different design principles. Through experimentation, it is found that medium density housing in New Zealand is able to house a variance of different cultures through a carefully designed scheme that considers different needs and requirements of different groups. Through the use of density, living options and flexibility, inclusiveness is achieved within the built form. A mix of these living types – both for individualistic cultures and collectivist cultures – allows different people to have what they might want, while still allowing them to be within the presence of one another. Furthermore, a mix of these dwellings - both within a building or within the site- mean that there can be different personality types even within the same space, contributing to a vibrant community.

This design-led research portfolio also finds that fostering of diversity within housing can also be accomplished by providing a rich amount of places where people are able to meet and interact. These spaces must occur often and on different scales to ensure that different people and different activities are catered for. This social aspect of the design is what enables people of different backgrounds to come together in a space that is neutral. While the architecture houses them and their living needs, these 'third' spaces foster the community spirit that is important in any healthy living setting. Along with this development of green spaces and accessibility to them, it is found that a range of mixed use activity is also important in a diverse space. By including this mix in the form of office, retail and leisure spaces in the design, the development opens itself up to the public, encouraging the community to interact with the site. This brings in different people at different times of the day for different uses, generating an active living space that is continuously changing.

Although these different performance criteria have been met through the guidance of a literature review and related works study, measurement of the success is not easy. Despite including design features that are considered good practice and providing this diverse range of living options, it is impossible to judge how the end user will interact or even engage with the space. This provides an opportunity for further development that includes a more inclusive process of consultation with the end user to provide a more responsive design to immediate or even territorial needs. The scope of this design-led research did not include engagement

with the end user or the community, but it is acknowledged that a project of this nature should seek to include engagement and consultation in the design process. It is learnt through this iteration process that the design process from an architect's perspective should be a conversation with the people that could be inhabiting this space and by doing that we will be able to more specifically cater for these different needs even within the two different societies. Another important finding through this research process was the understanding that designers and architects cannot engineer people's behaviours - instead it is our duty to develop ways for people to sort themselves out as to what is socially appropriate by providing them with tools and spaces to do so.

Given the method used, this design-led research portfolio comes reasonably close to solving the difficult problem of designing for various different cultures. Critical architectural decisions such as activity, amenities, orientation, privacy, dimensions, access and context are important features to consider when designing for different cultures. Along with this, the spaces around these built forms are equally important to foster the coming together of different societies. This final design proposes a concept where a range of people can come together without fully assimilating, through a medium density housing complex that facilitates the integration and interaction of different cultures to encourage the "togetherness of strangers".

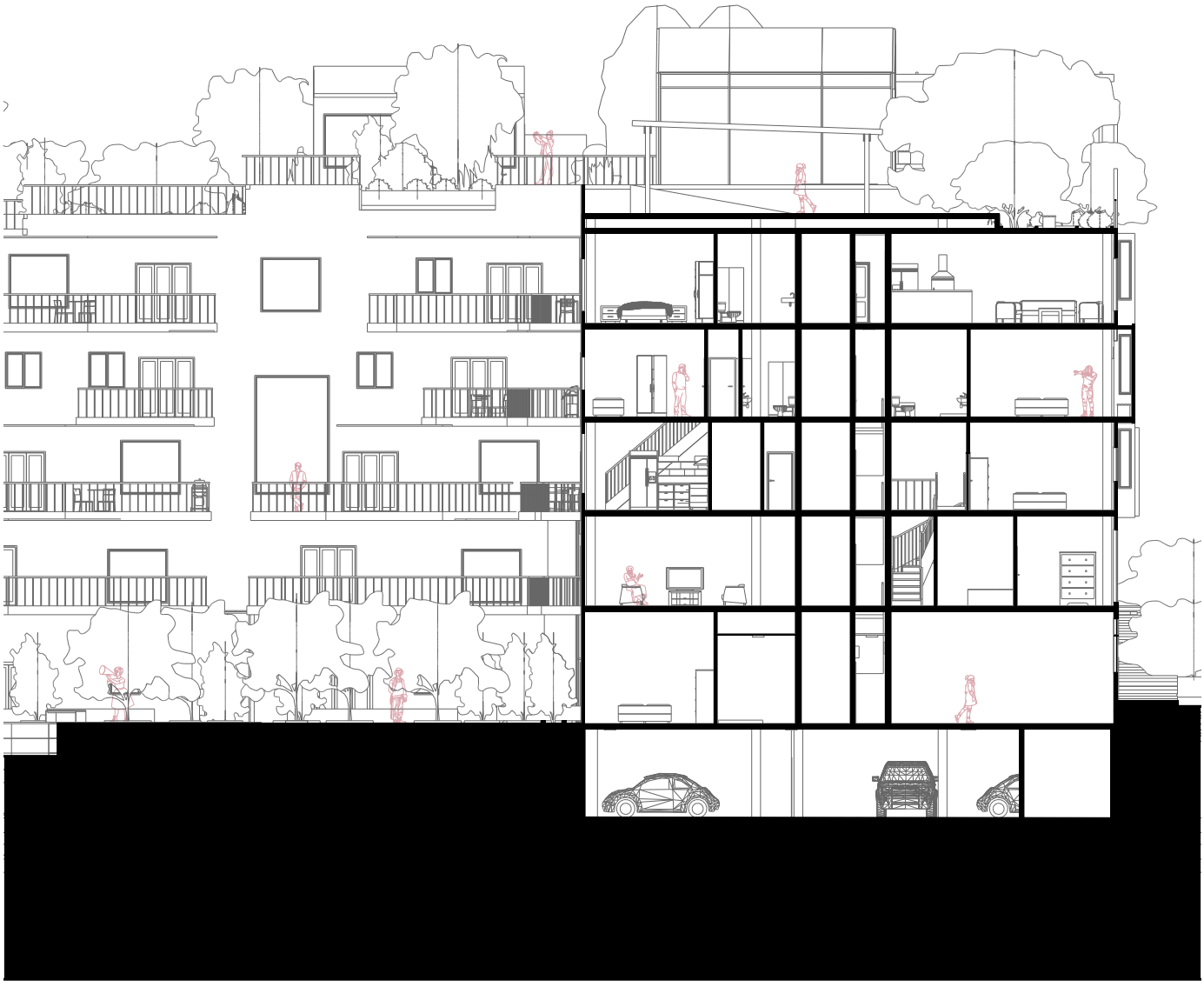

Fig.10.04. Transverse section

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The Togetherness of Strangers.

Austin D'souza