



WHERE CAN I CRY?

providing for emotionality
in the built environment

Where Can I Cry? providing for emotionality in the built environment

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abstract

Increasingly, research suggests that urban life is characterised by rising levels of distress (Söderström, 2017). We exist in a melee of social, political, cultural and environmental constructs, many of which require individuals to repress emotional expression and experiences. Without consciously doing so, we take cues from the designed environment as to what behaviours should be acted out in that space, and this has a direct impact on our well-being. This thesis explores how the built environment can be designed to support the emotional wellbeing of its occupants.

Current practice addressing well-being predominantly looks at cases of severe mental dysfunction (Söderström, 2017) or designing spaces that privilege physical concerns (Jencks & Heathcote, 2010). The research in this thesis is not directed towards such extreme instances of distress; it focuses on the capacity of designed environments to emotionally enable and empower all building users, taking into account a broad spectrum of emotional expression and responses to space. To accomplish this, existing literary research on emotional well-being is traversed and used to inform a series of design explorations. These aim to discover how the design of space can enable occupants to feel supported; to live their emotional lives with complete agency. A conceptual framework is developed, drawing on philosophy, psychology, sociology, neurology and geography, which informs architectural design experiments that test relationships between the body, the mind, and the architecture we engaged with.

This thesis involves a speculative approach to design research. Using design experiments at multiple scales, this thesis explores the potential of moments in the built environment where people have strong emotional connections to space, in order that a consciously compassionate design approach may be developed. Four architectural briefs are explored at three scales - installation, domestic and public scale - allowing design to inform the research. Each investigation is successive and becomes a testing ground to evaluate and critique the design outcomes prior to it. The design tests also involve progressively more architectural and interactive complexity. This sequence of design tests explores the potential of spaces to empower an inhabitant in architectural space to experience joy and sadness; to directly associate architecture with emotional well-ness.

acknowledgements

The patience and guidance of my supervisor Doctor Simon
Twose over the last three years, your willingness to humour my
understanding of 'deadlines' has been invaluable.

To my whanau, given and found
Mum, Dad, Uncle Mark and Nana, for raising me with care
My siblings, for still inviting me to family dinners anyway
My flatmates, for knowing when to check in
Oscar, for being the third space I never thought I needed.

To the compassion and grace of every kind ear who has humoured
this thought over the last decade.

Lastly and most powerfully, to my dear littlest sister Kathryn, who
has walked every step of my journeys with me. This is a testament to
the courage and dignity you inspire in those you care for.

Contents

abstract	v
acknowledgements	vii
preface	xi

background_____1

introduction	<u>3</u>
context	<u>11</u>

body space_____21

investigation one : installation	<u>23</u>
case study : Andy Goldsworthy	41
case study : Ensamble Studio	45
design development	49
brief	51
case study : Ola Söderström	65
findings and reflection	70

domestic space_____73

investigation two : home for one	<u>75</u>
brief	77
site	79
initial design	90
case study : Peter Zumthor	109
case study : Walter Pichler	113
design development	117
detailed design	131
findings and reflection	140
case study : Maggie's Cancer Caring Centers	143

investigation three : multi-dwelling	<u>147</u>
brief	149
site	151
concept design	152
installation re-evaluated	156
exploration	159
detailed design	167
findings and reflection	185
public scale_____	<u>189</u>
investigation four : emotional hospital	<u>191</u>
intro	193
site	195
case study : Madlove	201
case study : New Dunedin Hospital Proposal	205
brief	209
experiment one : escape	211
experiment two : interrupt	225
experiment three : interact	245
findings and reflection	263
conclusion_____	<u>265</u>
critical reflection	266
summary of findings	268
considerations of emotion	269
conclusion	270
further research	272
works cited_____	<u>275</u>
bibliography	276
figures	279

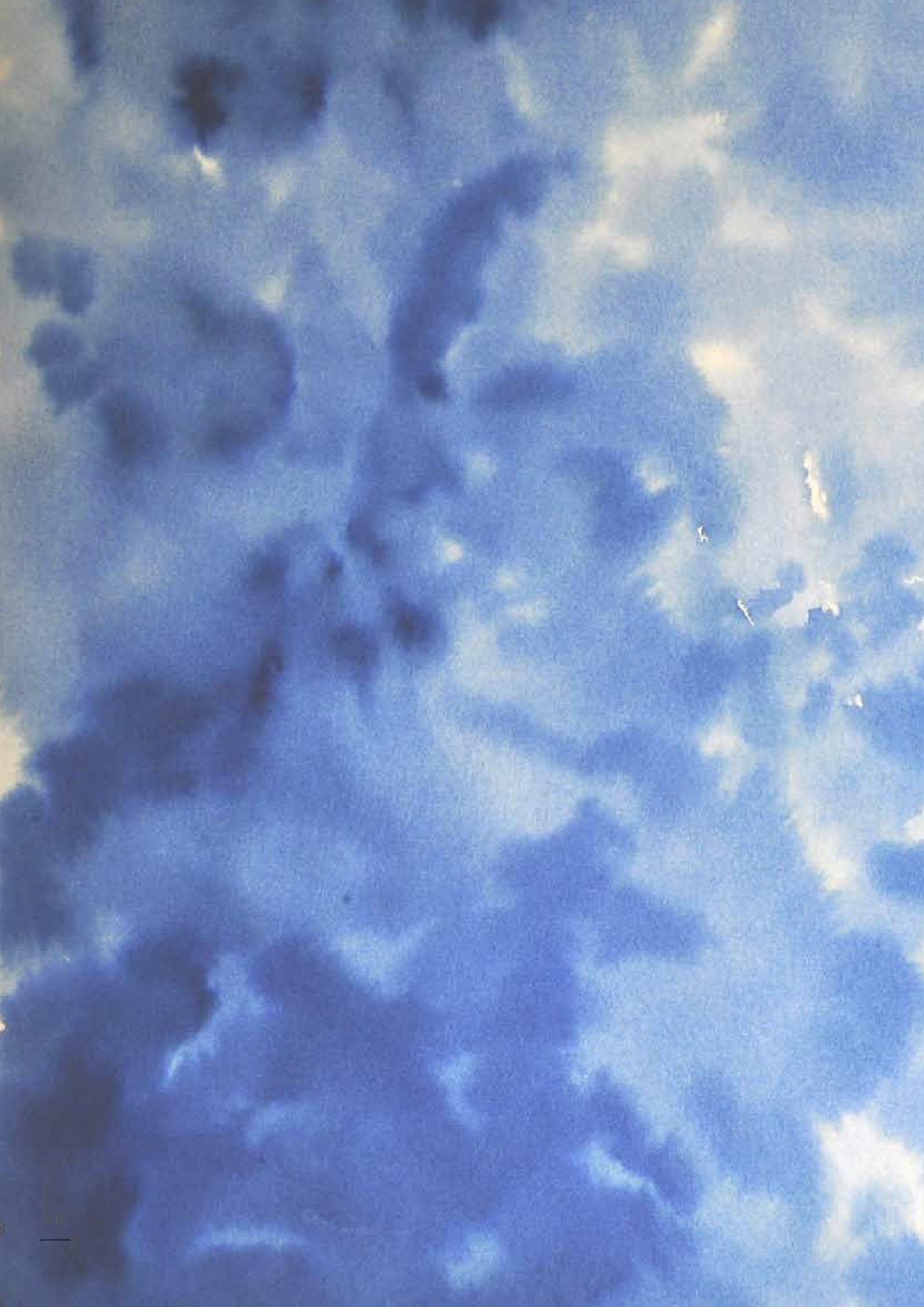
preface

Here-in lies a collection of investigations which, ultimately, are a very personal exploration of agency and emotionality in architectural space.

Although unintentionally divergent from what this research may have initially set out to be, it nonetheless demands the acknowledgement of the designer, as a researcher and as an emotional being, in the knowledge that:

I am my own world.

For this reason, and by the nature of the topic at hand, just like my world, the design is simultaneously flawed and complete. The emotions designed are my emotions, the memories - my memories, the mind - my mind, its hopes and confusions - a mirror of my world. On reflection it is clear an investigation of this nature can never truly be separated from the self by which it is conceived, but will inescapably turn to reflect the subjective and emotional contexts from which it is called forth. Therefore, in no way does this research claim to represent or be in pursuit of an objective truth. This is merely one world's subjective contribution in the hope that we may one day build a collective understanding of how we may be emotionally well in our built spaces.



The background is a vibrant blue watercolor wash with various shades of blue and white, creating a textured, cloud-like effect. The word "background" is centered in a black, sans-serif font, flanked by two horizontal black lines.

background



introduction





overview

Modern life takes place in a melee of social, political, cultural and environmental constructs, many of which require individuals to repress emotional expression and experiences. The genesis of this thesis lies in two key considerations. Firstly, there is a growing body of research which suggests that life in urban environments is characterised by increasing levels of distress. This has a direct link to a deteriorating emotional well-being of individuals leading to adverse health effects (Duff, 2012). Secondly, that an increasing awareness of the importance of physical accessibility in the built environment begins to suggest how accessibility benefits the agency of all building users (Imrie & Kullman, 2017). The combination of these two statements precipitate the current investigation into what an emotionally accessible built environment might be like.

Although there is a body of research evolving around emotion in architecture, the majority of this is directive to the creation of spaces which induce specific emotional responses in its occupants. Spaces which make us happy, sad, angry, relaxed, but ultimately these are not the genuine emotions of the subject themselves, merely another directive output programmed into the built environment around them by its designer. This architecture exists to induce a temporary emotional state at the expense of the occupant's existing emotional state

going unaddressed. This research takes the inverse of this path and explores how space can be designed to empower existing emotional states as a way to support the emotional well-being of occupants. This research is carried out following a body of philosophy which provides a theoretical framework, around which design can be developed and evaluated.

Although theoretical discourse on matters of care, wellbeing and embodiment in space are developing widely, current architectural practice is less widely applied to the matter of emotional agency. At present the closest comparable architectural practice addressing wellbeing is concerned with mental health care, more specifically dealing with cases of severe mental dysfunction (Söderström, 2017), institutional patient care settings (Jencks & Heathcote, 2010) or physical accessibility (Imrie & Kullman, 2017). This close consideration of architecture aligned to medical diagnosis is practiced largely in spaces already set aside as environments of care and more specifically where considerations of the occupant or user of the space are synonymous with that person also being a patient. Maggie's Cancer Caring Centers in the United Kingdom is the closest such practice aligned with the interests of the current research, as it considers how the expression of physical environment is crucial to supporting the emotional experience and recovery

of cancer patients. These projects employ at all stage of design development, an understanding of how emotionality is being addressed by the built environment (Jencks & Heathcote, 2010). Although this is evolving a more comprehensive and compassionate model of healthcare it remains strictly aligned to post-diagnosis care. This leaves little practice consciously addressing wider groups of building users or the impact of non-institutional spaces with the intention of using emotional empowerment to reduce levels of distress.

Based on an assessment of a broad range of research this thesis speculates that users who feel they have more emotional agency in their daily lives would be more empowered in their emotional states, be better able to address their own emotional needs and ultimately experience lower levels of distress in going about their lives (Duff, 2012).

The research is not directed at creating a perfect care environment, nor does it intend to directly address diagnosed mental illness or presume to suggest design as a cure for such extreme instances of emotional distress. In concerning itself with the nexus between emotionality, wellbeing, embodiment and architectural space this thesis proposes to make a speculative exploration into how the design of space can support occupants in feeling enabled to live their emotional lives with complete agency.

HOW CAN THE
DESIGN OF THE
BUILT ENVIRONMENT
SUPPORT
EMOTIONAL HEALTH
AND WELL-BEING?

aims & objectives

Aims:

- To investigate the interaction between the human mind, the human body and the spaces they inhabit.
- To explore an architectural language of emotional agency.

Objectives:

- To identify and evaluate architectural qualities which engage with the occupant through emotional qualities.
- To develop an architectural language to articulate aspects of emotional agency in the built environment.
- To integrate this architectural language into a critical investigation of design outcomes across a range of scales.
- To evaluate these design outcomes against existing cross-disciplinary thinking which has implications on this course of investigation.

scope

This thesis IS:

- An exploration of how humans relate to themselves, others and the spaces they inhabit
- A speculative design practice
- Using programme as a testing ground
- Developing an architectural language of care and emotional agency

This thesis IS NOT:

- A health care thesis
- Proposing architecture as a 'cure' to mental and emotional illness
- Proposing a singular successful design outcome
- Attempting to create exclusively 'happy' emotional spaces

methodology

This thesis applies a design-as-research methodology. Architectural experiments are informed by, and aim to inform, cross-disciplinary research into embodiment and emotional agency in space. A theoretical model of the body-mind-architecture relationship is explored, picking up on the research of such key figures as Juhani Pallasmaa, Peter Zumthor, Maurice Merleau-Ponty, Heinrich Wölfflin, and Ola Söderström. This is tested through four explorations, which are:

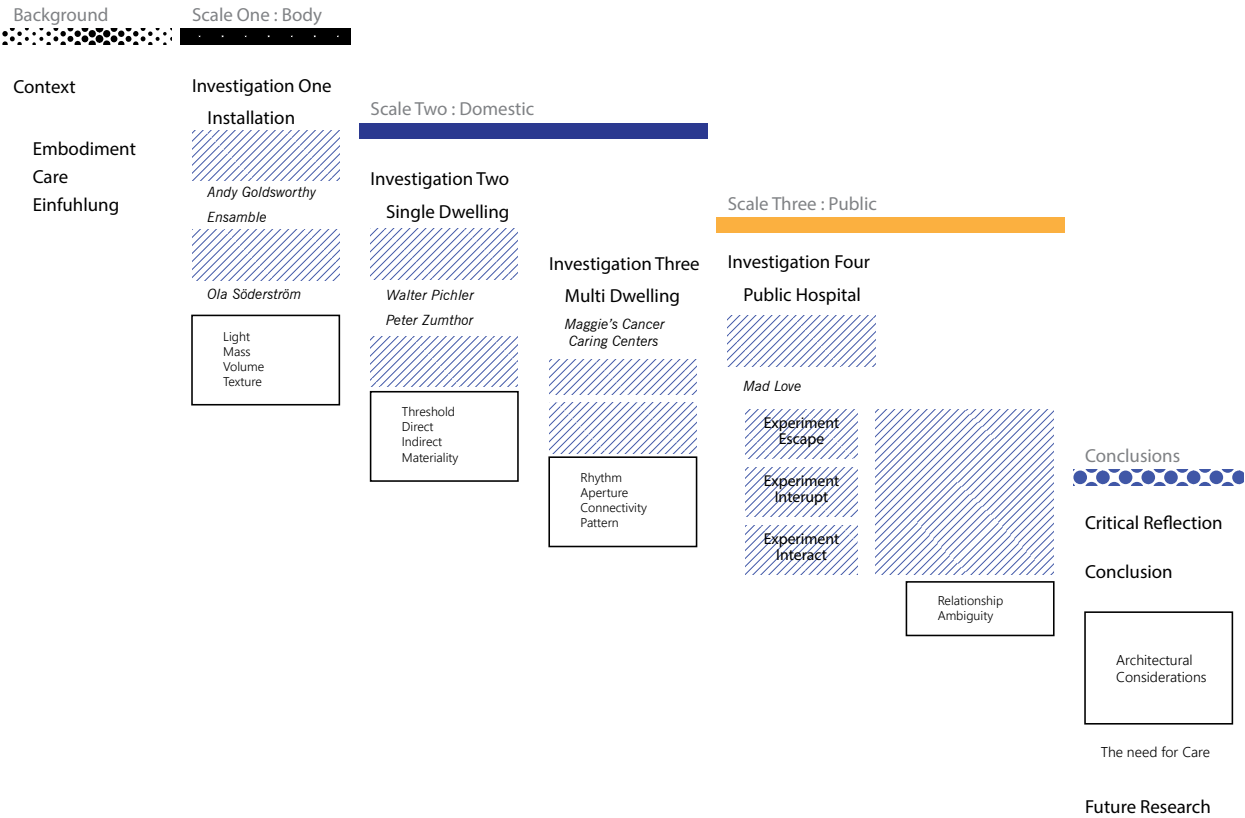
1. Installation,
2. Single Unit Residential,
3. Multi-Unit Residential
4. Public Hospital.

The investigation begins by designing an installation in an abstract setting, conceived for a single occupant. This is followed by the design of two domestic scale buildings, each introducing a higher level of social complexity. Investigations for this intermediate scale are carried out across multiple sites in suburban Wellington to test the expression of the thesis aims and ideas in variable site conditions. The next phase involves taking the discoveries of the domestic scale experiment and testing them at an increased scale. These are used to consider the emotional programme of a district hospital, which becomes a testing ground for the

final investigation. The proposed redevelopment of the Dunedin hospital is taken as the site for a network of in-between spaces designed to provide moments of emotional intensity and expression.

The processes applied to this work comprise of both digital and analogue work flows. The emphasis has been primarily on hand-craft, in drawing and modelling, to maintain a connection between the body and the design process. This is supplemented with digital practices where appropriate. Critical reflection is applied at each stage of the investigation, to address the research aims and objectives and inform the research questioning, which results in progressively more focussed investigation.

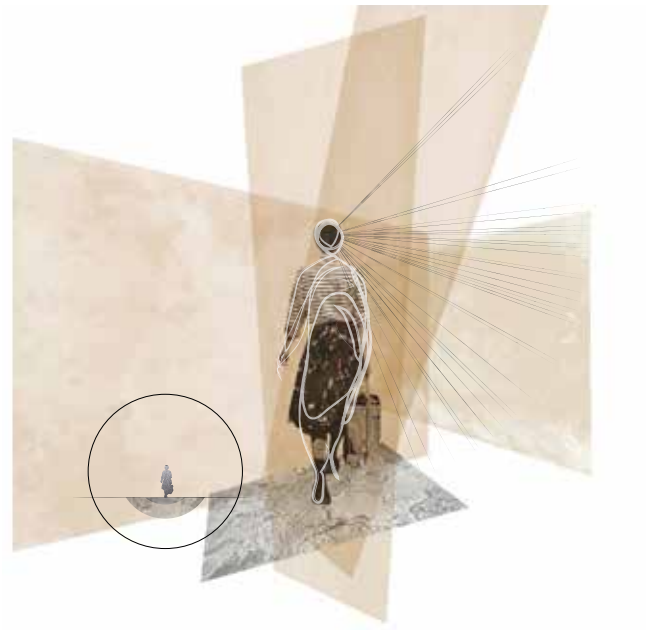
thesis structure







context



theoretical context

“The process by which the brain determines or computes the value of a stimulus” – Joseph Le Doux on emotions (as quoted in Mallgrave, 2015, p.19)

“Emotion is the multi-sensory medium through which we engage the world,...” – Harry Francis Mallgrave (Mallgrave, 2015, p. 20)

This discussion will identify the theoretical background from which this thesis builds its understanding of embodiment, care and spatial empathy. These form the basis that allows this thesis to explore and evaluate the outcomes of its designed investigations in order to develop a deeper understanding of emotional wellbeing in the built environment.

It must first be acknowledged that many of the concepts in this thesis were conceived in other languages and therefore rely heavily on nuances which do not necessarily translate faithfully. This also means that original texts were accessed as translations or through secondary sources which may impact the interpretation of concepts through translational accuracy (as highlighted by Gernot Böhme (2017, p. 90)).

We begin by understanding the subtle differences of our own language. Feelings and

emotions are not the same although the English language allows them to be used interchangeably. For the sake of clarity this discussion will use ‘feeling’ to refer to the sensations of being while ‘feelings’ are the cognitive expressions we use to identify a mood. It is through emotion that we come to interpret the experience of these stimuli and come to a cognitive understanding of self (Mallgrave, 2015). This is not necessarily relegated to the domain of the mind but, taking into account an embodied experience of the world in which the physical and abstract bodies function as an organic whole, is experienced with all of one’s being (Robinson, 2011). Much as we feel with touch, we also feel with our mental connection to the world (Pallasmaa, 2009).

Another distinction critical to the discussion of this thesis is the difference between emotion and emotionality. Where emotion is our interpretation of stimulus, emotionality becomes our reaction to those emotions. The behavioural and psychological components which express our emotional states (Mallgrave, 2015). From this understanding we can now begin to build the connections needed to relate emotion, through embodied emotionality to a model of agency in the built environment.

Embodiment: Emotion, Mind, Body, Space

“Human consciousness is an embodied consciousness; the world is structured around a sensory and corporeal centre ... The human body is a knowing entity” – Juhani Pallasmaa (Pallasmaa, 2009, p.13).

Embodiment is a concept involving a connection between body and mind (Merleau-Ponty, 1962). Closely linked with discussions of perception, embodiment becomes a way of understanding how individuals experience and perceive the world around them (Peri Bader, 2015). This thesis takes a phenomenological approach to understanding this relationship between emotion and space through the embodied experience of individuals.

Phenomenology is a method of consideration as opposed to a definitive philosophical stance which aims to define the quantities and relations of human essence (Merleau-Ponty, 1962). Within phenomenological discussion there is not necessarily one single model of how an embodied being functions within itself. What is common to all strains of this discussion, is an understanding of embodiment characterised by physical and

abstract components of experience. These, often referred to as bodies, function inter-dependently as organic quantities within a whole (Robinson, 2015). This suggests a nonhierarchical layering of experiential contributors (Pallasmaa, 2005). These layers make up the essential nature of our worlds. Each layer then becomes not an entity in itself but a filter through which we collect and interpret information. All parts of the body organically interact to function as a whole body without thresholds between (Robinson, 2015, p. 139). This back and forth relational dynamic provides a way to evaluate the complex nuance of human experience, as it develops an inter-reaction of self and space. This casts embodiment in consideration of the sensorially intelligent, thinking body and which can then be discussed in terms of inseparable physical and abstract qualities (Pallasmaa, 2009).

It is through our physical experience that the world enters us; we connect to it and collect from it data to comprehend our experiences (Pallasmaa, 2009). Some of these stimulants are common to all, however, the interpretation of these is not. On receiving this raw data from the body, the abstract body interprets it into tangible understandings and creates an entirely new information set (Merleau-Ponty, 1962). This informs our understanding of the surroundings. We cannot control how this alters or amends the raw experience as it is rooted

deep within each of our thoughts, memories, and understandings. It makes up our world, the entirety of our lived experience. Because of this, no two people understand their environments the same (Merleau-Ponty, 1962).

Through interaction and exposure to expressive quantities the boundaries of the self and the world flow together and blur the lines between the self and the world (Pallasmaa, 2009, p. 20). A three-dimensional architecture unifies depth into the presence of perception and fleshes it out with the complexities of an embodied world (Holl et al., 2006, p. 41). Buildings are therefore an extension of the human body. They serve to protect and breathe a visceral understanding of being into those who dwell within them (Robinson & Pallasmaa, 2015). "... the art form of architecture does not only provide a shelter for the body, it also redefines the contour of our consciousness, and it is a true externalisation of our mind" (Pallasmaa, 2009, p.20). Architecture is another layer to the physical body which comes to house the mind, and therefore the emotional body, through the conduit of its physicality (Zumthor & Oberli-Turner, 2006, p.36).

Phenomenology is a method of thinking (Merleau-Ponty, 1962) and, taking this approach, this thesis engages phenomenological architecture as a mode of speculative thinking. This becomes central to the thesis' research as it affords opportunities of

a self-divulging investigation, by which design itself explores relational dynamics of the mind, body and space, and their emotional implications.

Care, Agency, Wellbeing

“... the unbiased and full understanding of human embodied existence is the prerequisite for a dignified life.” – Juhani Pallasmaa (Pallasmaa, 2009, p.20)

This section will discuss ethical care, personal agency and wellbeing in relation to how these are enacted in and through the design of built environments. When we think of care in the built environment it could be considered natural to jump to thoughts of hospital rooms and old people's homes, spaces which allow for medical recovery, spaces especially set aside for the programmatic healing of individuals (Imrie & Kullman, 2017). Meanwhile, spaces not set aside in this way, spaces where we live the majority of our lives, provide for their occupants to be physically able, mentally competent, culturally conforming and emotionally compliant. Anomalies in the physical or abstract experiences of an individual constitute experiences of disability as an occupant in a world that privileges ability. This is where we begin to consider what is referred to as the 'ethics of care'.

'Care' as a verb, is a cross-disciplinary notion. It may hold many different meanings to many people and there is little agreement on what exactly this verb looks like in the practice of architecture (Imrie & Kullman, 2017). Although often depicted as a moral or ethical framework due to its origins in feminist social sciences and political theory (de La Bellacasa, 2012) there is a much more outcome driven argument for the inclusion of care in design practice (Söderström et al., 2017). Characteristics of such 'care' as it is theorised is that it is an intentional and active consideration of the relationships between things built from an understanding that any given subject exists entirely within their unique world of experience (de La Bellacasa, 2012). It represents a shifting incorporation of actions and ideas which form a reaction to compassionate needs (Imrie & Kullman, 2017). Any act is suggested as being an act of 'care' where it is done in the intention of developing and maintaining the complex balance which constitutes the wellbeing of a lived experience within a subjective world (Tronto, 1993).

It must be noted however that discussion of 'care' does not specifically desire the creation of a 'perfect world' but seeks instead to meaningfully engage with the reconciliation of how individuals experience their personal world's within the constructs of the world that surrounds them (de La Bellacasa, 2012).

When discussed in terms of the built environment, care comes to consider how physical infrastructure acts as a vessel in which encounters of an interactive caring community take place, thus causing those structures themselves to become a part of the mechanism of caring (Imrie & Kullman, 2017). Currently the standard of 'caring' in design practice as falling short of its potential, diminishing the acceptable standard of care' to merely guard against directly doing harm rather than actively enabling the inhabitant (Imrie & Kullman, 2017).

Agency in the context of this thesis is used to refer to the concept of human agency. This is defined as the capacity of an individual to independently enact an expression on their world, supported by the ability to act unimpeded (Duff, 2012). Critical to this understanding is the acknowledgement that agency can only be experienced where the expression of an individual is unimpeded. This can be considered as an individual having a sense of empowerment or the experience of being enabled in their expression by the world around them (Söderström, 2017). These are experiences often linked with the development of positive wellbeing (Duff, 2012). In terms of emotionality in the built environment, this is not necessarily the case, not because individuals are unable to experience emotions but because they are denied the ability to act out the necessary emotionality to process these

experiences (Duff, 2012). This lack of emotional agency in the built environment has a direct impact on quality of life experienced by those who inhabit it (Söderström et al., 2017).

In design, this means identifying and considering, in constant evaluation, the qualities of what we design and how these formally and informally act upon the users of the design. Care becomes an important dimension of the design process as it is that by which an unbiased understanding of user needs can be brought to influence the outcomes of a design process. Care is therefore a method of thinking, a consideration beyond analysis, engaging not only the design, but the designer themselves (Imrie & Kullman, 2017). Through this extended understanding, all architectural or designed spaces, all places and environments, exist as spaces of care (Söderström, 2017). In considering more closely the matter of caring and its enactment, it becomes apparent that within the context of 'care' as an architectural reaction, the space which this should inhabit is a space within architectural practice itself, not merely the spaces which architecture creates.

Einfühlung: Empathy In Architecture

“They [biology, psychology, neuroscience, phenomenology, etc] all converge on this fact: all human endeavours depend upon our brains functioning as organic members of our bodies, which are in turn actively engaged with the ecological, architectural, social and cultural environments in which we dwell.” – Sarah Robinson (Robinson & Pallasmaa, 2015, p. 3)

The final addition to this theoretical context bridges the gap in how architecture communicates care, agency and emotional well-being through an individual's embodied emotionality experience in the built environment. The concept which becomes this bridge is the German notion of *Einfühlung* (spatial empathy). As a discussion this concept suggests a framework of architectural qualities which will be used to design and evaluate an expression of emotional agency in the built environment.

Empathy as it is used here is not the same as interpersonal empathy, which is the common use in English. *Einfühlung* is rather the emotive recognition between a self and a space (Curtis, 2014, p. 366). Although initially proposed in relation to art

history by the German philosopher Robert Vischer, the concept of *einfühlung* entered architectural discourse around the turn of the century through the work of thinkers such as Heinrich Wölfflin and August Schmarsow (Schützeichel, 2013, p. 293). Although closely aligned within models of phenomenological thinking, *einfühlung* is a distinct line of discussion which specifically focuses on the outer edge of where the self meets the space around them through emotional stimulation/ understanding and embraces scientific investigation (Wagner, 2014) in a way which phenomenology does not (Merleau-Ponty, 1962).

Both Wölfflin and Schmarsow saw their work as establishing the beginnings of architectural psychology (Schützeichel, 2013, p. 299). At this time however psychology as a unique field was very young (Curtis, 2014) and so it is only now that these concepts can be connected to modern neurological and psychological research through the recent discovery of mirror systems in the brain. Mirror systems are the bio-neurological function which allow the brain to comprehend things observed but not yet processed (Mallgrave, 2015). For this reason the self can identify through craft and interaction, the ‘human’ in spaces (Mallgrave, 2015). This discovery of ‘embodied simulation’ has caused a revitalisation of *einfühlung* in theoretical discourse lead by Karsten Strueber (Curtis, 2014, p. 357) for

its potential scientific proofs for the articulation of spatial embodiment (Mallgrave, 2015). Although this field needs significant further investigation from both a scientific and theoretical standpoint, such a finding does lend legitimacy to speculation into what implications these investigations could have on the relationship between emotional identities and the built environment.

There is an understanding that *einfühlung* relies on the projection of the self into space to then have an emotive feedback of understanding. We experience buildings as having both their own physical presence but also as an extension of our own embodiment (Wagner, 2014). While Schmarsow was more concerned with bodily experience, it is Wölfflin who link the interpretation of emotion to architecture (Schützeichel, 2013, p. 301). Meaningfully this builds on two divisions of experiences induced by *einfühlung* identified by Vischer, these being *Ausfühlung* - the 'expansion of self' - and *Zusammenfühlung* - the 'constriction of self' (Curtis, 2014, p. 366). It is this 'expansion of self' which holds the most interest to the current research as it suggests that a self can come to a more harmonious understanding of itself in space by first projecting itself into that space as a vehicle for locating itself. Objects and indeed, spaces, are most meaningful where there is an emotional transference (Wagner, 2014, p. 408), but more

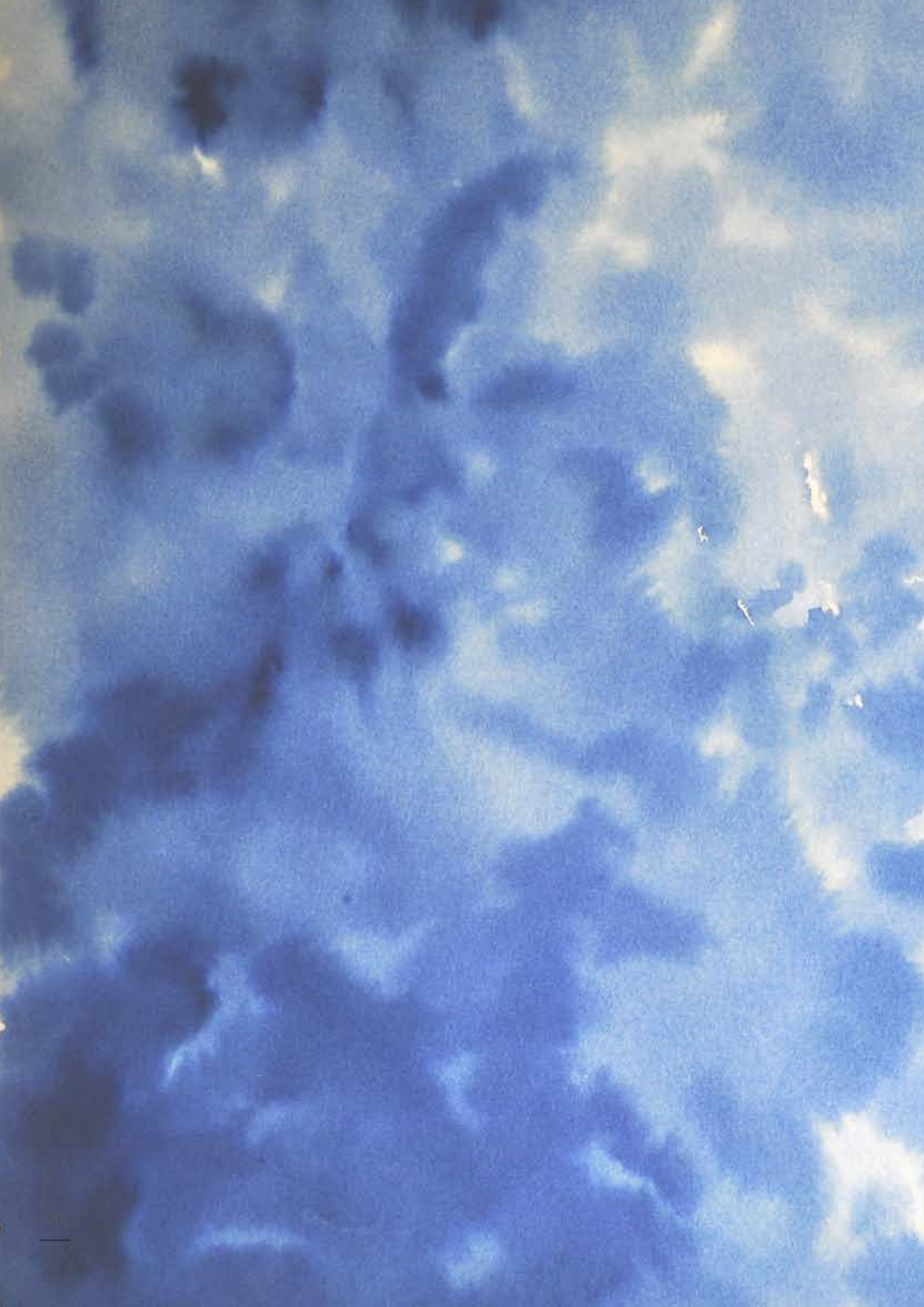
importantly where that transference is sympathetic with the existing qualities of the subject's self (Wagner, 2014, p. 409). This pushes *einfühlung* beyond the anthropomorphisation of objects to be a transferal of understanding between a self and their environment (Curtis, 2014). Connecting this to phenomenology it allows the experience of *einfühlung* to describe the process by which phenomenological embodiment casts space as an extension of self and an externalised filter of the functioning mind.


By this model this thesis proposes space as a critical vehicle in the translation of emotion to emotionality as a filter through which individuals can connect more deeply with their unique emotional self. Architecture cannot be a rule for how to live in space but an invitation to behave in a certain way (De Botton, 2006, p. 20). The invitation of emotional agency, empowerment, authentic emotionality. This research will base itself around developing an architecture which could provide a more empowering invitation for inhabitants to connect to their built surroundings in times of emotional distress. Here *einfühlung* also plays a key role in the development of this research as it becomes the basis for some investigations into an architectural language of spatial emotional agency. Some properties which could be explored as a way of articulating this invitation of empowered

emotionality include: spatial relationships, formal proportions, scale, pattern, rhythm, tactility and creative (Mallgrave, 2015, p. 21), materials (Ursprung, 2014, p. 48), verticality and horizontality (Wagner, 2014, p.419).

Conclusion

Care must be enacted in the design process to create buildings which provide the unbiased experience of agency which is necessary for empowering individuals' emotionality and wellbeing in architectural space. Taking a phenomenological approach to understand emotionality as an embodied phenomenon, this thesis builds a relationship between emotion and the architectural world around it. This is an understanding increasingly informed by cross-disciplinary investigation into the mind-body-space relationship which leads us to the neurological development of philosophical spatial empathy (einfühlung). In particular this theory has developed over recent decades to be a crucial tool linking the particular interests of this research, emotionality in the built environment. This lead to a set of spatial tools with which to start meaningfully exploring its thesis through design lead research which will use design exploration to test and develop these tools into a framework with which to design emotional agency into the built environment.





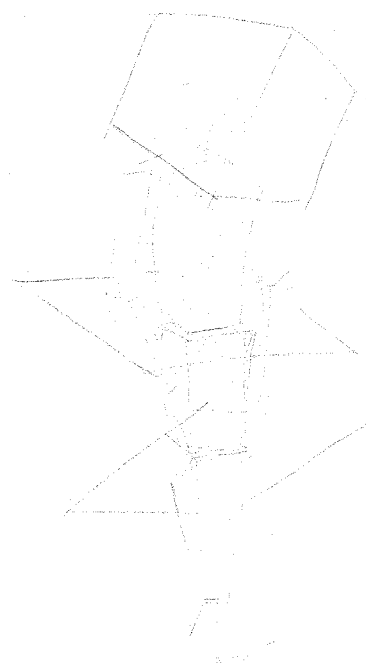
body space



investigation one

installation

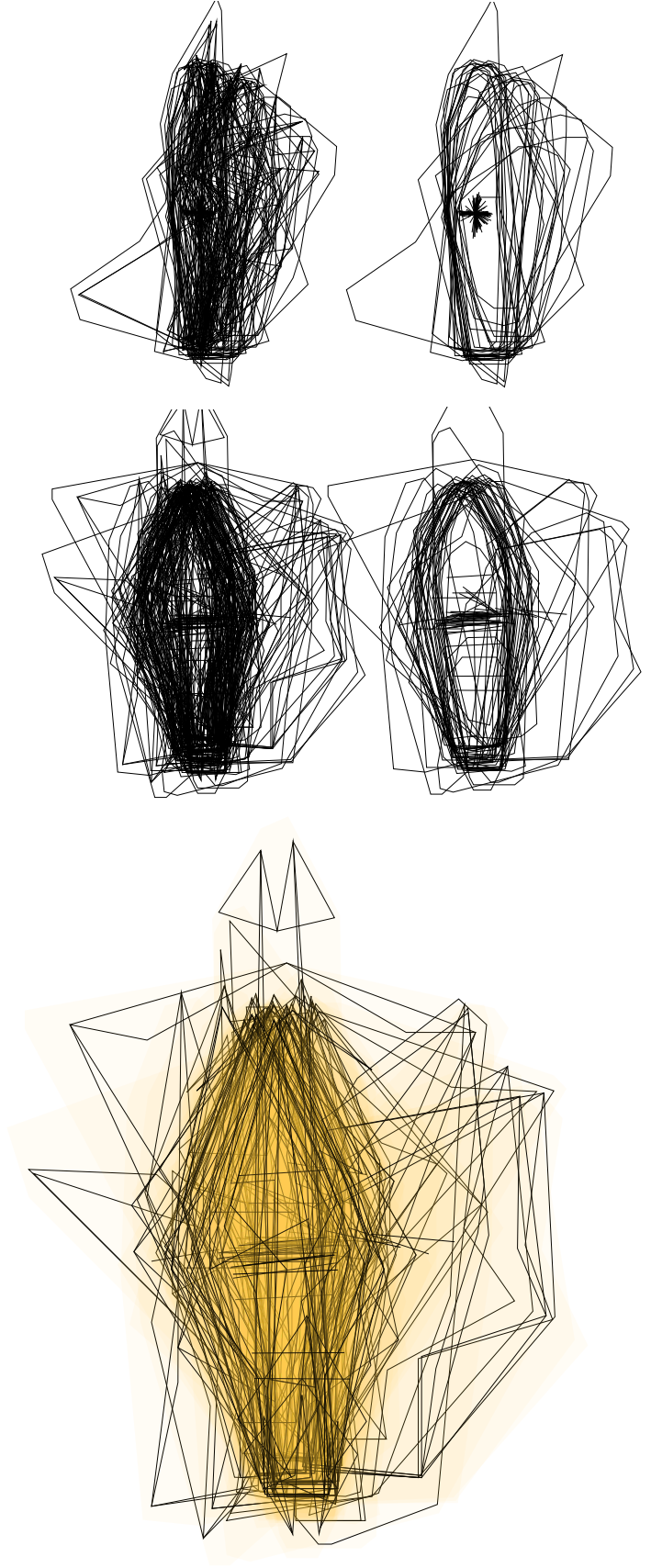


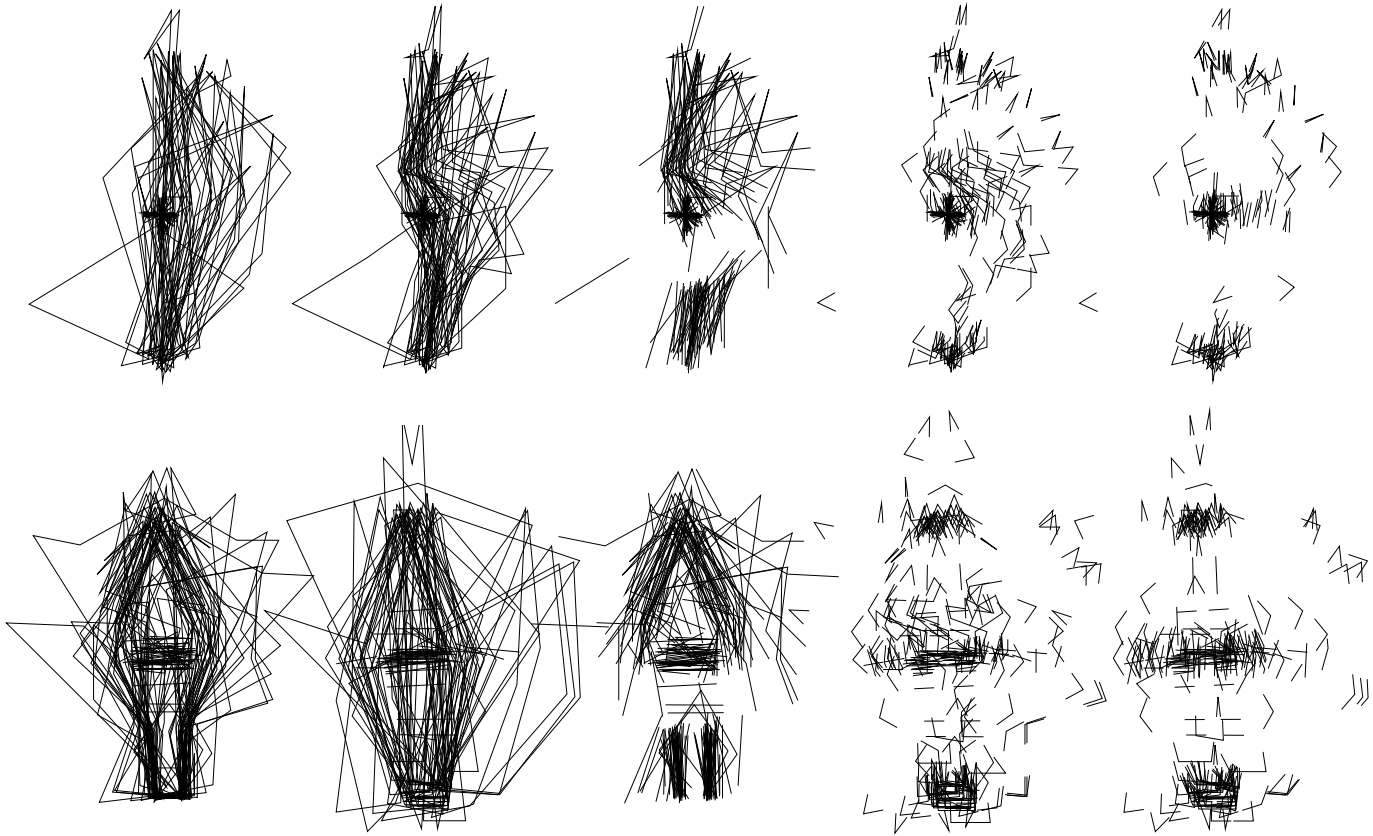


introduction

This first chapter of investigation begins at the scale of the body. Starting very early in the research, this design process happened in parallel to the collection of related discourse as a way for design to react to its theoretical context. Through this exploration design became a tool of testing its own parameters. Using design as an explorative process allowed the scope to be explored through critical learning and resulted in the initial design investigation to refine its brief in a meaningful way which informed how each subsequent investigation would build on the evaluation of the last.

The starting place of this exploration investigates the human body through photography and drawing before pushing into modelling as a way of setting out into architecture. As this exploration occurs in parallel to the initial background research this section is interspersed with meaningful case studies which direct the consideration and development of this investigation in particular. Through this process a collection of spatial qualities are identified for further exploration which become the basis for an ongoing development of considerations to translate intentions of care into emotionally supportive built environments. From these experiments a final brief for an installation is defined and executed. This is imagined as a siteless headspace for a single occupant to express address and meditate on their emotional needs. Leading on from these investigations a critical reflection is made of the design to evaluate its findings so that these can inform the brief and focus of the following investigation.





Illustrations of the human body in motion tracking points and mass to identify how the body is recognised from the side (above) and facing (below), digital drawing over digital film capture

Concluding drawing identifying the essential core of the human body in space, digital drawing

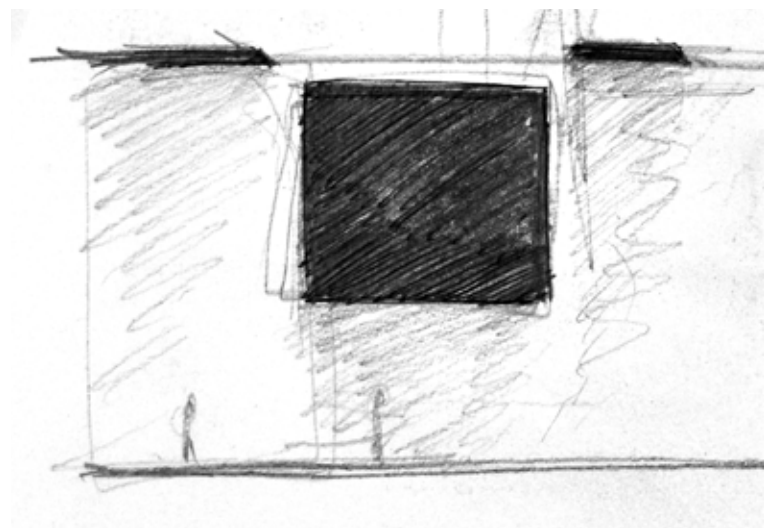
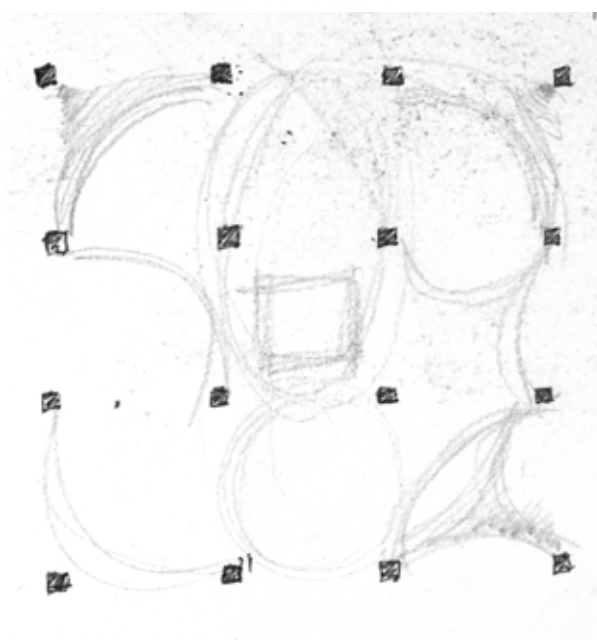
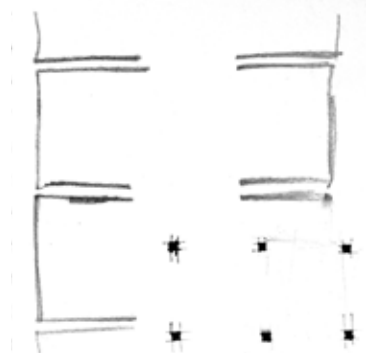
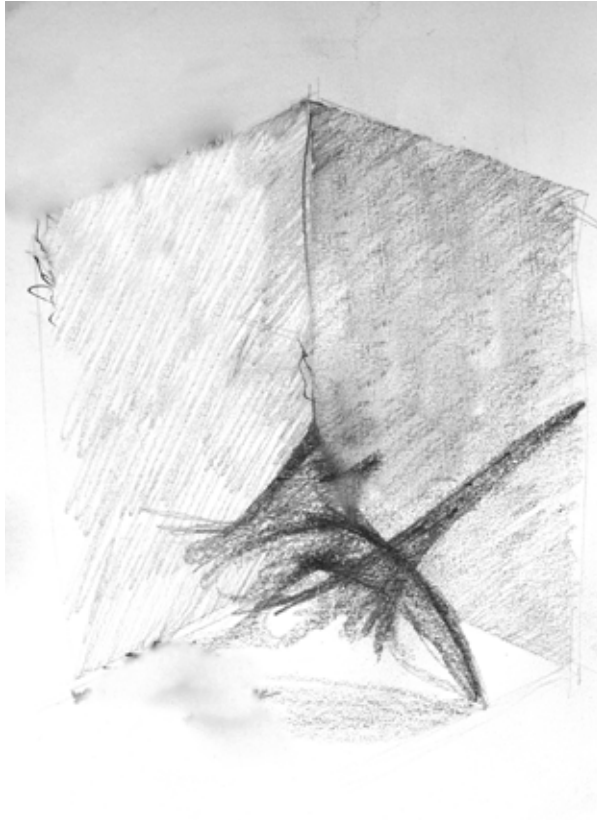
From the outset it was important to understand the key element of any experience, the embodied self. At this early stage there was also an exploration of body looking at the body's relationship to itself and how it is identified as well as how it can see itself in space.

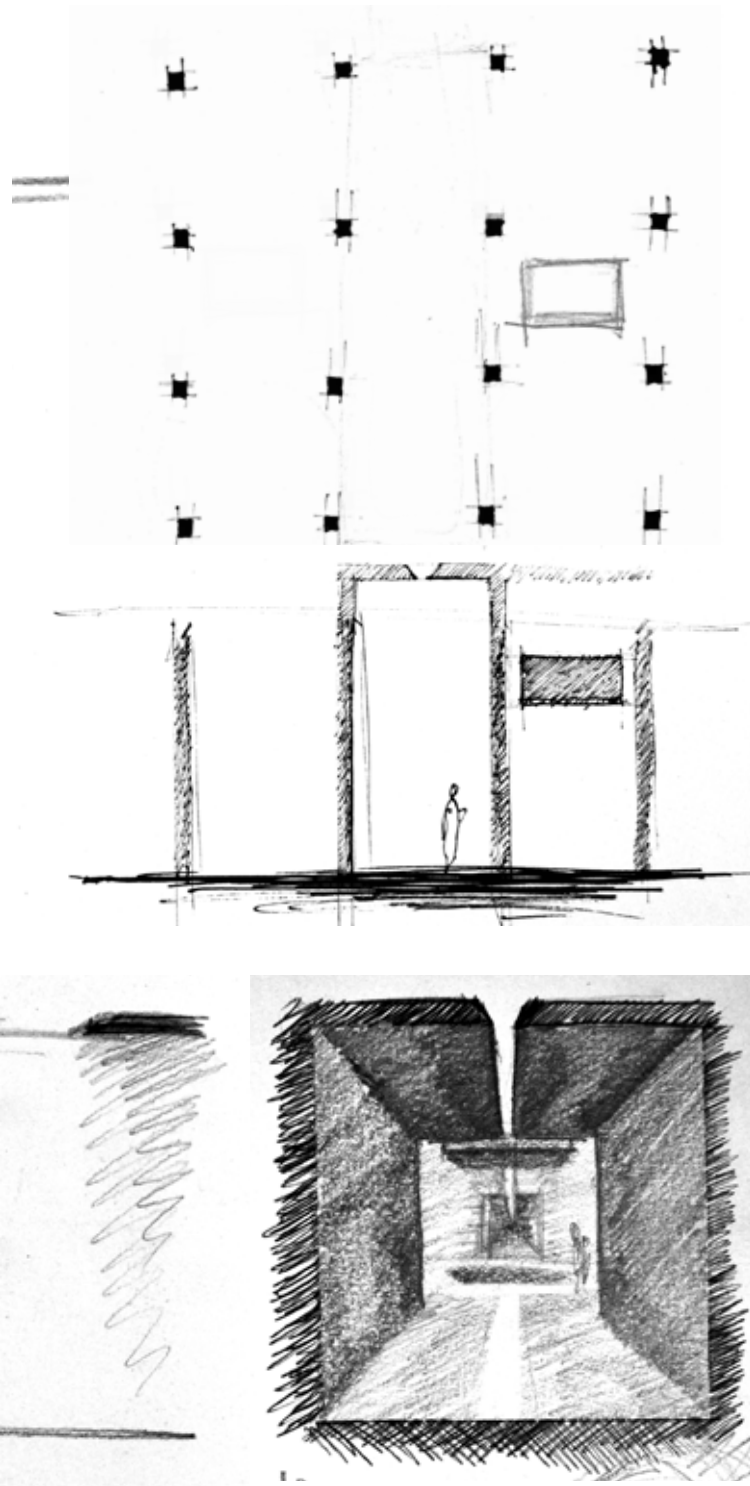
Initiated by investigations of the body and its embodied identity the initial stage of this installation investigation undertake a series of explorations. These experiments are broad in their interests and expressions and consider a range of emotional conditions. On reflection, these designs were identified as not connecting meaningfully to the essential ideas of emotion sought by the thesis.

*Initial intuition designs with habitation,
model, stretch fabric and card*

*(over page) Exploring different
installations, scales and forms with
particular themes of suspended forms
and shadow, sketches and models*



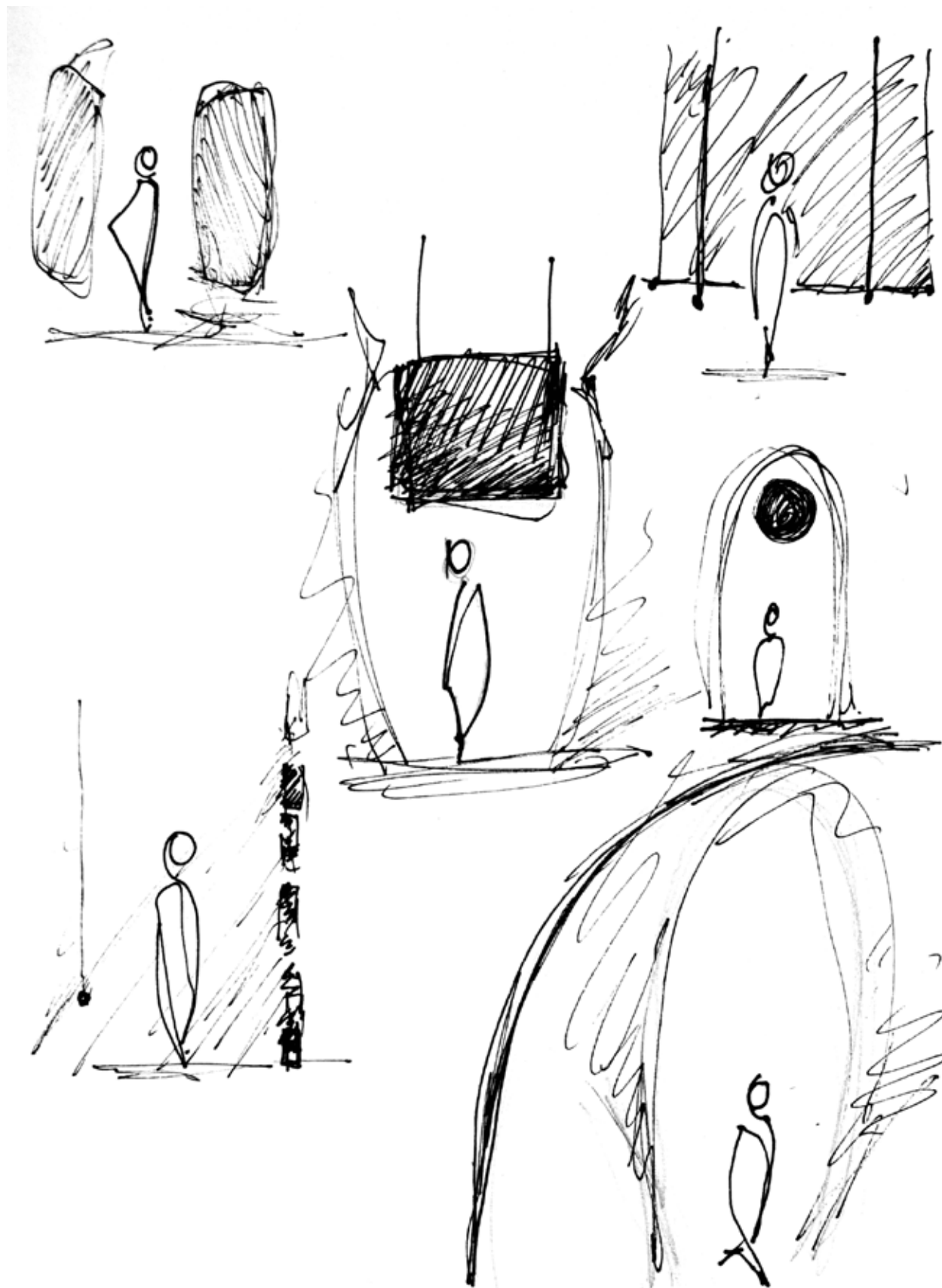


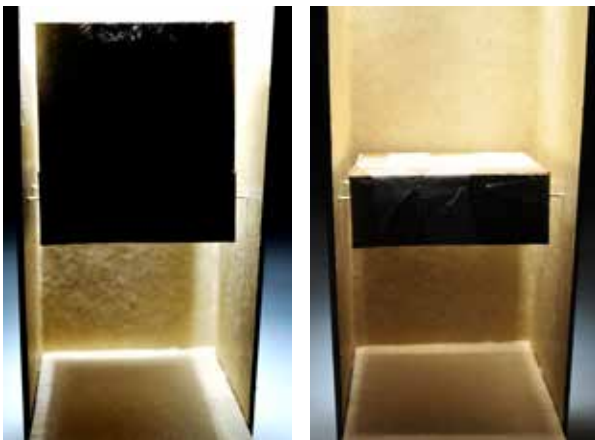
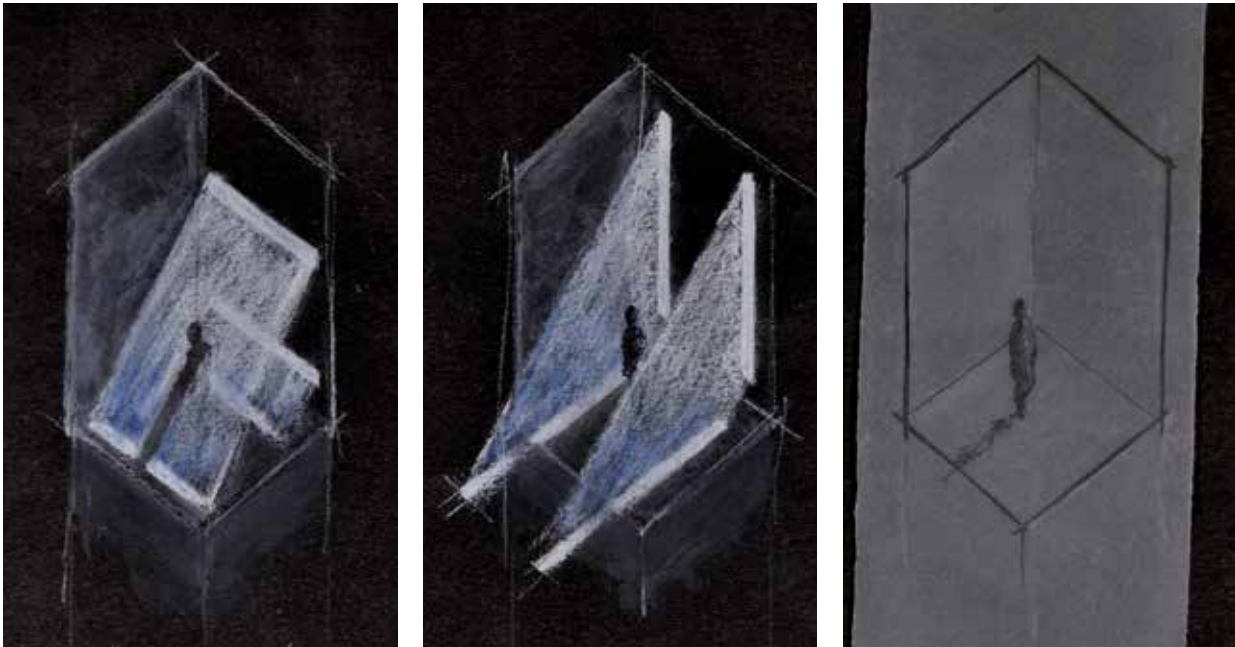


At this stage the concept develops around a range of spaces which would be something more like an abstract pavilion space to address variance and reflect the breadth of experiential needs. In these agency would be represented by the freedom of the individual to position themselves in the space in whatever way most reflected their emotional identity. This however proved too ambitious on the grounds of introducing too much complexity before the lower parameters of the research were explored. There was no clear direction to these explorations although, on reflection, each unsuccessful investigation built on an understanding of what was essential.

Each successive investigation identifies a quality of mass in relation to the human occupant. These particularly exist in suspension above the subject and imply an understanding of the gravity of space. Informed directly by the theoretical context of *einfühlung* this explores design communicating the possibility of a gradient of emotional gravity through spaces of high and low mass. Key elements which lead on from these explorations were an idea of volume informing behavioural conditions of intimacy within a space and the role of light which later informed a more specific inquiry through design.

Light was taken as a measure of not only the possible emotional conditions of space, but also as





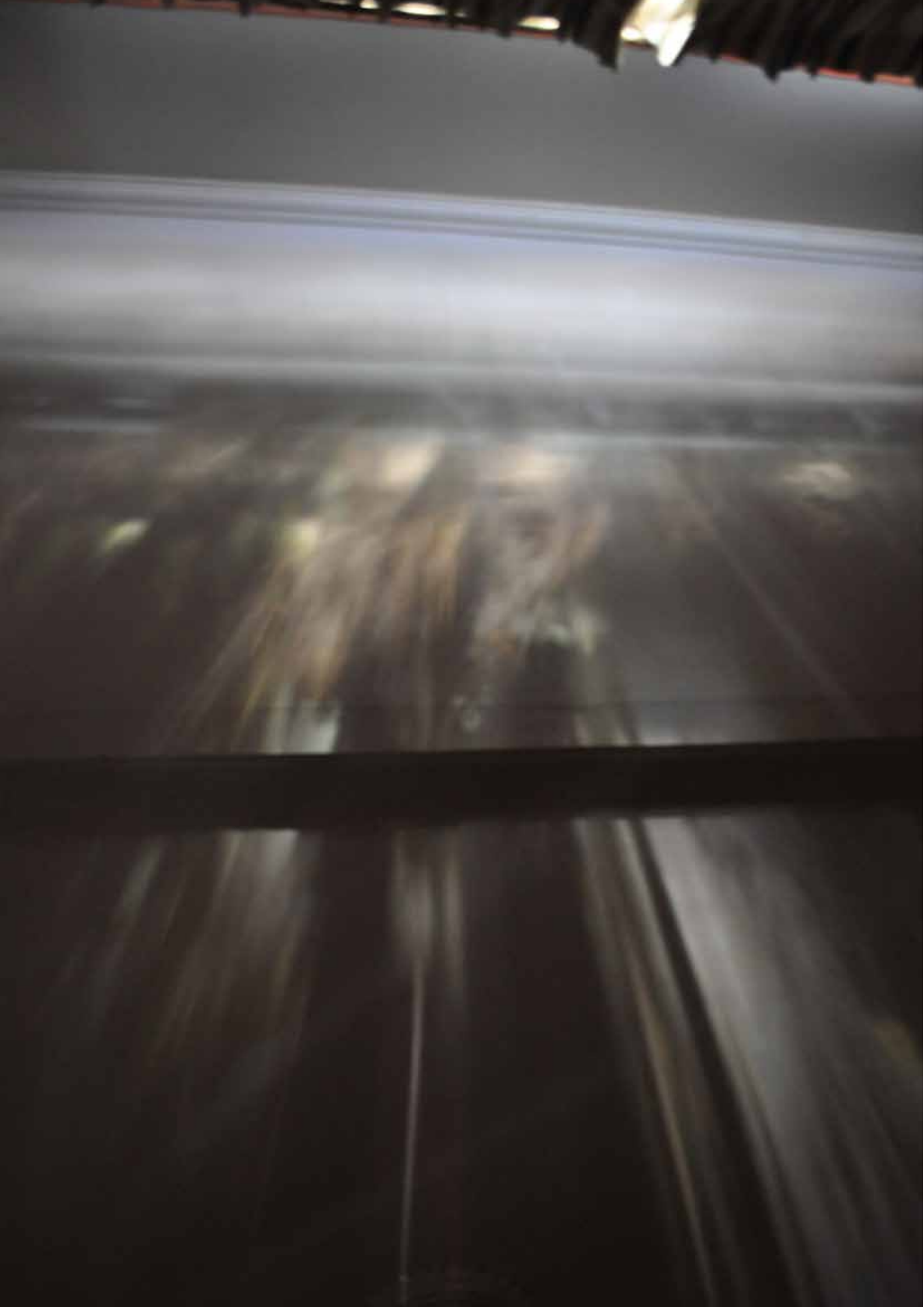
Explorations of mass and light relationship, sketch model, cardboard, masking tape and pins

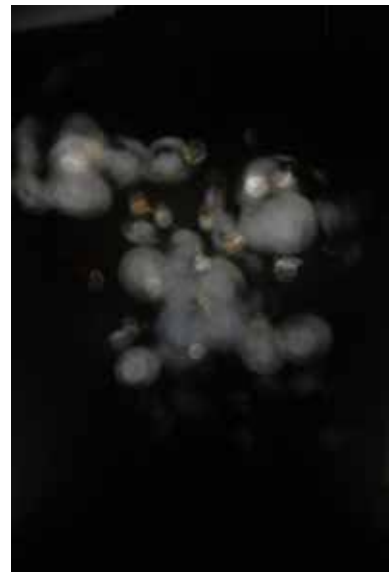
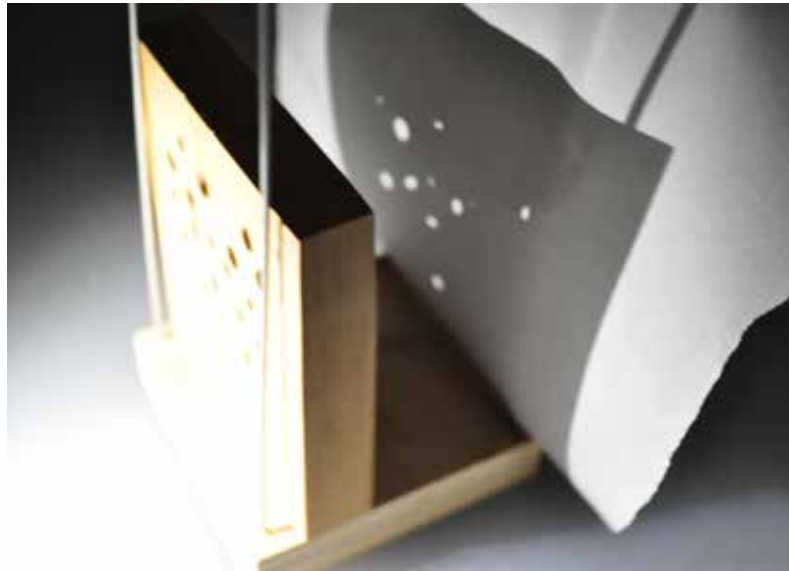
Exploration of light as threshold and volume, sketches, conté and ink on black sugar paper

Explorations of volume, form and mass in relation to body, sketch ink on cartridge

a denotation of form and threshold within space. This involved considering how a space could be set aside through shifts of lighting quality as encoding shifts in agency and emotional connection through photographic studies light is also considered in ways beyond utility and explored as visual texture. Pushing beyond considerations of light purely as lighting and exploring it as a sensory stimulus in space connects to an embodied understanding of space. In this way light connects to touch and more diverse experiences. Similarly texture connects both through sight as well as touch.

This led to an investigation of material texture. As an isolated experiment this was done





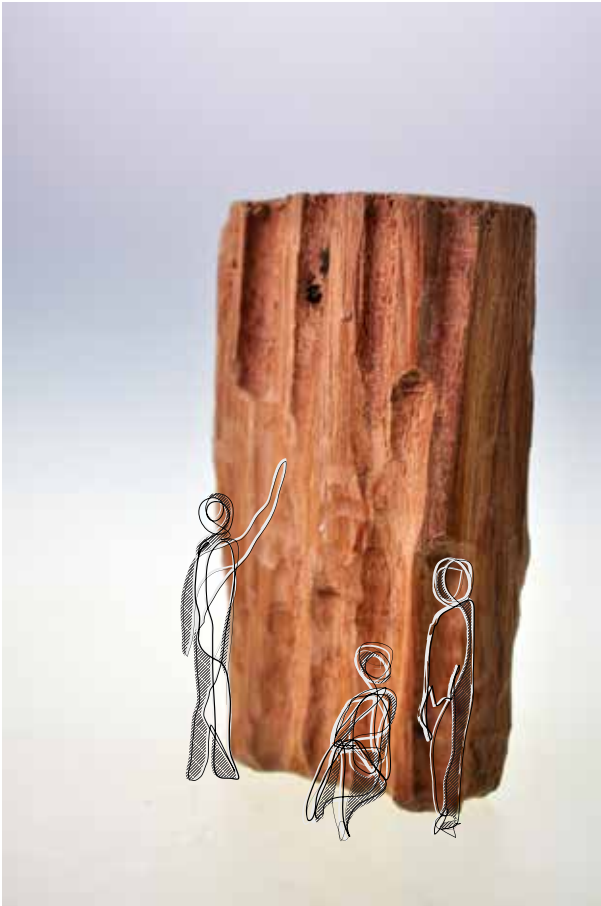
Emotive lighting condition in authors home, digital photography

Series exploring lighting through mass including Montage of change in lighting condition over time, digital photography and model, wood, detail paper, wire, light

through applying a variety of textures to an object. Rough tools were used to form the object and areas are then smoothed to simulate repetitive touch. For this reason, discussions of phenomenology and the space for the body reentered the conscious considerations of the design language used in the exploration. From this also comes an understanding of texture as it is articulated through light as texture is largely described by the combination of surface and shadow.

In reflecting on these initial experiments it becomes clear that the key aspects of architectural qualities which should lead the initial development were light, mass, volume and texture. These,

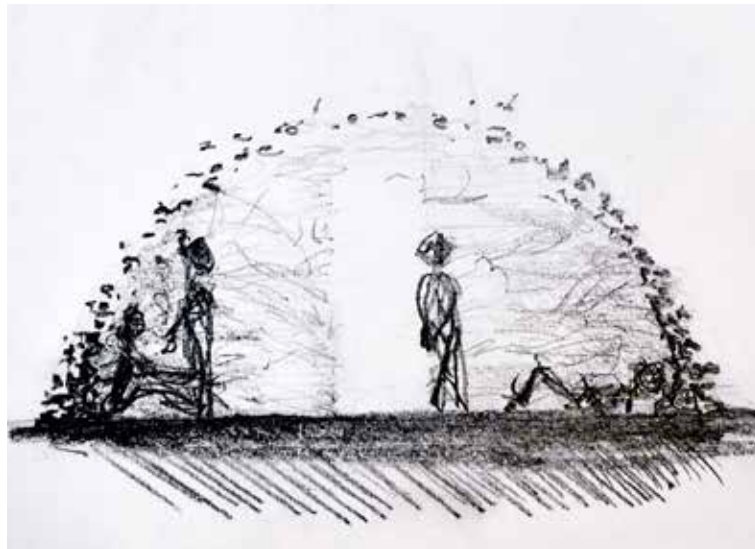
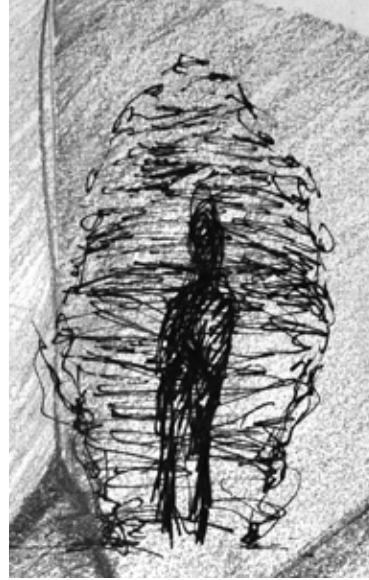




Texture study looking at the visual and tactile effects of rough and smoothed surfaces as well as weathering, wood

Human interaction with textural material condition, photograph overlaid with digital drawing

informed by design and case study analysis form the beginnings of the development of architectural language which begin at a simpler scale and are then elaborated and refined through the incremental introduction of complexity through the brief and scope of design and additional layers of spatial qualities in later investigations.



Sketch ideation of personal and shared emotional nesting spaces, ink and pencil on cartridge paper

Investigation of formal to haphazard construction arrangements, sketch model, PVA and match sticks







case study

Andy Goldsworthy



Chambers

Project: Chambers

Designers: Andy Goldsworthy

Date: 1999-2001

Location: Clougha Pike, UK

Figures: 1-2

Project: Chapelle Sainte-Madeleine

Designers: Andy Goldsworthy

Date: 2002

Location: Refuge d'art, France

Figure: 3



Chambers is a series of landscape installations by the artist Andy Goldsworthy which connect in very essential ways to the theoretical basis of this investigation. Inspired by shore side graves carved into coastal rock, Goldsworthy explores the relationship in which a subject recognises another subject through the medium of an object (Goldsworthy, 2002). Essentially this builds on a similar, if not the same, experience as described in experiences of *empathie*. Goldsworthy describes the intention of this work to:

“...strengthen its association with the human presence and form. [...] The Chamber will be a place in which for people to stand - a space where people will have stood before them, and others will stand after they’ve left. Each visitor will add to the human presence.” (Goldsworthy, 2002, p. 51)

These capture the awareness of the subject’s physicality the mass of the materials and a shift in the tactile and visual texture which denotes the shift from exterior to interior. Sharp texture are associated with the exterior, speaking of the tools and machines and roughness which created them, while the smooth aligned interior form and its proportions of occupation are a tactile reminder of human touch and how the passage of time weathers familiar

objects. Through this Goldsworthy celebrates not only presence in space through embodiment, but also connect dimensions of memory and time to the work, both of which are deeply emotionally driven quantities with the effect of connecting the present subject to the subjects who have and will interact with the object in the same ways throughout its life.

This is all achieved through a careful a harmonic understanding of the body through Goldsworthy’s own embodied connection to the work at all stages of the design process.

Image Credit: Owen Walks

Retrieved from:

www.owenswalks.org/imglances/lan072_06.jpg

Image Credit: York Alpine Club

Retrieved from:

yorkalpineclub.org.uk/blogs/

Image Credit: Mark Goudy and Liza Riddle

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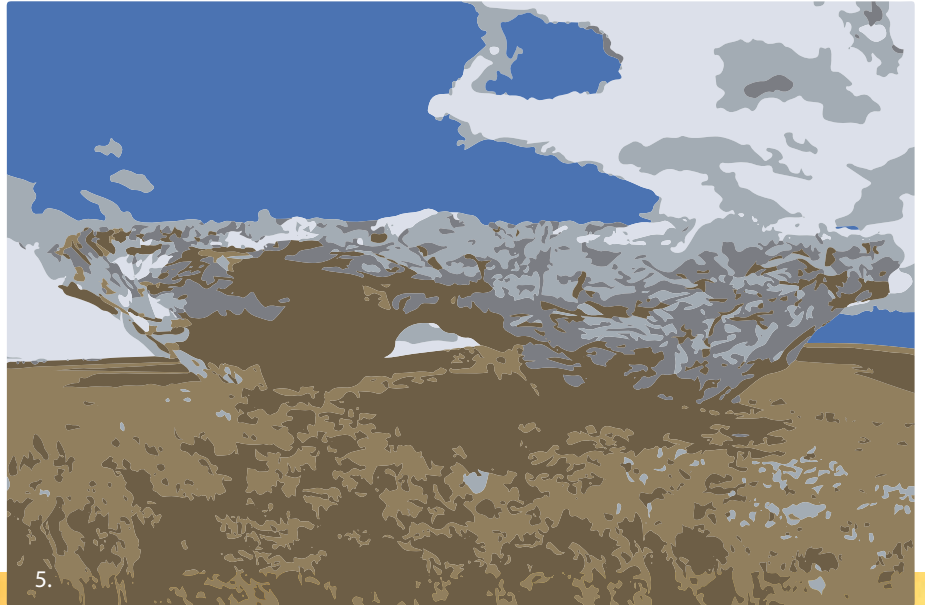
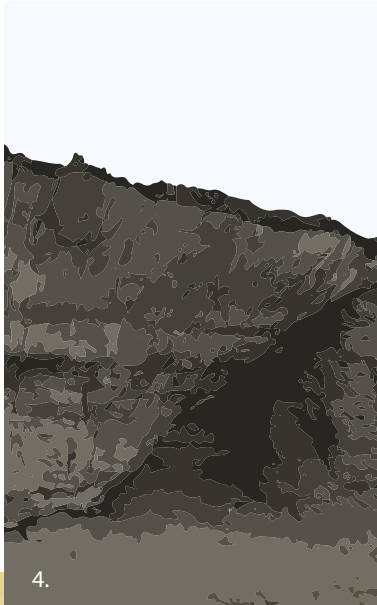
www.thundercloudstudio.com/Travel/europe_2012/andy_hike/images/madeleine.jpg





case study

Ensamble Studio



Tippet Rise Art Centre

*Project: Domo, Bearclaw Portal,
Inverted Portal*

Designers: Ensamble Studio

Date: 2015

Location: Tippet Rise, MA, USA

construction of 'domo'

Image Credit: Ensamble Studio

render of 'domo'

*Image Credit: Ensamble Studio / Tippet
Rise*

*'Beartooth portal' structure with person
indicating scale*

Image Credit: Iwan Baan / Tippet rise

*textural detail of form showing imprint
of the natural structures from which they
have been cast*

*Image Credit: Ensamble Studio / Tippet
Rise*

'Inverted Portal'

*Image Credit: Ensamble Studio / Tippet
Rise*

*all images retrieved from: [www.
designboom.com](http://www.designboom.com)*



6.



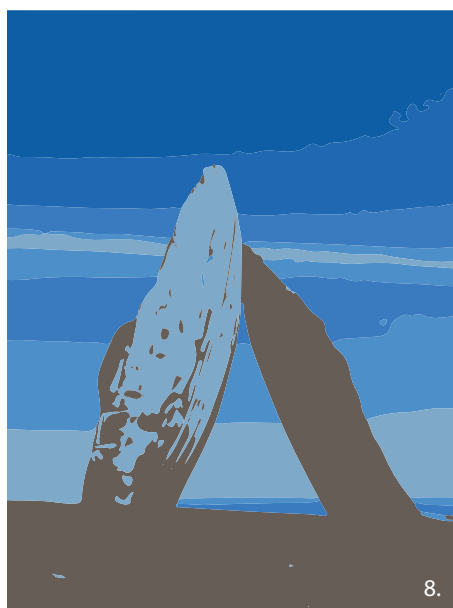
7.

Ensamble Studio's installations at Tippet Rise are the ultimate celebration of mass and volume. Sited in the vast landscape of Montana, USA, these megalithic concrete structures are of a scale far removed from that of the human body. Formed through a unique process of casting concrete in the earth these objects, through their contrasting smooth cast and rough weathered surfaces, carry marks of both the man made and the natural material processes that formed them.

These surfaces come to direct an input of interaction into the object. The smoothed surfaces are accessible, intractable, man-made and manageable although seemingly natural at the same time in the arc and materiality. The rougher surfaces on the other hand look towards the landscape and through this diametric conversation between mass volume and texture, the objects serve to articulate a gradient of presence between the landscape and the individual. This is supposed as having an emotional component in experiencing the structure as the individual transitions from existing within the landscape to communing with it through the medium of another physical body.

They are immense masses existing within a volume of space so much more immense as to dwarf their scale entirely. It is in this conflict of scales which these interventions come to resonate with the experience of the viewer. As *einfühlung* argues, it is

through our understanding of our own physicality that we come to access the constructed physicality of the object. The sheer proportion and compositional placement of each structure become the presence of grounding as a conduit to understanding the human scale within the scale-less volume of a landscape.



8.





installation

design development



brief

The aim of this design experiment is to explore ideas of volume, mass, texture and light to convey emotional elements in space. This was explored through an installation for a single occupant. Focusing on capturing a 'head space', a space of mental refuge, the design developed in association with ideas of meditative transience at its core. This was imagined as an intervention which could exist within an abstract setting that could be any built environment and rejuvenate a subject's ability to step out of that space into a personal environment where they may express how they needed/emotionally required. This lack of physical site was intentional as it allowed the designer to more closely consider the world of the subject as the site of the experience and stripped out a layer of complexity to be addressed at a following stage of the research where it could be used to test the architectural language developed here/ the findings of this investigation.

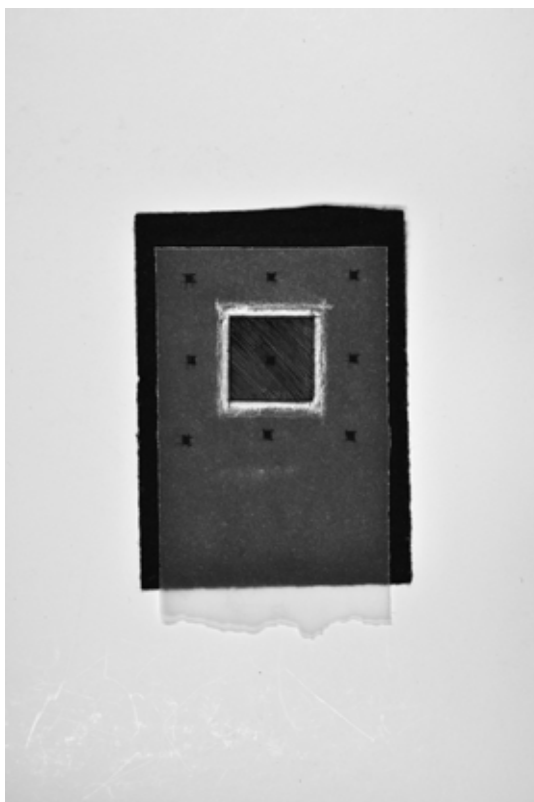




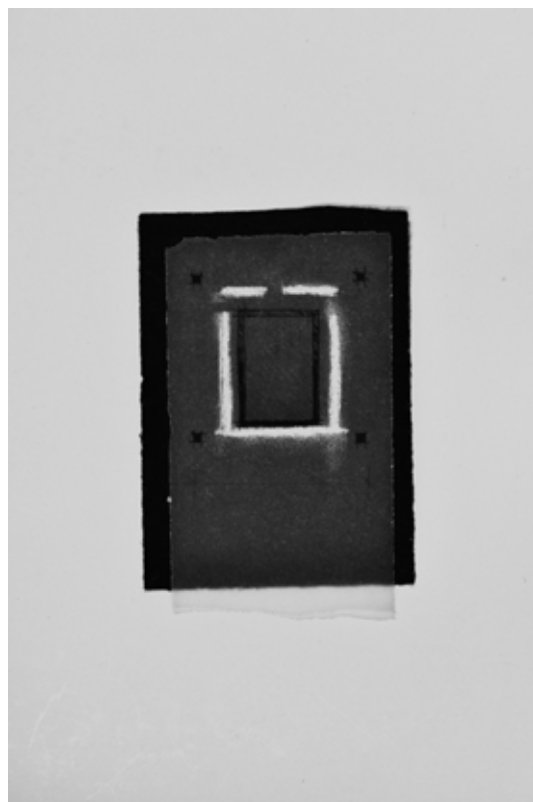
(previous spread) A reimagining of a previous model reimagined under the new brief, model 1:20

Impression sketches sketch for potential design expression, pencil and ink on cartridge paper and detail paper

Initial impression sketches exploring volume in relation to body



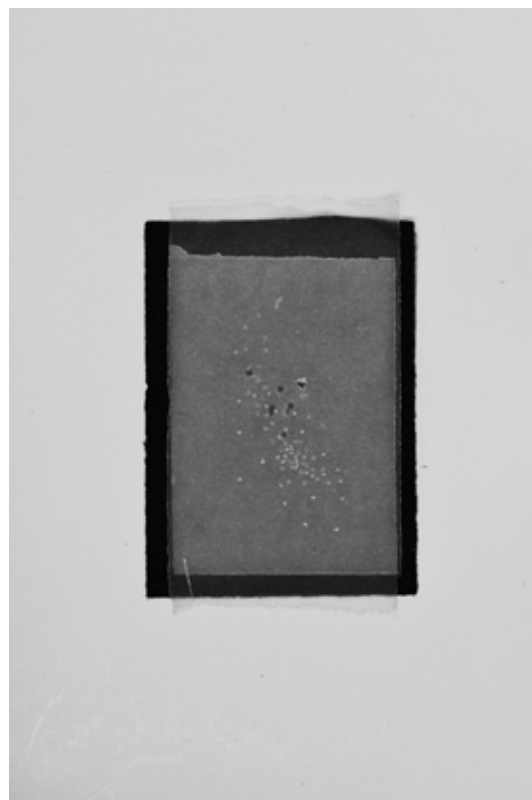
*Light bound volume study, white
conté, black paper, transparency*



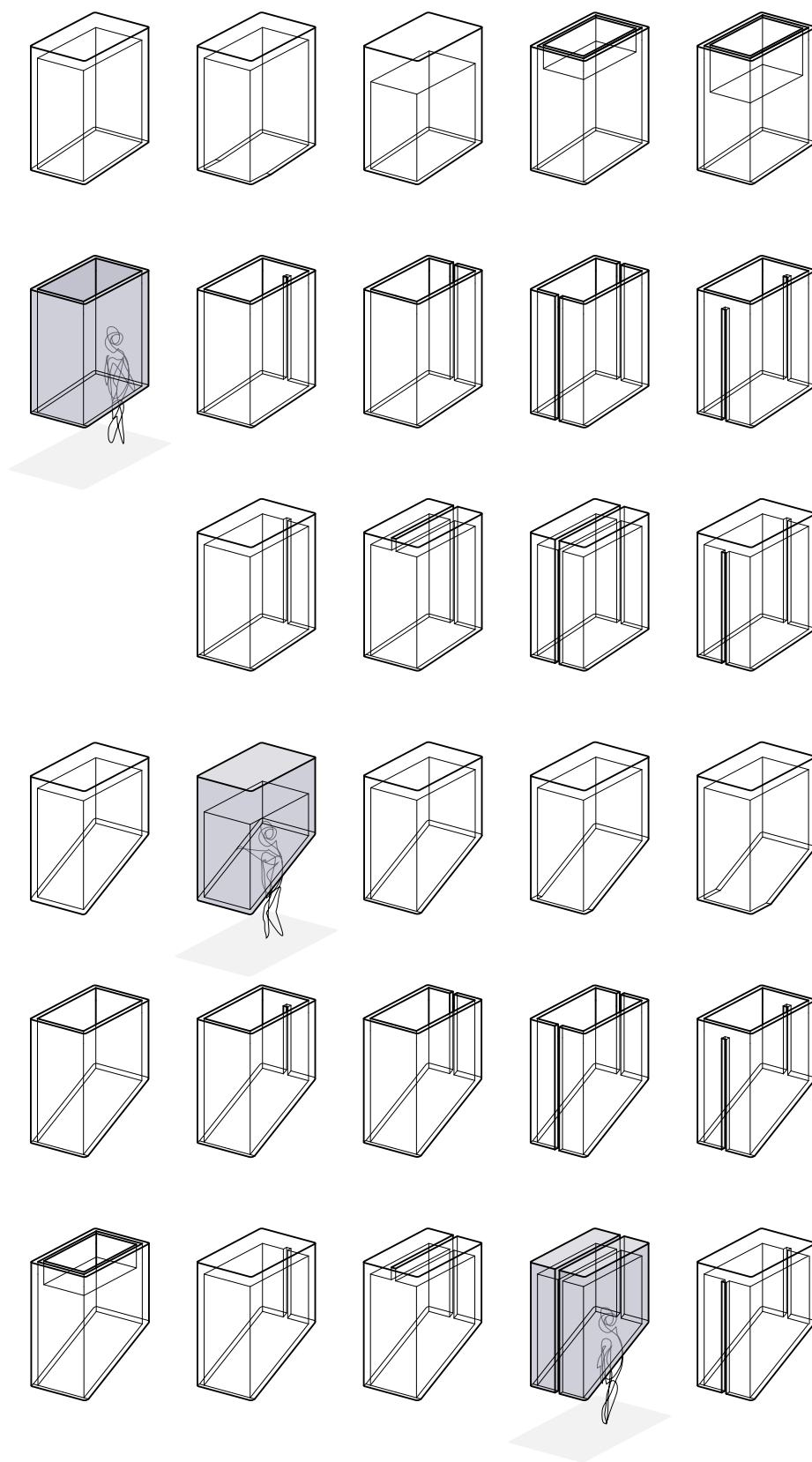
*Light bound mass study, white
conté, black paper, transparency*



Atmospheric light and volume study, white conté, black paper, transparency



Light as visual texture study, black paper and detail paper





Iterative volume testing to identify form and expressions of mass and light opening

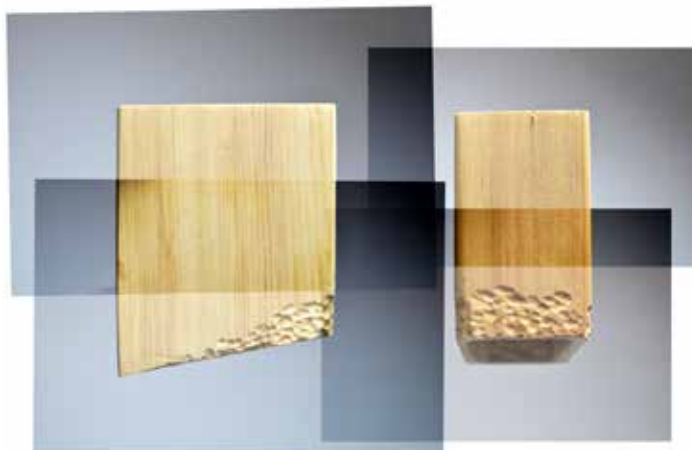
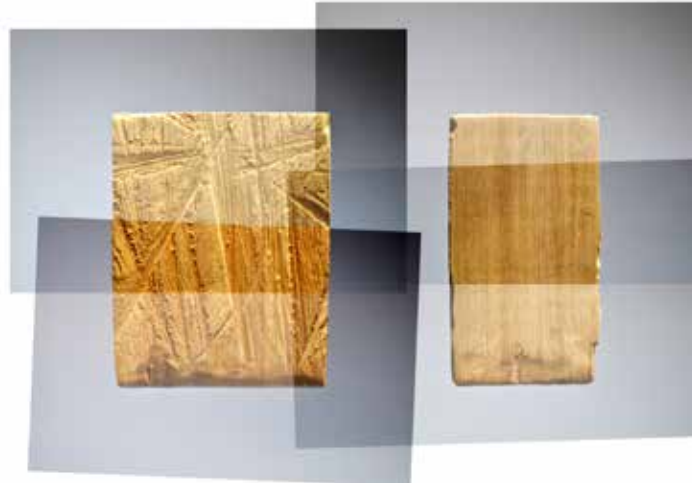
Three identified forms exploring different material and light treatments

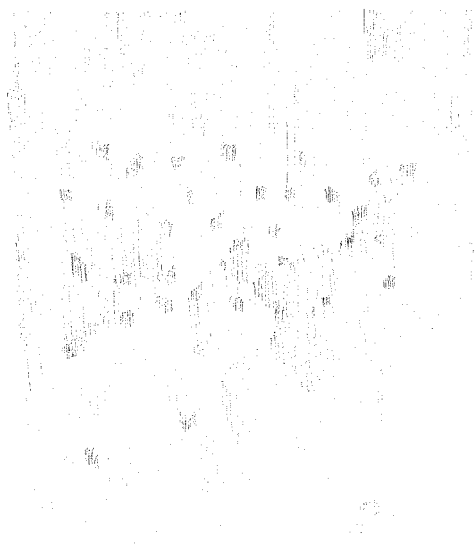


Photos capturing the internal texture of each installation iteration, models 1:20

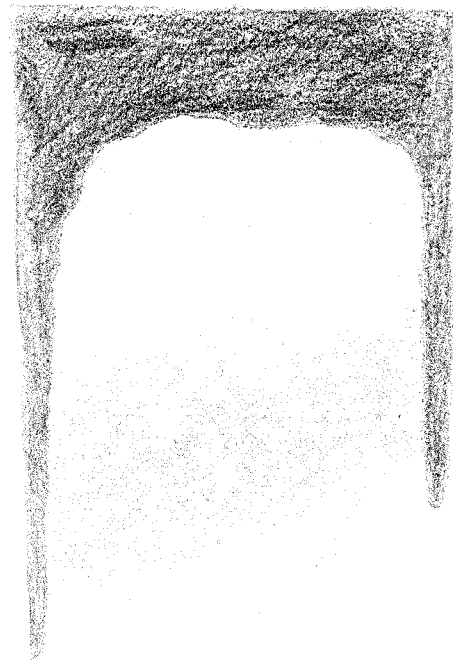
Collage elevations of external texture of installation iterations with particular not to roughened, smoothed and material texture as invitation to space, models

1:20





*Diagram of external texture and
perforation of final design, sketch*



*Diagram of internal and external
lighting gradients and mass of
final design, sketch*

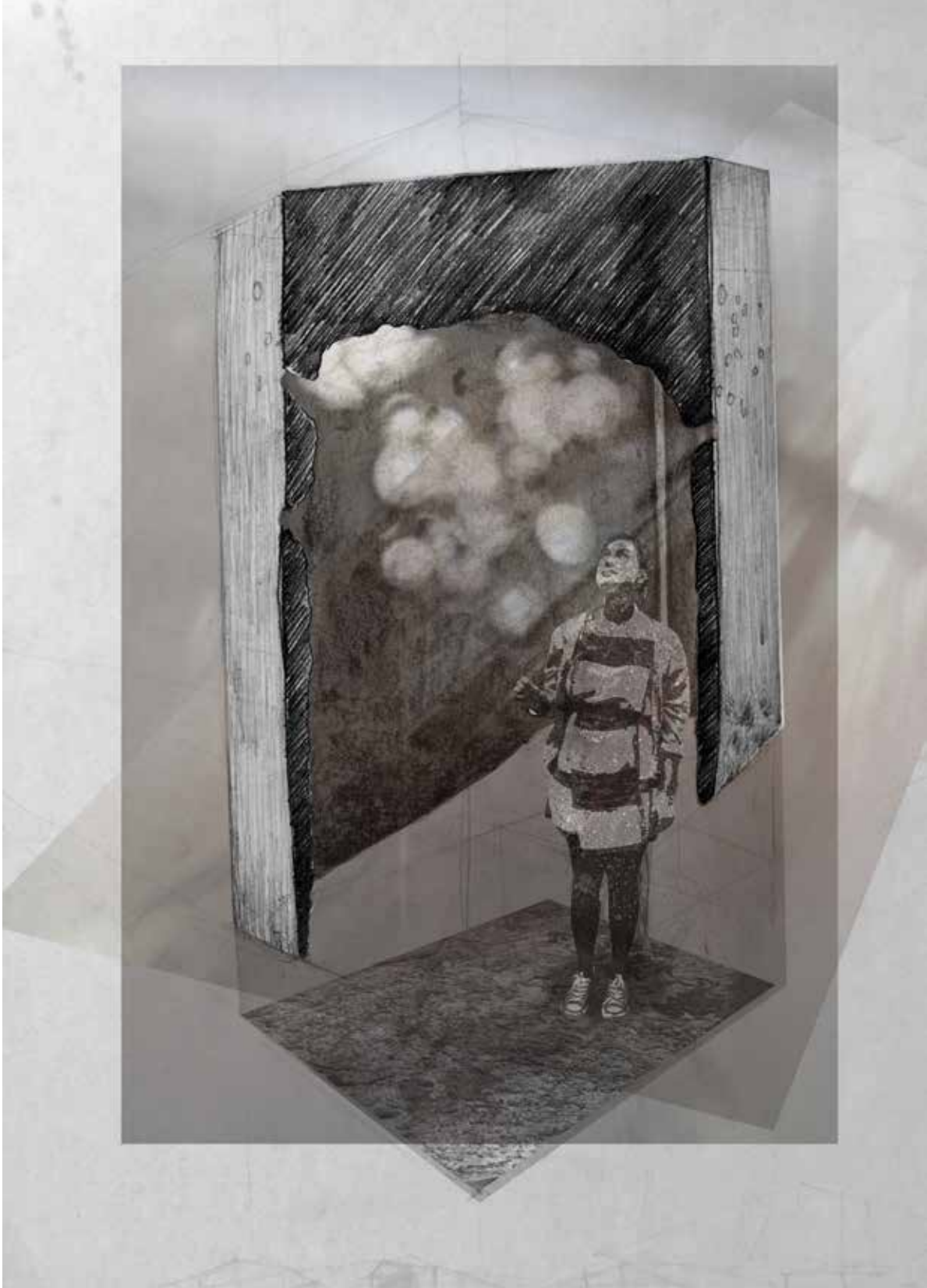


Diagram of internal texture and perforation of final design, sketch



Diagram of internal seclusion and connection to external environment through final design, sketch

*Atmospheric section rendering internal
experience and habitation of final
installation design, digital collage over
hand sketch*







case study

Ola Söderström



Ola Söderström

Project: Chambers

Designers: N.A.

Date: 2016

Location: Lausanne, Switzerland

*Author's own illustrations of rhythm,
sensorial and ambivalence in relation to
the body*



Ola Söderström is a geography researcher from Switzerland where he and a cross disciplinary team has been researching the relationship between mental wellbeing and urban environments. Of particular interest to this thesis is a study in which individuals who had recently begun to experience psychosis described to researchers through interviews and narrated walks how they interacted and managed their interactions in the built environment to be able to exist in harmony with their mental state (Söderström, 2017).

Through the research of his team Söderström has been able to speculate on pattern of needs people who experience mental distress seek out in their space. He breaks these broadly into four themes; ambivalence, sensoriality, atmosphere, and rhythm. Of particular interest at the early stages of this thesis are the themes of Ambivalence and Sensuality.

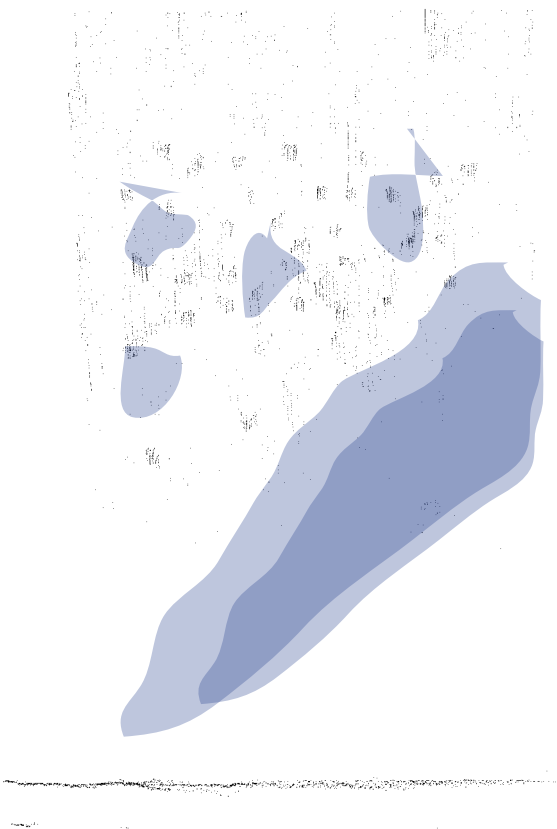
Ambivalence is described as the simultaneous attraction and repulsion from 'the complexities and chaos' of a city (Söderström, 2017). This is characterised by a desire for the availability of access and meaningful connection while also having the equally meaningful ability to choose not to engage to varying degrees.

Sensuality on the other hand is the sensory stimulus rendered in any given environment (Söderström, 2017). It highlights the indivisible

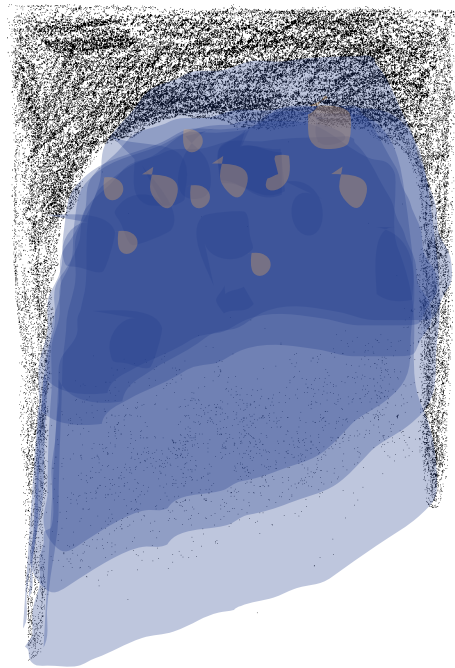
connection between the corporeal body and its embodied mental and emotional capacities. Similar to ambivalence this is also characterised by a need for a managed level of stimulation to varying degrees without the risk of being over stimulated (Söderström et al., 2017).

The research of Söderström became critical to the ongoing design evaluation of this thesis as it outlines a series of themes which tie spatial articulation in urban environment to wellbeing. These, although never presented as exclusive considerations become another layer through which to evaluate the successful expression of agency within the design of built environments.

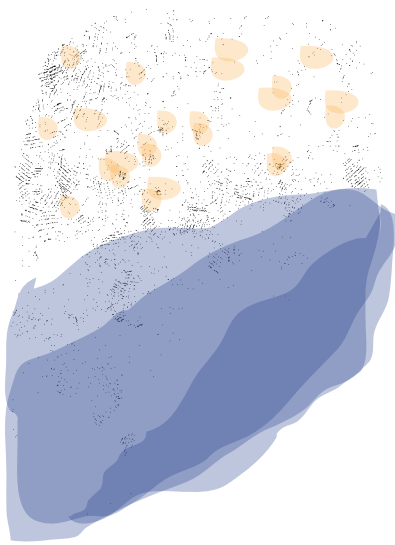
The major issue with the use of this research to inform this thesis is that its specific field of interest lies outside the scope of the topic at hand. It must therefore be emphasised that this is being taken as a consideration of how individuals who experience disempowered states enact agency and look for empowerment in their urban built environments. These themes of ambivalence and sensoriality are used as another layer through which to evaluate successful expressions of agency with the intention of finding relationships of emotionality in the built environment.



*Diagram of external texture
and perforation of final design
analysed for understandings
of ambivalence and sensorial
connection*



*Diagram of internal and external
lighting gradients and mass
of final design analysed for
understandings of ambivalence
and sensorial connection*



*Diagram of internal texture
and perforation of final design
analysed for understandings
of ambivalence and sensorial
connection*



*Diagram of internal seclusion
and connection to external
environment through final design
analysed for understandings
of ambivalence and sensorial*

installation

findings and reflection

This final design, articulated as a meditative personal place, represents several successful outcomes for the research. The design successfully captures a comfortably balanced proportion and embodied quality measured against the human occupant.

Light acts as a stimulus with the intention of creating a meditative environment where both physical and visual texture interact to stimulate an awareness of self. Texture and the tactile surface of the design invite a connection to the space physically to locate the self within the installation while also encouraging an awareness of the object as an extension of a personal space. The power of the designed mass and volume comes from their harmonious articulation in respect to the mass and volume of an embodied emotional occupant. This concludes that light, texture, mass and volume all connect to the embodied self in ways which are conducive to the development of emotionally empowering spaces.

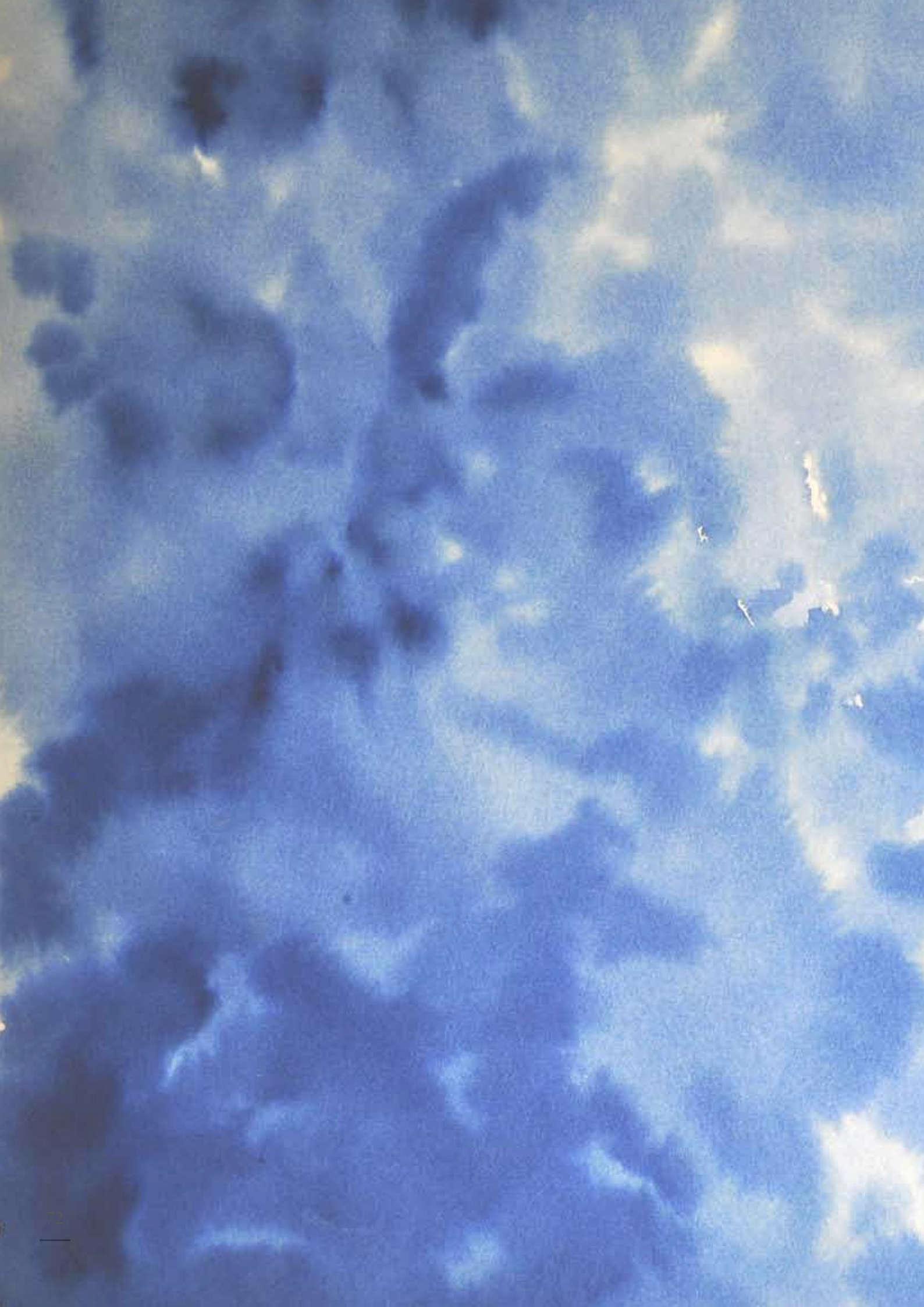
At this stage the design outcome is analysed additional qualities which allow it to capture agency and articulate as a space for emotionality. A series of informed discussions with colleagues and a group critique of the design outcomes identified several additional aspects which could further detail the architectural language being developed. These are transitional thresholds, the dynamic of seclusion

(which will be reinvestigated as Söderström's (2017) themes of ambivalence and sensoriality) and a call for greater material consideration.

Critique and discussion also asked how the design addressed multiple individuals. A brief investigation deemed that this was an important consideration, but is not appropriate for this early stage of investigation. These designs have been set aside to be re-introduced to the development of the architectural language during a later investigation.

Over all this investigation was highly effective as a tool to identify scope and process within which ongoing design investigation could meaningfully develop. By making the mistake several times of adding complexity too quickly it became easier to identify how the scope of the research needed to be broken down within each investigation to build up the complexity of the scope through design investigation in line with the research objectives. Aspects identified here become the focus of the next stage of investigation as the shift in design complexity is increased as a way of testing and further elaborating the design and architectural language already developed in this first stage.







domestic space





investigation two

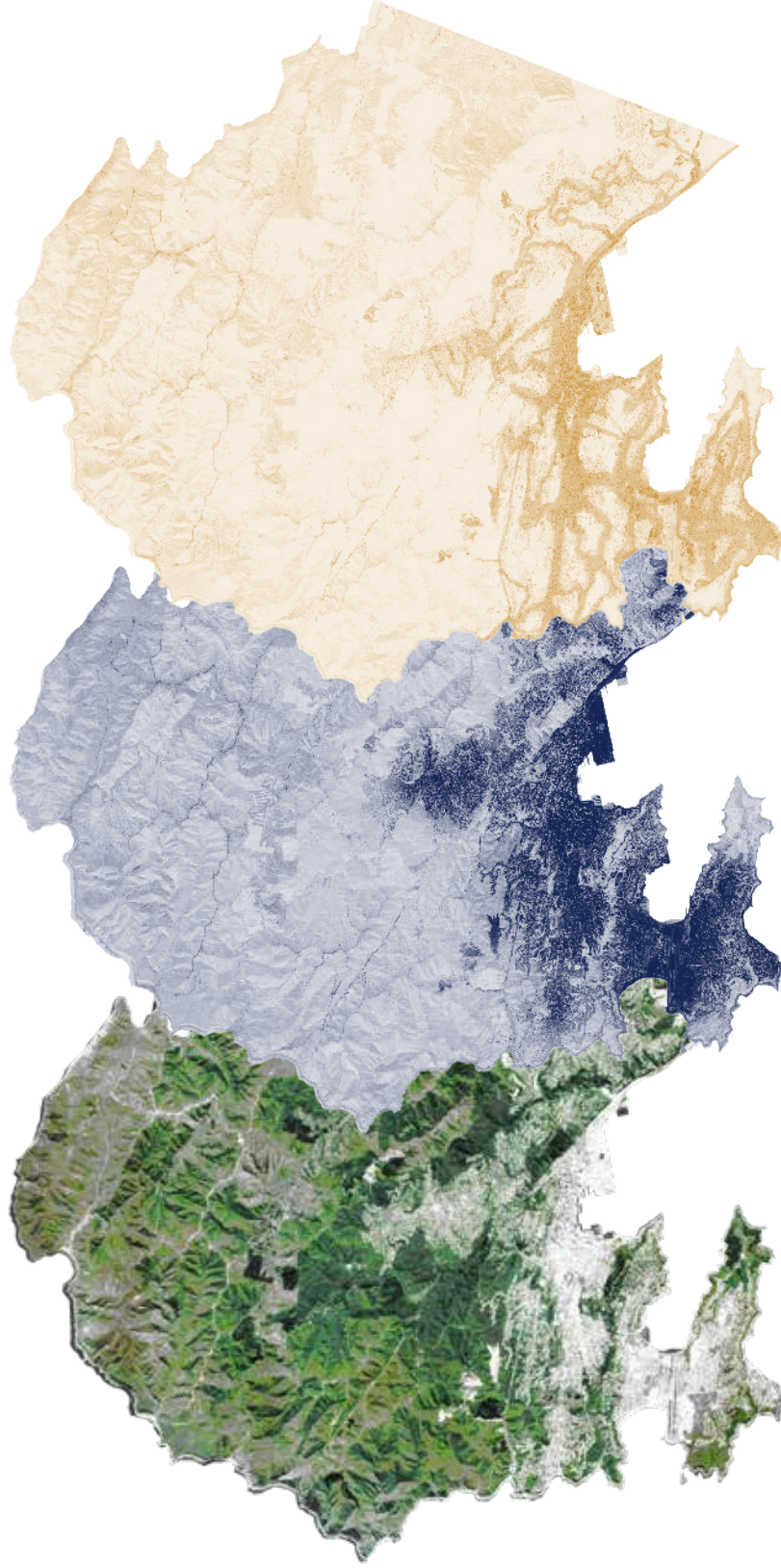
home for one

brief

Building on from the previous design investigation this investigation increases the complexity of the design problem as a means of testing, elaborating and then refining the architectural considerations proposed by the previous design. This takes the already developed language of light, texture, mass and volume and builds on these through attention to the findings of investigation one adding ambivalence, sensorial, threshold and material considerations to drive the design well also adding programmatic considerations.

This investigation proposes a dwelling for a single occupant in suburban Wellington. This introduces a domestic programme to assess the architectural language and site to the considerations of the design process. In order to keep the focus of the design on developing and evaluating an architectural language of emotional agency as opposed to falling into developing a design solution for a domestic dwelling, three sites were identified based on a set of criteria supported by Ola Söderström's (2017) research. Each site represents a different set of ground conditions and orientations within the same suburban area.

Through a process of taking design ideas and evaluating their relevance to the different site conditions, a series of considerations could be developed which allowed the development of focus on architectural relationships within the design rather than the design outcome itself. Once these general expressions were identified a single site is chosen from the three to develop a detailed expression of these conclusions. From this design a critical evaluation is used to direct the focus of the following investigation.





site

The Wellington City was chosen as a catchment area within which to site the domestic scale investigations. Having identified considerations key to the development of healthy emotional spaces through the case study of Söderström's research this domestic scale investigation took ambivalence and sensorial quantities as key criteria when looking for a site around which to base this investigation. As identified in investigation one and supported by Söderström's (2017) theme of ambivalence individuals require a sense of open but controlled connection to feel as empowered agents of their surroundings. For this criteria the analysis evaluated distance or separation from highly urban centers and proximity to minor urban conveniences while also having the mobility of access via bus routes and desirable walking connections to a diverse range of environments. Sensorial is considered here as a the availability of sights, sounds, tastes, smells and physically stimulating environments such as natural amenities, views of varying depth and access to green space both publicly and privately. Through this process many areas were eliminated with Southgate being identified as a suburban area well suited to this investigation.

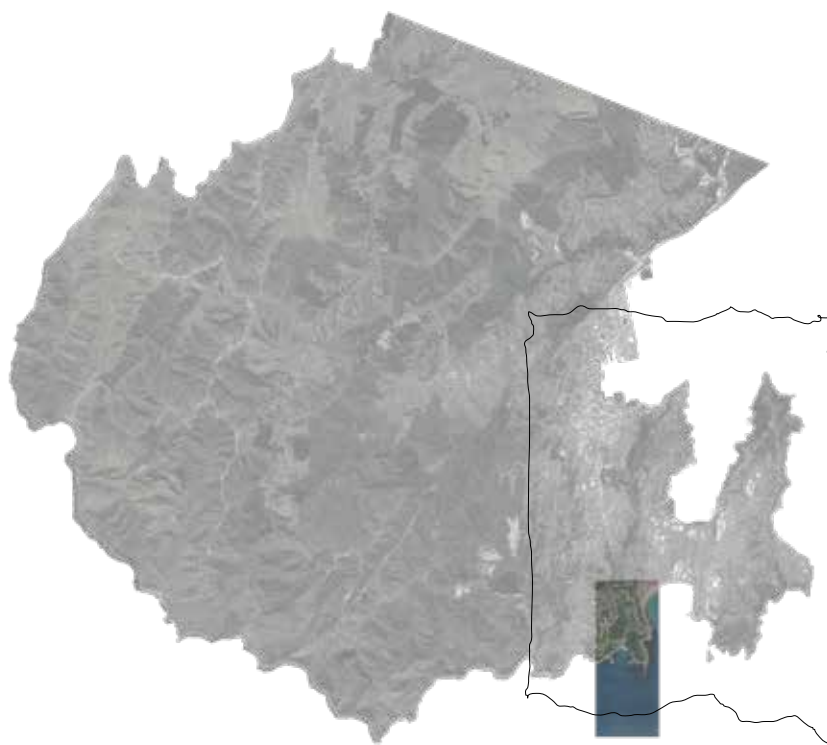
Multiple sites were used throughout the process of developing these ideas due to the opportunity this presented to test the ideas presented by this thesis in a range of conditions in order to

Map of Wellington City showing connectivity of bus routes based on an understanding of ambivalent connection to the city, these indicate desirable locations in dark yellow

Map of Wellington City showing density of urban centers based on an understanding of sensorial overload in the city, desirable locations are located in areas peripheral to darker blue, more densely populated areas

Map of Wellington City indicating natural amenity based on an understanding of desirable sensorial stimulus, desirable locations are adjacent to these areas

Map of New Zealand indication geographical location of Wellington



evaluate the similarities and differences between such solutions. This allowed for an evolution of ideas through multiple iterative processes and cross evaluation occurred to strengthen the understanding gained from each site. Having multiple sites and conditions also contributed to a dynamic process by which the solution to issues identified on one site were met with solutions developed in another site and then tailored to the original site conditions. This allows the focus of the research to remain on the development and evaluation of the design considerations without getting distracted into a single design solution too early. The three selected vacant sites are 81 and 87 Buckley Road and an unnumbered site on Melrose Road.

*Aerial image of Wellington city
indication chosen area of Southgate
as identified by previous analysis as
having desirable qualities to support the
investigation, digital photo manipulation*

*Isolated analysis of Southgate to assess
internal articulations to select sites
within the area, physical montage of
overlaid information*



Site

Home For One

Domestic Space

Investigation Two

82

Investigation Two

Domestic Space

82



81 Buckley Road



87 Buckley Road



Melrose Road

Site visit information montage into a mixed media representation of the suburb of Southgate indicating three selected vacant sites to be used as testing grounds for the following investigation.

81 Buckley Road

This is a large rectangular site at the crest of the ridge but set back slightly from the road before dropping down to back onto Buckley Reserve. This site has potential for exploring relationships between the building and ground mass by interacting with the ground plane as well as slope.

View of 81 Buckley Road from the south showing relationship of site to street and view

(above) Layered subjective cartography mapping of 81 Buckley Road with each layer shown separately below

(lower left) These represent the key relationships from the site to surrounding buildings, visual relationships and symbolic representations of surrounding quantities,

(lower center) Geographical quantities of the site showing contours, road and foliage on the site

(lower right) Subjective understandings of the sensorial experience from the site represented in blue and the ambivalent relationships from the site represented in yellow





87 Buckley Road

The largest of the three sites this also includes a considerable area of comparatively flat land which slopes gently upwards before dropping on the other side of the ridge. This has implications on the shape and direction of the dwelling no available on the other two sites.

View of 87 Buckley Road from the south showing relationship of site to street and the slope of the site

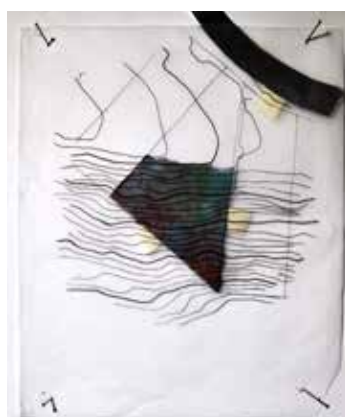
(above) Layered subjective cartography mapping of 87 Buckley Road with each layer shown separately below

(lower left) These represent the key relationships from the site to surrounding buildings, visual relationships and symbolic representations of surrounding quantities

(lower center) Geographical quantities of the site showing contours, road and foliage on the site

(lower right) Subjective understandings of the sensorial experience from the site represented in blue and the ambivalent relationships from the site represented in yellow





Melrose Road

This is the smallest and the steepest of the sites. Dropping steeply from the road edge this site projects directly west across a panoramic view of Island Bay. Although similar in terrain to 81 Buckley road the abruptness of the site edge has implications on managing privacy, sound and access as well as the opposing direction of sun and view.

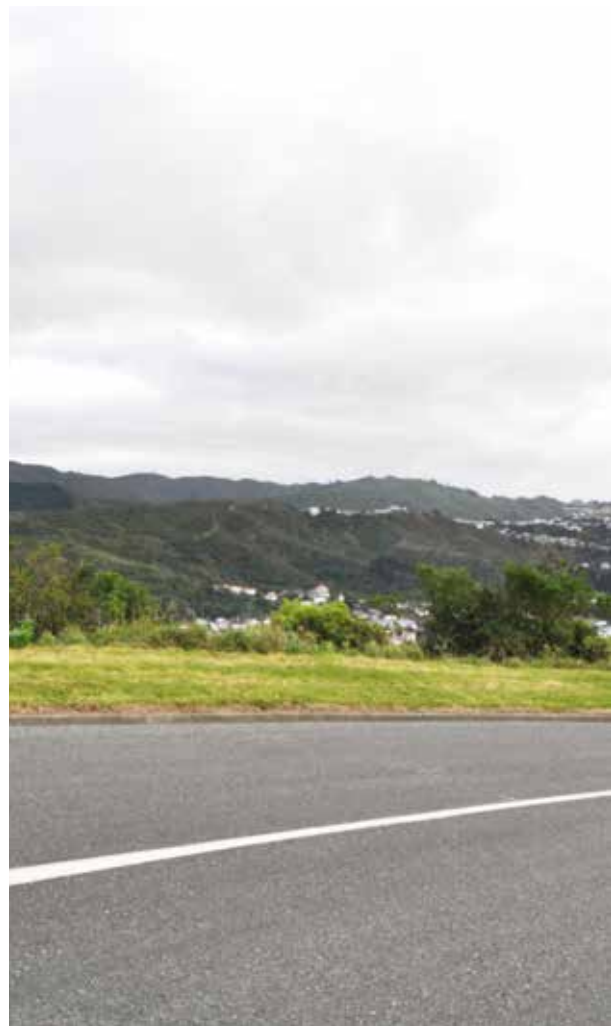
View of Melrose Road from the south showing relationship of site to street and view

(above) Layered subjective cartography mapping of Melrose Road with each layer shown separately below

(lower left) These represent the key relationships from the site to surrounding buildings, visual relationships and symbolic representations of surrounding quantities

(lower center) Geographical quantities of the site showing contours, road and foliage on the site

(lower right) Subjective understandings of the sensorial experience from the site represented in blue and the ambivalent relationships from the site represented in yellow





Melrose Road

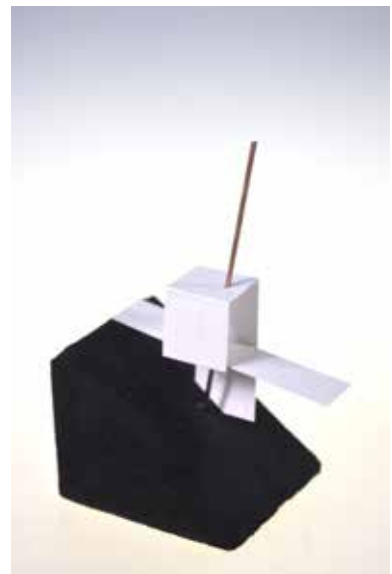
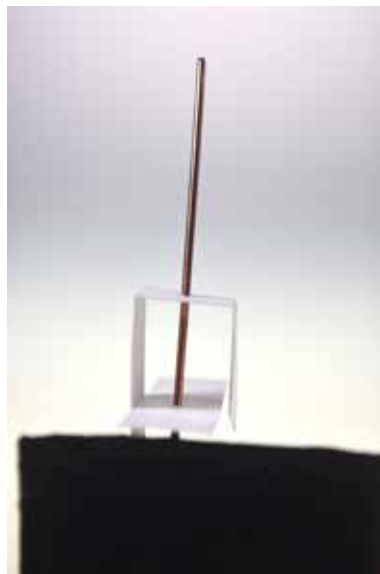
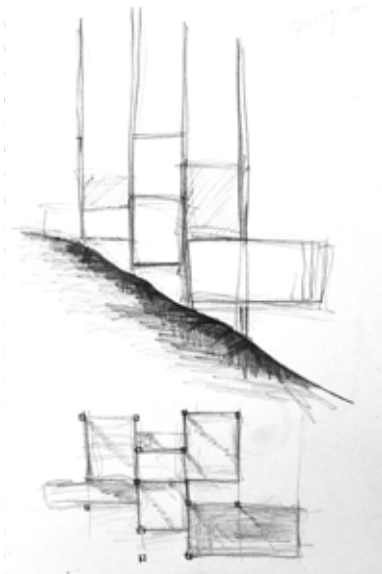
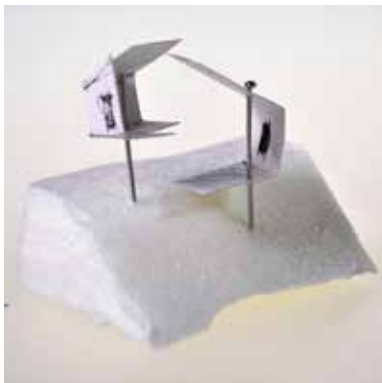
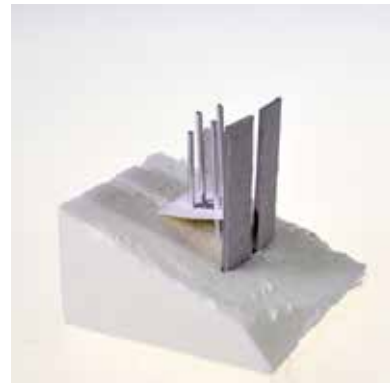
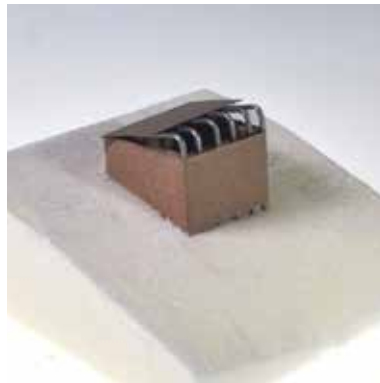
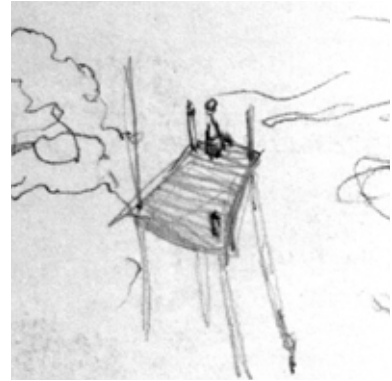
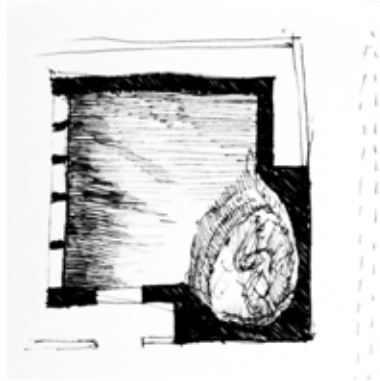
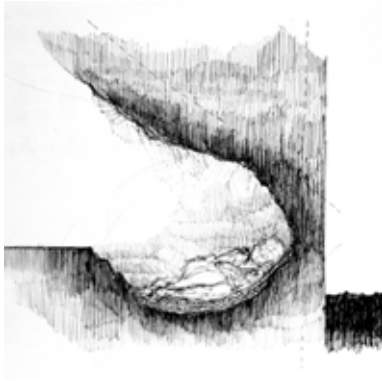
Home For One

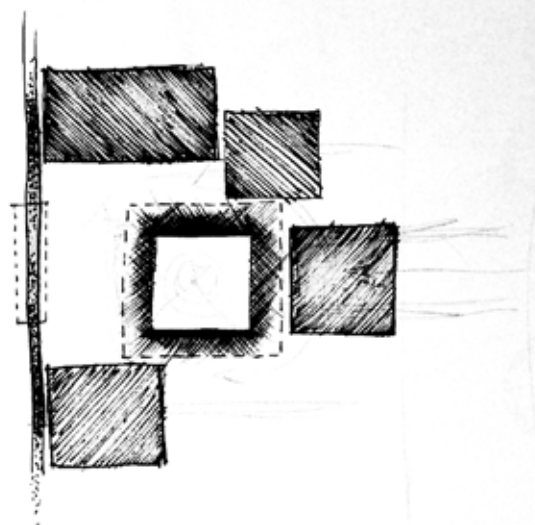
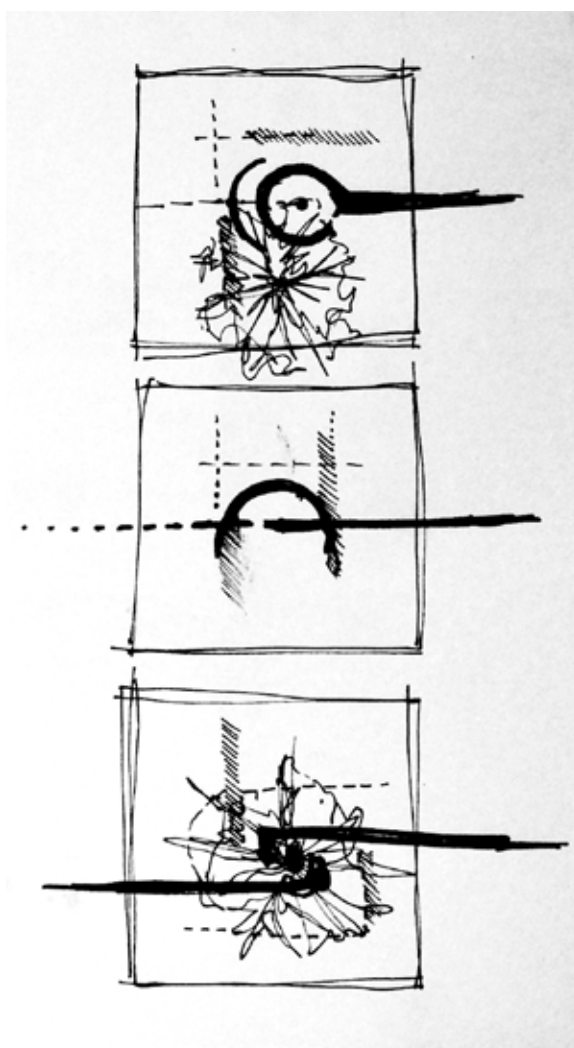
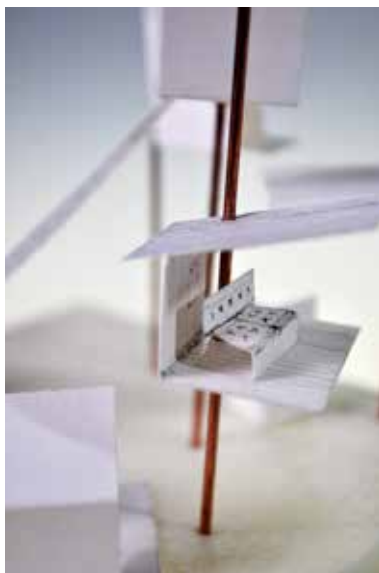
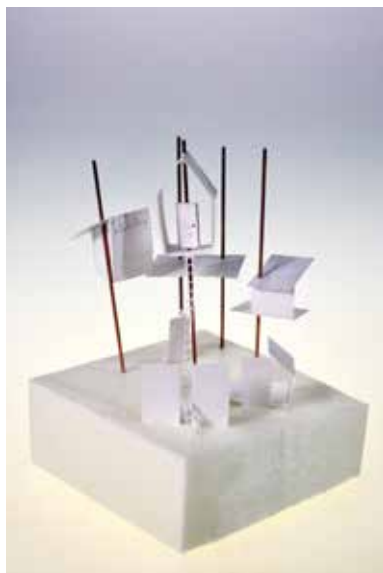


initial design

Design investigation began as a series of sketch models and drawings with little attention to practicality. These exploratory tests became a speculative experiment in breaking apart the programme of dwelling into pockets of need and then putting them back together into an understanding of domestic space. Very obvious in this initial set is the contrast of protective and open spaces, which lead into an understanding of two spaces within the design also having a leaning towards different degree of mass, volume, and relationship to other spaces. This suggests that each design requires varying gradients of threshold both internally and externally.

Initial impression explorations of potential designs, hand sketching and sketch modelling in paper, card, wire and gold foam

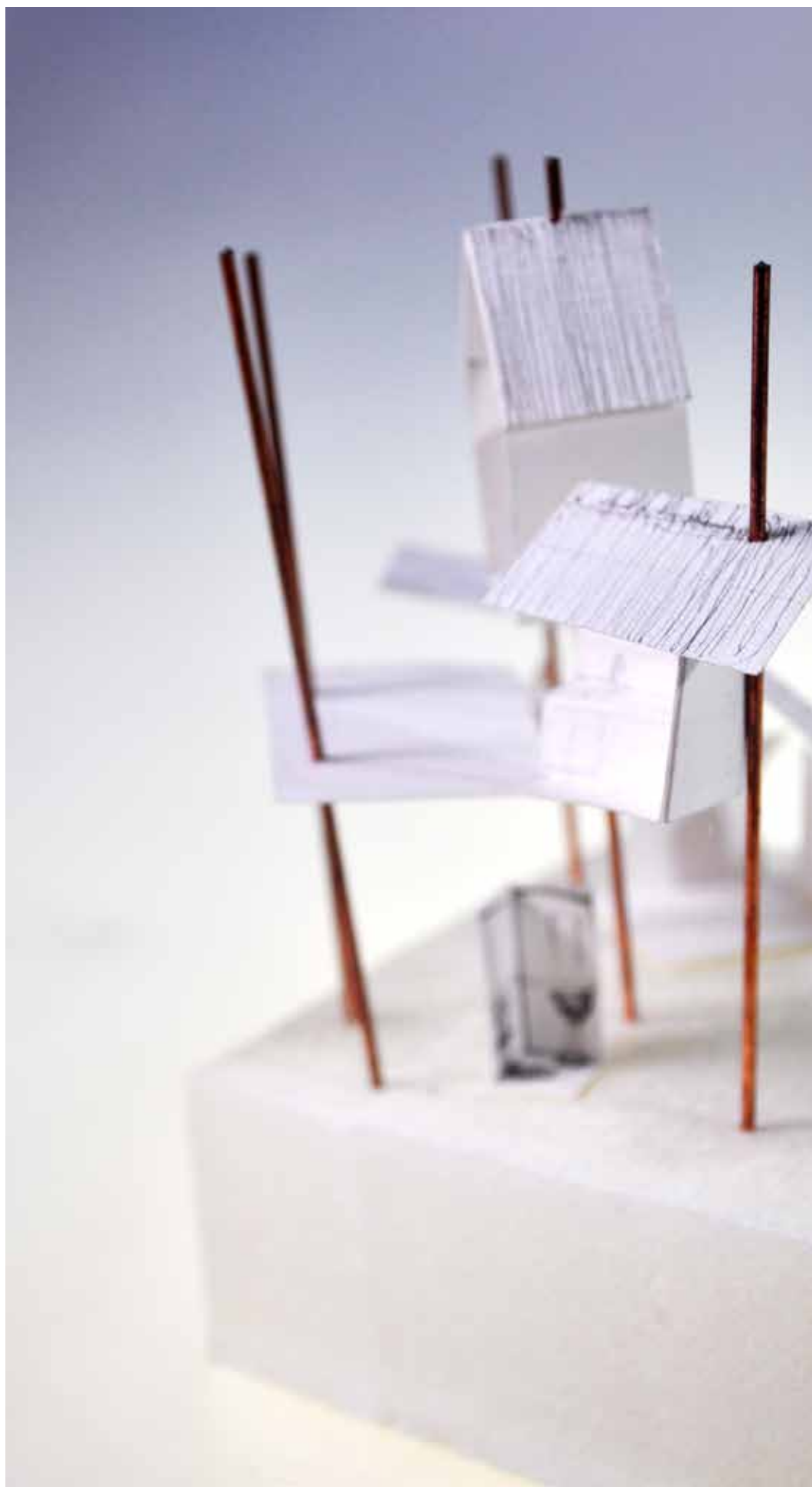




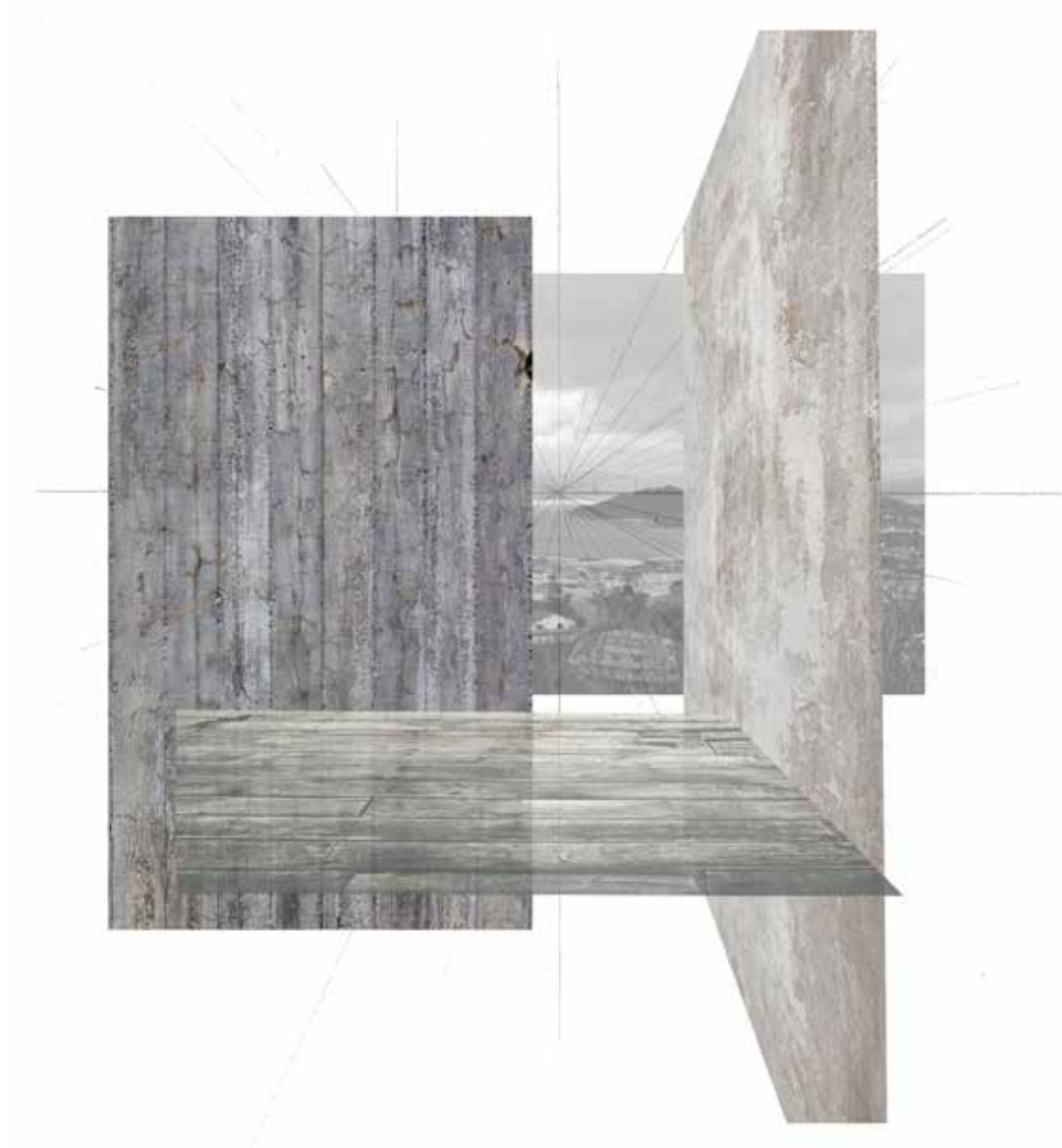
*Program analysis through modelling
drawing propositions for relationships
between entrance and habitation spaces
supported by photographs capturing the
intimacies of impossible spaces*

*(centre left) Investigations of flow
and sight in response to modelling
investigations*

*(centre right) diagram of volumes and
mass in plan as a response to modelling
exercise suggesting internally and
externally focused spaces in relation to
mass*



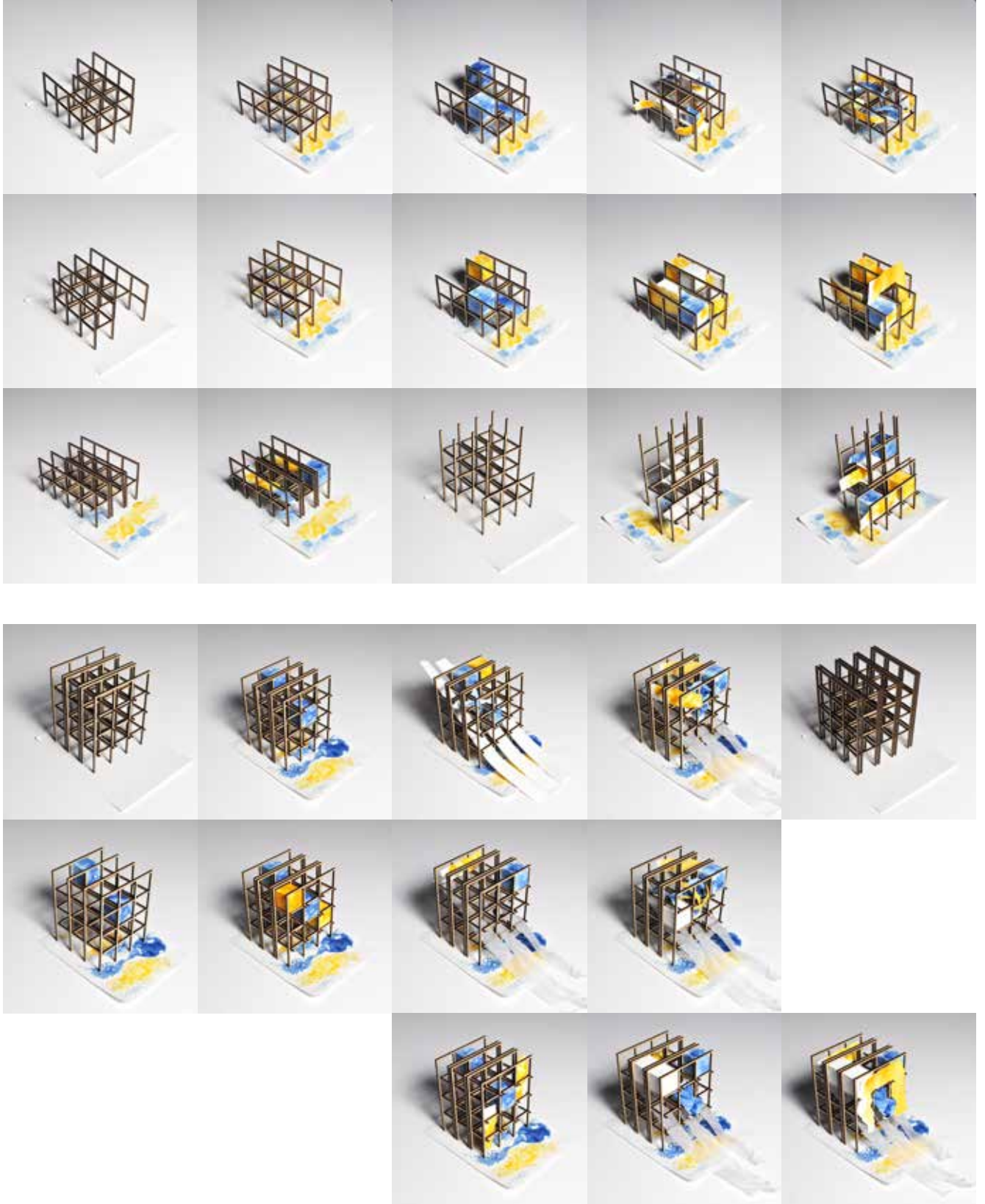


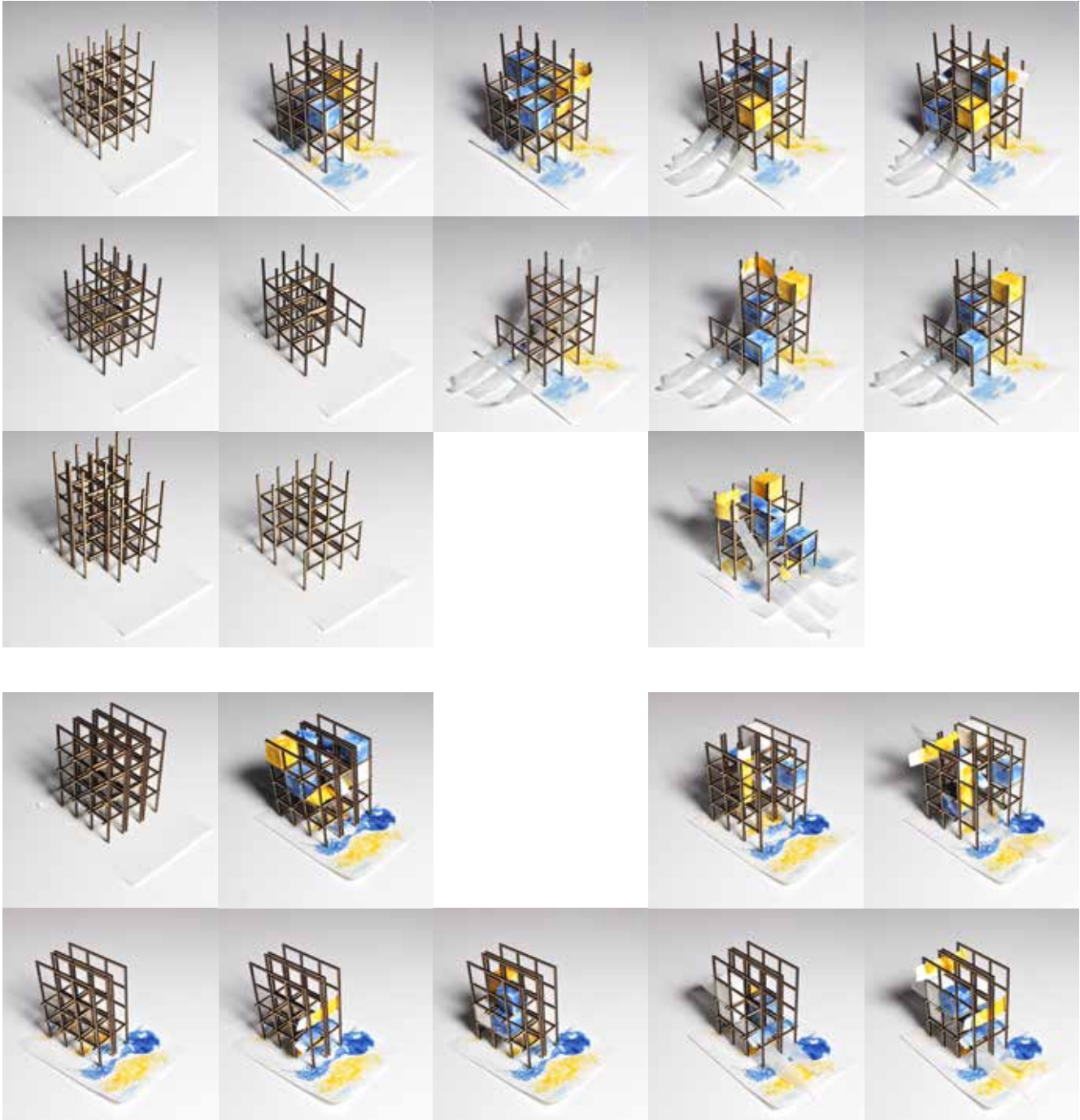


A series of explorations into material mass with attention to high and low mass relationships as well as exposure and enclosure as a way of capturing ambivalent and sensorially focused experiences within space, digital collage

Final composition selected as a successful expression of ambivalent relationship to the city, digital collage

This series of montages use materiality as a way of communicating emotive associations of mass within space. By exploring the varying relationships of exposure and enclosure in this way, the unexpected result from this one point perspective investigation is the importance of intersection to the articulation of volume and mass. Here the emphasised verticality and horizontal projection of the image lead into a bodily understanding of space.





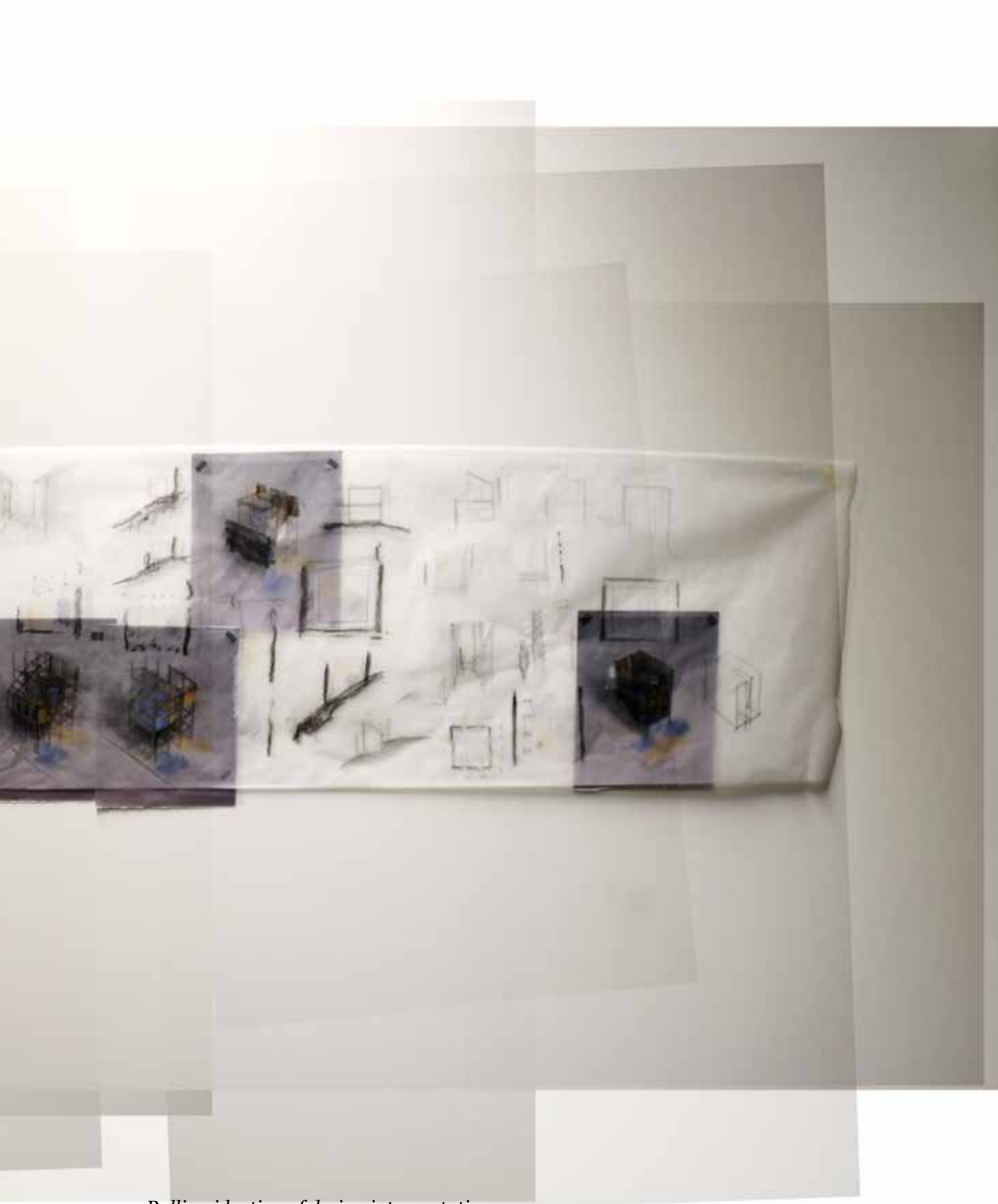
Iterative massing investigations as developed across all sites with yellow elements indication reactions to considerations of ambivalence and blue elements indicating reactions to sensorial considerations, laser cut MDF structure and card and coloured ink components

Explorations in reaction to 87 Buckley Road (top half left leaf)

Explorations in reaction to Melrose Road (top half right leaf)

Explorations in reaction to 81 Buckley Road (lower half across spread)





Rolling ideation of design interpretations across all three sites building on ideas of material mass from previous experimentation and building new understandings of threshold in reaction to structure, ambivalence and sensoriality,

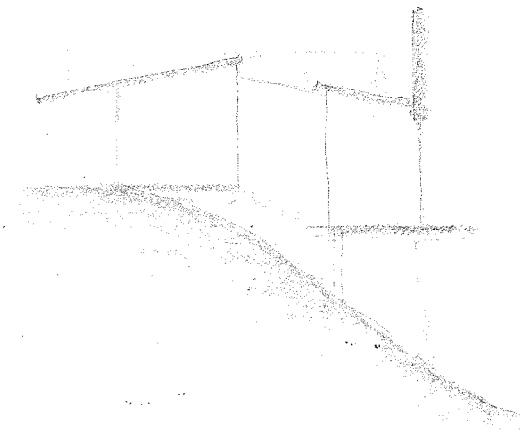
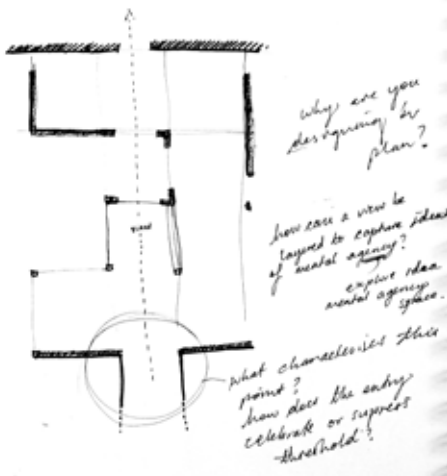
(see following pages for details and further exploration through this process)

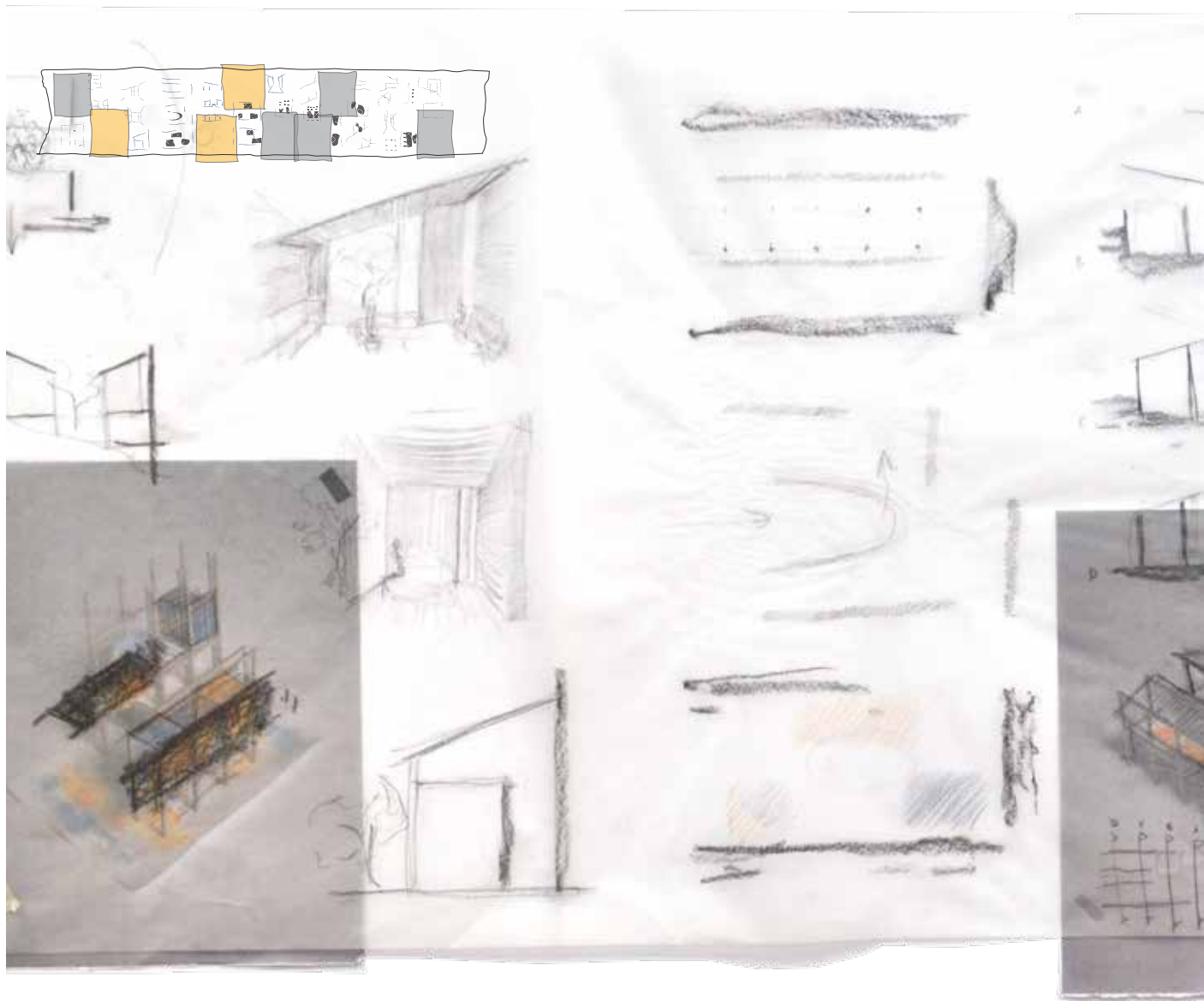
Through this exercise of intensive iterative massing and overlaying that thinking, the research comes to understand the relationship between what has been identified in the material mass explorations and the initial sketch modelling as open and protective spaces and relates them to aspects of programme. Placing these understandings of programmatic needs onto the site draws connections with the cartographic study of sensorial and ambivalent experiences on each site. This suggests that the treatment of ambivalence is the balanced consideration of indirect stimulus which enter from outside the immediate environment and addressing sensoriality is a genuine understanding of the stimulus presented in direct implication to the occupant.

The following pages catalogue the design process by which ideas were explored through each of the sites and then returned to the original testing conditions in developing the design.

Initial design tests on 81 Buckley Road from rolling ideation explored through plan and section detailing contrasting mass of building elements and relating spatial planning from structural modelling exercise.

Supplementary images explore the practicalities of ideations through relationships of volume as communicating different intimate experiences of space proposing intimacy and the volumetric variation as the agency to move through emotional space, graphite on tracing paper

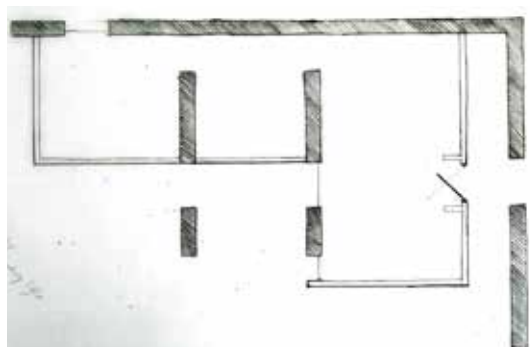
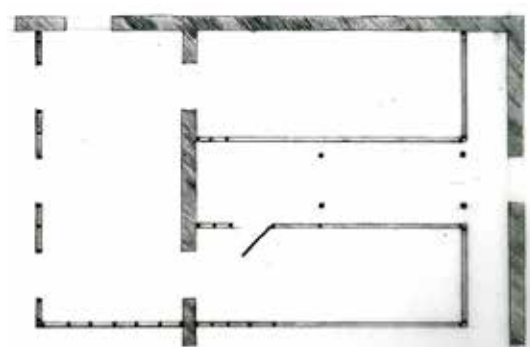
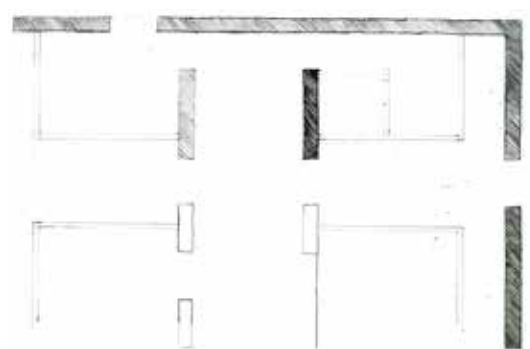
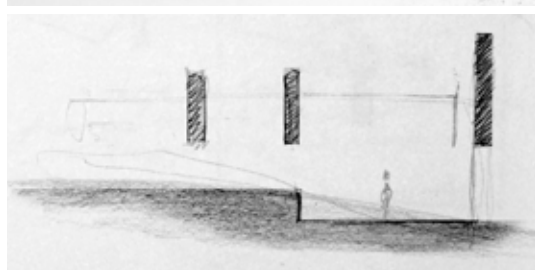
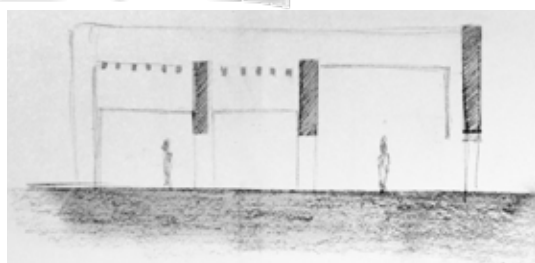
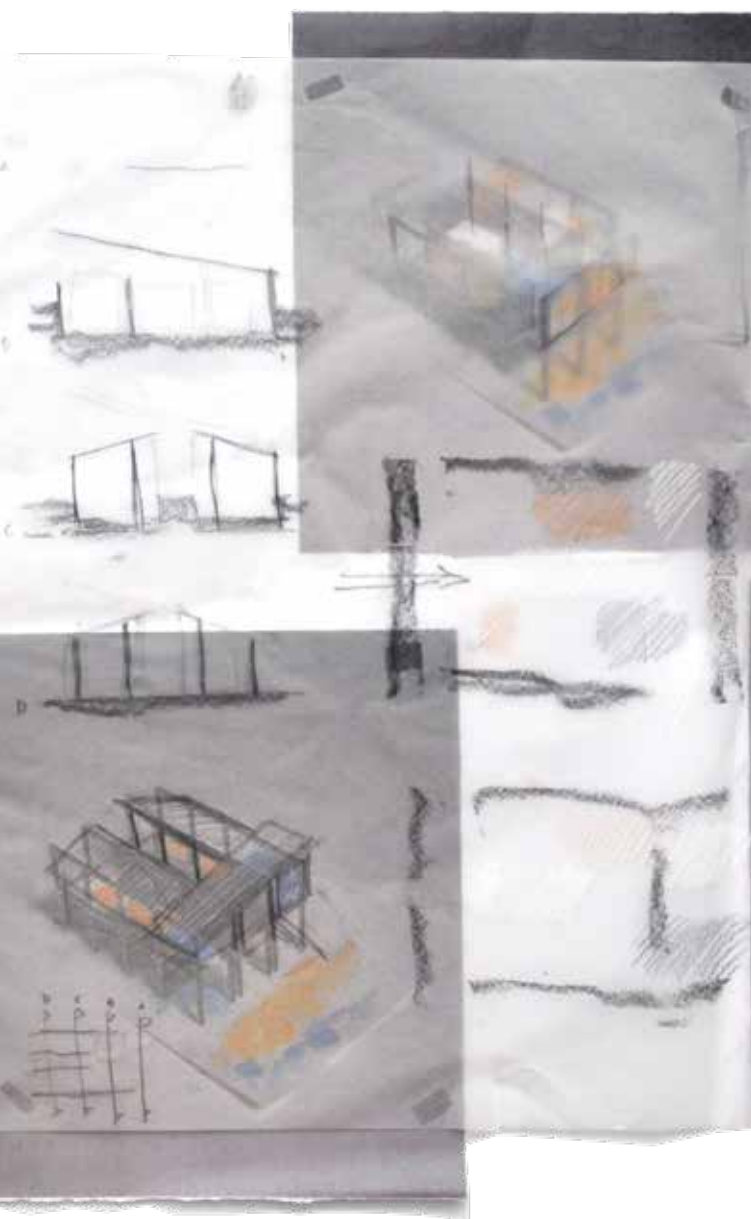


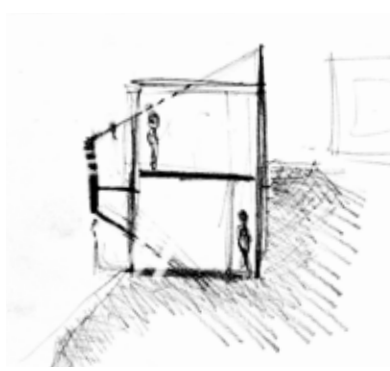
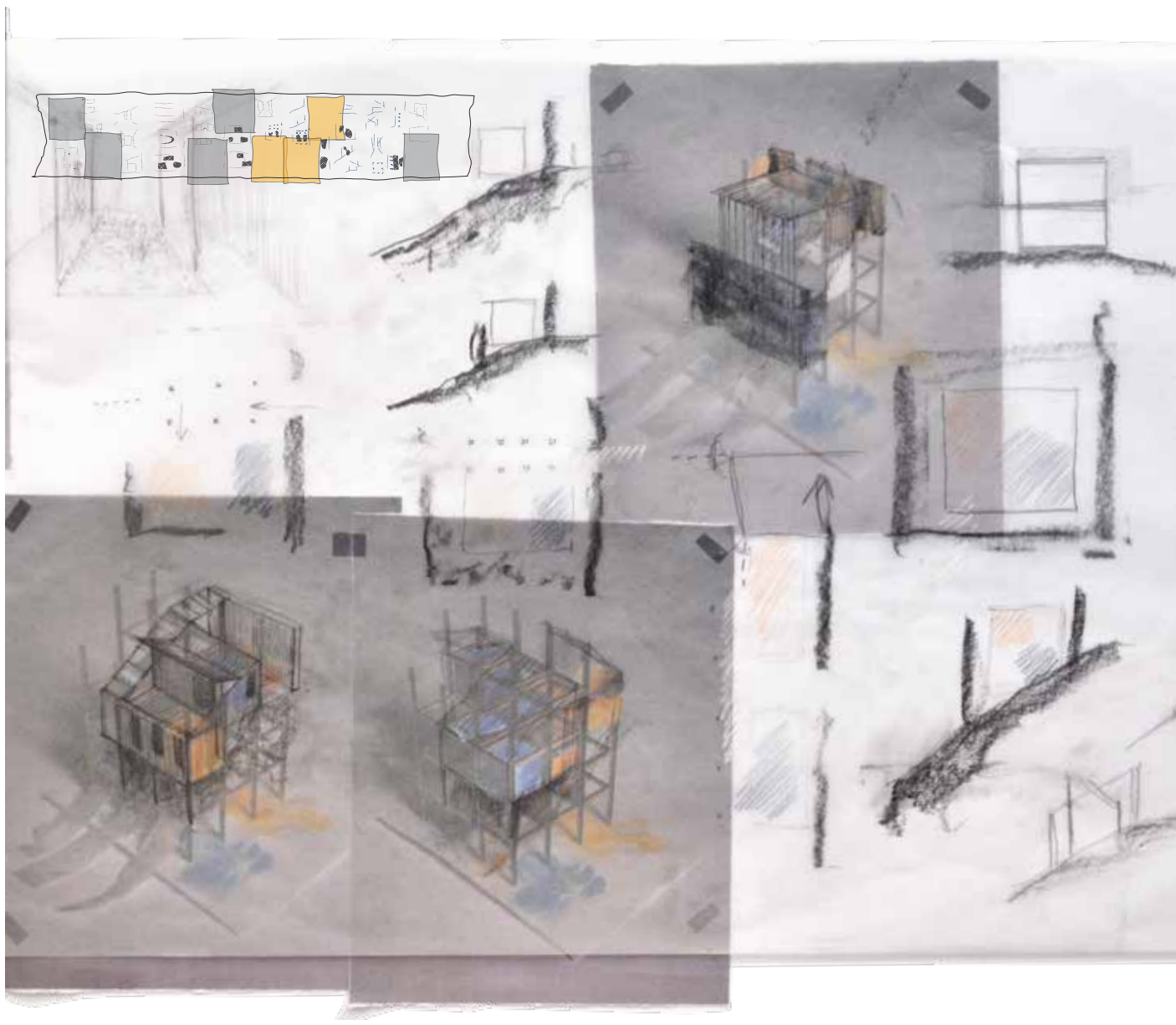


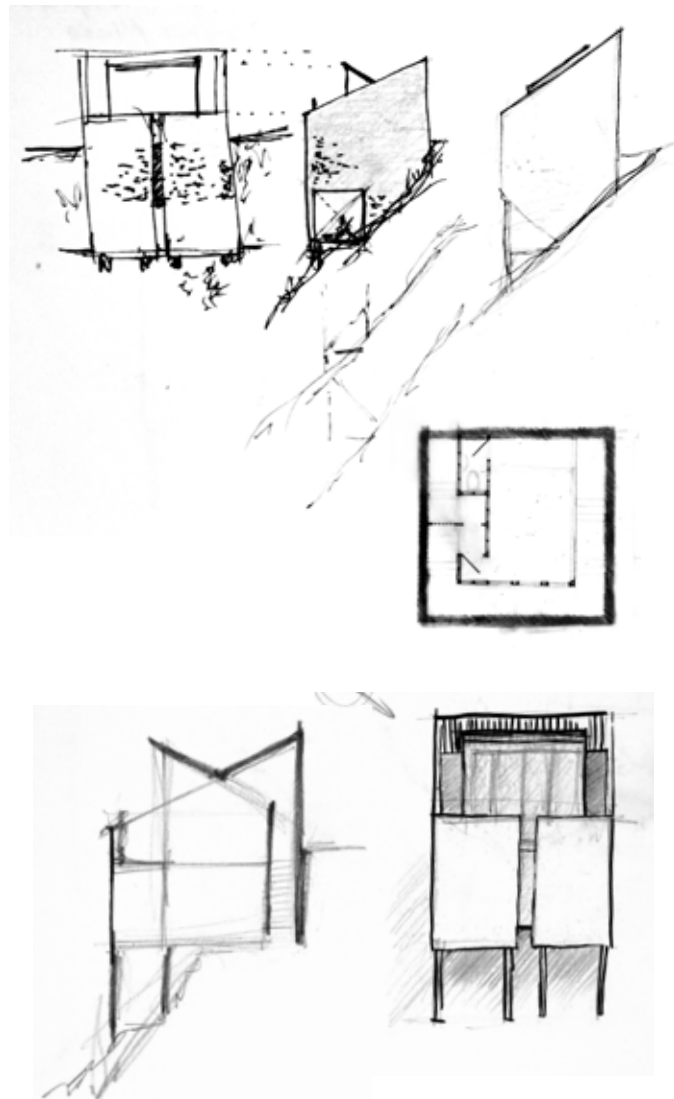
Initial design tests on 87 Buckley Road from rolling ideation exploring building mass and relationship to the ground plane through plan diagram, section and perspective, graphite on detail paper and printed photographs

Perspectives and details exploring relationships of smaller mass within a volume as triggering experiences of einführung in space

Plans and sections exploring layering of volumes as a way to diminish threshold in the relationship between mass and entry





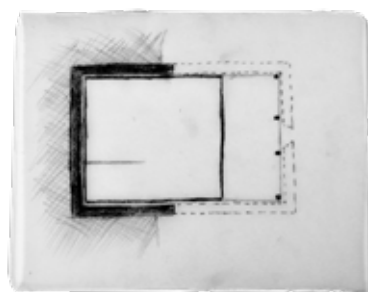
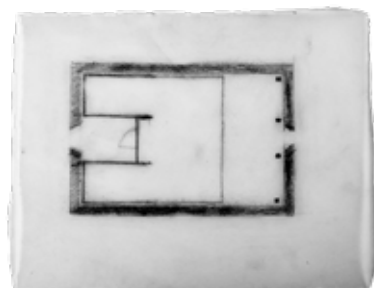
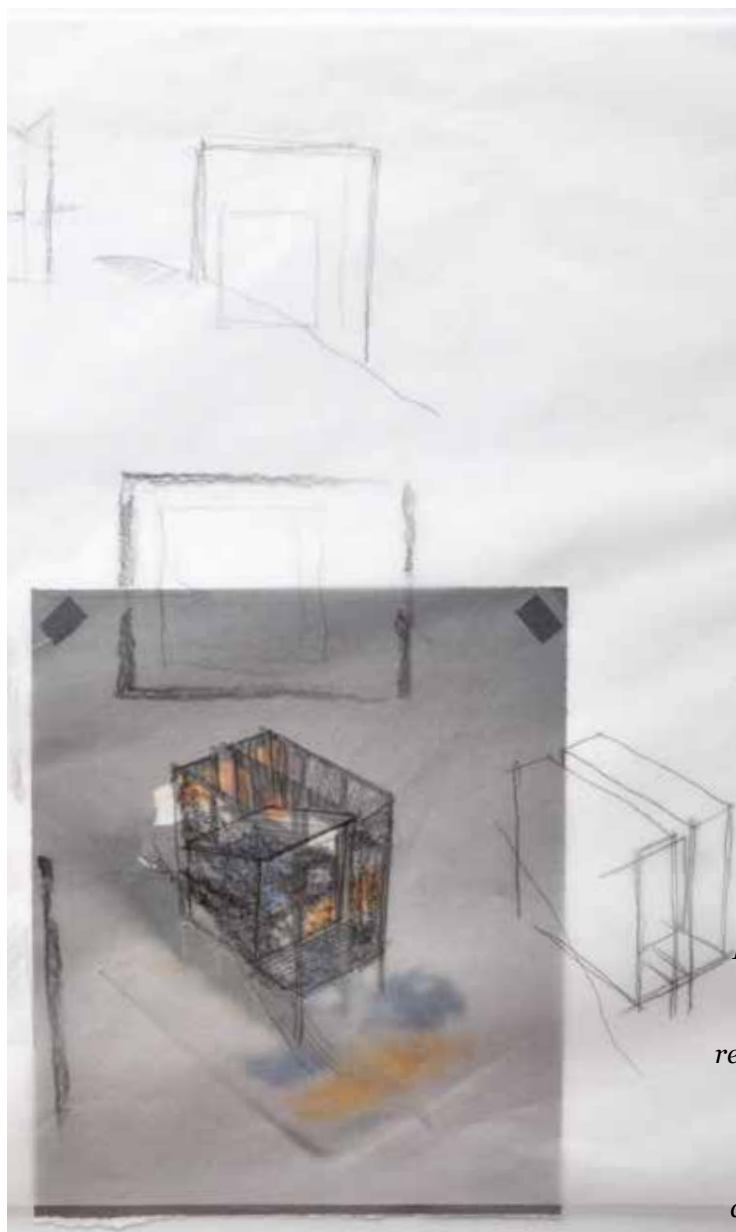


Initial Design

Home For One

Initial design tests on Melrose Road from rolling ideation further exploring building mass and relationship to the ground plane through section as well as a what is translated to spaces of direct (blue) and indirect (yellow) stimulation, graphite and coloured pencil on detail paper and printed photographs

Sections exploring evolution of mass and volume relationships through the introduction of ambivalent (indirect) and sensorial (direct) concerns



Final ideation returning to 81 Buckley Road as a combination of all design explorations

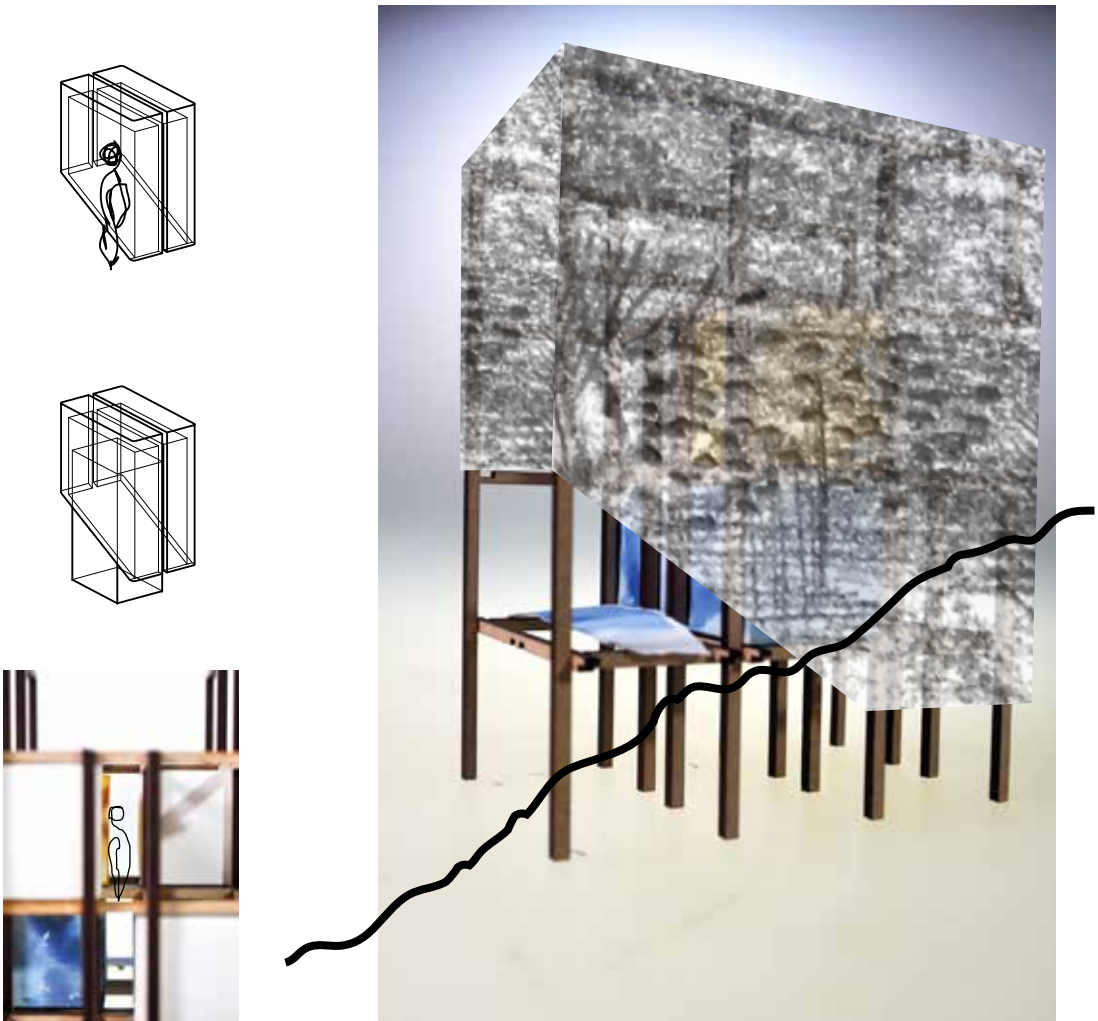
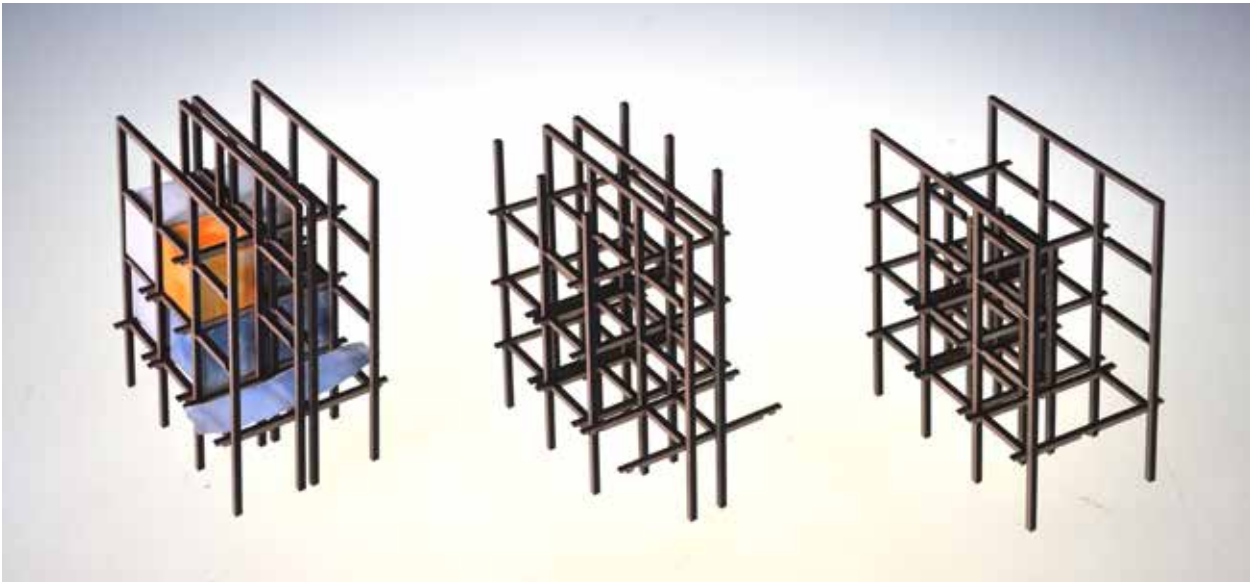
Reintroduction of installation design to evaluate shift in scale form body space to domestic space as a way to draw relationships which mediate between the body and the building, digital drawing

Refinement of structural relationships from iterative testing to align with developed design thinking, model 1:100

Indicative upper and lower floor plans building on the findings of ideation

Close up photo of updated structural model capturing bodily relationship to the space created between structure and mass in negative volumes

Indicative collage from exploration so far expression form of installation in relation to interpretations of understandings of material and threshold overlaying direct and indirect experiences to provide for emotional wellbeing, multimedia collage

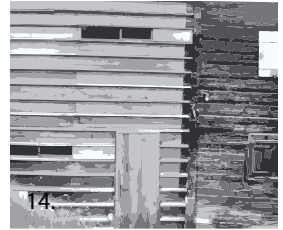
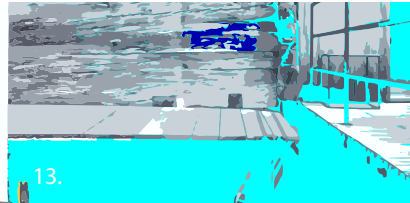
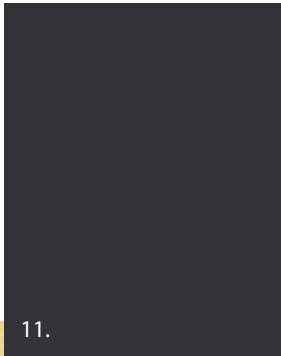
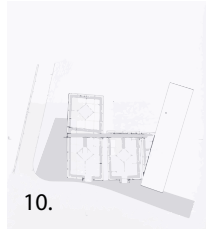
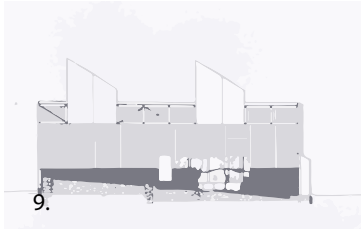






case study

Peter Zumthor



*Project: Protective housing for
archaeological excavations*

Designers: Peter Zumthor

Date: 1985-86

*Location: Chur, Graubünden,
Switzerland*

Project: Gugalun House,

Designers: Peter Zumthor

Date: 1990-1994

*Location: Versam, Graubünden,
Switzerland*

Figures: 13 - 15

Project: Thermal Baths at Vals

Designers: Peter Zumthor

Date: 1990-1996

*Location: Vals, Graubünden,
Switzerland*

Works by Peter Zumthor

Project: Homes for Senior Citizens

Designers: Peter Zumthor

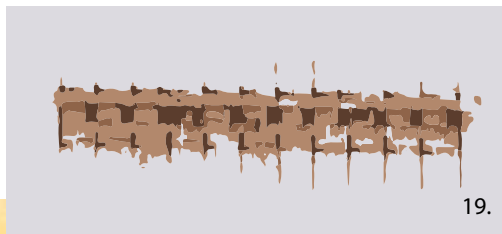
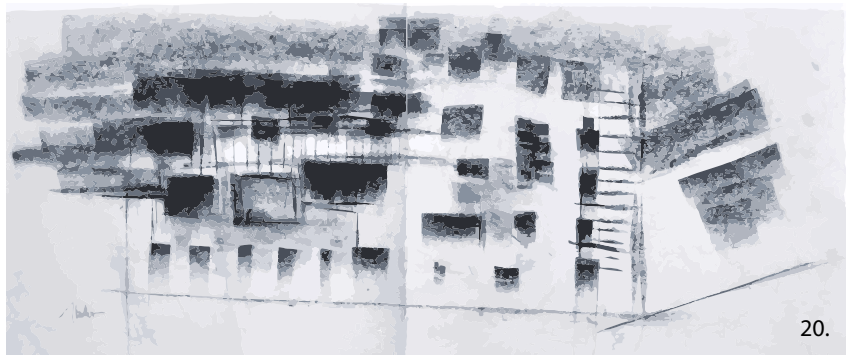
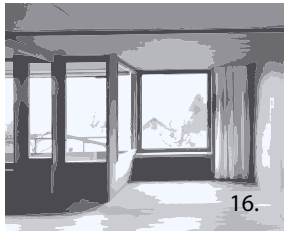
Date: 1989-93

*Location: Chur, Mansans, Graubünden,
Switzerland*

Figures: 16 - 19

Peter Zumthor's works and writings are prolific in the discourse in which this thesis locates itself. This work is looked to as a leading case study for the development of this thesis as it captures much of the understated empowerment of authentic being that this thesis strives to capture. Multiple works contributed to considerations apparent in the design work for both their conceptual focus and their physical architectural expressions.

In his book *Atmospheres*, Zumthor (2006) outlines what he refers to as 'considerations' and 'qualities' of architecture. These are described as the lens through which he and his design office achieve the atmospheric quality of their built spaces. These were evaluated as a parallel to the investigation of this thesis as these are aimed at a general



atmosphere, while this thesis focuses specifically on ‘atmospheres’ of emotionally empowered wellbeing. In discussing these considerations Zumthor (2006, p. 23) identifies the ‘anatomy’ of the built environment. The parts to be more than the sum of. “The body that can touch me [my body].” (Zumthor, 2006, p. 23).

Buildings built from natural materials drawn from the primal elements of the natural bodies those materials came from (Zumthor & Oberli-Turner, 2006, p. 31). In trying to use these qualities in his own work Zumthor acknowledges an elemental quality of material that, used in an appropriate fashion, becomes primal to the understood connection of space (Zumthor & Oberli-Turner, 2006). This can be seen in his extensive use of natural and exposed materials. In each of the buildings selected as pertinent to the development of this thesis, materiality is a key quantity used to articulate the engagement with the space. Engaging the viewer activates elements of emotional space (Zumthor & Oberli-Turner, 2006 12).

Each of the projects represented above was selected as not consciously programmed as spaces for emotional engagement but which achieve a specific harmony in their impression which highlighted them as more measured emotional spaces. This allowed for similar considerations to be identified across multiple projects concluding

that it is the contrasts and intersections of different material qualities as well as the selection of natural materials which contrast and show age over time which instil in each of these projects a sense of the building having its own agency. From images each of these buildings speaks more of the materials which formed it than the designer, though those materials only exist through the designer’s decision to place them there. The core elements of architecture, material, structure and so on, create relationships that connect both inward and outward (Zumthor & Oberli-Turner, 2006, p.33). For this reason it is the duty of the designer to treat architectural components with ‘respect and care’ in consideration of their impact on building users (Zumthor & Oberli-Turner, 2006, p. 34).

Image Credit (photography): Hélène Binet

Image Credit (drawing): Peter Zumthor

Fig. 9 - 19 (Zumthor & Oberli-Turner, 2006)

Fig. 21 - 22 (Hauser & Zumthor, 2007)





case study

Walter Pichler





Walter Pichler

Project: House by the Smithy

Designers: Walter Pichler

Date: 1995-2002

Location: South Tyrol, Italy

Walter Pichler's House by the Smithy is a deeply personal project which was driven not only by personal memories but also from an intimate familial connection to the site. For this reason the land and the buildings relationship to it is indivisible from the project (James & Preston, 2008). The house sits in humble contrast to the immense landscape around it drawings its solemnity form the land through its bounding materialities. Recessed into what Pichler represents as the body of the land, a deeper understanding of that presence is captured through the submerged path and heavy outer walls at the entrance. There is an emphasis on cycles and flows, shifts between states, which take place on the site and within the building and how these shifts

contextualise both the building and the occupants within (James & Preston, 2008). Pichler removes the visual from the building creating an internalised, introspective space, reliant on the shifts of light and dark to connect the occupant to the realities of time outside of their presence in the space (James & Preston, 2008).

This is a space of elemental connections and an awareness of being. By placing light expressed through soft and transparent materialities within the material mass of solid stone Pichler forms a gradient of self awareness which bridges from the body of the mountain down to the body of the occupant in a visceral journey through the architectural experience. This is interpreted as an emotional awareness of the self in relation to the body of the earth, as depicted in the artistic representations of the project. From this case study a more deliberate understanding of materiality and threshold is applied to the thesis to evaluate design experiments so far in identifying their successful elements.

*Image Credit (drawing): Walter Pichler
(James & Preston, 2008)*

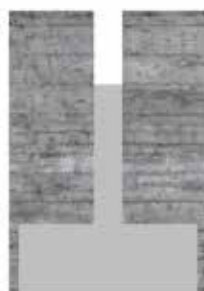
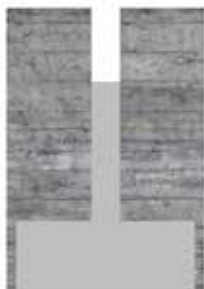
*Image Credit (photography): Joanna
Pianka
retrieved from: [www.3oodpi.at/
architecture](http://www.3oodpi.at/architecture)*





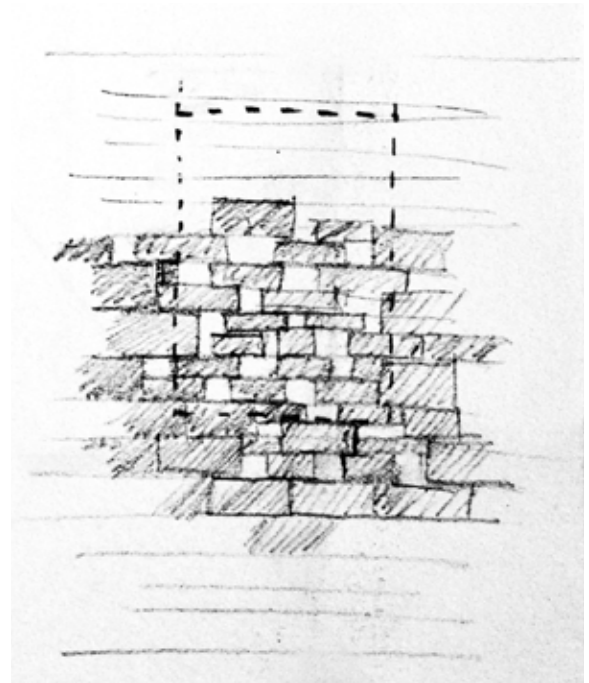
home for one

design development





External texture studies exploring texture as both a physical and visual experience to reaffirm findings from investigation one as still being applicable to a domestic scale building. This investigation also feeds into explorations of aperture.



Investigation of light in relation to how volumes allow it to pass through mass while still providing privacy and expressions of enclosure and protection internally

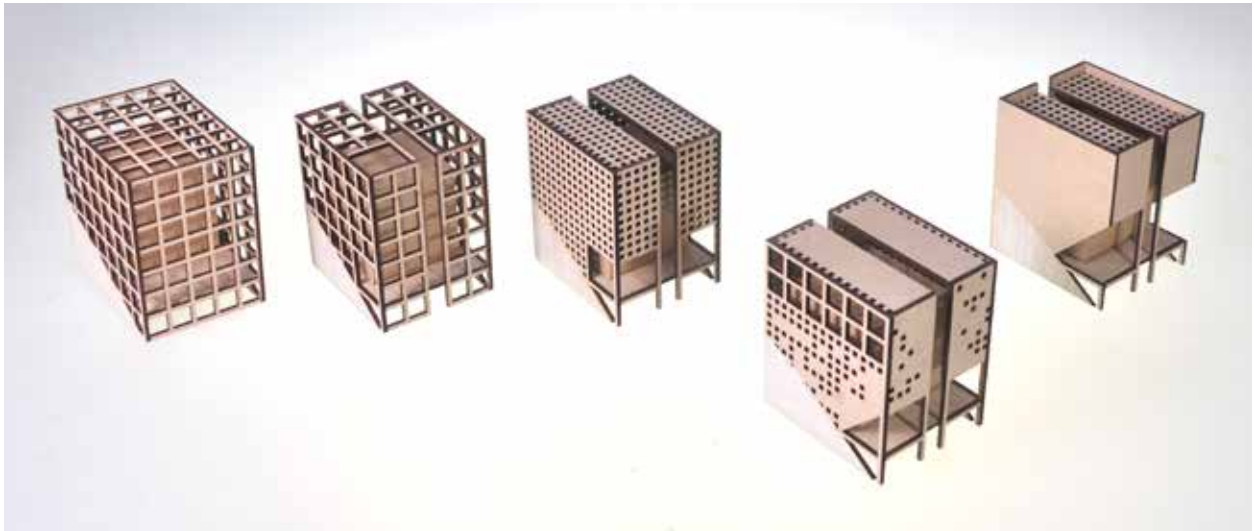
Investigations into exposure looking at how layered forms are opened or closed to reveal each other indicating most successful iteration, model 1:100

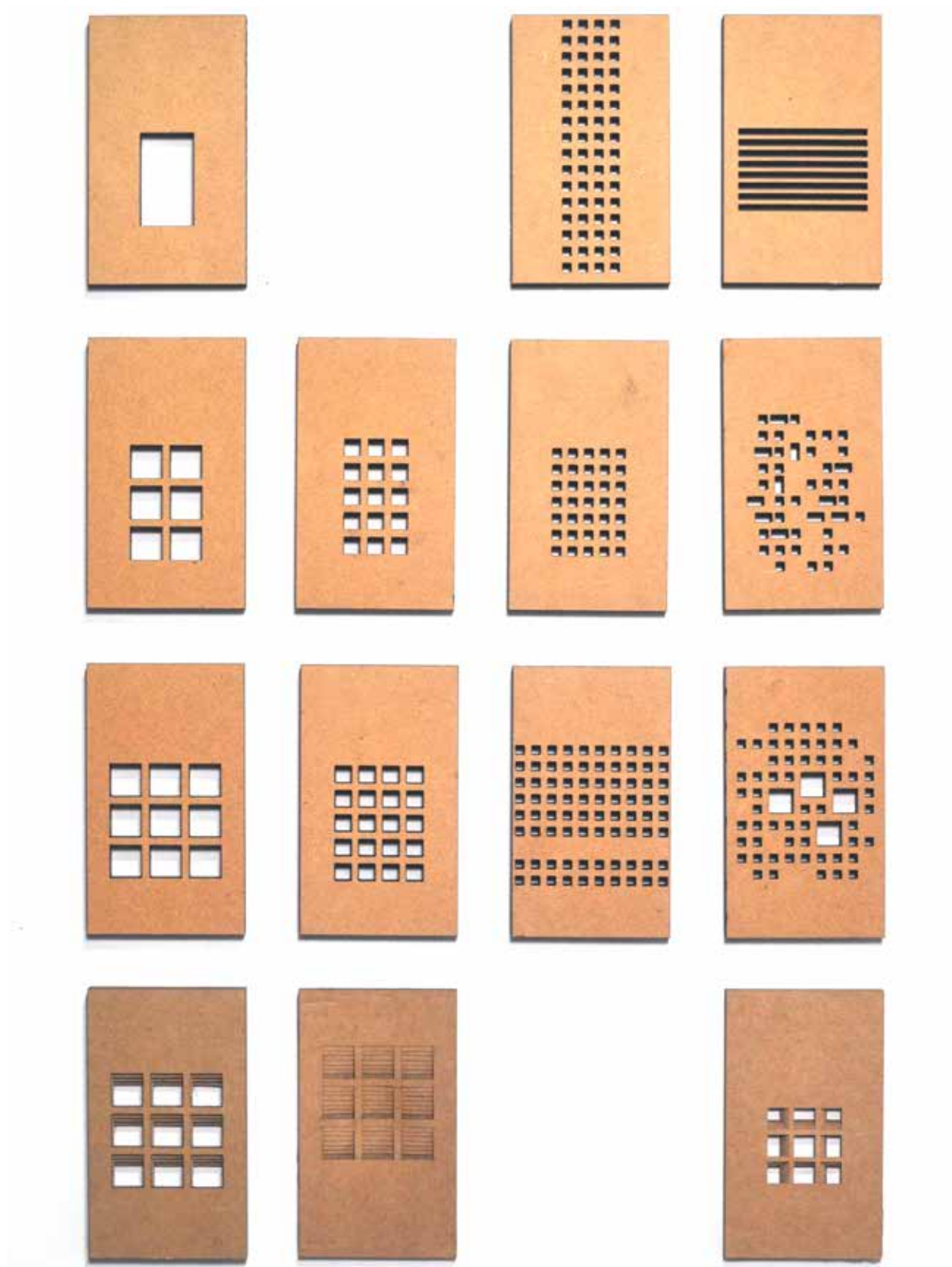
Close ups showing gradients of exposure and details of successful outcome, model 1:100

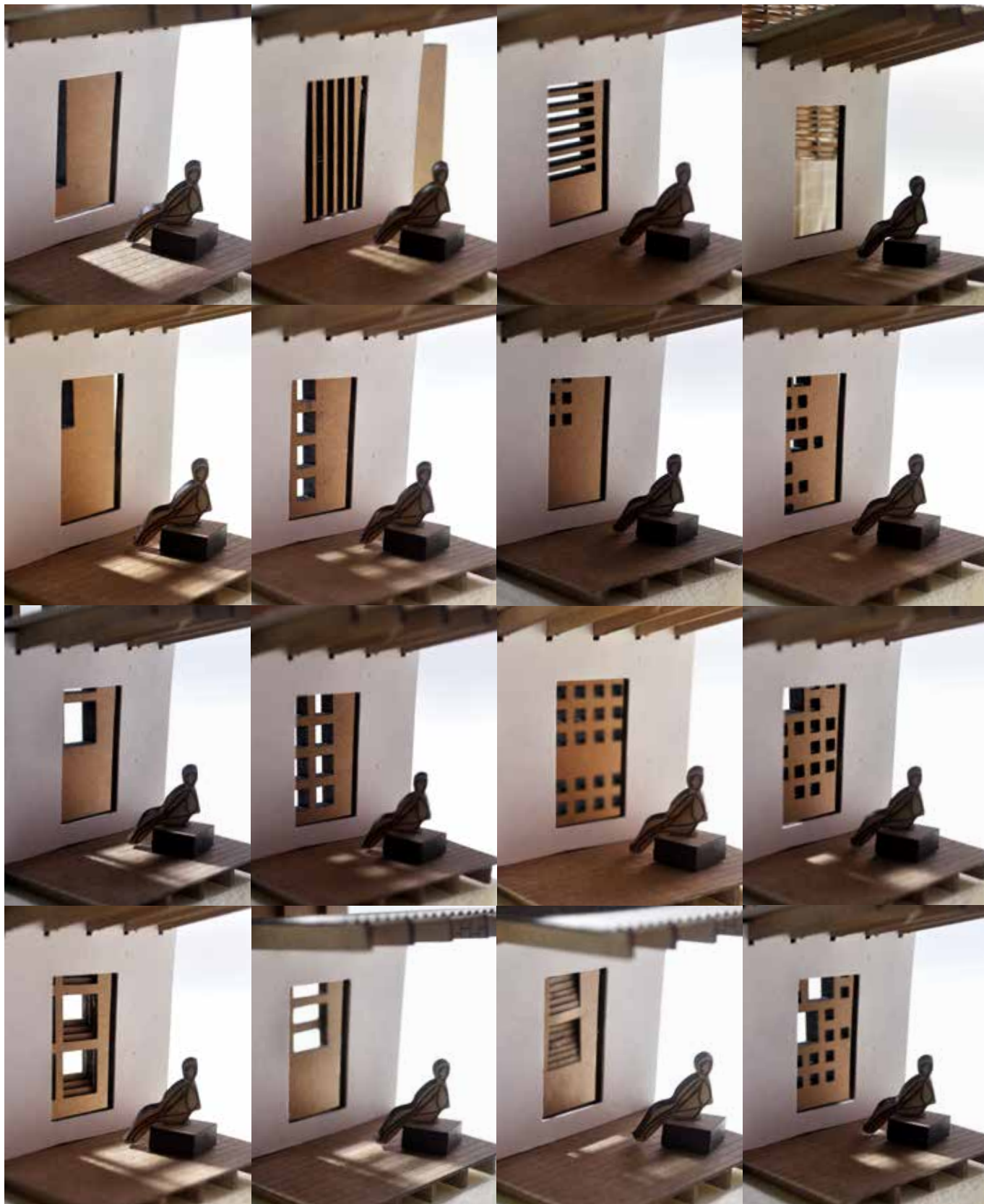
Following spread:

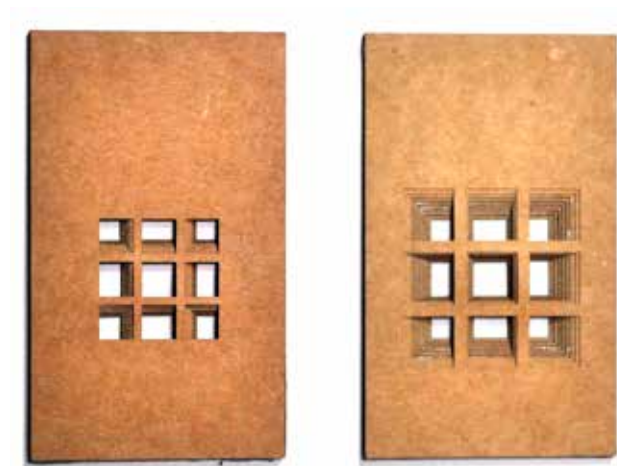
Iterations of wall plates expressing different patterns of perforation through which to allow light to enter the building and maintain sight out, model 1:50 laser cut MDF and card

Lighting tests of iterations to assess interior quality achieved with the aim of identifying a successful balance of light, sight and protection, model 1:50 laser cut MDF and card on goldfoam







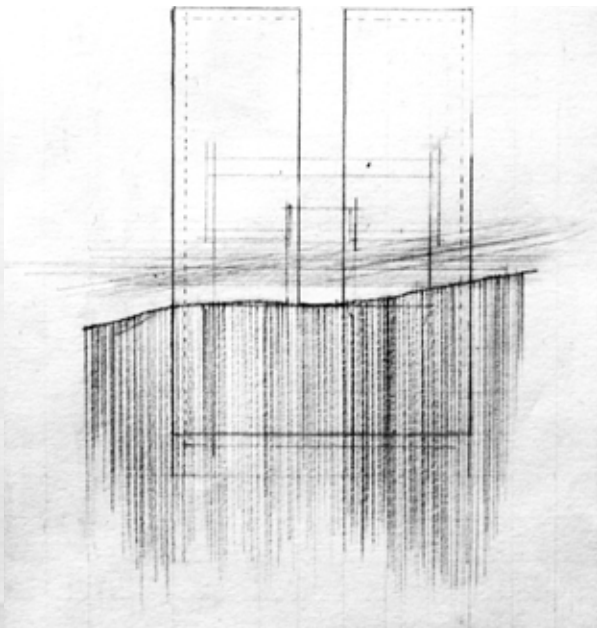
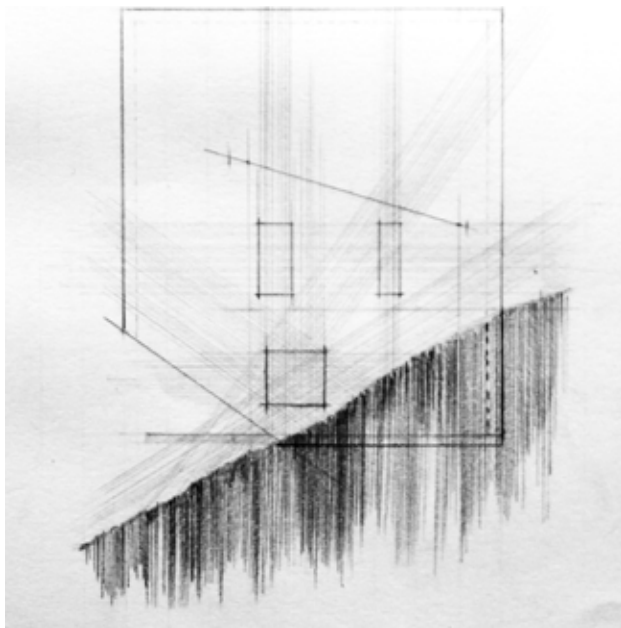
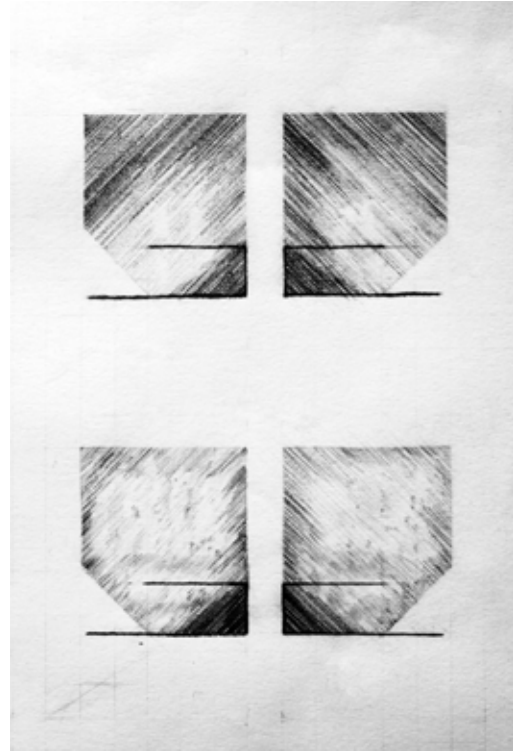
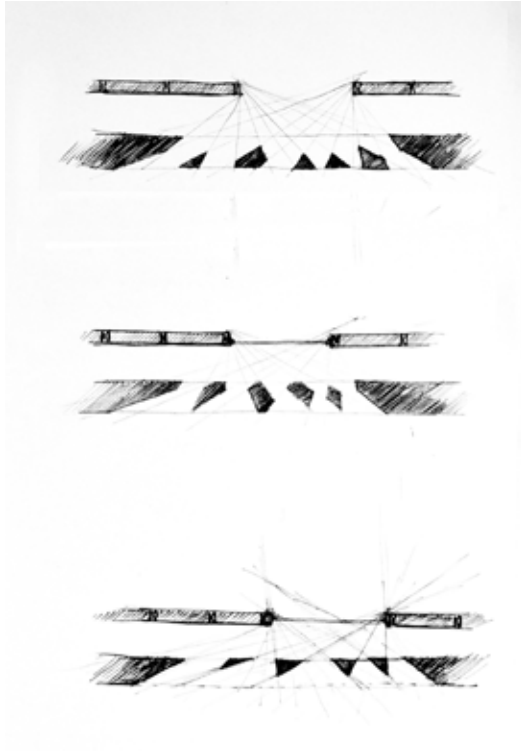


Successful iteration of outer wall opening which allowed for all desirable conditions as shown through photographic testing, model 1:50

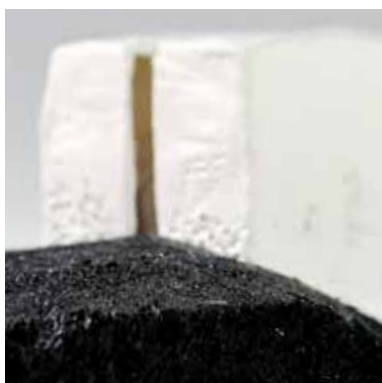
Explorations to elaborate findings

Diagrams exploring desired lighting gradients

Diagrams exploring area of material expression along exterior of proposed form





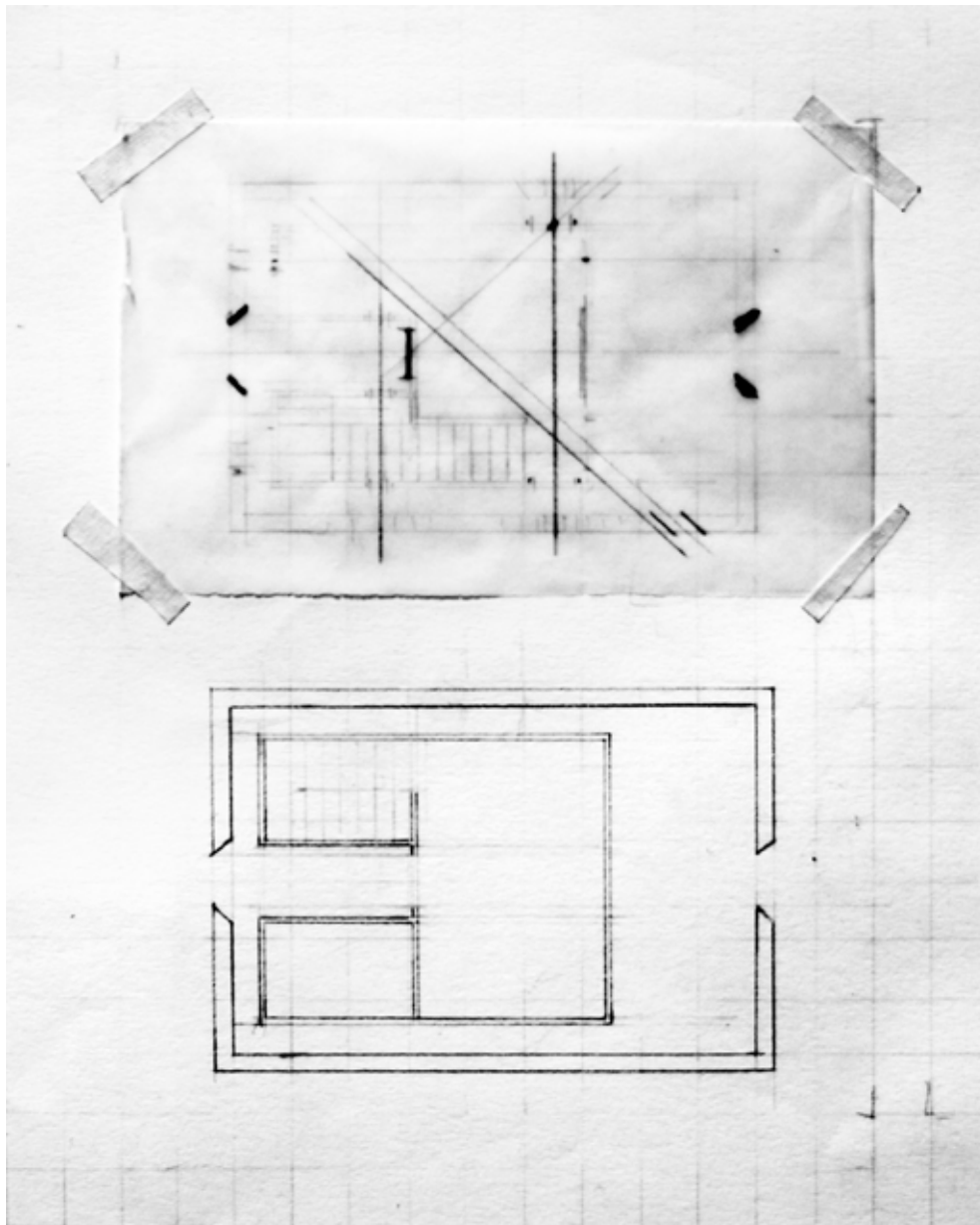


Material test exploring light relationships informed by understanding of direct and indirect experiential qualities, model 1:100 air dry clay

(top left) detail of material surface and undulation, model 1:100 air dry clay

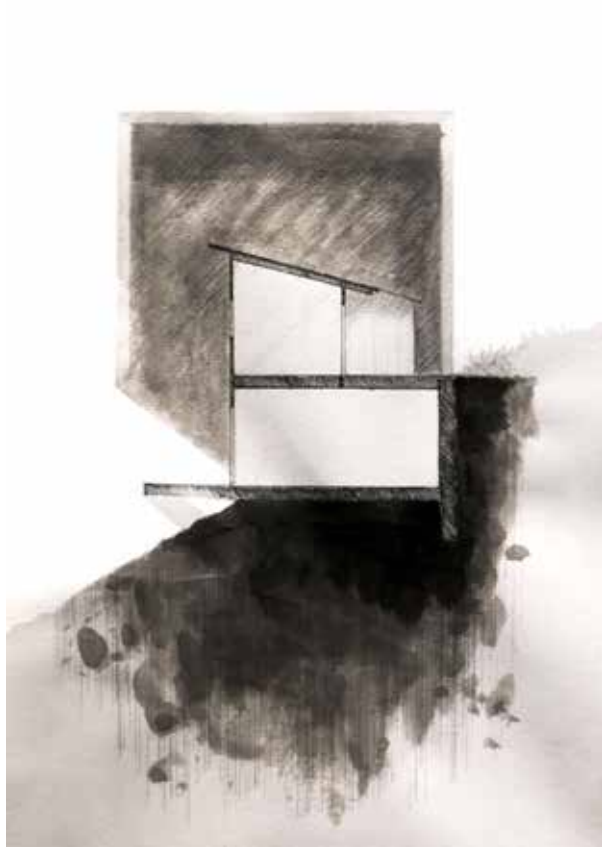
(top centre) detail of internal material quality and lighting effect assessing that aperture it too small, model 1:100 air dry clay

(top right) detail of material surface and undulation as indicating human presence by roadside entrance to building, model 1:100 air dry clay



Indicative floor plans overlaid to evaluate thresholds of transition and thresholds of light, sight and sensorial experiences, drawn at 1:100

Development sections indicating layering of mas and volumes within form as a way of increasing presence in space and delaying transitional thresholds, drawn at 1:100

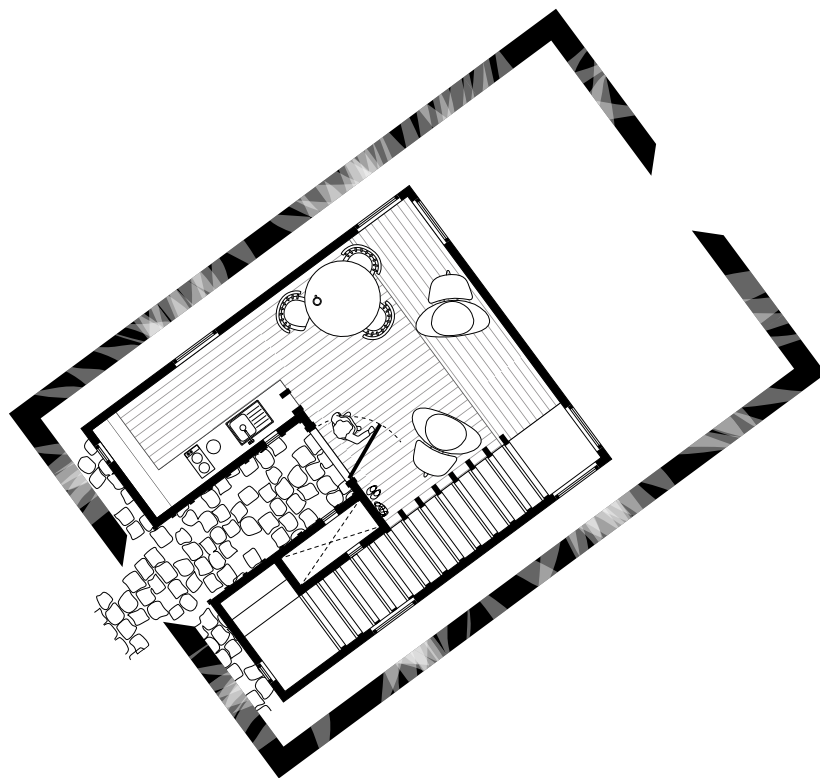




home for one

detailed design

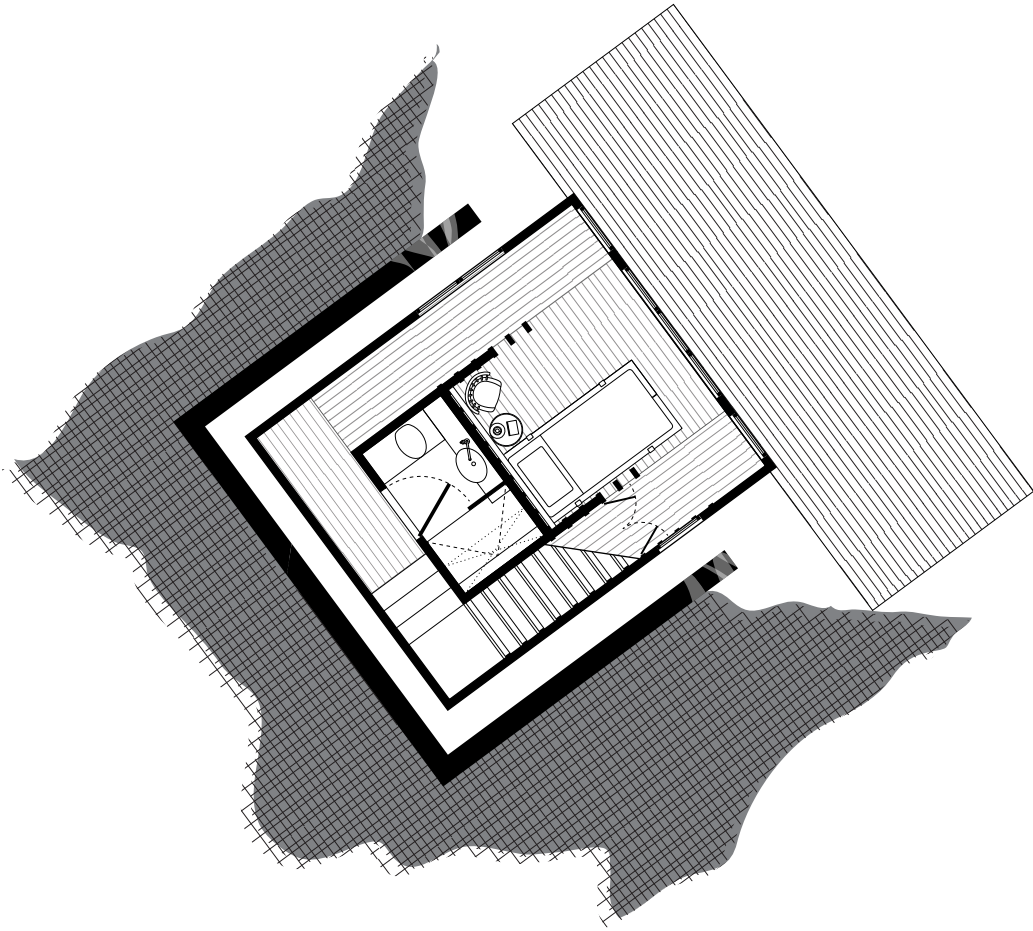




floor plan

entry floor, kitchen and living

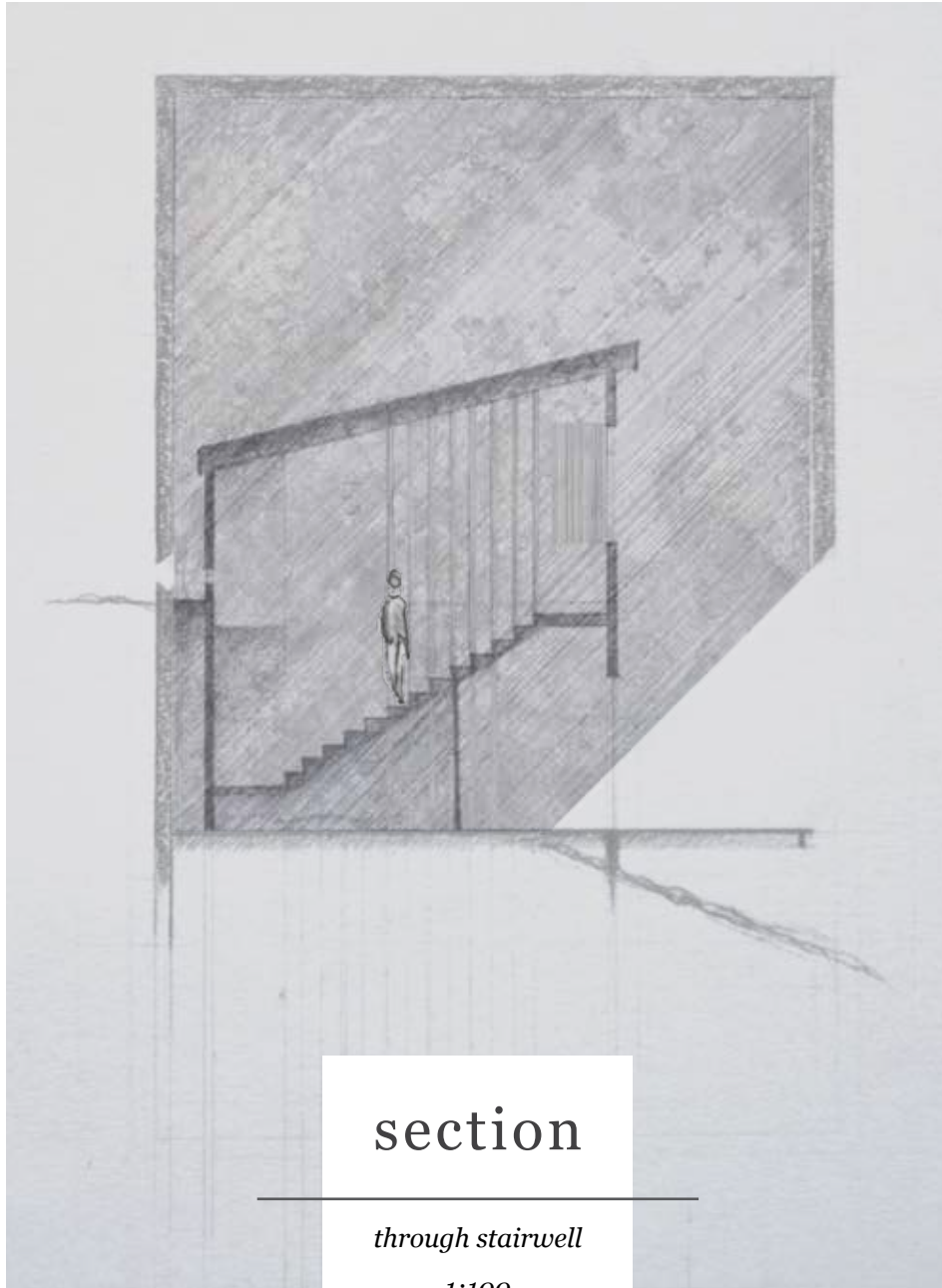
1:100



floor plan

lower floor, bathroom and sleeping

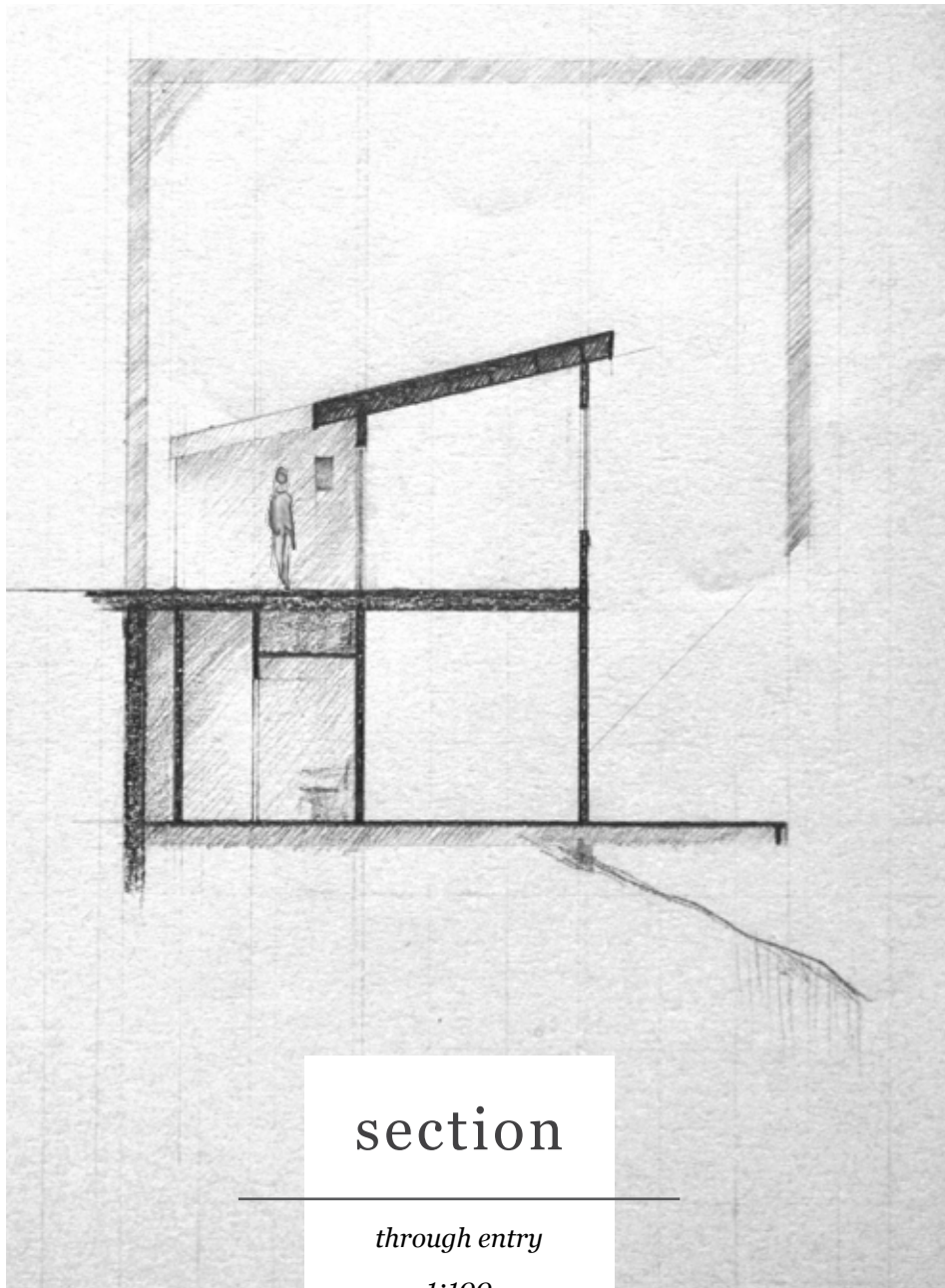
1:100

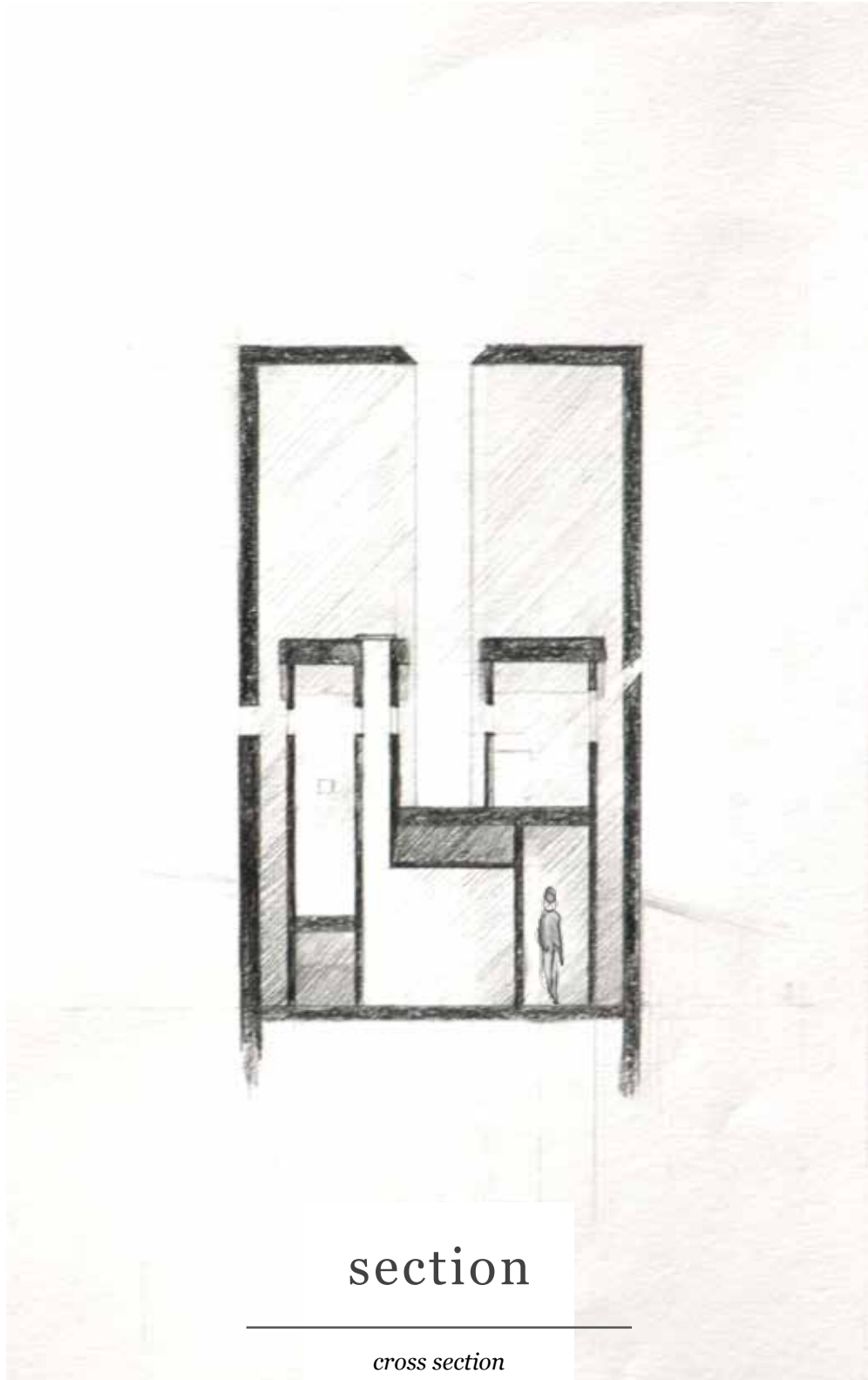


section

through stairwell

1:100





findings and reflection

This design experiment takes the findings from Investigation one and, in addressing the complexities of site and programme, tests the addition of threshold, materiality, ambivalence and sensorial connection to its developing architectural language. During this investigation it became clear that what was being developed here is less meaningful as an 'architectural language' than it is as a collection of architectural considerations, around which a framework of emotional care can be designed and evaluated.

From this investigation conclusions can be drawn about the value of the tested design considerations. Threshold proved to be a crucial lens through which to interpret the relationship between internal spaces as well as interior and exterior. This captures the translation from one space to another. The recurring evaluation is that breaking down hard thresholds into softer gradients of transition becomes an enabling quality for an occupants reading of their emotional agency within the space. Breaking down these understandings of inside and outside also allows for what has been brought from theory as ambivalence and sensorial consideration to be reconceptualised as indirect and direct considerations. These emphasise not the location of the worldly experience but balancing sensorial experiences based on their experiential location in relation to the embodied subject. This

understanding of the relationship to the body is also key to the evaluation of successful materiality as informed by contextual research into spatial empathy (*einfühlung*). This material understanding was built on through experimentation and the case studies of Walter Pichler and Peter Zumthor, to find that there is an equally important relationship to be considered between the perceived materialities of where objects intersect and form material conversations of the already identified quantities of mass, texture and volume.

Elements of the design which come into focus as deserving further investigation include rhythm, pattern, connectivity and opening. Pattern and rhythm are both referred to often in discussion of spatial empathy (*einfühlung*) but also become apparent through the investigation of thresholds as denoting felt shifts in space. Through the extrapolation of considering light at an increased scale this comes to explore sight and privacy. Although not consciously identified as such at the time, this experimentation touched on the importance of aperture through a building. This should be further explored in the following investigation to clearly identify where these considerations lie in communicating emotional agency.

Connectivity is ultimately identifying a need for social considerations in the research.

Through reflecting on this design process it becomes apparent that the development of design considerations cannot continue any further without the acknowledgement that we are not solitary bodies in space. Up until this point the design has been centered on a single, seemingly solitary occupant. This does not reflect a realistic breadth of application as there are very few scenarios where an individual exists in abstract isolation within an urban environment. This calls for a reevaluation of the current domestic investigation to be reimagined as a dwelling for multiple occupants in a second domestic investigation to bridge between the intimate scale of a single dwelling and the proposed public scale to follow.



case study

Maggie's Cancer Caring Centers



Maggie's Cancer Caring Centres

Project started by Charles Jenks and Maggie Keswick

Designers: Various

Date: Various

Location: Various

The first Maggie's Centre opened near Edinburgh Hospital 1996 in this custom designed restoration of an old stables

Image Credit: Richard Murphy Architects Ltd (retrieved from: www.richardmurphyarchitects.com)

Image capturing analysis of eight Maggie's centres layouts coding spaces as providing for direct intimate space (blue), indirect communal spaces (yellow) and direct communal spaces (blue). Authors own illustration based off a graphic analysis of Maggie's Centers by Lily Jencks (Jencks & Heathcote,



Maggie's Cancer Caring Centers in the United Kingdom is the closest practice aligned with the emotional intentions of this thesis. Maggie's is an organisation which provides support to cancer patients and their communities in and around hospitals in the United Kingdom with a particular emphasis on the spaces in which that care is provided. A key design intention of this movement is to consider how the expression of physical environment is crucial to supporting the emotional experience and recovery of cancer patients. These projects employ, at all stages of design development, an understanding of how emotionality is being addressed by the built environment (Jencks & Heathcote, 2010). Although this is evolving a more comprehensive and compassionate model of healthcare it remains strictly aligned to post-diagnosis care. For the sake of this case study, this thesis will focus on the experiences created by these buildings and the design attributes which enable them.

There is a consistent attention within Maggie's Centres to break down the dialogue of programmatic expectations by combining unexpected elements, such as utilising a domestic language into a not programmatically domestic building. "Informal, like a home, a Maggie's Centre is meant to be welcoming, domestic, warm, skittish, personal, small scaled and centred around a kitchen

or place to make food." (Jencks & Heathcote, 2010, p. 13)

This is emphasised by those working in these buildings who identify this as one of the key dynamics which promotes the agency of the occupant through familiarity (Martin, 2017). Although this proposes a model of care as a service in which both human and nonhuman elements are the provider (Martin, 2017) it crucially identifies the building as an essential nonhuman element in the delivery of that care. The building is therefore a conduit for care provided through design.

Another key theme identified in Maggie's Centres is a model for how the gradient of spaces in the building are separated and experienced. This identifies a critical shift in understanding for the design investigation undertaken by this thesis as it presents considerations of communal space in relation to deeply personal or intimate space, both of which exist in an environment of emotional volatility. Importantly, Maggie's Centres, as a design philosophy, also identify the unbiased validation of all emotional experiences, through emotionally enabling spaces, as crucial to ongoing health which is essential to the basis of this thesis. Learning from Maggie's Centres as it moves into addressing multiple occupants this thesis focuses on capturing similar qualities of interaction supported by architectural space.



investigation three
multi-dwelling

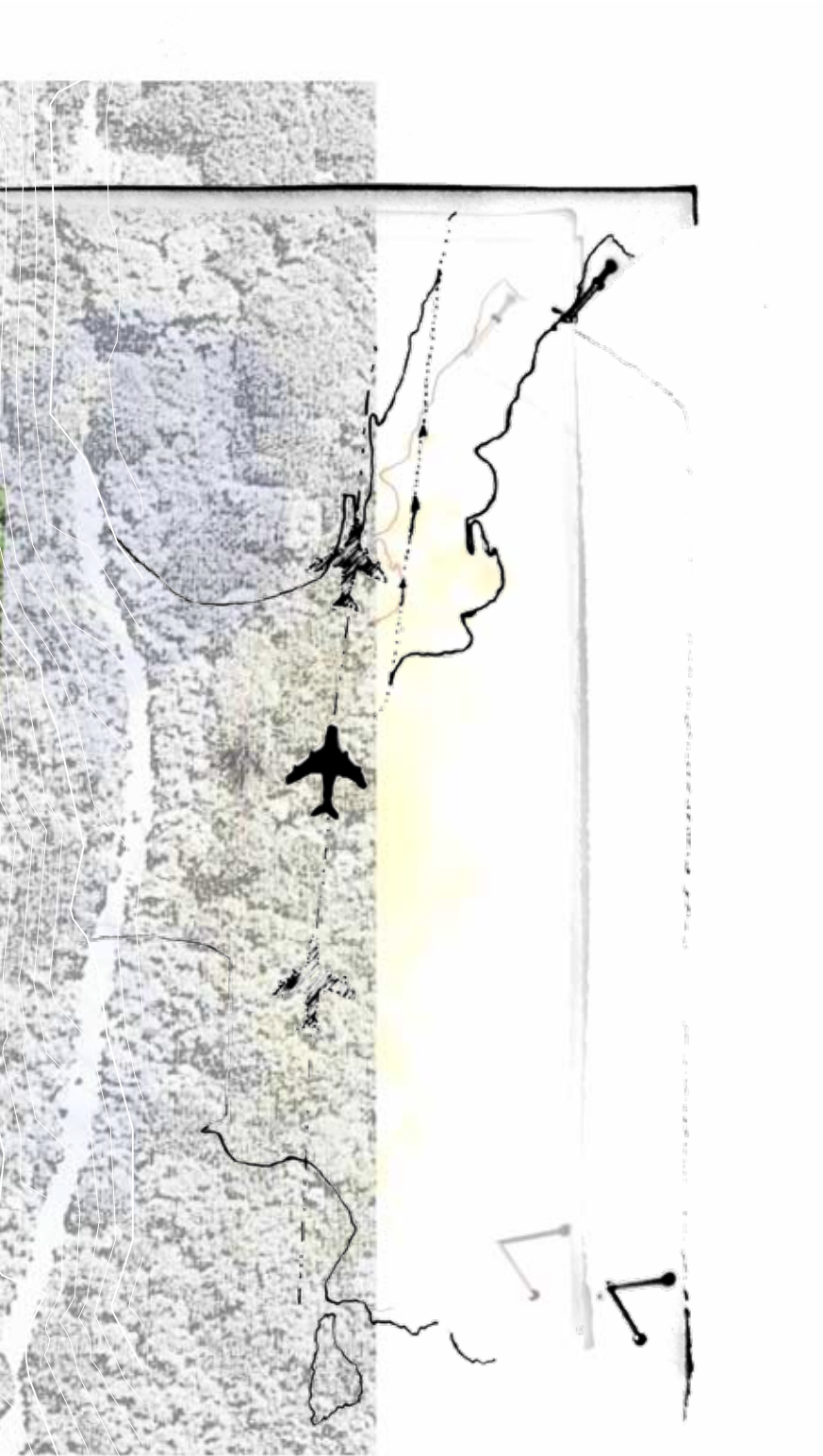


brief

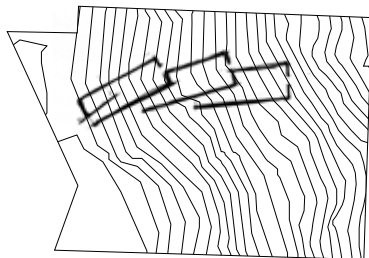
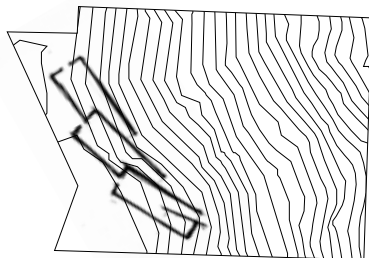
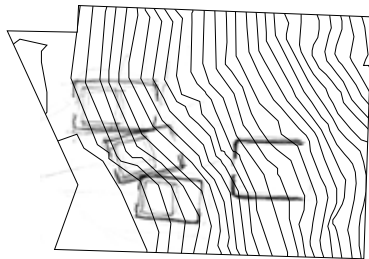
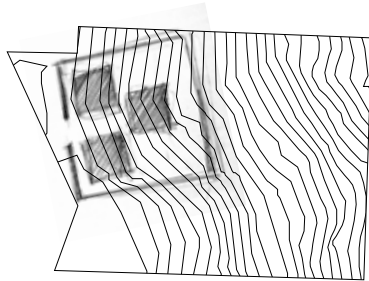
Findings and reflection on the initial domestic scale investigation pointed to the need for an elaboration of the testing ground to include a dimension of interpersonal interaction. To do this a secondary domestic scale will be investigated. This brief looks to provide space for three individuals to cohabit with emphasis on providing space for their emotional movement through personal and communal spaces as well as facilitate their interactive emotional communities. As identified from the previous investigation this 'multi dwelling' will become the testing ground to evaluate the existing considerations of the architectural language. These will be built upon to further explore the relationships created by connectivity, aperture, pattern and rhythm in creating an emotionally healthy living environment for multiple emotional worlds to coexist within.

In order to keep a consistent comparison with the outcomes of the previous investigation the 81 Buckley Road site will be used. As the scale is likely to push beyond the existing site boundary, for this investigation the adjacent vacant lot will be amalgamated into the site consideration.





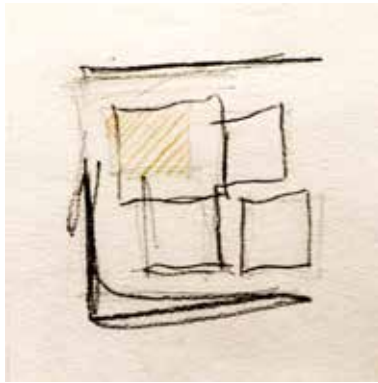
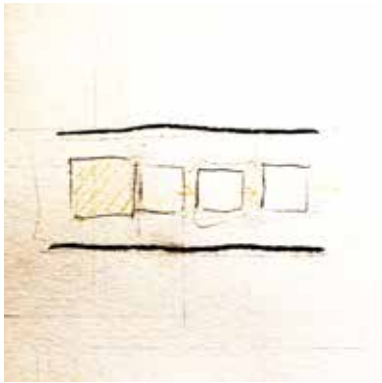
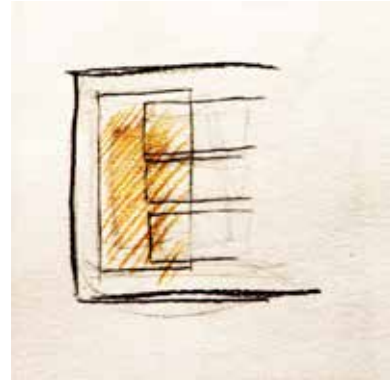
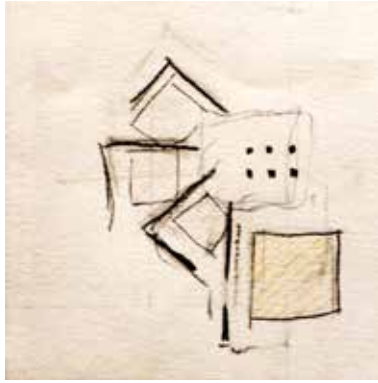
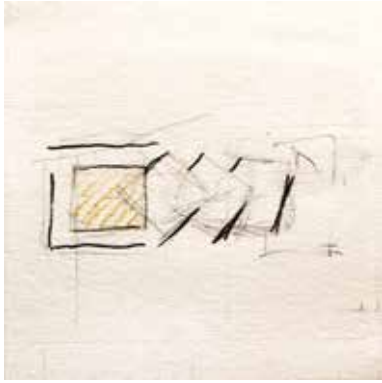
site



concept design

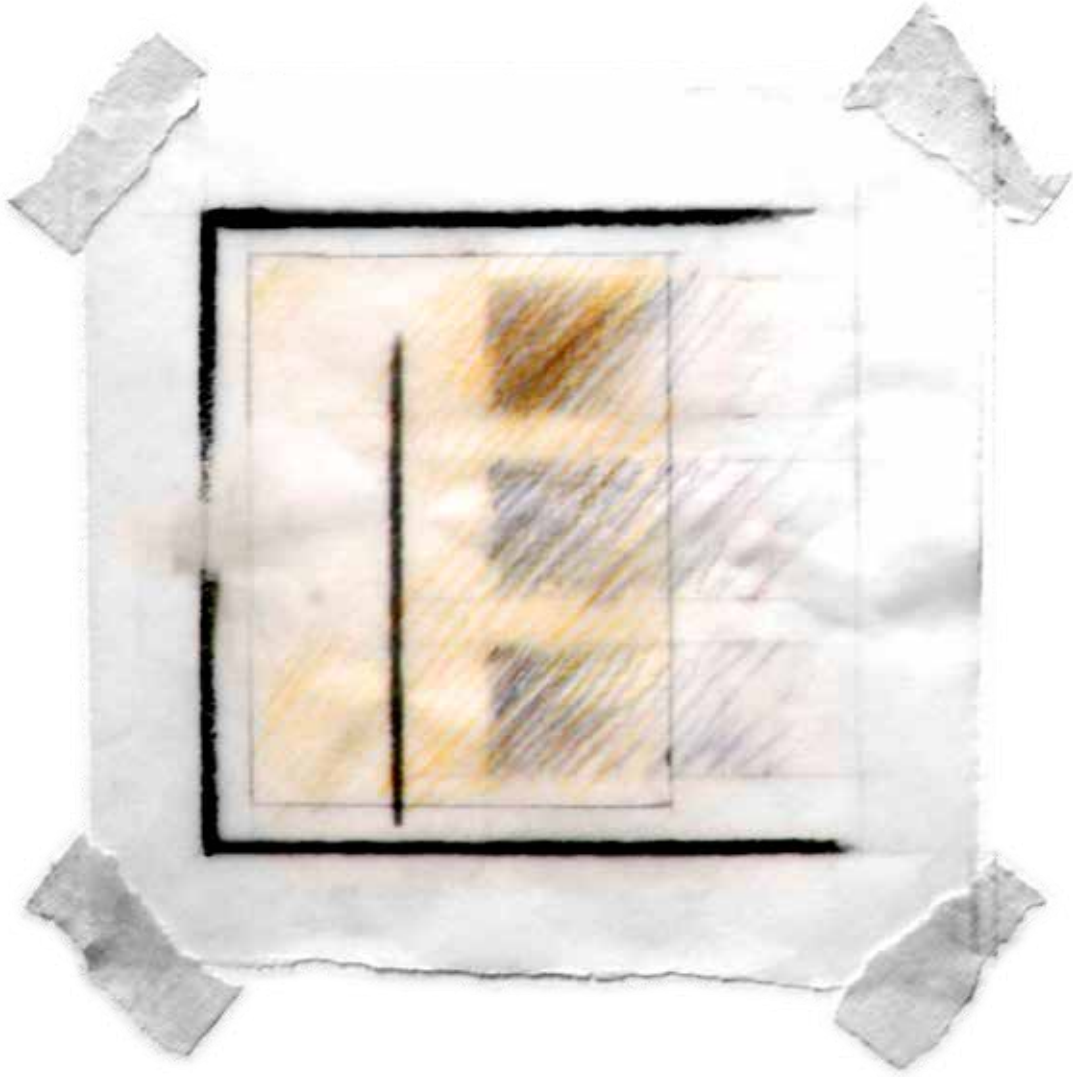
The formal expression of the previous investigation is iterated onto the site as a way of introducing the increased scale of design exploration

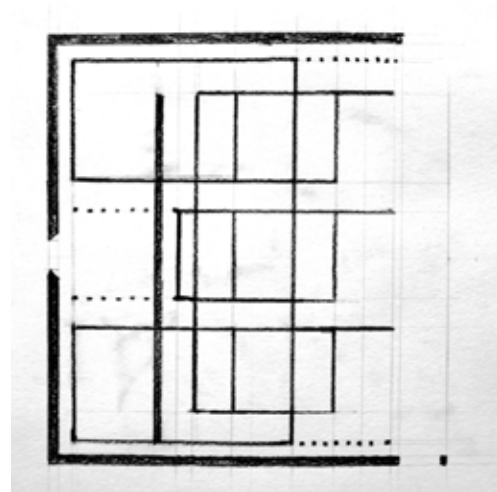
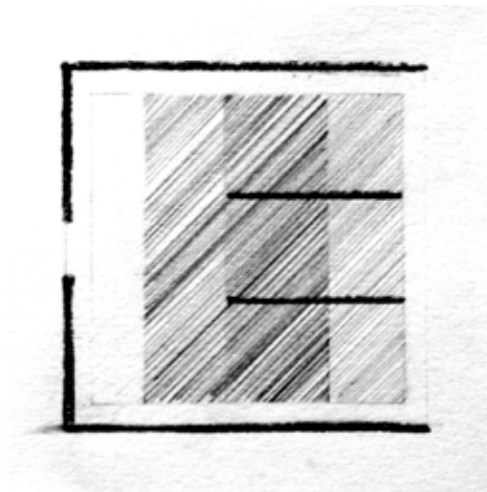
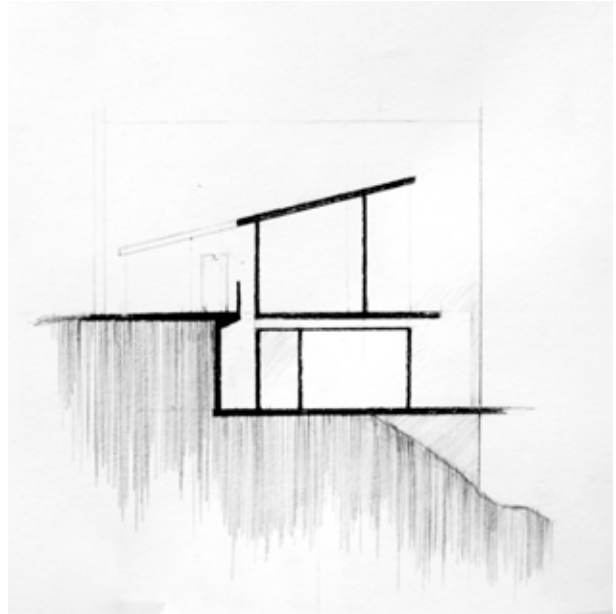
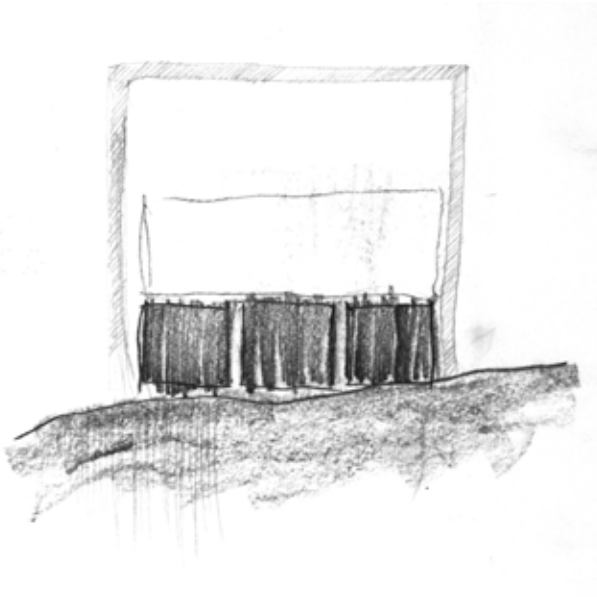
Considerations are further evaluated through drawing to explore gradients of connectivity through spaces and in reaction to the site



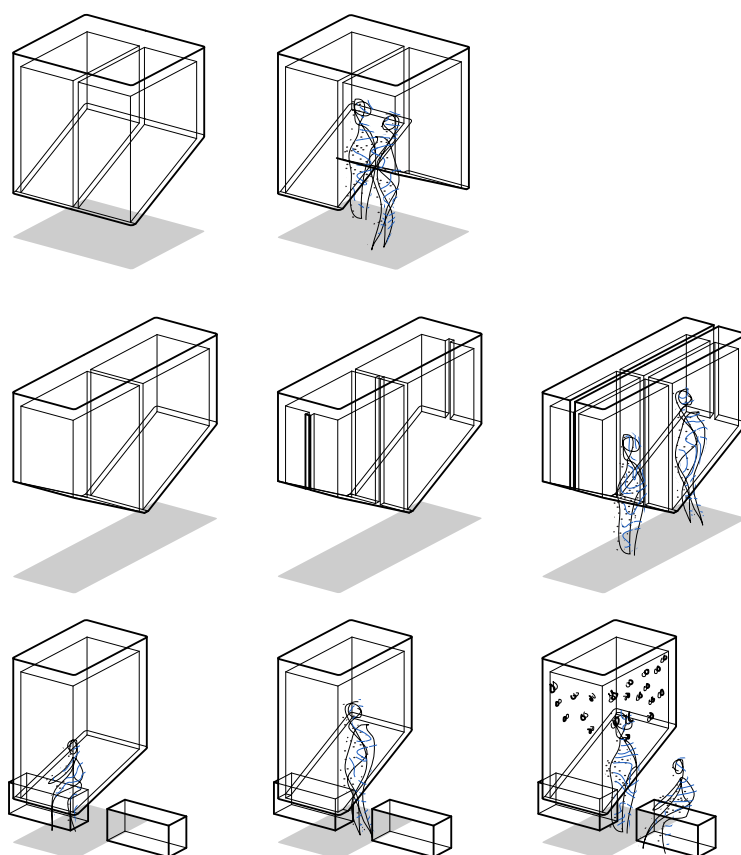
Concept Design

Multi-dwelling

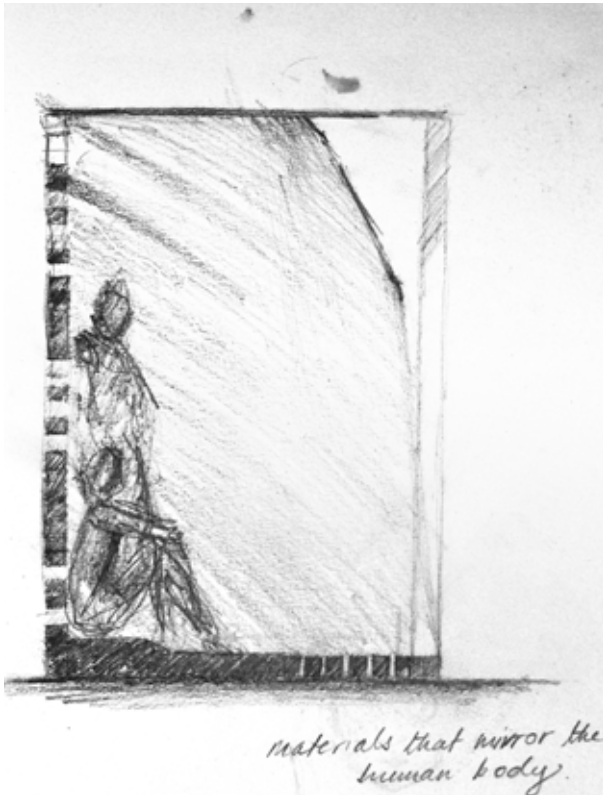




This investigation begins to explore mass as a division between individual intimate private spaces and shared private spaces as well as between these private spaces and the communal or semi-public spaces also present in the dwelling. This leads to an investigation of how mass can be articulated through material but also be broken down through aperture and pattern in order to facilitate the relationships between these spaces.

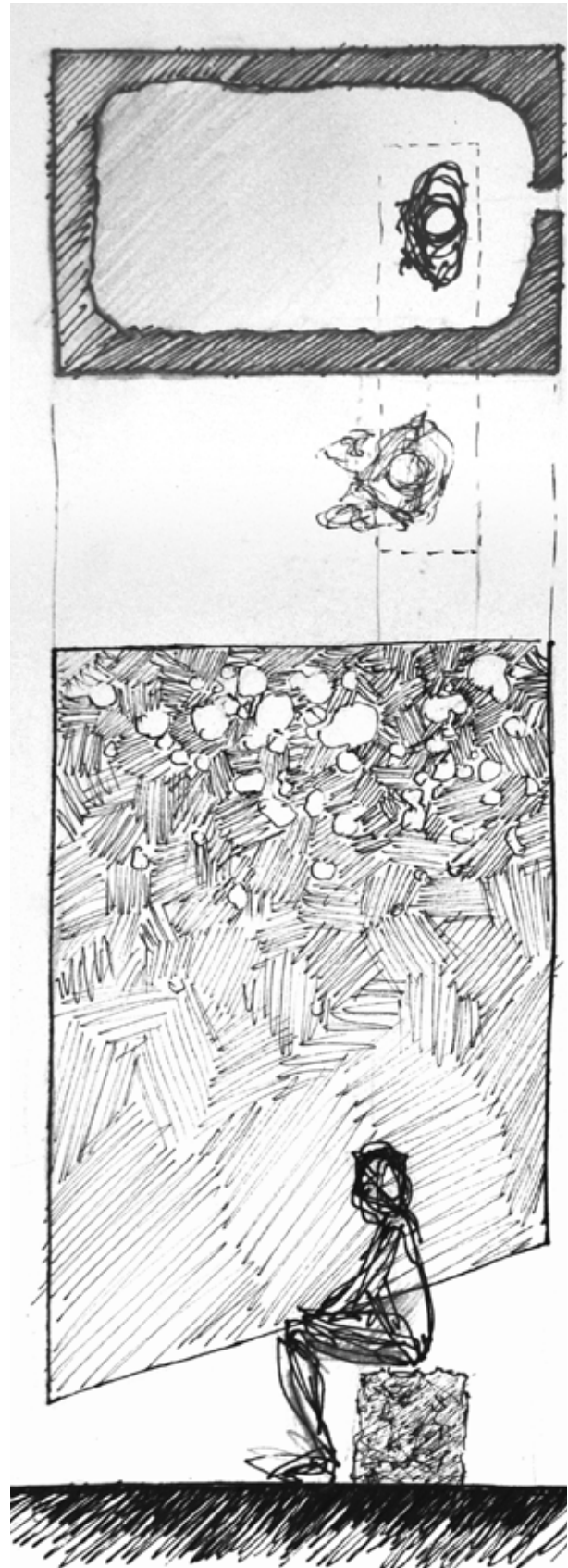


installation re-evaluated



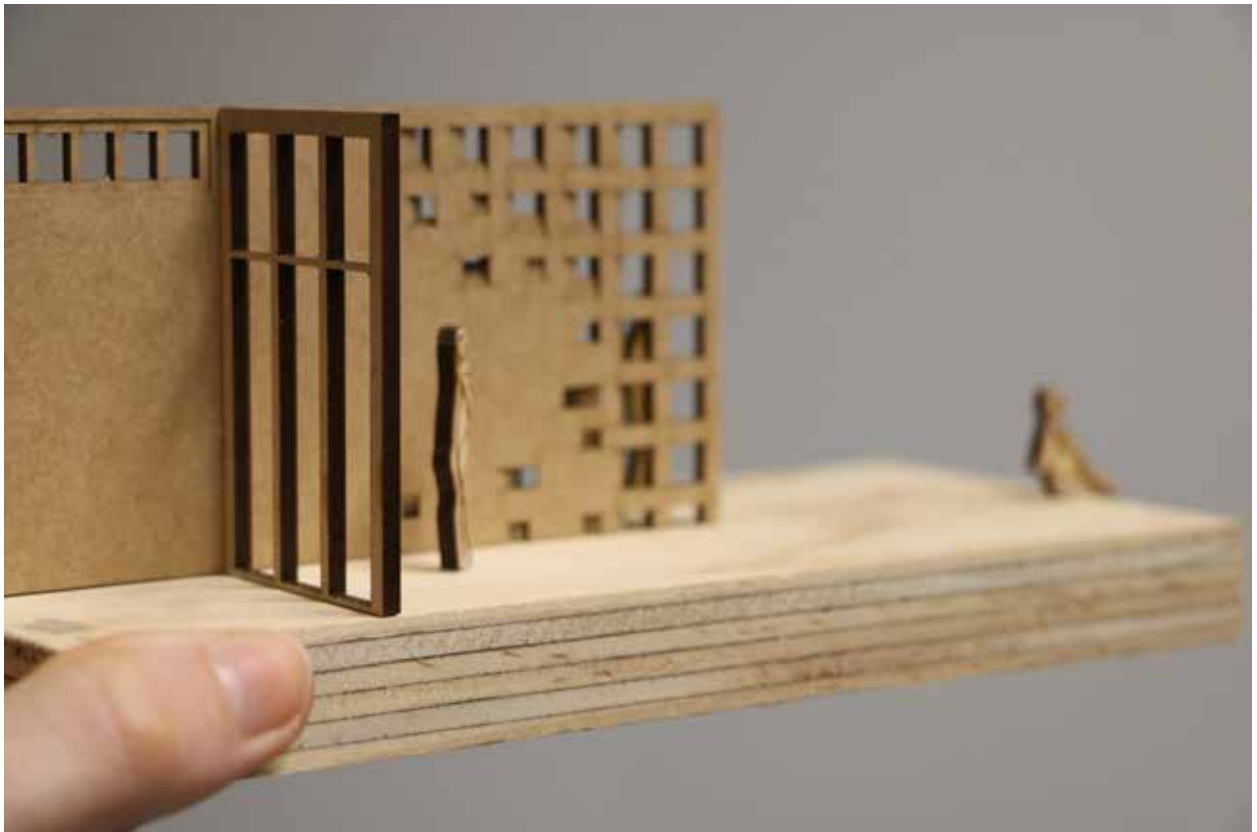
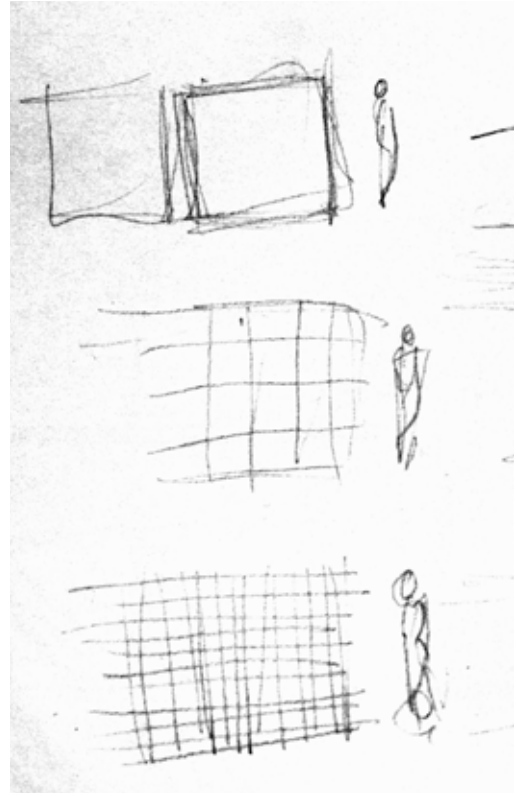
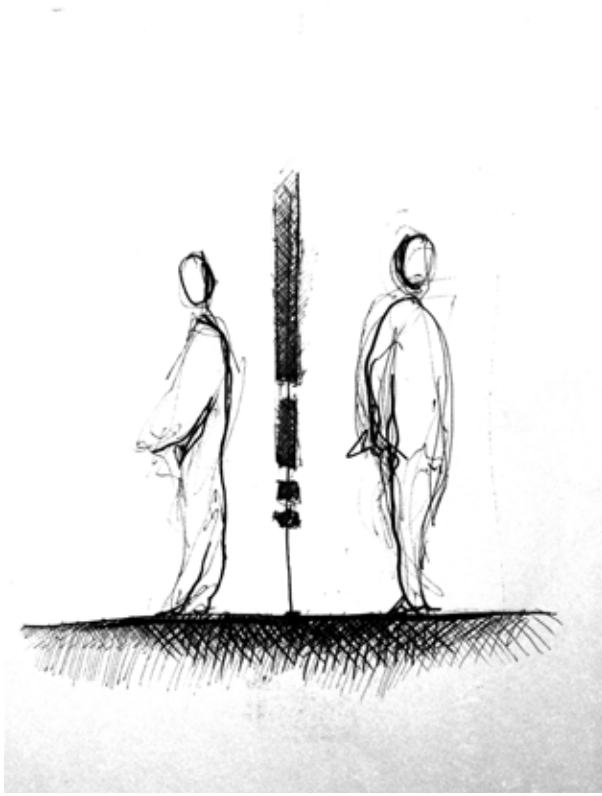
As part of this investigation the installation is revisited to assess potentials identified at the first reflection but not evaluated. These reconnect the design to its successful initial findings as a way forward addressing connectivity of space and proposes aperture an appropriate approach to this.

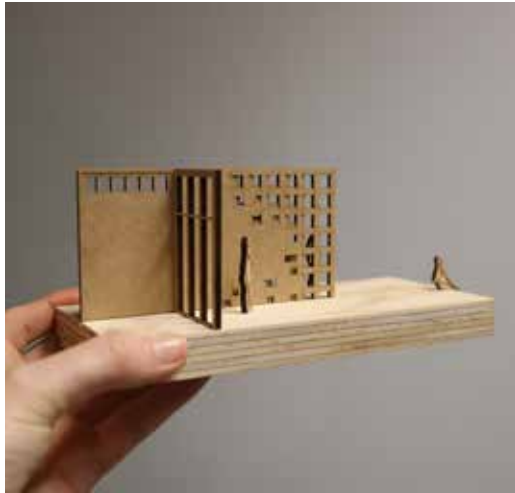
sketch proposals testing potential for multi person installation



Installation Re-evaluated

Multi-dwelling

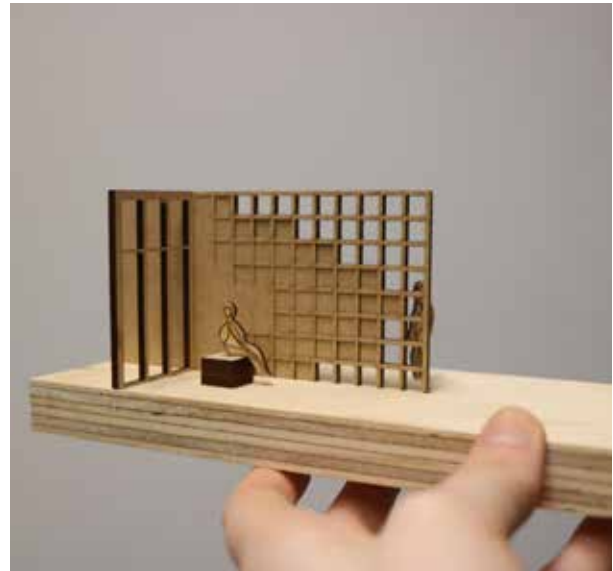




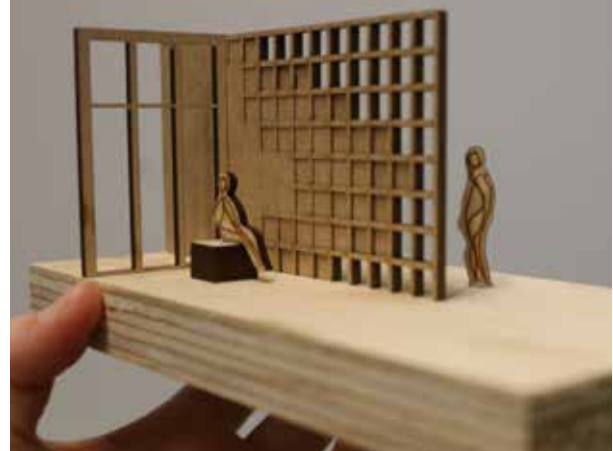
exploration

sketch of patterning in relation to human scale

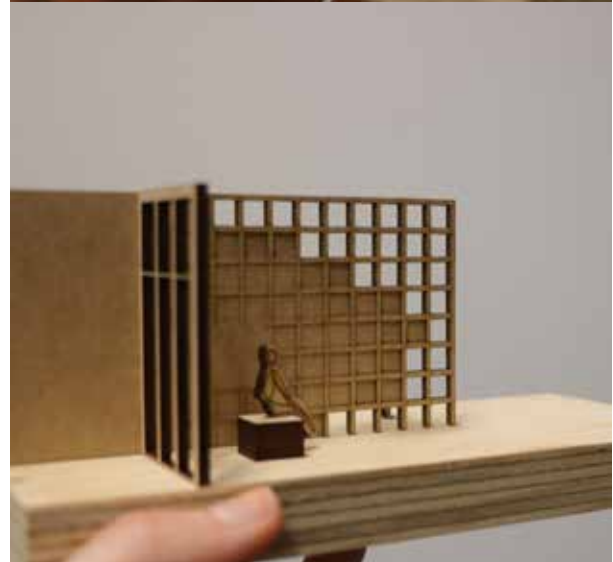
models and sketches exploring interpersonal connection utilising aperture through mass, models 1:50



Exploration



Multi-dwelling







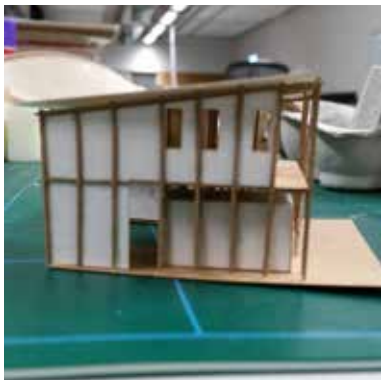
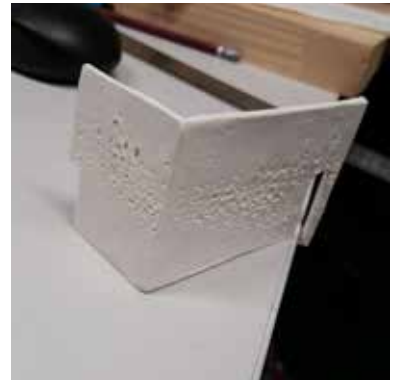
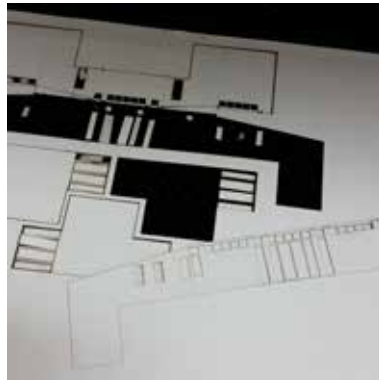


previous spread:

*successful aperture wall outcomes
describing flow from intimate personal
space to shared personal space on deck,
model 1:50*

*model describing alignment of apertures
to break down thresholds and interior
exterior relationships, model 1:50*





separation of model iteration showing
the different rhythms of spaces through
layering of gradients of intimacy,
pattern, structure, mass and aperture
which connects across the whole house,
model 1:125





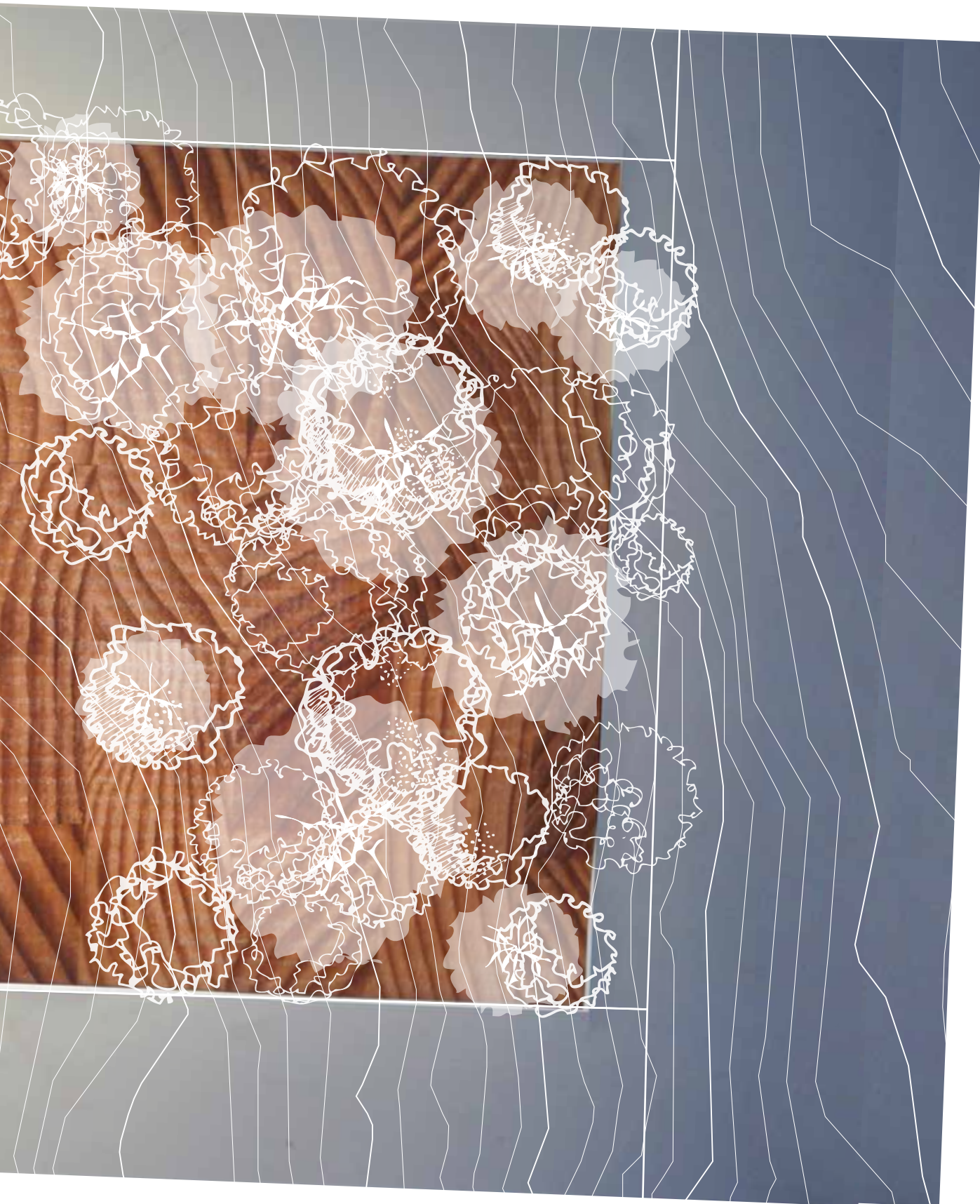


multi-dwelling

detailed design











floor plan

entry floor, kitchen and living

1:100





floor plan

lower floor, private living

1:100

elevations



south west



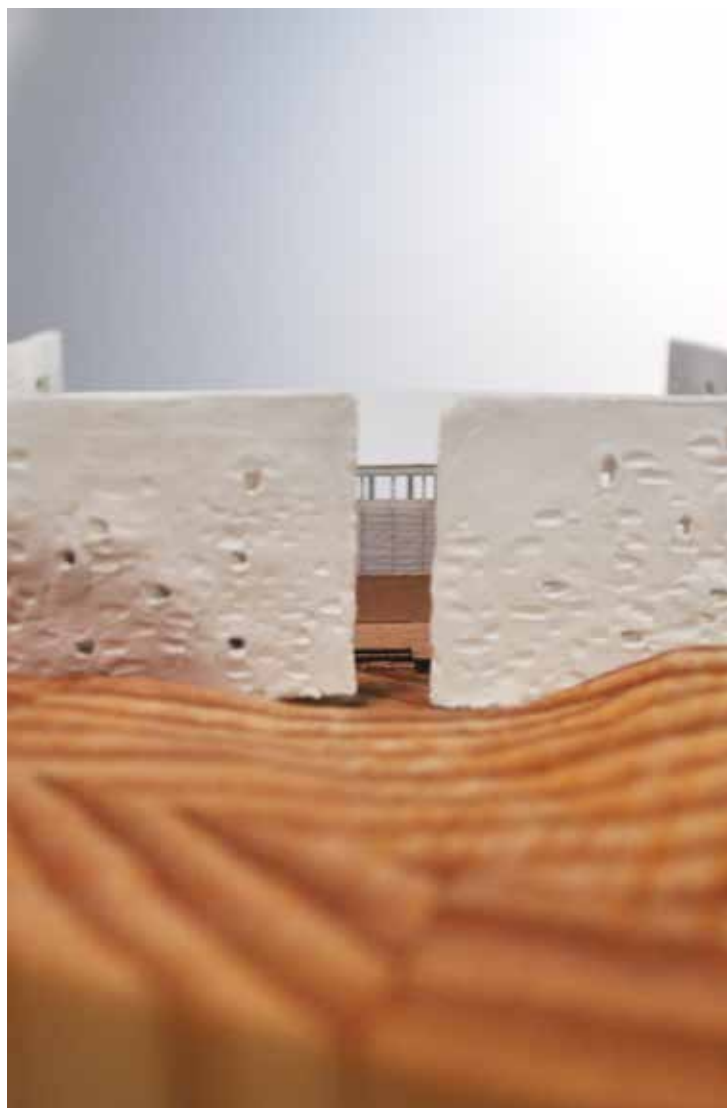
south east



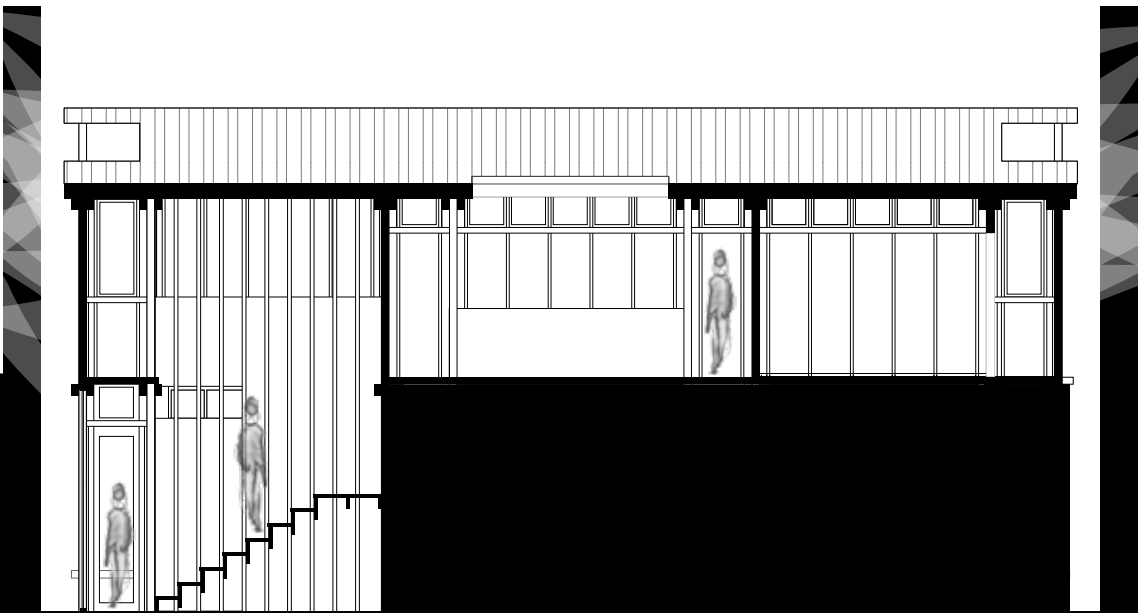
north east



north west



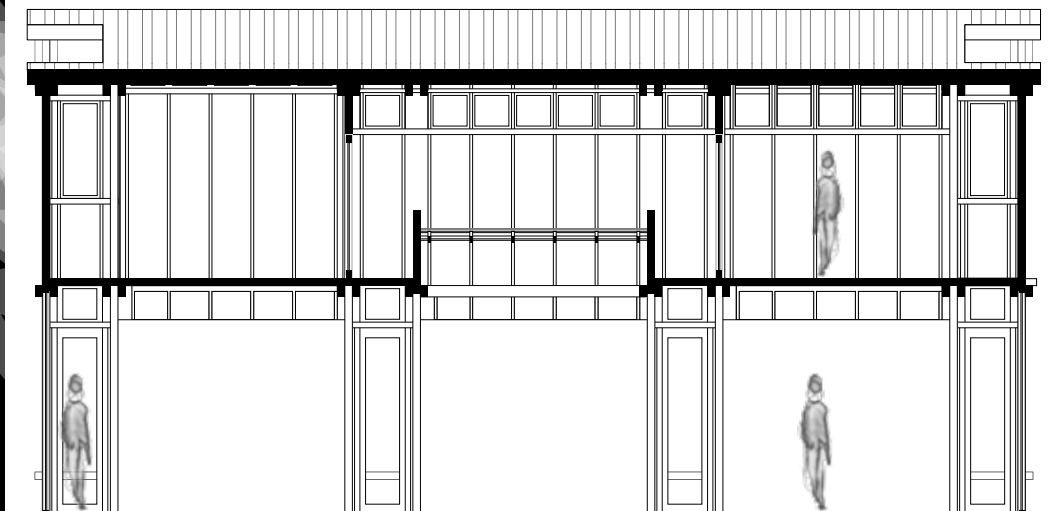
entry from Buckley Road



cross section

entry and stairwell

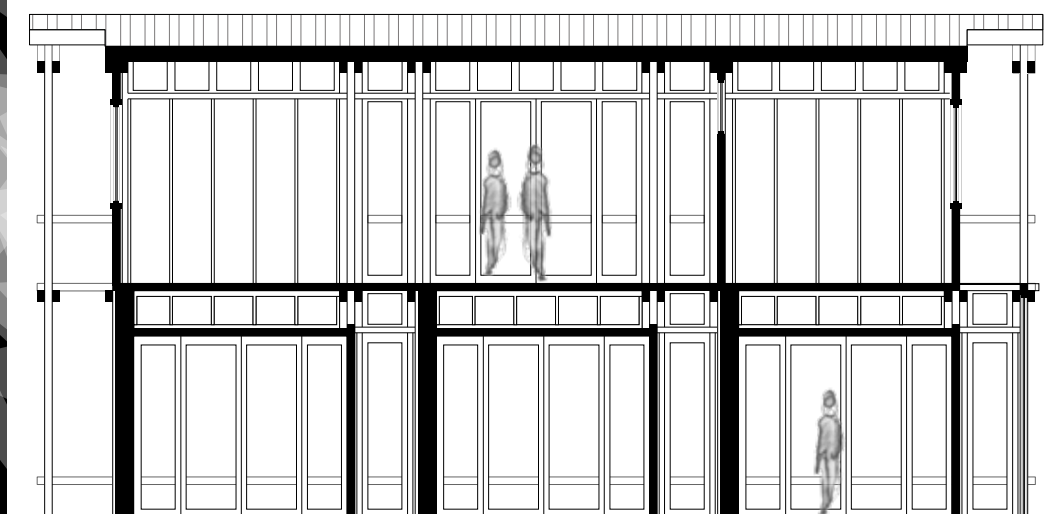
1:100



cross section

through entry and hallway

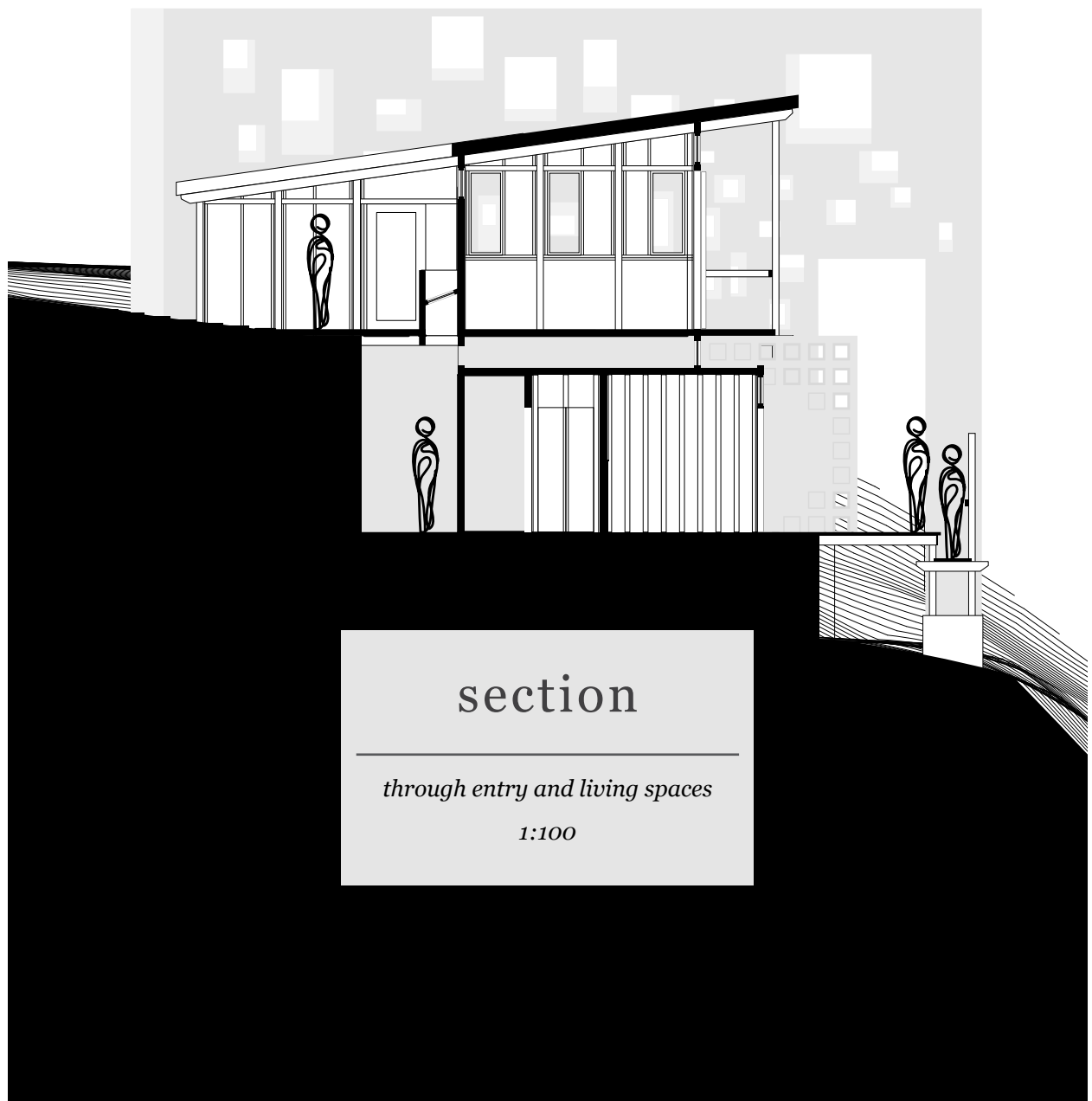
1:100

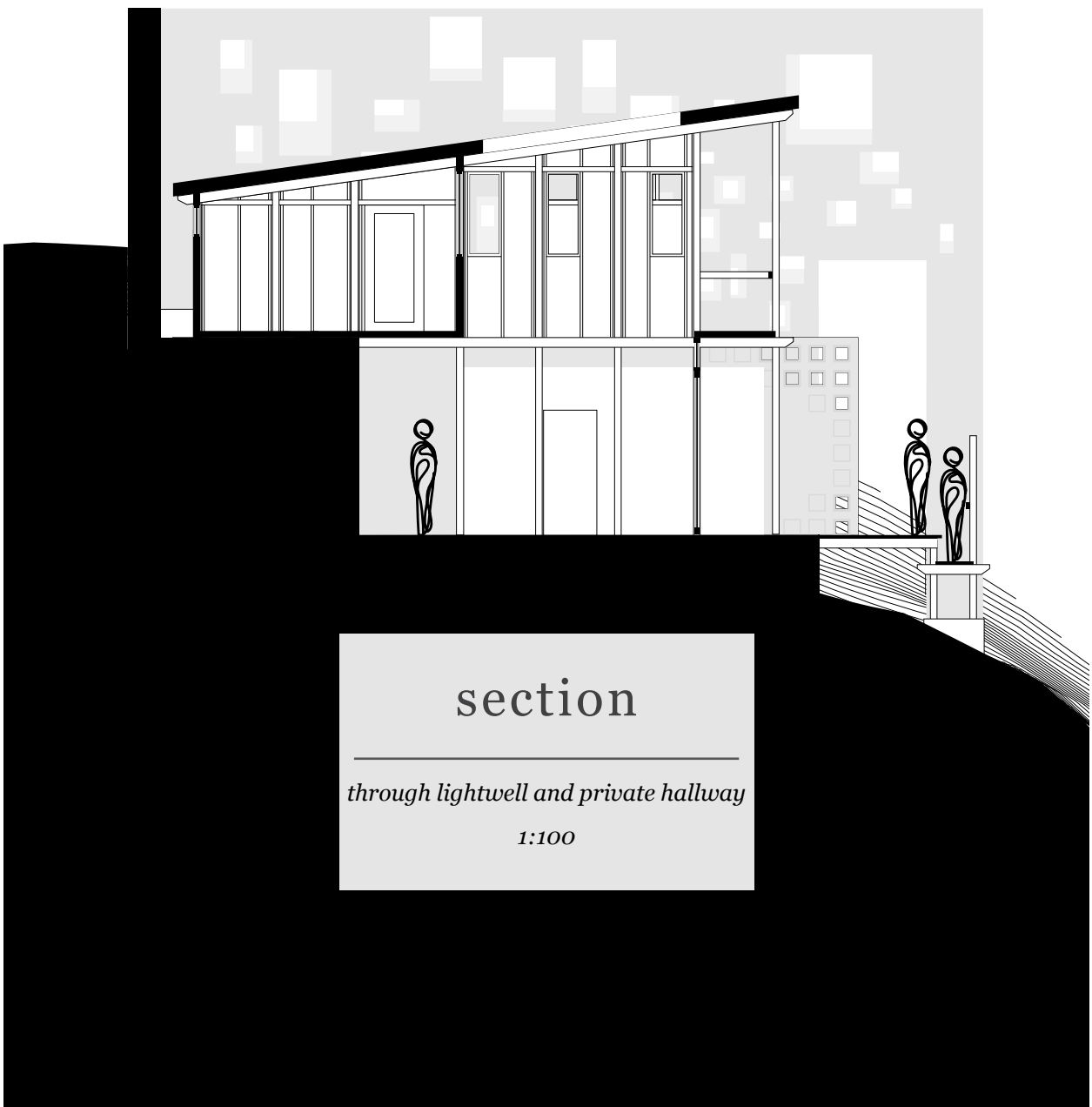


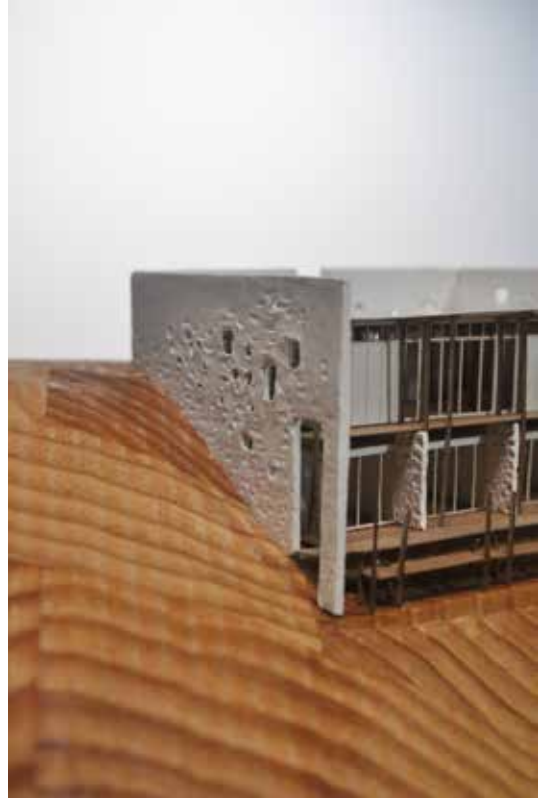
cross section

through communal and private living

1:100



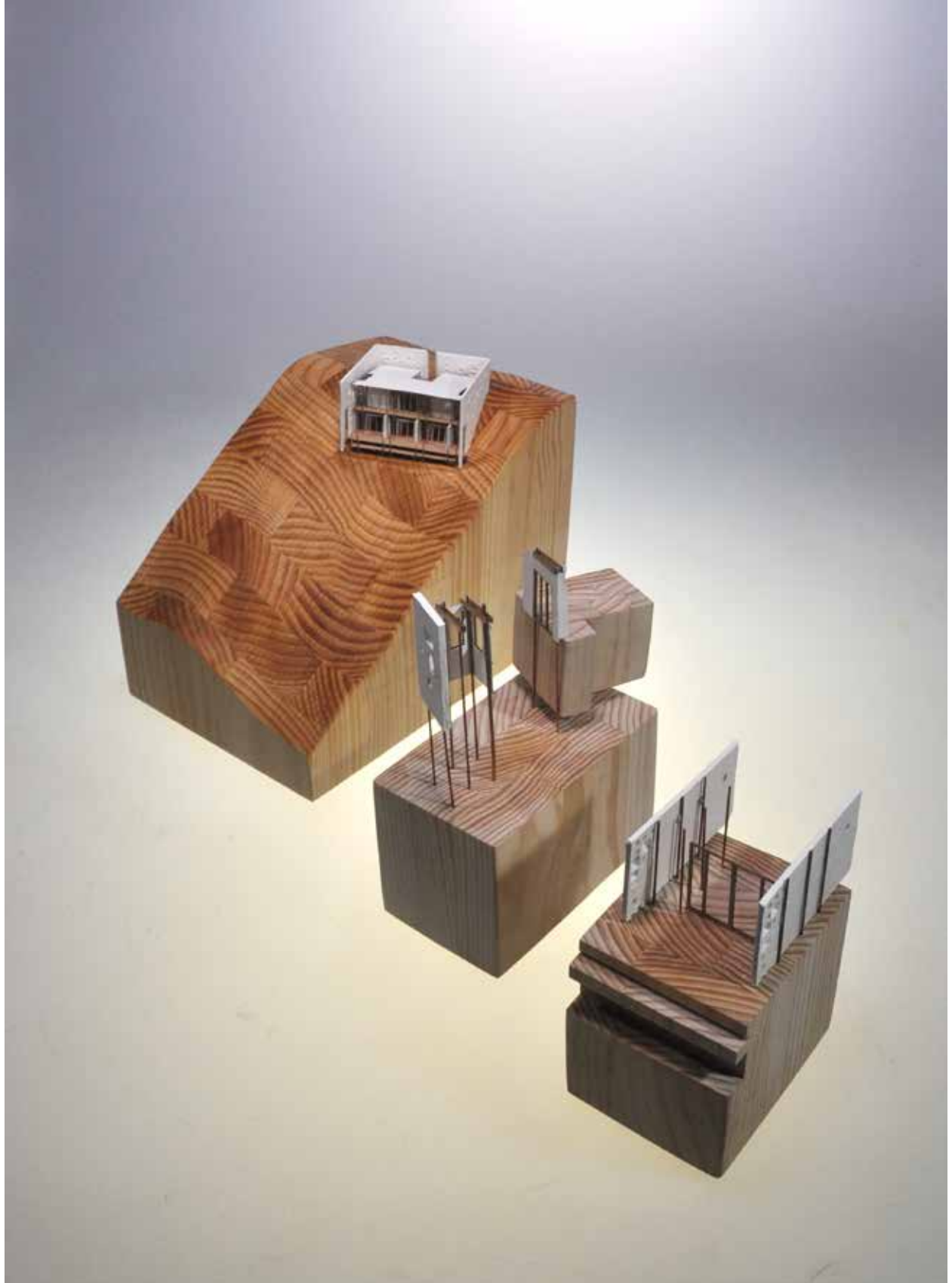






Multi-dwelling

Section



findings and reflection

This investigation set out to develop an understanding within the architectural language already under development from the previous two investigations; specifically, how multiple emotional worlds can be supported by the same architecture. Building on the previous investigation at a similar scale serves to cement the findings and more decisively evaluate the conclusions that can be drawn from that process. This elaboration allows this investigation to draw conclusions on connectivity, aperture, pattern and rhythm.

At a surface level rhythm and pattern invoke similar experiences as texture, especially the idea of visual texture and how it engages with an embodied sense of touch. However, rhythm, pattern and texture are distinct in that they each engage with a different embodied understanding. Pattern connects to familiarity, rather than textural touch. It engages remembered identities of both other spaces, previous encounters and also in reflection of the embodied individual's physicality in that environment. Rhythm is implied with emphasis in the abstract bodies, rather than the physical. As Söderström (2017, p. 67) identifies it, rhythm is about the harmony between the built environment and the pace at which it can be experienced. In consideration of emotional agency in space, this requires allowance for fast and slow as well as formal or fluid paces-of-being to be expressed in the same

environment, in harmony with the varying paces of emotional experience.

Through this investigation aperture was explored, building on experiments from the previous investigation. This exploration found that aperture is an essential vehicle through which bodies relate. This resulted in 'light' being removed from the list of considerations. Light was essential in developing the initial installation investigation - however, on reflection the previous consideration of light is identified as a vehicle for emphasising a relationship between the subject and an external body than about the essential vehicle of light. For this reason aperture is considered as a more deliberate development supported by the consideration of how negative space through solid volumes facilitates these relationships between bodies. This consideration including relationships between a subject and another subject, a subject and distant bodies in the form of a view, and the subject and the sun, through lighting concerns.

This understanding of aperture leads into the introduced consideration of connectivity brought about by the introduction of multiple bodies to the design consideration. Often articulated in conjunction with aperture and threshold through this process, considerations of connectivity becomes a way for designed agency to connect emotionally between a subject's emotional connections and

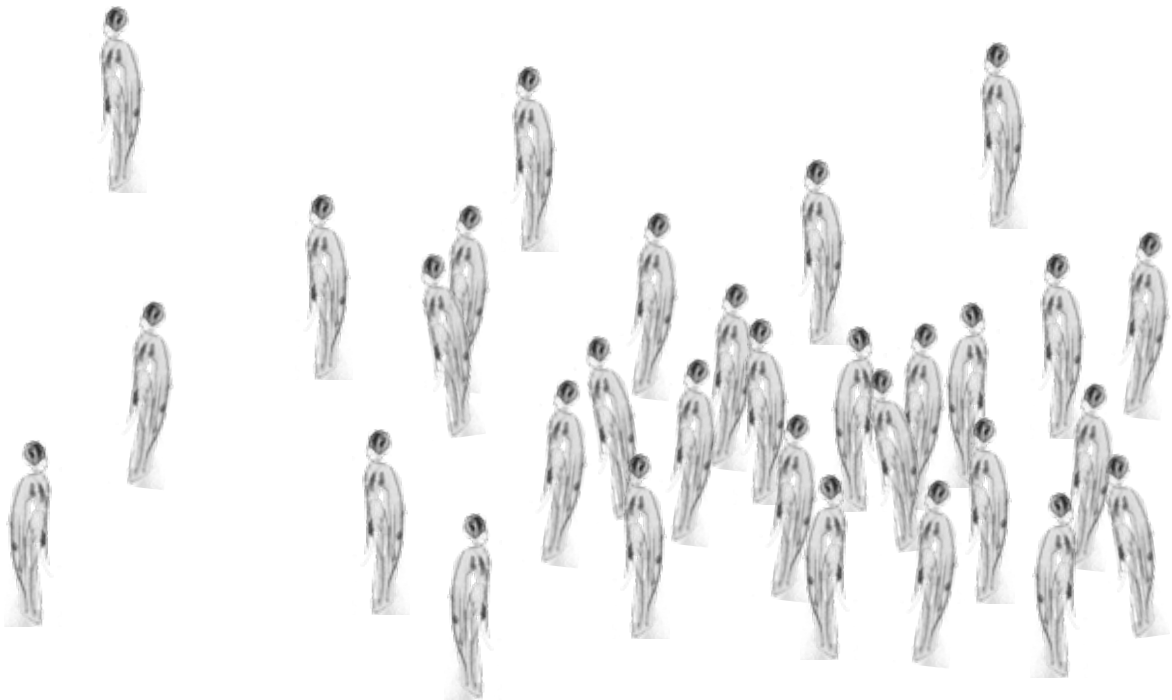
freedoms of transition between space. Although closely associated with threshold, connectivity distinguishes itself by acknowledging not just the movement of embodiment but the movement and projection of agency within space.

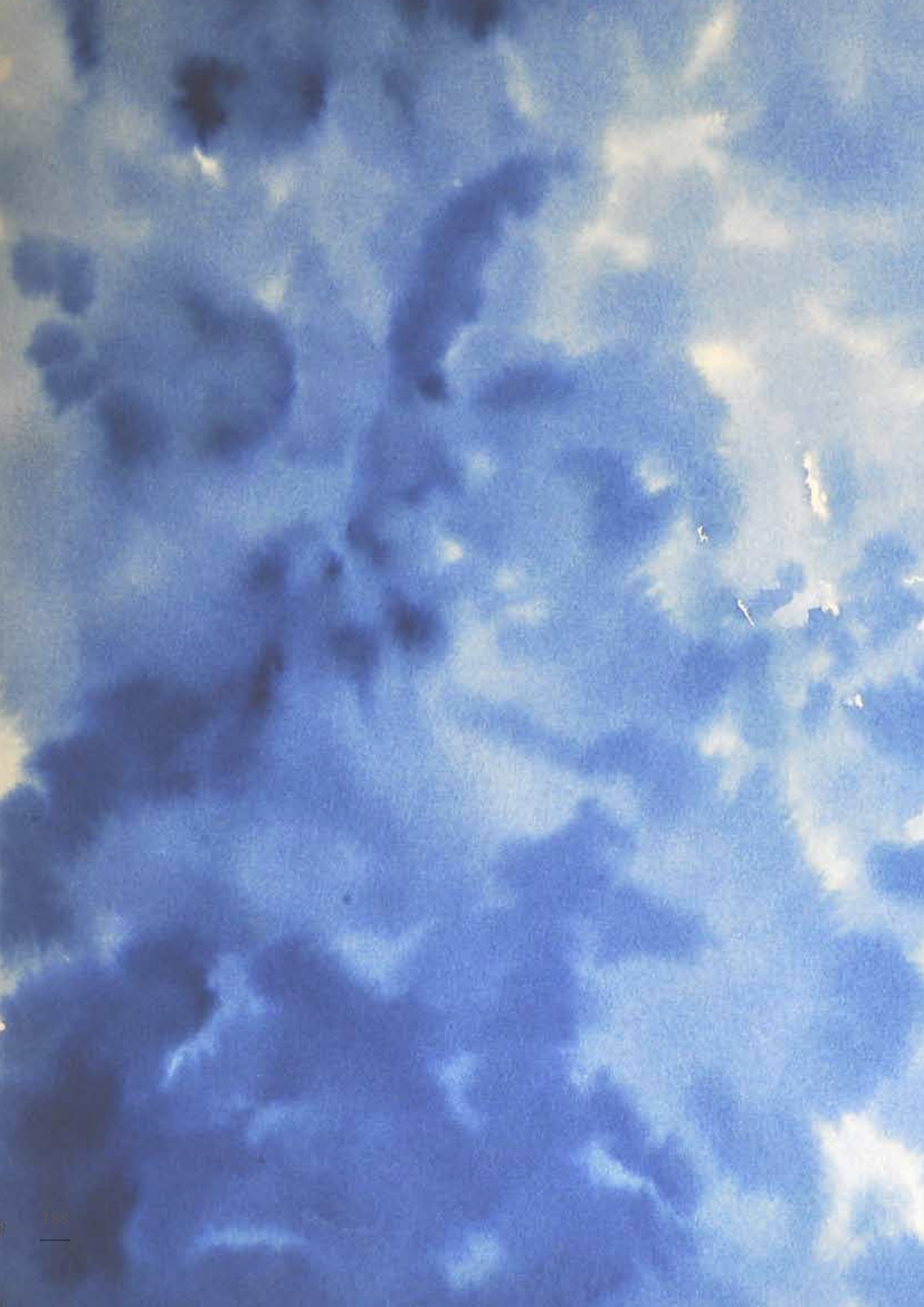
As a design investigation the 'multi dwelling' was developed in two parts separated in time and the design process. The initial stages were formed in reaction to the gap identified in the 'single dwelling' investigation. The later stages were directed by a need to bridge between that individual scale and the public scale which follows. Because the initial stages of investigation were driven by reflection on the findings of the previous investigation, these had quite reactionary outcomes to achieve form and plan. However, prematurely shifting the design to the public scale identified a gap in the research. The resulting return to this investigation allowed a more explorative approach towards the later stages. This included the reintroduction of the body to this design, which it had not originally had capacity to address.

This shift in scale makes it clear that there is no singular expression of a building's components which captures emotional empowerment. In every case it, in this larger scale more obviously than in the more intimate scales, it is a relationship between elements which ultimately creates the effect. This is supported by drawing parallels to care being less

about a consideration of individual components than the emphasis on the relationship between those components (de La Bellacasa, 2012). In considering connectivity, pattern, aperture and rhythm at this scale it became clear that each relies on the articulation of at least one other consideration to successfully capture *emotional agency* to communicate an emotional agency. This emphasis on relationships points towards the creation of emotionally empowering built environments being a process of layering both physical elements and the emotive considerations of the designer. It is this process of layering relationships which will be the focus of the next investigation as it designs a network of care into a public scale building.







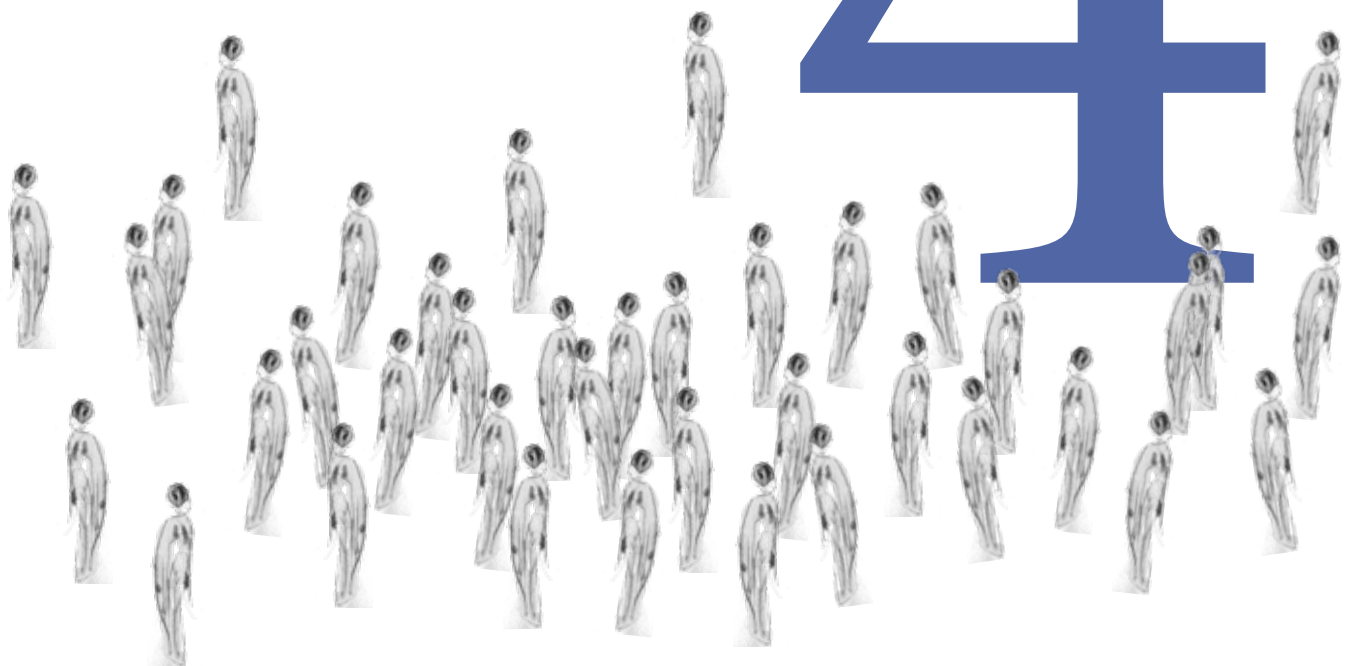


public scale



4

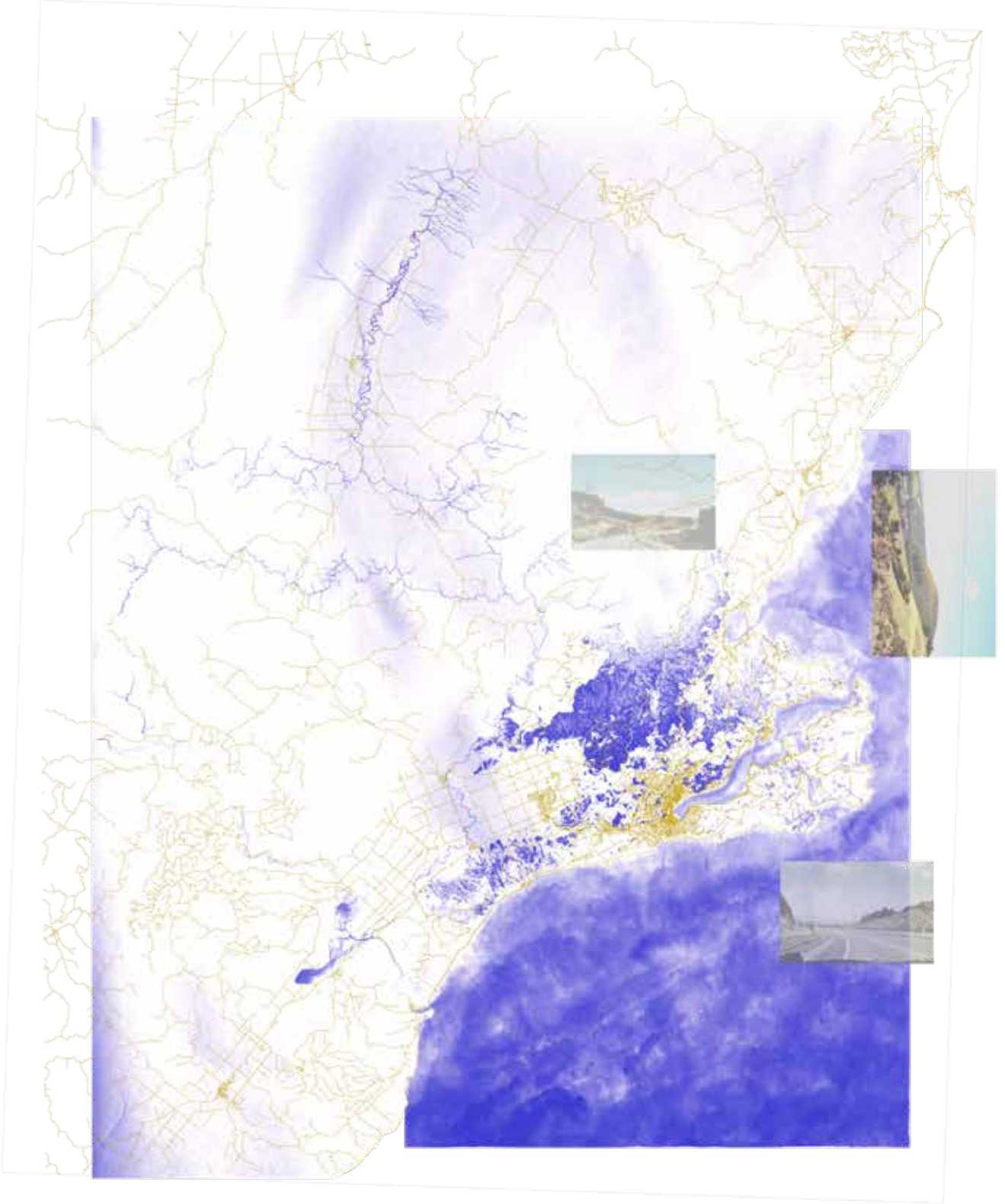
investigation four
emotional hospital

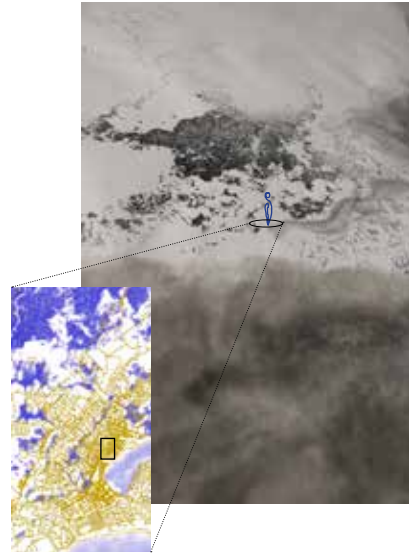


intro

This section of the investigation takes the emotional programme of a hospital as a testing ground to explore how architectural intervention could be used to enable this occupation of the space. Coincidentally, this investigation began as announcement was made of the public consultation for the new Dunedin Public Hospital development which had been speculated for some time. This included the announcement of the site in central Dunedin. As the investigation had already set out to design a hospital this was taken as an opportunity to react to genuine design issues which faced placing that programme on the proposed site in central Dunedin.

It should be noted that this is not an exploration of how to effectively design a hospital as a functional program. In this case a 'hospital' is being used as a testing ground for the expression of care in built form to empower the experience of individuals and address the emotional elements of human experience. The hospital was chosen as an appropriate testing ground as it is a built environment associated with diverse emotionality and a full range of human experience.










site

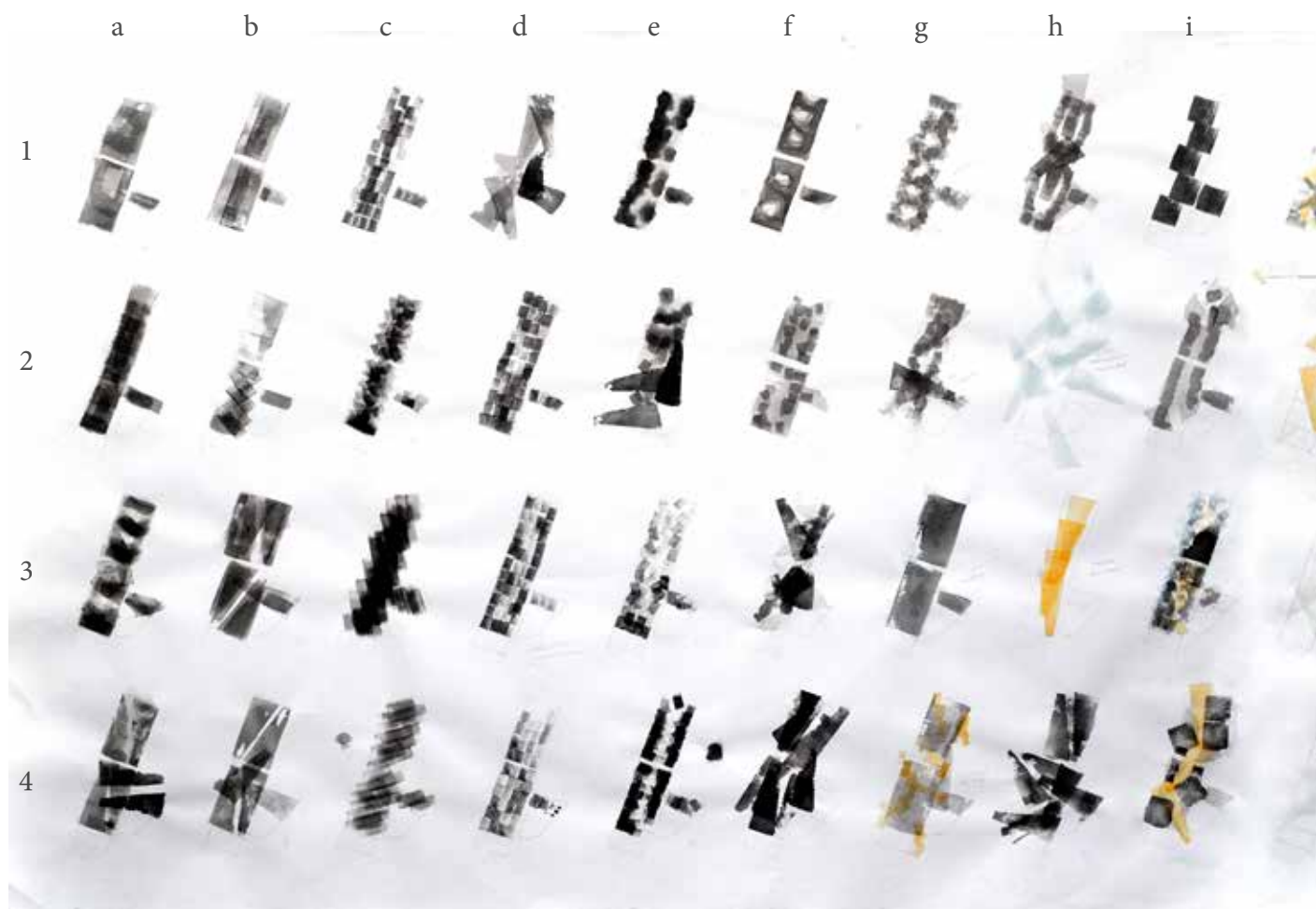
The site for this investigation was selected as an appropriate site due to already being the proposed site for the future Dunedin hospital. It incorporates a huge area of Dunedin CBD taking over the majority of two city blocks slightly North East of the city center. These blocks which previously held the Cadbury chocolate factory and parking buildings among other things lie between the two one way streets Cumberland Street and Castle Street which make up the north and south lanes of the southern State Highway One respectively. This area connects to the southern edge of the existing hospital complex and lies just south of the main campus for Otago University which will use the new hospital as its major medical teaching facility. Also included in the overall site area are two sites across Castle Street which have been set aside for auxiliary buildings.

- Dunedin peninsular cartographic study*
- ▶ marking natural amenity (blue) and
 - ▶ highlighting routes of connectivity and population density through road centre lines (yellow), multimedia collage
- △ (upper right) composite image indicating site location in relation to surroundings, multimedia collage



*Key site analysis indication relationships
between:*

-  *Natural amenity*
-  *Highway*
-  *Town center*
-  *Existing hospital campus*
-  *Proposed site for new hospital
development*

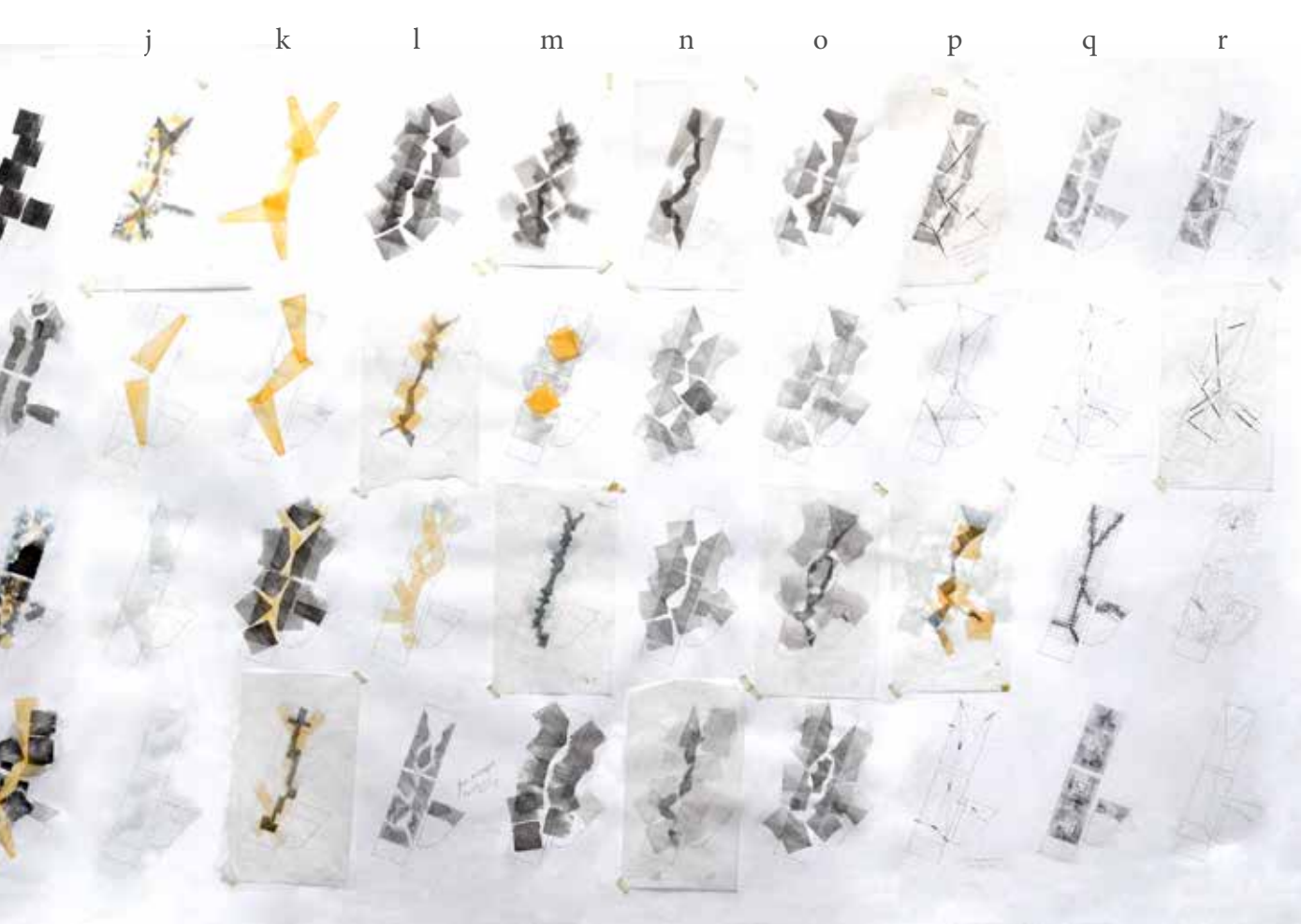


At this initial stage of massing that the design, and the entire research process come to a halt. No clear way forward was apparent and at every turn the process tried and failed to find a way to progress the design and meaningfully implement the architectural findings of the previous investigation.

This led to two meaningful revelations. First was the re-evaluation of the second domestic scale investigation which at that time had been left as a brief but under-realised reflection on the single occupant dwelling. This closer, more detailed consideration in its own right provided aspects of the architectural consideration of interpersonal emotional thresholds which were missing. Bridging

between the intimate domestic and public scales, this allowed for the public scale investigation to be resumed with renewed understanding of what its intentions and scope should address within the aims of the topic at hand.

Leading back into the public scale investigation with this new perspective the second became clear. Although a variety of conclusions were drawn the most revealing was that, although mass has been indicated by successful experiment in all previous investigations and by theoretical context as being a critical element to the emotional empowerment, presence in space, it would appear to no longer be the case at this scale of formal



Hyper-iteration experiments of mass and internal site dynamics considering desirable direct and indirect connections, drawn at 1:5000

mass. This would suggest that not only is form not specifically related to emotionality at this scale but that massing of those forms is not implicit where it is outside the scale of having an intimate relationship to the embodied experience of the individual. At this urban scale perhaps we reach the limits of where *emföhlung* can be experienced until the built environment can be witnessed in a proportionately embodied way. On reflection this has additional implications of the conclusions drawn from the case study of Ensemble Studio's structures at Tippet Rise. This therefore places formal massing and urban master planning outside the scope of the current design investigation and the research of this thesis.





case study

Madlove



28.



29.



30.

Project: Beta Test Installation

Designers: James Christian and Benjamin Koslowski

Date: 20

Location: Foundation for Art and Creative Technology (FACT), Liverpool, England

Madlove Projects

Project: Bedlam: the asylum and beyond

Designers: James Christian and Benjamin Koslowski

Date: Sept 2016 - Jan 2017

Location: Wellcome Collection, London, England

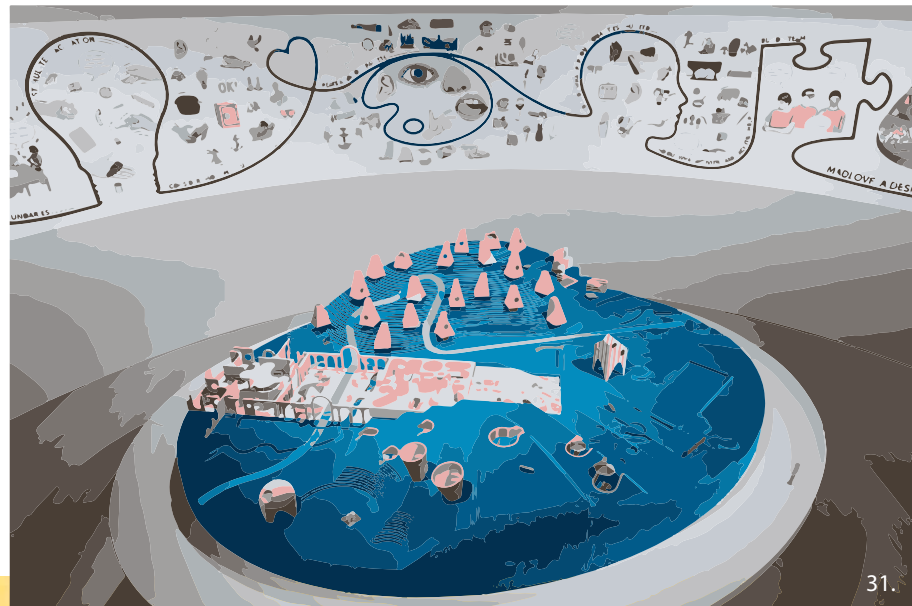
Figure: 31

*Beta Test installation
View of the Cooling Tower and Turkish Delight
Image credit: FACT*

Beta Test installation View of the entrance and the Bookcase Staircase to Nowhere Image credit: FACT

*Beta Test installation Inside the Cooling Tower
Image credit: FACT*

*Madlove: A Designer Asylum Installation
View showing model of speculative asylum complex with visualisation of collected data in the background
Image Credit: Wellcome Collection*



Madlove is a project which combines community engagement and speculative design process. On their website, their mission is described thus:

"It ain't no bad thing to need a safe placetogomad.[...]Madlovecreatespositive spacestoexperience mental distress...and enlightenment." (www.madlove.org.uk)

Through an extensive series of community focus group workshops, with an unbiased inclusion of diverse experiences, data has been collected by the project from across Europe. This data centers around identifying what good mental health and care look, sound, smell, taste and feel like both emotionally and physically as well as identifying what people, activities and spaces support these experiences (www.madlove.org.uk). At a critical level this supports the findings of Ola Söderström and his team as identifying similar key themes as correlating to the consideration of ambivalence and sensuality (Söderström, 2017). From this collection of information a series of speculative project phases have been realised. Most notably of these are an installation 'Beta test' and an exhibition of processed data and a speculative design at Bedlam: the asylum and beyond (www.madlove.org.uk).

This research impacts this thesis through both

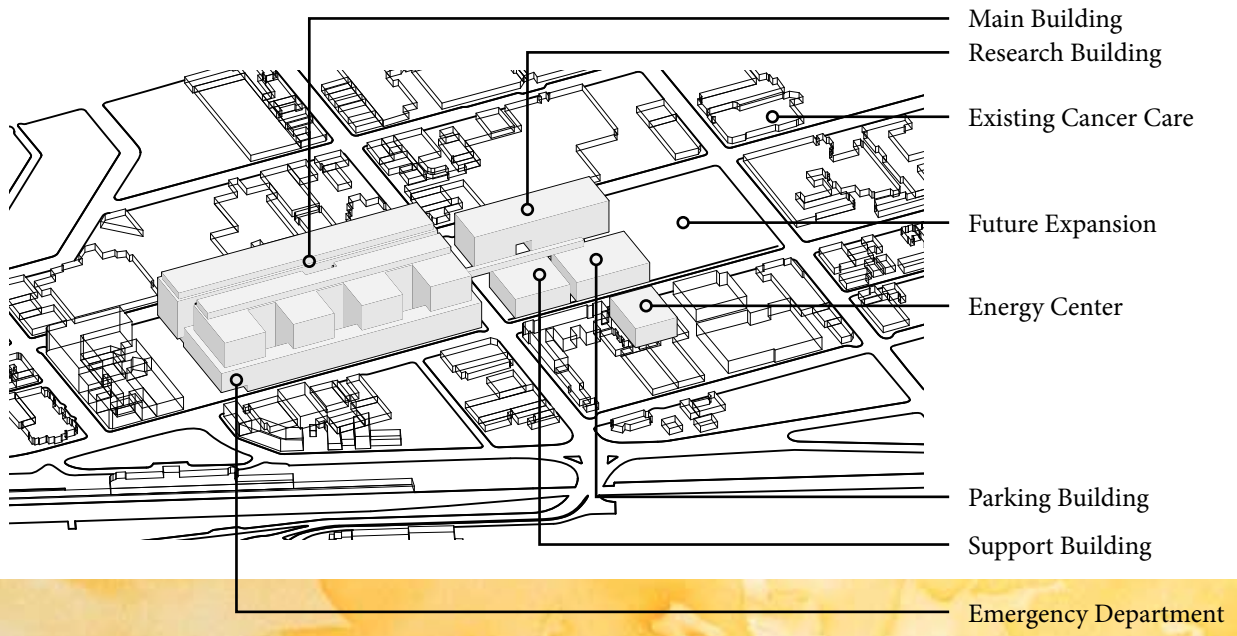
its research intentions, its findings and its design practice. Madlove is interesting to this thesis because its mission is adjacent to the current research. Where Madlove is looking at mental space in a built environment this thesis has a similar interest in emotional space in the built environment. The spaces and objects expressed in the design outputs have a speculative ambiguity which connects with a feeling of agency as identified in the background research for this these by speaking first to the body before speaking to programmatic needs. This ambiguity, present in the installation investigation, has disappeared somewhat in the domestic scale investigations and will need to return in the public scale to successfully articulate the agency identified as necessary for the built environment to support emotional wellbeing.

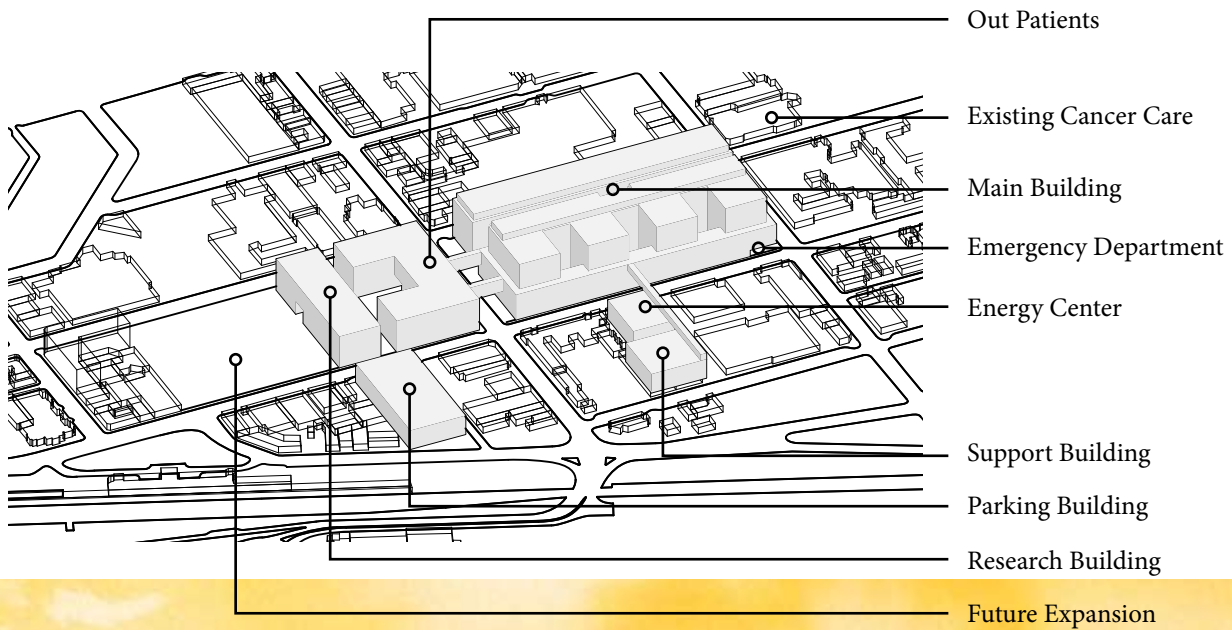
As a design the outcomes of Madlove's research, as expressed through both the Madlove Beta installation and the Bedlam installation, can be read as a collection of expressions that capture what mental spaces might be if their occupants had the agency to elect how their space empowered their experience. These feel like radical expressions of agency. Building from this, Madlove came to impact the direction taken by Investigation Four as it was revisited. Learning from this case study directed the scope and output of the investigation and directed its structure as well as its theoretical understanding.



case study

New Dunedin Hospital
Proposal





New Dunedin Hospital Development Project

Project: Complete redevelopment of Dunedin Regional Hospital on a new site

Designers: Unassigned

Date: 2018 - ongoing

Location: Dunedin, Otago, New Zealand

At the time this design investigation was revisited the public notification and consultation process was launched for the redevelopment of Dunedin Public Hospital. With this came the release of further site details along with artist's impressions of two potential distributions of buildings across the site. Since this time more designs have been contributed to the public to capture the imagination of the Dunedin community as to what this space could be. A conscious decision was made to freeze this information out of ongoing considerations of the thesis and take one of the original massing proposals as an extension of the site, into which the ongoing investigation can take place. This will be informed by all the design practice and findings to date. The massing proposal directly above was chosen to continue the design exploration in conjunction with insight gained from a case study of Madlove.

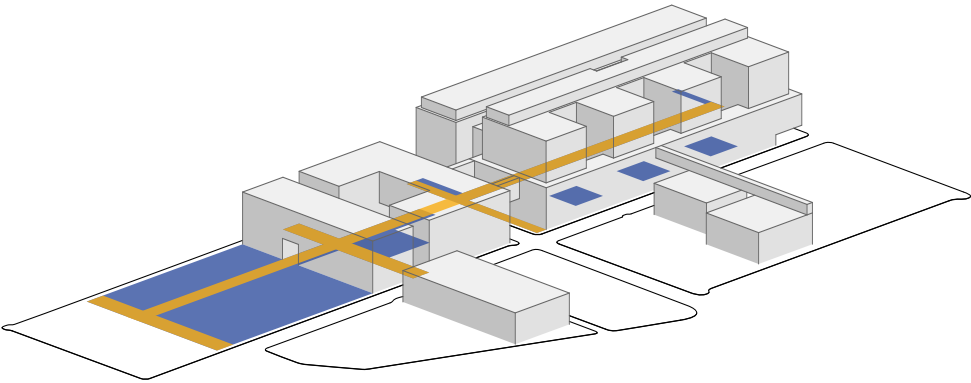
*Images reformatted by author from original artists impressions in press release from the New Dunedin Hospital
No designer was attributed to the original images
www.newdunedinhospital.nz
accessed November 2018*

emotional hospital

brief

This investigation proposes, in addition to the existing investigation brief, to take the mass and location of the proposed building as site and shell into which it will explore three experimental reactions to emotional well-being in public buildings. These experiments will explore representations of emotional escape, emotional interruption and emotional interaction respectively as patterns with which to introduce the empowerment of emotional well-being to the building.

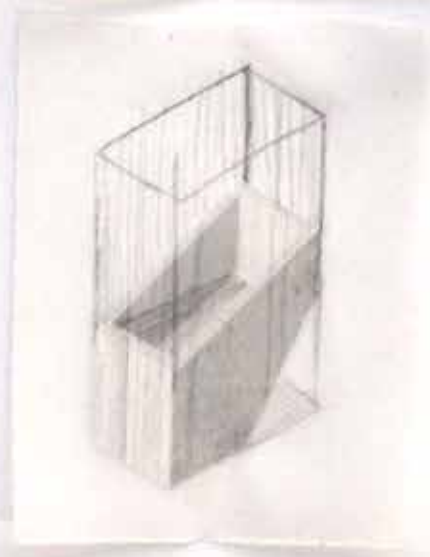
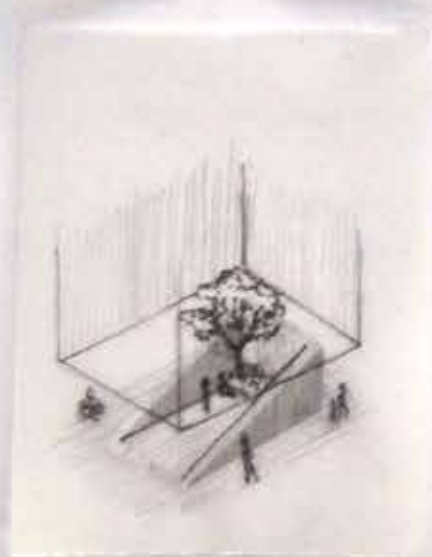
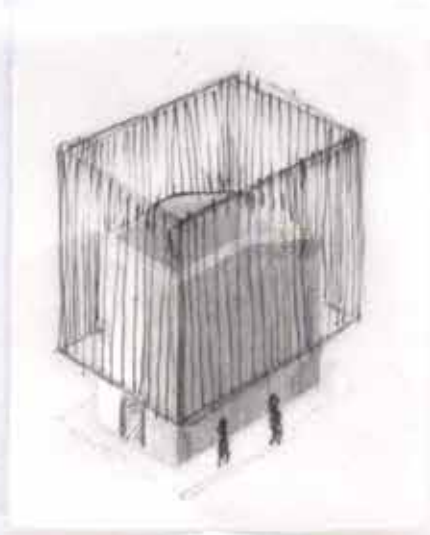
Each of these explorations will employ the findings of previous investigations supported by those drawn from case studies and literature to capture the unique emotional volume they represent. Outcomes of these quick investigations will then be combined into a final speculative proposal to express the network of emotional gradients which could represent the emotional infrastructure of a large scale public hospital complex. From this final section of design research findings will be evaluated and conclusions drawn regarding how emotional health can be architecturally empowered in public built spaces.



experiment one

escape

It seems essential in a testing ground as emotionally diverse as a general hospital that individuals may require spaces entirely external to the programme of the building in order to address their emotional needs. Providing an escape from the directive of programmed designed space focuses on the edges of that transition. For this experiment external spaces of the building mass are identified as areas of potential interest for this emotional treatment. These were then broken down into areas which would likely prioritise direct or indirect interactions due to movement, connection and proximity as a way of informing which subsets of findings would likely apply to the treatment of the emotional gradients across these spaces.

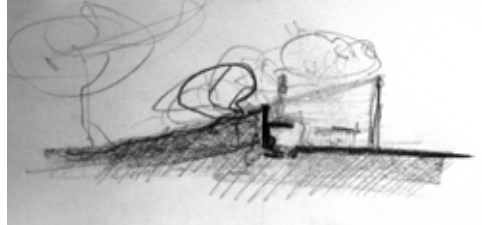
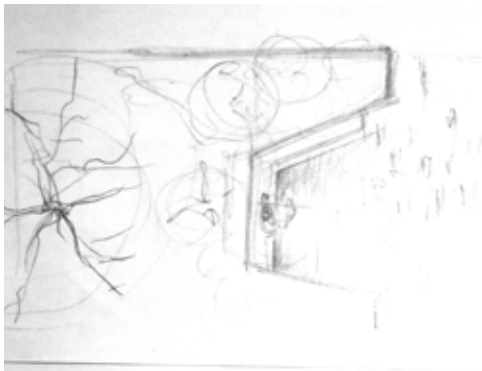
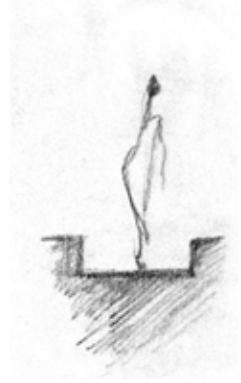
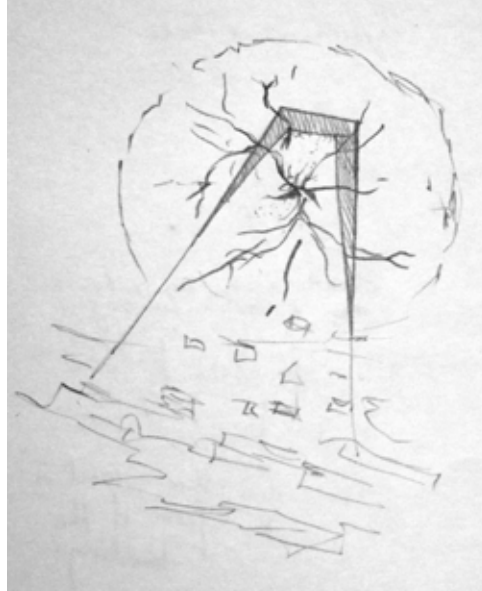
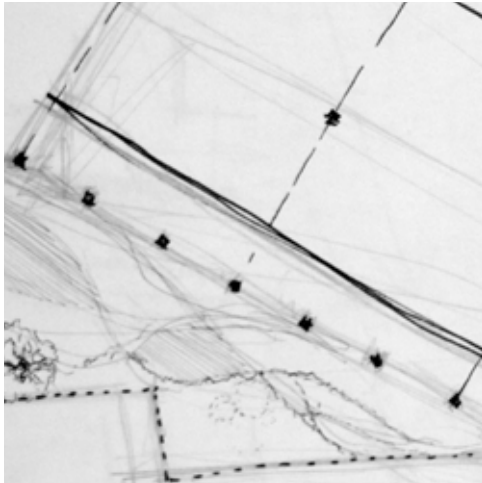
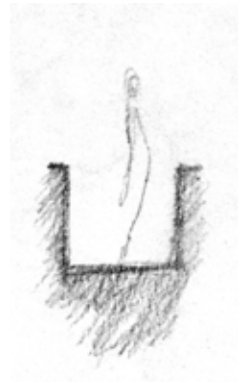
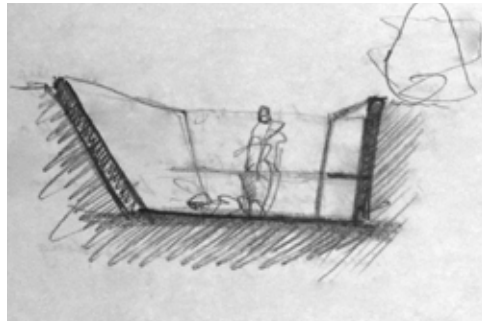
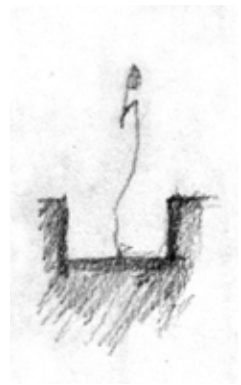
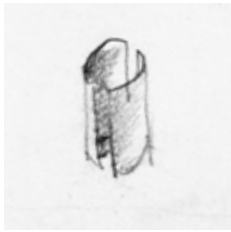
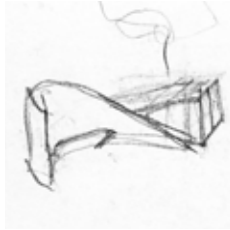
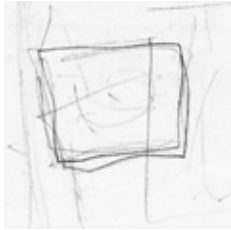
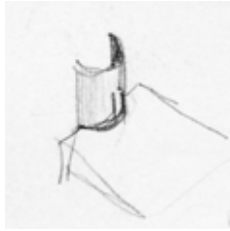


ideation



gardens

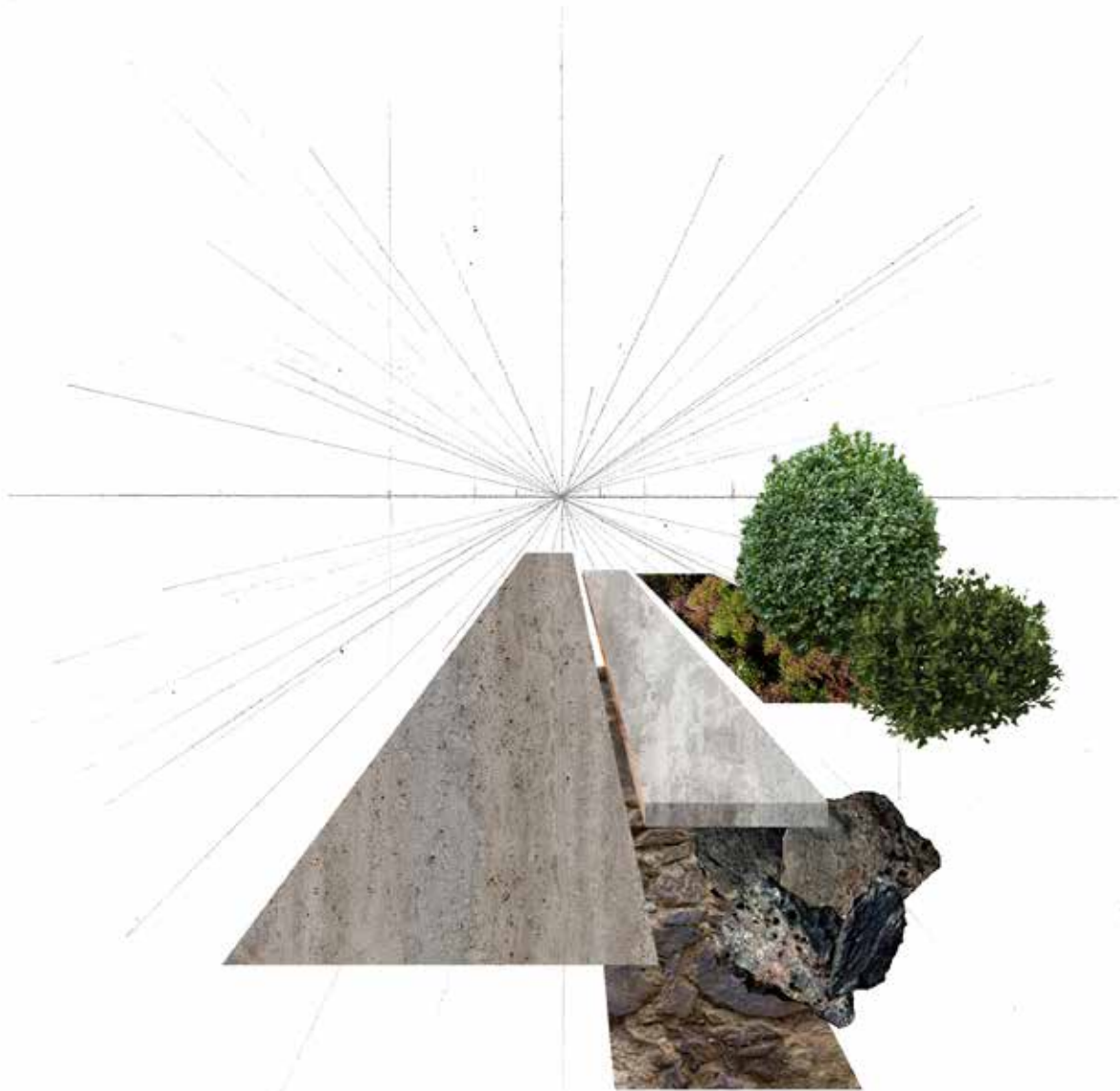






gardens montage

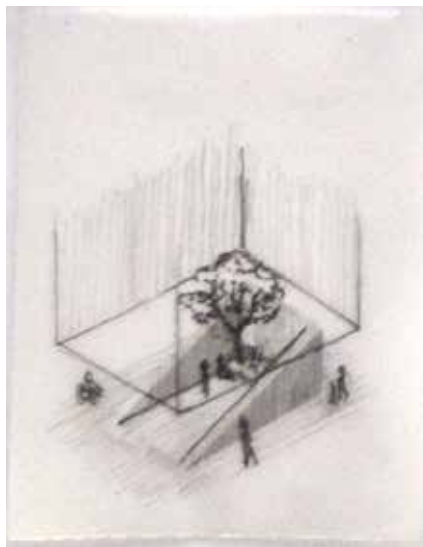
where a garden meets a building's edge

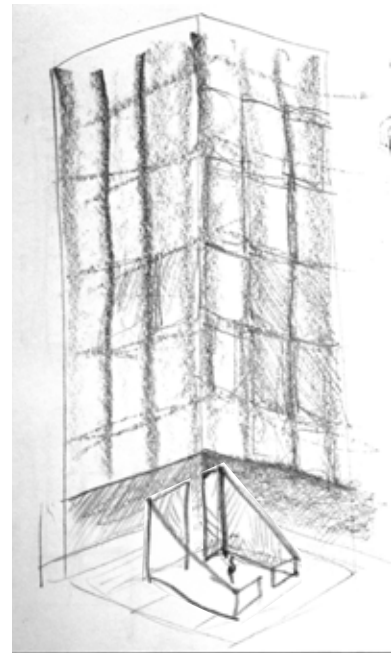
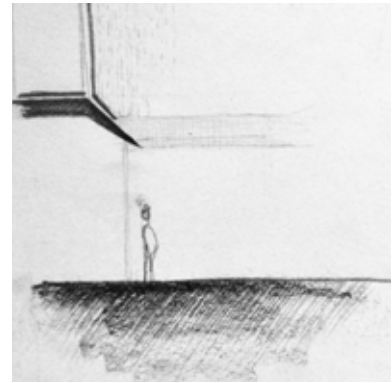
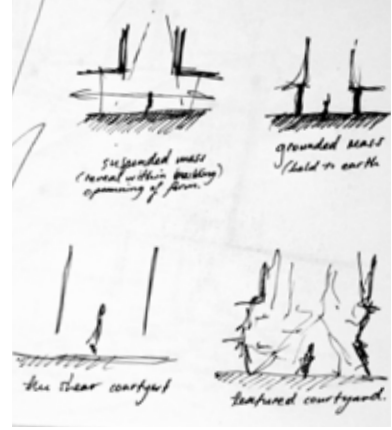
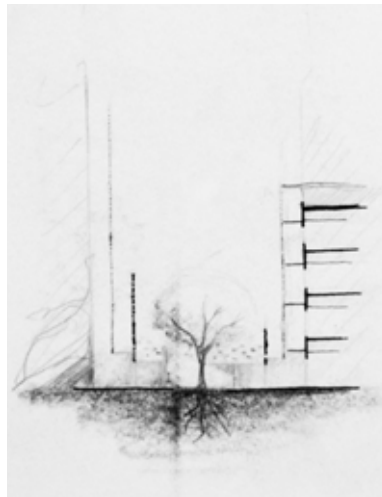
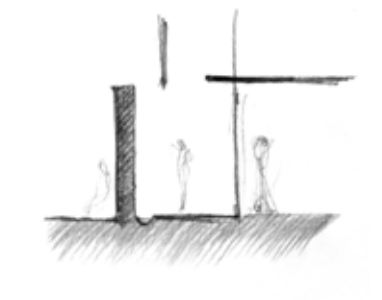
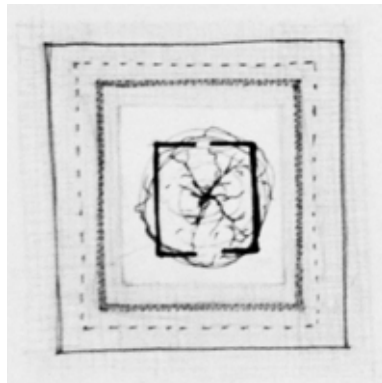
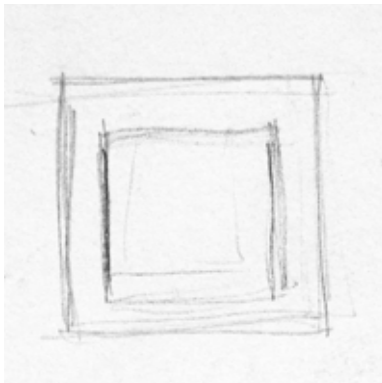
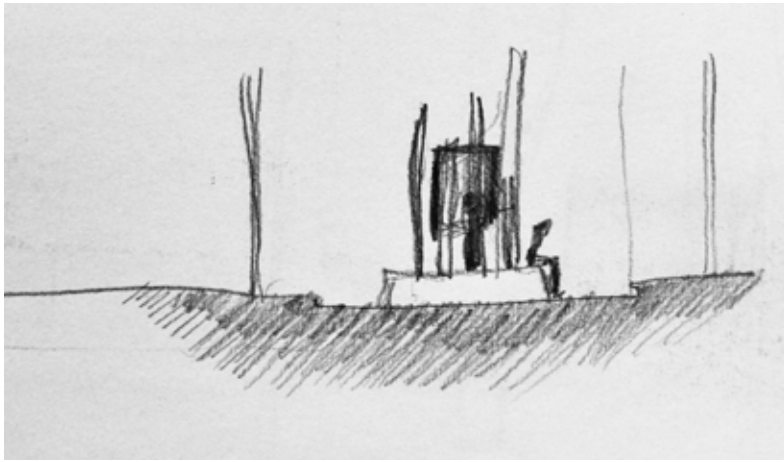
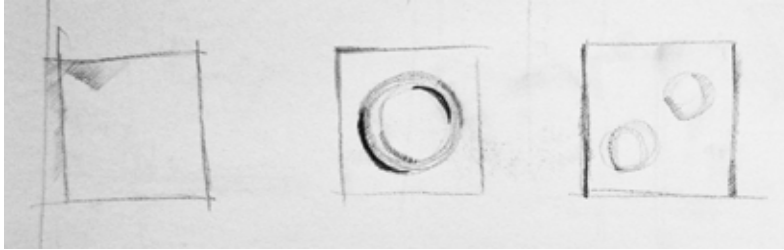


material study

material treatment for garden folly

courtyards

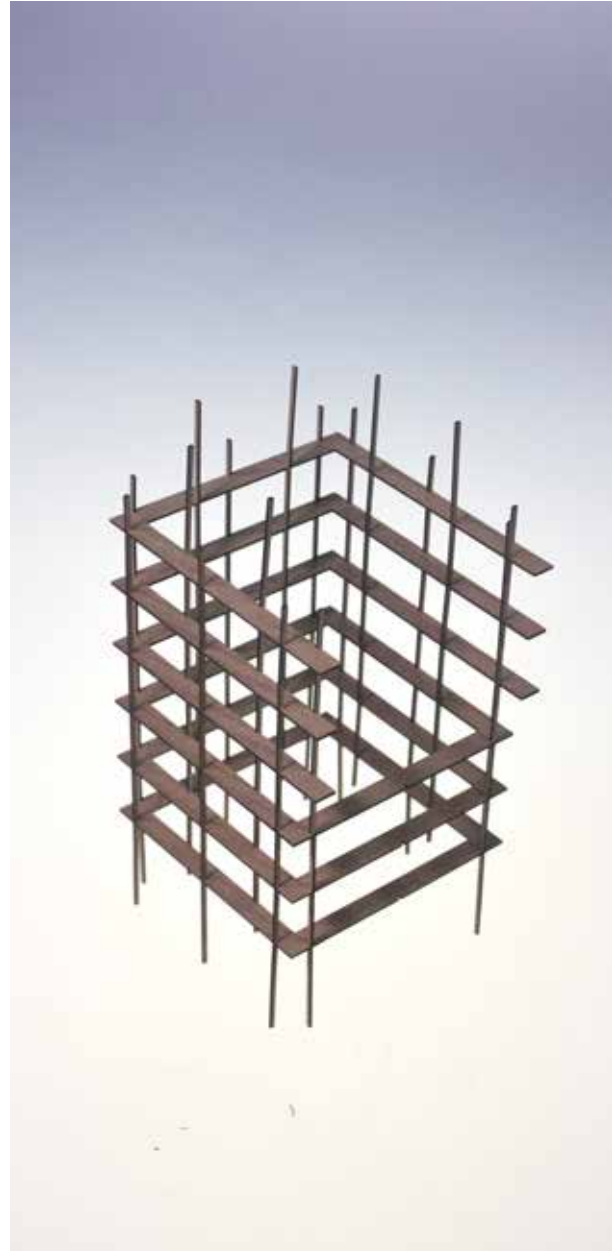




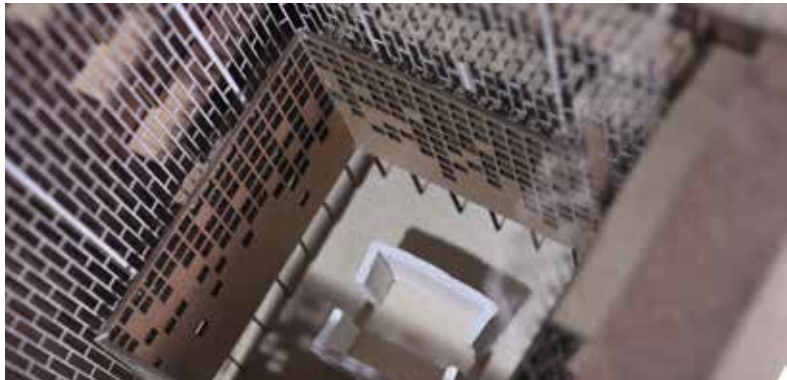
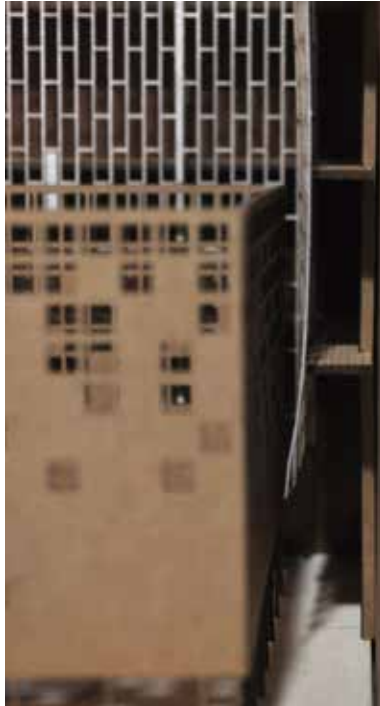


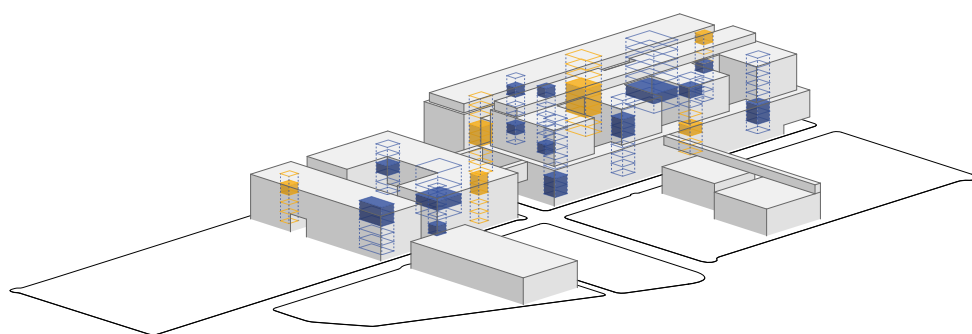
courtyard montage

layering forms to denote ambiguity in space





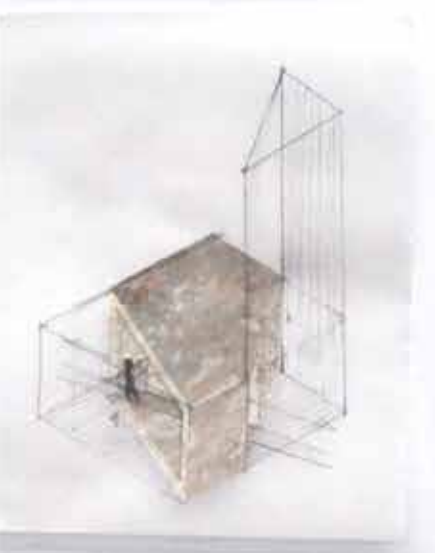
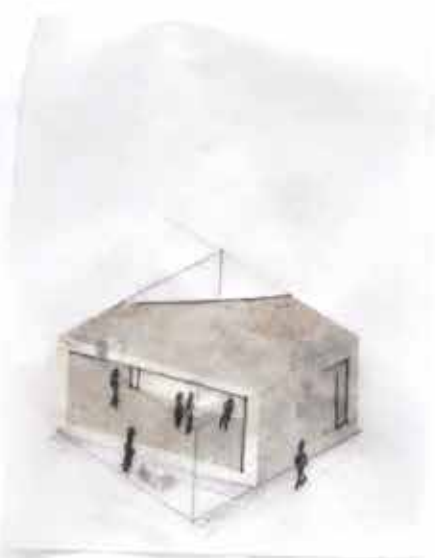
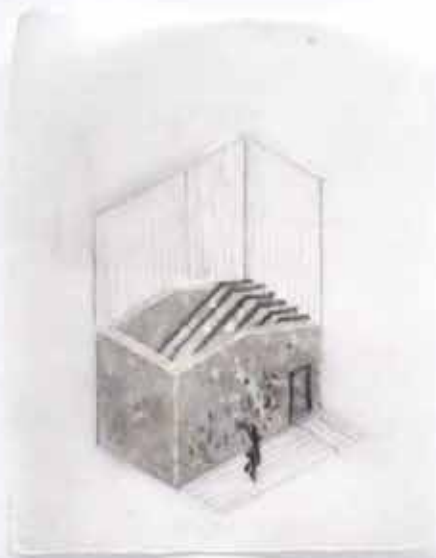




experiment two

interrupt

This experiment engages with the programme of the emotional testing ground and proposes to create spaces of emotional empowerment which function to interrupt the existing programme. Taking this concept the experiment proposes to consider how smaller masses or buildings could inhabit the site mass to provide additional spaces within, but separate from, the building itself. Programmes were chosen for these spaces to be entirely individual from but supplementary to the speculative needs of hospital users. These would be distributed around the building to disrupt the building mass. It was speculated that spaces such as a greenhouse, music school, art gallery, gym, swimming pool dance studio, family room, coffee shop, farewell rooms, multid denominational religious space and a library would all be programmes suitable to achieve such an effect. For the sake of the scope only a limited number of designs would be realised to test the idea. The programmes of a swimming pool and a library were chosen to be explored through this experiment.

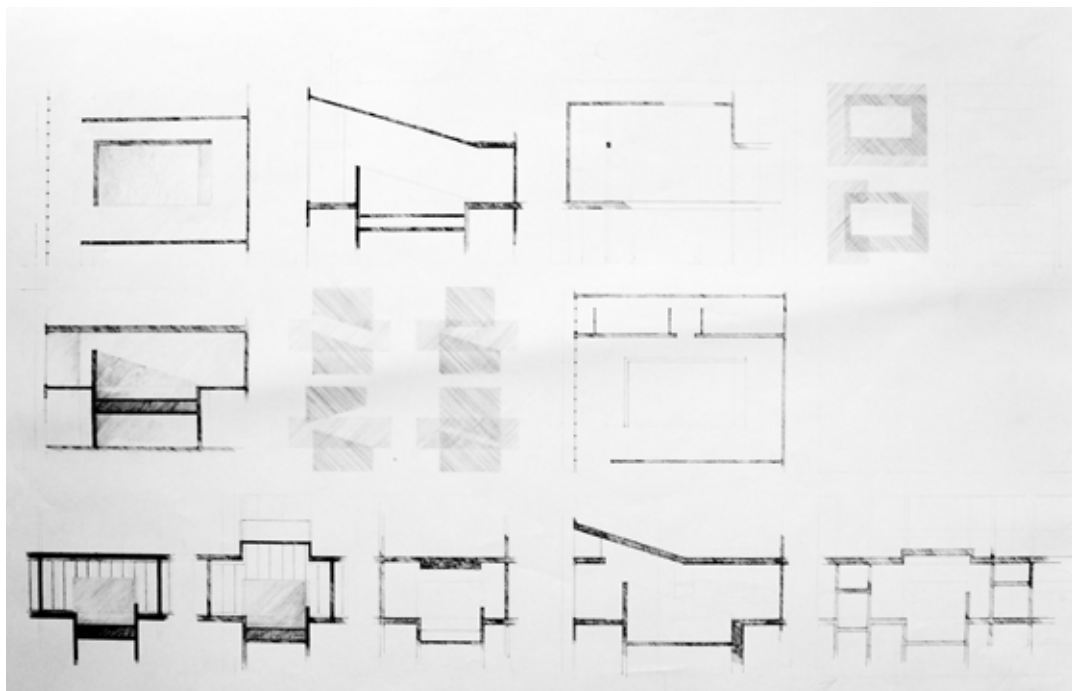
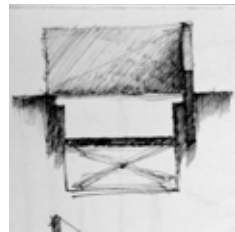
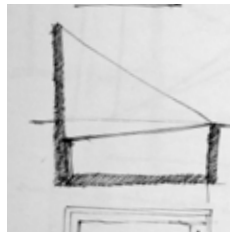
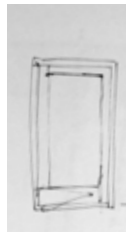
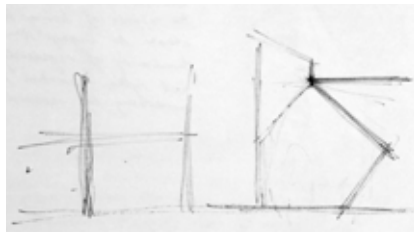
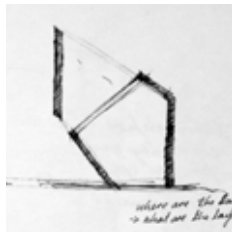
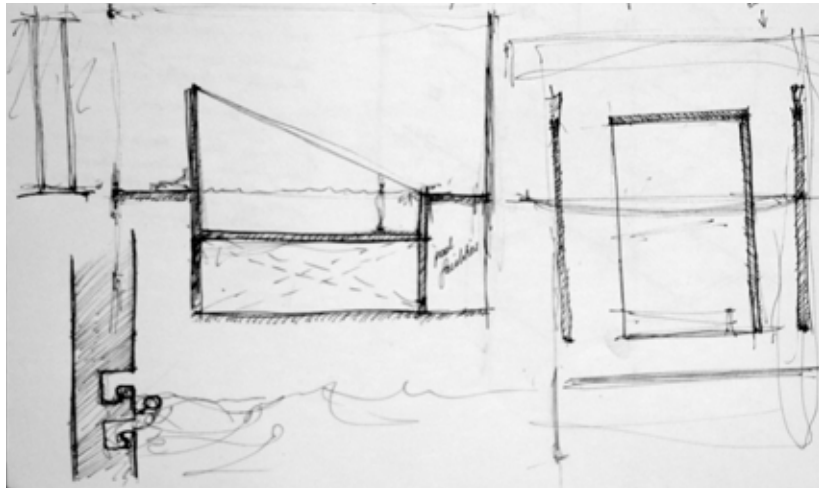
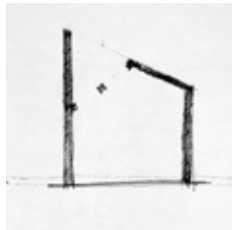
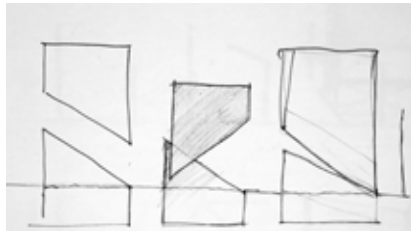
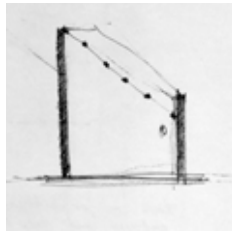


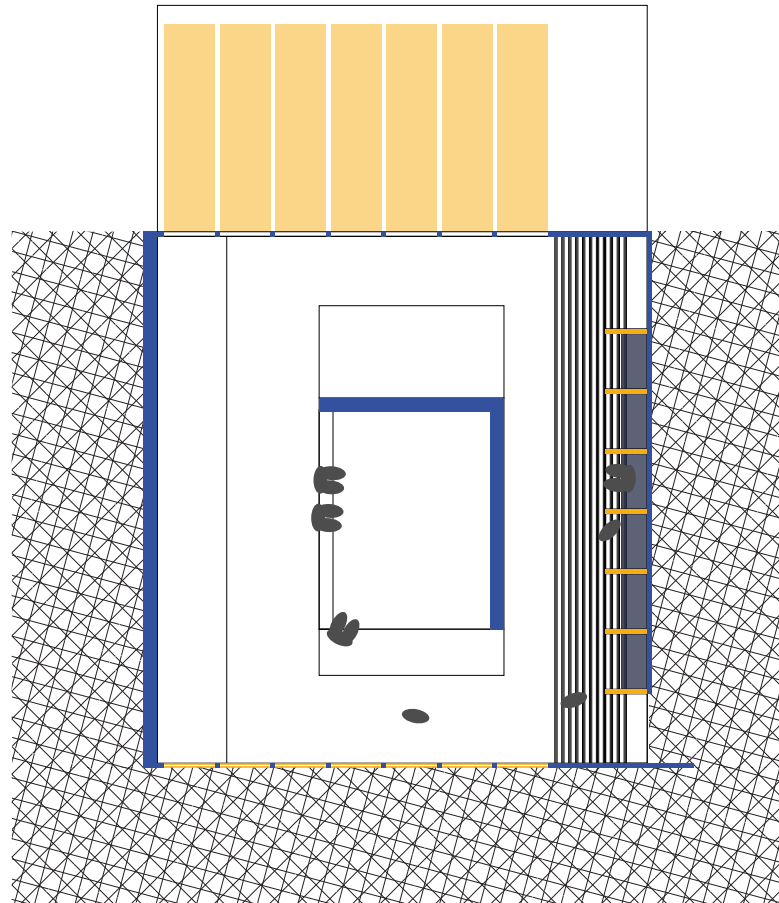


ideation

pool

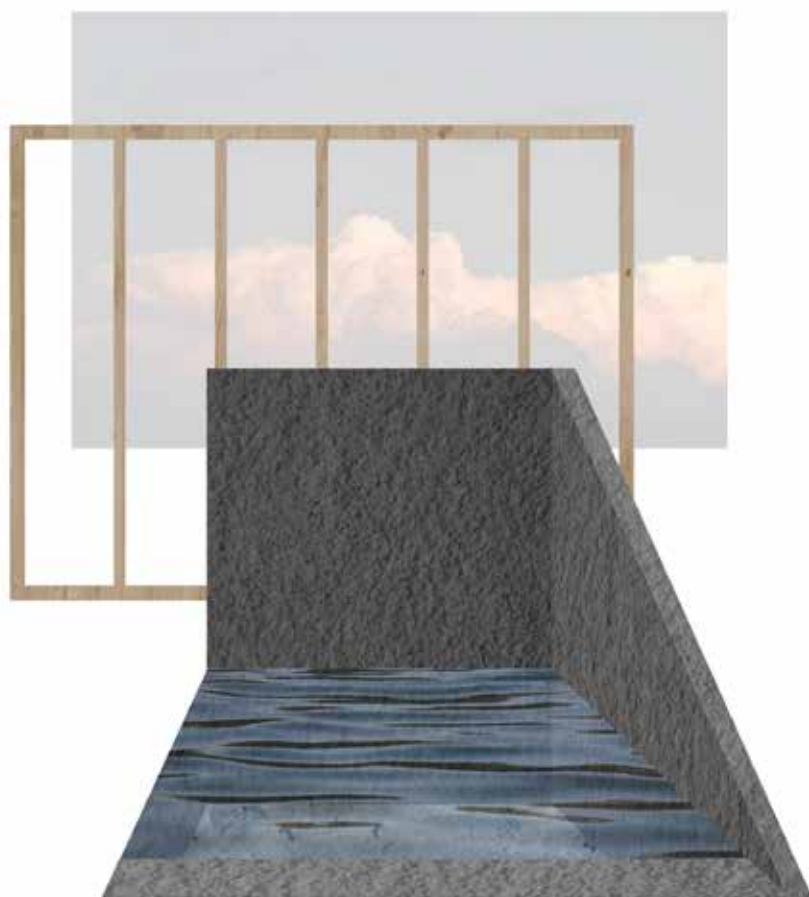






floor plan

abstract floor and wall plan of foot pool
montage of experimental layering

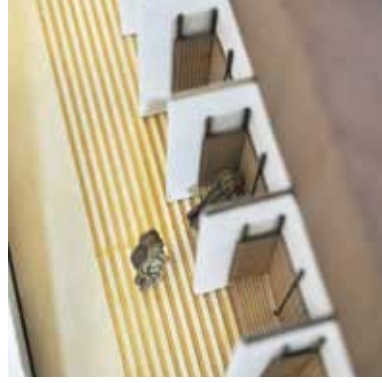


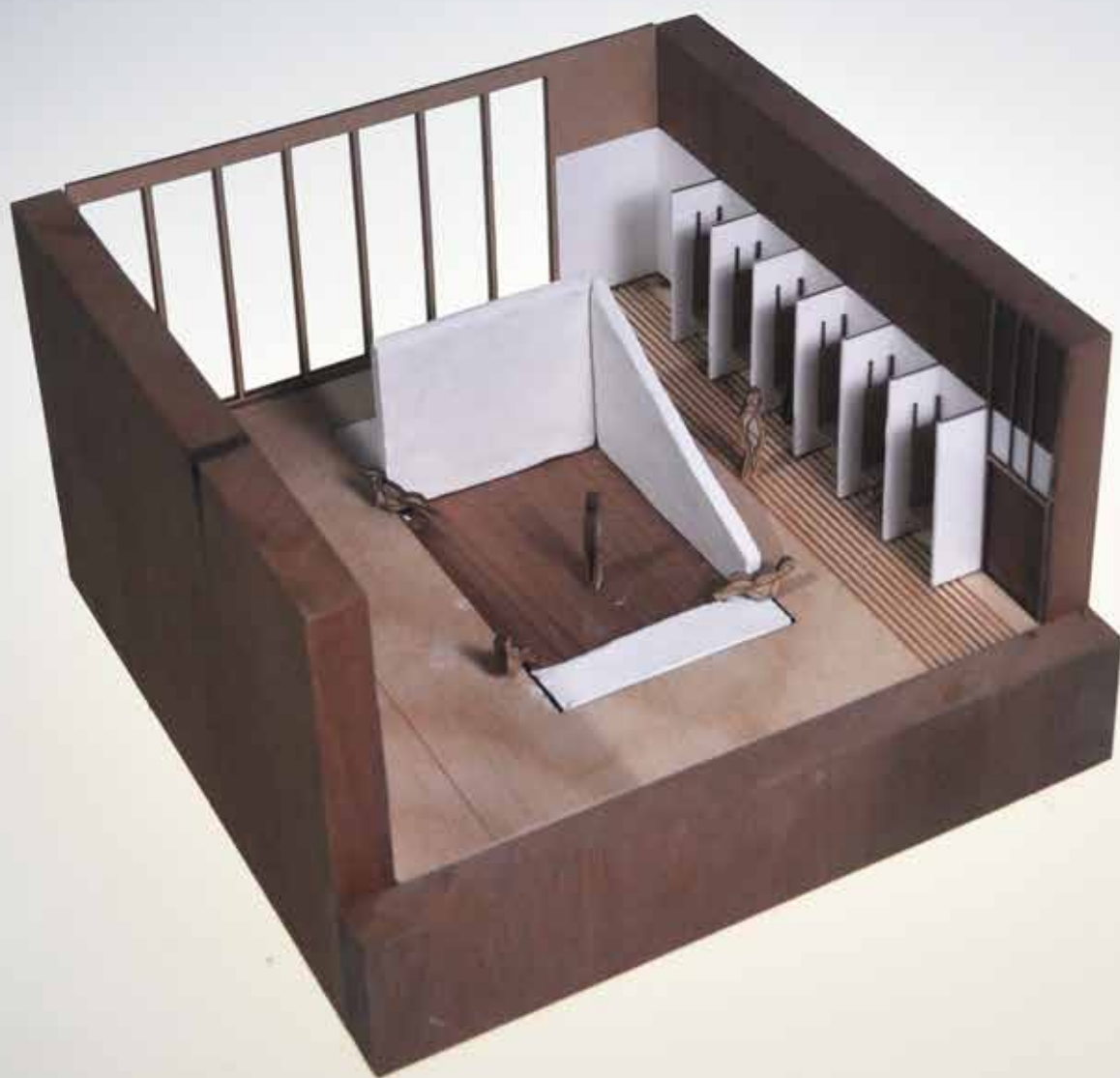




Floor Plan

Interrupt



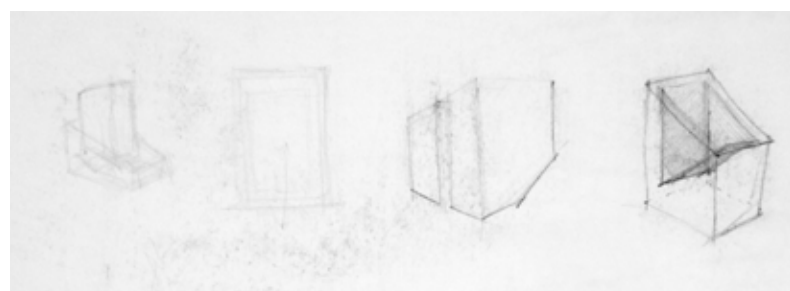
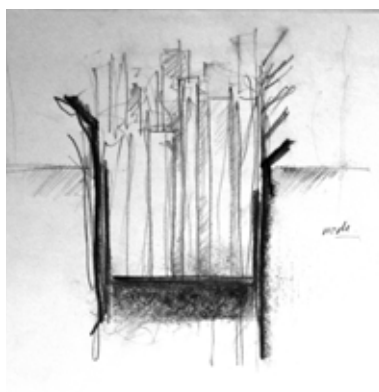
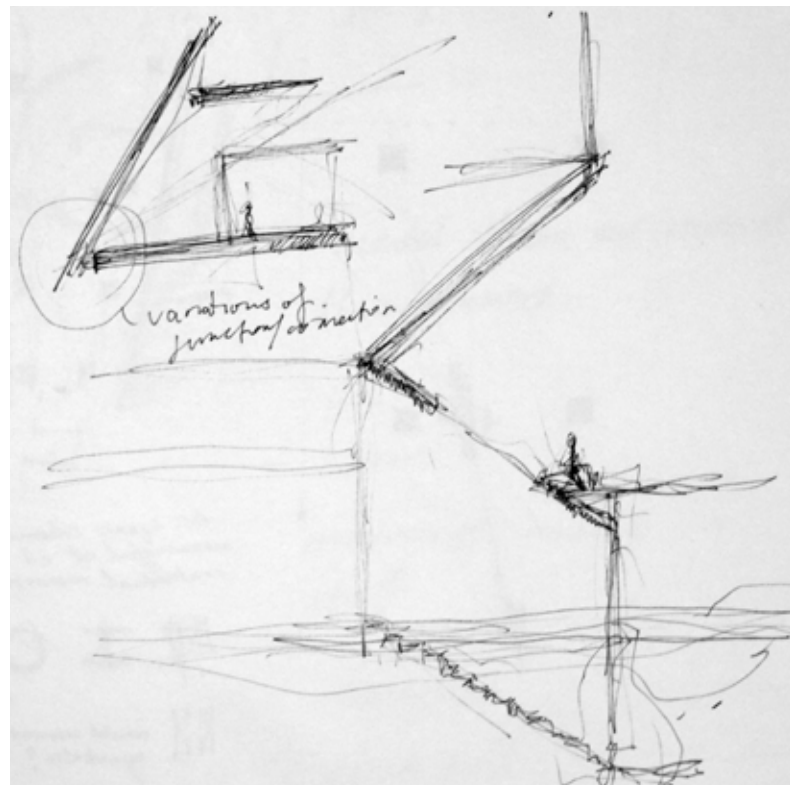
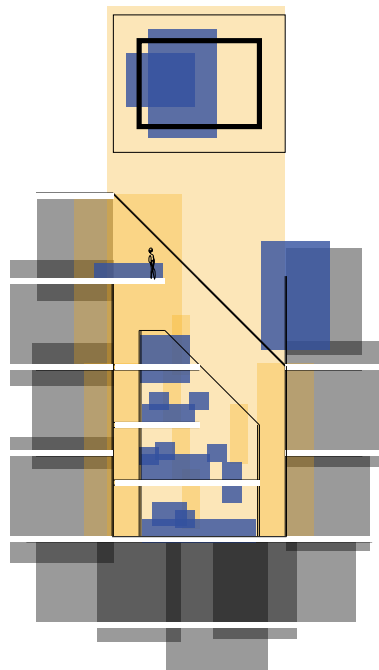
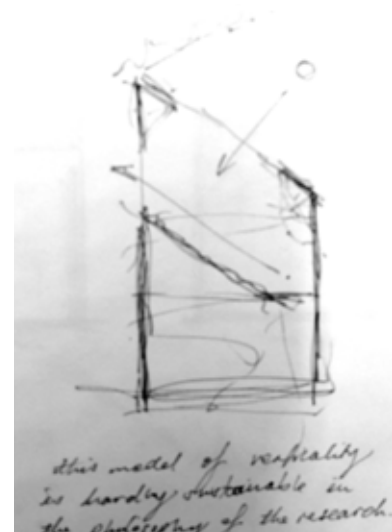
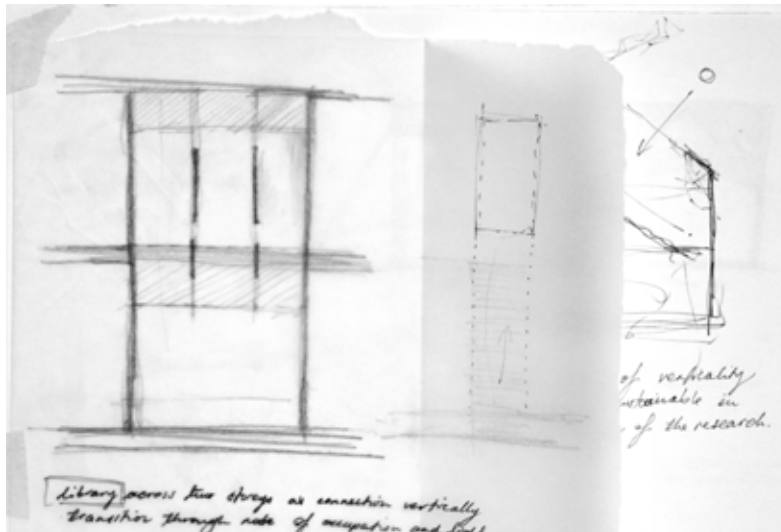


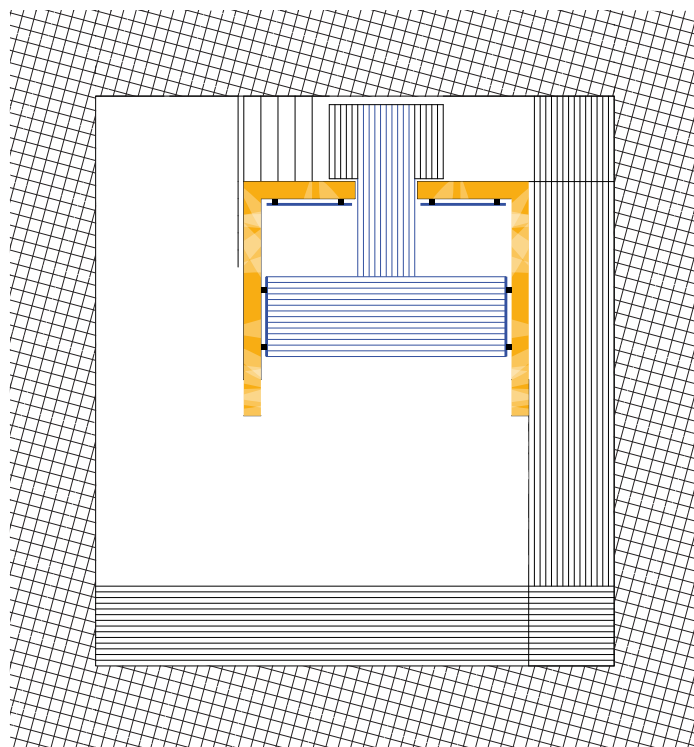
Floor Plan

Interrupt

reading rooms



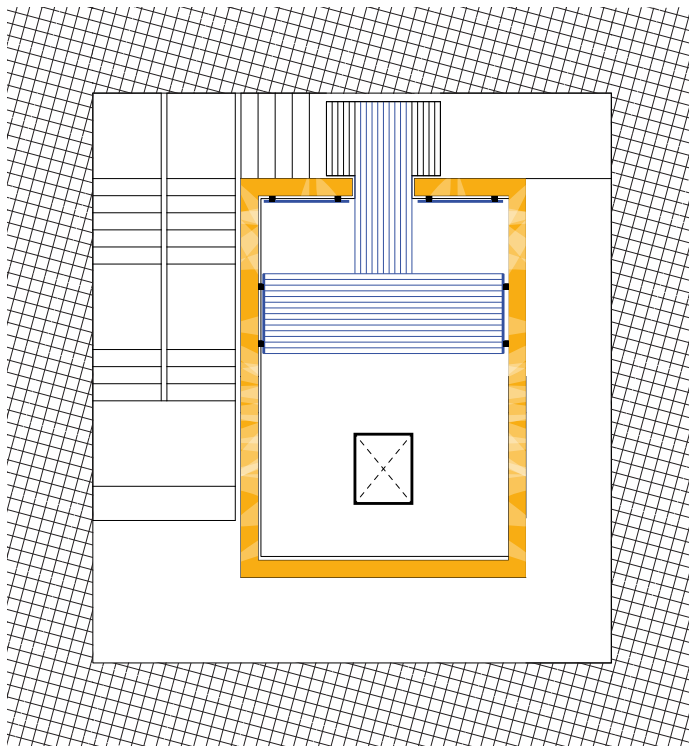




floor plan

base entry floor

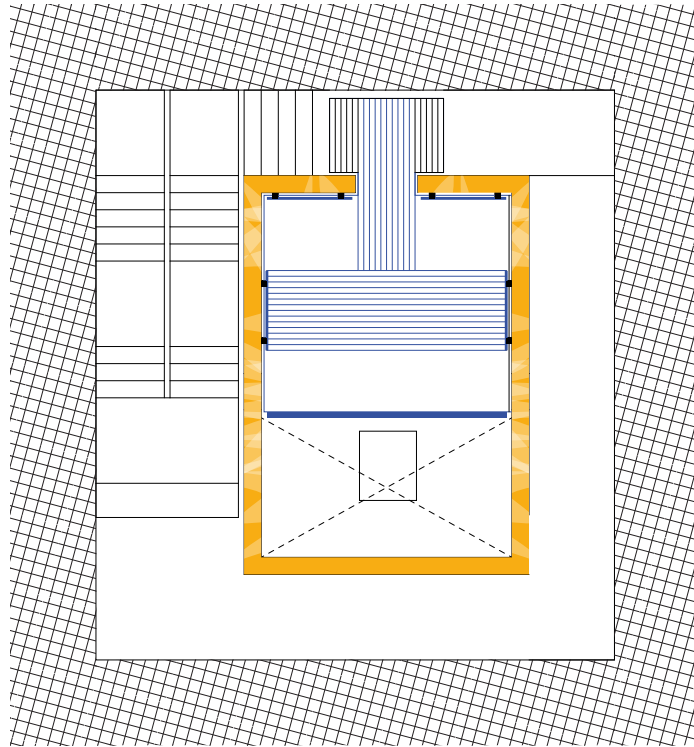
1:100



floor plan

second floor

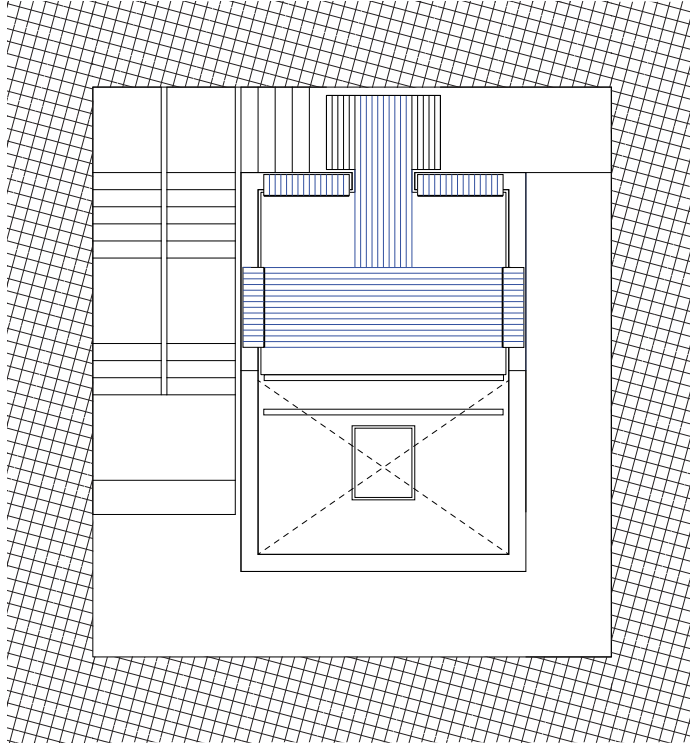
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floor plan

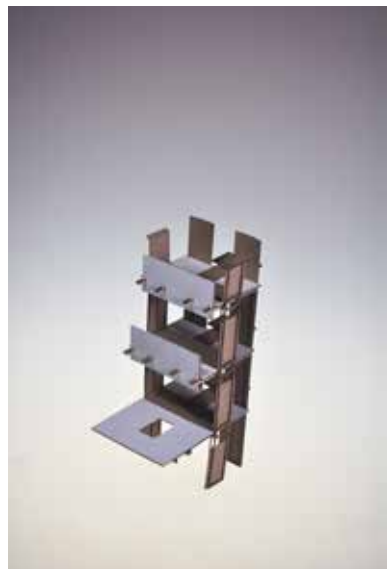
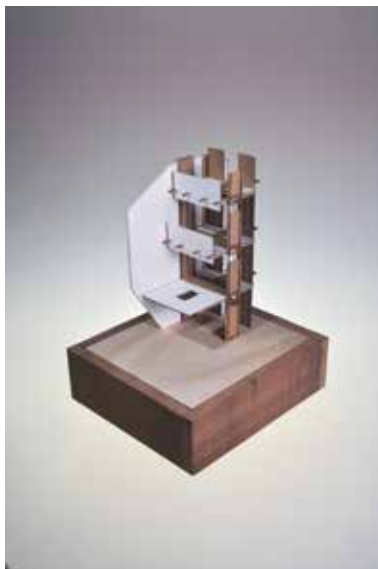
(above) second floor, (opposite) upper entry floor

1:100



Floor Plan

Interrupt

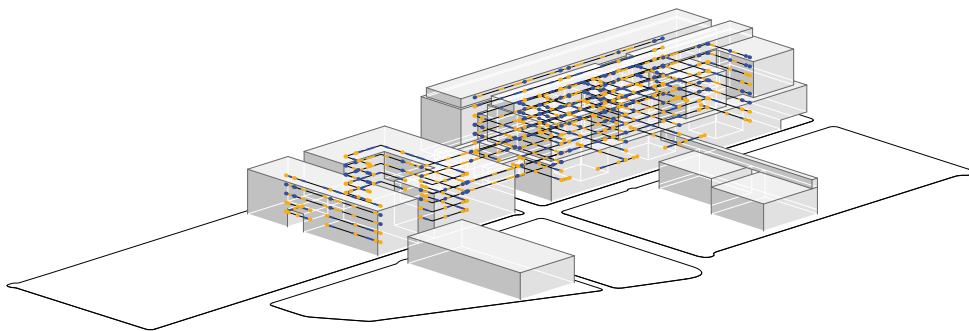






Floor Plan

Interrupt

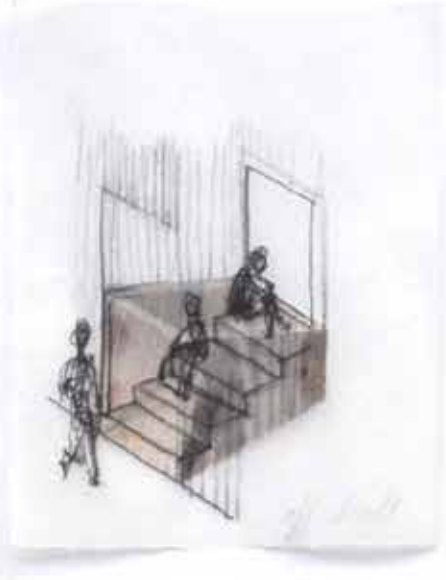
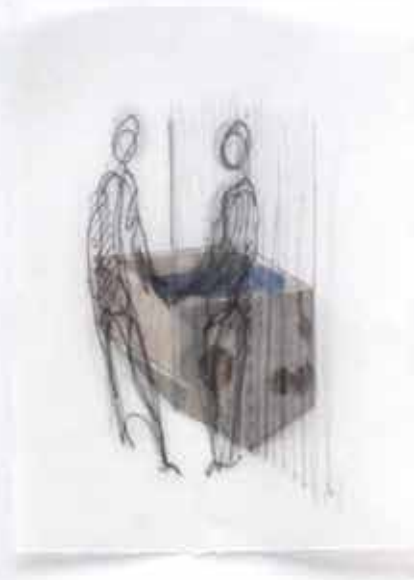


experiment three

interact

This test steps down again in scale back to effectively being an installation.

The purpose of this particular design experiment looks at intersections which could be made on the smallest scale to re-associate a connection and empowerment between the built environment and the personal world of its user. Looking at the existing proposal for the site again likely axis were selected as trajectories of transit through the form and proposed them as corridors. Assuming a similar floor plan would be used on all floors, with minor variations where necessary, a range of interventions were proposed to a standard corridor which would allow for a heightened sense of connection to the space, awareness of personal emotional identity in space and more meaningfully allow for individuals to engage and emotively connect within that environment. The proposed outcomes will intend to create an overall environment which is emotionally empowering within the existing programme and in harmony with its existing spaces.





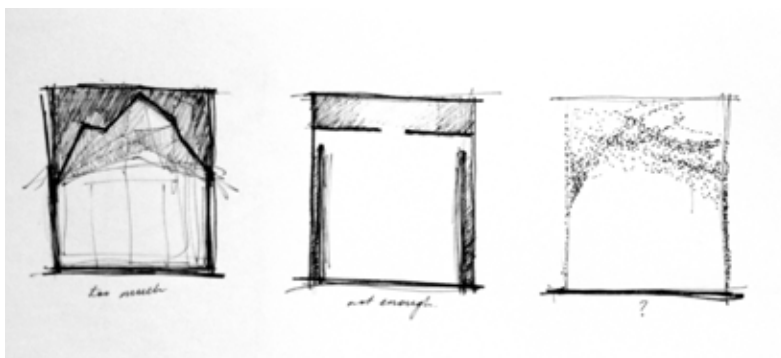
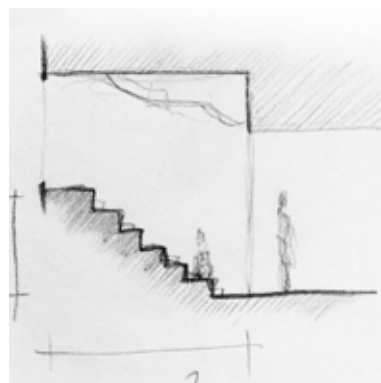
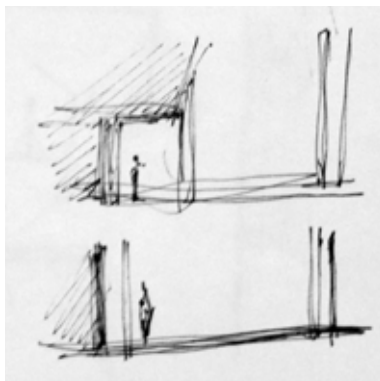
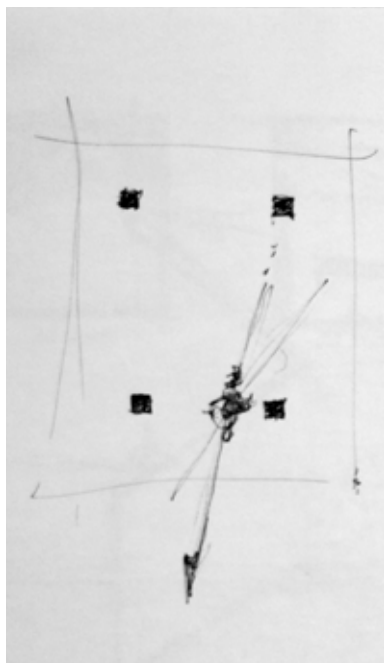
Ideation

Interact

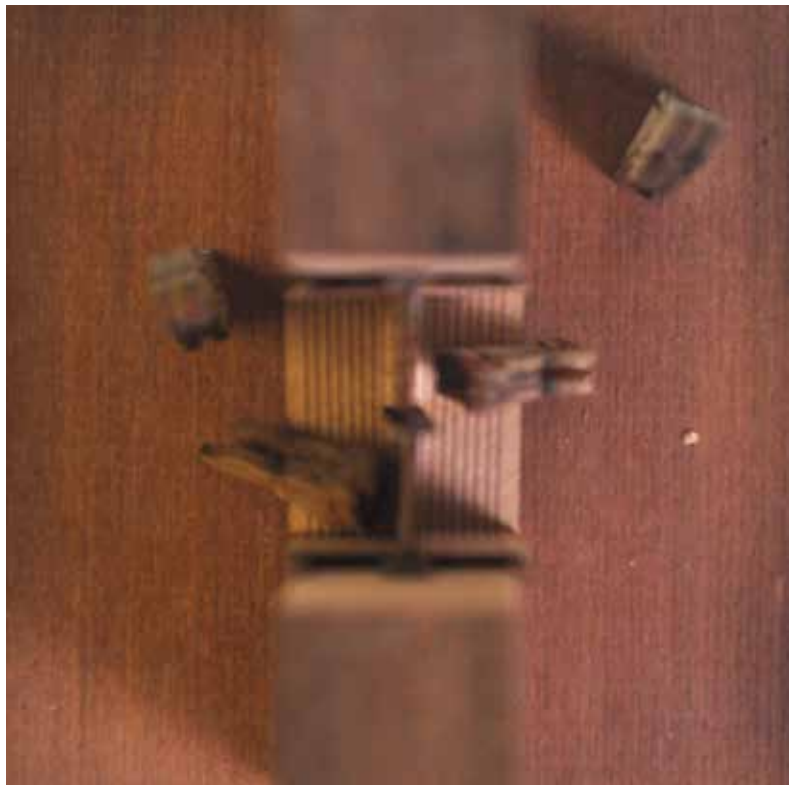
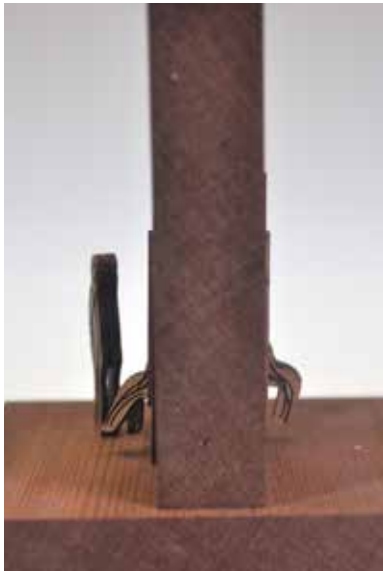
ideation

connecting pause







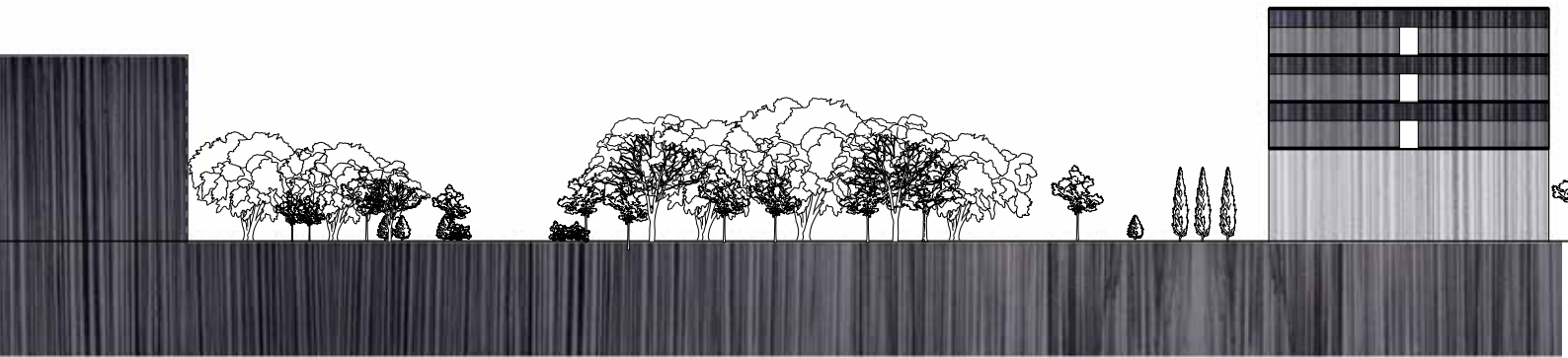


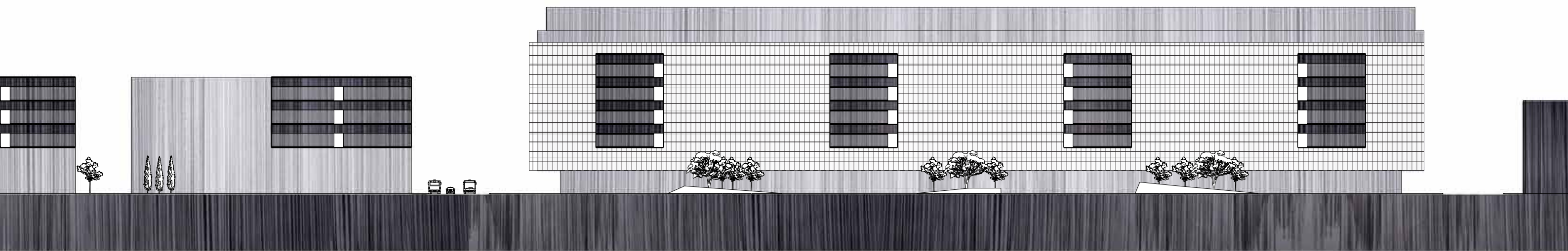
Connecting Pause

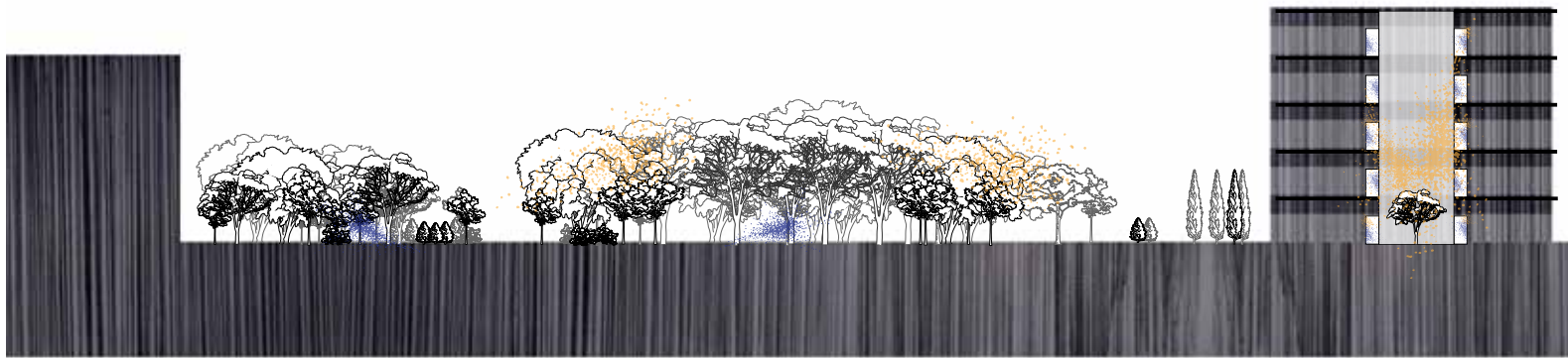
Interact

final

indicative application of
considerations

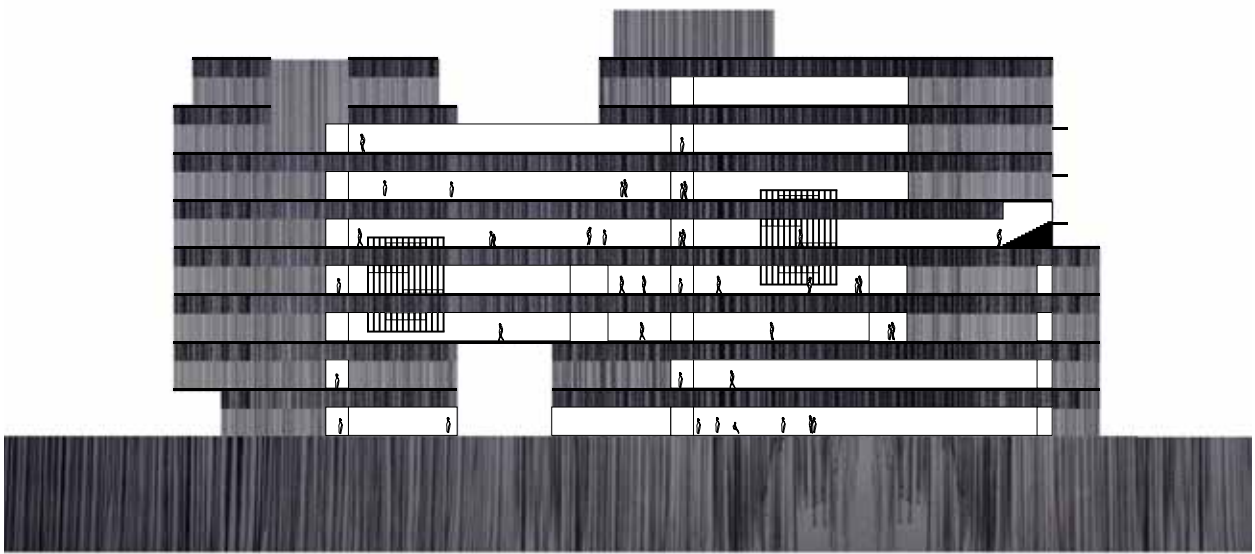












Indicative Application Of Considerations

Final

findings and reflection

Through the three explorations made as part of this investigation, the final iteration of the design considerations has been tested and evaluated into a combination of the design outcomes. Due to time constraints this investigation was not able to go into detail on some issues about urban connection. This puts external connection outside the scope of this thesis and presents the potential for further investigation into emotional agency in a wider context.

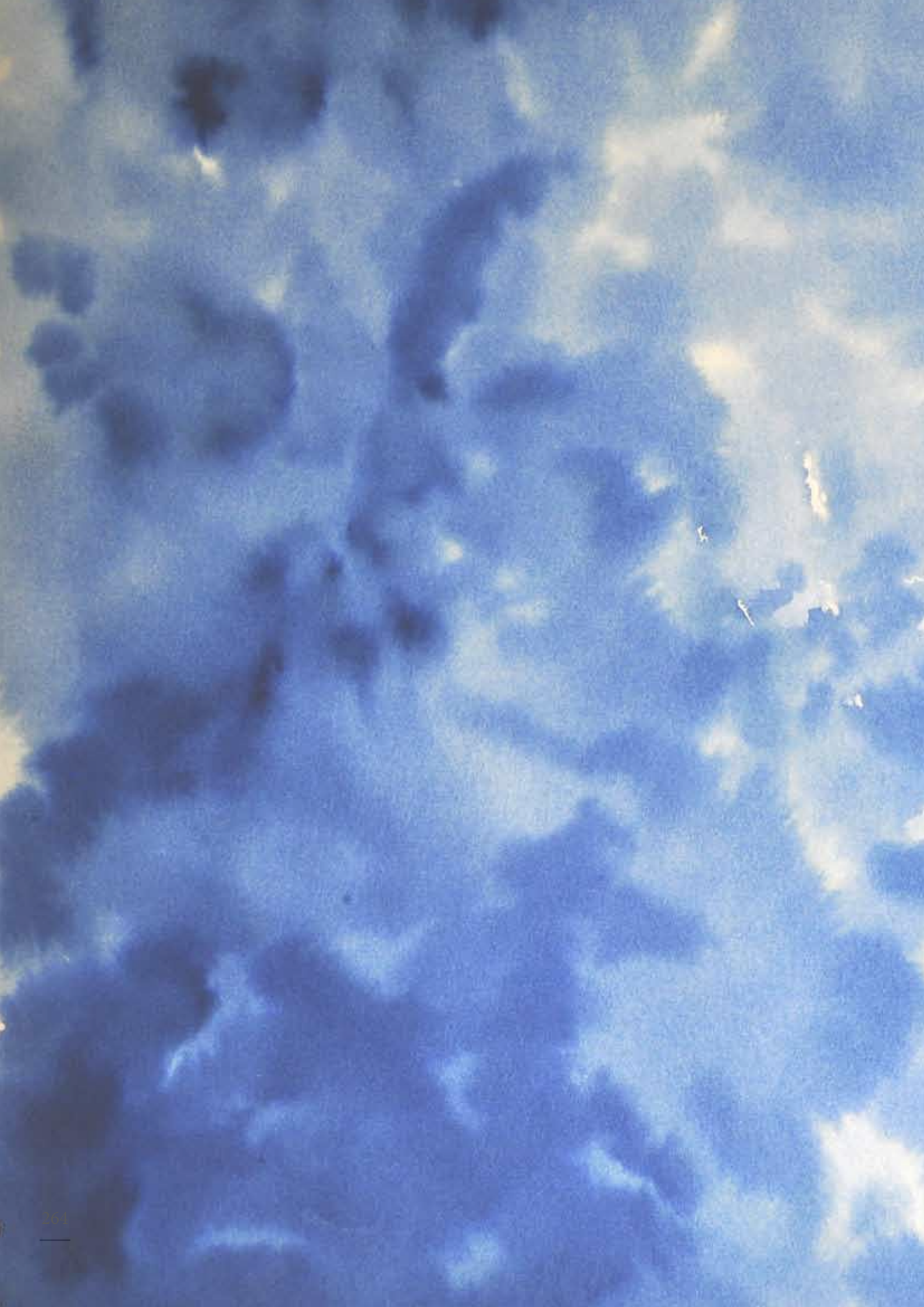
Through the removal of practicality from the scope this final public scale renders a satisfying conclusion to the aims of this thesis. These are summarised for all investigations in the following chapter. However, this final investigation clarified two final points which complement the existing findings. These are identified as the consideration of ambiguity in design and the role of the designer in enacting this model of care in the design of the built environment.

Ambiguity is the final layer to add to the network of considerations put forward from previous investigations. This is simply the consideration of flexibility where an ambiguously coded space acts in the place of a directive programmatic expression. This builds on the ideas identified through researching Maggie's Centres as a case study, particularly through the final design exploration of interactive interventions, to capture a careful

expression of diverse ways of being within a single environment. This is not to say that programme is counteractive to emotionally empowering spaces. Instead it suggests that only where it is softened by incorporating layers of diverse expression can it effectively communicate an agency of emotionality to its occupants.

This allusion to conscious intention brings us to the other decisive finding of this investigation: that these spaces cannot come to exist without the intentional application of care by the designer. These layers of consideration which connect emotion to space, and more importantly the freedom of those emotions, must be consciously chosen. Without the intention of choice, there is no supported emotional relationship between the occupant and their built environment leaving building users to negotiate the agency of their world unsupported. It is only through intentional, compassionate and considerate design that the agency of emotional wellbeing will be supported in the built environment.

It is with these final two layers of consideration that this thesis is able to draw its conclusions as a framework in which to begin to consider emotional wellbeing and how it can be supported by the built environment through the practice of design.





conclusion

reflections and findings

critical reflection

This thesis is a portfolio of work developed over the last 23 months. The length of this investigation and its execution for the majority of its duration, as part time study, likely had a significant and as yet not fully understood impact on the cohesion of the research, design process, focus and findings. In dealing with emotionality it proved impossible to separate the design and research from the researcher's own personal emotional identity. Sections of this thesis have been influenced in unexpected ways by personal circumstances surrounding the design process. Although not obvious at the time, on reflection this had a drastic impact on addressing the scope of the research and remaining focussed on its aims.

The speculative and iterative nature of this research process allowed for the development of a successful architectural approach which connects the proposed model of emotional wellbeing to the designed environments. The constant shifting scales and investigation techniques, as part of this research, became meaningful tools for reflecting on the design and the process. As the investigations stepped in and out of modes of representation, it became increasingly obvious that certain conventions of design tacitly connect the designer to the design intentions through their embodied application to the design process. This in turn lead to a more expressive use of media in an attempt to communicate this felt understanding of the designer's impact on the design. This can be seen in the development of the two final investigations in particular.

Although outside the scope of investigation it is clear, on reflection, that the research would have benefited from a wider range of emotional feedback. At no stage was there any opportunity for a wider sample of

individuals with diversified experiences to comment on the findings of the investigation, outside of direct colleagues of the author or critics from the architectural field. This has both aided and hindered the design process. This research became indisputably a personal response to emotionality in the built environment, although it was based on existing discourse and it frames its findings as such.

Aspects of the design itself remain under realised and unconvincing in places though ultimately this has not prevented the research from identifying successful elements and collecting meaningful findings. The work revealed many relationships within design that have the capacity to empower emotional wellbeing in the built environment.

Investigations two and three were successful in their development and analysis of an architectural framework in which to consider the design of emotional agency. Although these investigations did not engage with the many practicalities of built space, they did begin to embody the intangible aims of the research. If they were developed further, they could have bound these into a conventional architecture with more success, but they remain speculative and as such tools for thinking. This departure from architectural conventions was taken further in investigation four, where the burden of functional practicality was consciously outside the scope, which led to more satisfyingly emotionally driven developments. It is these developments, from a more speculative consideration which finally connect the findings of each scale of investigation and allow this thesis to draw its conclusions.

summary of findings

Threshold



Mass



Direct



Indirect



Volume



Rhythm



Aperture



Texture



Connectivity



Pattern



Materiality



Ambiguity



considerations of emotion

- which allows gradients of embodied transition
- which understands itself in intimate relation to both the subject and the architectural object it is part of
- as the balanced sensorial outputs of the designed environment
- as the balanced sensorial inputs and relationships through surrounding spaces
- in harmony with the intimacy of personal and communal emotionality
- in harmony with the pace of emotionally being
- which acknowledges the relationship between emotional bodies
- in grounding embodied presence in space
- in acknowledging movement of agency
- which supports a familiarity of both embodiment and environment
- which captures the emotional quantity of embodiment
- which acts in the place of directive programme

conclusion

This thesis is a collection of four investigations across three scales, exploring the place of architecture in empowering emotional health and wellbeing. Having identified a need for an increased attention to diverse emotions in the design of healthy built environments, the aims of this thesis centred on developing a collection of considerations for design that attempted to connect emotional agency to space. Through an application of care and an acknowledgement of a subject's embodied emotional world, a model of emotional experience was developed through the lense of *empathy* (spatial empathy). The model was developed into an architectural vocabulary through a series of speculative design outcomes, each following a very personal design technique. This personal approach, engaging the emotional agency of the designer, allowed the complex connections between emotions and architectural space to be explored through design.

This research proposes that a critical awareness of spatial empathy and the embodied emotional relationships to the built environment leads to a more meaningful understanding of emotional agency and wellbeing in architectural space. This has led to a concise but by no means exhaustive list of architectural quantities, qualities and considerations, constructive to the development of emotionally focused spaces. This vocabulary of architectural characteristics satisfies the aim of this research: to find tools with which to enable emotional agency in the design of the built

environment. The final project brings together all of these considerations as a final test of the research. It is both a visual conclusion and a design articulation of the thesis findings.

It is in the process of this final investigation that the other meaningful learning from this research became clear. It ultimately identifies a need for further research, a higher consideration on the part of the architectural profession for designers to meaningfully employ their skills to create emotionally empowering environments. It is the responsibility of the designer, always, to consider with care and compassion the human needs of all those who interact with the buildings they design.

Through speculative design this research concludes that an emotionally healthy building is one designed with a careful consideration of the relationship between the embodied subject and the built form that acts as its bounding vessel. A building that is designed in response to not only how its occupants will touch and interact with it, but also how it impacts on and holds them. As designers we must know these things both tacitly and intentionally; we must understand the diversity of emotional lives and the need for these to have a strong agency in the built environment we create. We must design spaces to hold joy and distress, hope and fear. Must know where we laugh, where we can just be, and where we can go to cry.

further research

The complexity of our emotional relation to the built environment leaves vast potential for further research. This thesis tackles the subject of emotional agency in architectural space and its design, but many more questions open out from the research; as this research comes to its conclusion it is clear that it was only able to address a small corner of the avenues it may have explored.

Going forward this research could be elaborated through a consideration of everyday spaces, other than those engaged with the practice of care. Programmes such as office environments or the wider urban fabric of city life presents opportunities to further understand the potential for emotional empowering spaces and they impact the day to day emotional lives of a general and diverse populations. This does however suggest that an ongoing step would be to use further iterations to strip out the speculation and allow practicalities to be tested against the findings of this research through design development. This would also suggest engagement with collecting data through iterative exchanges of design and feedback from wider communities on the effective design outcomes.

At each scale of design investigation, the research came up against challenges in representing emotional considerations in design and the architectural space that results. Although as it was not considered in the scope of this thesis, it is suggested that an adjacent body of research could investigate the communication of emotionality and emotional agency in architectural design representation.





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