

REINVIGORATING LIFE

An Architecture for Younger Onset Dementia

Kelly Moeroa Lambert



REINVIGORATING LIFE

An Architecture for Younger Onset Dementia

by **Kelly Moeroa Lambert**

A 120 point thesis submitted to the School of Architecture and Design, Victoria University of Wellington, in partial fulfilment of the requirements for the degree of Masters of Architecture (Prof.)

Victoria University of Wellington:

2015

Acknowledgements

Jacqueline McIntosh, Dr Sally Rimkeit, and the rest of the JM crew, thank you for your knowledge, enthusiasm, and support throughout the year.

Mum and Dad, thanks for your constant encouragement and reminders to enjoy life outside of architecture.

A special thank you to Henry for your never ending optimism, I wouldn't have made it through Architecture without you.

0.1 | (previous spread) Designed Entrance

0.2 | (opposite) Nana



For my Nana,

Peretaia Robati



ABSTRACT

Most people are familiar with dementia, but few realise that it is not just an old persons' disease. Younger onset dementia (YOD) is defined as the onset of dementia before age 65, some afflicted are as young as 30. People with YOD often have children at home, were recently employed, are physically fit and have active social lives. There are currently no facilities in New Zealand for people with YOD, resulting in their institutionalisation in aged-care facilities withdrawn from the local community and environment. The loss of physical and social stimulation often results in confusion, high anxiety and a faster progression of symptoms.

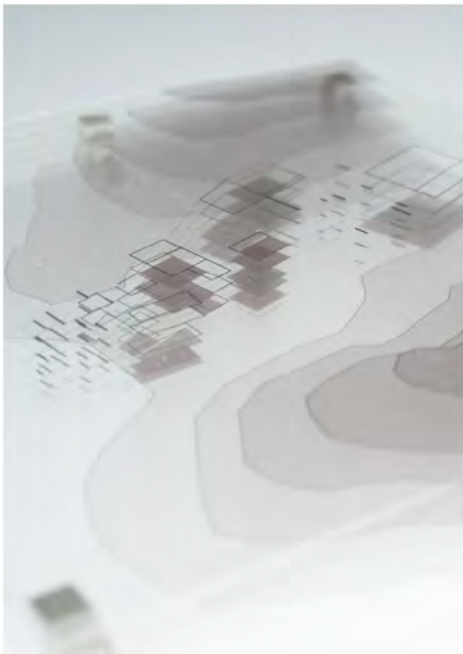
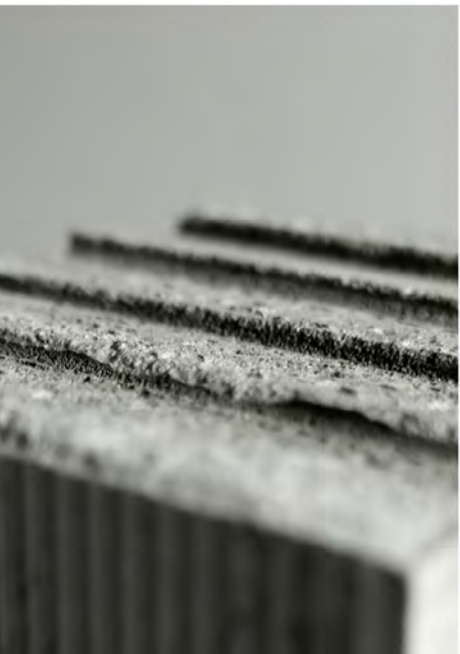
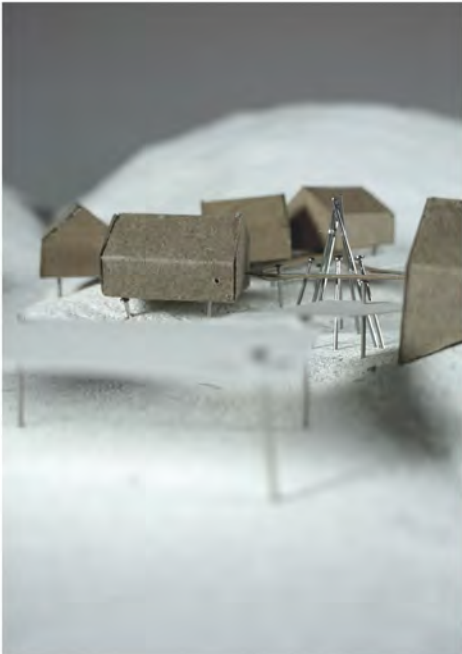
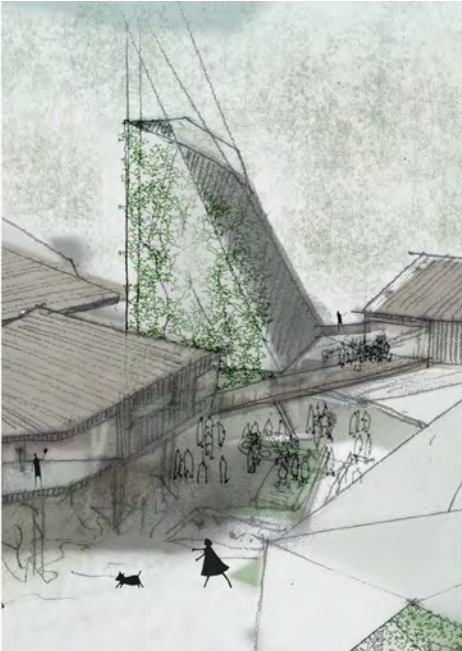
Seeking to develop a specialised YOD facility, this thesis examines; existing literature across multiple disciplines, examples of successful YOD facilities internationally, and proposes both a participatory and iterative design method to establish **how architecture can reinvigorate the lives of those affected by YOD and instigate a more socially responsive approach to design.** This extends to the wider group of 'lives' including the care workers, the community and ultimately NZ. The need to provide architecture for memory, autonomy, and therapy was developed from the literature establishing key objectives for the design.

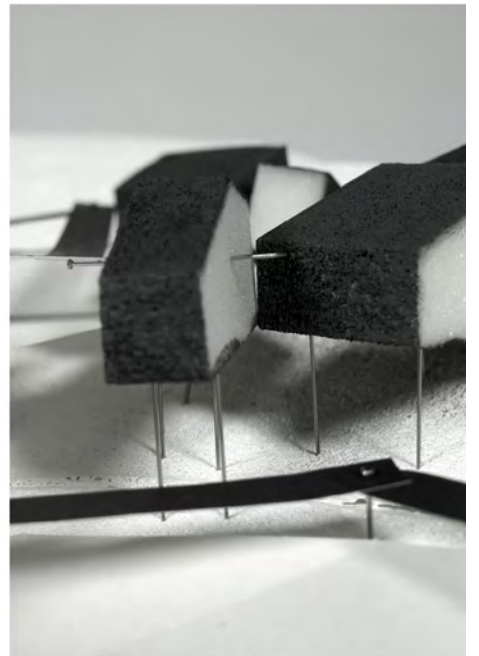
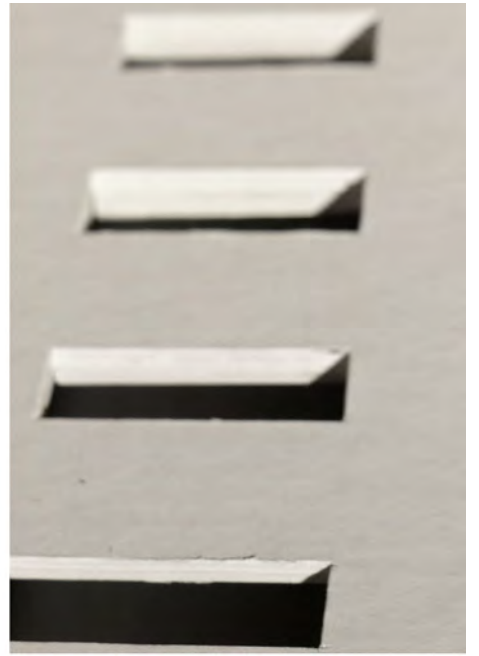
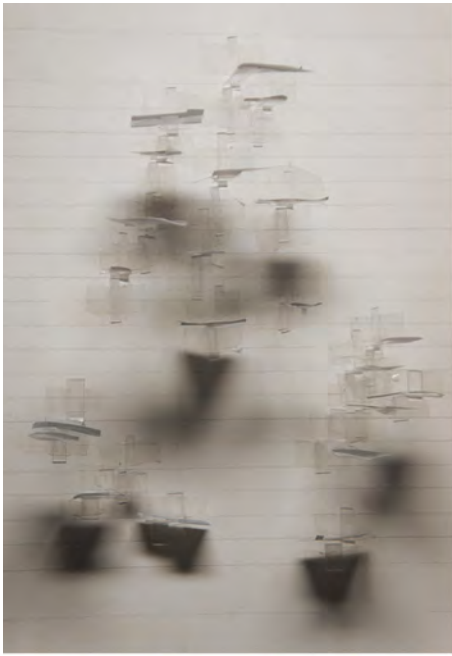
In response to the lack of community interaction which occurs with existing dementia facilities, the thesis explores the possibilities inherent in Tschumi's method of disprogramming. A garden centre is introduced to both contribute to and benefit from the YOD facility. The merging of YOD facility and garden centre into an infinity loop offers continual interaction, establishes a stimulating environment, and reaffirms those affected by YOD as relevant and active members of the community. The thesis engages with the discourse on projective practice to regain memory, autonomy, and activity for those affected by YOD, providing a reinvigorating architecture while simultaneously promoting a more socially responsive approach to design.

CONTENTS

Acknowledgements	iv
Abstract	vii
1.0 Introduction	001
1.1 Problem and Proposition	003
1.1.1 Scope	010
1.1.2 Methodology and Structure	012
2.0 Reviewing the Literature	015
2.1 Architecture and Memory	017
2.2 Architecture for Autonomy	021
2.3 Architecture as Therapy	025
2.4 Summary & Reflection	029
3.0 Analysis of Existing	031
3.1 Method of Analysis	033
3.1.1 Corumbene Aged Care	034
3.1.2 Group Home for Dementia	036
3.1.3 De Hogeweyk aka Dementiaville	038
3.1.4 Home of Compassion	040
3.1.5 Itep Le Home Therapeutic Complex	042
3.1.6 Warm Atmosphere	044
3.2 Summary & Reflection	049
4.0 Designing for YOD	051
4.1 Refining the Scope	053
4.1.1 Community Requirements	054
4.1.2 Refining Programme	064
4.1.3 Identifying Site	068
4.1.4 Experience Requirements	074
4.1.5 Summary & Reflection	082
4.2 Design Phase One	085
4.2.1 Programme Requirements	086
4.2.2 Managing Integration	088

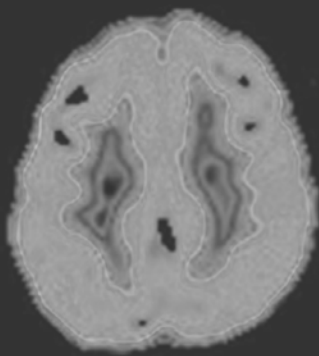
4.2.3 Initial Concept	096
4.2.4 Design One	100
4.2.5 Summary & Reflection	106
4.3 Design Phase Two	109
4.3.1 Redefining Programme Requirements	110
4.3.2 Exploring Merging	112
4.3.3 Relinquishing Control	118
4.3.4 Clarity amongst Disparity	122
4.3.5 Design Two	128
4.3.6 Summary & Reflection	134
4.4 Design Phase Three	137
4.4.1 Landscape & Garden Centre	138
4.4.2 Garden Centre & Dementia Homes	140
4.4.3 Dementia Homes & Landscape	146
4.4.4 Design Three	150
4.4.5 Summary & Reflection	156
4.5 Design Phase Four	159
4.5.1 An 'Image of the City'	162
4.5.2 The Districts	168
4.5.3 The Approach	170
4.5.4 The Node	172
4.5.5 The Path	174
4.5.6 The Home	176
4.5.7 The Edge	182
4.5.8 The Backyard	184
4.5.9 Summary & Reflection	188
5.0 Conclusion & Discussion	191
<hr/>	
6.0 Reference List	201
7.0 List of Figures	207
8.0 Appendix	211
<hr/>	



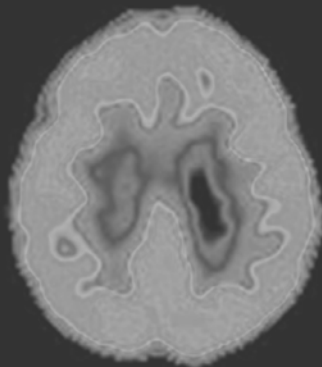




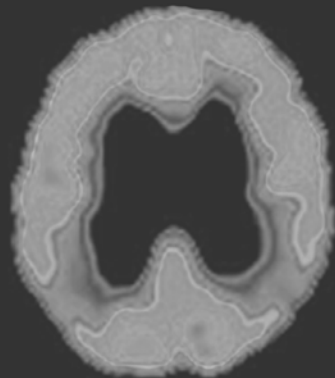
INTRODUCTION



Normal



*Mild Cognitive
Impairment*

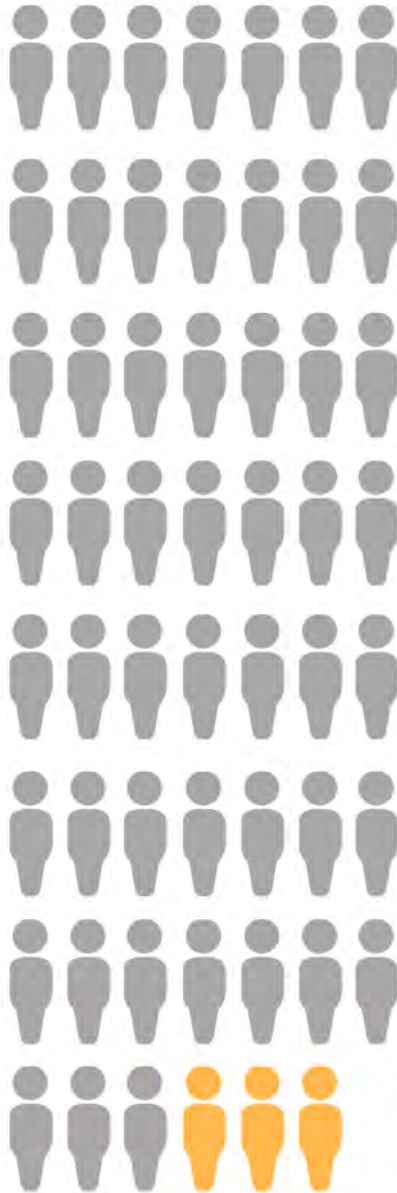


*Alzheimers
Disease*

1.1

PROBLEM AND PROPOSITION

For most people, the term Dementia immediately sparks an image of a frail elderly person unable to recall loved ones and continually losing the ability to carry out everyday tasks. Dementia is an umbrella term used to describe the many fatal, progressive diseases which lead to a deterioration of brain activity (figure 1.1). “The most common symptoms include changes in memory, thinking, behaviour, personality and emotion” (Alzheimers New Zealand). Although predominantly known as a disease amongst the elderly it can also occur in those much younger. Younger Onset Dementia (YOD) is defined as the onset of dementia before the age of 65, with some affected as young as 30. An estimated 55,000 people in New Zealand (NZ) have dementia. Extrapolating from an Australian survey and NZ Economic Impact report 3,000 of those people are estimated to be below the age of 65 (figure 1.2). These are people in the prime of their lives socially and physically. Most have been recently employed fulltime and many are living in their own homes with young dependent children (figure 1.3).



With the inevitable progression of their condition, those with YOD lose their jobs and are often locked away in their own homes for safety. When the family members can no longer cope, the person is institutionalised in an aged-care facility designed for the frail elderly (figure 1.4).

Aged-care facilities are inadequate and have a detrimental effect, not only for those with YOD, but also their families and carers. Verderber and Fine claim they were initiated within modernism and “widely perceived as drab, dehumanizing places, environments of neglect and disposal” (225). Recent descriptions similarly claim they have “dehumanising architecture and unpleasant social environments...with no attempt to recreate the home that people were leaving when they moved” (Peters 47).

People with YOD spend their final years surrounded by frail residents old enough to be their parents (Heather). Their challenges and needs differ enormously from those suffering from dementia in their elder years. International studies (Haase; Bakker et al.)

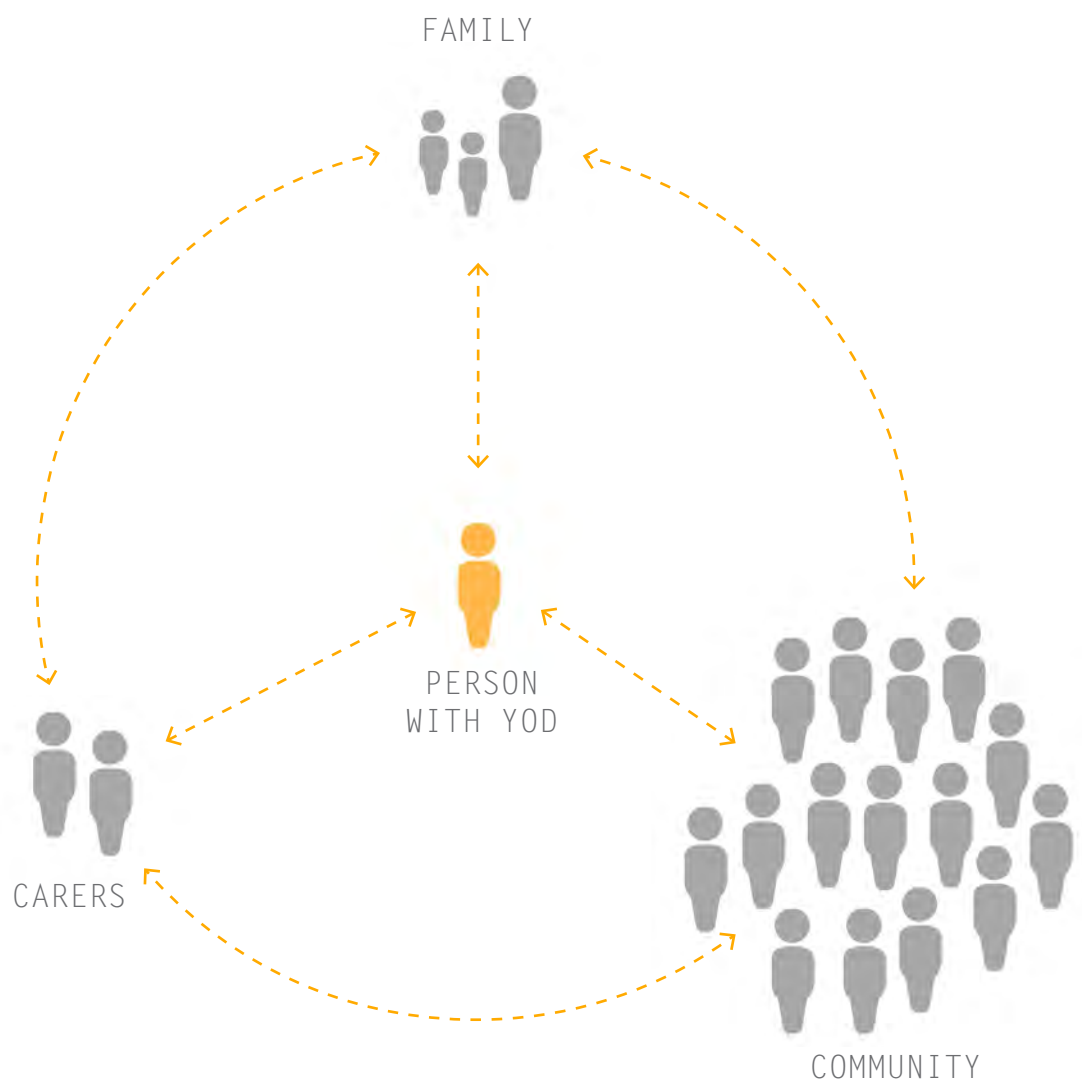
have identified a strong need for daycare, respite and long term homes designed to cater specifically for this younger generation. Qualitative research with those with YOD and their carers in the Wellington region supports these findings within the context of NZ (Rimkeit, McIntosh and Lambert). Government organisations concur and recommend “age appropriate responses in service provision” for people with YOD (Standards NZ 231), and state that “younger adults with early onset dementia should be provided services appropriate to their age and needs wherever possible, eg. not within an aged residential care facility” (Ministry of Health 52). Aged-care facilities impose a change in social context and physical activity for those with YOD. In this environment, they are faced with locked doors and docile, unstimulating games rather than the physical or mental activity that they are accustomed to. There is a clear need for age appropriate care which can reduce the loss of memory, autonomy and activity those with YOD face.



1.3 | Environments and activities enjoyed by those with YOD



1.4| Environments and activities those with YOD are subjected to



This loss of meaningful life has widespread implications (figure 1.5). Family members; lack a support network, struggle to deal with the challenges of YOD, and fear having to subject their loved one to an inadequate institutional environment. Younger, fitter, stronger people provide unique challenges for professional caregivers in terms of potential for injury and the psychological fear of the condition. Communities and society are generally unaware of YOD, reacting with avoidance rather than inclusion with some even holding the ‘not in my backyard’ mentality. These implications provoke an investigation into how architecture could empower a society which understands the needs of those with YOD and supports them to participate fully in society.

The design of care facilities is most commonly driven by imperatives for efficiency and profit. Within contemporary architectural theory there is a prominent notion to challenge these norms, as either

outdated or preoccupied in notions of power and wealth (The Agency Group; Jones and Card; Schneider and Till). Jeremy Till also rejects the metaphor of architecture which upholds “the deluded belief that architecture can be autonomous”, instead endorsing architectures contingent nature (135). Such ideas suggest a rethinking of the role of both architects and architecture within society and care facilities specifically.

Despite the apparent need for quality designed YOD specific facilities, there are very few international examples and none within NZ. With the increase in prevalence and lack of appropriate age-specific services for people with YOD a different response is required. This thesis seeks to address this gap by questioning, **how architecture can reinvigorate the lives of those affected by YOD and instigate a more socially responsive approach to design.** The term ‘those affected by YOD’ refers to the people with YOD, their family, the caregivers, the wider community, and ultimately NZ.

1.1.1 SCOPE

This thesis addresses the concerns for YOD from pre-diagnosis, daytime care provision, short term overnight care to fulltime care. The late stages of all forms of dementia generally require hospital care. The scope of this thesis does not extend to that level of assistance.

1.6 | (opposite) Stages, symptoms, and care-levels for dementia

STAGES

STAGE 1
*Early difficulties
(Pre-diagnostic
phase)*

SYMPTOMS

The person may:

- Forget what they were just asked to do*
- Be confused about where they are*
- Become lost on a familiar route (such as the way to the local shops)*
- Have a reduced attention span*
- Become repetitive in conversation*
- Be anxious or suspicious about possessions or the spouse/carer's behaviour*

CARE-LEVELS

*diagnosis &
community centre*

<p>STAGE 2</p> <p><i>The emergence of significant difficulties in daily living</i></p>	<p>STAGE 3</p> <p><i>Reduced capacity for independence</i></p>	<p>STAGE 4</p> <p><i>Incapacity and high dependence on care</i></p>	<p>STAGE 5</p> <p><i>Final Stage</i></p>
<p><i>The person may:</i></p> <p><i>Have problems recognising close family and friends</i></p> <p><i>Confabulate stories to fill blanks or account for errors</i></p> <p><i>Have memories that are false</i></p> <p><i>Increased disorientation and forgetfulness</i></p> <p><i>Have poor judgement and difficulty in thinking logically</i></p> <p><i>Have trouble handling money</i></p> <p><i>Experience difficulty in driving a motor vehicle</i></p>	<p><i>The person may:</i></p> <p><i>Have difficulty finding the right words in conversation</i></p> <p><i>Have ideas (fixed or temporary) that are not real</i></p> <p><i>Exhibit uncharacteristic mood swings or occasional outbursts of abusive language or violence</i></p> <p><i>Wander around their home or away from their home at random</i></p> <p><i>Become upset when faced with having to make choices</i></p> <p><i>Increased disorientation of time and place</i></p>	<p><i>The person may:</i></p> <p><i>Need complete assistance with eating, toileting and often all personal care</i></p> <p><i>No longer recognise close family</i></p> <p><i>Lose ability to make decisions</i></p> <p><i>No longer talk</i></p> <p><i>Suffers from medical complications of dementia</i></p>	<p><i>The person may:</i></p> <p><i>Lose most if not all ability to communicate</i></p> <p><i>Not be able to speak for themselves</i></p> <p><i>Not be able to make decisions about medications</i></p> <p><i>Require palliative care, rsponsive to their needs</i></p>
<p><i>dementia daycare & respite care</i></p>	<p><i>rest home</i></p>	<p><i>dementia care (level 3)</i></p>	<p><i>continuing hospital level care</i></p>

1.1.2

METHODOLOGY & STRUCTURE

This thesis is grounded in a research through design strategy but has been enriched through:

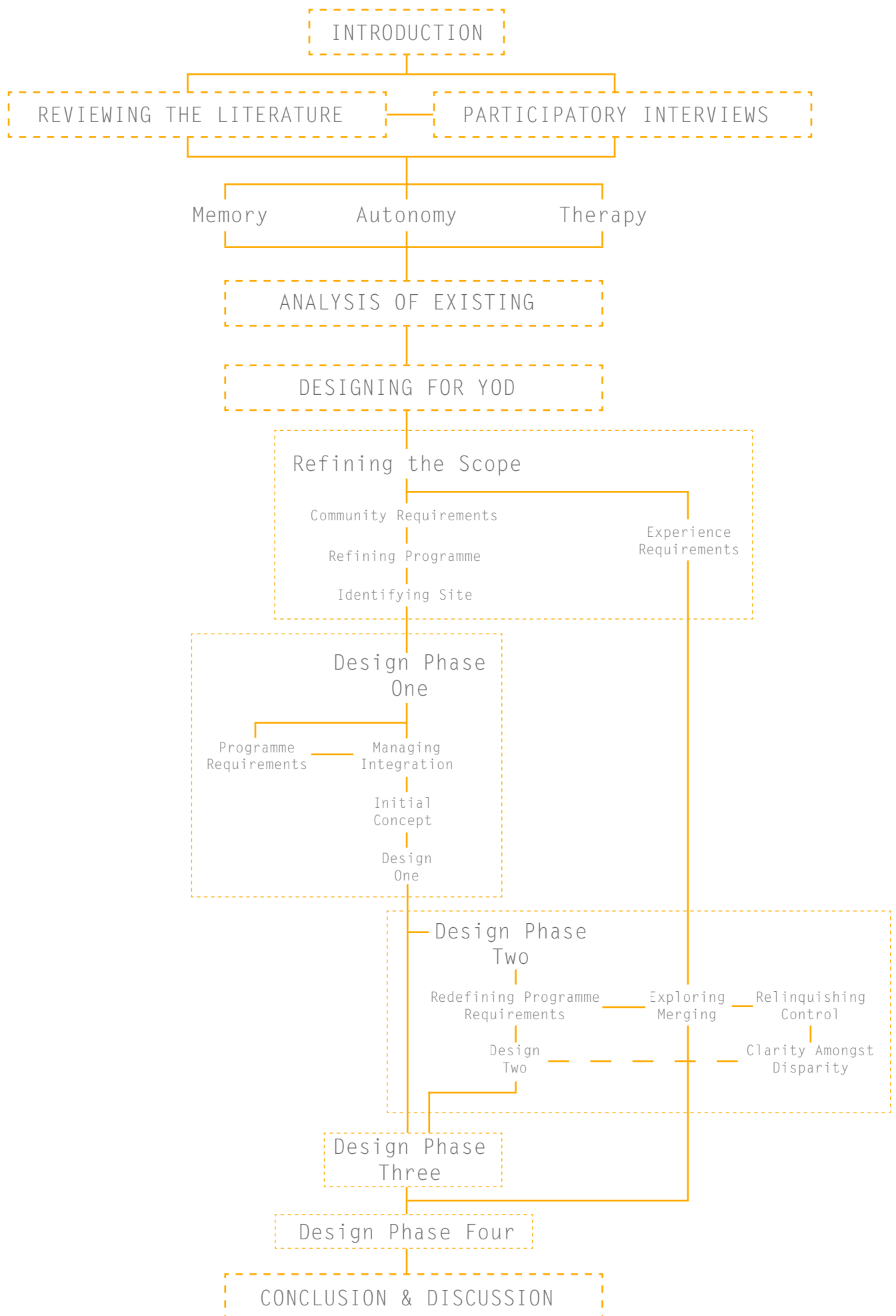
- *A participatory qualitative study involving people with YOD and their carer's*
- *A cross-disciplinary literature review of the conditions, problems and possible solutions for those with YOD*
- *An analysis of relevant case studies to establish current responses in practice and design criteria.*

(refer to Appendix 1 for NZ Health and Disability Ethics Committee Approval and Appendix 2 for Interview questions)

The participatory qualitative study (Experiencing Place) engaged nine people with YOD and their caregiver's using a semi-structured interview with myself, an academic experienced in participatory design, and a clinical psycho-geriatrician. The aim was to understand how those with YOD and their families experience 'aged-care' facilities. Specifically, what design ideas could provide a therapeutic resource and/or remove barriers to quality of life.

Sanoff outlines the importance of participation through user involvement when concerned with improving the quality of everyday life through design (178). Many authors have recognised the need to include not only those with YOD but also their family members in the design of dementia care facilities (Lewis; Gibson et al.; Tyson). Participatory design allows the needs of those with YOD to be empathetically; discovered, acknowledged, and utilised to inform a design which specifically adheres to their individual requirements (Lindsay et al. 522).

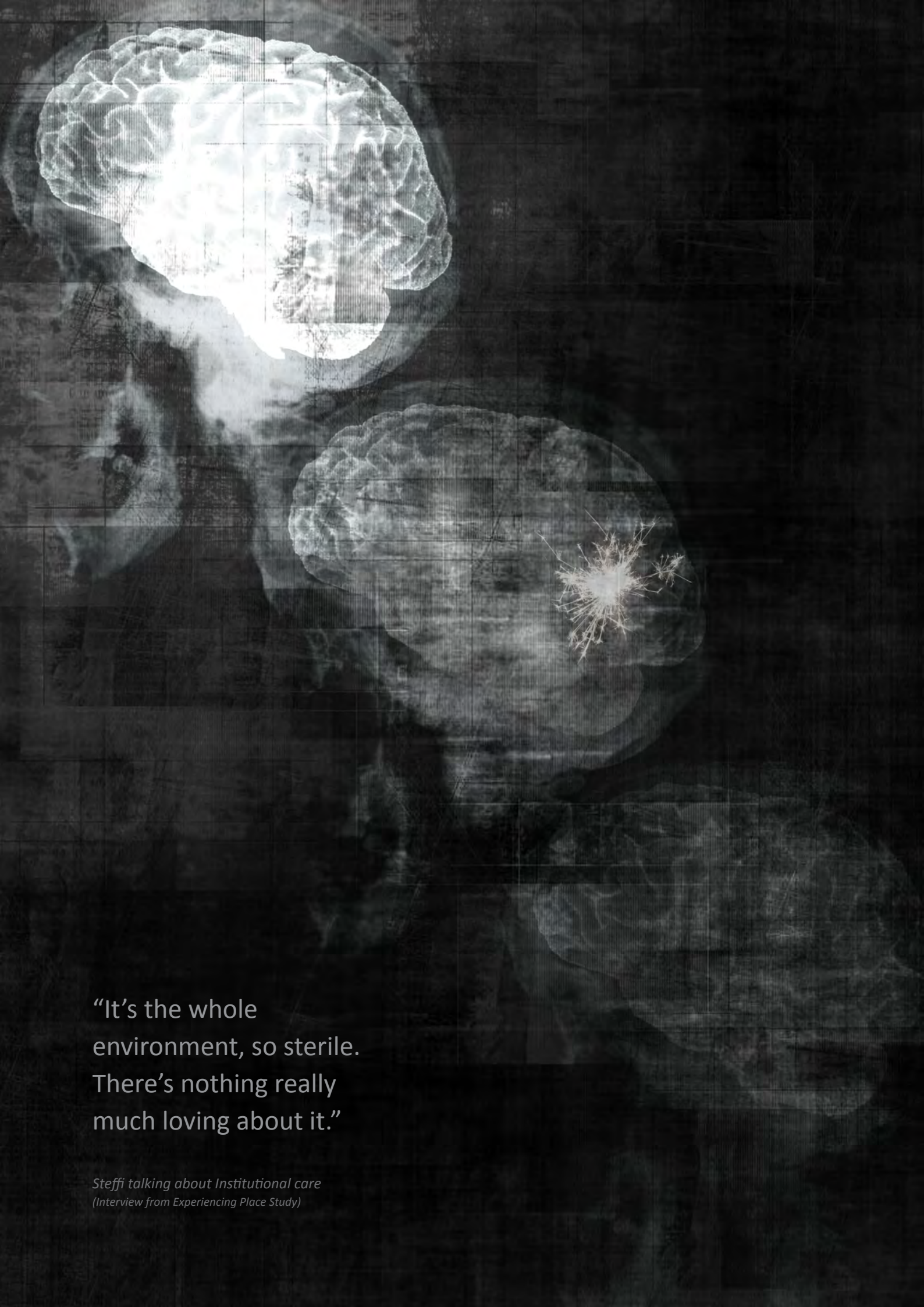
From this foundation, an iterative design process was used in order to test ideas and develop a successful design solution. A range of design tools were used with a predominance of physical modes through model making, photography, and hand drawing. These methods allow focused design of key ideas. Digital modes were then explored to develop the design at a more detailed level. All explorations were self-analysed against the research objectives by means of multiple tests, comparisons, and reflections on strengths and weaknesses. Ongoing critique by architectural academics, practicing architects, expert mental health professionals, and consequent self-reflection served to further refine the design.



2.0

REVIEWING THE LITERATURE

While much has been written on designing for dementia, there is a very limited body of research into those aspects of dementia that are different for the young (Fleming, Crookes and Sum). As a result, the majority of this literature review stems from readings related to dementia as a whole while honing in on aspects which are of particular relevance to YOD. The reviewed literature explores a cross-disciplinary approach engaging with architecture, philosophy, gerontology, psychology, health, and urban planning. The following subchapters review existing literature with a focus on how architecture can spark memory, regain autonomy, and provide therapy.



“It’s the whole
environment, so sterile.
There’s nothing really
much loving about it.”

*Steffi talking about Institutional care
(Interview from Experiencing Place Study)*

2.1

ARCHITECTURE AND MEMORY

“Human memory is acquired; we are born with a clean slate upon which experience makes its marks” (Treib xiv). But what if your slate starts to erase itself? Slowly those experiences disappear and what may have previously inspired reminiscing suddenly holds little significance from those most recent to those formed earliest. This is often the case for people with dementia.

Architectural researchers and practitioners have suggested that architecture can contain, accumulate, and project memory in a way which stimulates and inspires reminiscing and imagination (Oter-Pailos; Pallasmaa "The Geometry of Feeling the Phenomenology of Architecture"; Treib). This consideration of architecture and memory looks to Husserl's theory of phenomenology. Phenomenology is concerned with the experience of place and is, therefore, heavily reliant on human interaction. Heidegger and Norberg-Schulz both develop these ideas in their work on 'dwelling'. Dwelling "implies something more than 'shelter'" (Schulz 5) and "only if we are capable of dwelling, only then can we build" (Heidegger 160), suggesting a need to fully engage with a place to truly 'dwell'. Pallasmaa elaborates, maintaining that architecture becomes more memorable and meaningful when it "sensitises our whole physical and mental receptivity" ("The Geometry of Feeling the Phenomenology of Architecture" 459). Similar ideas have been expressed in the medical literature. "People with dementia depend upon a familiar setting that provides cues to enable independent functioning" (Van Hoof 9). The shift from home to an institution can therefore mean a loss of all familiar mechanisms associated with 'dwelling' and place.

Academic and practicing architect Ola Nylander, identified seven fields of architectural attributes which enable our

perception of the qualitative aspects of home, allowing us to "dwell" in the full sense of the word" (10). These include; materials and detailing, enclosure, movement, spatial figure, daylight, and organisation of spaces. A design which considers these aspects enables the process of appropriation and creation of meaning ensuring an environment which feels like home to its occupants.

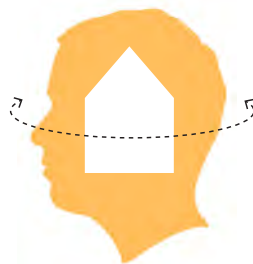
In this regard, research supports the use of smaller scale home-like settings for YOD facilities, developing "more interaction between residents, less depression and a lower rate of general decline, than for people living in conventional residential settings" (Lewis 27). By recreating an environment akin to the experience of home those with YOD are armed with mechanisms to enable spatial recall.

Within urban theory, phenomenology is referred to as a 'sense of place'. Lynch argues that a person's environmental image of a place is built up of three components; identity, structure and meaning (5). This concept offers the designer a functional framework with the ability to place an object (identity) within a layout (structure) in order to conjure meaning. Within architectural theory, Burnette agrees and suggests that;

Architects who relate their design to knowledge of cognitive psychology may find themselves involved in a universal linguistic system not founded on historic styles

or geometric combinations, but on human experience with, and understanding of, architecture (182).

Such ideas promote a design which is based on the first principles governing an individual's understanding of space rather than being solely reliant on past associations. According to psychiatrist Sivadon, the mentally sick encounter their environment as "a world which derives its meaning from essentially spatial relationships rather than cultural layers"(410). This is not to discredit the fundamental notion of 'dwelling' but rather to understand that there is a need to also consider the role of architecture when recollection can no longer occur. By utilising Burnette's ideas the gradual loss of past experiences can be compensated by the individual's basic understanding of spatial relationships.



2.2 | (right) Memory Objectives

Provide an environment which feels like home for its residents, sparking spatial recollection and a sense of place

Ensure an environment which can compensate for loss of memory

Establish a model care environment which is memorable for visitors and makes all New Zealanders proud

“He’s still fit enough to
have a life, you know,
why take it away from
him?”

*Grace talking about Phil
(Interview from Experiencing Place Study)*



2.2

ARCHITECTURE FOR AUTONOMY

People with YOD are physically active and frequently mention the desire for normalcy (Beattie et al. 363). The progression of their symptoms erodes this ability and reduces autonomy. To provide autonomy it is important to “send the message that good design matters, and that care facilities are deserving of high quality, statement architecture” (Peters 50). It has also been widely acknowledged that *understandable and orienting design, accessibility, privacy and safety* lead to a higher level of independence and a reduction in agitation, aggression, and overall psychotic problems (Chafetz and Namazi; Smith, Mathews and Gresham; Zeisel et al.). The following addresses architecture's ability to; promote awareness as a way to reduce stigma and utilise physical features to increase independence and re-establish autonomy.

Architectural design can reduce the stigma of dementia facilities and promote social inclusion. Recent Danish architects have focused on “domestic spaces that remind the users of, and feel like, their own homes, breaking down preconceptions of the nursing home stereotype” (Peters 49). Robinson and Thompson similarly suggest that residents within a homelike setting have more independently generated behaviours and significantly less stereotypic repetitive behaviours (252).

Dr Gesine Marquardt, an expert in architectural design for dementia, states that “the design of the physical environment plays a major role in supporting the wayfinding abilities of people with dementia” leading to “autonomy and independence and thereby promoting self-sufficiency and self-esteem”(75). A design which encourages wayfinding can operate on two levels, through floor plan typology and through environmental cues (Marquardt 79).

A medical study conducted in 1997 by Elmstahl, Annerstedt & Alhund analysed the spatial orientation in living facilities for dementia patients with regard to floor plans. The L-shaped design exhibited the least amount of disorientation whereas the corridor design identified more dyspraxia, lack of vitality and disorientation of identity (47). Another medical study in 1989 by Netten found that cluster designs achieved

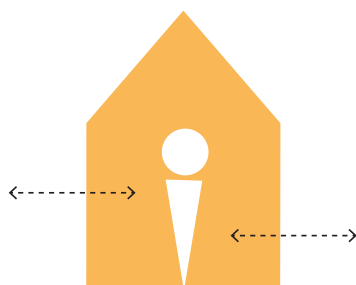
a higher level of orientation than large scale facilities due to shortened corridors, and simple decision points (143). Internal configuration is also important to improve wayfinding. Passini et al. identified these as; clear reference points and places, articulated and distinct architectural environments, direct visual access to common areas, simple circulation with wide hallways, and small scale settings (684). Features to be avoided include; routes with many exit points, repetitive elements, and elevators (Marquardt 81)

Environmental cues can aid in promoting autonomy. Namazi, Rosner, and Rechlin have identified that: signs and pictograms help with locating services such as bathrooms; allowing for personalisation through memorabilia displayed outside rooms helps identification; and vivid colour coding helps to enhance short term memory and improve functional ability (12). Heavily contrasted floors are to be avoided as these are often perceived by dementia sufferers as a change in depth (Passini et al. 138). These aids enhance controllability over situations or events, which is linked to lower appraisals of stress amongst YOD sufferers and carers (Roth and Cohen 813).

As care facilities combine a range of people in one place it is important that a “resident can claim some ownership or territoriality over the space” where they can be private (Cutler and Kane 50). This is most easily

achieved by giving residents their own room with their own belongings to retreat.

Safety is also important for those with dementia. Wandering residents who try to 'escape' are frequently mentioned, but, constant surveillance is an intrusion on the individual's privacy and independence. Effective safety measures often exploit residents cognitive deficits, through; the use of mirrors on exit doors causing the resident to assume a stranger is approaching (Mayer and Darby 607) or grids of black tape on the floor in front of doors causing avoidance related to confusion with depth (Hewawasam 217). These unobtrusive methods prevent the agitation and frustration associated with imprisonment and promote a sense of autonomy (Fleming, Crookes and Sum 19).



2.4 | (right) Autonomy Objectives

Create an environment which promotes awareness amongst the general public in order to encourage understanding and reduce stigma

Ensure a facility which is orientating, accessible and safe allowing residents to navigate independently

Offer opportunities for retreat focused on regaining a sense of privacy within a group setting

“If it didn’t stimulate
me it’s not stimulating
people with dementia”

*Claire talking about Current Facilities
(Interview from Experiencing Place Study)*



2.3

ARCHITECTURE AS THERAPY

Issues with sensory overstimulation and deprivation are prevalent for those with YOD within care environments. As young and fit people they are willing and able to engage in physical activity. As a result, “caring for a younger person can be more demanding and difficult” (Tyson 26). It is suggested that design can help by providing “therapeutic resource to promote well-being and functionality among people with dementia” (Day, Carreon and Stump 397). Connections to nature, physical exercise, social interaction, and multi-sensory elements can all aid in providing balanced stimulation and therapeutic resource for those affected by YOD.

2.5 | (opposite) Loss of Control.

“The natural environment has been shown to have important therapeutic outcomes” with respect to those with dementia (Gibson et al. 68). It reduces agitation and provides a calming environment to relieve stress for both staff and those affected (Hernandez) and is “an abundant source of multi-sensory stimulation” (Gibson et al. 57). Within NZ, nature is a fundamental part of our cultural heritage. “The wild land broods in our histories – from the original forests of Tane to the oppressive bush of *The Piano*” (Abbott and Reeve 8). Such attachment requires a consideration of the dichotomous relationship between inside and outside for architectural interventions within the NZ landscape.

Landscape architect, Rainey classifies three modes of relationship between architecture and landscape under the terms; contrast, merger, and reciprocity (Rainey 4). Concerned with an architecture for those affected by YOD, it is important that the response be welcoming and non-threatening. Therefore, the architectural response would best suit the modes of merger or reciprocity, while considering contrast (in detail) to make clear distinctions for its occupants.

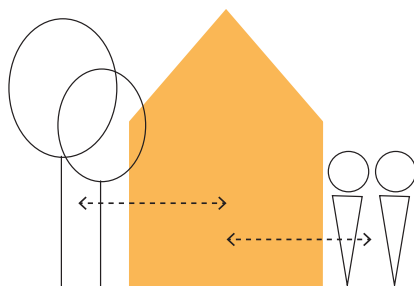
Providing multiple points for sunlight access can allow residents to orientate themselves according to time of day and season of the year simply through an understanding of sun angle (Gibson et al. 61). Knowles equally supports an architecture which draws from the rhythm of nature as a provider of ritual and maintainer of both “comfort and joy in our buildings” (xv).

Another way to increase interaction, is through the multi-sensory Snoezelen method. This provides an environment which stimulates all of the senses in order to place “fewer demands on their intellectual abilities but capitalise on their residual sensorimotor abilities” (Chung et al. 1). While the efficacy of this method is yet to be validated it is closely aligned with Pallasmaa’s thoughts on the multi-sensory experience of architecture. According to Pallasmaa “qualities of space, matter and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton, and muscle” (Pallasmaa *The Eyes of the Skin: Architecture and the Senses*). Tactile surfaces, material qualities and transitional elements can spark engagement amongst those with YOD and provide a therapeutic environment.

Physical activity has been shown to “significantly and substantially improve cognitive ability” due to improved cardiovascular factors and emotional stimulation (Gibson et al. 58). The built environment can encourage physical activity by creating pedestrian orientated neighbourhoods (Handy et al.). Interviews have revealed walking as the most common form of exercise for those with YOD. A movement channel which allows continual wandering would be beneficial as a way to harness this tendency for physical benefit. For those with YOD, embracing and offering opportunities to wander and be active in the garden can contribute towards self-confidence and social interaction, feelings of self-worth, hopefulness, and enjoyment (Gibson et al. 62).

Social interaction is also important to keep the mind actively engaged. Many expressed their frustration with being forced to interact with people much older than themselves (Rimkeit, McIntosh and Lambert). Moore and Verhoef's medical study highlights ways to enable social interaction by providing a; homelike setting, linking 'wandering path' between spaces, view to activity settings from living areas, choice in social environments for both small or large groups, and layout of furniture conducive to socialising (225).

Community involvement provides an opportunity to instigate and enable social interaction. As described by a family carer, "they can't make conversation now...so we need an environment where people are talking to them all the time...rather than expecting them to make conversation with each other" (Phil and Grace). The introduction of cognitively able minds, amongst those with YOD, would significantly help to spur social interaction.

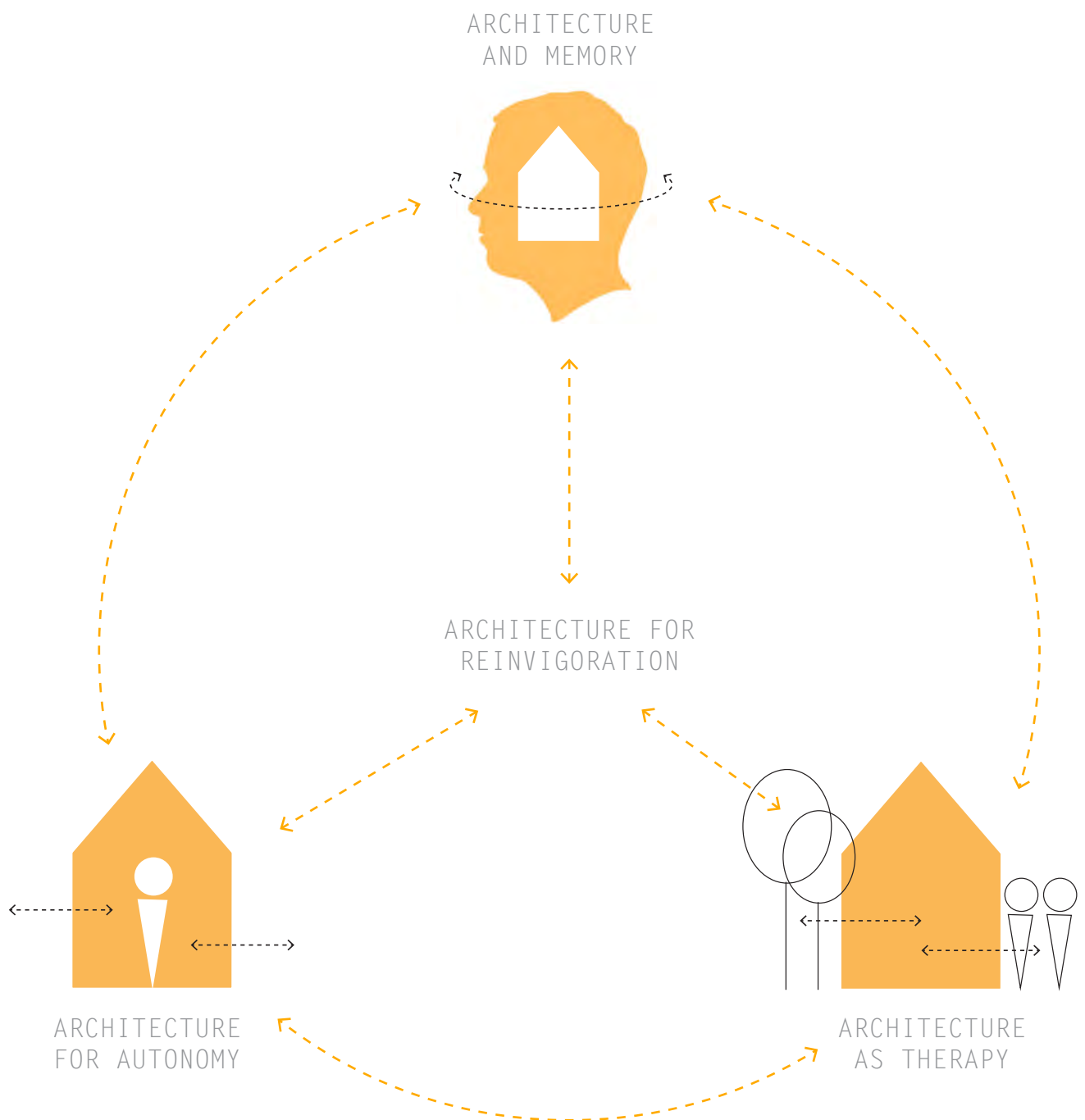


2.6 | (right) Therapy Objectives

*Actively
integrate with NZ's
natural environment and
encourage occupants to
experience its daily and
seasonal variations*

*Guarantee
a facility which
promotes physicality
and generates sensory
stimulation to provide
better working conditions
for stressful
work*

*Inspire
community and
social interaction
amongst residents,
family members and the
general public*



2.4

SUMMARY AND REFLECTION

Advice on the design of environments specifically for those with YOD is lacking in both the architectural and psychiatric literature. This review has grouped research into three main themes to identify the key issues for those with dementia as well as those items that are specific to YOD. Younger people with dementia differ significantly from those with later onset dementia and as a result they have a distinct set of needs.

A design which encompasses the notion of 'dwelling' is important for those with YOD to affirm a memorable and familiar sense of place. As their ability to recall diminishes a design which provides essential spatial relationships can aid in maintaining an understanding of place in a more instinctual manner.

"A prerequisite to maintaining residents' quality of life in a nursing home is their ability to orient themselves within their new environment" (Marquardt 75). A quality design that is orientating, private, and safe can reduce the stigma associated with YOD and enhance their sense of autonomy.

A stimulating architecture which integrates with nature, community, physical exercise, and multi-sensory elements can provide a therapeutic environment and meaningful activity.

Each of these aspects are completely co-dependent and can help to create an architecture which triggers memory, enables autonomy, and provides therapy prolonging symptoms for those with YOD and reinvigorating life.

3.0

ANALYSIS OF EXISTING

Dementia is apparent throughout the history of human civilisation with the built environment playing a significant role in providing treatment. Institutionalisation within an asylum, specifically designed for mental disabilities, was the first move towards an architectural solution. The next solution looked at ease and minimalist efficiency for care. Since then facilities have shifted away from the institutional approach and focused more on "patient-centered care" (Verderber and Fine 14).

When designing a community facility for those with YOD these more recent examples become important case studies to aid in providing a successful solution. As there are limited examples of facilities built specifically for YOD, the criteria for inclusion extends to dementia facilities for the elderly and facilities for the young with mental disabilities. The focus is on solutions rather than existing problems and looks at facilities whose guiding principles are to improve quality of life through design.

MEMORY



Domestic
scale +
form



Domestic
materials
+ detail



Spatial
Cues



Memorable
model

4 / 4

AUTONOMY



Promotes
Awareness



Independent
Orientation



Unobtrusive
Safety



Offers
Privacy

4 / 4

THERAPY



Integrated
with nature



Community
Integration



Promotes
Physicality



Multi-
sensory
Stimulation

4 / 4

CARE-LEVEL



diagnosis +
counselling



Daycare



Respite
Care



Full Time
Care



Hospital
Care

Programme Scope

3.1

METHOD OF ANALYSIS

A review of the literature revealed design imperatives to aid in the loss of memory, autonomy, and activity for those with YOD. Each case study has been assessed against these imperatives and arranged into a graphic diagram to enable identification of specific strengths and weaknesses (figure 3.1). These findings are key in establishing whether these designs have achieved their guiding aims and consequently what ideas to both implement and avoid throughout my own design process. The services provided for each design have also been identified in graphic form.

3.1.1

CORUMBENE AGED-CARE

Circa Morris Nunn

Tasmania, Australia

1997

Strengths:

- Utilising existing farm buildings and continuing the built typology creates a familiar environment for its residents
- Heavy use of timber relates to its context and provides an intimate warmth
- Internal focus provides a safe and interesting internal environment for wandering

Weaknesses:

- The engrained 30's typology limits the future use of the facility
- General public are unable to integrate with its occupants therefore minimising the ability to promote awareness

3.2| (top) Corumbene Design Imperatives and Care-Levels

3.3| Isometric drawing of Corumbene

3.4| Corumbene exterior

3.5| Corumbene interior

MEMORY



3/4

AUTONOMY



3/4

THERAPY

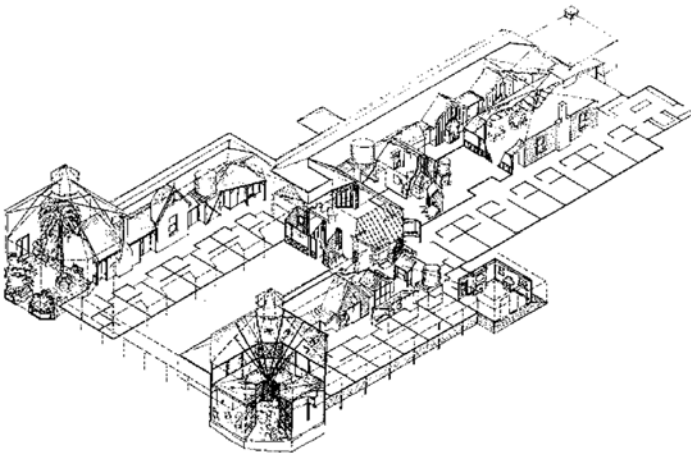


3/4

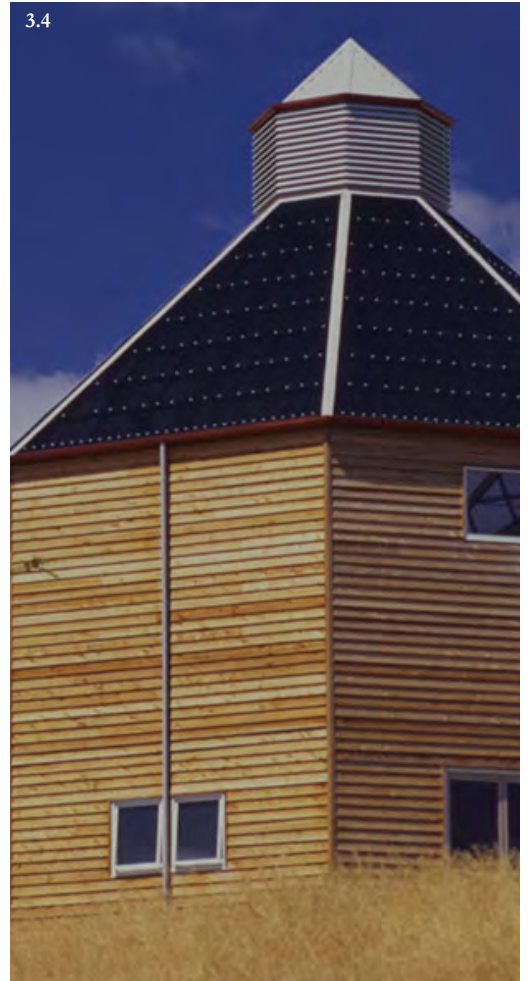
CARE - LEVELS



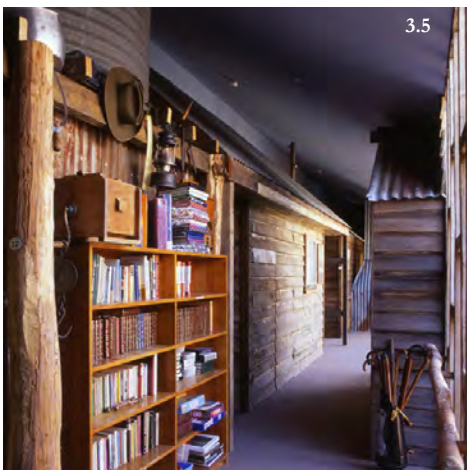
3.3



3.4



3.5



3.1.2

GROUP HOME FOR DEMENTIA

Sou Fujimoto Architects

Hokkiado, Japan

2006

Strengths:

- Minimal hallways and large openings in walls aid in allowing independent orientation
- Residents are given their own room enabling privacy

Weaknesses:

- Overall very unfamiliar as a home with an institutional scale and disorientating angular walls
- Shut off from the outside environment, giving a sense of imprisonment
- Little room to wander for physical exercise
- An unstimulating environment

3.6 | (top) Group Home Design Imperatives and Care-Levels.

3.7 | Plan of Group Home.

3.8 | Group Home Exterior

3.9 | Group Home Interior

3.10 | Group Home Angled Walls

MEMORY



0/4

AUTONOMY



2/4

THERAPY



0/4

CARE - LEVELS



3.8



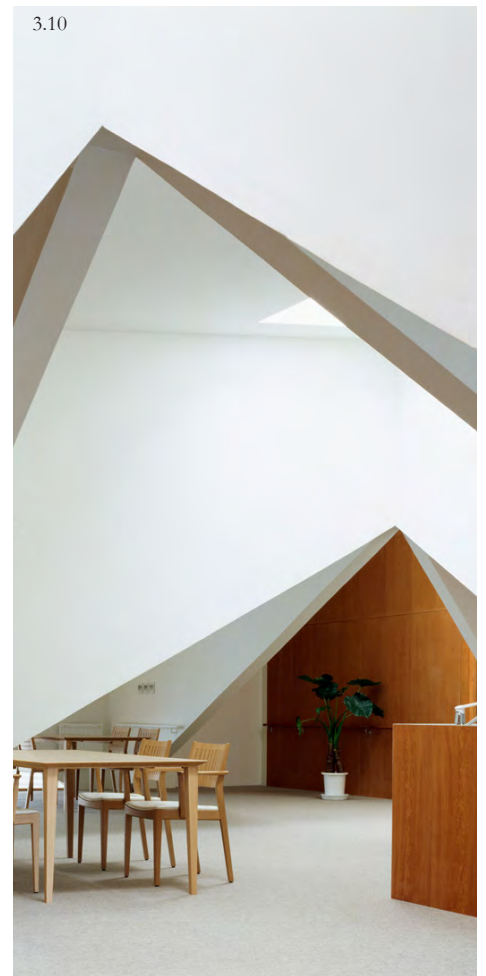
3.9



3.11



3.10



3.1.3

DE HOGWEYK

Molenaar & Bol & Van Dillen

Weesp, Netherlands

2009

Strengths:

- The inward focus of the village creates an unobtrusively safe environment, a memorable model for its residents, and promotes awareness to the general public
- based on surrounding architecture the village is familiar and independently orientating
- specific interiors for different cultures enables a personal attachment to place
- the ability to wander past shops and gardens promotes physical exercise and multi-sensory stimulation

Weaknesses:

- wider community interaction is encouraged but limited and infrequent

3.11 | (top) De Hogeweyk Design Imperatives and Care-Levels.

3.12 | Hogeweyk Courtyard Diagram

3.13 | Hogeweyk Room Variations

3.14 | Hogeweyk Grocer

3.15 | Hogeweyk Courtyard View

MEMORY



4/4

AUTONOMY



4/4

THERAPY

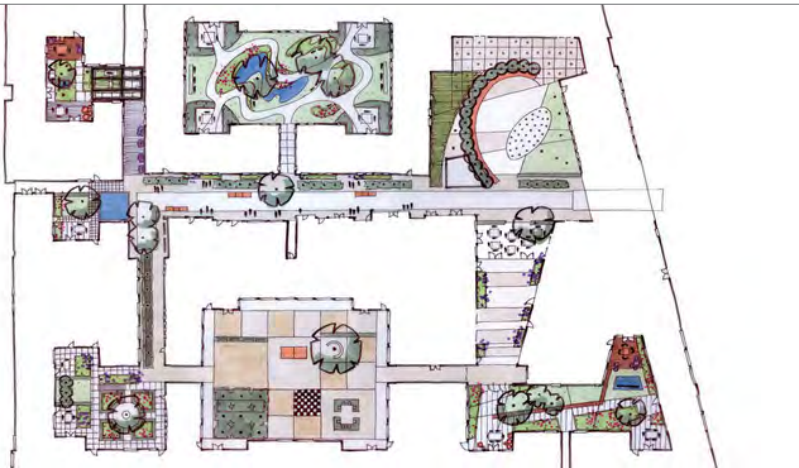


3/4

CARE - LEVELS



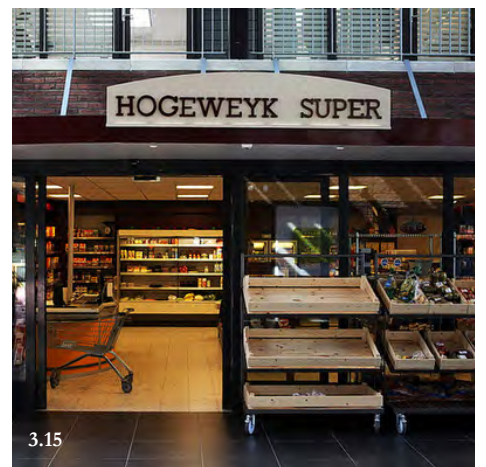
3.13



3.14



3.16



3.15

3.1.4

HOME OF COMPASSION

Team Architects

Wellington, NZ

2009

Strengths:

- the form and use of timber references the NZ vernacular to spark memory
- integration with nature enables therapeutic benefits
- the timber fence references typical NZ suburban fences providing unobtrusive safety
- circular internal walkway enables physical exercise and independent orientation

Weaknesses:

- furniture is provided creating a more institutional than homely environment
- access to the secure unit is through the hospital making the entrance unpleasant and business like
- limited ability for the public to interact

3.16|(top) Home of Compassion Design Imperatives and Care-Levels.

3.17|Home of Compassion Entrance

3.18|Home of Compassion Interior

3.19|Home of Compassion Bay Windows

MEMORY



3/4

AUTONOMY



3/4

THERAPY



2/4

CARE - LEVELS



3.18



3.19



3.20

3.1.5

ITEP LE HOME

Laurens & Loustau Architects

Toulouse, France

2012

Strengths:

- References the surrounding typology of shipping containers to enable memory
- Allows wandering throughout the site while still maintaining safety through discrete use of trees and surrounding buildings as barriers
- Provides a gym and area to walk around for physical activity

Weaknesses:

- 'red carpet' and extensive concrete is cold, aggressive, and more institutional than homelike
- Surface treatments are abrupt and lack detail and stimulation
- Internal activity is hidden rather than inviting community involvement

3.20 | (top) Itep Le Home Design Imperatives and Care-Levels.

3.21 | Plan of Itep Le Home

3.22 | Itep Le Home Aerial View

3.23 | Itep Le Home Exterior View

3.24 | Itep Le Home Concrete Forms and Red Carpet

MEMORY



1/4

AUTONOMY



1/4

THERAPY



1/4

CARE - LEVELS



3.1.6

WARM ATMOSPHERE

Junya Ishigami

Akita, Japan

est.2012

Strengths:

- Familiarity, comfort, and an intimate scale are afforded through the use of existing timber framed homes
- Old structural skeletons with modern claddings enables a contemporary architecture
- Clustered courtyard arrangement promotes social interaction, integration with nature and allows residents to explore
- Embodies the therapeutic principles of 'ageing in place'

Weaknesses:

- The mix of old and new, although architecturally fascinating, could create mixed messages leading to confusion and poor orientation

3.25| (top) Warm Atmosphere Design Imperatives and Care-Levels.

3.26| Plan of Warm Atmosphere.

3.27| Coloured roof model of Warm Atmosphere

3.28| Timber Frame Model of Warm Atmosphere

3.29| Visualisation of Warm Atmosphere

MEMORY



4/4

AUTONOMY



2/4

THERAPY



2/4

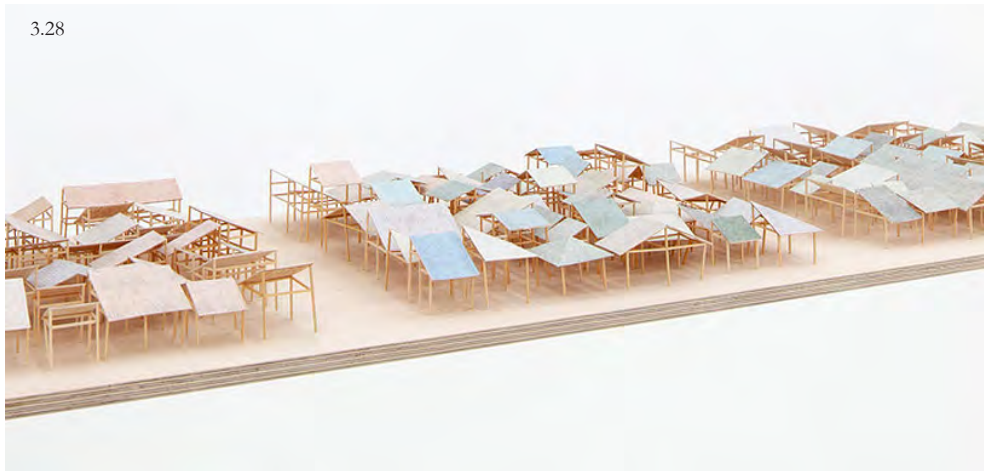
CARE-LEVELS



3.27



3.28



3.31



3.29



DESIGN IMPERATIVES & CARE-LEVELS

CORUMBENE AGED
CARE

GROUP HOME FOR
DEMENTIA

































DE HOGWEYK
DEMENTIAVILLE

HOME OF
COMPASSION





































ITEP LE HOME

WARM
ATMOSPHERE

No.ACHIEVED

Domestic scale + form	Domestic materials + detail	Spatial Cues	Memorable model	Promotes Awareness	Independent Orientation	Unobtrusive Safety
						
						
						
						
						
						
						
5	4	2	4	1	4	5

3.30|Achieved Design Imperatives and Care-levels provided, by each case study.

Offers Privacy	Integrated with nature	Community Integration	Promotes Physicality	Multi-sensory Stimulation	diagnosis + counselling	Daycare	Respite Care	Full Time Care	Hospital Care
									
									
									
									
									
									
									
5	4	0	5	2	1	1	1	5	2

MEMORY



Domestic
scale +
form



Domestic
materials
+ detail



Spatial
Cues



Memorable
model

AUTONOMY



Promotes
Awareness



Independent
Orientation



Unobtrusive
Safety



Offers
Privacy

THERAPY



Integrated
with nature



Community
Integration



Promotes
Physicality



Multi-
sensory
Stimulation

CARE - LEVEL



diagnosis +
counselling



Daycare



Respite
Care



Full Time
Care



Hospital
Care

Programme Scope

3.2

SUMMARY AND REFLECTION

These case studies highlighted important considerations with regard to architecture for memory, autonomy, and therapy. Figure 3.31 shows those imperatives and care levels achieved by each case study.

Implement:

- Domestic form, scale and materials familiar to the local typology
- Privacy and personalisation within homes
- External variation of rooms to aid in recognition
- Simple layouts for navigation
- Clustered arrangements with connection to social areas
- Opportunities for wandering and exploration
- A direct connection with nature

Avoid:

- Materials and spaces void of detail
- Environments closed off from the outside community where people feel locked up
- Aggressive or disorientating colours and forms

Figure 3.32 shows which imperatives were achieved (darkest) overall and those that were not (lightest). The most evident gap in the designs is the lack of interaction with the existing community and therefore the inability to promote awareness. Other aspects which are largely overlooked in practice are the multi-sensory environments and spatial cues which highlight the use of the space without ambiguity. There is also a large gap in designs which cater for the early stages of care. This means residents are unable to become accustomed to a place before moving in fulltime.

3.31 | (opposite) Overall achieved Design Imperatives and Care-levels provided.

4.0

DESIGNING FOR YOD

The iterative nature of research through design requires an arrangement and development of ideas into four sections. Each of the following sections provides an altered approach to the design problem and proposition.

4.1 Refining the scope responds to the issues discovered and proposes a method of disprogramming to be tested on a site in the Wellington suburb of Johnsonville.

4.2 Design Phase One, uses the method established to provide a site responsive design aware of its programmatic relationship.

4.3 Design Phase Two, explores the potential to push disprogramming to its fullest extent by merging home and garden centre into a single image.

4.4 Design Phase Three, builds from self-reflection to provide a reciprocal and stimulating design for those affected by YOD.

4.5 Design Phase Four, takes the success from the previous phases and develops at a more intimate scale to firmly establish the person experience. It provides a developed solution which reinvigorates the lives of those affected by YOD for implementation into the suburb of Johnsonville.



4.1

REFINING THE SCOPE

“The kinds of knowledge that may enter into a design solution are practically limitless” (Goel and Pirolli)

4.1.1 | (opposite) Photograph of multiple initial studies

4.1.1

COMMUNITY REQUIREMENTS

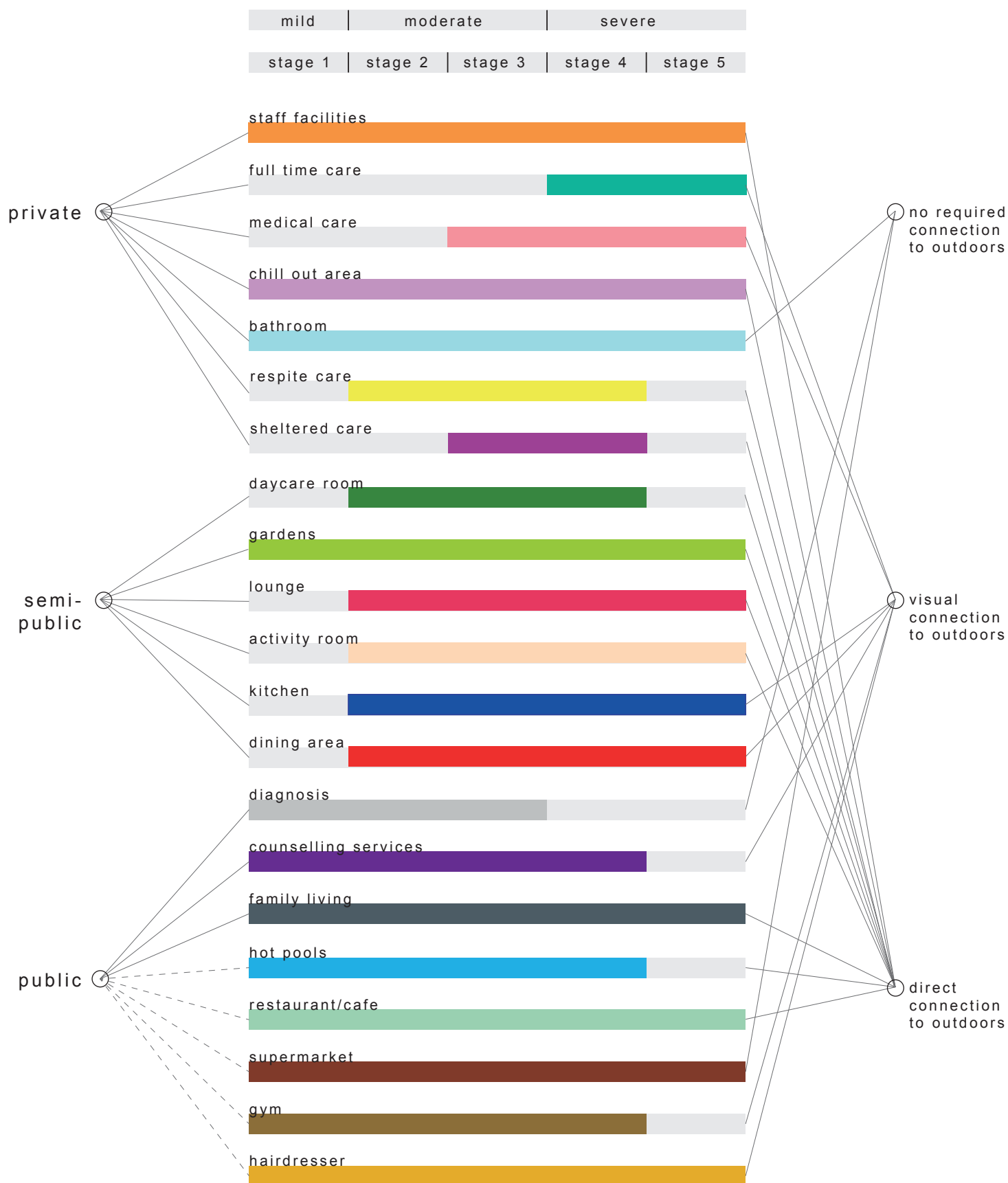
How a dementia facility relates to its context is important for both the stimulation of the occupants and the sensitivities of the existing community. Integrating into the existing urban fabric or occupying the city fringe are both possible scenarios for location.

Initial Exploration 1

A set of potential programmes were considered and analysed in terms of their requirements for privacy, different stages of dementia, and outdoor connection (figure 4.1.2). These programmes were then sized proportionately and arranged with regard to; their relationships to each other, the requirements as per figure 4.1.2, and the two scenarios outlined above. Two options for each scenario were explored via plan and analysis of public-private areas to establish a direction for further tests (figure 4.1.3).

4.1.2 | (opposite) Programme considerations

4.1.3 | (next spread) Design options for urban fabric and fringe



KEY

PROGRAMME ARRANGEMENT

staff facilities

full time care

medical care

chill out area

bathroom

daycare room

respite care

sheltered care

gardens

lounge

activity room

kitchen

dining area

diagnosis

counselling services

family living

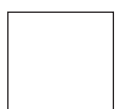
hot pools

restaurant/cafe

supermarket

gym

hairdresser



public

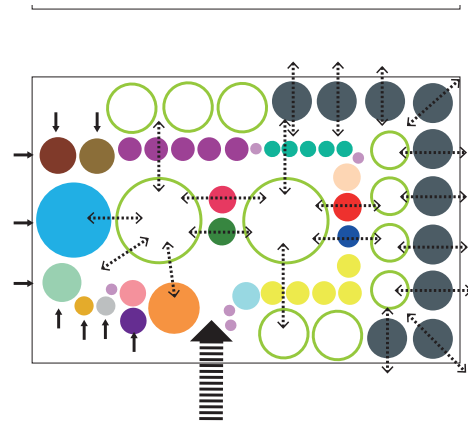


semi-public

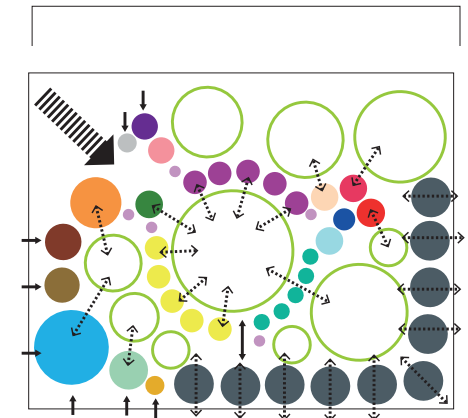


private

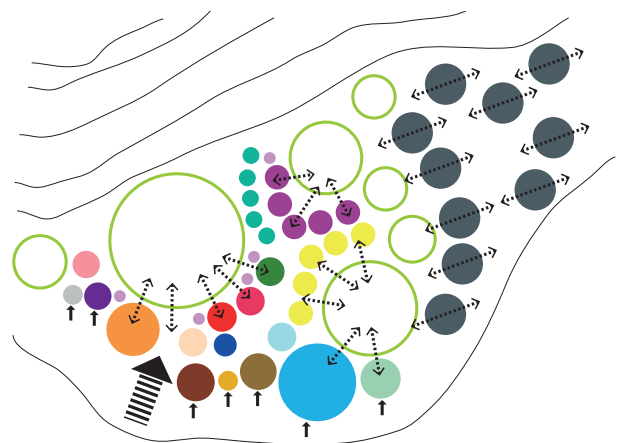
URBAN FABRIC
OPTION 1



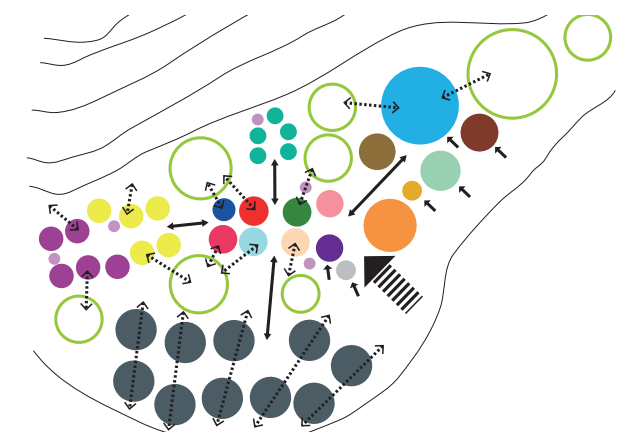
URBAN FABRIC
OPTION 2

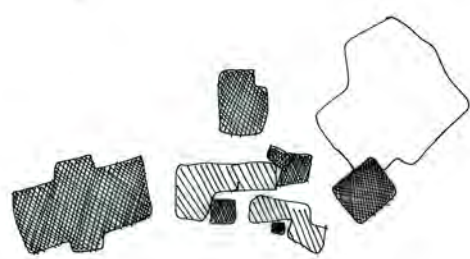
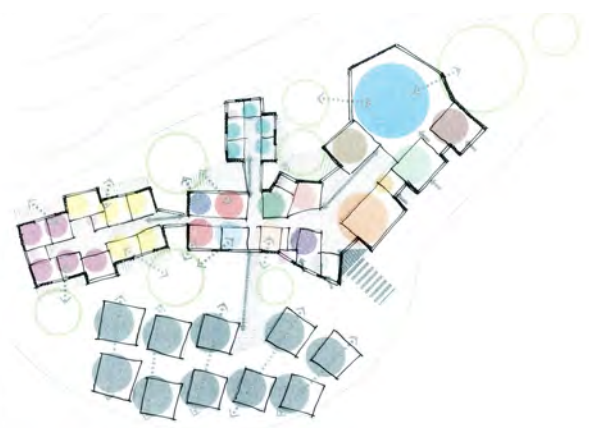
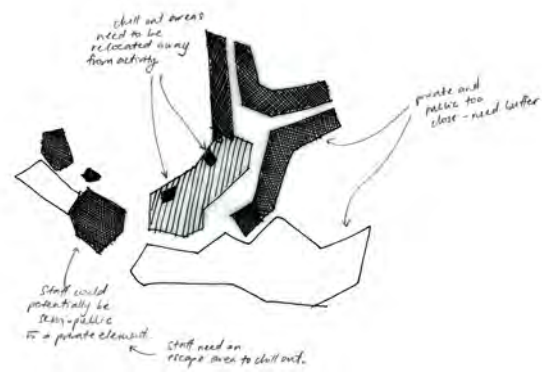
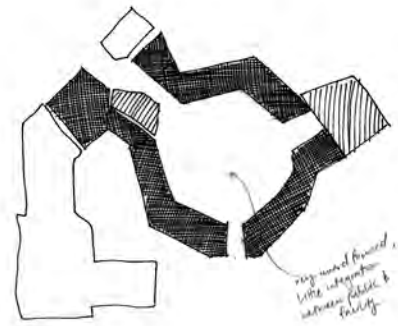
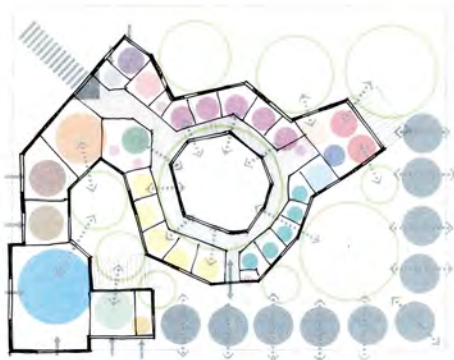
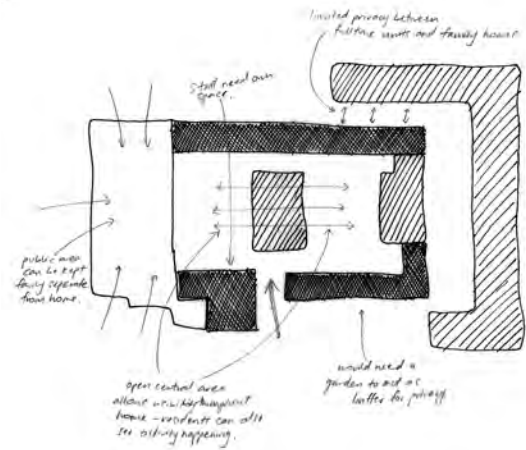
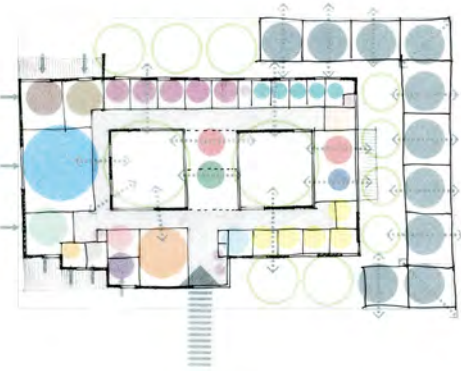


URBAN FRINGE
OPTION 1



URBAN FRINGE
OPTION 2





The restrictions on size, orientation, safety, and connection to outdoors within the urban sites deem the urban fringes more appropriate for occupation for those with YOD. These iterations also highlighted the difficulties with regard to privacy and a need for thresholds to separate public and private programmes. Finally this exercise identified the need to consider the relationship between the earlier stages of dementia and the later.

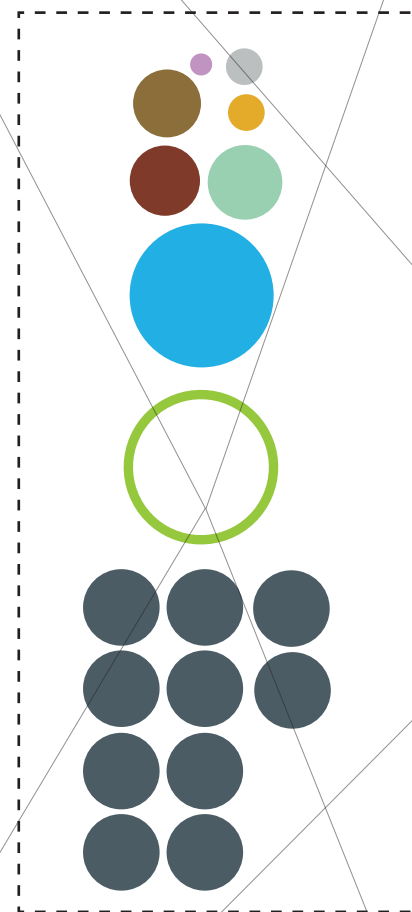
Initial Exploration 2

This next test considers the design in a more transitional manner to relate to the different stages of dementia. Figure 4.1.4 relates the stages of dementia to the associated programmes and highlights a progression from public to private. It identifies zones where stages need to overlap or remain distinct.

This established a need to provide connections for those within the later stages to the earlier stages while reducing the connection from earlier stages to later. In this way, those most progressed can benefit from the activity of those least affected while those least affected are not constantly faced with their eventuality.

4.1.4 | (opposite) Transitional relationship diagram

STAGE 1



***diagnosis &
community centre***

PUBLIC

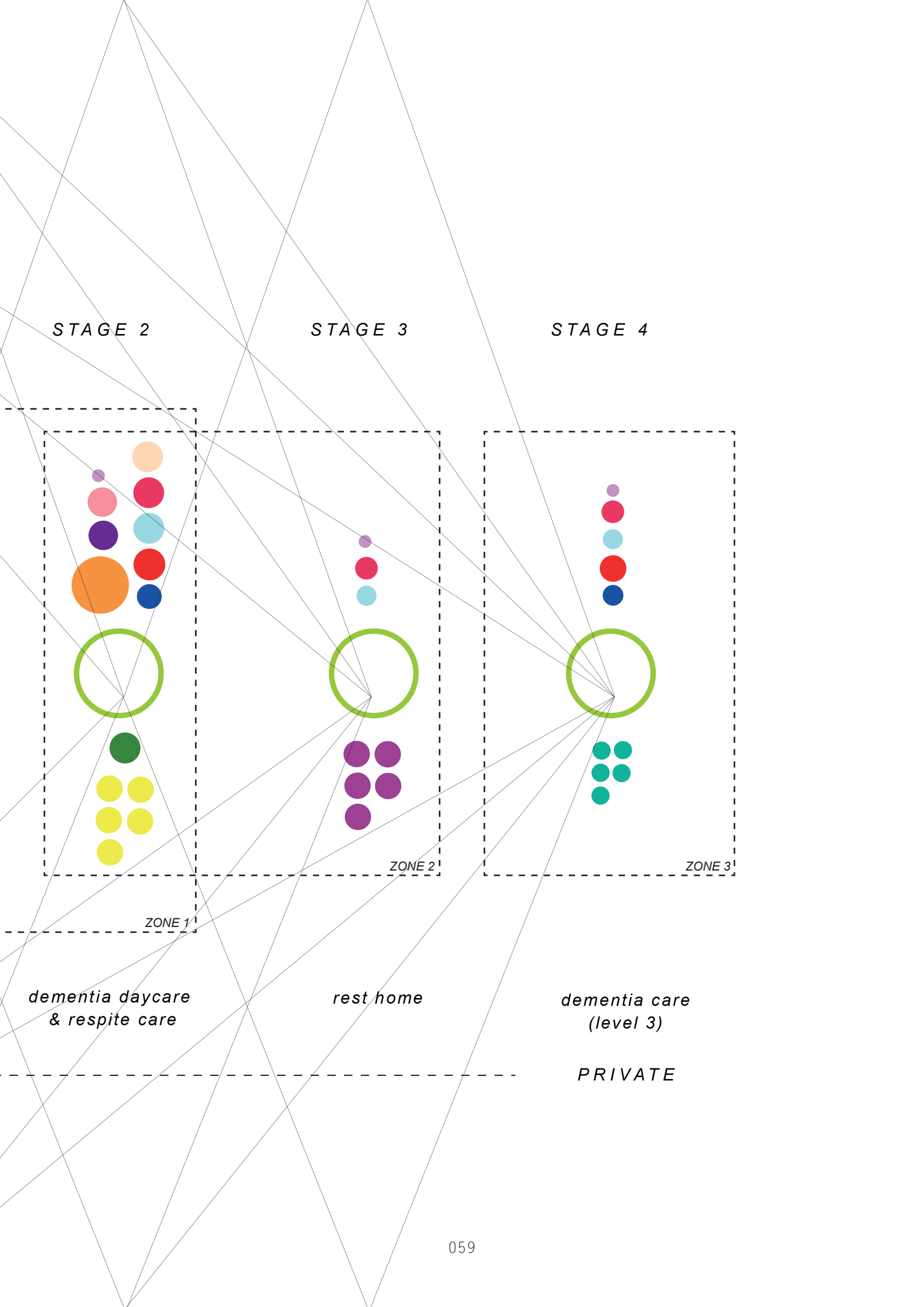
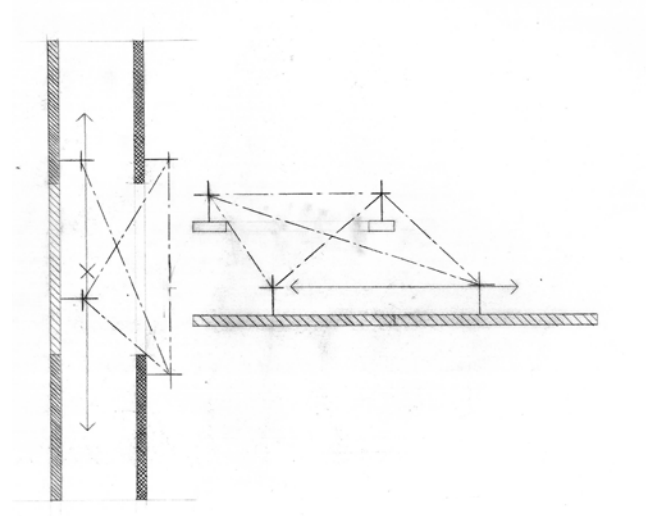
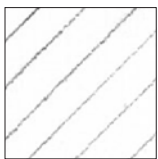


Figure 4.1.5 shows three possible designs which address the need for one directional surveillance through a change in elevation, in relation to the three zones. These explorations were successful as a way of understanding how elevation can achieve one directional surveillance. They each began to inform their own specific site requirements, highlighting the importance of acquiring a specific site to respond to.

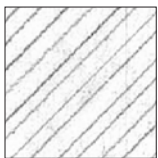
ELEVATIONS



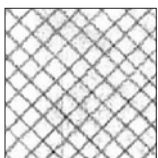
KEY



zone 1

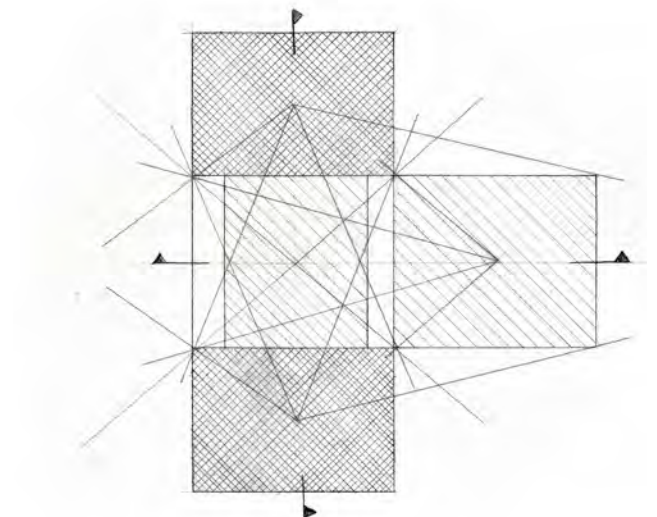


zone 2



zone 3

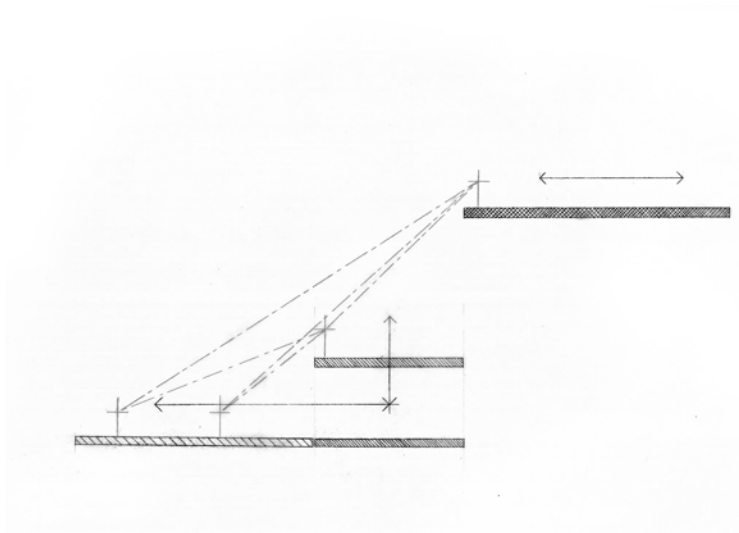
PLANS



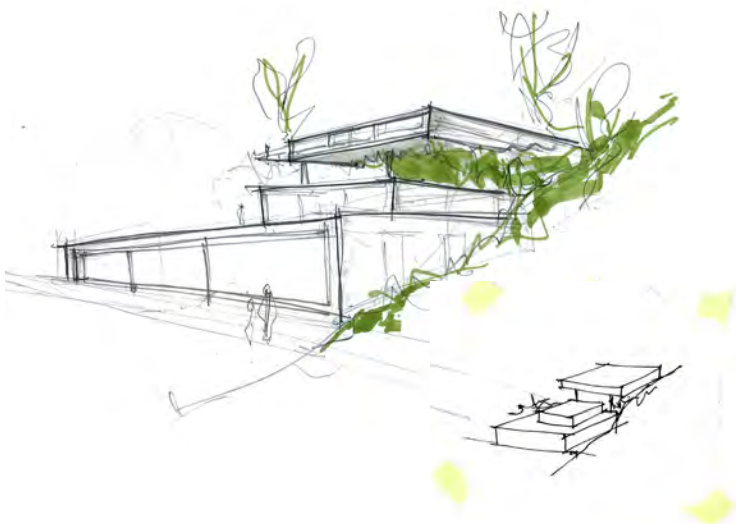
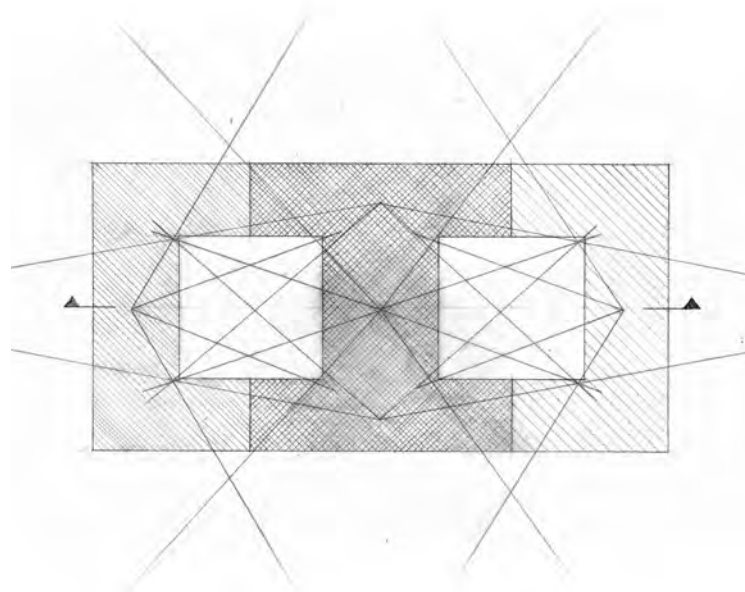
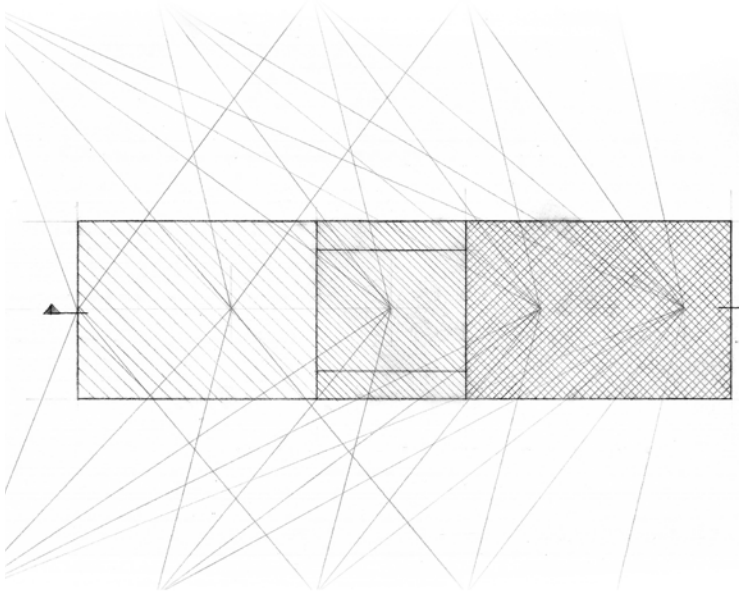
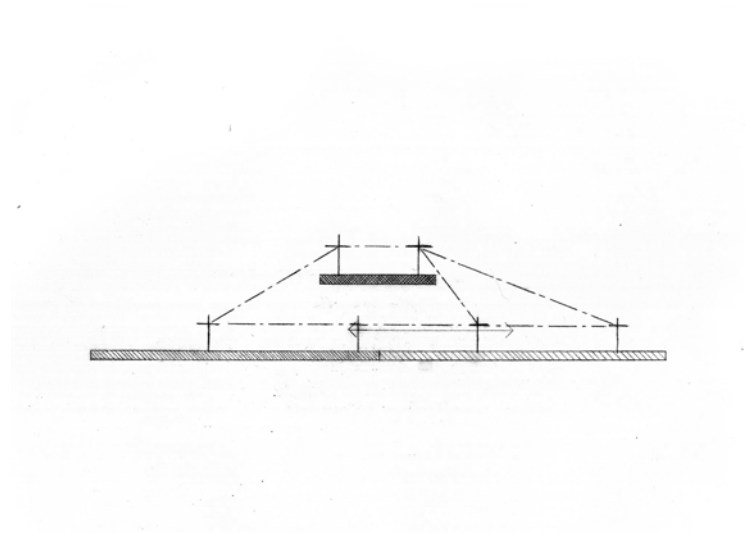
PERSPECTIVES

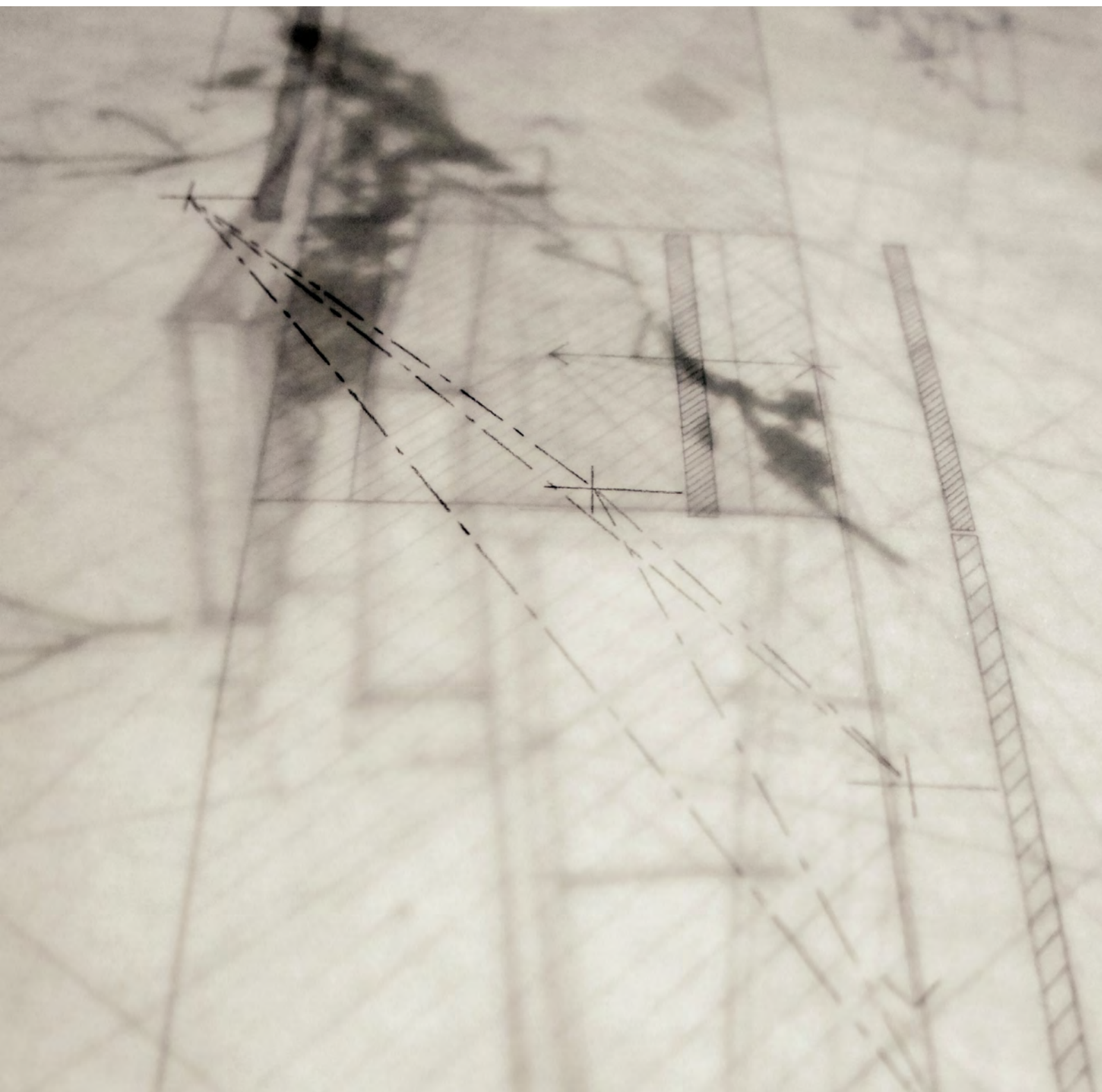


OPTION 2



OPTION 3





Summary & Reflection

‘Initial Explorations’ highlighted significant gaps requiring consideration. Foremost the design needs to provide a solution to the problem of isolation and lack of community engagement for those with YOD. Initial Test one deemed the urban sites inappropriate for a dementia facility due to; a lack of connection to nature, huge restrictions on size, orientation, concern for safety, and the neighbourhood ethos of ‘not in my backyard’. Initial Test Two stressed the importance of a specific site. Urban fringe sites are better suited for the requirements of a dementia facility but are withdrawn from the community. Rather than placing the dementia facility within the community, can the community somehow be brought to them?

4.1.2

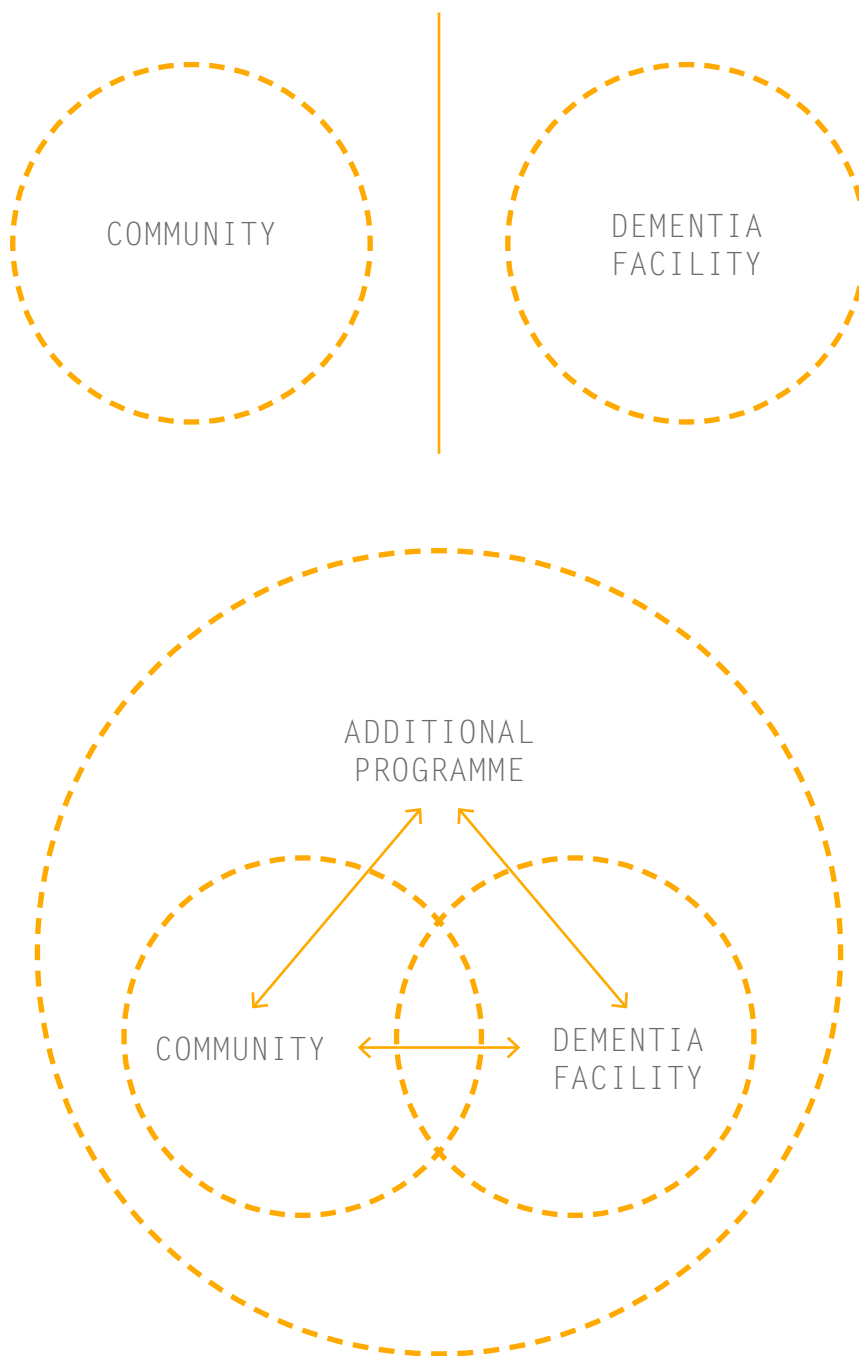
REFINING PROGRAMME

Initial explorations revealed the difficulties associated with integrating a dementia facility into an existing community. This difficulty was evidenced in the case studies, however, the literature identified the need to interact with existing communities and promote awareness to reduce stigma. As a solution to these problems, the introduction of a compatible programme which can both contribute to and benefit from the YOD facility has been considered (figure 4.1.7). Within architectural theory, this idea is best known through the work of Bernard Tschumi and his exploration of disprogramming. Identified as a way to explore the relationship between architecture and program, disprogramming is defined as, “combining two programs, whereby a required spatial configuration of program A contaminates program B and B’s possible configuration” (Tschumi 205).

The World Health Organisation (WHO) supports the combination of those affected by YOD with existing communities, reporting that:

“To the extent that they engage in public activities and share their experiences, these younger faces of dementia can also provide a positive dissonance that helps mitigate the ageism that is associated with dementia”. (WHO and Alzheimer's Disease International 59)

Combining the dementia facility with another programme, allows a strengthening of the relationship between programme and architecture to improve the *memory*, *autonomy*, and *therapy* requirements of the occupants.

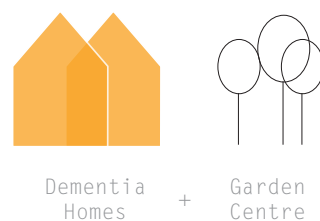


To establish a holistic programme which can address key requirements of the project a number of publicly accessible programs were considered. These were assessed against relevant criteria to provide the most beneficial amalgamation for those affected by YOD (figure 4.1.8).

A garden centre was chosen, as it has the potential to provide:

- An unobtrusively safe environment due to its commercial requirements for secure fencing and a single main exit/entrance
- A mentally, socially, and physically stimulating environment due to the constant influx of people and large associated area for exploring
- An integration with the natural environment due to the product sold and its requirements for indoor-outdoor flow

This combination would allow the person with YOD greater; autonomy and independence, outdoor opportunities, physical activity, social engagement and a sense of community. The facility would also benefit the wider community by; assisting in reducing the stigma that currently exists for dementia, creating awareness that dementia is not just an old person disease, helping people in the community to seek diagnosis earlier, enabling family members to meet others in a similar situation and establish a support base, and providing carers with a desirable work environment. The garden centre would also benefit from the YOD facility by gaining customers from those visiting or wishing to support the cause.



with regard to Dementia

<i>Subsidiary Programme Options</i>	<i>Unobtrusive safety</i>	<i>Stimulating Mentally</i>	<i>Stimulating Physically</i>	<i>Stimulating Socially</i>	<i>Integrated w nature</i>	<i>Total Score</i>
<i>Supermarket</i>	1	1		1		3
<i>Organic Market</i>	1			1	1	3
<i>Library</i>	1	1		1		3
<i>Community Pools</i>			1	1	1	3
<i>Recreation Centre</i>	1		1	1		3
<i>Community Centre</i>		1	1	1	1	4
<i>Hot Pools/Spa</i>			1	1	1	3
<i>Garden Centre</i>	1	1	1	1	1	5
<i>Gym</i>		1	1	1		3
<i>Movie Theatres</i>	1			1		2
<i>Shopping Mall</i>	1		1	1		3
<i>Outlet Mall</i>	1		1	1		3
<i>Boutique Shopping Centre</i>	1			1	1	2
<i>Health Centre</i>	1	1		1	1	4
<i>Casino</i>		1		1		2

4.1.8 | Compatible programme analysis

4.1.3

IDENTIFYING SITE

As the capital city of NZ and the location of the qualitative study, Wellington was chosen as the most suitable area for an initial test. Mapping out the location of existing facilities within the Wellington region identified a significant gap in the Johnsonville Area (figure 4.1.9).

4.1.9 | (opposite) Dementia Facilities in Wellington

stand alone dementia daycare	+ daycare	1	Redwood Club
		2	Marsden Daycare Trust
dementia care (secure environment)	+ residential	3	St Joseph's Home of Compassion
		4	Sprott House
	+ residential + daycare	5	Whitby Rest Home and Hospital
		6	Elderslea
		7	Ferguson Rest Home and Hospital
		8	Heretaunga
		9	Woburn Home
		10	Village at the Park
	+ residential + respite	11	Te Hopai
specialist hospital/ dementia care	+ residential	12	Millvale House Miramar
	+ residential + daycare	13	Manor Park Private Hospital
No Dementia Facilities in this area			

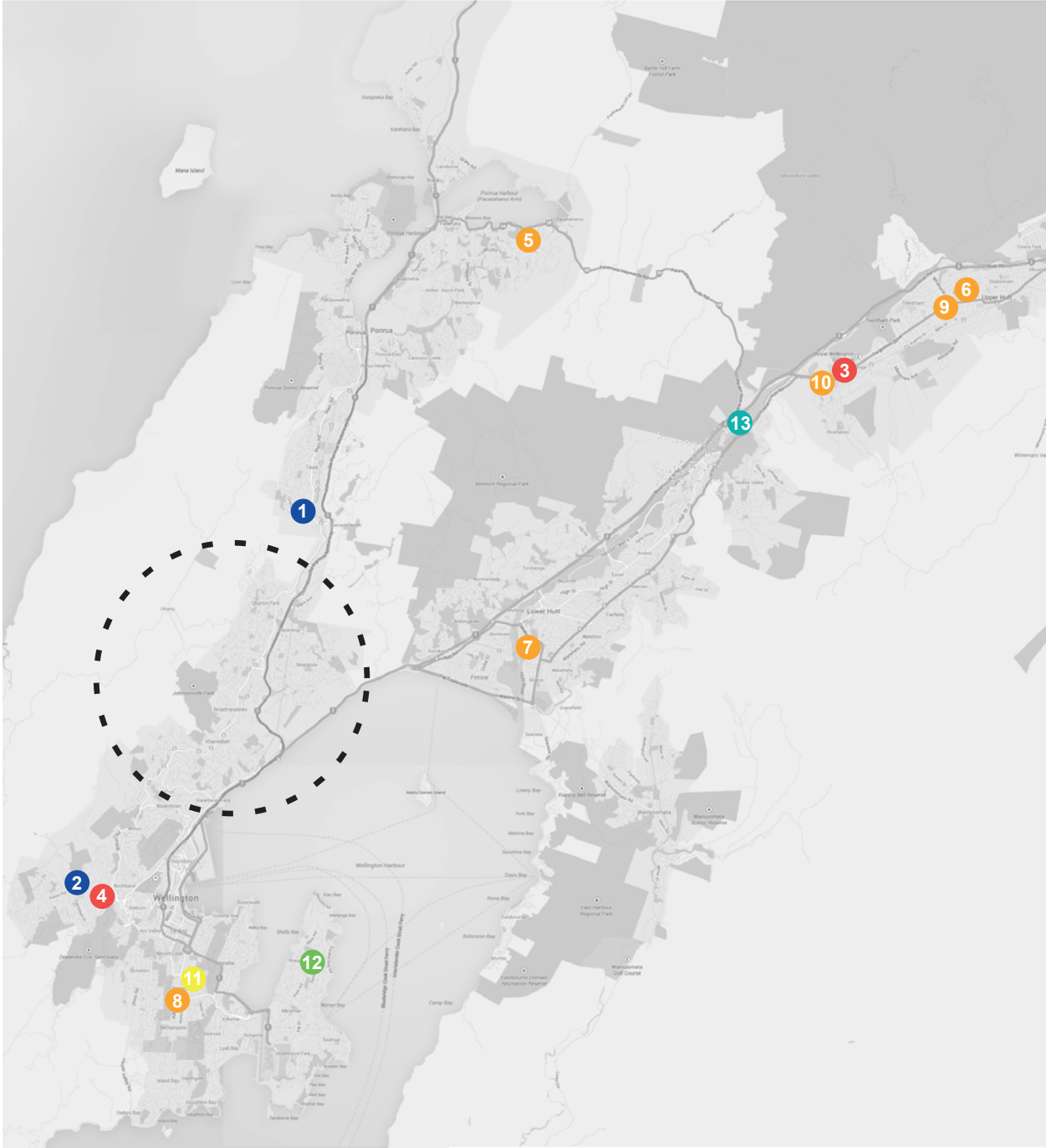
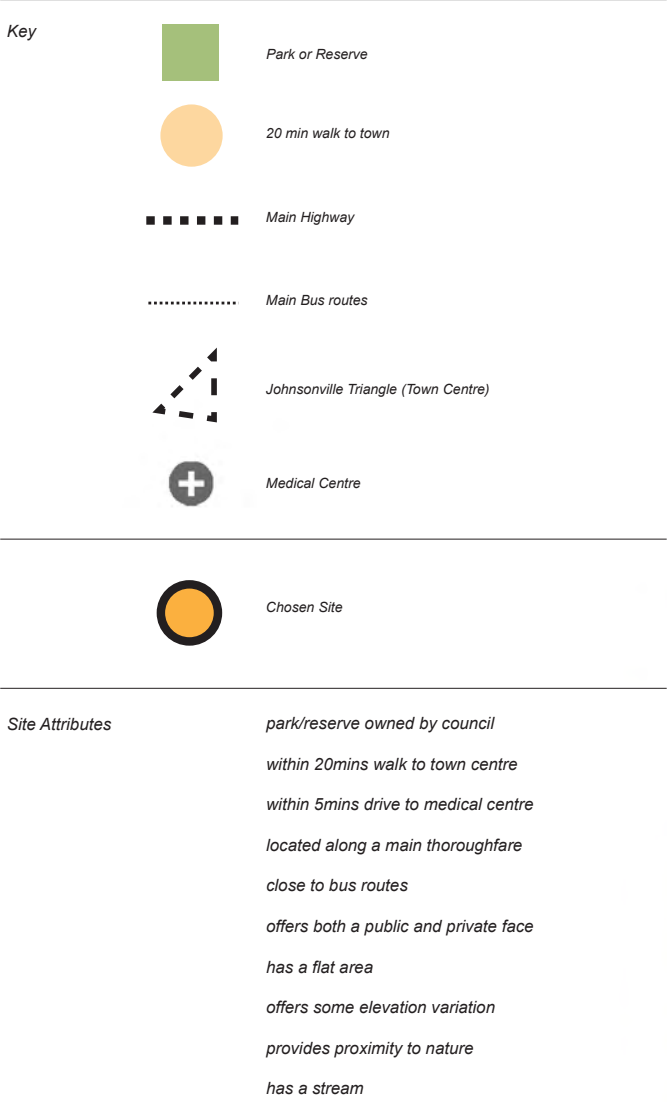


Figure 4.1.10 shows a map of the Johnsonville area, identifying key site attributes which enhance suitability for YOD and the garden centre. The introduction of a community building on this site would help to reoccupy an otherwise overgrown and vacant site for the benefit of the surrounding community (figure 4.1.11).



4.1.10 | (opposite) Site Selection Mapping

4.1.11 | (following spread) Map and photos of Selected Site





Bus Stop (going south)



Middleton Road

Wingfield Place

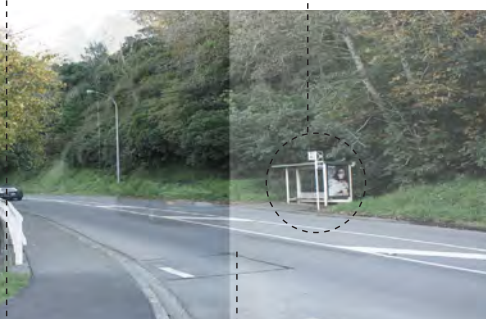


*abandoned
& overgrown*

SELECTED SITE



Bus Stop (going north)



Middleton Road

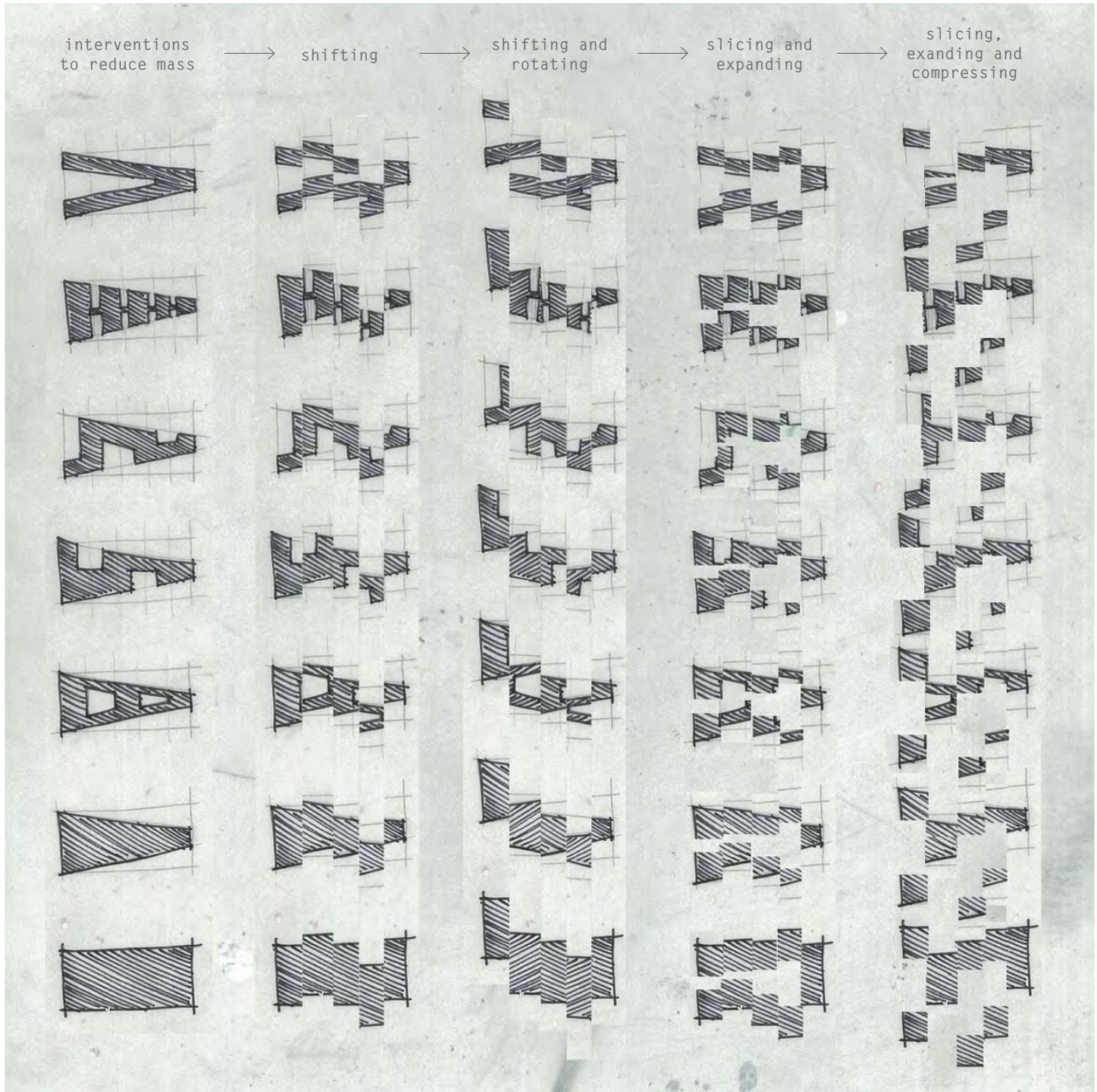
4.1.4

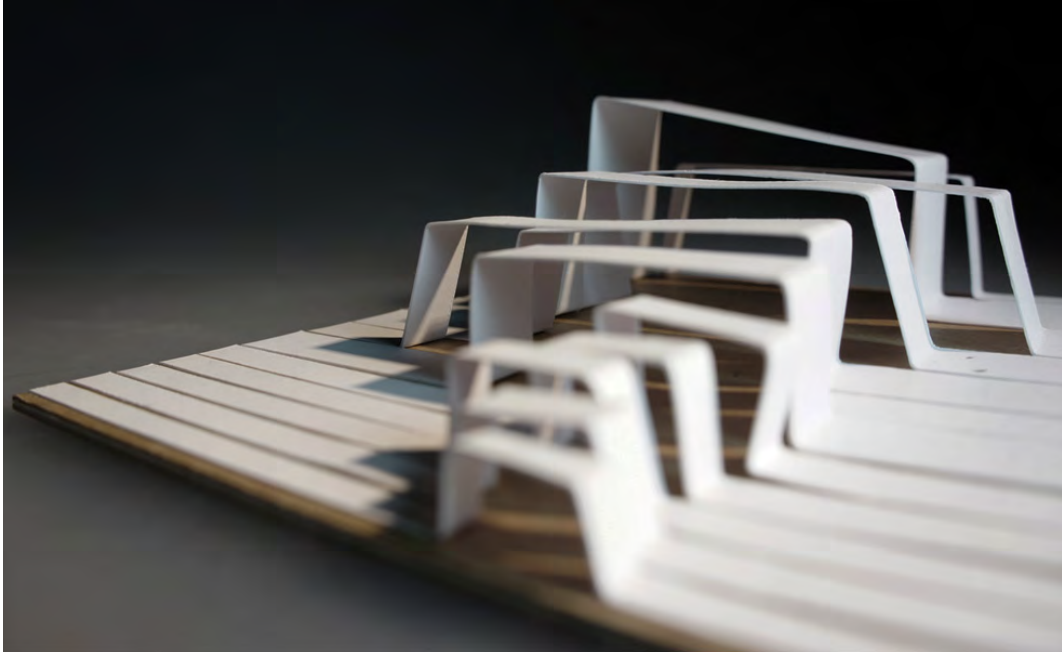
EXPERIENCE REQUIREMENTS

The following investigates a variety of architectural requirements, with regard to experience for those with YOD, from the macro scale of building mass to the micro scale of surfaces.

A facility for dementia requires a considerable amount of building mass to house all of its required programme. Figure 4.1.12 explores ways to reduce institutional mass to a more homelike scale through cut-outs, shifting, rotating, slicing, expanding and compressing. These ideas were carried through to a physical model which identifies the potential to provide moments of intimacy and interaction (figure 4.1.13).

4.1.12| (opposite) Reducing institutional mass

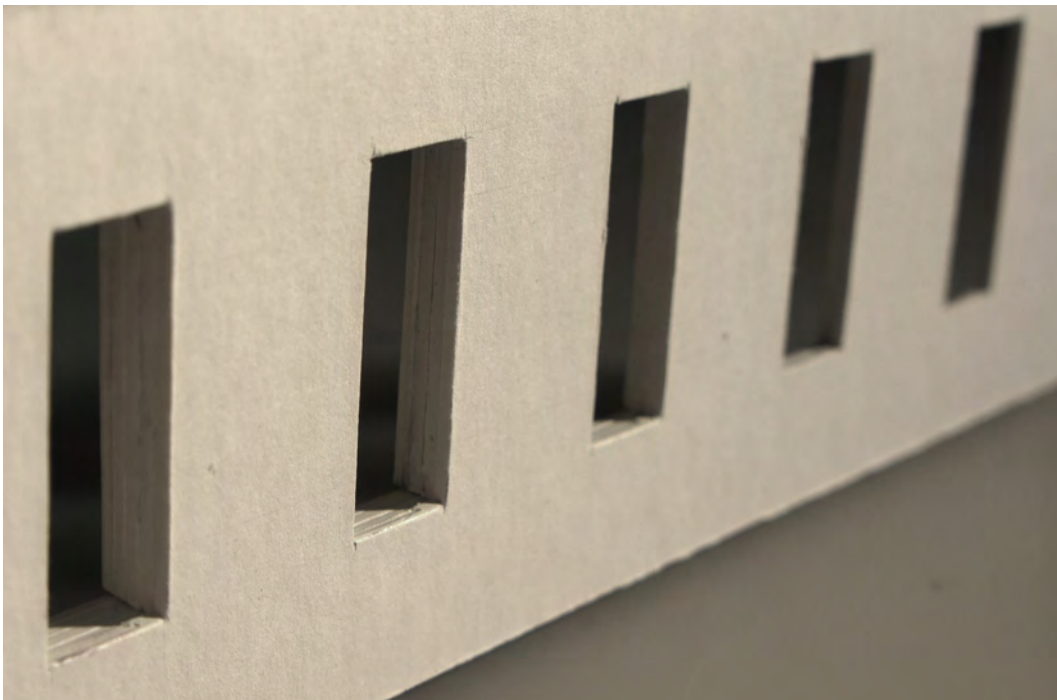




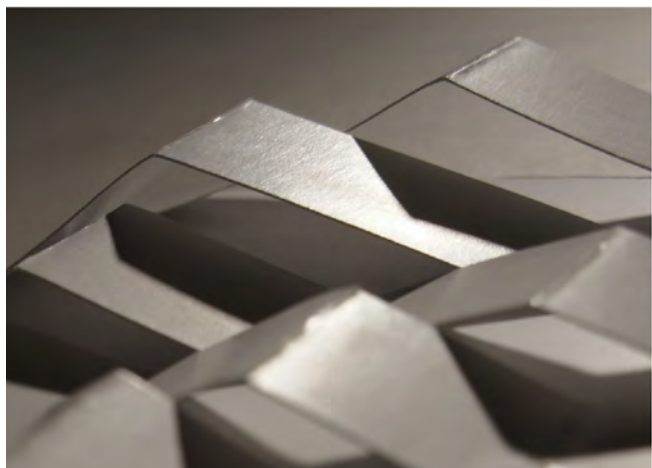
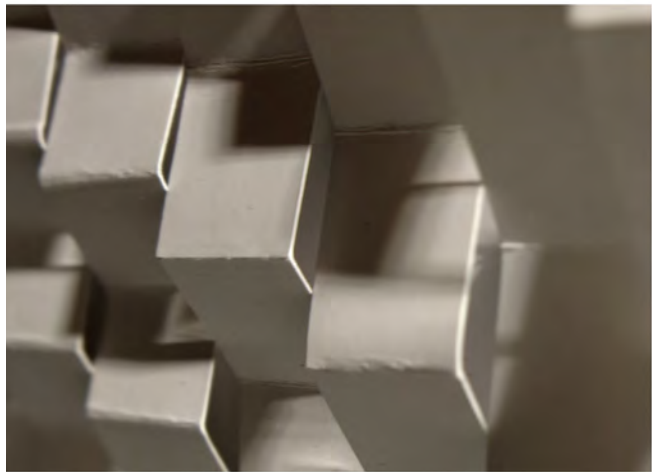
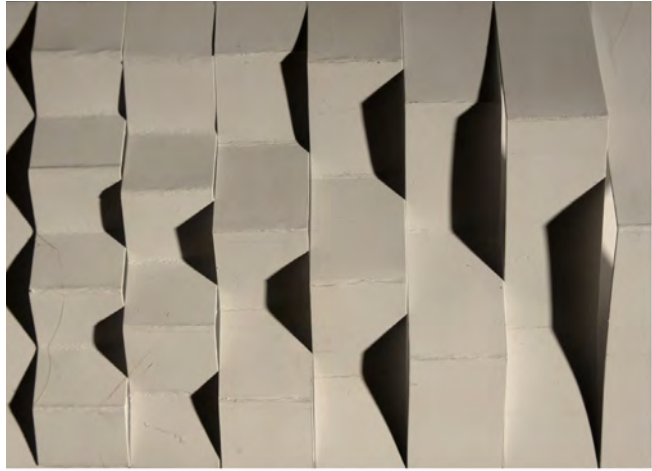
4.1.13 | (opposite) Intimacy and interaction model

4.1.14 | (below) Depth of reveal model

Investigations for transition through stages, at a more intimate scale, were pursued through model making. Altering depth of reveal to provide varying degrees of protection in relation to the variation in thickness of the human skull (figure 4.1.14). Facades which transition public to private by gradually opening to filter light and signify access (figure 4.1.15) or progressively expanding to suggest activity within (figure 4.1.16). Each of these models test the inside-outside relationship through a consideration of threshold.





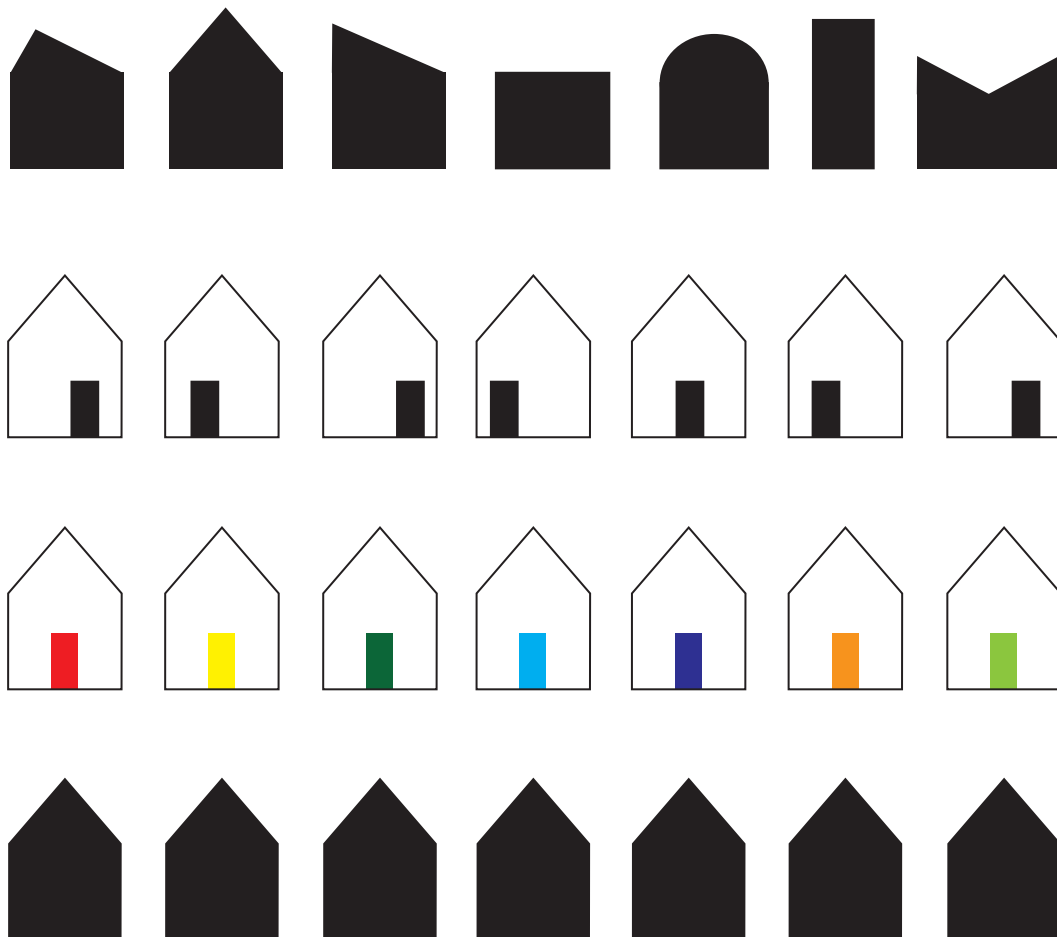


4.1.15 | (opposite) Signifying access model

4.1.16 | (right) Expanding model

Recognition of one's own room is a key issue for many occupants of dementia facilities. Figure 4.1.17 dabbles in possibilities to aid in recognition and simultaneously provide an opportunity for personalisation. The key issue will be insuring a coherency to the design while providing these variations.

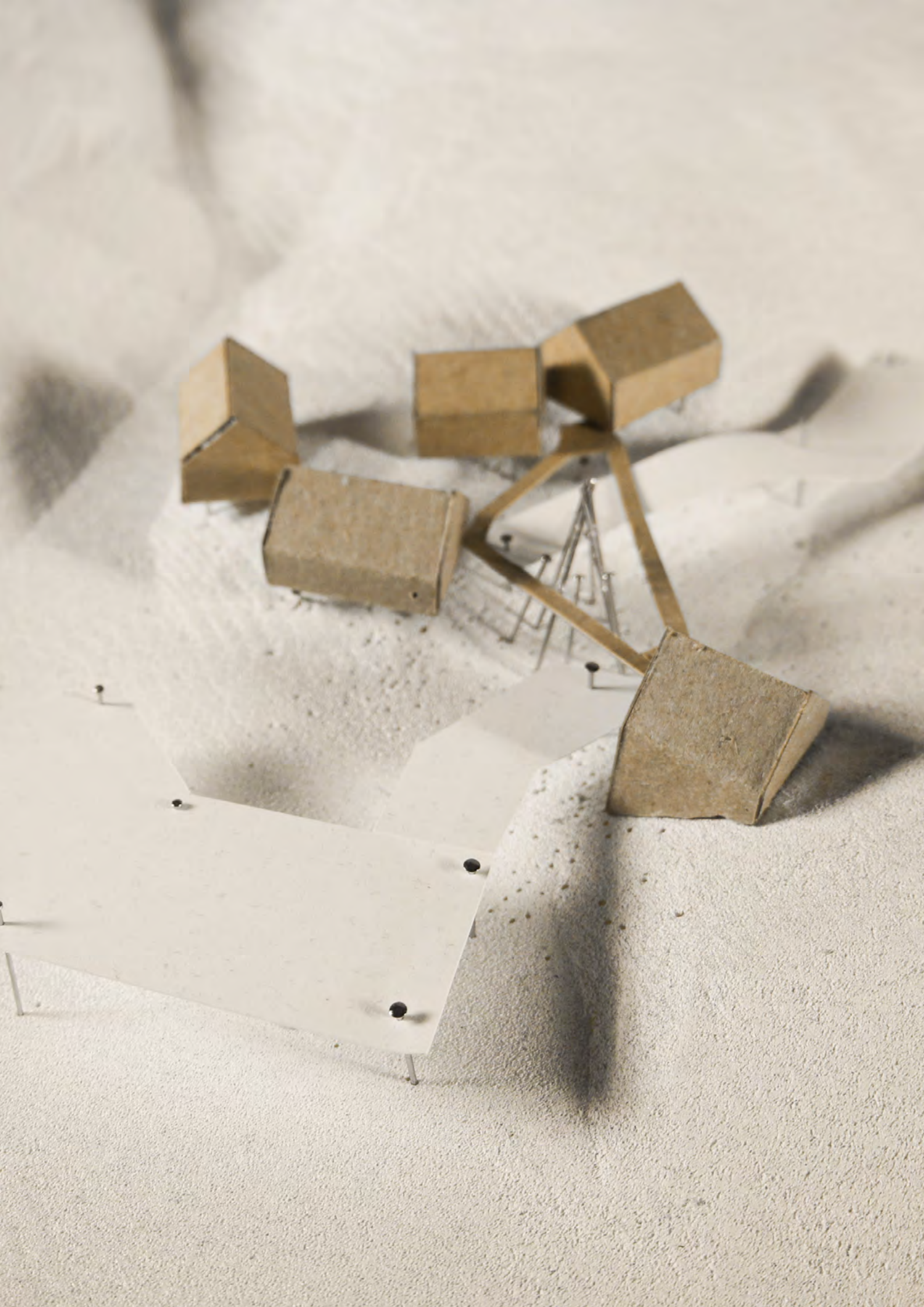
4.1.17 | Recognition possibilities



4.1.18 | Stimulating surface models

Stimulating surfaces promote an interaction with the architecture itself as a mode of therapy. Surfaces to achieve this stimulation were explored through model making to decipher their tactile potentials and then photographed to review their engagement with light and shadow (figure 4.1.18).





4.2

DESIGN PHASE ONE

“Sequences of events and spaces occasionally clash and contradict each other. One then observes a strategy of conflict in which each sequence constantly transgresses the other’s internal logic.” (Tschumi 160)

Faced with two potentially conflicting programmes the following seeks a site responsive design solution which is aware of its inherent tensions and manages their integration.

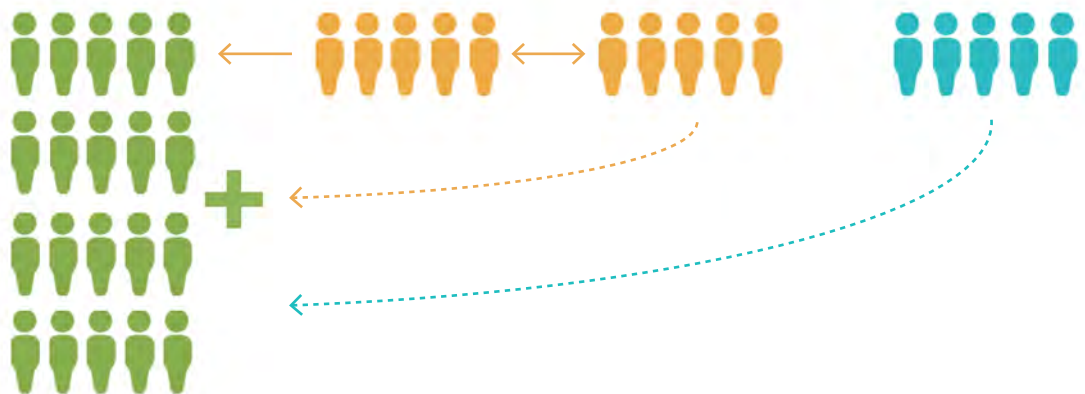
4.2.1 PROGRAMME REQUIREMENTS

Figure 4.2.2 illustrates the specific programmes catered for in this design phase and their; spatial requirements, design requirements, capacity, and relationships.

4.2.2 | (opposite) Programme Requirements Diagram

PROGRAMMES	Garden Centre	Day Care	Respite	Rest Home & Dementia Care
SPATIAL REQUIREMENTS	<i>Car park (25 cars)</i> <i>Cafe</i> <i>Courtyard / gathering space</i> <i>Sales Building / Offices</i> <i>Greenhouse</i> <i>Outdoor sales area</i> <i>Outdoor growing area</i> <i>Garage/Storage</i>	<i>Activities Room</i> <i>Bathrooms x 3</i> <i>Outdoor Courtyard</i> <i>Staff room</i> <i>Share communal areas with Respite</i>	<i>Bedrooms x 5 - with bathroom</i> <i>Kitchen</i> <i>Dining</i> <i>Lounge</i> <i>Private Lounge Area</i> <i>Conservatory</i> <i>Outdoor Courtyard</i> <i>Staff Room</i> <i>Seclusion Room</i>	<i>Bedrooms x 5 - with bathroom</i> <i>Kitchen</i> <i>Dining</i> <i>Lounge</i> <i>Private Lounge Area</i> <i>Conservatory</i> <i>Outdoor Courtyard</i> <i>Staff Room</i> <i>Seclusion room</i>
DESIGN REQUIREMENTS	<i>Public area</i> <i>maximum social interaction</i> <i>visually stimulating architecture</i> <i>integrated with landscape</i>	<i>Semi Public</i> <i>maximum social interaction</i> <i>visually stimulating architecture</i> <i>integrated with Garden Centre</i> <i>connected to respite</i>	<i>Private</i> <i>overlook busy garden centre</i> <i>home</i> <i>connected to daycare</i>	<i>Private</i> <i>separate from busiest areas</i> <i>home</i> <i>overlook private areas of garden centre</i> <i>large focus on therapeutic design</i>

CAPACITY & RELATIONSHIP



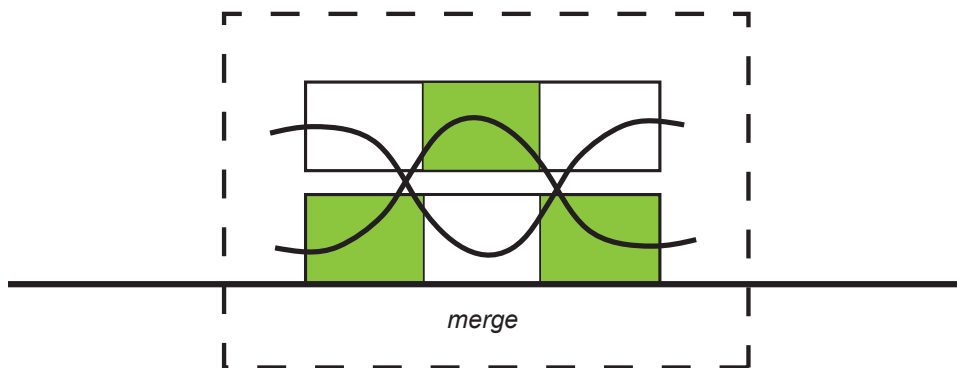
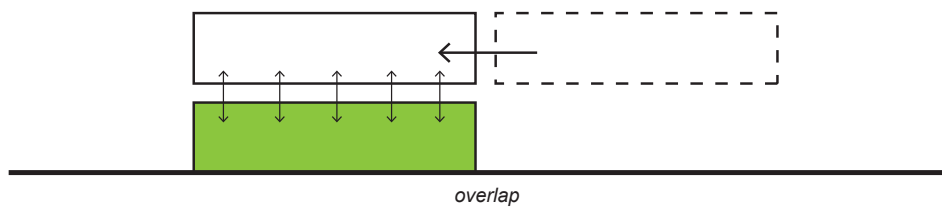
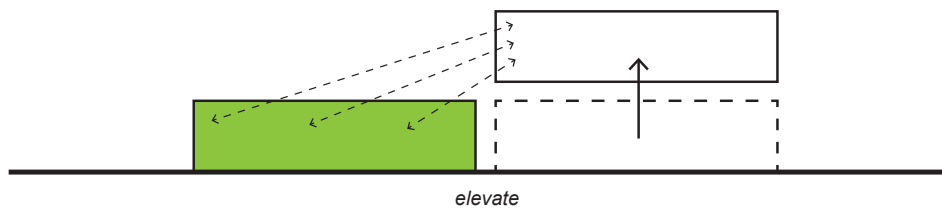
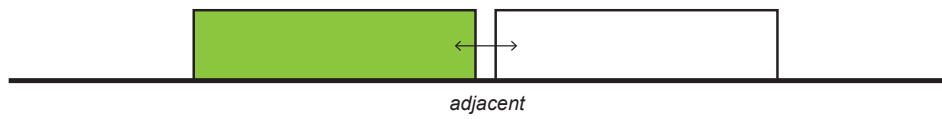
4.2.2

MANAGING INTEGRATION

Understanding the conflicts between garden centres and homes (as dementia facility) becomes key when seeking opportunities for integration.



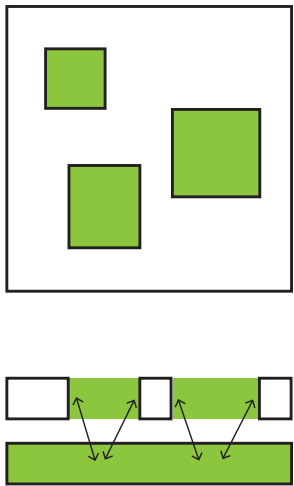
Figure 4.2.3 explores how to integrate the two disparate programmes by merging rather than simply placing them adjacent to each other.



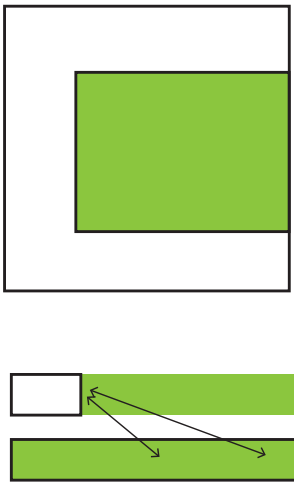
Massing Explorations

Figure 4.2.4 explores merging through architectural typologies of perimeter, courtyard and cluster, on the selected site in Johnsonville. The explorations address the needs for; privacy, a controlled environment, access to upper programmes, positioning on site, and contributory walkways.

COURTYARD



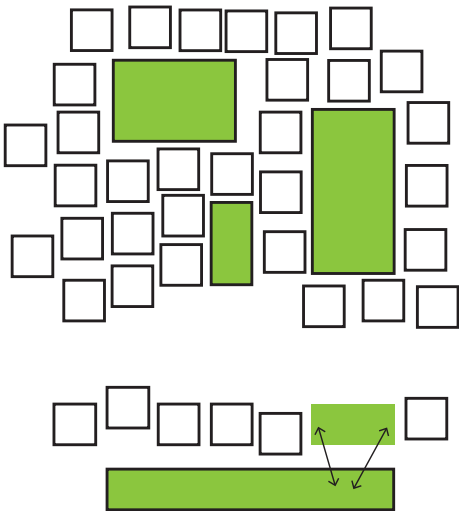
PERIMETER

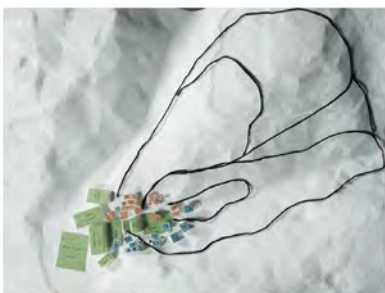
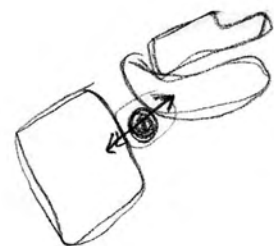
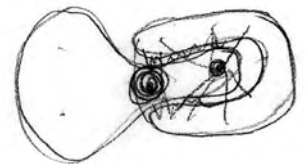
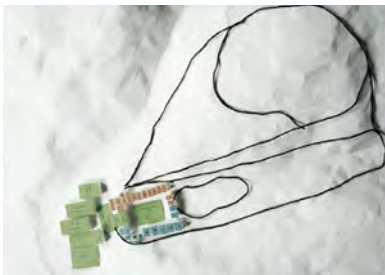
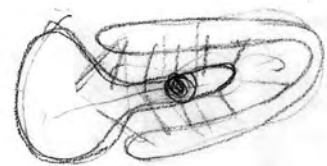
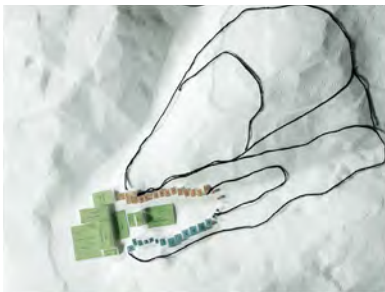
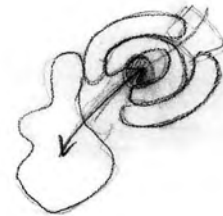
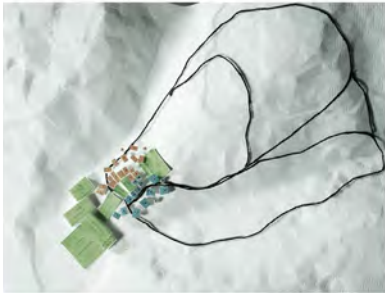
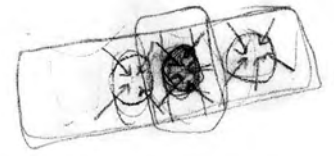
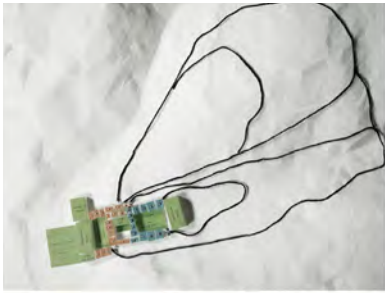


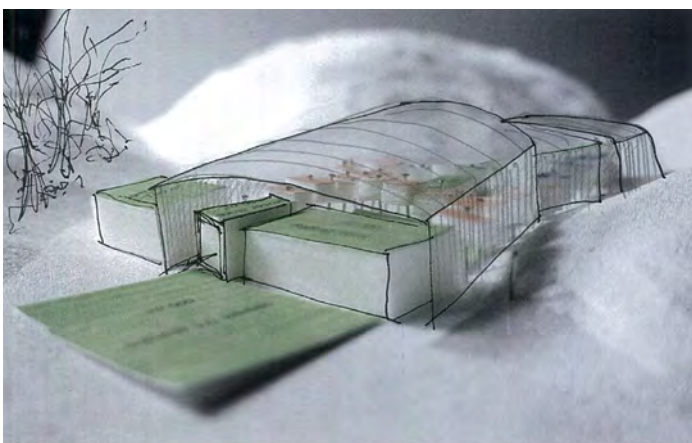
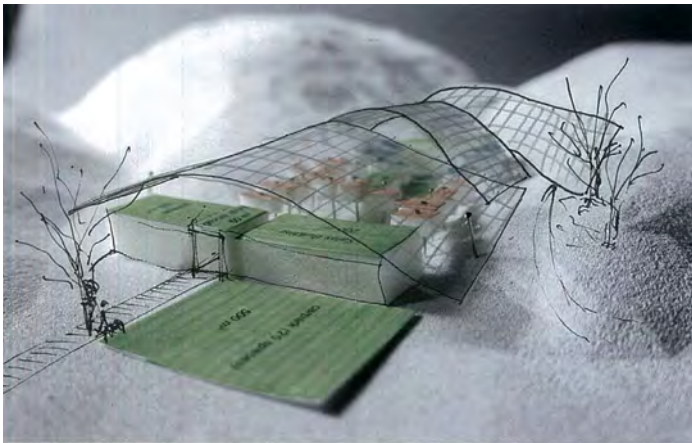
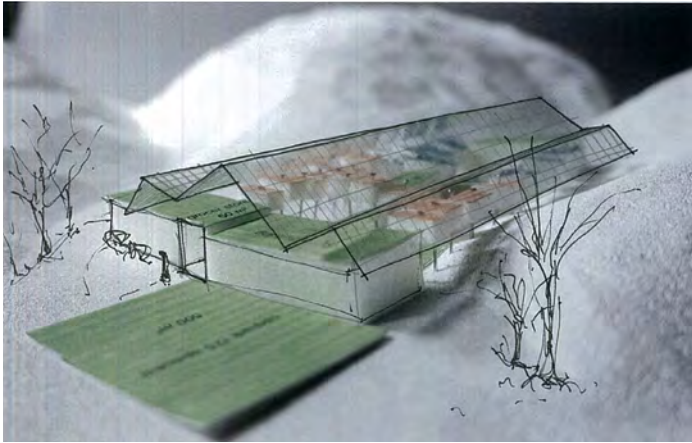
KEY

-  GARDEN CENTRE
-  DAYCARE & RESPITE
-  FULLTIME

CLUSTER



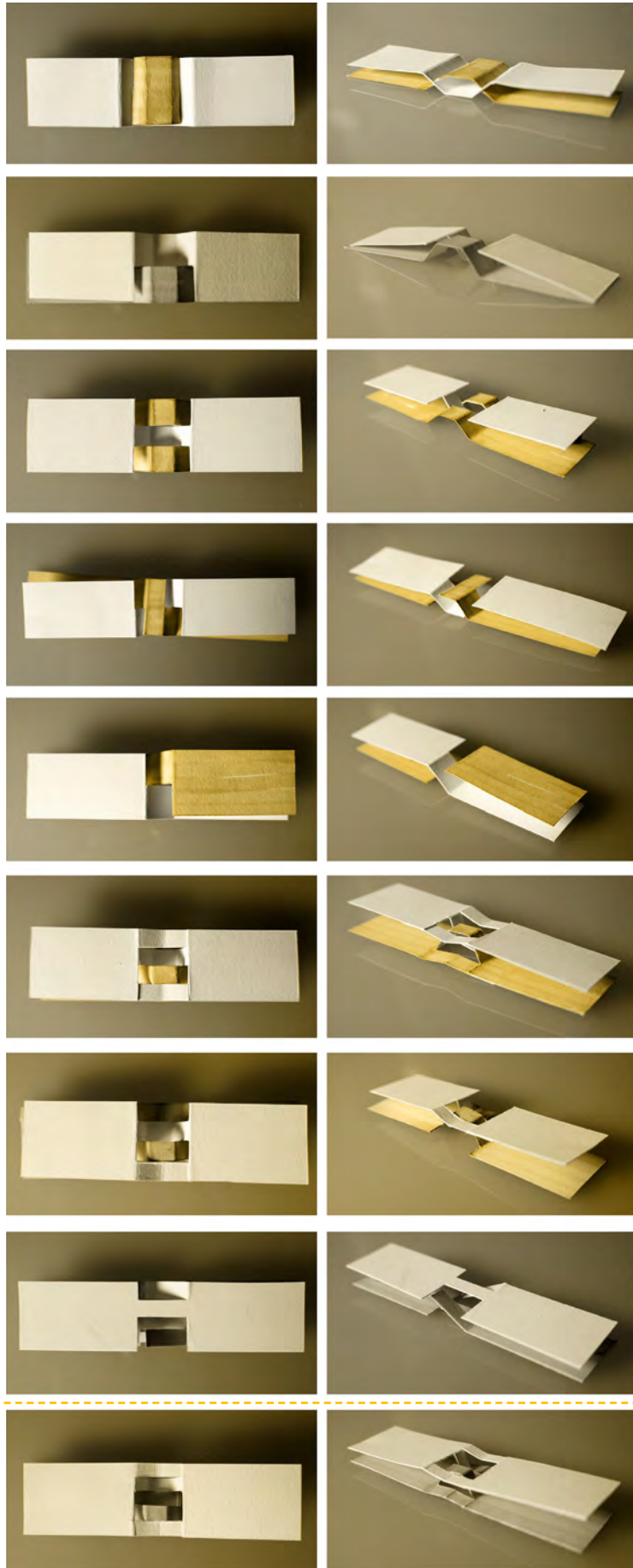




Through analysis and comparison, the option which achieved the most successful integration of the two programs was chosen. An attempt to architecturalise these masses was then explored through continuous roofing options resulting in figures 4.2.5.

These tests, although successfully integrating the two buildings into one unit and making use of the social aspect of courtyards, are far too institutional for the occupants. Furthermore, they do not require that the occupants of the dementia facility interact directly with the garden centre.

4.2.5 | (opposite) Aesthetic explored through encompassing roofs

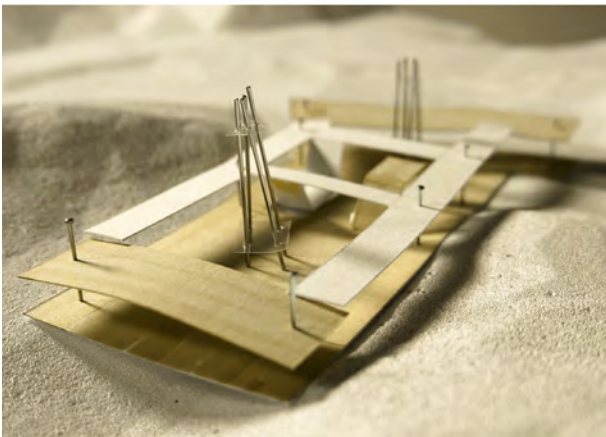




Maquette Explorations

Figure 4.2.6 shows a series of possibilities for direct merging, using diagrammatic maquettes, focused on a central interlocking of circulation and courtyards. From this series the most suitable option was tested on the site considering; fit within site, exposure to street, a shared entrance, and a shared circulation system (figure 4.2.7).

The final layout provides a key moment for interaction, however, the overall layout still lends itself to a very institutional mass. This test identified the need to remove the rigidity and symmetry of the design and test the potential to more organically adapt to the site. Similarly, it shows a need to break the mass into more homelike clusters to provide a navigation for occupants akin to their previous homes.



4.2.6 | (opposite) Central interlocking macquettes

4.2.7 | Developed central interlocking macquette

4.2.3

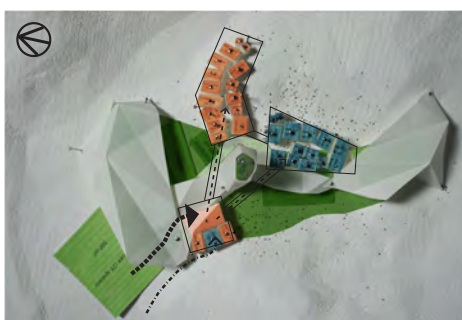
INITIAL CONCEPT

This design concept explored the potential to more organically adapt to site with the garden centre as a faceted landscape and the dementia facility divided into clusters. Tested on the site through massing, the garden centre was investigated as a ribbon of movement integrated with the existing topography and focused on the vibrant central café. The homes arranged themselves accordingly around the café and in response to the topography. Transition of privacy was also key in determining the appropriate location of the programmes. Figure 4.2.8, illustrates the relationship between the two programmes, identifies movement through the buildings, and figure 4.2.9 establishes an architectural aesthetic for the concept.

4.2.8 | (opposite) Programme arrangement and movement



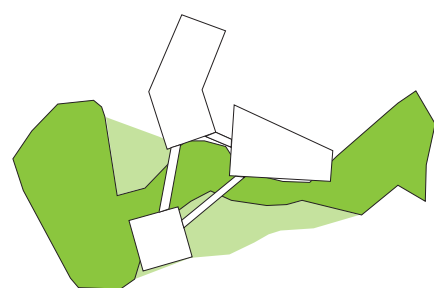
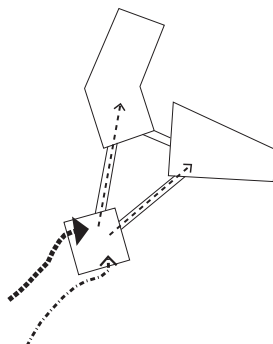
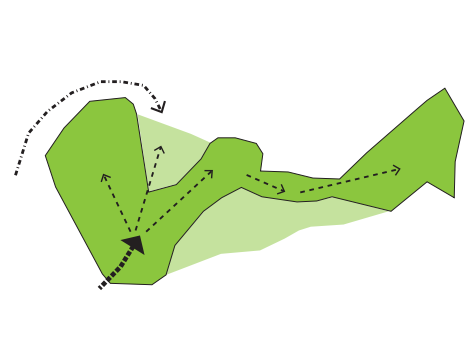
Garden Centre - Level 0

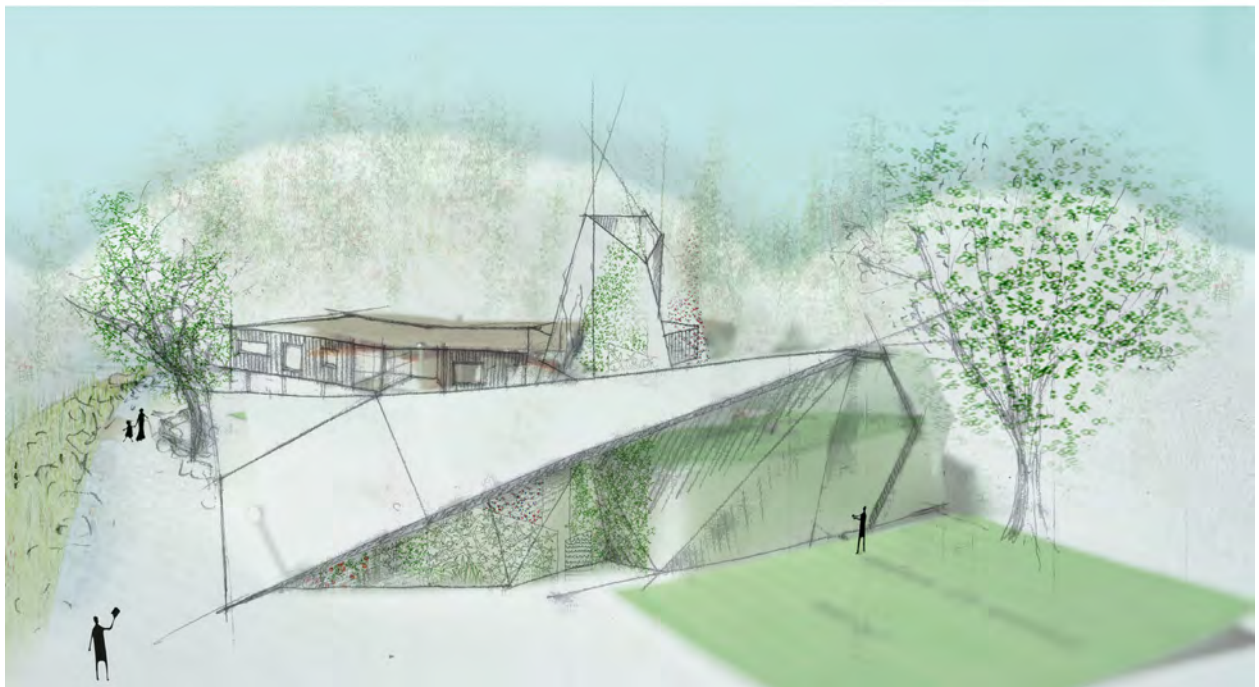
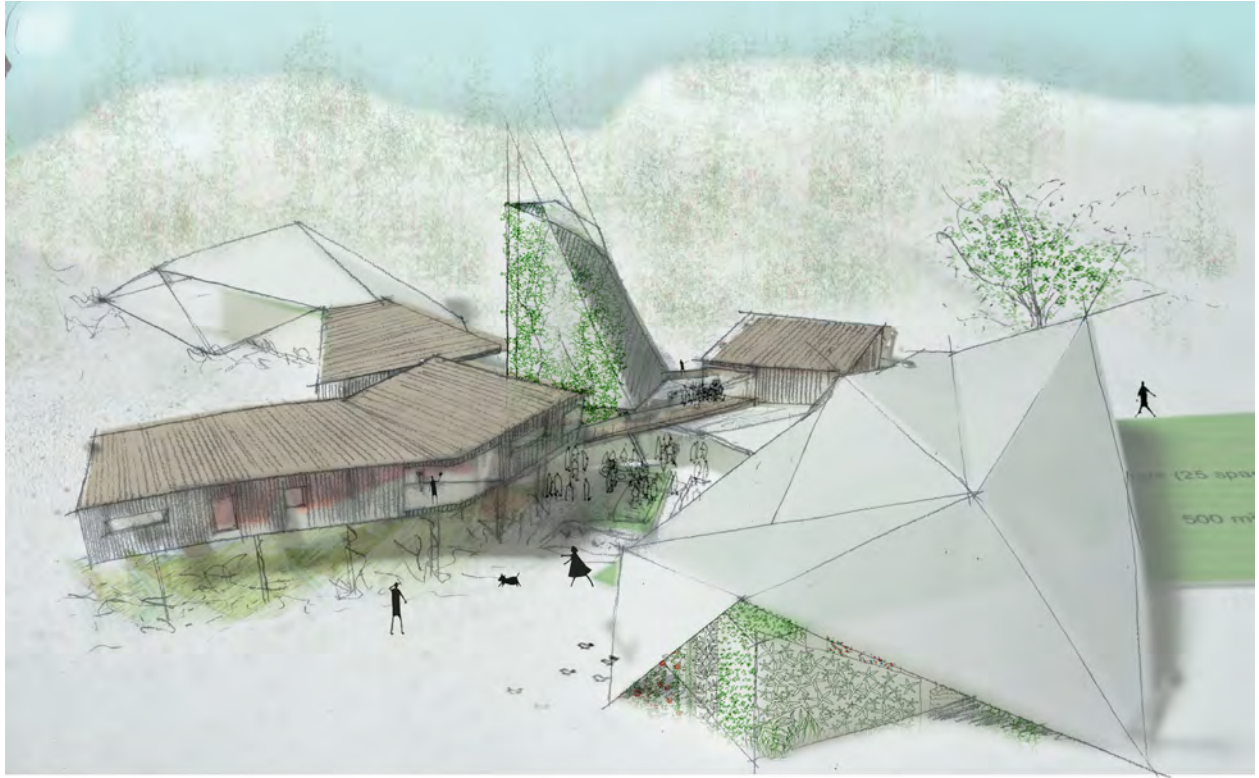


YOD Centre - Level 1



Both Programmes - Roof





Design Critique (20-5-14):

The initial concept was critiqued by academic staff and post graduate students. The ability for the residents to participate in therapeutic gardening was deemed a positive, however, the design appeared as a spectacle rather than a homely environment and the scale was inappropriate in the Johnsonville context. It was suggested that consideration be given to the garden centre as a large flat typology vs homes which are comparatively vertical and small.

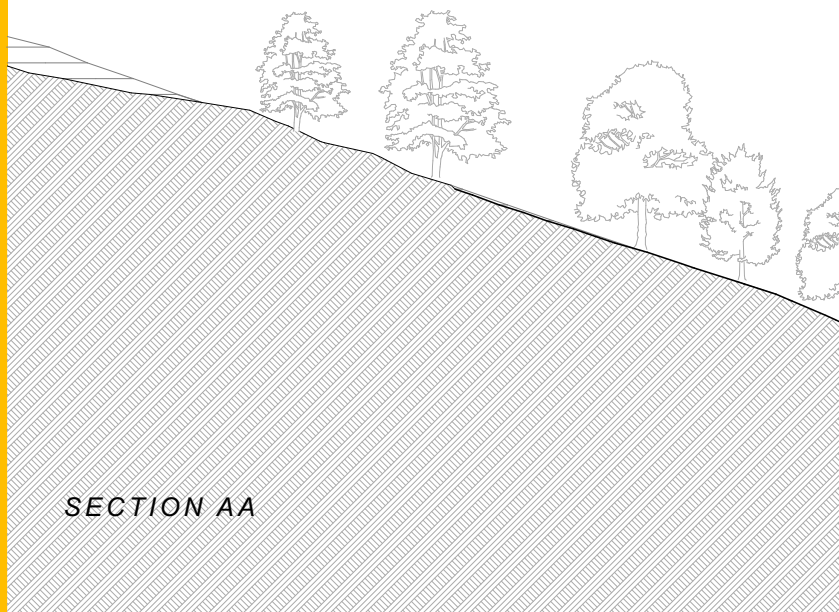
4.2.4

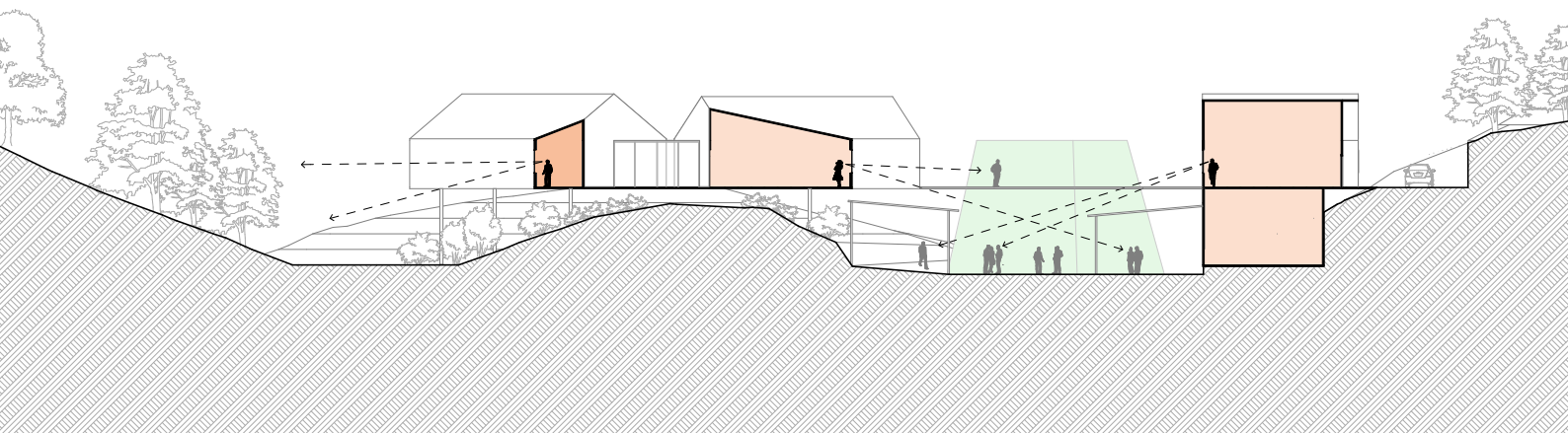
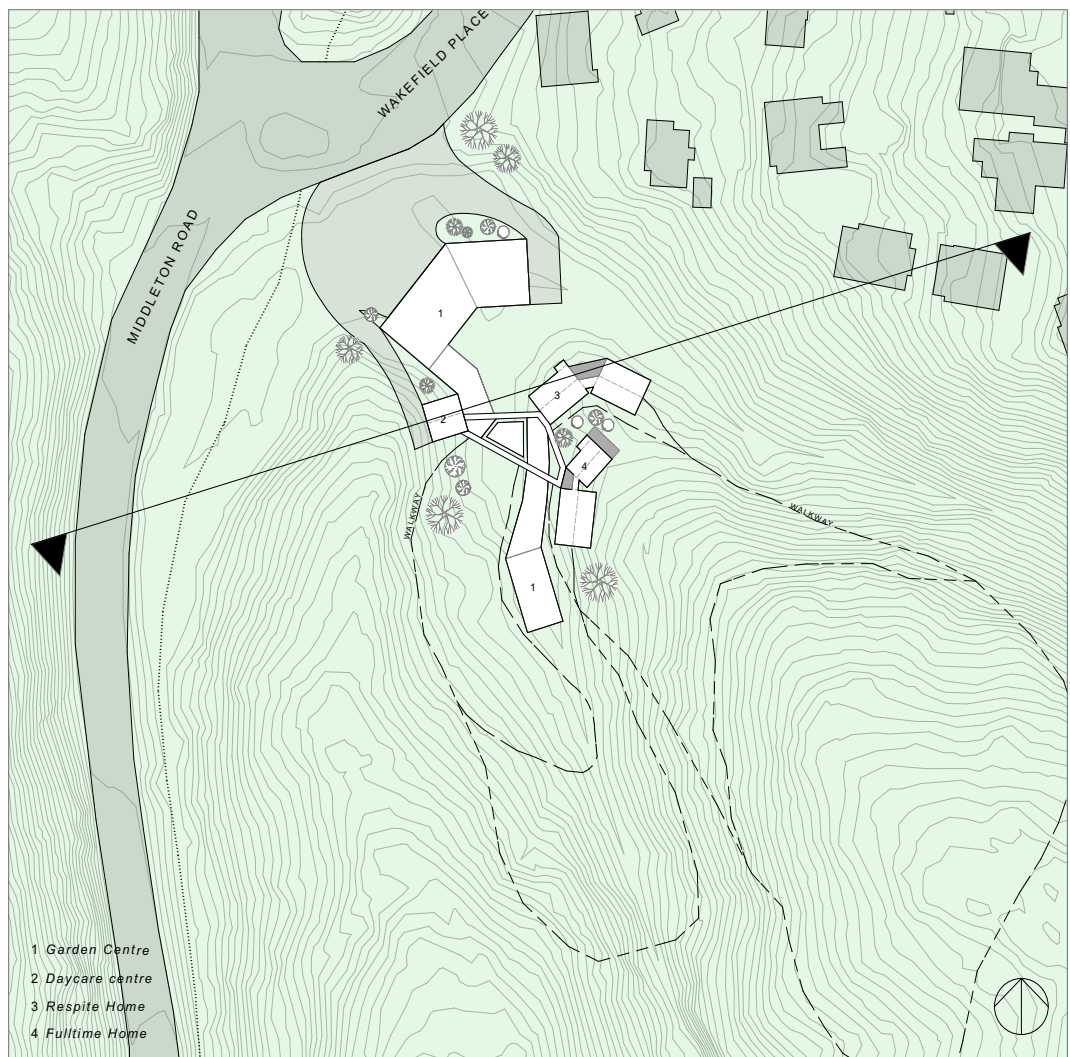
DESIGN ONE

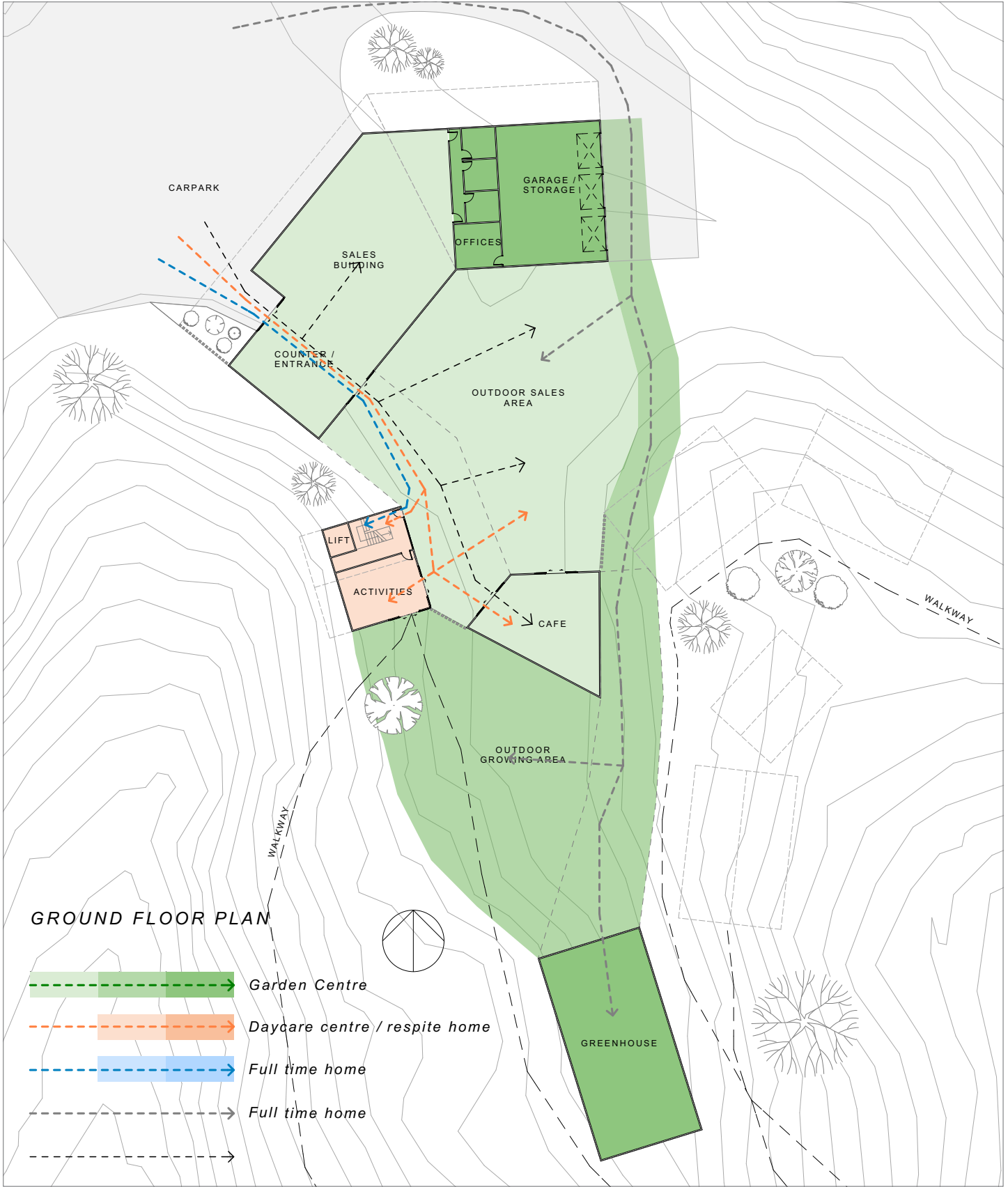
The next design explored the same programmatic relationships (figure 4.2.10), opportunities for surveillance (figure 4.2.11), transition of privacy (figures 4.2.12 and 4.2.13), and individual homes but looked at providing a more appropriate response to the Johnsonville context in terms of a more modest form (figure 4.2.14). The homes were divided into living and sleeping zones in order to emphasise the small homes and large garden centre.

4.2.10 | (opposite) Design One Site Plan

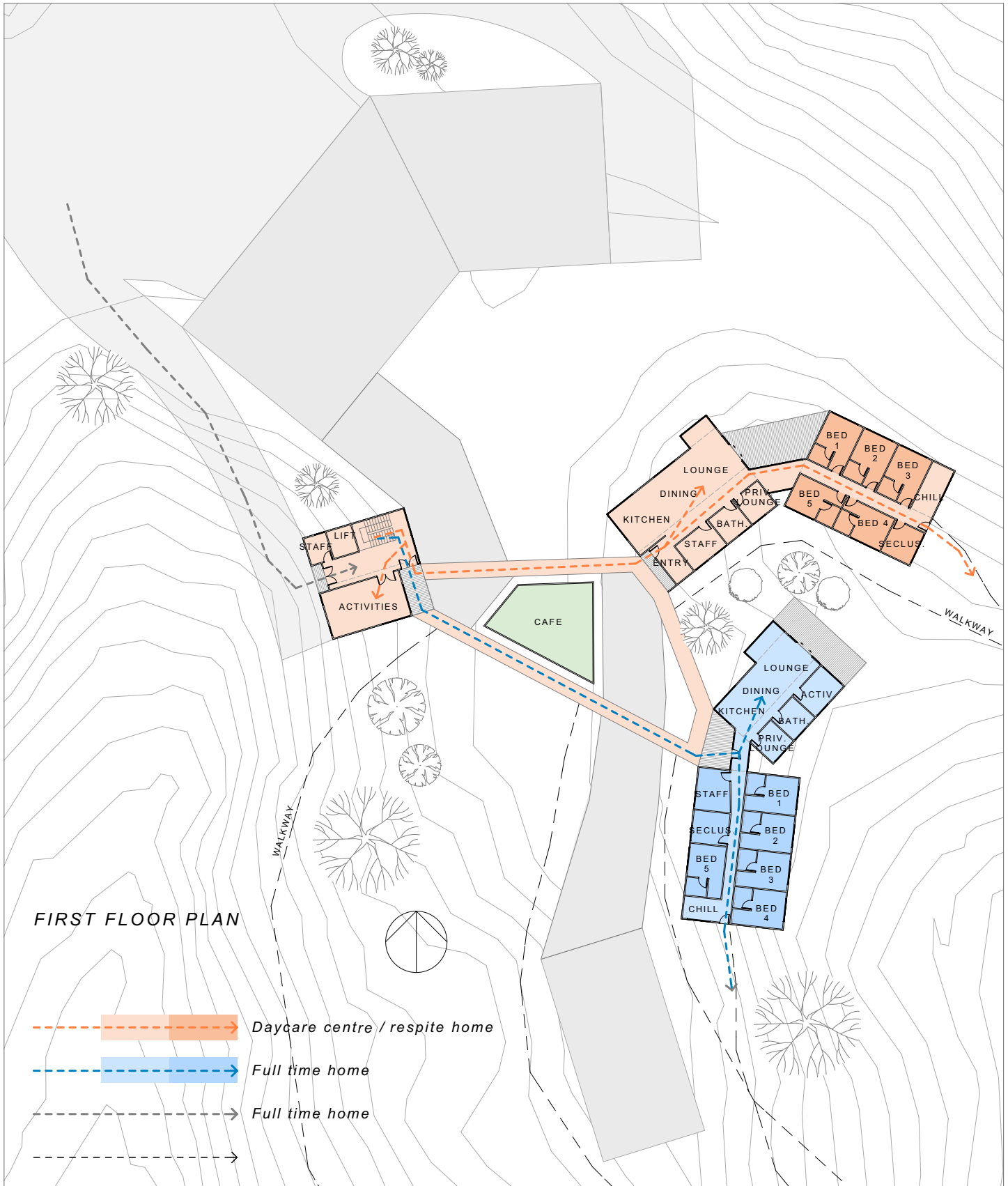
4.2.11 | (below) Design One Section







4.2.12|Design One Ground Plan



4.2.13 | Design One Upper Plan



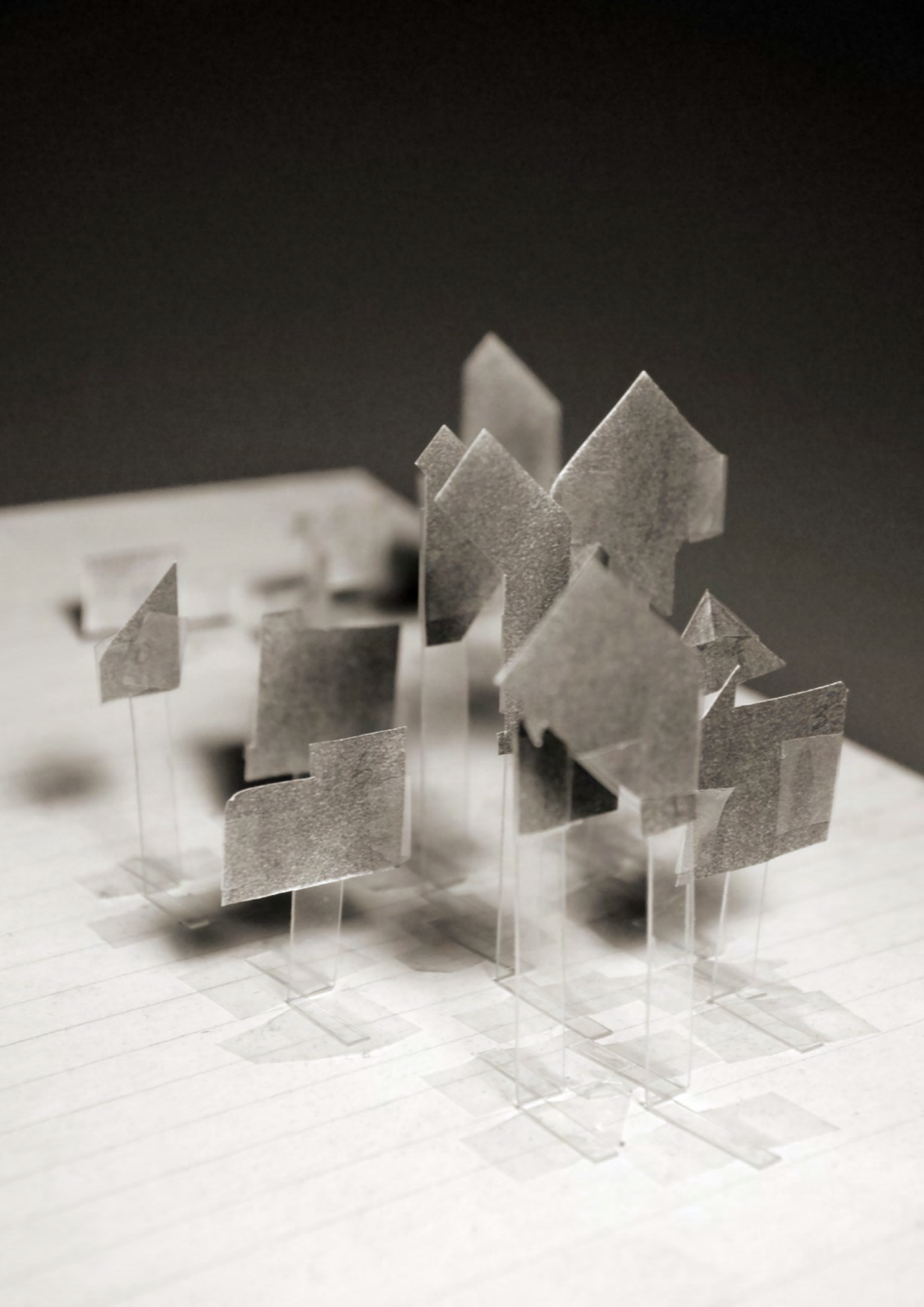
Formal Design Critique (27-5-14):

Positives:

- Cross programming works well to achieve set out objectives
- Good level of detail in physical model for understanding ideas

Moving Forward:

- Consider;
 - o the contrasting architecture of home and garden centre
 - o how contrasting materials could begin to integrate
 - o orientation of spaces in relation to daily rhythms
 - o integration at a personal level
- Really test the potential for a cross programmed architecture



4.3

DESIGN PHASE TWO

“The program plays the same role as narrative in other domains: it can and must be reinterpreted, rewritten, deconstructed by the architect” (Tschumi 205).

The following establishes an understanding of the two architectural typologies, home and garden centre, and explores their potential to merge.

4.3.1

REDEFINING PROGRAMME REQUIREMENTS

Figure 4.3.2 illustrates the developed programme requirements for the design in response to; feedback from design phase one, interviews with those affected by YOD, and advice from expert mental health professionals. Refer to figure 4.2.2 page 087 for original requirements. The changes include:

- Three homes rather than two - one daycare and respite home and two fulltime homes, each for six people
- Communal rather than individual bathrooms due to safety issues with ensuite bathrooms.
- Communal greenhouse rather than a conservatory with every house
- A direct connection between the fulltime homes and the garden centre

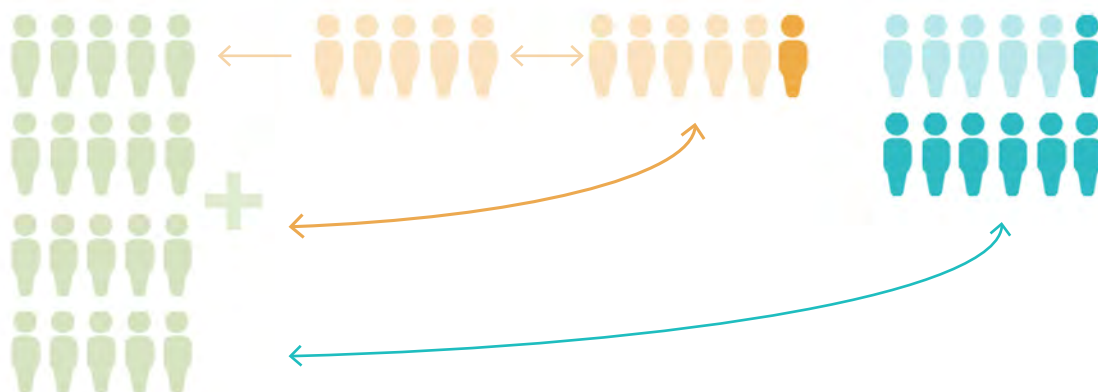
4.3.2 | (opposite) Redefined Programme Diagram

KEY FOR
CHANGES

+ Added or altered
- removed

PROGRAMMES	Garden Centre	Day Care	Respite	Rest Home & Dementia Care x 2
SPATIAL REQUIREMENTS			+ Bedrooms x 6 - no bathroom - no conservatory + Communal Bathroom x 2	+ Bedrooms x 6 - no bathroom - no conservatory + Communal Bathroom x 2
DESIGN REQUIREMENTS			+ integrated with Garden Centre	- separate from busiest areas - overlook private areas of garden centre + overlook busy garden centre + integrated with Garden Centre

CAPACITY &
RELATIONSHIP



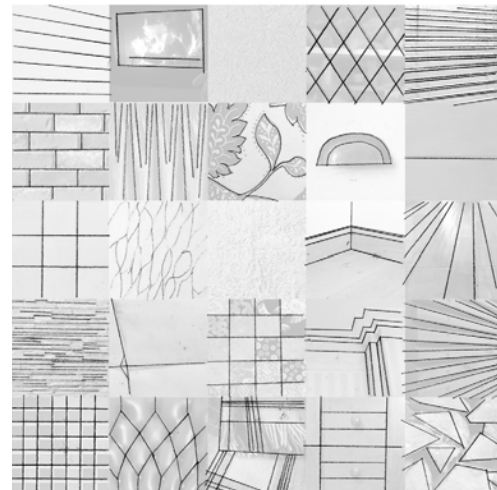
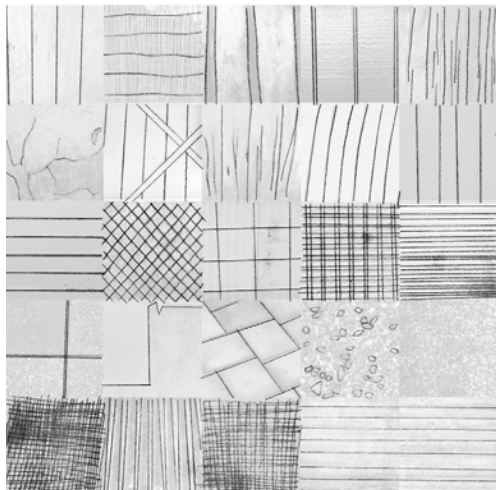
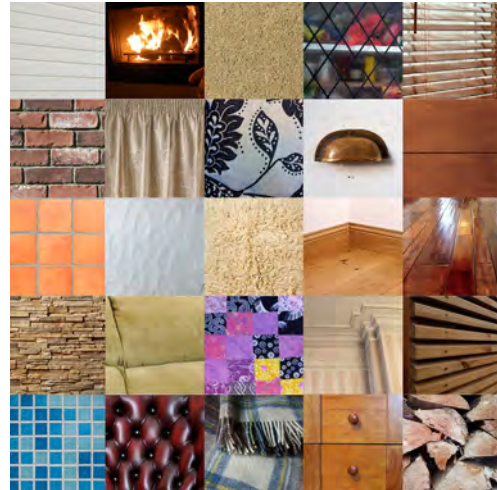
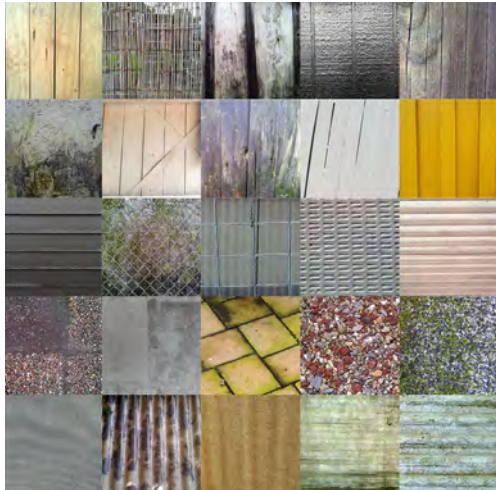
4.3.2

EXPLORING MERGING

Figures 4.3.3 and 4.3.4 provide an analysis of materials of the garden centre and home with regard to qualities, geometry, and colour.

Figure 4.3.5 explores the idea of integrated surfaces through the merging of materials from home and garden centre. These test how the commercial garden centre can exhibit a more homely feel and how the home can be informed by the tactile textures of the garden centre.

4.3.3 |(opposite) Material Qualities and Geometry

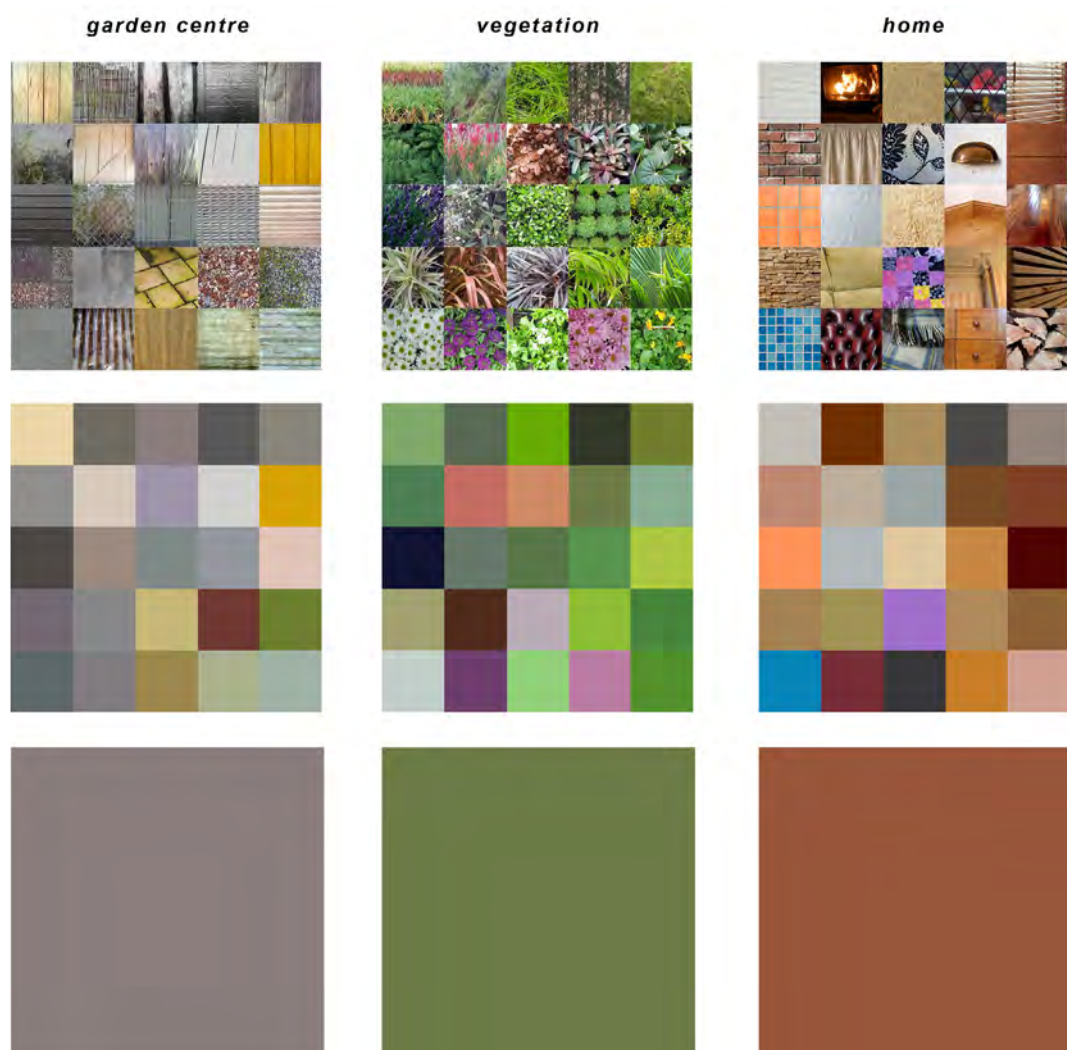


garden centre

weathered
cool tones
hard
disjointed
growth potential

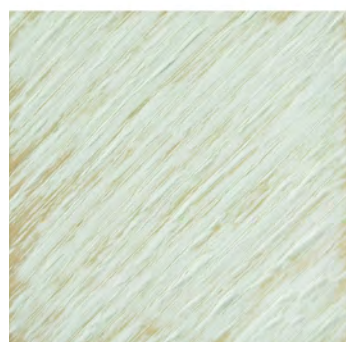
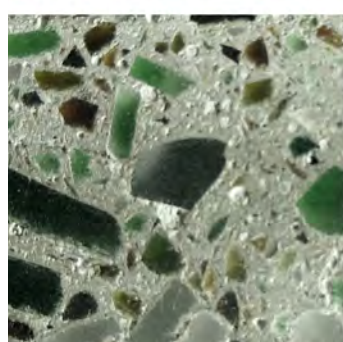
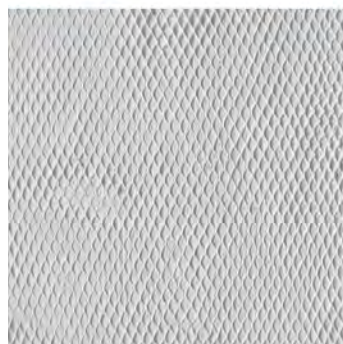
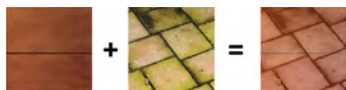
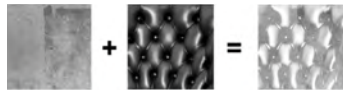
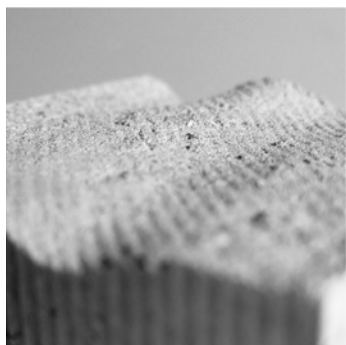
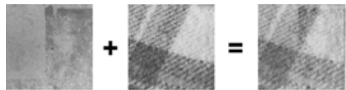
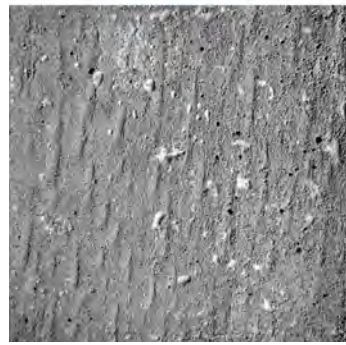
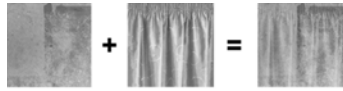
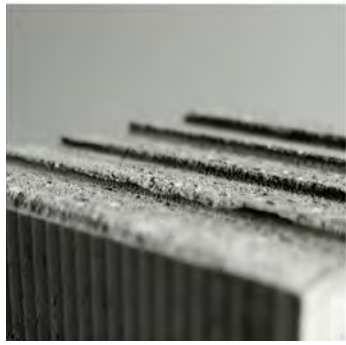
home

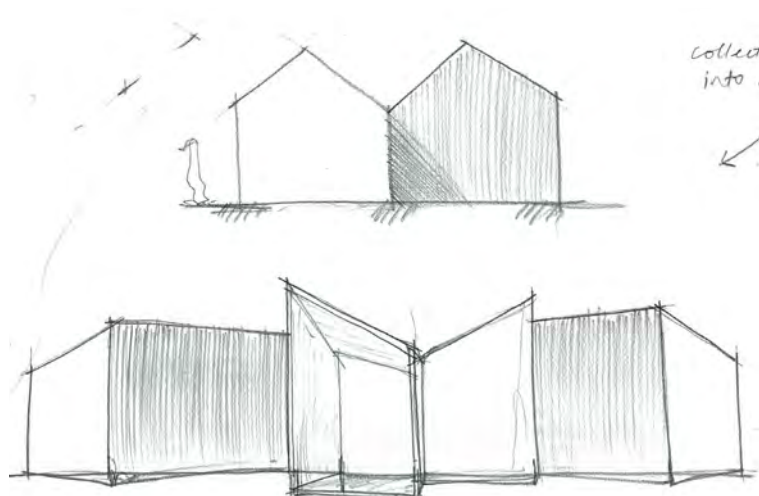
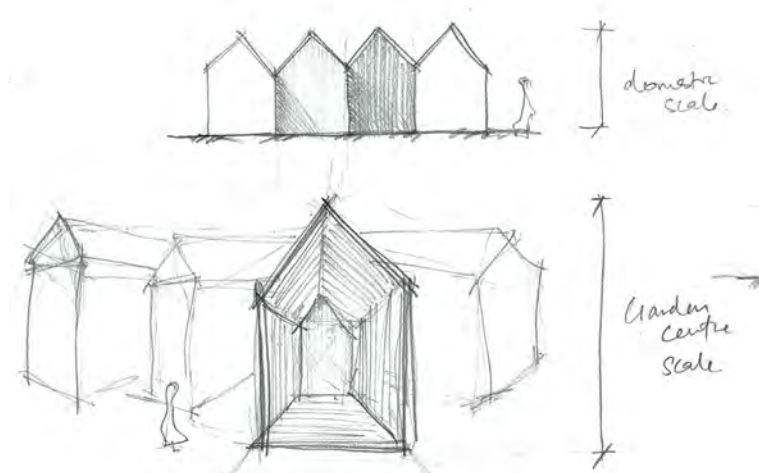
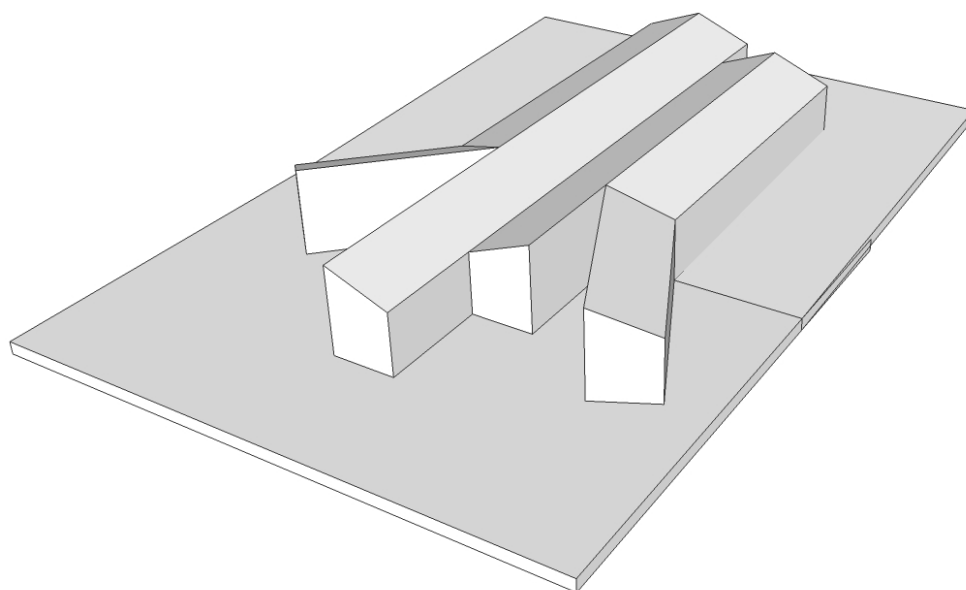
polished
warm tones
soft
refined
finished surface



4.3.4 | (above) Material Colours

4.3.5 | (opposite) Integrated Surfaces

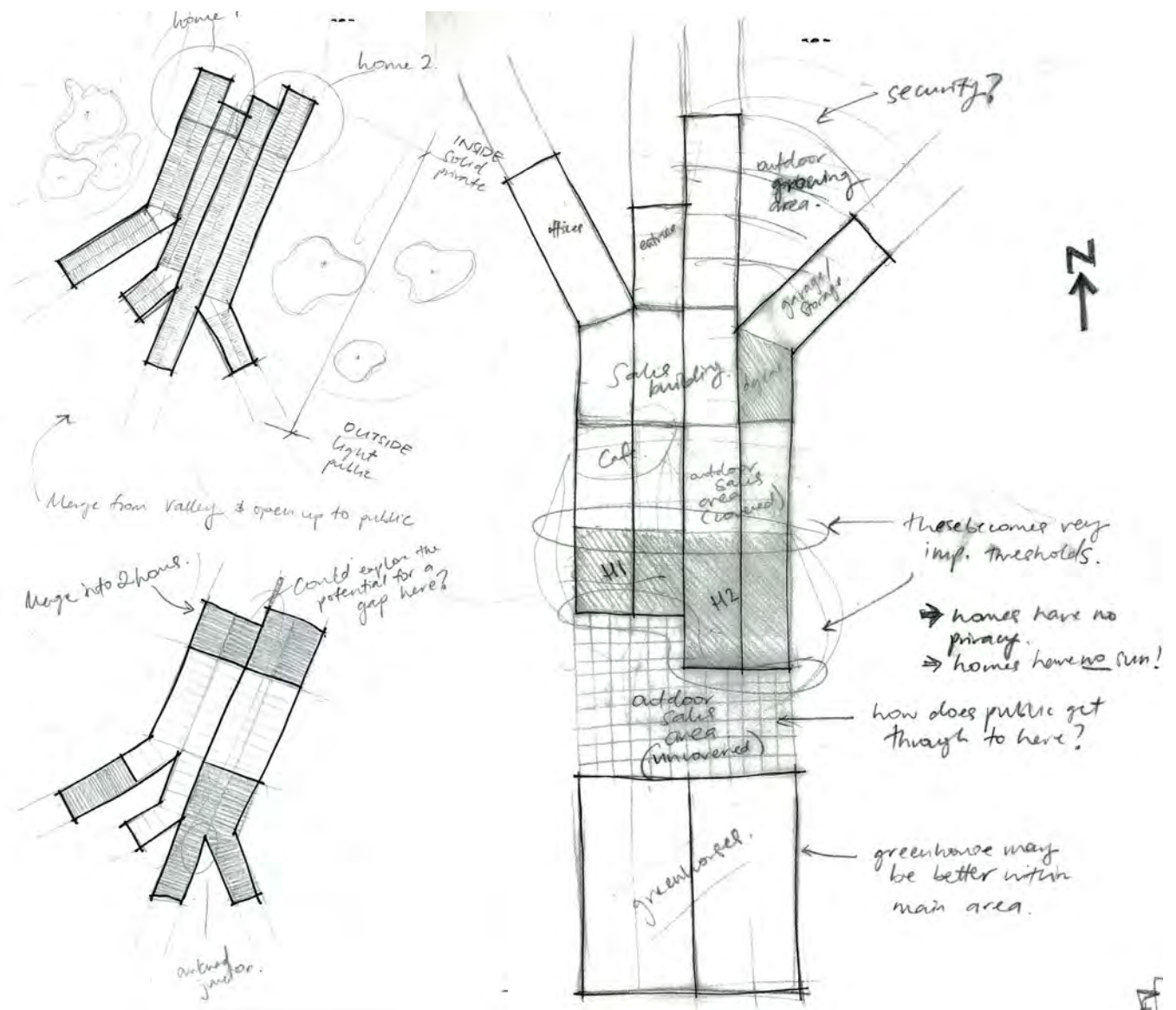




4.3.6 | (opposite and below) Axonometric, Elevations, and Sketched Plans of Merged Typologies

Figure 4.3.6, provides an option for a hybrid form based off the gable typology of home and the shed typology of garden centre.

This formal possibility was deemed to be too pragmatic, too controlled, and lacking the stimulation required for those with YOD. It suggests the need for a more intuitive exploration.

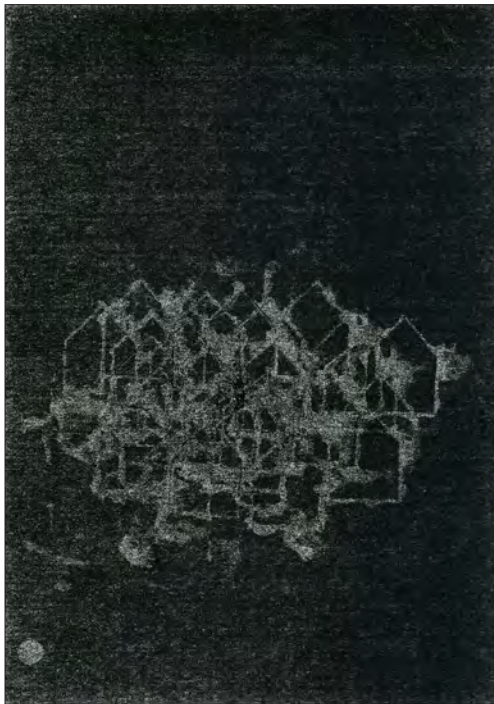


4.3.3

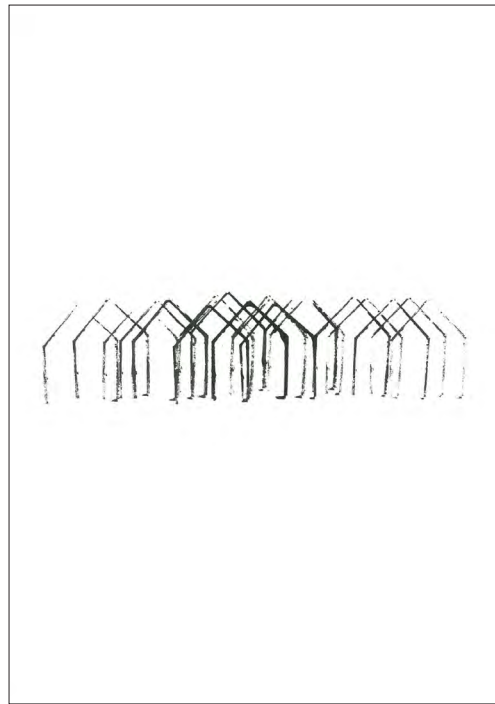
RELINQUISHING CONTROL

A series of small tests were undertaken to explore the potential for an architecture which questions control. Taking the 'gable', an idealised image of home, a series of drawings were conducted which represent behavioural *symptoms of dementia*.

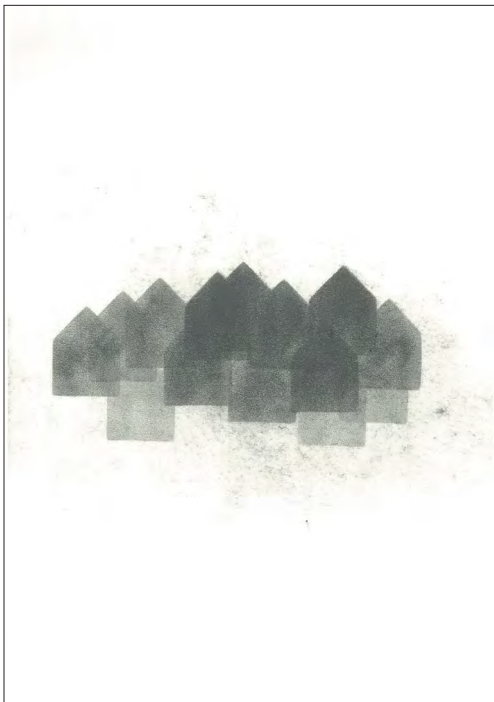
- Figure 4.3.7 tests the notion of *erasure* with bleach on black card.
- Figure 4.3.8 develops a series of *incomplete movements* through ink.
- Figure 4.3.9 explores the *unfocused* nature of dementia through smudged graphite.
- Figure 4.3.10 exhibits feelings of *disorientation* through ink.



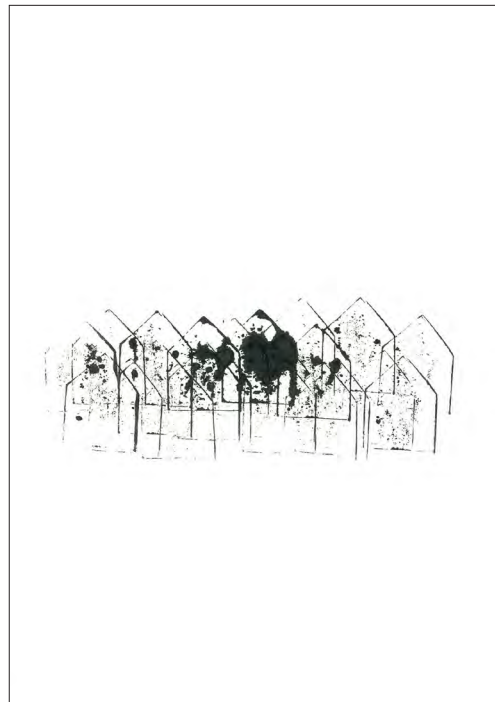
4.3.7 | Erasure



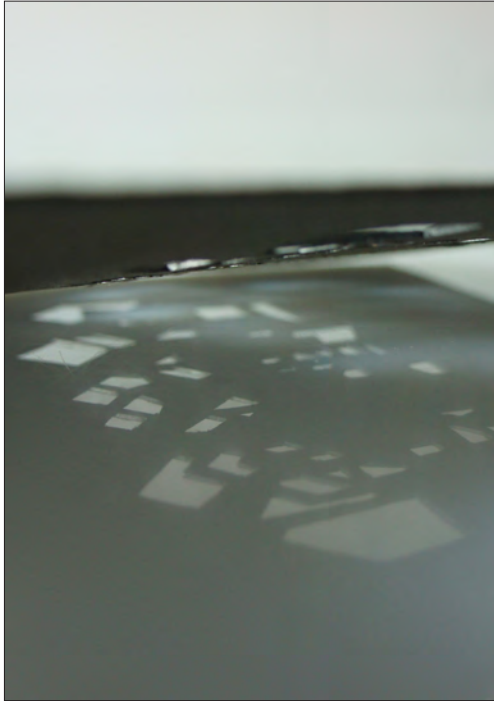
4.3.8 | Incomplete Movements



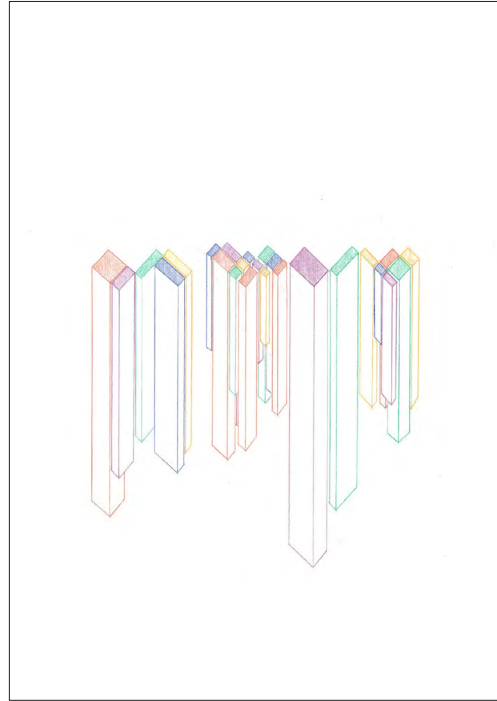
4.3.9 | Unfocused



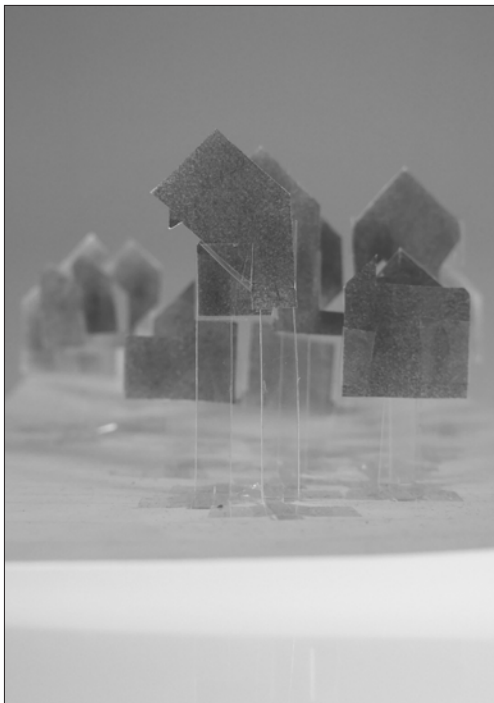
4.3.10 | Disorientation



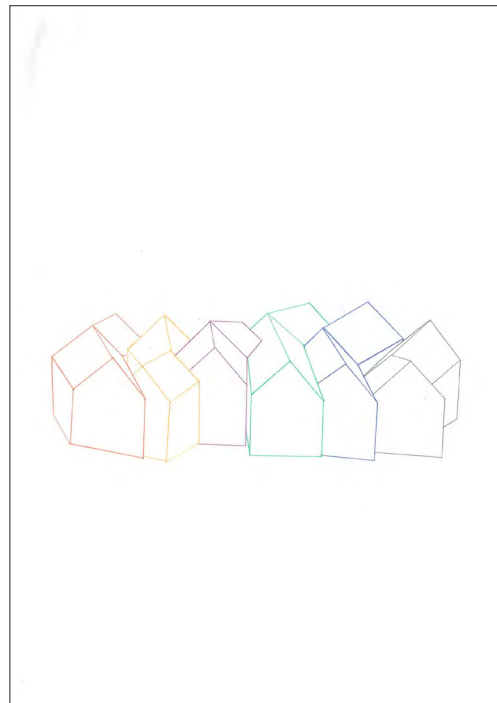
4.3.11 | Creating from Erasure



4.3.12 | Completing the Incomplete



4.3.13 | Distancing the Unfocused



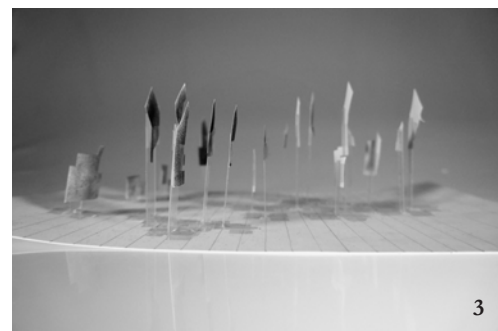
4.3.14 | Embracing Disorientation



The qualities of each drawing were then transformed to consider an inhabitable space.

- Figure 4.3.11 removes the erasure and readjusts the plane to consider figure ground.
- Figure 4.3.12 finds the complete frames and emphasises these instances as towers.
- Figure 4.3.13 expands on the notion of focus and adjusts the distance from each shape accordingly.
- Figure 4.3.14 connects the points to create an embracing form.

The 'Distancing the Unfocused' study had the most potential due to its play on focus and perspective. Viewed from the front the model realigns itself as its original image, providing a moment of clarity. As the viewer rotates around the space, pieces appear disparate and, the image vanishes (figure 4.3.15). This provides moments of clarity amongst disparity, in the same way that a YOD sufferer can shift in and out of focus.



4.3.15 | (right) Distancing the Unfocused Series

4.3.4

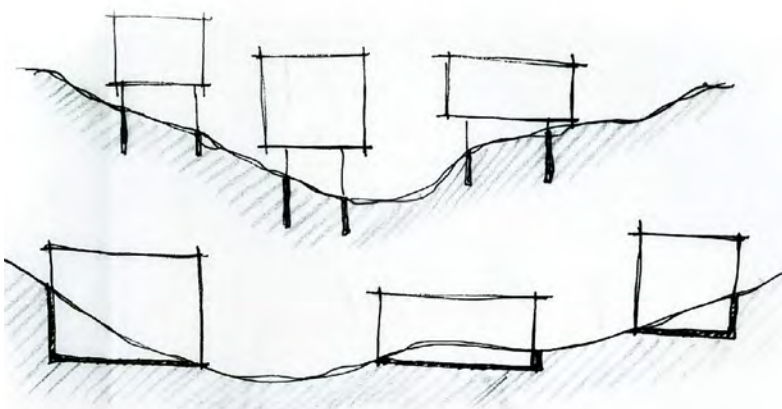
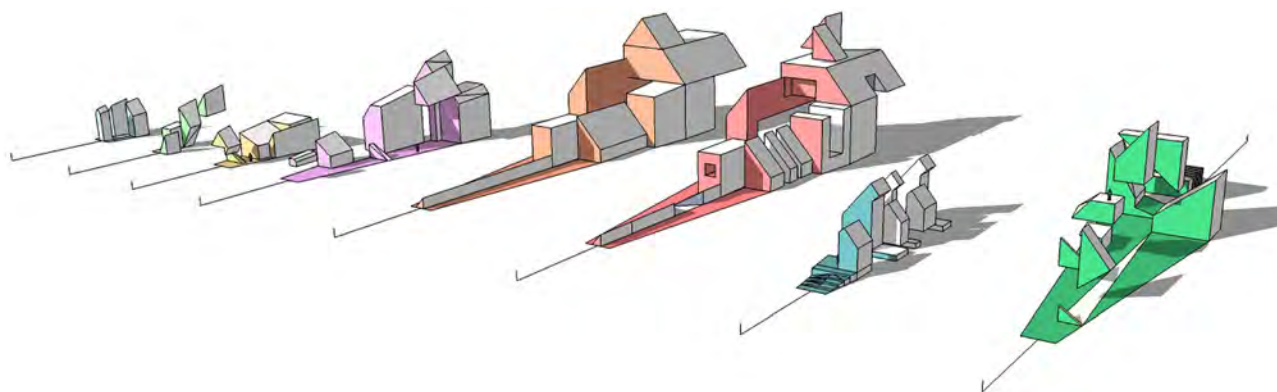
CLARITY AMONGST DISPARITY

This section looked at creating an image from disparate pieces. Initial tests addressed how perspective could be used to achieve this (figure 4.3.16). These tests developed an understanding of the opportunities and pitfalls associated with; perspective, site, and occupation (figure 4.3.17).

Two iterations were tested on site to achieve an alignment of multiple pieces into a solid gable form on approach.

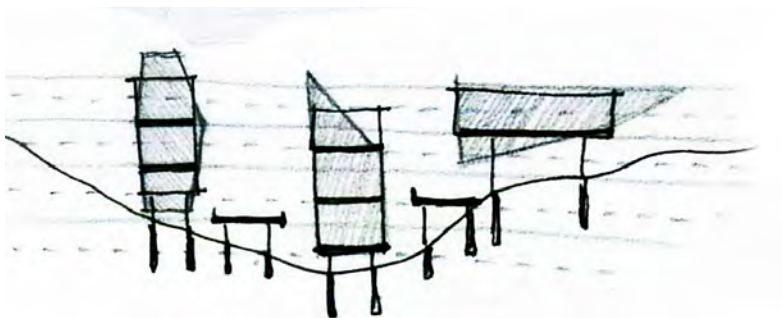
4.3.16 | (opposite-top) Creating an image through perspective

4.3.17 | (opposite-bottom) Understanding Site and Occupation

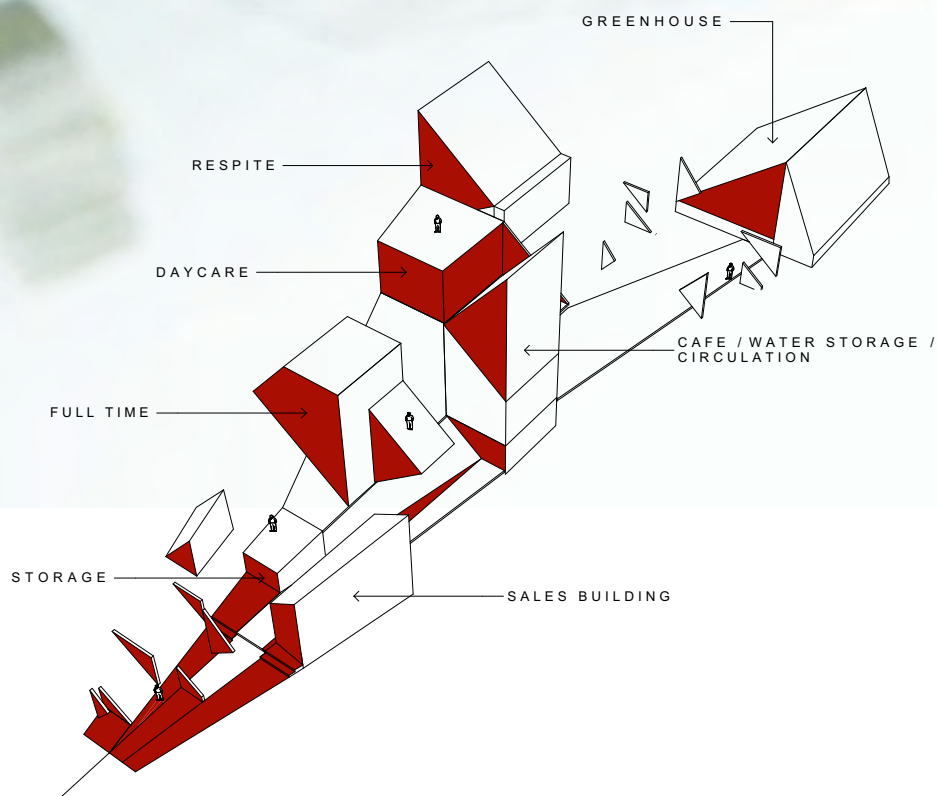
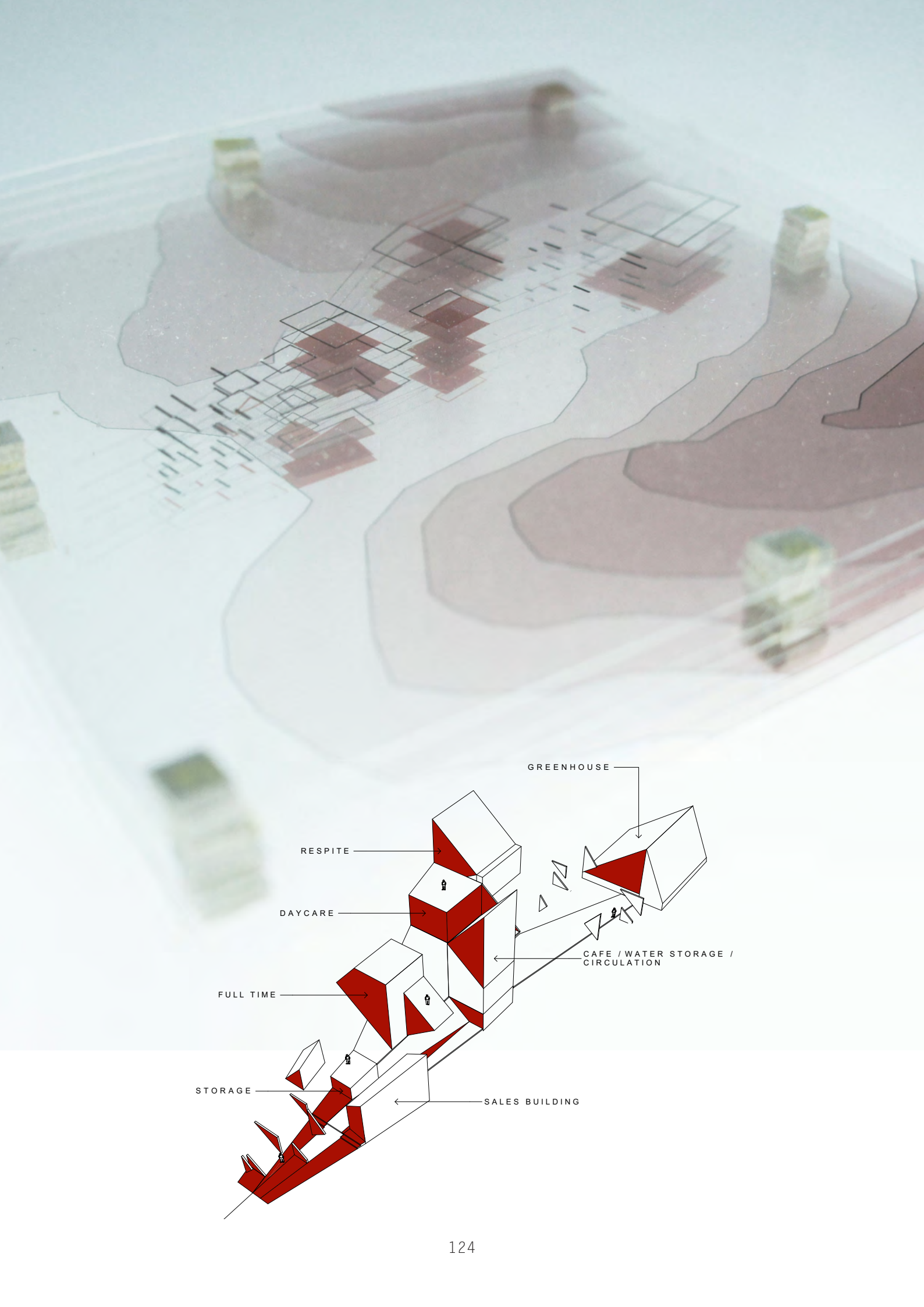


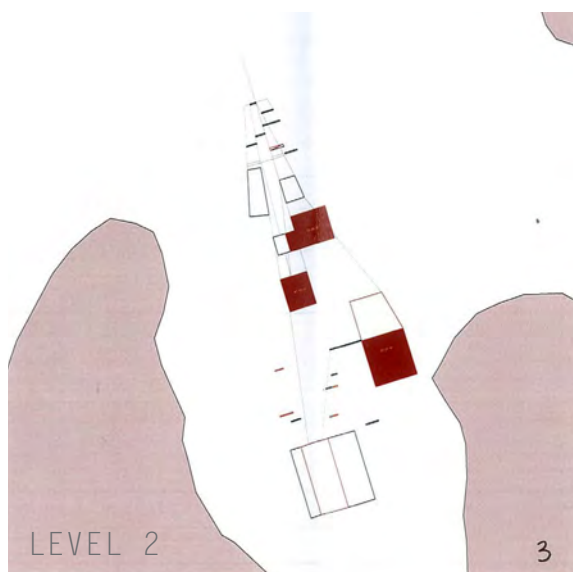
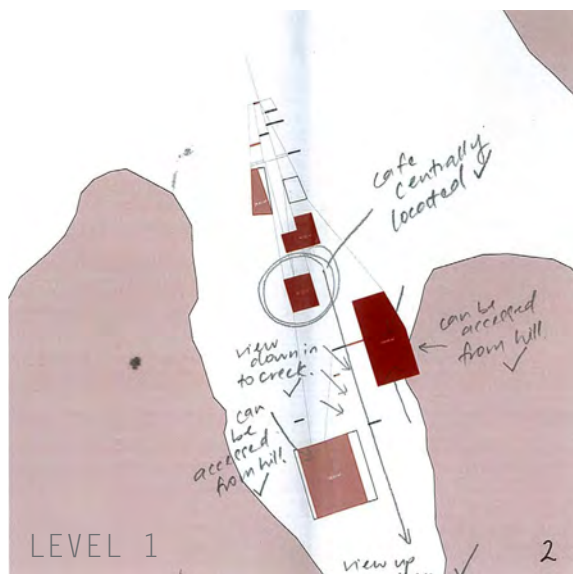
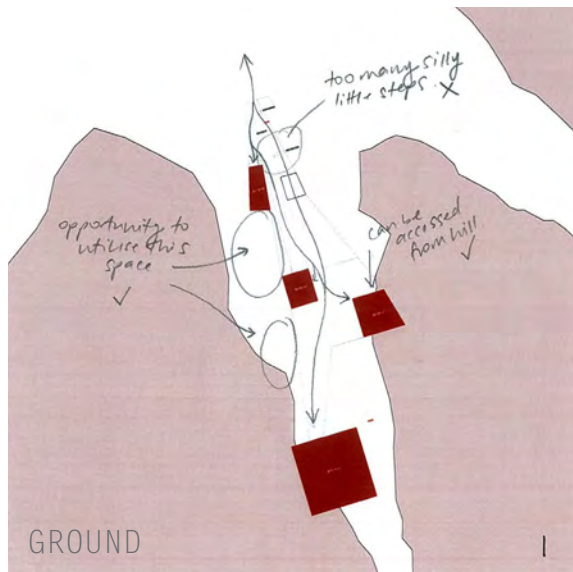
above

below



- align floors to levels and half levels
- use materiality to distinguish shapes





Iteration 1

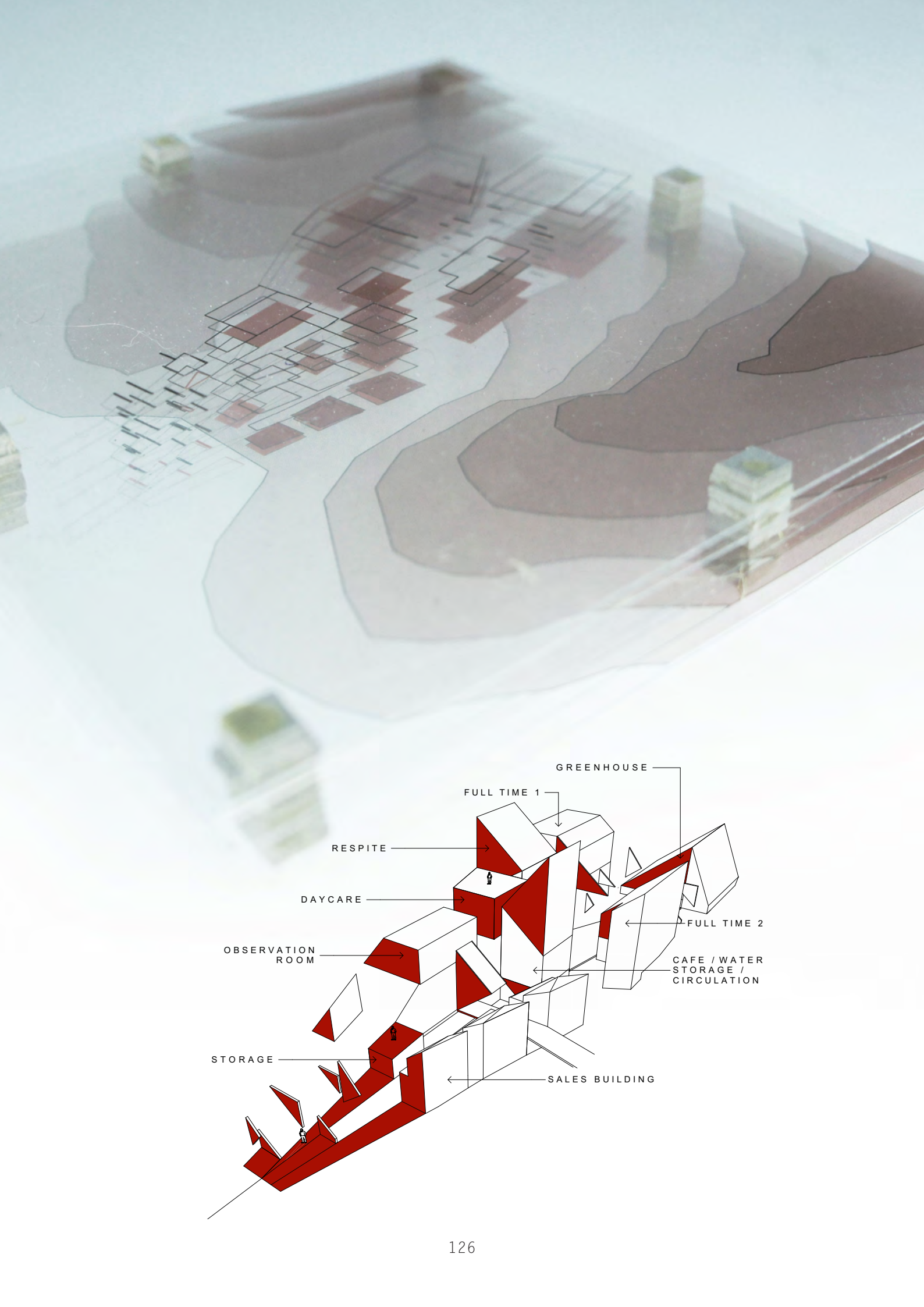
Figure 4.3.18 illustrates iteration 1.

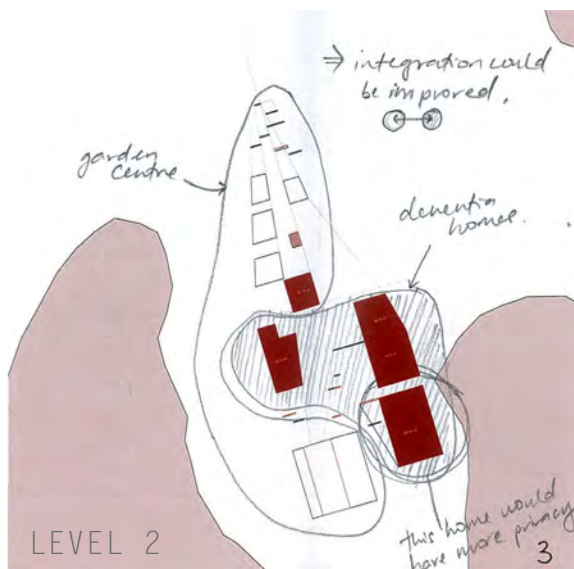
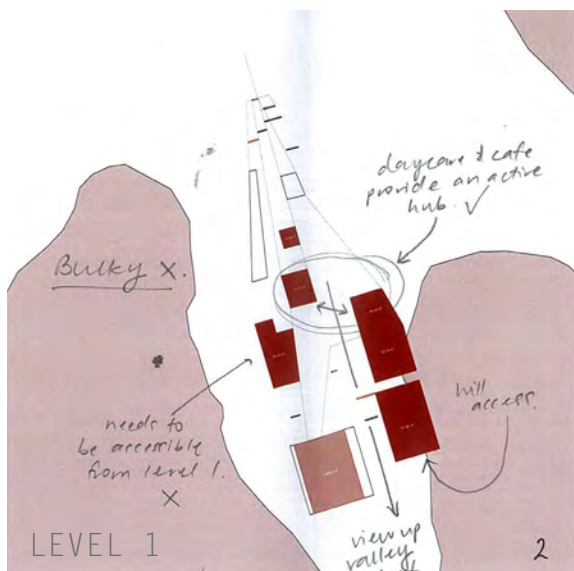
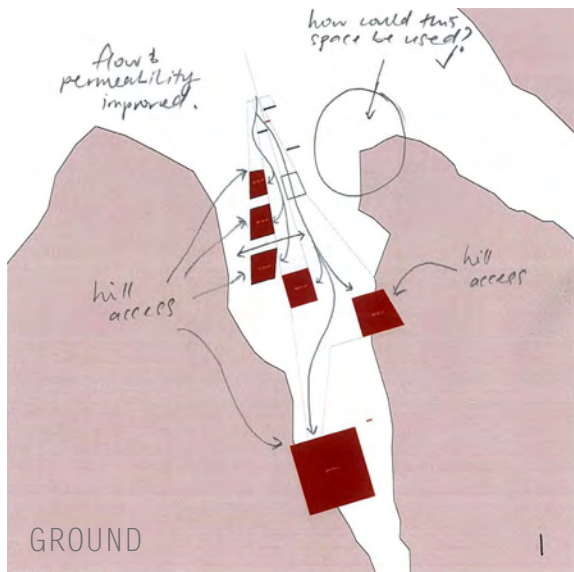
Strengths:

- fits within valley well
- Circulation to the greenhouse is efficient
- View up valley
- Improved access to buildings from valley sides
- Sculptural shapes welcome people to the centre
- Café height and location acts as a landmark

Weaknesses:

- Not enough space for all of the programme
- Platforms and shapes are at different levels requiring many small steps and reducing safety
- Many of the shapes are too awkward to occupy





Iteration 2

The previous test identified a need to add more inhabitable space and organise the levels for improved circulation. Figure 4.3.19 illustrates iteration 2.

Strengths:

- Required programme fits
- Levels have been improved to remove awkward stairs
- Circulation through site still works well
- There is less reliance on vertical circulation in the homes
- Daycare and café location creates an active hub

Weaknesses:

- Adding more buildings increased the bulk of the scheme
- Cross programming is limited
- View up valley has been compromised by buildings

Although iteration 2 meets all of the programmatic requirements it is less successful aesthetically, due to its bulky nature. It is apparent that the cone of view associated with a single gable form is limiting the design and forcing a narrow occupation of site.

4.3.5

DESIGN TWO

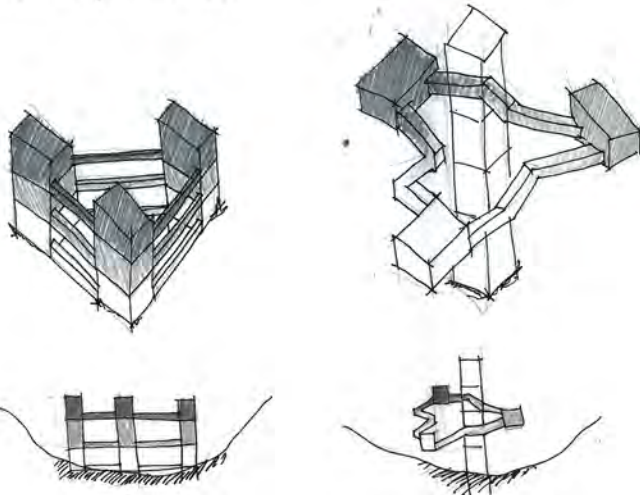
This design reversed the previous design process, first considering arrangement of programme and then adjusting to fit within an image. It considers the potential for a vertical greenhouse and circulation tower to utilise the height of the image and the opportunity for single level homes (figure 4.3.20). These implications led to a design which considers programme arrangement and promotes movement by scattering architecture along a walkway and removing dead ends (figure 4.3.21). The overall image has also been adjusted to a collection of gable forms to suit the design needs.

These ideas were explored through drawings and a block mass computer model in order to deal with scale and site specifics. Figures 4.3.22 to 4.3.24 show the design through diagrammatic plan, section, axonometric, and elevation.

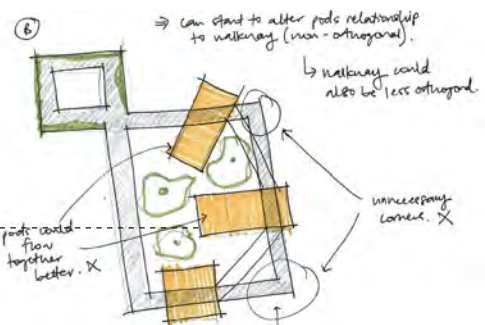
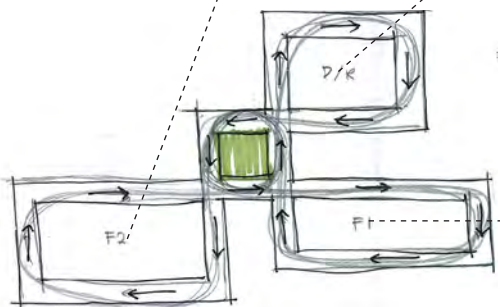
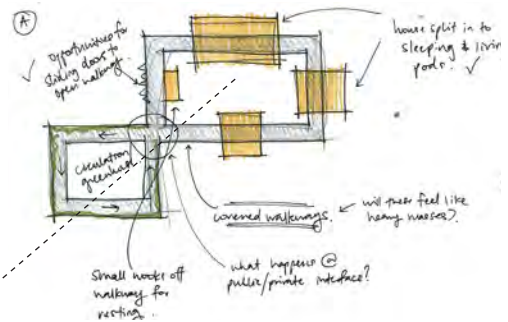
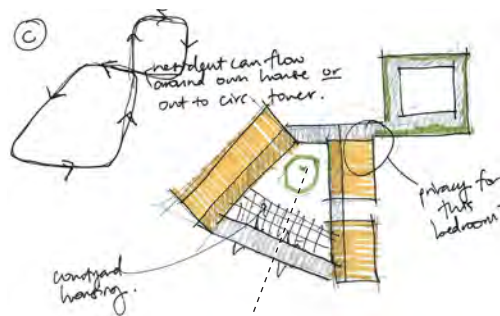
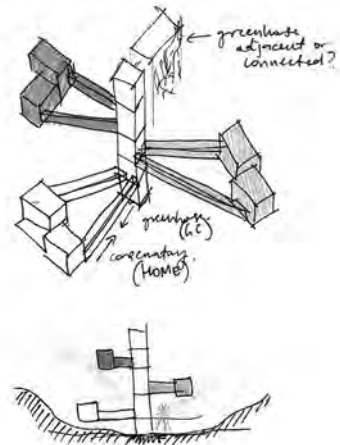
4.3.20 | Looped walkway possibilities

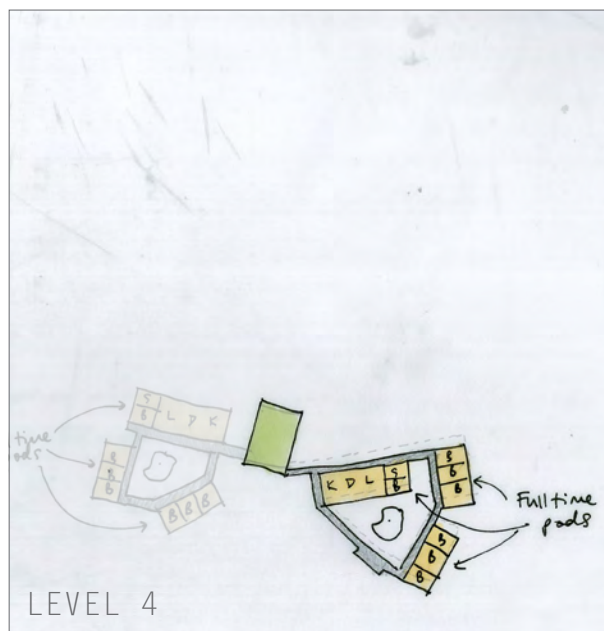
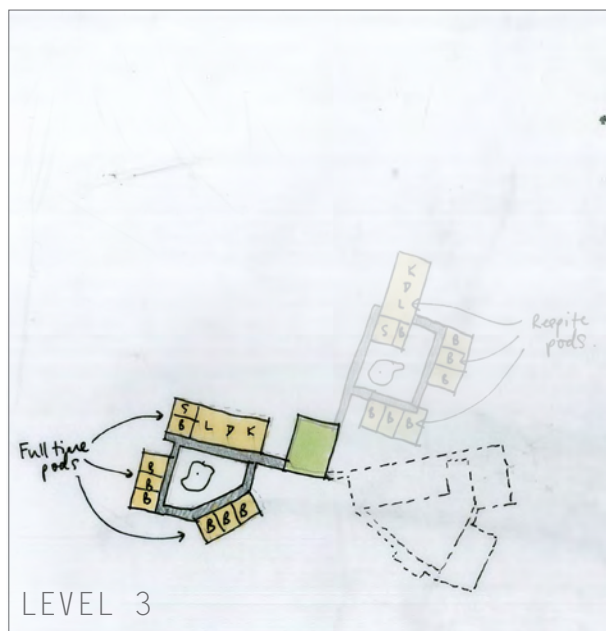
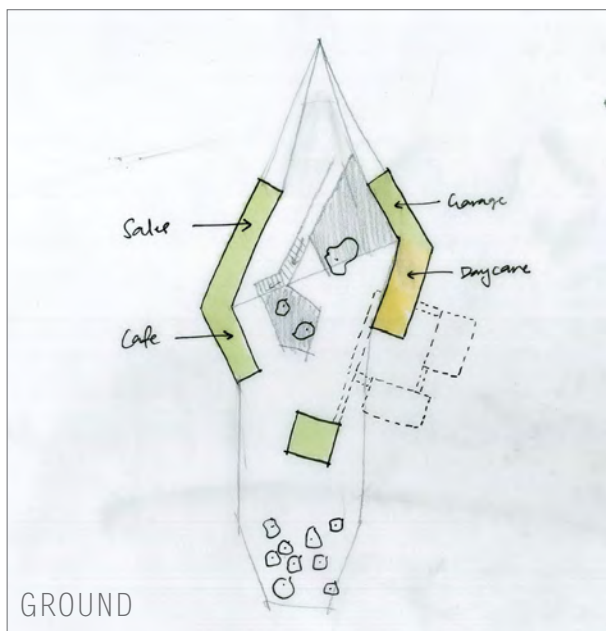
4.3.21 | Scattering along the walkway

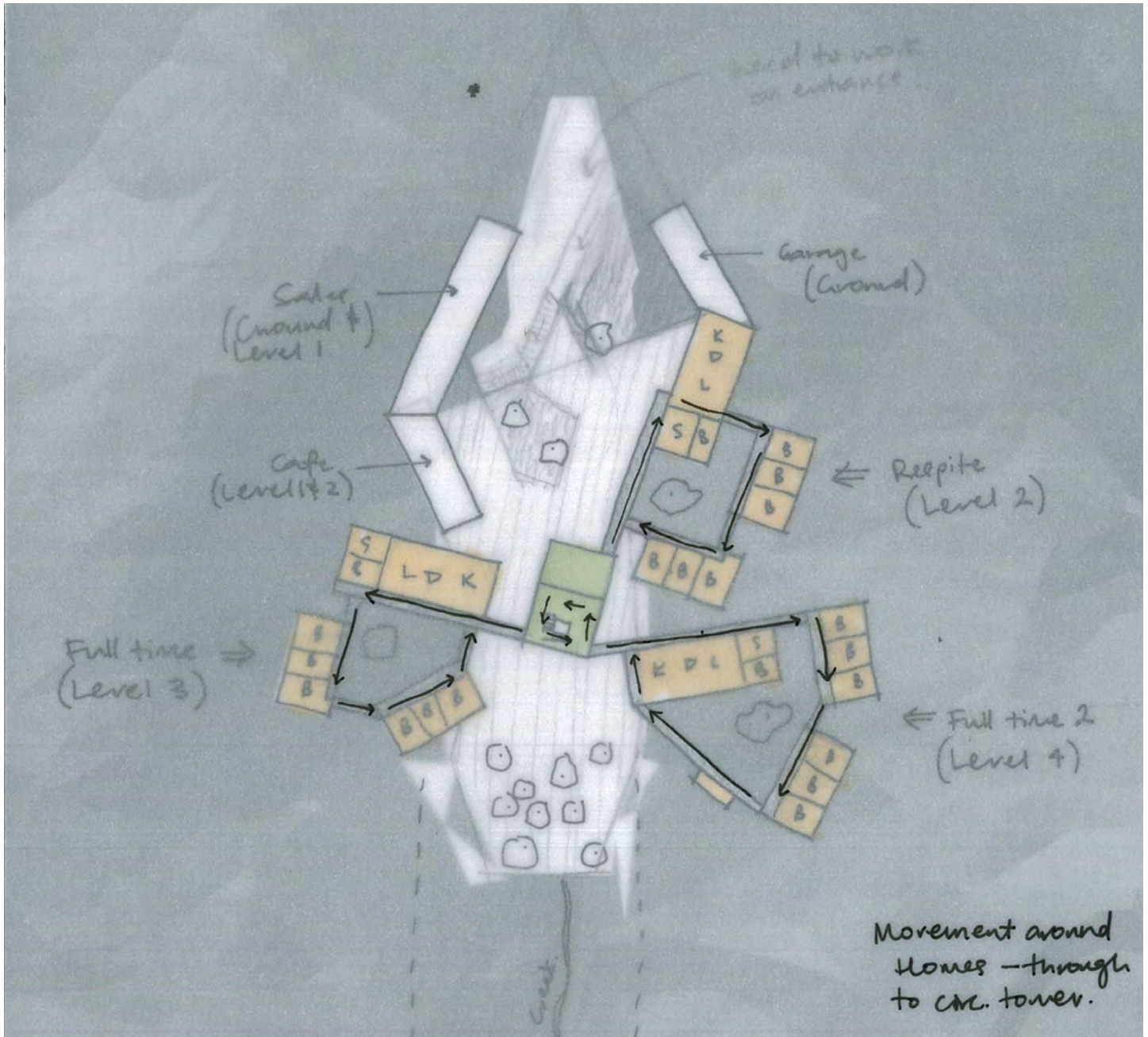
Homes operate across 3 buildings. One looped track between all homes on a single level each.



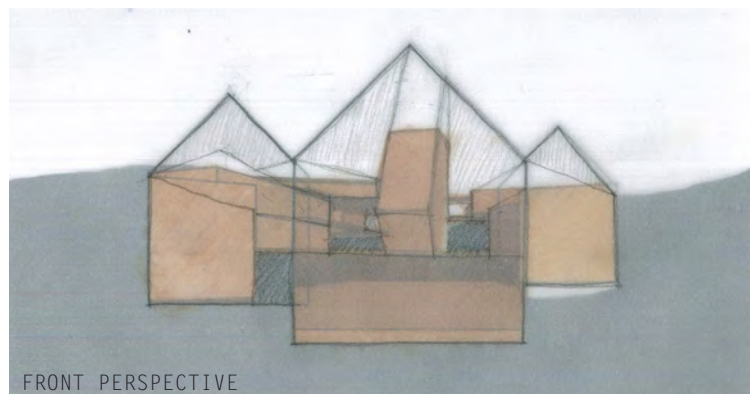
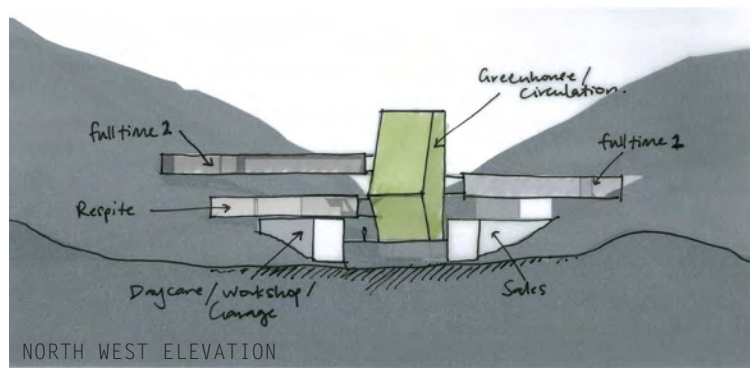
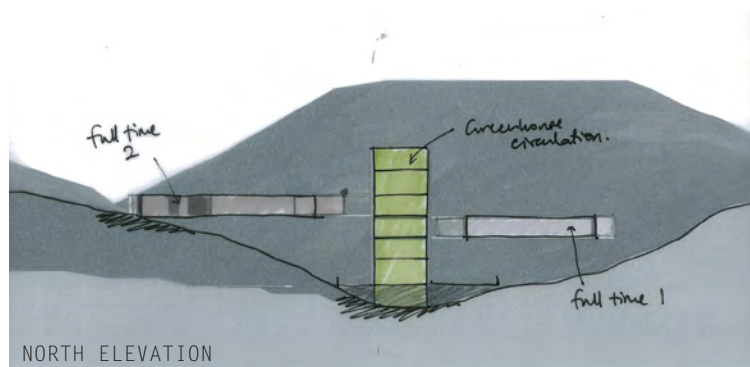
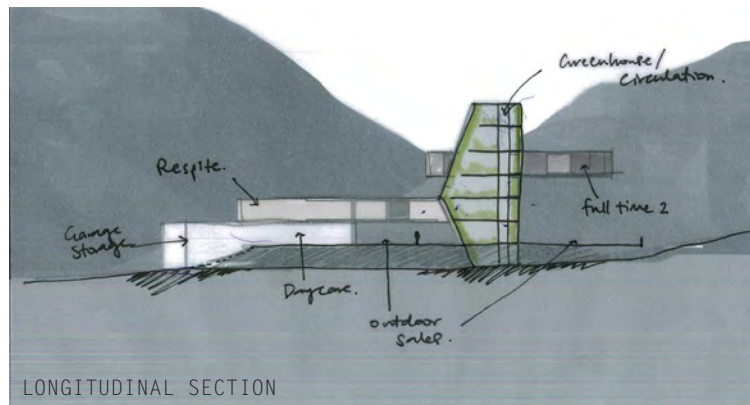
Each home loops back to central circulation tower.







4.3.23 | Design 2 Collapsed Plan



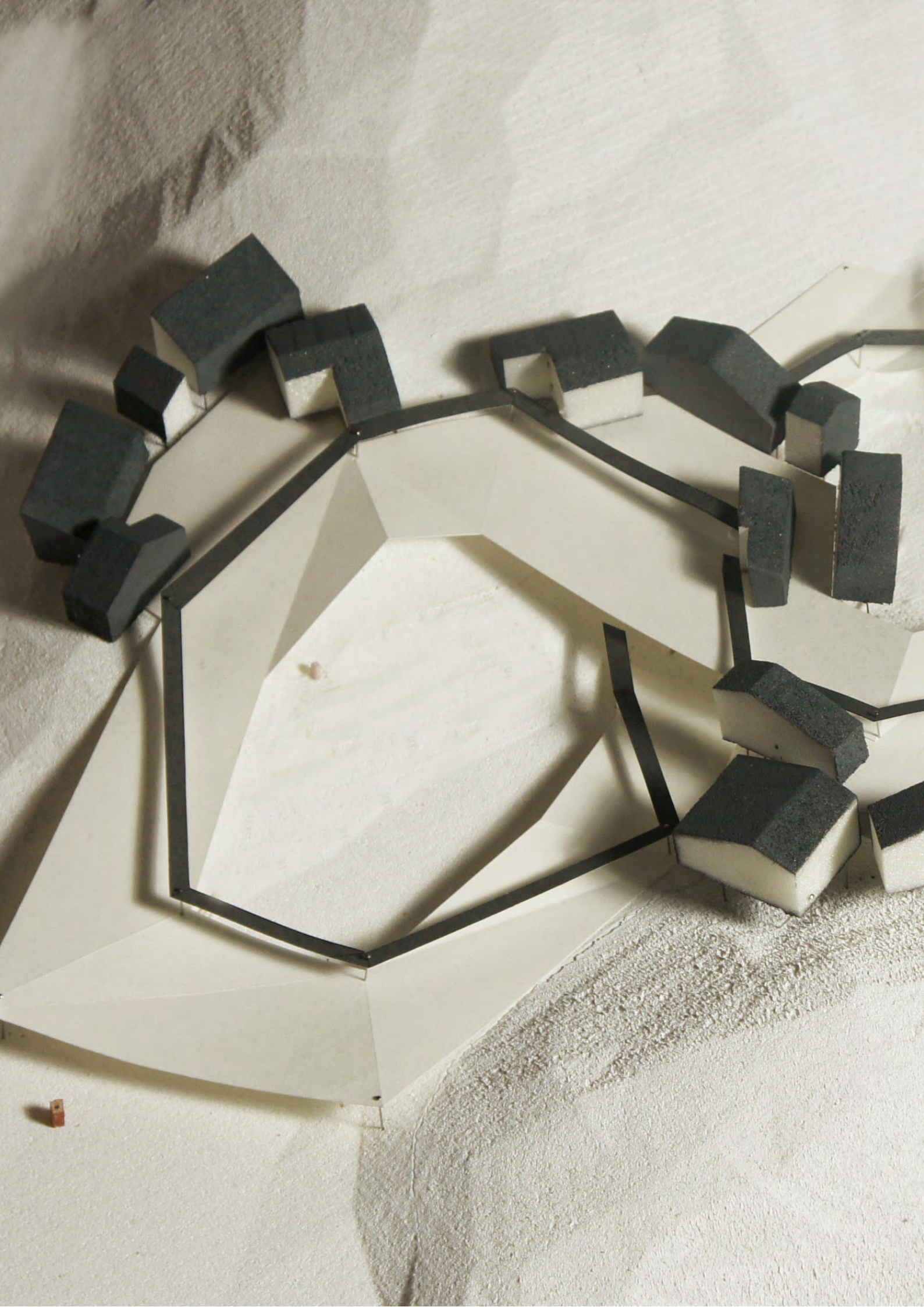
Strengths:

- Movement is promoted within the homes

Weaknesses:

- Strength of the overall image is lost
- Beauty of the 'disparate sculpture garden' has been lost
- Tower is very disjointed from the rest of the design and its site

Although successful in providing a design which promotes movement, within the homes, the dementia homes still lack an ease of access to the garden centre. Trying to maintain the clarity of an overall image is limiting the ability for the design to operate effectively for the occupants.



4.4

DESIGN PHASE THREE

“Reciprocity: Sequences of spaces and sequences of events can, of course, become totally interdependent and fully condition each other’s existence”. (Tschumi 159)

The following design tests look at achieving reciprocity between the architecture, landscape, garden centre, and dementia homes.

4.4.1

LANDSCAPE + GARDEN CENTRE

Drawing from Site

Returning to Rainey's ideas of reciprocity, this section asks how the site can begin to inform the design. Figure 4.4.2 shows the sites sun and shading over both summer and winter solstice throughout the day provoking a consideration of programme placement. Figure 4.4.3 exhibits qualities of the site to draw from such as; the densely bushed site, its topography, and the potential to consider it as a faceted surface. This provokes a return to the idea of the garden centre as a piece of the faceted landscape (figure 4.4.4).

4.4.2 | (opposite-top) Sun Shading

4.4.3 | (opposite-middle) Site Qualities

4.4.4 | (opposite-bottom) Faceted landscape models

SUMMER 0600



SUMMER 0900



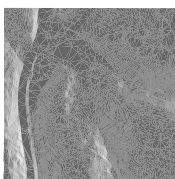
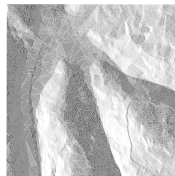
SUMMER 1200



SUMMER 1500



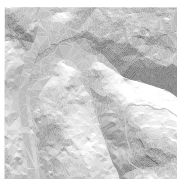
SUMMER 1800



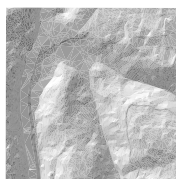
WINTER 0600



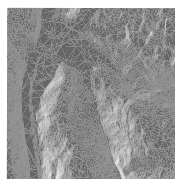
WINTER 0900



WINTER 1200



WINTER 1500

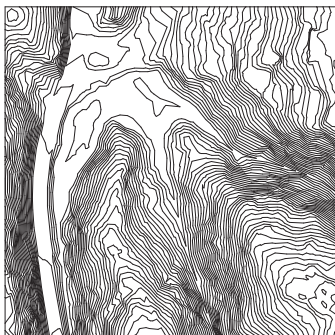


WINTER 1800

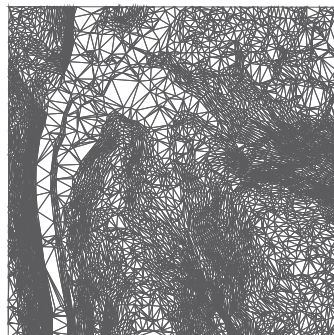
AERIAL VIEW



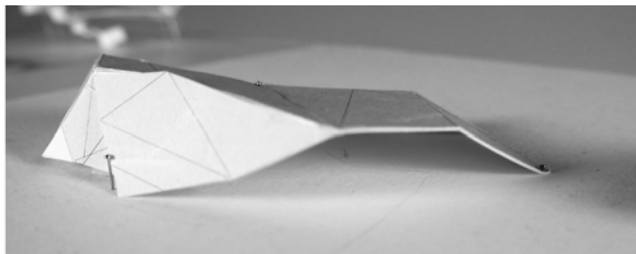
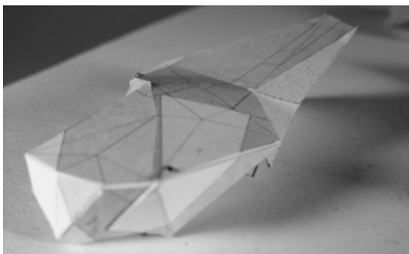
TOPOGRAPHY - 1M CONTOURS



ABSTRACTED FACETED SURFACE



FACETED SURFACE



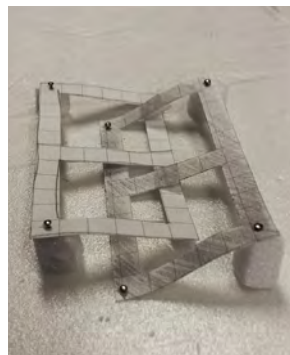
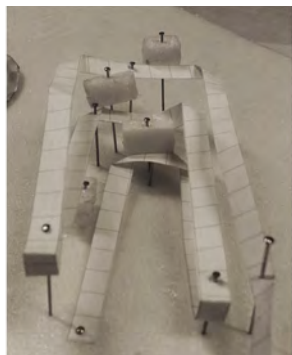
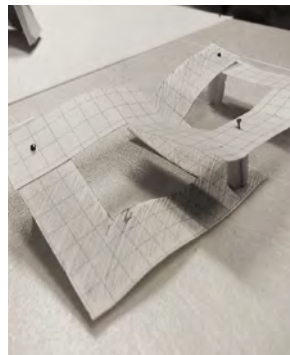
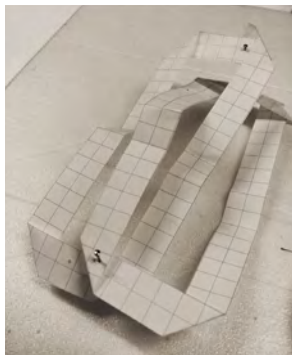
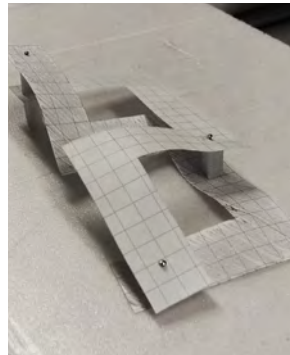
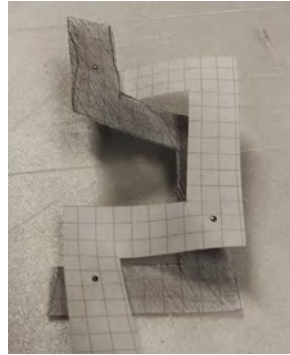
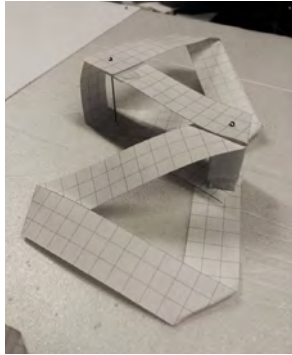
4.4.2

GARDEN CENTRE + DEMENTIA HOMES

Achieving Disprogramming and Continuity

Opportunities to interlock the two programmes, in a manner which promotes continuous movement, were addressed through maquettes (figure 4.4.5). These continue the idea of the homes as a cluster of pieces. A selection of three maquettes were further considered and refined to establish a master concept or parti (figure 4.4.6).

4.4.5 | (opposite) Continuous movement Maquettes



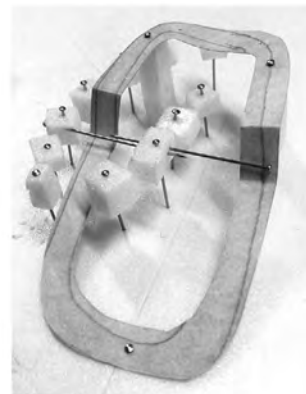
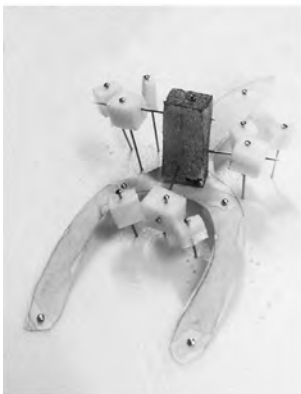
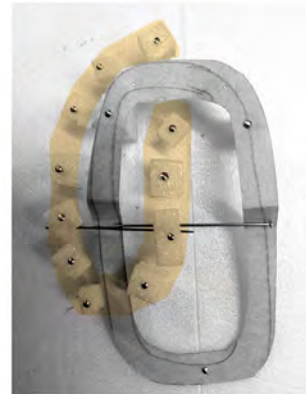
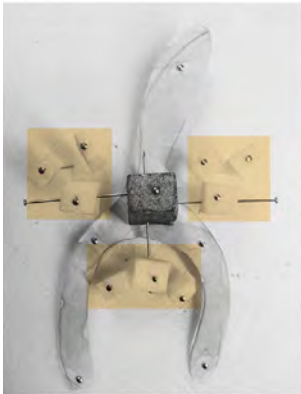
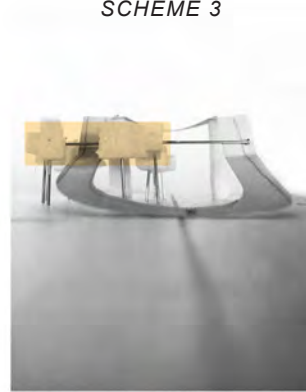
SCHEME 1



SCHEME 2



SCHEME 3



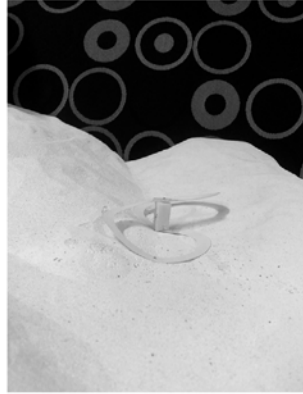
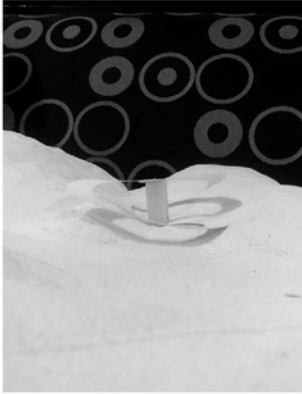
4.4.6 | (above) Refined Maquettes

4.4.7 | (opposite) Testing Formal Implications



To achieve juxtaposition of the two programmes the individual aesthetics and their relationship were considered. Looking to the 'Distancing the Unfocused' model (dementia facility) and the faceted landscape models (garden centre), figure 4.4.7 tests the formal implications of this relationship.

These tests establish scheme 2 as the most appropriate model. The infinity loop; provokes continuous movement, fits well to the site, and has a favourable aesthetic balance. The infinity loop would house the garden centre and act as an inhabitable hardscape and greenscape to ensure disprogramming.



ITERATION 1

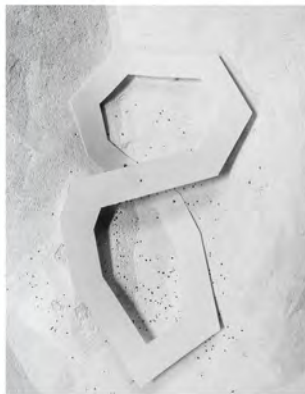
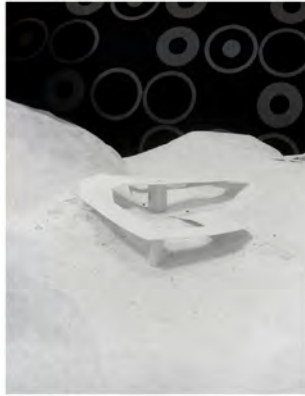
ITERATION 2

ITERATION 3

ITERATION 4



ITERATION 5



ITERATION 6

Adjusting loop to nestle within site

These iterations advance the infinity loop and position it on site. The site naturally accommodates the two circles of the form within its topography but slight adjustments for a direct response are necessary. Alterations were made to the specific placement within the valley by varying the; width of the band, size of circles, height of central crossover, shape of loops, and general geometry (figure 4.4.8). These alterations were made to ensure; access via the hillsides, an entrance which addresses the street, and an adequate scale.

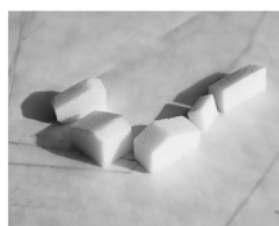
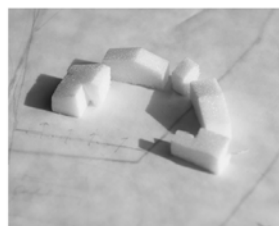
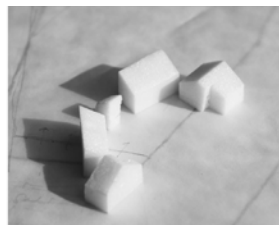
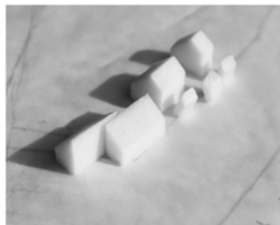
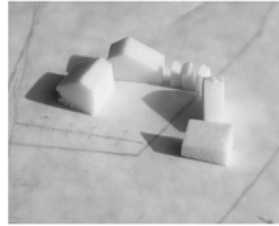
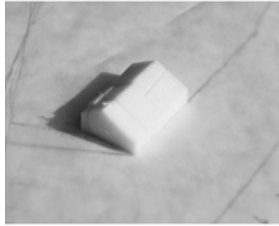
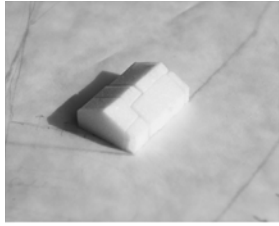
4.4.8 | (opposite) Nestling within Site

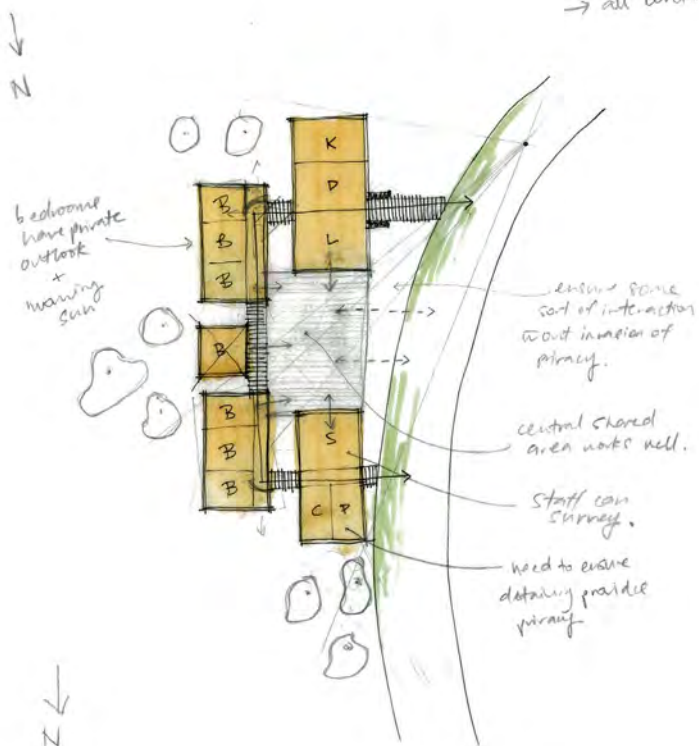
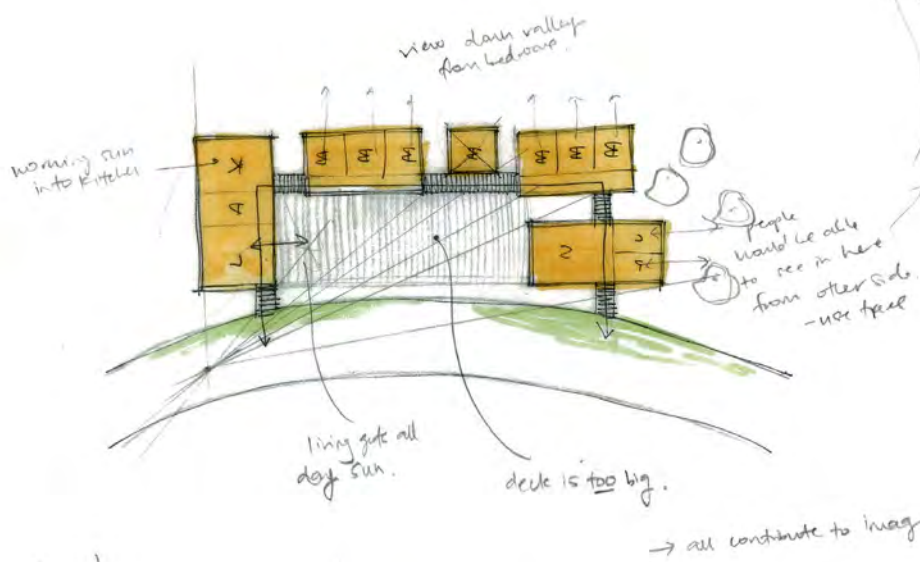
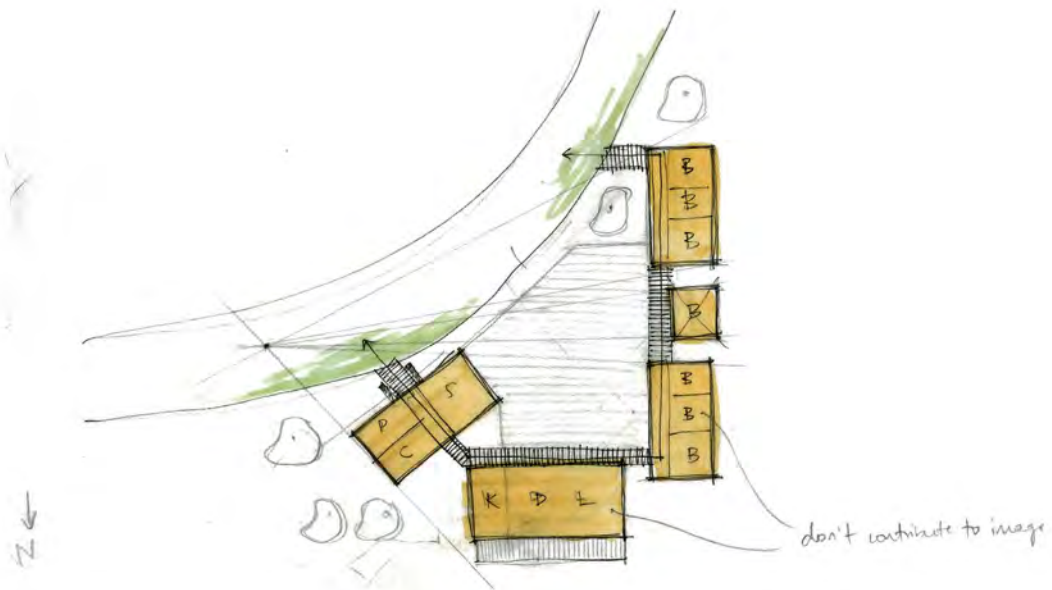
4.4.3

DEMENTIA HOMES + LANDSCAPE

Dividing mass and creating community

This exploration identifies how the familiar gable form could be divided into clusters (figure 4.4.9). In this way the forms all come from a cohesive whole and facilitate the requirements of domestic scale, movement, mass reduction, and community.



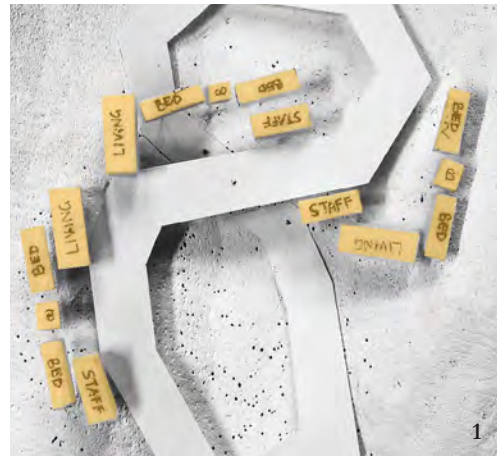


Planning homes

The three required homes have been considered individually and arranged in a way which (figure 4.4.10):

- Promotes internal movement through the homes facilitating exercise
- Reduces the mass of a single large building to maintain domestic scale
- Ensures programmes are related to the necessary daily rhythm of sunlight
- Appears as a community village
- Creates interaction between the communal outdoor area of the dementia homes and the public walkway

These designs work well but could consider a less rigid and more responsive positioning to the localised topography. Figure 4.4.11 seeks to more specifically relate to site, by transitioning from rigid to organic and referencing the typography and garden centre.



4.4.10 | (opposite) Planning Homes

4.4.11 | (right) Locating Homes

4.4.4

DESIGN THREE

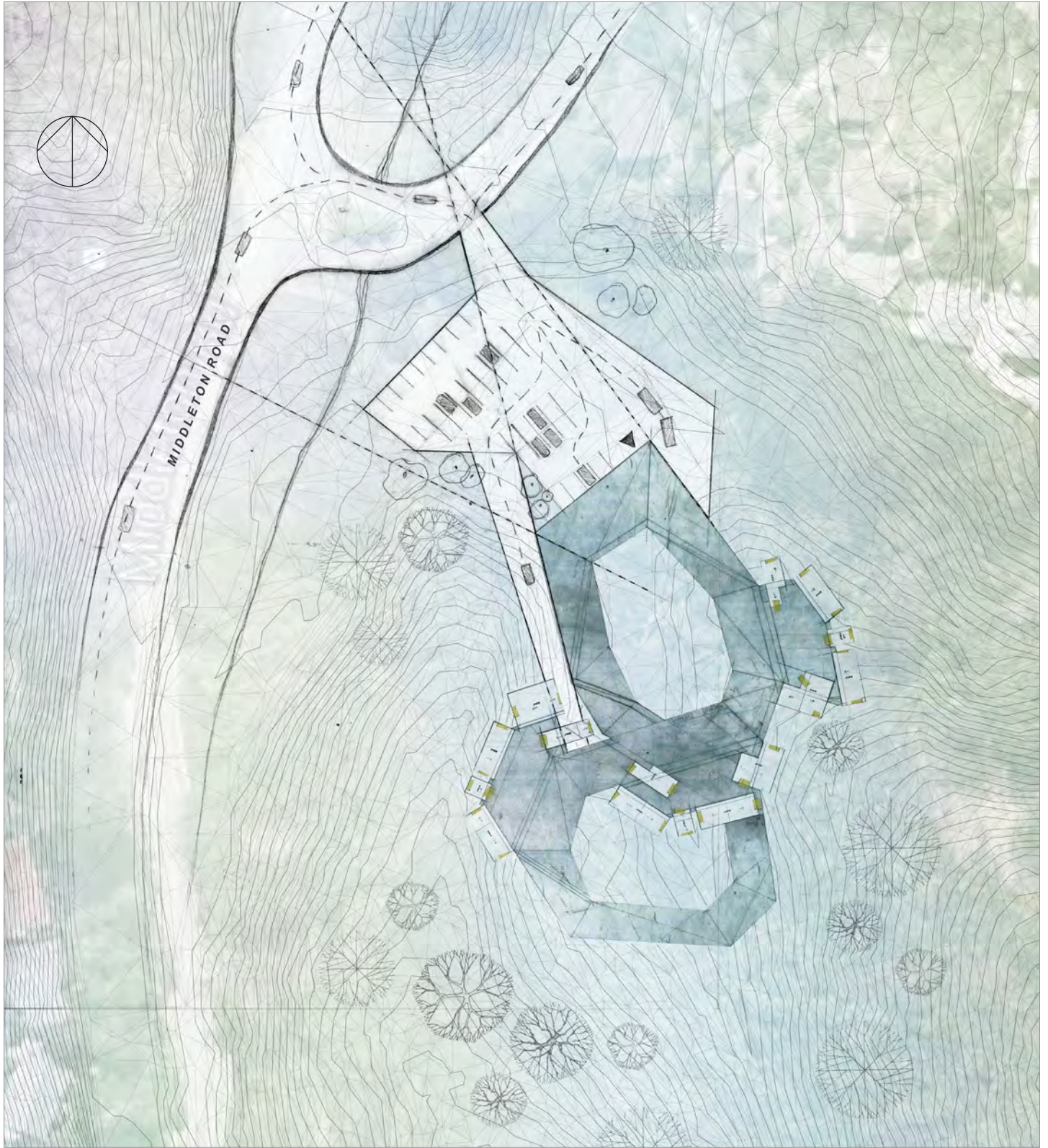
The following provides a solution to the need for a stimulating community facility which reinvigorates the lives of those affected by YOD.

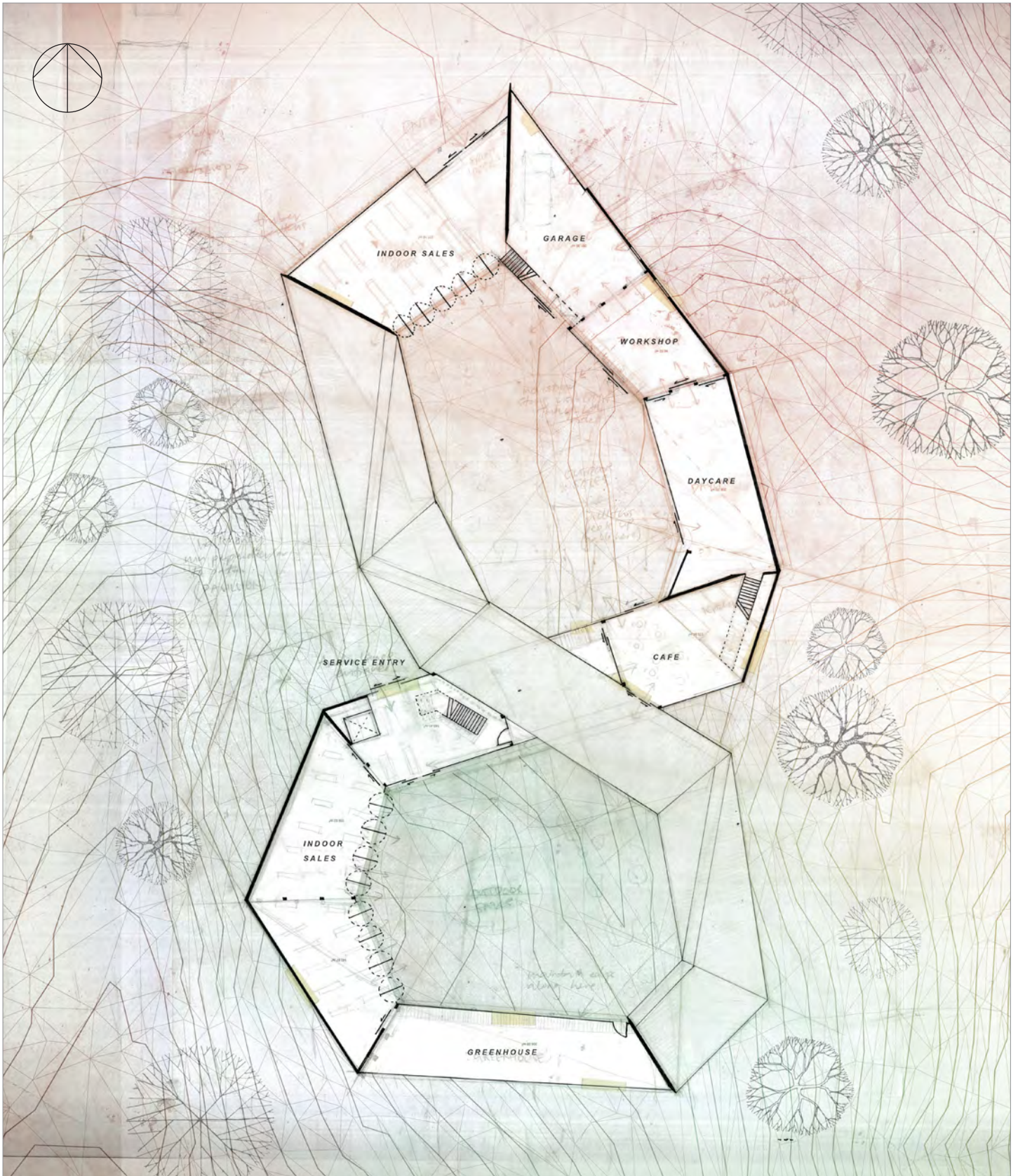
Key Features:

- A direct response to the site and its topography
- An entrance which addresses the road and transportation network
- A garden centre which acts as landscape, walkway, and pavilion
- An architecture which promotes freedom of movement
- Homes that appear as small communities within a larger community
- A continuous covered walkway
- A stimulating environment mentally, socially, and physically
- An intimacy of scale

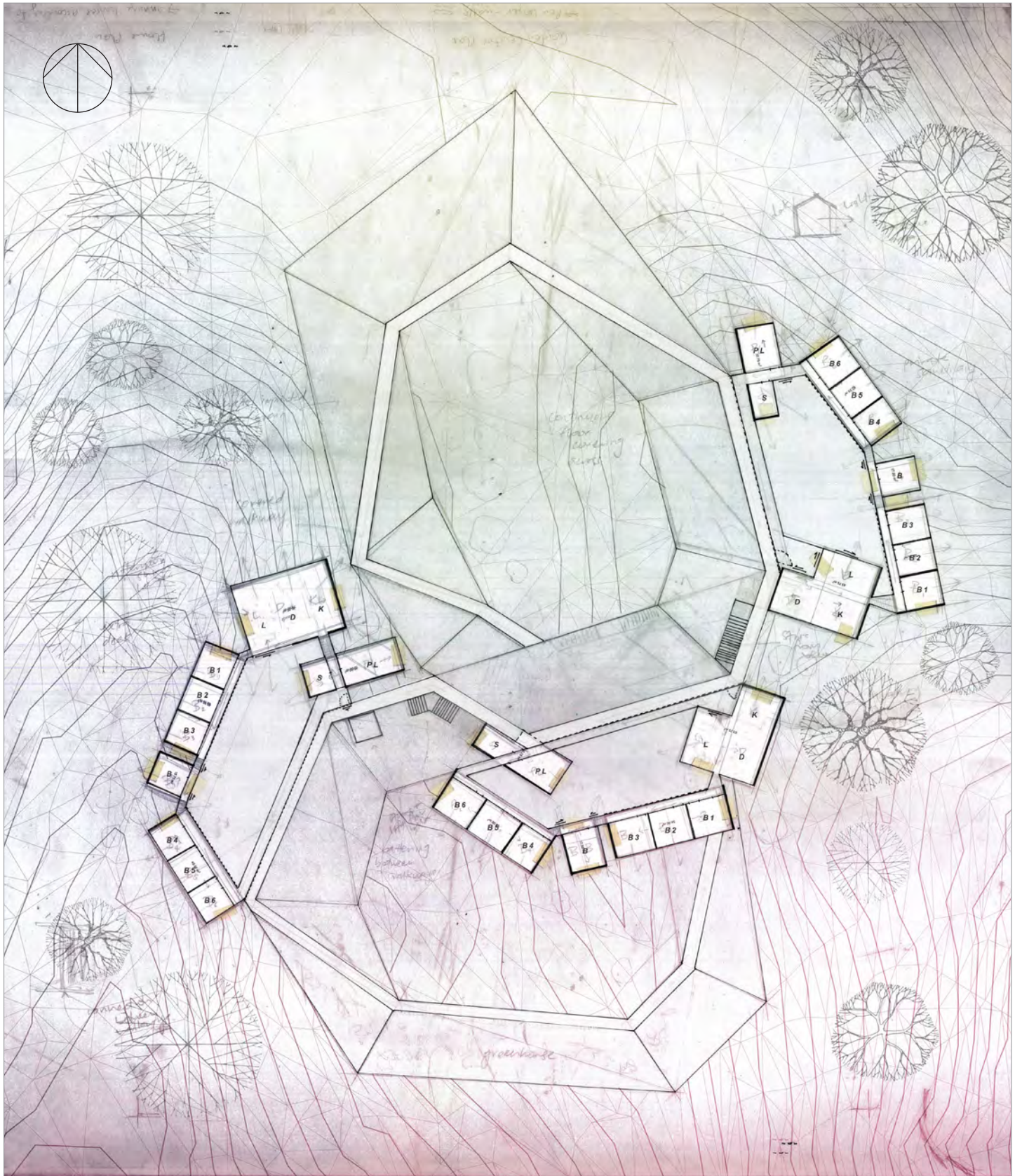
Figures 4.4.12 to 4.4.16 illustrate these features through plan, perspective and an inhabited physical model.

4.4.12 | (opposite) Design Three Site Plan

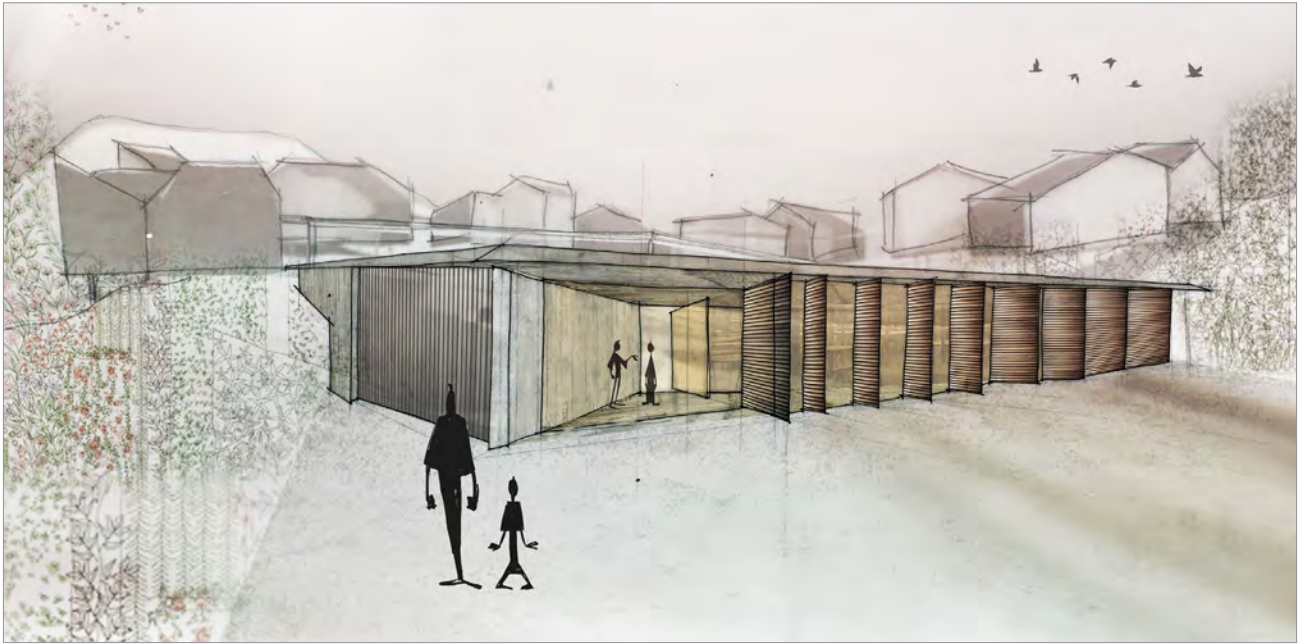




4.4.13 | (opposite) Design Three Ground Floor Plan



4.4.14 | (opposite) Design Three Upper Floor Plan





Formal Design Critique (27-5-14):

Positives:

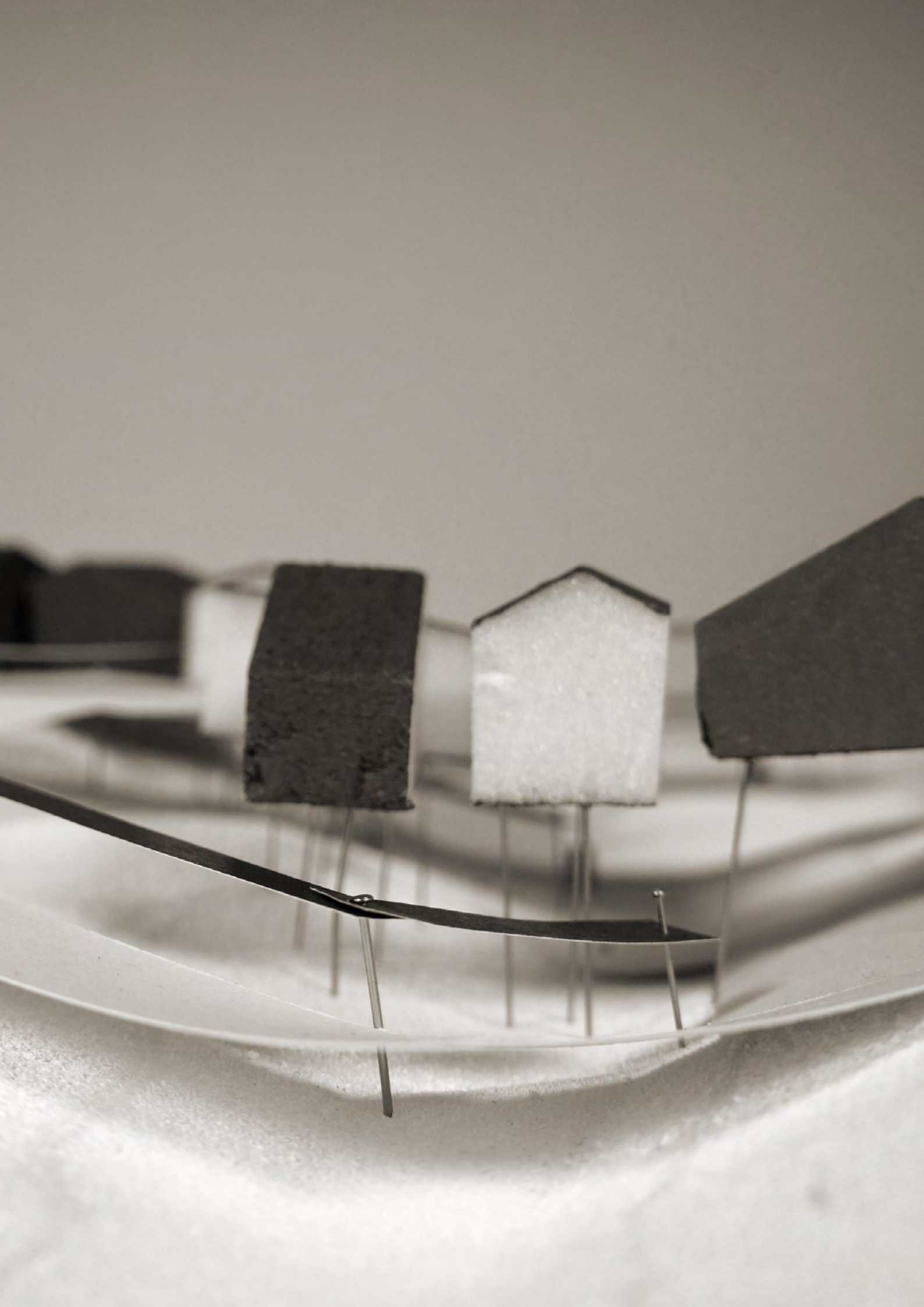
- “Fantastic presentation, systematic, beautiful, engaging”
- Opening panels of entrance work well
- Very thorough observations in terms of disprogramming

Moving forward:

- Need to prove that the layout wouldn’t be confusing for someone with dementia
- Consider the public/private threshold at the entrance to the homes
- Design for spaces to be attune to the daily rhythms afforded by sunlight
- Consider how the interior can help

4.4.15 | (opposite) Design Three Perspectives

4.4.16 | (above) Design Three Model Inhabited



4.5

DESIGN PHASE FOUR

"I would like to propose that the future of architecture lies in the construction of events"(Tschumi 256).

This chapter explores a final design which takes the success of the previous design at a macro scale (figure 4.5.2) but develops it at an intimate scale relevant to the experience of space.

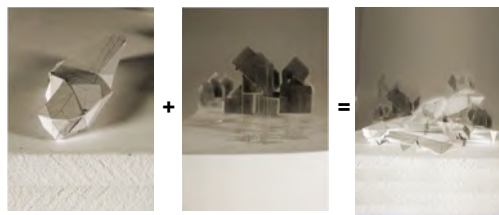
4.5.1 | (opposite) Phase Four Model



Drawing from Site pg.139



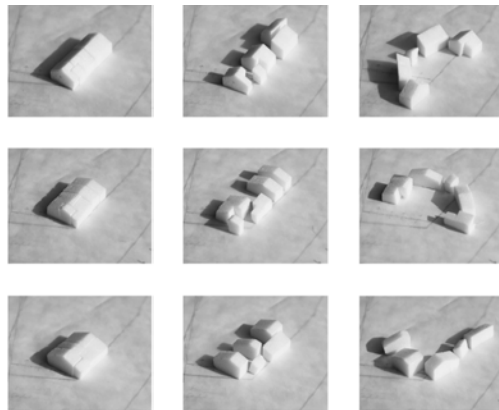
Achieving Disprogramming & Continuity pg.142



Testing Formal Implications pg.143



Nestling Within Site pg.145



Dividing Mass and Creating Community pg.147



Planning and Locating Homes pg.149

4.5.2 | (above) Design Drivers from Phase 3

4.5.3 | (opposite) Final Design Site Plan



MIDDLETON ROAD



KEY

- 1 Garden Centre
- 2 Full-time Home One
- 3 Daycare and Respite Home
- 4 Full-time Home One

4.5.1

AN ‘IMAGE OF THE CITY’

“Nothing is experienced by
itself, but always in relation
to its surroundings, the
sequences of events leading
up to it, the memory of past
experiences.”

(Lynch 1)

To ensure an orientating final design which heightens experience and triggers past memories, Lynch’s elements of the mental image were considered. A clear pathway was the main focus since “for many people, these are the predominant elements in their image” (Lynch 47) and it is also an enabler for the wandering typical of those with YOD. Along this path other essential elements, (districts, nodes, edges, landmarks) are arranged to create an ‘image of the city’. “Districts are structured with nodes, defined by edges, penetrated by paths, and sprinkled with landmarks” (Lynch 48). Considering the design as an integrated whole allows disprogramming to occur in a manner which is familiar. Here the YOD homes relate to its garden, the neighbours, and the garden centre in the same way that a home relates to the city (figure 4.5.4).

The following takes the reader on a journey through the design and explains The Districts, The Approach, The Nodes, The Path, The Home, The Edge, and The Backyard of the design for those affected by YOD.

HOMES

PATHWAY

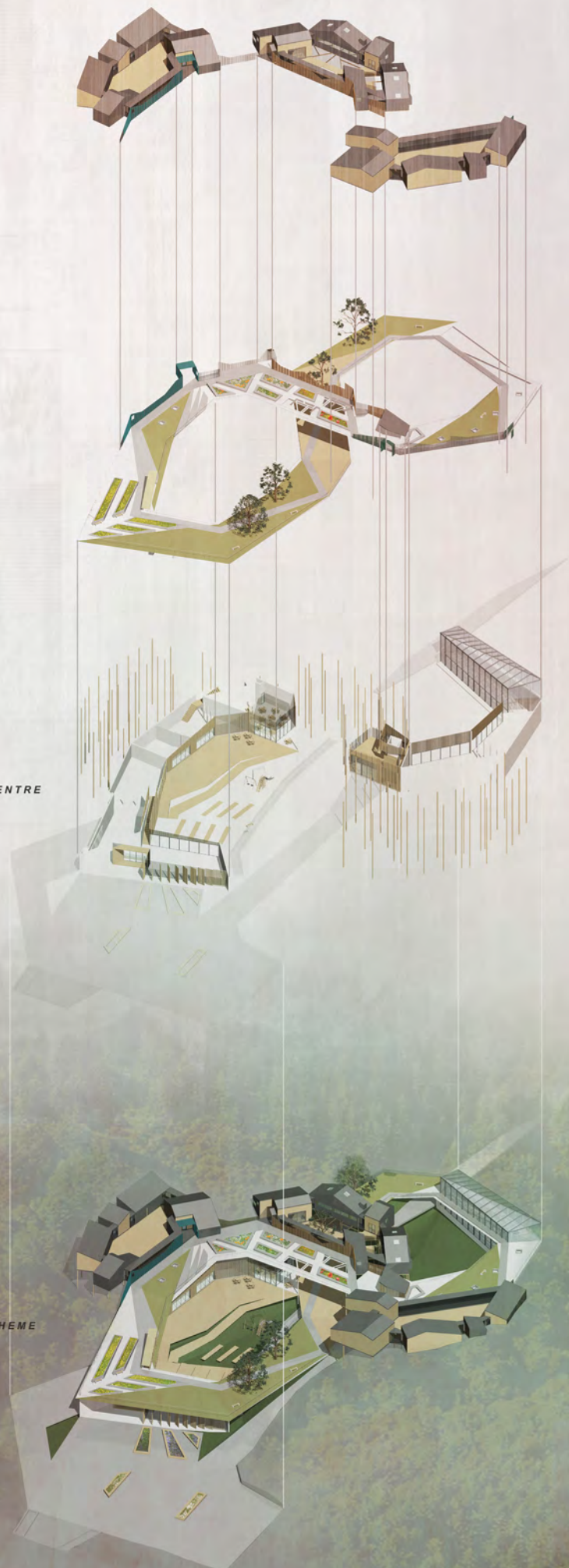
GARDEN CENTRE

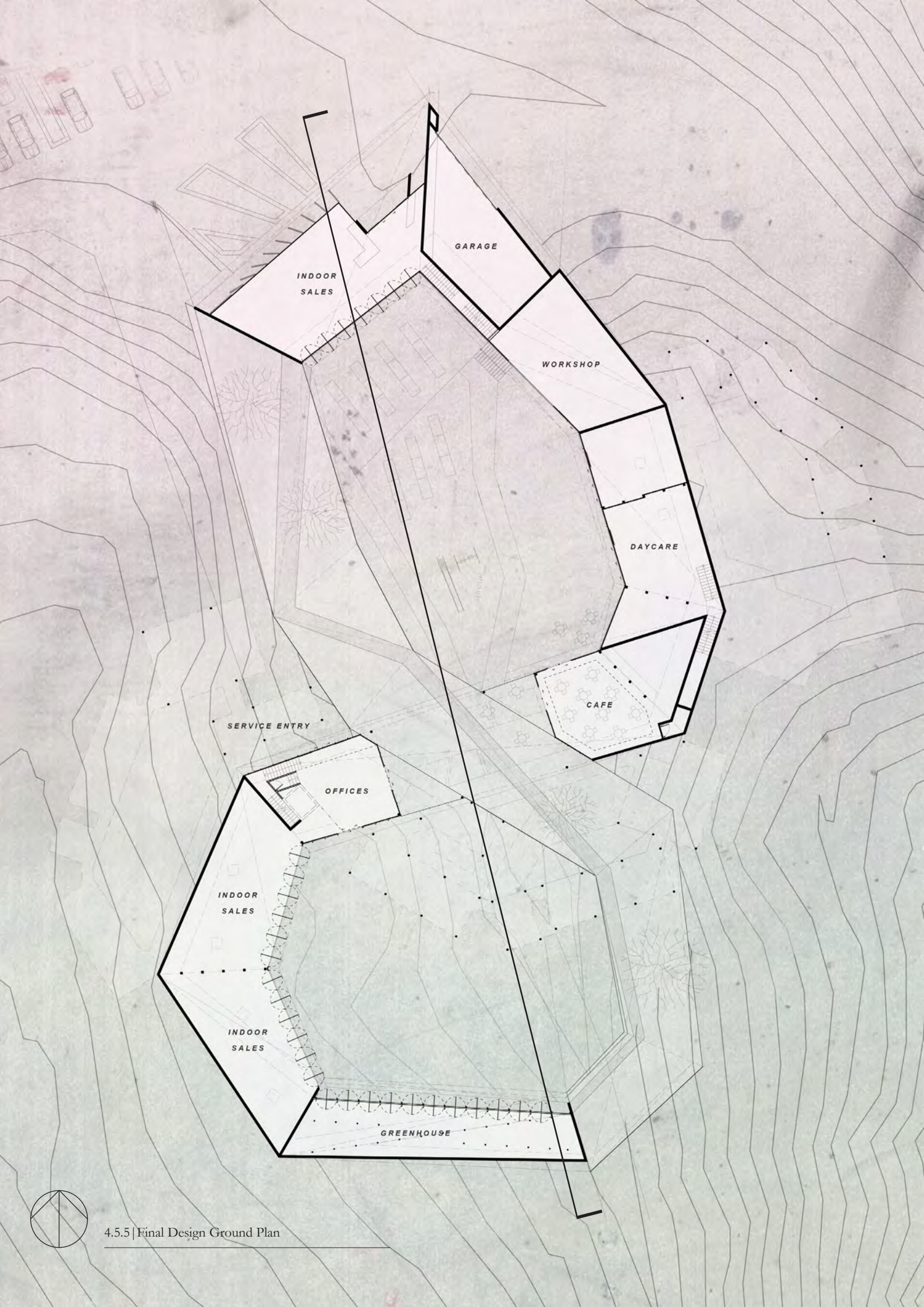
ENTIRE SCHEME

Urban Street

Suburban Park

Forest





INDOOR
SALES

GARAGE

WORKSHOP

DAYCARE

CAFE

SERVICE ENTRY

OFFICES

INDOOR
SALES

INDOOR
SALES

GREENHOUSE

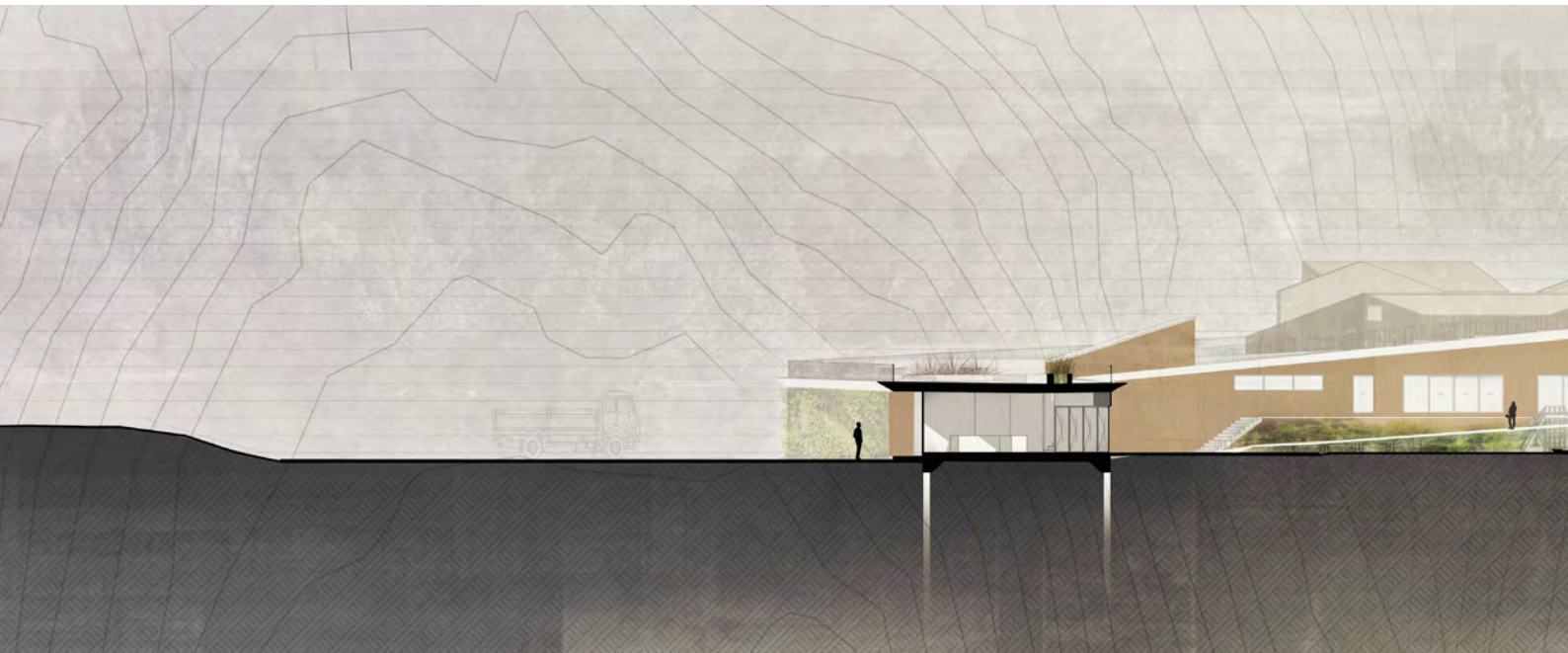
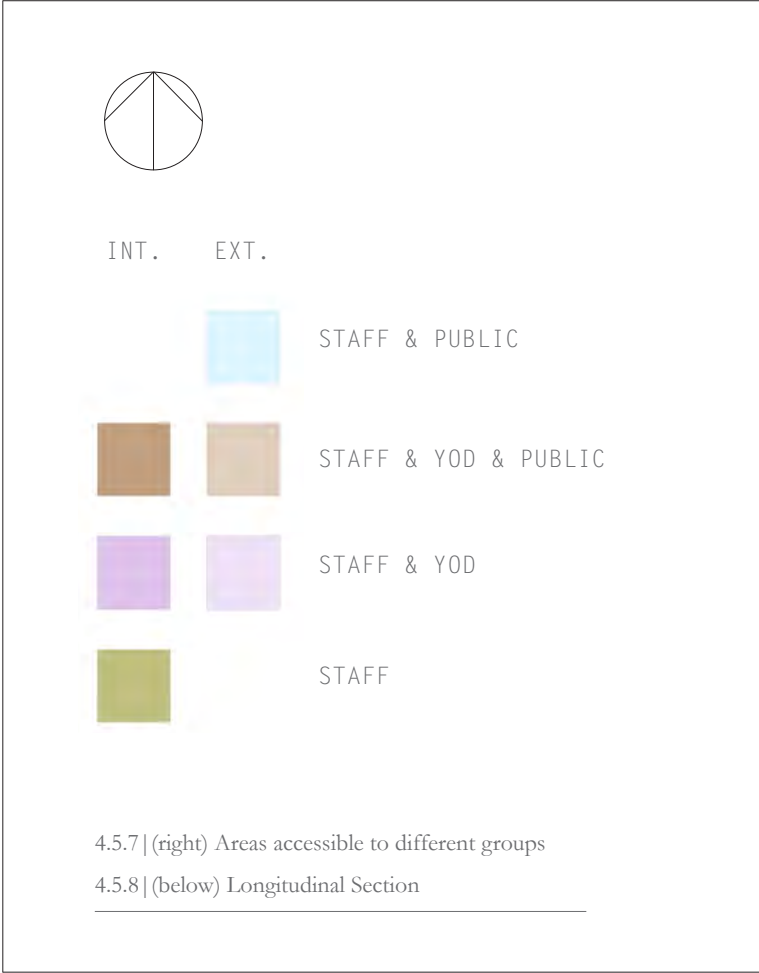


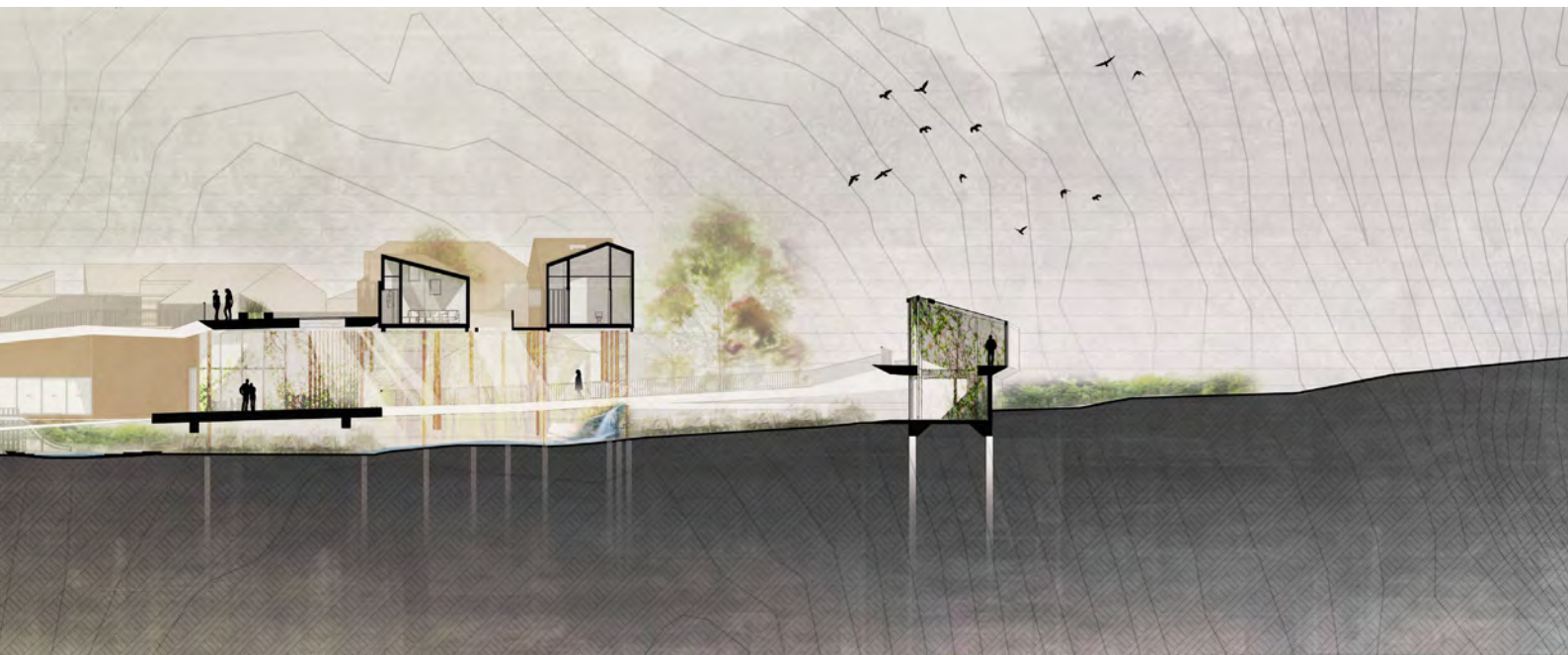
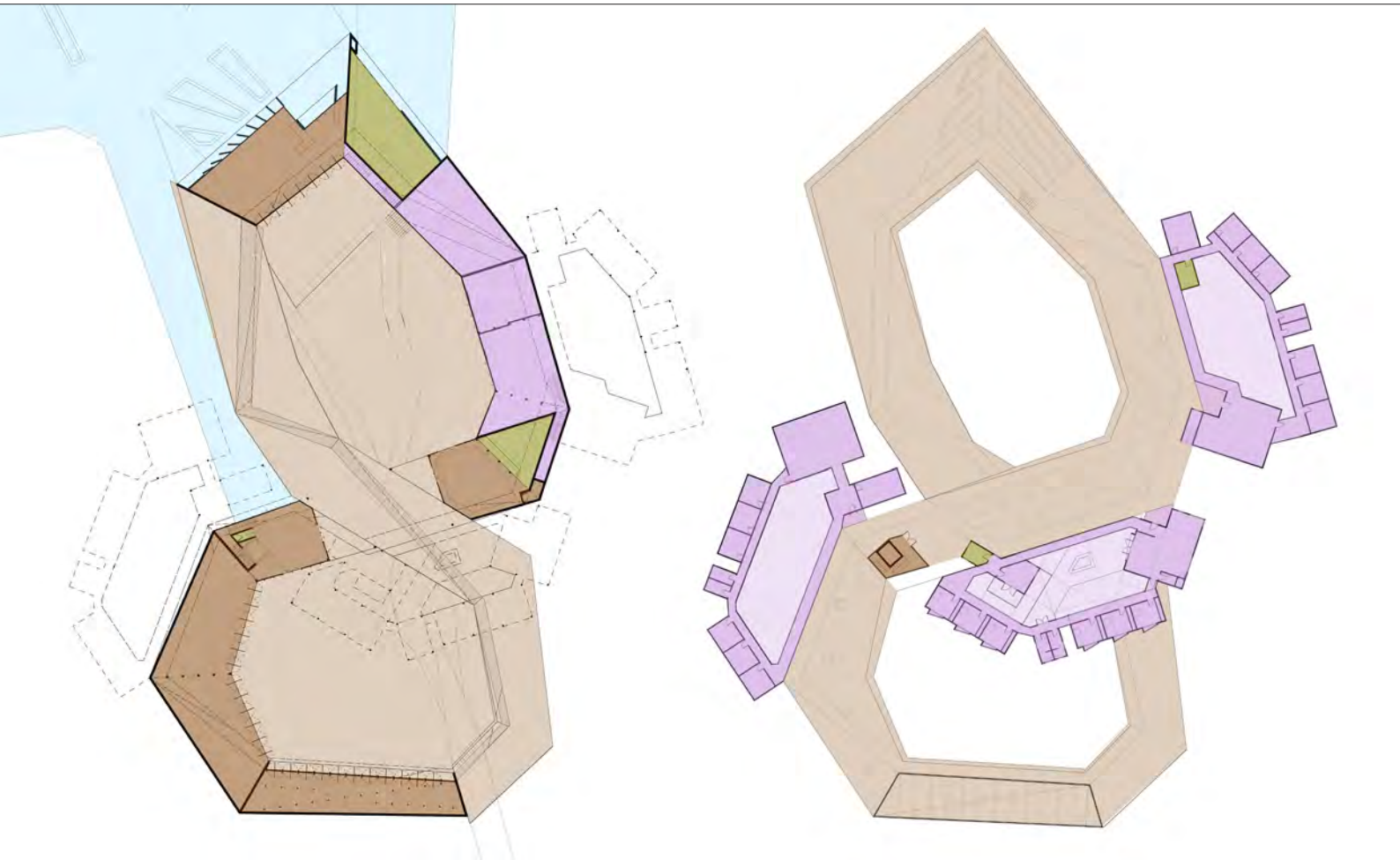


The parti for the project is most clearly illustrated in plan. Continual movement is evident, with the homes connecting directly into the main pathway, removing any dead ends and increasing interaction between the programmes (figure 4.5.5 and 4.5.6).

Unobtrusive safety is afforded to those with YOD, with no visible locked doors or fences and a single checkout point constantly monitored by staff. Figure 4.5.7 shows the areas of the design accessible to the different groups of people highlighting the freedom, safety, and privacy for the occupants and the areas accessible to all where interaction can occur.

Figure 4.5.8 establishes the relationship of the low lying scheme to its landscape as it rises up through the valley. It identifies the height at the central crossover, a transition from a more public to private face, and shows how passive surveillance can begin to occur from the YOD homes to the garden centre around and below.



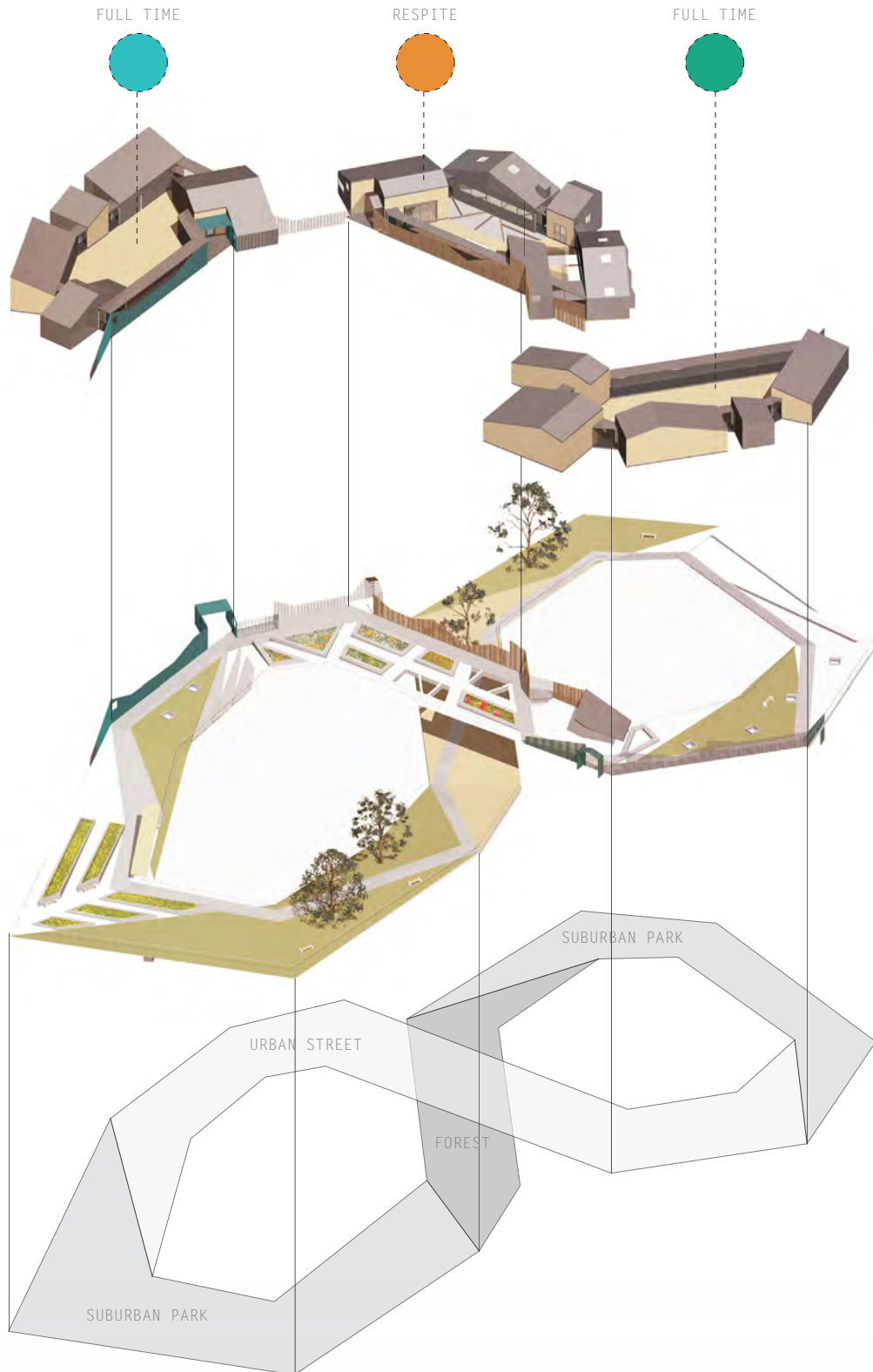


4.5.2 THE DISTRICTS

Districts have been established along the main path providing identifiable areas and a more variable and therefore interesting movement channel. These identifiable sections take note from familiar areas within and around the city; the forest, the suburban park, and the urban street (figure 4.5.9).

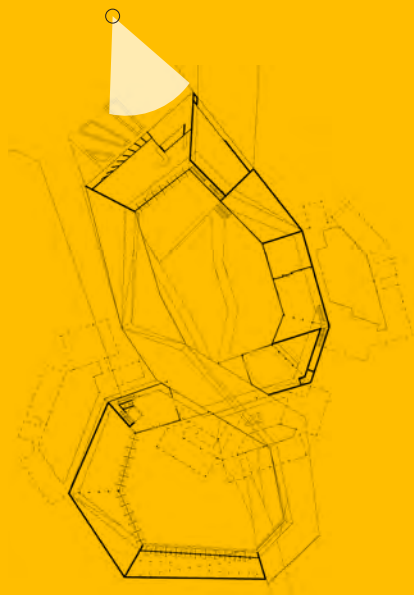
The YOD homes are grouped along the 'urban street' and maintain a cohesion in form and materiality while remaining distinct through feature colours (figure 4.5.9). Colours for each home are used on the side faces of the fence, the entrance door, and around reveals to create individual character, reduce monotony, and provide an element to aid in recognition.

4.5.9 | (opposite) Exploded diagram highlighting districts and home colours



4.5.3

THE APPROACH



4.5.10 | (opposite) Perspective of The Approach

Specific consideration is necessary when providing an entry for both the YOD home and garden centre. Separation anxiety can be reduced for a person with YOD when the entry to the care facility is not readily apparent. The combined entrance nestles within the valley and is designed



to be non-threatening and inviting while simultaneously acting as a welcoming commercial front for the garden centre (figure 4.5.10). The large dynamic façade is broken up through the use of a timber screen system which fans out towards the door to signify access. Adjacent to the

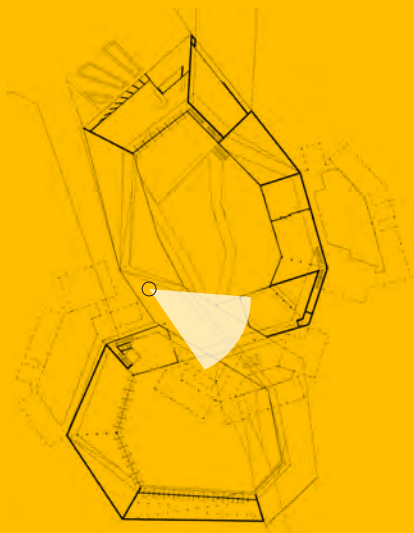
timber screen, a concrete wall is angled to draw people towards the door framed within a warm timber batten box. The use of timber and multiple dividing elements reduces mass and provides an intimate and welcoming approach for both public and those affected by YOD.



4.5.4

THE NODE

The central crossover point is a multi-sensory stimulating node to provide an exciting element for visitors and act as a therapeutic zone for those with YOD. It is the focus of the 'forest' district and the meeting point of multiple paths. The activity of the café combined with the adjacent main vertical circulation point provides an active social environment. This multi-sensory forest atmosphere is enhanced through the use of architectural devices which engage all of the senses (figure 4.5.11).



4.5.11 | (opposite) Perspective of The Node

- The **sight** of plants, flowers, people working, supporting columns, and trees extending between the ground, the path, and the home above.
- The **feel** of sun on skin dappling through the cut-outs in the floor above and the rough concrete texture beneath the feet



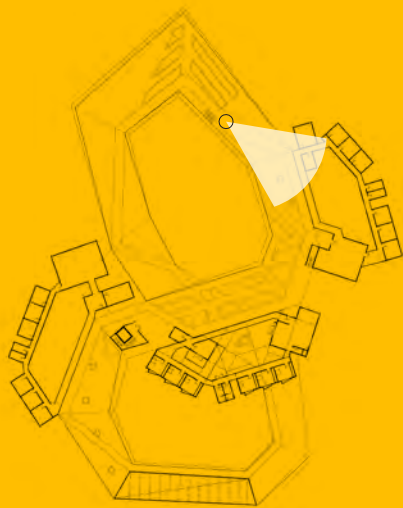
- The **sound** of children's laughter, conversations, birds chirping, and water splashing down from the designed catchment and flowing as a stream beneath the path
- The **smell** of soil, plants, food cooking, flowers, and coffee
- The **taste** of food enjoyed at the café adjacent to this hive of sensory stimulation.



4.5.5

THE PATH

To encourage movement, a clearly delineated path is maintained throughout. A two metre wide non-skid concrete pathway weaves its way along the loop to entice people to interact with the adjacent activities. The path also flows alongside the homes to provide a moment of interaction and ensure a return to home. At the approach to home the fence continues from the garden centre balustrade and



4.5.12 | (opposite) Perspective of The Path



alters along its length to mimic the form of the home behind. Surfaces either side of the pathway are contrasting and operate at an angle to maintain continuous movement but also entice users to stray from the path and explore the plants, sit amongst the grass, sit on benches, or peer down through the skylights to the daycare space below (figure 4.5.12)



4.5.6 THE HOME

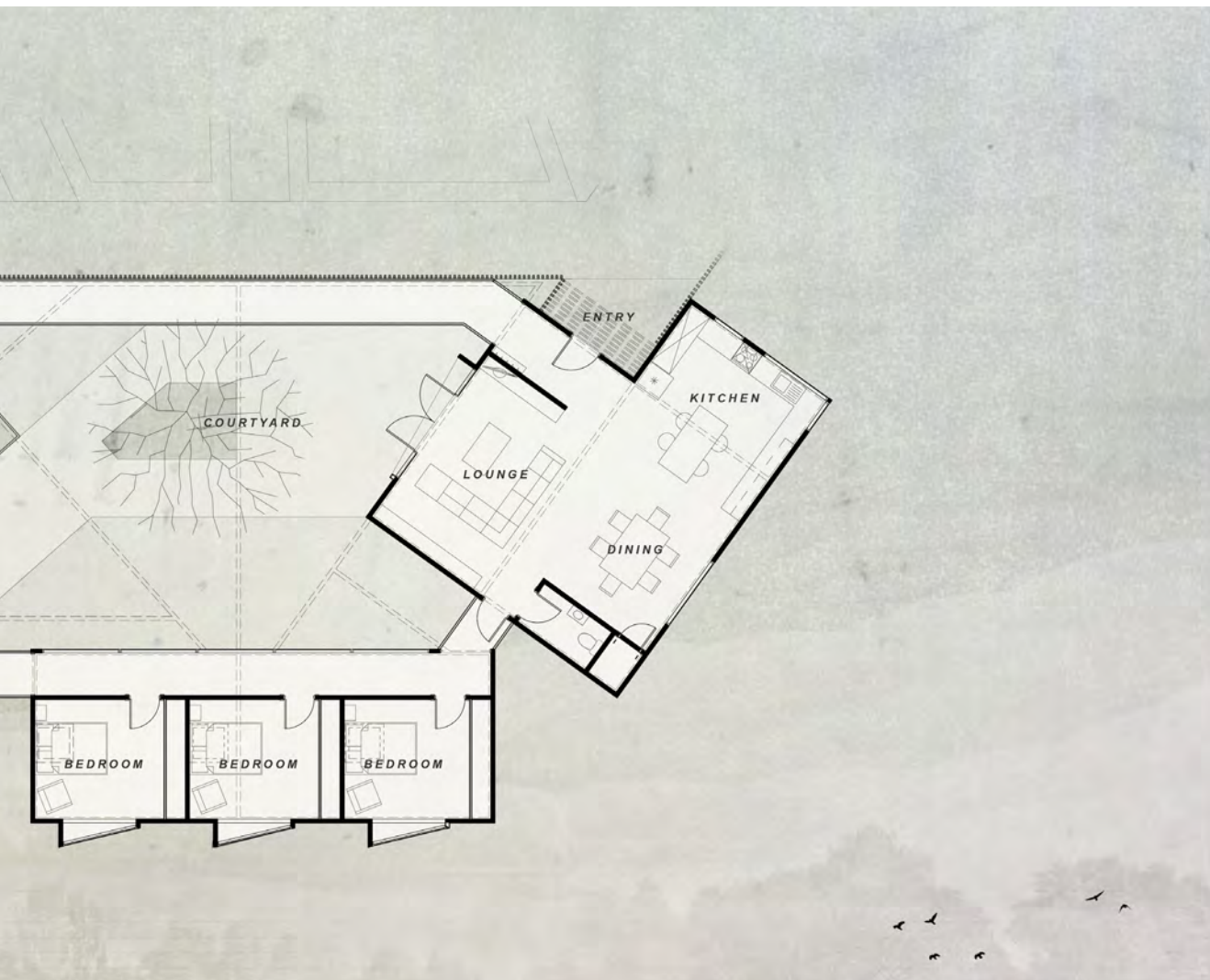
Divided into areas for living, sleeping, bathing, and retreating, the home is arranged in a loop focused around a central courtyard (figure 4.5.13).

This provides a single loaded wandering path between settings to detract from the feeling of long corridors, a constant view to the central activity setting, and a



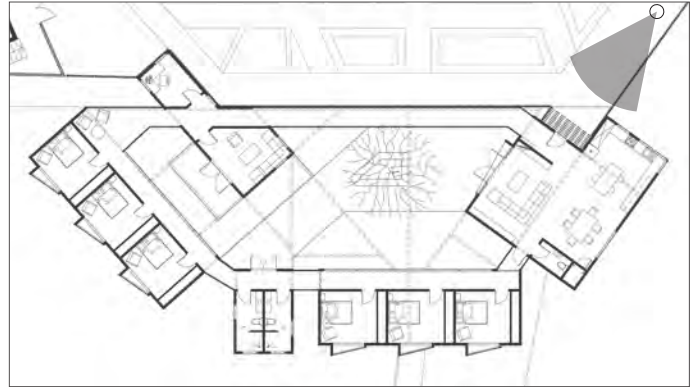
4.5.13 | (opposite) Plan of Home

choice in social environments. These are all key elements identified as creating a more socially conducive built environment (Moore and Verhoef). For safety reasons there are no ensuites, instead two bathrooms are located between the bedrooms.



Entry

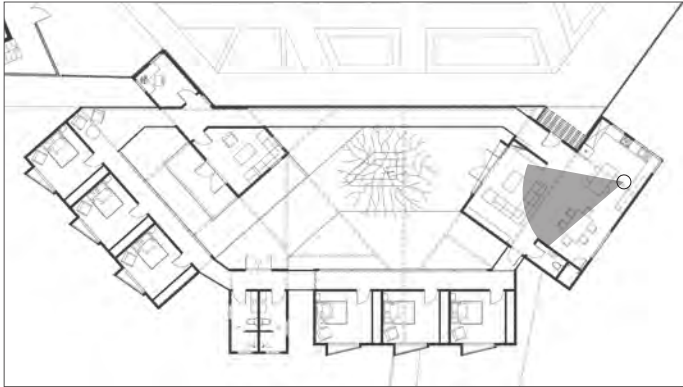
Upon approach, the feature colour of the fence and front door become apparent providing a mechanism for recognition (figure 4.5.14). The fence adapts to frame the door providing an intimate entrance recessed from the walkway, therefore, operating in the same way that a home typically would to the street (figure 4.5.15). This threshold also provides a space for personalisation through planting or sculptures.



4.5.14 | (below) Entrance to home

4.5.15 | (left) Typical recessed entrances





Living

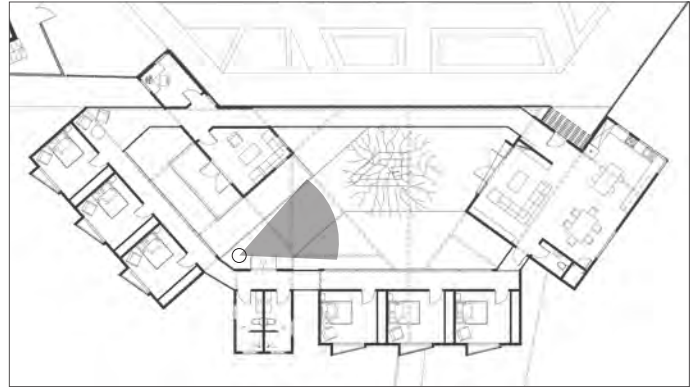
The living space operates as the main activity setting of the home, orientated to the rhythm of nature, with morning sun coming into the kitchen and afternoon sun spilling into the lounge. Here residents have the freedom to explore the garden centre, wander around the indoor home loop, go out into the courtyard, pick vegetables from the garden, socialise in the living area, set the dining table, help with meal preparation, or just sit and observe (figure 4.5.16). The design exhibits Nylander's architectural aspects of home to enable the process of appropriation and creation of meaning ensuring a homely environment.

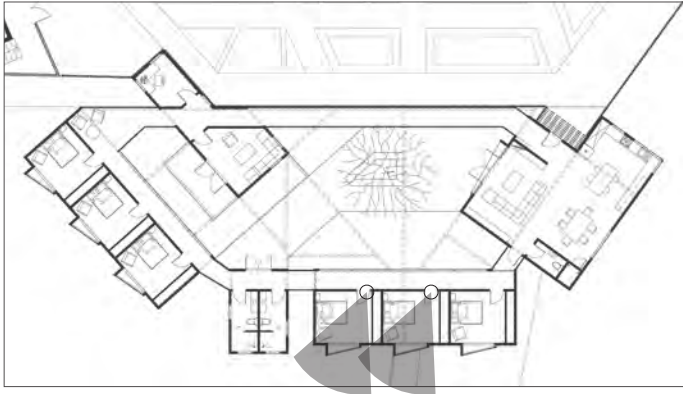
4.5.16 | (below) Perspective of Activity Setting



Courtyard

A central courtyard features a tree from the garden centre below providing an intimate setting and acting as an orientating element within the home (figure 4.5.17). Seating surrounding the tree provides a social gathering point as birds perch on branches and visiting children laugh and play. Cut-outs and permeable decking, placed between structural beams, aid in producing the forest atmosphere below. These architectural elements create a subtle connection between this private setting and the multi-sensory zone below.





Bedroom

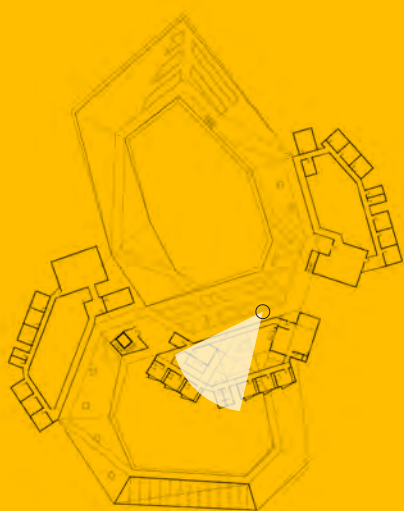
The bedroom provides a private retreat space for the resident. Each bedroom has a large window looking out to the surrounding native bush, a skylight bouncing morning light into the room, and the ability for individualisation through personal belongings (figure 4.5.18).

4.5.17 | (opposite) Perspective of Courtyard

4.5.18 | (below) Perspectives of different bedrooms



4.5.7 THE EDGE



4.5.19 | (right) Diagrams of The Edge

4.5.20 | (opposite) Perspective of The Edge

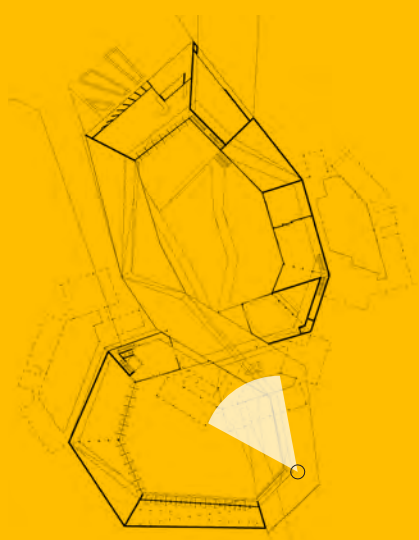
A battened fence acts as a recognition element and is located alongside the homes internal walkway providing a threshold between the public garden centre and the private internal courtyard (figure 4.5.19). Variation in height and batten spacing allow glimpses through to spark interaction and prevent feelings of containment (figure 4.5.20).





4.5.8

THE BACKYARD



4.5.21 | (opposite) Perspective of The Backyard

The path which loops past the stream and back towards the central node offers the notion of inhabiting a backyard sanctuary. A tranquil environment withdrawn from the hive of activity (figure 4.5.21).









5.0

CONCLUSION & DISCUSSION



People with YOD are younger, fitter and healthier than others with dementia. Very few people are aware of YOD and there are no facilities in NZ which cater for their specific needs. In response to the lack of awareness and appropriate care facilities, this thesis has sought to address “how architecture can reinvigorate the lives of those affected by YOD and instigate a more socially responsive approach to design”.

A qualitative interview process and multi-disciplined literature review established a need for an architecture which can spark memory, regain autonomy, and provide therapy. Analysis of existing facilities looked to these three themes and highlighted the shortfalls of current designs which do not interact with existing communities. Similarly, initial design tests revealed the difficulties associated with integrating a dementia facility into an existing community to promote awareness and reduce stigma.

In response, the possibilities inherent in Tschumis method of disprogramming were explored. A garden centre was introduced to both contribute to and benefit from the YOD facility. This allows the person with YOD greater; autonomy and independence, outdoor opportunities, physical activity, social engagement, and sense of community. In return the garden centre provides an opportunity for the general public to give back, subsequently, gaining customers who are looking for a greater purpose than just shopping.

5.1 | (opposite) Aerial Perspective of Final Design
 5.2 | (following spread) Comparative Analysis
 of Design Development with regard to Design
 Imperatives

The iterative nature of research through design resulted in multiple explorations through predominantly analogue representation. Each of the four design phases concluded with a design, building upon the previous phases, with the fourth as the developed design. Figure 5.2 shows a comparison of the four designs, in terms of the three key themes, highlighting the development and success of the developed design.

Design Phase One; developed an understanding of the possible integration of the two programmes, established a need to provide individual homes as opposed to the typical institutional mass, and concluded with a design which considered one directional surveillance but failed to thoroughly merge the two programmes.

Design Phase Two explored a more intuitive process to address the failure of design phase one. Although successful in providing tactile surfaces and merging programmes, it led to a heroic architecture concerned with form over the needs of the occupants. The concluding design addressed the need for internal loop walkways to promote physicality within the home, but, lacked a thorough integration with the garden centre.

Design Phase Three looked to integrate the landscape, garden centre, and dementia homes in a reciprocal manner while still maintaining clarity of separate typologies through contrast. This phase developed a successful and thoroughly integrated design through the use of an infinity loop parti but lacked a consideration of experience.

DESIGN ONE



DESIGN TWO



6/12

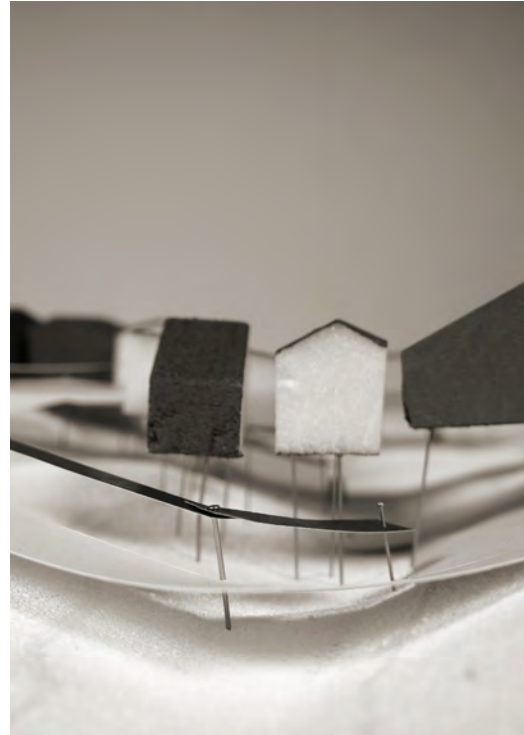


5/12

DESIGN THREE



DEVELOPED DESIGN

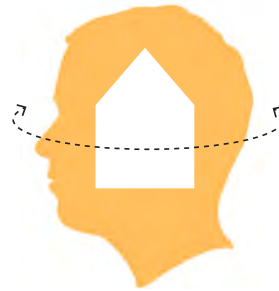


9/12



12/12

ARCHITECTURE AND MEMORY



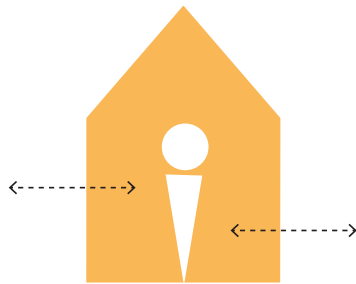
A digital method of representation was pursued in Design Phase Four to allow a development of detail. This phase illustrated a developed design which meets the outlined proposition and objectives and fills the existing knowledge gap on 'design of the built environment for those affected by YOD'. A consideration of memory, autonomy, and therapy ensured a design which would reinvigorate the lives of those affected by YOD (figure 5.3). The design:

- Provides an environment that feels like home through clustered houses with domestic scale, form, materials, and details, sparking spatial recollection.
- Allows personalization of individual spaces to enable 'dwelling' and provide a sense of place.
- Utilises Lynch's elements of a city image to provide instinctual understanding and compensate for loss of memory.
- Provides an exciting and new model for care facilities that is memorable for visitors and would make the nation proud.

5.3 | Achieved Objectives and Design Imperatives of Final Design



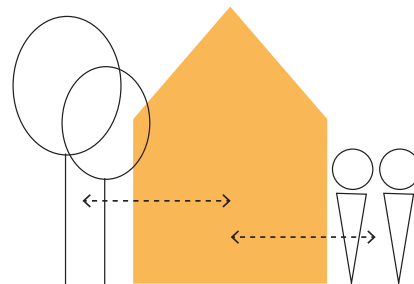
ARCHITECTURE FOR AUTONOMY



- Integrates the public into the environment through the garden centre, and considers public/private thresholds to promote awareness and reduce stigma.
- Establishes an infinity loop and feature colours to ensure recognition so that residents are unable to get lost.
- Uses the garden centre checkout requirements and surrounding bush to create an unobtrusively safe environment allowing independent exploration.
- Provides separate bedrooms with a one directional view to the bush to give residents a sense of privacy and retreat.



ARCHITECTURE AS THERAPY



- Actively integrates with the natural environment of the site and orientates specific areas of the home to the sun.
- Inspires community and social integration amongst residents, family members and the general public providing a place for information and support from the earliest stages.
- Promotes physicality through a constant and gradual incline across the infinity loop, subsequently, enabling wandering, reducing aggressive behaviour and providing a better working environment for carers.
- Guarantees a multi-sensory environment through surfaces and focused points of activity.



Central to this thesis is the notion of a more socially responsive architecture, adding to the architectural discourse in relation to post capitalist approaches, projective practice, participatory design methods and agency.

A caring architecture for the mentally ill requires a shift in priorities from efficiency and profit, towards an end user focused approach. This approach fosters “responsive and innovative solutions rather than standard or familiar ones” and is aptly described by Schafer and Reeser as “Reorganising” capitalism (5). By this they mean “moving away from a critical architectural practice...to a projective practice” (Somol and Whiting 77).

Furthermore, it has been indicated that experiences involving people in the design process provide feelings of satisfaction associated with having influenced the design decisions (Sanoff 179). Maintaining a ‘sense of control’ over an otherwise uncontrollable disease has been recognised by Mitchell as a significant coping mechanism amongst YOD sufferers, carers, and professionals. Empowering these individuals through ‘*participation in design*’ (Granath 1) allows them to regain a sense of control and acknowledge their phrase, ‘Nothing about me without me’.

The ideas researched in this thesis have much potential to be developed further. Breakthroughs in medical research offer new opportunities for involving the built environment in both diagnosis and continued therapy. Further inquiries could include: a variation in landscape through distinct areas and gradient to offer opportunities for diagnosis and stimulation, and a consideration of lighting to aid in sleep disruption and issues with perception. This new growth area of research would help to further invigorate the lives of those with YOD and instigate a more socially responsive approach to architecture.

“ Architecture is not an isolated or autonomous medium, it is ... inevitably involved with questions more difficult than those of form or style.”

(Taylor and Burns 3)



REFERENCE LIST

- Abbott, Mick, and Richard Reeve. *Wild Heart: The Possibility of Wilderness in Aotearoa New Zealand*. Otago University Press, 2011. Print.
- Alzheimers New Zealand. "Dementia Facts and Figures." 2012. Web. 25 November 2014.
- Bakker, Christian, et al. "Needs in Early Onset Dementia: A Qualitative Case from the Needyd Study." *American journal of Alzheimer's disease and other dementias* 25.8 (2010): 634-40. Print.
- Beattie, Angela, et al. "'How Can They Tell?' a Qualitative Study of the Views of Younger People About Their Dementia and Dementia Care Services." *Health & social care in the community* 12.4 (2004): 359-68. Print.
- Burnette, Charles. "The Mental Image and Design." *Designing for Human Behaviour*. Eds. Lang, J, et al. Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross Inc, , 1974. 169-82. Print.
- Chafetz, P, and K Namazi. "Structuring Environments for Persons with Cognitive Impairment." *The Dementias. Diagnosis, Treatment, and Research*. Eds. Weiner, M and A Lipton. Washington DC: American Psychiatric Publishing, 2003. 405-32. Print.
- Chung, JC, et al. "Snoezelen for Dementia." *Cochrane Database Syst Rev* 4 (2002). Print.
- Cutler, Lois J, and Rosalie A Kane. "Environments for Privacy, Safety, and Movement of Persons with Dementia Maximal Privacy+ Moderate Barriers= Minimal Intrusion." *Alzheimer's Care Today* 3.1 (2002): 50-54. Print.
- Daniel and Claire. Interview by McIntosh, Jacqueline, Sally Rimkeit and Kelly Lambert. "Experiencing Place: Living with Younger Onset Dementia (YOD) in Aged Care Facilities." 2014.
- Day, Kristen, Daisy Carreon, and Cheryl Stump. "The Therapeutic Design of Environments for People with Dementia a Review of the Empirical Research." *The Gerontologist* 40.4 (2000): 397-416. Print.
- Fleming, Richard, Patrick Crookes, and Shima Sum. *A Review of the Empirical Literature on the Design of Physical Environments for People with Dementia*. Australian Government, 2008. Print.
- Gibson, Grant, et al. "Housing and Connection to Nature for People with Dementia: Findings from the Independent Project." *Journal of Housing for the Elderly* 21.1-2 (2007): 55-72. Print.
- Goel, Vinod, and Peter Pirolli. "The Structure of Design Problem Spaces." *Cognitive science* 16.3 (1992): 395-429. Print.
- Granath, J.A. "Architecture: Participation of Users in Design Activities." *International Encyclopedia of Ergonomics and Human Factors* (2001). Web. <http://granath.arch.chalmers.se/_private/encyklopedia.htm>
- Haase, Trutz. *Early-Onset Dementia: A Needs Analysis of Younger People with Dementia in Ireland*. Dublin: Alzheimer Society of Ireland, 2005. Print.
- Handy, Susan L, et al. "How the Built Environment Affects Physical Activity: Views from Urban Planning." *American journal of preventive medicine* 23.2 (2002): 64-73. Print.
- Heather, Ben. "42 and Scared of Dementia." 2014. Web. 5 December 2014. <<http://www.stuff.co.nz/life-style/well-good/10414490/42-and-scared-of-dementia>>

- Heidegger, Martin. "Building Dwelling Thinking." *Poetry, language, thought* 149 (1971). Print.
- Hernandez, Rebecca Ory. "Effects of Therapeutic Gardens in Special Care Units for People with Dementia: Two Case Studies." *Journal of Housing for the Elderly* 21.1-2 (2007): 117-52. Print.
- Hewawasam, Lucksri C. "The Use of Two-Dimensional Grid Patterns to Limit Hazardous Ambulation in Elderly Patients with Alzheimer's Disease." *Nursing Times Research* 1.3 (1996): 217-27. Print.
- Jones, Paul, and Kenton Card. "Constructing "Social Architecture": The Politics of Representing Practice." *Architectural Theory Review* (2011): 228-24. Print.
- Knowles, Ralph. *Ritual House: Drawing on Nature's Rhythms for Architecture and Urban Design*. Island Press, 2006. Print.
- Lewis, Hazel. *Dementia in New Zealand: Improving Quality in Residential Care*. Wellington: Ministry of Health, 2002. Print.
- Lindsey, Stephen, et al. *Empathy, Participatory Design and People with Dementia*. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. 2012. ACM. Print.
- Lynch, Kevin. *The Image of the City*. Cambridge: The M.I.T Press and Harvard University Press, 1960. Print.
- Marquardt, Gesine. "Wayfinding for People with Dementia: A Review of the Role of Architectural Design." *Health Environments Research & Design Journal (HERD)* 4.2 (2011). Print.
- Mayer, Robert, and Stuart J Darby. "Does a Mirror Deter Wandering in Demented Older People?" *International Journal of Geriatric Psychiatry* 6.8 (1991): 607-09. Print.
- Ministry of Health. "Rehabilitation and Support Services: Short-Term Residential Care Services for People in Contracted Residential Facilities." Ed. District Health Board 2011. Print.
- Mitchell, Helen. "Coping with Young Onset Dementia: Perspectives of Couples and Professionals." Cardiff University, 2012. Print.
- Moore, Keith Diaz, and Rianne Verhoef. "Special Care Units as Places for Social Interaction: Evaluating an SCU's Social Affordance." *American Journal of Alzheimer's Disease and Other Dementias* 14.4 (1999): 217-29. Print.
- Namazi, Kevan H, Tena Tarler Rosner, and Linda Rechlin. "Long-Term Memory Cuing to Reduce Visuo-Spatial Disorientation in Alzheimer's Disease Patients in a Special Care Unit." *American Journal of Alzheimer's Disease and Other Dementias* 6.6 (1991): 10-15. Print.
- Netten, Ann. "The Effect of Design of Residential Homes in Creating Dependency among Confused Elderly Residents: A Study of Elderly Demented Residents and Their Ability to Find Their Way around Homes for the Elderly." *International Journal of Geriatric Psychiatry* 4.3 (1989): 143-53. Print.
- Nylander, Ola. *Architecture of the Home*. West Sussex: John Wiley & Sons, 2002. Print.
- Oter-Pailos, J. "Mnemonic Value and Historic Preservation." *Spatial Recall: Memory in Architecture and Landscape*. 2008. 240-59. Print.

- Pallasmaa, Juhani. *The Eyes of the Skin: Architecture and the Senses*. John Wiley & Sons, 2013. Print.
- . "The Geometry of Feeling the Phenomenology of Architecture." *The Architecture Reader: Essential writings from Vitruvius to the present* (1985): 241-45. Print.
- Passini, Romedi, et al. "Wayfinding in a Nursing Home for Advanced Dementia of the Alzheimer's Type." *Environment and Behavior* 32.5 (2000): 684-710. Print.
- Peters, Terri. "Socially Inclusive Design in Denmark: The Maturing Landscape." *Architectural Design* 84.2 (2014): 46-53. Print.
- Phil and Grace. Interview by McIntosh, Jacqueline, Sally Rimkeit and Kelly Lambert. "Experiencing Place: Living with Younger Onset Dementia (YOD) in Aged Care Facilities." 2014.
- Rainey, Reuben M. "Architecture and Landscape: Three Modes of Relationship [the Inhabited Landscape: An Exhibition]." *Places* 4.4 (1988). Print.
- Rimkeit, Sally, Jacqueline McIntosh, and Kelly Lambert. "Experiencing Place: People with Younger Onset Dementia in 'Aged-Care'." *Faculty of Psychiatry of Old Age Conference*. 2014. Unpublished Conference Paper.
- Robinson, Julia.W, and Travis Thompson. "Stigma and Architecture." *Enabling Environments: Measuring the Impact of Environment on Disability and Rehabilitation*. Eds. Steinfeld, Edward and G.Scott Danford. New York: Plenum Publishers, 1999. Print.
- Roth, Susan, and Lawrence J Cohen. "Approach, Avoidance, and Coping with Stress." *American Psychologist* 41.7 (1986): 813. Print.
- Sanoff, Henry. "The Application of Participatory Methods in Design and Evaluation." *Design Studies* 6.4 (1985): 178-80. Print.
- Schafer, Ashley, and Amanda Reeser. "Architecture after Capitalism." *Praxis: Journal of writing and building*. 5 (2003). Print.
- Schneider, Tatjana, and Jeremy Till. "Beyond Discourse: Notes on Spatial Agency." *Footprint: Delft School of Design Journal*. Spring (2009): 97-111. Print.
- Schulz, Christian Norberg. "Genius Loci." *Towards a Phenomenology of Architecture* (1980). Print.
- Sivadon, Paul. "Space as Experienced: Therapeutic Implications." *Environmental Psychology: Man and His Physical Setting*. Eds. Proshansky, et al. New York: Holt, Rinehart, & Winston, 1970. 21-37. Print.
- Smith, Ronald, R Mark Mathews, and Meredith Gresham. "Pre-and Postoccupancy Evaluation of New Dementia Care Cottages." *American journal of Alzheimer's disease and other dementias* 25.3 (2010): 265-75. Print.
- Somol, Robert, and Sarah Whiting. "Notes around the Doppler Effect and Other Moods of Modernism." *Perspecta* (2002): 72-77. Print.
- Standards NZ. "Standards New Zealand Health and Disability Sector Standards." *Proposed audit workbook and guidance for residential services for people with dementia*. SNZ HB 8134.5: 2005 vols. Print.
- Steffi and Joe. Interview by McIntosh, Jacqueline, Sally Rimkeit and Kelly Lambert.

- “Experiencing Place: Living with Younger Onset Dementia (YOD) in Aged Care Facilities.” 2014.
- Taylor, Robert, and Carol Burns. “Front Matter.” *Perspecta* 21 (1984): 1-5. Print.
- The Agency Group. “Before and after Agency.” *Footprint: Delft School of Design Journal*. Spring (2009): 113-22. Print.
- Till, Jeremy. “Architecture and Contingency.” *Field: a free journal for architecture* 1.1 (2007): 120-35. Print.
- Treib, Marc. *Spatial Recall: Memory in Architecture and Landscape*. Routledge, 2013. Print.
- Tschumi, Bernard. *Architecture and Disjunction*. Cambridge: The MIT Press, 1996. Print.
- Tyson, Marguerite. *Exploring the Needs of Younger People with Dementia in Australia*. Alzheimer’s Australia, 2007. Print.
- Van Hoof, J. “Ageing-in-Place: The Integrated Design of Housing Facilities for People with Dementia.” doctoral dissertation). Eindhoven University of Technology, Eindhoven, the Netherlands, 2010. Print.
- Verderber, Stephen, and David J Fine. *Healthcare Architecture in an Age of Radical Transformation*. London: Yale University Press, 2000. Print.
- WHO, and Alzheimer’s Disease International. *Dementia: A Public Health Priority*. Geneva 2012. Print.
- Zeisel, John, et al. “Environmental Correlates to Behavioral Health Outcomes in Alzheimer’s Special Care Units.” *The Gerontologist* 43.5 (2003): 697-711. Print.

7.0

LIST OF FIGURES

Sourced Figures Only

3.3| Isometric drawing of Corumbene

Morris-Nunn, Robert. *Cutaway Isometric Drawing*. 2006. *Story Telling*. Web. 8 Dec. 2014. <http://researchbank.rmit.edu.au/eserv/rmit:9776/Morris_Nunn.pdf>

3.4| Corumbene exterior

Circa Morris Nunn. *Exterior Photograph*. 2014. *Corumbene Aged Care*. Web. 9 December 2014. <<http://www.circamorrisnunn.com.au/corumbene-aged-care/>>

3.5| Corumbene interior

Circa Morris Nunn. *Interior Photograph*. 2014. *Corumbene Aged Care*. Web. 9 December 2014. <<http://www.circamorrisnunn.com.au/corumbene-aged-care/>>

3.7| Plan of Group Home.

Sou Fujimoto Architects. *Plan of Group Home*. 2009. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/?p=23991>>

3.8| Group Home Exterior

Ano, Daici. *Exterior Photograph*. 2009. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/?p=23991>>

3.9| Group Home Interior

Ano, Daici. *Interior Photograph 1*. 2009. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/?p=23991>>

3.10| Group Home Angled Walls

Ano, Daici. *Interior Photograph 2*. 2009. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/?p=23991>>

3.12| Hogeweyk Courtyard Diagram

Niek, Roozen. *Courtyard Diagram*. 2009. *Nursing Home De Hogeweyk*. Web. 8 Dec. 2014. <<http://www.niekroozen.com/en/project/Nursing-Home-De-Hogeweyk/>>

3.13| Hogeweyk Room Variations

Kopart. *Hogeweyk Room Variation Photographs*. 2014. *Gizmodo*. Web. 8 Dec. 2014. <<http://gizmodo.com/inside-an-amazing-village-designed-just-for-people-with-1526062373>>

3.14| Hogeweyk Grocer

Erkelens, Hans. *Hogeweyk Supermarket Photograph*. 2014. *Gizmodo*. Web. 8 Dec. 2014. <<http://gizmodo.com/inside-an-amazing-village-designed-just-for-people-with-1526062373>>

3.15| Hogeweyk Courtyard View

Niek, Roozen. *Courtyard Photograph*. 2009. *Nursing Home De Hogeweyk*. Web. 8 Dec. 2014. <<http://www.niekroozen.com/en/project/Nursing-Home-De-Hogeweyk/>>

3.17 | Home of Compassion Entrance

Bell Kelly Beaumont. *Entrance Photograph*. 2013. *Team Architects*. Web. 9 Dec. 2014. <<http://www.bkb-ta.co.nz/projects/health-and-aged-care/st-josephs-home-of-compassion-john-vianney-centre/>>

3.18 | Home of Compassion Interior

Bell Kelly Beaumont. *Interior Photograph*. 2013. *Team Architects*. Web. 9 Dec. 2014. <<http://www.bkb-ta.co.nz/projects/health-and-aged-care/st-josephs-home-of-compassion-john-vianney-centre/>>

3.19 | Home of Compassion Bay Windows

Bell Kelly Beaumont. *Bay Window Photograph*. 2013. *Team Architects*. Web. 9 Dec. 2014. <<http://www.bkb-ta.co.nz/projects/health-and-aged-care/st-josephs-home-of-compassion-john-vianney-centre/>>

3.21 | Plan of Itep Le Home

Laurens and Loustau Architects. *Plan of Itep Le Home*. 2012. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/298441/itep-le-home-laurens-loustau-architects/>>

3.22 | Itep Le Home Aerial View

Laurens and Loustau Architects. *Aerial View of Itep Le Home*. 2012. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/298441/itep-le-home-laurens-loustau-architects/>>

3.23 | Itep Le Home Exterior View

Chalmeau, Stephane. *Exterior Photograph*. 2012. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/298441/itep-le-home-laurens-loustau-architects/>>

3.24 | Itep Le Home Concrete Forms and Red Carpet

Chalmeau, Stephane. *Exterior Photograph 2*. 2012. *Archdaily*. Web. 8 Dec. 2014. <<http://www.archdaily.com/298441/itep-le-home-laurens-loustau-architects/>>

3.26 | Plan of Warm Atmosphere.

Junya Ishigami Studio. *Plan of Homes for the Elderly*. 2013. *Openhouse*. Web. 8 Dec. 2014. <<https://openhousebcn.wordpress.com/tag/junya-ishigami/>>

3.27 | Coloured roof model of Warm Atmosphere

Junya Ishigami Studio. *Exhibition Detail*. 2014. How Small How Vast Exhibition. *Designboom*. Web. 8 Dec. 2014. <<http://www.designboom.com/architecture/junya-ishigami-private-residence-chile-03-18-2014/>>

3.28 | Timber Frame Model of Warm Atmosphere

Ichikawa, Yasushi; Junya Ishigami Studio. *Model Photograph*. 2013. *Openhouse*. Web. 8 Dec. 2014. <<https://openhousebcn.wordpress.com/tag/junya-ishigami/>>

3.29 | Visualisation of Warm Atmosphere

Ichikawa, Yasushi; Junya Ishigami Studio. *Drawing*. 2013. *Openhouse*. Web. 8 Dec. 2014. <<https://openhousebcn.wordpress.com/tag/junya-ishigami/>>

8.0

APPENDIX

A1 - HDEC APPROVAL



Health and Disability Ethics Committees

1 The Terrace
C/- MEDSAFE, Level 6, Deloitte House
10 Brandon Street
PO Box 5013
Wellington
6011

0800 4 ETHICS
hdec@hdc.org.nz

20 February 2014

Dr Brenda (B) Sally Rimkeit
Unit 11
3 Severn St
Island Bay
Wellington 6023

Dear Dr Rimkeit

Re:	Ethics ref:	14/CEN/12
	Study title:	Facility design as a resource or hindrance for people with younger onset dementia (YOD) in 'aged' care in New Zealand: a qualitative study using Interpretive Phenomenological Analysis. Understanding how people with YOD and their family carers experience 'aged' care facilities. What specific design processes provide therapeutic resource or, alternatively, barriers to quality of life. How are personalisation of space, autonomy, privacy, socialisation, and opportunities for achievement maximised by environmental and architectural design for the person with YOD?

I am pleased to advise that this application has been approved by the Central Health and Disability Ethics Committee. This decision was made through the HDEC-Expedited Review pathway. The Committee find this to be an interesting and well put together application.

Conditions of HDEC approval

HDEC approval for this study is subject to the following conditions being met prior to the commencement of the study in New Zealand. It is your responsibility, and that of the study's sponsor, to ensure that these conditions are met. No further review by the Central Health and Disability Ethics Committee is required.

Standard conditions:

1. Before the study commences at *any* locality in New Zealand, all relevant regulatory approvals must be obtained.
2. Before the study commences at a *given* locality in New Zealand, it must be authorised by that locality in Online Forms. Locality authorisation confirms that the locality is suitable for the safe and effective conduct of the study, and that local research governance issues have been addressed.

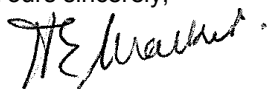
After HDEC review

Please refer to the *Standard Operating Procedures for Health and Disability Ethics Committees* (available on www.ethics.health.govt.nz) for HDEC requirements relating to amendments and other post-approval processes.

Your **next progress report** is due by **20 February 2015**.

Please don't hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,



Mrs Helen Walker
Chairperson
Central Health and Disability Ethics Committee

Encl: appendix A: documents submitted
appendix B: statement of compliance and list of members

Appendix A **Documents submitted**

<i>Document</i>	<i>Version</i>	<i>Date</i>
Protocol: Research Protocol	3	30 January 2014
PIS/CF: Study Consent	3	28 January 2014
Survey/questionnaire: Study Questions	2	28 January 2014
Evidence of scientific review: Scientific Peer Review	3	30 January 2014
Evidence of CI indemnity	1	21 January 2014
CVs for other Investigators	1	21 January 2014
PIS/CF: Patient Information	Patient Information	21 January 2014
PIS/CF for persons interested in welfare of non-consenting participant: Study Assent	2	28 January 2014
CV for CI	1	28 January 2014
Application	01	30 January 2014

Appendix B

Statement of compliance and list of members

Statement of compliance

The Central Health and Disability Ethics Committee:

- is constituted in accordance with its Terms of Reference
- operates in accordance with the *Standard Operating Procedures for Health and Disability Ethics Committees*, and with the principles of international good clinical practice (GCP)
- is approved by the Health Research Council of New Zealand's Ethics Committee for the purposes of section 25(1)(c) of the Health Research Council Act 1990
- is registered (number 00008712) with the US Department of Health and Human Services' Office for Human Research Protection (OHRP).

List of members

<i>Name</i>	<i>Category</i>	<i>Appointed</i>	<i>Term Expires</i>
Mrs Helen Walker	Lay (consumer/community perspectives)	01/07/2012	01/07/2015
Mr Paul Barnett	Lay (the law)	01/07/2012	01/07/2014
Mrs Gael Donoghue	Non-lay (health/disability service provision)	01/07/2012	01/07/2014
Mrs Sandy Gill	Lay (consumer/community perspectives)	01/07/2012	01/07/2014
Dr Ptries Herst	Non-lay (intervention studies)	01/07/2012	01/07/2015
Dr Dean Quinn	Non-lay (intervention studies)	01/07/2012	01/07/2015

<http://www.ethics.health.govt.nz>

A2 - EXPERIENCING PLACE INTERVIEW QUESTIONS



Interview Questions

Experiencing Place: Living with Younger Onset Dementia (YOD) in Aged Care Facilities

Researchers: Jacqueline McIntosh, Dr. Sally Rimkeit

1. Please tell us about the design of your care home? What do you like about it? Does it feel like home? What would you change?
2. What do you normally do during the day? What are your plans for tomorrow?
3. How do you keep fit? What do you do for fun? Are there things that you cannot do at the care home? What things would you like to do there?
4. How easy is it to find your way around the care home? Where do you go most often?
5. How often do you go outside? What is it like outside at your care home?
6. When your family and friends visit, where do you see them? Where do you have friendly chats?
7. What is your favourite place in the care home. Why do you like it? What place do you try to avoid? Why? Are there things that make you feel unsafe?
8. Is your room a really private space? Could you have a partner sleep over?
9. If you became upset at the care home, is there a special place where you could calm down?
10. What sort of care home would suit you best? What would the building design be like?