

# Extrapolating the Unseen: Above, below and beyond the surface of my sketchbooks' pages

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I, Henry Pretorius, declare that the research dissertation that I herewith submit for the Master's Degree qualification Architecture with Design at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of Higher Education.

HB Pretorius

1996210249

A handwritten signature in black ink, reading "Henry Pretorius". The signature is stylized with a long horizontal line extending to the left and a vertical line extending downwards from the end of the name.

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# GLOSSARY OF KEY TERMS

**Afterwardsness** (also referred to as re-lived by the author in this study)

In the psychoanalysis of Sigmund Freud, afterwardsness is a “mode of belated understanding or retroactive attribution of sexual or traumatic meaning to earlier events... [from the German word] Nachträglichkeit, translated as deferred action, retroaction, après-coup, afterwardsness” (De Lauretis,2008:118).

## Alibi

Proof that someone who is thought to have committed a crime could not have done it, especially the fact or statement that they were in another place at the time it happened (<https://dictionary.cambridge.org>)

Similarly refers to drawings used in the study to access the irrational world of the subconscious, as evidence of a journey inward.

## Atmosphere

Refers to the sensorial qualities that a space emits. It arises between people and things, is an immediate form of physical perception, and is recognised through emotional sensibility. Also refer to: Attuned space.

“Atmosphere is the shared reality of the perceiver and the perceived, it is the reality of the perceived as the sphere of its presence and the reality of the perceiver insofar as he or she, in sensing the atmosphere, is bodily present in a particular way” (Böhme, 2017:23).

Atmosphere is also introduced by Tonino Griffero as belonging to an ontological category he terms quasi-things. These do not exist fully in the traditional sense as substances or events, yet they powerfully act on us and on our states of mind (Griffero, 2017).

## Attuned space

A space which carries atmosphere because of the refined plan-section-form layered relationship. Also refer to: Aura; Felt body; Felt space; Atmosphere; Temenos.

## Aura

Derived from authenticity and locale – a projected presence unachievable by reproduction which will then become an empty characterless envelope. Also refer to: Attuned space; Felt space,

“Aura is a ‘strange’ connective tissue of space and time: the unique apparition of a distance, however near it may be” (Benjamin, 2008:23).

## Automatic drawing

Automatic drawing is a method of bypassing the conscious mind and allowing spontaneous surrealist expression willed by imagination (Grant in Spare, 1975). Automatic drawings are used to conjure the subconscious into re-lived experiences.

## CAD

Computer-aided design (CAD) is the use of computers to aid in the creation, modification, or optimisation of a design.

## Derivation

The origin of something, such as a word, from which another form has developed, or the new form itself (<https://dictionary.cambridge.org>).

## Dérive

“The derive involves playful and constructive behaviors and an awareness of the psychogeographical effects. They take on a very different approach from just strolling or taking a journey. If a derive the individual, or several individuals, drop their everyday tasks and activities and go on with movement and action. They let themselves be drawn by the attractions of the terrain and what they find there. They do not have a motif in mind, they are just experiencing the city open to new perceptions.”

-Guy Debort

(<https://DebordTheoryOfTheDerive.pdf> // [topologicalmedialab.net](http://topologicalmedialab.net))

## Exploration

The activity of searching and finding out about something (<https://dictionary.cambridge.org>).

Exploration was the primary method of this study to explore different ways of interpreting and understanding the sketches in the sketchbooks.

## Extrapolation

The process of using existing information to discover what is likely to happen or be true in the future (<https://dictionary.cambridge.org>).

The five explorations combined forms a unified whole put forward as the extrapolation of the unseen above, below and beyond the pages of the sketchbooks.

## Felt body

The intuitive comprehension of spatial atmosphere through bodily presence, surpassing physicality and phenomenological senses to become aligned with that which cannot be perceived by senses alone. Referred to in text as feeling body.

“ ... the felt body – which would seem to have fallen through in between the (material) body and the soul – and embodied communication (in exchanging glances and several other occasions in daily life), emotions as atmospheres, significant situations and, amongst them, rich impressions, the surfaceless spaces (passed over by Greek Geometry) of weather, sound, posture, felt impulses, emotions etc.; also half-things: voices, wind, an overpowering sense of gravity, pain as an imposing opponent and not merely as a state of the soul, emotions as half-things moving the felt body” (Schmitz in Gugutzer, 2020).

## Felt space

The bodily awareness of attuned space.

“In bodily felt space, atmosphere can activate a kind of architectural engagement quite different from that triggered by Euclidean geometries. This difference reflects two contrasting European concepts of space, topos (Aristotle) and spatium (Descartes). While topos is a place in which one finds oneself, a space of bodily presence whose dimensions and directions relate to the body (up/below, right/left, front/back), the geometrical proportions of spatium constitute space as a medium of representation for something” (Böhme, 2017:2).

## Genius Loci

The sense of place or the prevailing character or atmosphere of a place (Norberg-Schulz, 1980).

## Introjection

In this study the process of purification of pleasurable emotions or encounters as feelings and their absorption into the body, builds on the Freudian interpretation of introjection as a way of collecting pleasure for a subconscious inner pleasure vortex. Also refer to: Pleasure-ego.

In psychoanalysis, introjection (German: Introjektion) is the process through which the subject replicates behaviours, attributes, or other fragments of the surrounding world, especially of other subjects. It is considered a self-stabilizing defence mechanism used when there is a lack of full psychological contact between a child and the adults providing that child’s psychological needs (Erskine, 2015).

## Irrealism

This refers to parallel realities above, below and beyond the page where the sketches exist in their metaphysical state as project from the 2D plain of the page into 3D worlds.

“Goodman claims that the world dissolves into different versions, and refers to this epistemological paradigm as an ‘irrealism’” (Cohnitz & Rossberg, 2018:6.1).

## Issues

A subject or problem that people are thinking and talking about. (<https://dictionary.cambridge.org>)

This term was used by Clark and Pause to identify facets to be analysed in their 2005 book Precedents in Architecture.

## Pleasure principle

In Freudian psychology, the pleasure principle is the instinctive seeking of pleasure and avoidance of pain to fulfil needs as a way of self-preservation (Freud, 1966:V12, 218).

### **Pleasure-ego**

The nature of the ego towards self-preservation cultivates an internalised pleasure-ego which is ambivalent towards the external world. (Freud, 1966:V14,113-137).

### **Pleasure vortex**

A collection of purified emotions associated with pleasure, driven by the pleasure-ego, interpreted as gut feelings to be drawn upon when subconsciously relying on feelings to guide design decisions.

### **Reality principle**

Freud contrasts the pleasure principle with the concept of the reality principle, which describes the capacity to defer gratification of a desire when circumstantial reality disallows its immediate gratification (Freud, 1966:V12, 219).

### **Temenos**

In archaic Greek, the meticulously ordered Greek temple precincts are referred to as the temenos (Tzonis & Lefaivre, 1988:1-3).

### **Transference**

A term associated with psychotherapy where the feelings of a person are unconsciously redirected to the therapist. In this study the term is adapted and refers to the subconscious ability of the architect to redirect gut feelings and emotions to guide design decision making.

### **Worldmaking**

Nelson Goodman explored the relation of “worlds” to language and literature, formulating the term “worldmaking” to suggest that many other worlds can also plausibly exist as the “world” we know right now. We cannot catch or know “the world” as such: all we can catch are the world versions - descriptions, views or workings of the world – that are expressed in symbolic systems (<https://bejamins.com/catalog/filmm.5>).

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<b>Corneli van den Berg:</b>	Dérive narrator

## INTRODUCTION

My collection of sketchbooks contains many personal ideas and designs for a weekend house, a place for escape at times when I need to find myself. The design ideas contained in them have been mainly inspired by effective and compact space planning with the premise to retreat, to get away, to go inward.

A visit to the town of Rosendal during the annual *Love Rosendal* festival over the Valentine's Day weekend of 2012 resulted in the impromptu purchase of an empty site located opposite the 100-year-old sandstone Dutch Reformed Church (1914) in the centre of town.

Rosendal<sup>1</sup>, a small town mainly in service of the surrounding farming community, has developed in recent years into an artist colony. It is set on the edge of the Witteberge, not far from Senekal in the Free State province of South Africa.

It is particularly popular over weekends when city

dwellers escape to the simplicity of life that the town offers. Some visitors, like me, end up contributing to the local economy and investing in property.

I have returned to the town only once since that weekend of love. Over the course of five years I have, however, imagined and re-imagined many times over, various designs for a retreat on my site in the centre of town. All the designs were meticulously drawn up in eight or nine Moleskine gridded-page notebooks. The squared pages allowed for easy scaling, and the plans, sections, and elevations range over various scales.

The aim of this study is to take stock of all the designs in these sketchbooks, and analyse the different proposals for this weekend retreat in search of insight into what was drawn on the pages. By doing so, I hope for a deeper understanding of how the sketchbooks channel and open creativity to allow freedom of exploration. At first glance, when I page through the sketchbooks, I get the feeling that the design ideas are all singular

in nature, but are attracted by the curiosity of multiple possibilities. I perceive these to be drifting in a pool of vibrations and flowing from one resonance to the next - almost as if an underworld is influencing the decision making.

What, then, does the sketch on the surface of the page capture?

And more importantly, what does the sketch *not* capture?

What lies hidden within these two-dimensional drawings?

To find the answer to these questions, further exploration is inevitable.

## LIMITATIONS

This study has a number of limitations:

Firstly, the study will be limited to the objective physical contents of the sketchbooks, and this will allow for a discovery of the unseen underworld that they attract.

Secondly, the focus of the study is on explorations and creative expressions. Psychoanalytic theories will be introduced to facilitate the study, although these are not the aim of the study.

Thirdly, the town and surroundings of the site is not considered as a main driver in the process and will therefore be observed as an external contextual setting providing a foothold for the journey inwards, as explored through the various design resolutions.

Lastly, none of the designs have been built, and although all the different design concepts are in search of an ultimate solution, it is not necessarily the aim of this investigation to provide a final design.

## RESEARCH THEME, PROBLEMS AND QUESTIONS

The sketch designs are the obvious quantitative research source, and these are contained on the pages of the sketchbooks. Objective cataloguing and categorising should be the starting point of the

study. However, by observing all the drawings, the design process is perceived to be in free *flow*, and includes subjective desires, feelings, memories, spatial intelligence, and an overbearing inquisitiveness into various possibilities. These cannot be ignored as it becomes an integral part of the driving force behind the many design solutions contained in the sketchbooks. The research therefore seems to be juxtaposed between reason and metaphor, and poses the questions: How does the sketchbook reveal and channel what lies beneath the surface of the page?; and What is recorded in the sketchbooks and what remains unseen?

To analyse and compare the different designs in order to identify the process is one part of the research theme. This process will show how the initial design ideas are explored, and how they evolve throughout the sketchbooks. It is already clear by just looking at the drawings that there are leading design themes and ideas: introverted design ideals; the idea of privacy and seclusion by means of courtyards; the juxtapositioning of inside-outside spaces contained within a strong geometric square or circle; the various possibilities and combinations of eating, sleeping, and living spaces; multiple investigations into the relationship between plan and section; the omnipresence of roof and the spatial evolution from plan to roof; simplification of methods and materials due to a scarcity of local craftsmanship; the relevance of size and scale; the concern with economics; and the idea of a small footprint to lower cost.

To me, the above concerns are architectural in nature and are expressed within the realm of architecture. However, subjectively I know that there is more to it. Why would I, over a timeline of almost five years, continue to scribble and draw these design ideas while I remain in the comfort of my bedroom? Why do I find this to be utterly relaxing and gratifying while it energises my creative spirit? What drives these flights of fancy? Is there an end? Was there ever a beginning? Is there an ultimate design solution?

Ultimately, the research question is: What is not shown on the surface of the page and how should it be approached and appreciated in order to bring its significance closer for the architect during the process of design?



*Illus. 1 Rosendal with sandstone church and Witteberge in the background (Martens, 2016)*

1. Originally a farm, Rosendal was established in 1911 when the widow of landowner Philip Botha was asked to name the area. With her son, she came up with two names: Liliesfontein and Rosendal (rose valley). The latter won the town was named after the abundance of rambling roses in the area. (Johnston, 2012)

## METHODOLOGY

The research methodology is to approach the unseen - that which is hidden and not shown on the surface of the page. This will be attempted through different explorations to conjure up these parallel reverberations. On the surface of the pages are scaled sketches drawn in plan, section, and elevation in various sketchbooks. Instinctively I know that there is much more to these sketches than meets the eye, and which is worthy of appreciation, yet scarce evidence exists of these hidden parallel echoes.

A careful study of all the sketches contained in the sketchbooks to understand what has unfolded on the pages, is the logical first exploration. What are the repetitive design objectives, what are the different thought processes and how have these been realised differently in each of the sketch design solutions? This exploration triggered further explorations, which evolved organically as part of the study, and will be fully explained and introduced once each previous exploration has been concluded and appreciated. A method of creative exploration followed by an attempt at analysis, has emerged through this study.

In short, Exploration #01 harnessed the drawings in the sketchbooks and identified the leading design themes. This process helped to reduce the corpus of drawings which is spread across different sketchbooks. Only the concluded designs which had been fully developed in plan, section, and elevation were categorised. After grouping the eight main designs, Exploration #02 will set forth to formally document them on CAD. Exploration #03 ventures into the hidden worlds below the sketchbook pages, where the subconscious drives and desires remembered and experienced during Exploration #02 reside. This leads to Exploration #04, which speculates on the spatial awareness of each design to discover the resurfacing of subconscious emotion through accessing worlds beyond the sketchbook page. And finally - as a conclusion - Exploration #05 discusses ideas for an exhibition through which the findings of the dissertation will be communicated.

## EXPLORATION #01: ON THE SURFACE OF THE PAGES

Reflections and taking stock

### 1.1 THE SKETCHBOOK AND THE EMPTY SURFACE OF THE PAGE

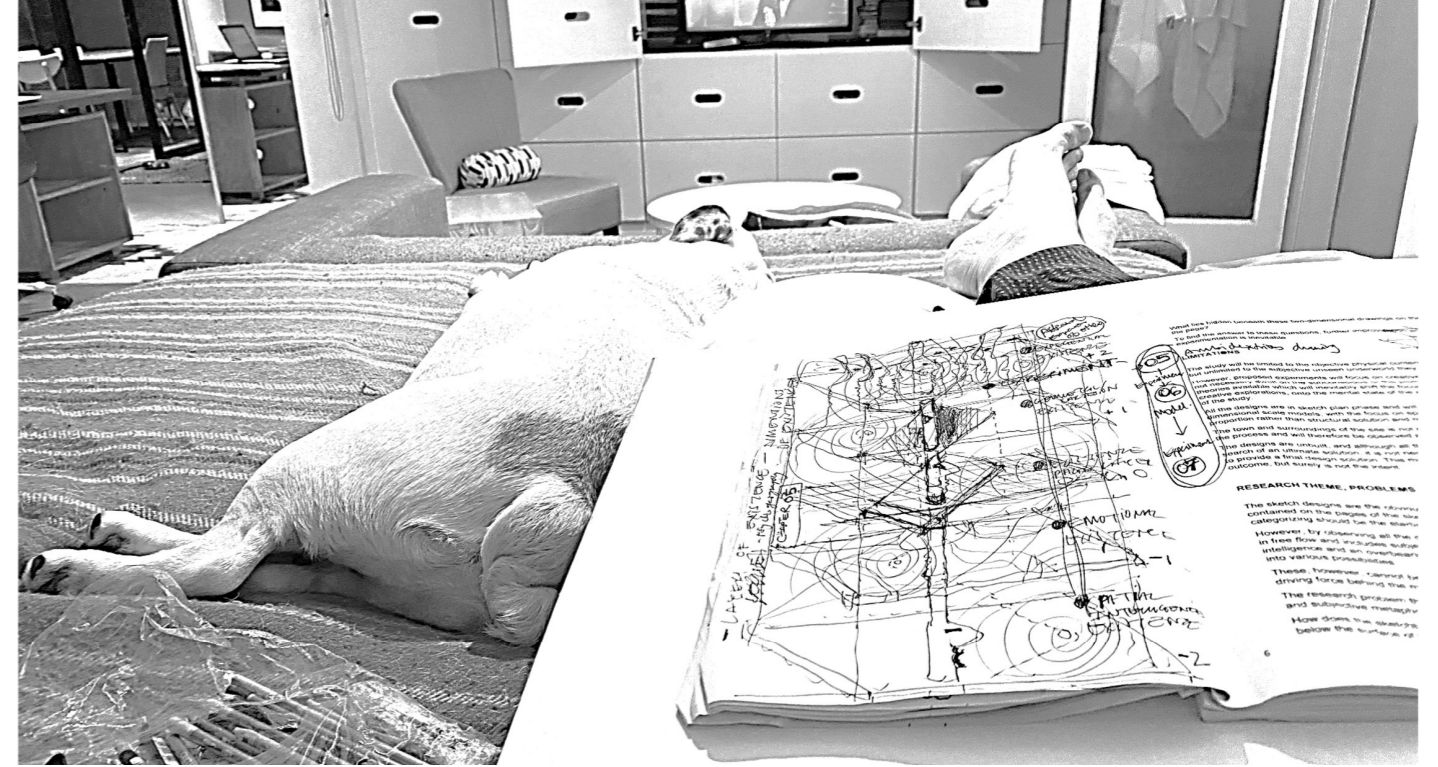


Illus. 2 My collection of sketchbooks (2013 - 2018)

My collection of 10 sketchbooks (Illus. 2) are all similar in format: black Moleskine, case bound, pocket-sized with acid-free pages. The pages are filled with various plans, sections, elevational studies, and details. All in black ink, drawn to scale on the 5mm gridded pages. They are not numbered or organised or ordered in any way. Some contain sections and elevational studies of plans that can also be found in other sketchbooks. Some contain complete sets of plans, sections and elevations that refer to a single design idea, but detailed sectional explorations of the same design appear in various sketchbooks. The reason for this is that I have

one sketchbook readily available at any given time wherever I go. The sketchbook immediately at hand is therefore not necessarily the most recent book that I have sketched in. I keep one or two next to my bedside. There is normally one in my carry bag and a few at the office. There is always one in my car, and when I find myself at the airport while waiting for a flight, the nearest bookshop sells them, which means that I can buy one if I don't have one with me.

It is very seldom that I use these sketchbooks for any other project, and their combined primary objective and use is exclusively for the Rosendal designs. This

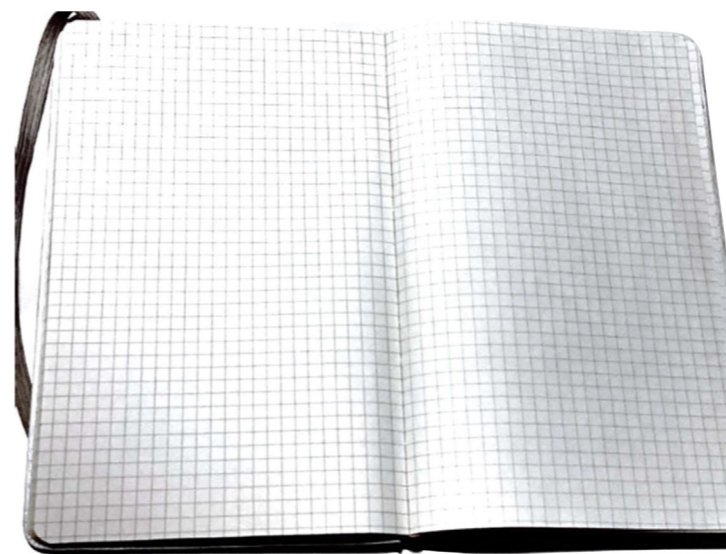


Illus. 3 My bedroom

occurs in between project presentations, or student crit sessions, meetings or while travelling. It becomes a way of escaping from the pressure of solving pressing design problems or any other site-related crisis. It offers a quiet repose to relax my mind and bring some clarity. I can easily carry on from where I have previously left off with the Rosendal process, and continue in any way that I please, such as solving a detail that I couldn't

figure out before, or questioning the current roof system and diagrammatically embarking on a new exploration. However, of the times that I enjoy exploring ideas in my sketchbook, the most common is when I am alone in my apartment and in the comfort of my own bedroom. Lying on my bed with my back supported by large continental cushions pressed up against the wall (Illus.3), with the sketchbook supported on my retracted legs, or lying on my side with my head resting in my hand, supported by my arm and elbow. This is when I am most at peace and in the thrills of creativity. There is usually something showing on the TV screen in the cabinet across from the bed, and my English Bulldogs are snoring in the background. I enjoy watching murder mysteries while I am in this sketching mode, which I find creates a setting of inquest that I find inspiring. I can look up from the sketchbook page and see how the investigators are progressing with the case, while my own design mystery is playing off on the empty pages in front of me.

The Rosendal designs are constantly on my mind, and can be accessed anywhere and at any time, if I have a gridded page in front of me. In this regard the empty gridded page (Illus. 4) is never actually empty, as the 5mm grid across the page has already killed the dominance of the white page. I am constantly aware of the designs which I have carried around in my head, and I can access them whenever I need to. In this regard the



Illus. 4 An empty page of a Moleskine sketchbook with 5mm grid

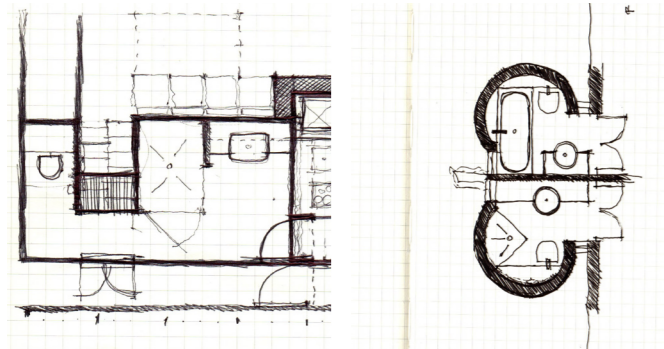


### 1.2.3 Variations in organising the daily eating-sleeping-bathing rituals resulting in different plans

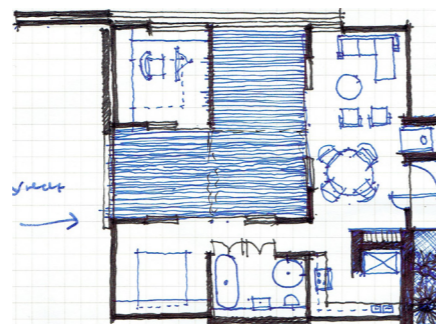
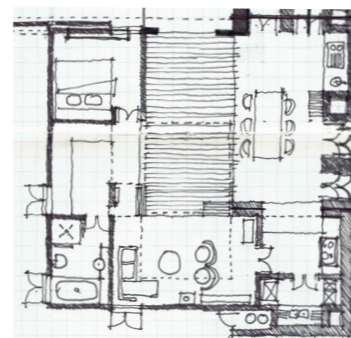
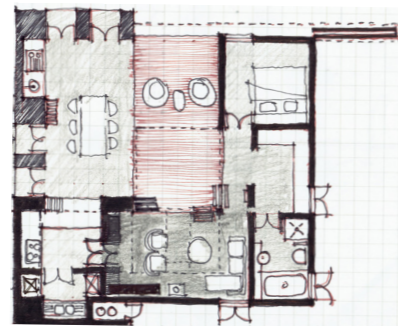
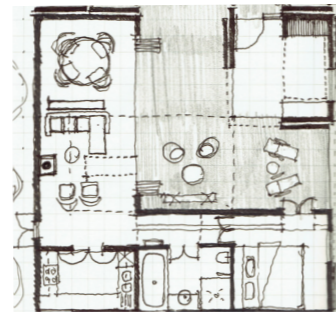
Despite efforts to create inside-outside spaces in the process of plan-making, considerable time and effort have also been put into re-organising the internal arrangements of various functions. Throughout the sketchbooks, various relationships between the inner workings of the plan are investigated. The eating-sleeping-bathing rituals continuously change the flow of interior space in relation to outside spaces. This process requires that the service spaces such as kitchens and bathrooms (Illus. 8), are meticulously planned in as much detail as possible, in order for the legitimacy of the internal changes (Illus. 9) to be considered.

### 1.2.4 Scale and size – minimising the footprint

It is a challenge to find the balance between the number of commodities and comforts that is allowed on plan, while trying to achieve the ideal of a compact lock-up-and-go typology. Furthermore, a small footprint makes for a relatively simple construction methodology. This was one of the major concerns throughout all the designs, as there is a lack of skilled builders in the remote town of Rosendal. Transporting materials is therefore a major cost factor. Minimising roof spans and pre-empting locally available materials resulted in a 3m x 3m general grid. This pre-conceived size could contain any of the functions provided on plan, while being generous enough for this micro-living typology. Also, it could be easily spanned with standard-sized construction elements, provided that a sub-grid of 1.5m x 1.5m would provide additional support. This proportioning on plan was echoed in the section with a generous ceiling height of 3m.



Illus. 8 Detail bathroom and kitchen planning



Illus. 9 Variations on plan

### 1.2.5 Plan-to-section relationship

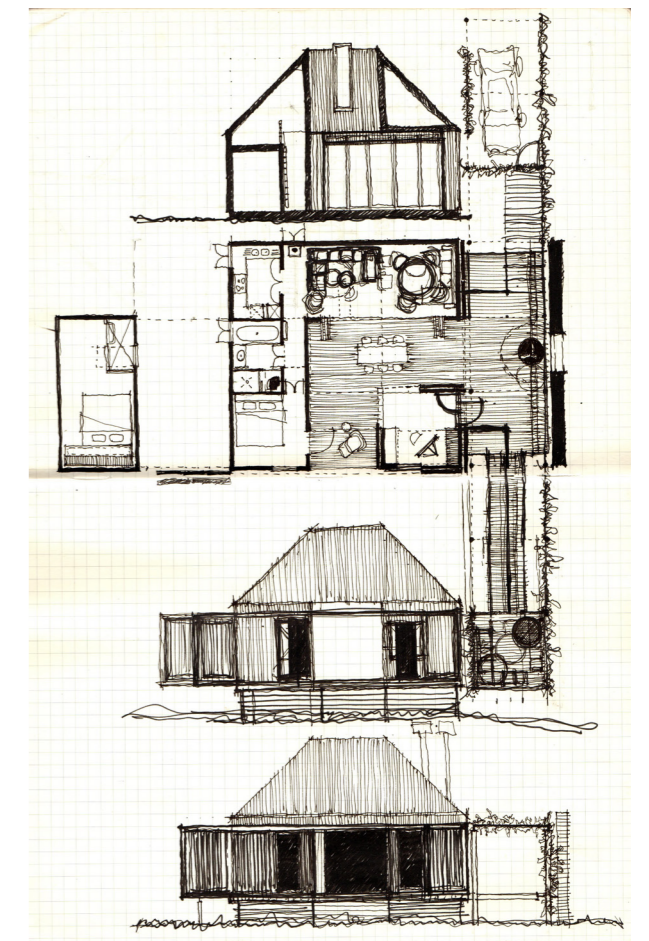
Due to the nature of a compact planning approach, the inter-relationship between plan and section was carefully considered for every plan variation. Although most of the designs are limited to a single ground floor, the roof volume was valuable space and could be cleverly utilised for additional functions.

This resulted in varied ceiling heights for the interior spaces and additional surfaces for clerestory windows. It became an especially useful way to delineate hierarchy, not only in terms of plan allocation, but also regarding spatial extrapolation. Corresponding with the idea of letting in light, the sections also explore manipulating the roof plain to that extent, and provide for unique characterisation of the roof element (Illus. 10). The plans and sections are equal partners in the process of making space, and neither is more important than the other.

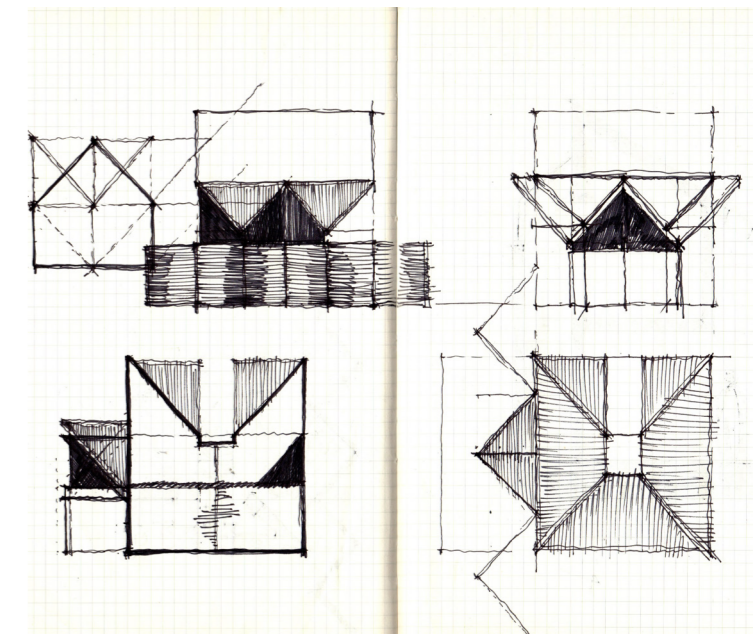
### 1.2.6 Roof and silhouette

The roof is the crowning glory of each design. In some of the designs it disappears completely to emphasise the visual impact of the design, while in others it dominates the composition. For this reason, it is important that the roof design aligns with the minimalist ethos of the plans, while allowing manipulation where necessary. This consequently imposes stronger characteristics on the massing as well as on the section and plan arrangement, as well as on spatial configuration.

In Illustration 11 this interplay is investigated through roof plan and section. While the roof massing on elevation appears geometric, the diagonal roof line in section falls towards the centre of the plan, while it flips up towards north to create the maximum exposure to light (refer to Design 6 – Zigzag house in Chapter 2). The diagonal on plan is further extrapolated on the western façade, where a lower roof over a juxtaposed corner on plan becomes a triangular composition that sits on a zigzag wall element that forms the western boundary line of the site.



Illus. 10 The roof space is utilised as an additional bedroom and storage space, while the volume is added to the space where additional functions are not required.

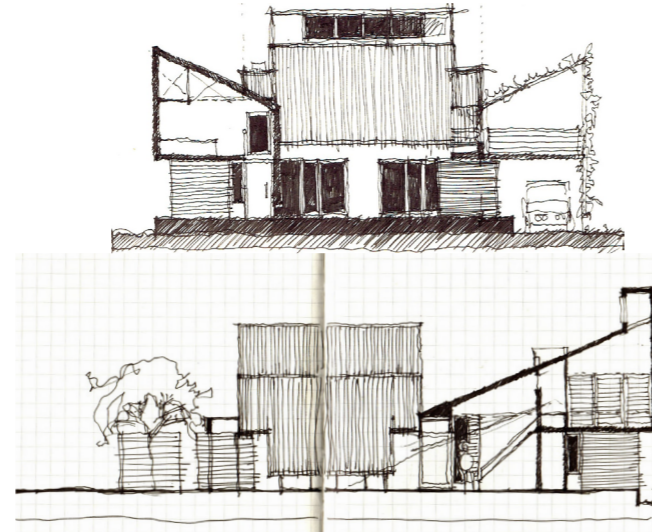


Illus. 11 Compositional diagrams showing the investigation of roof plan and section

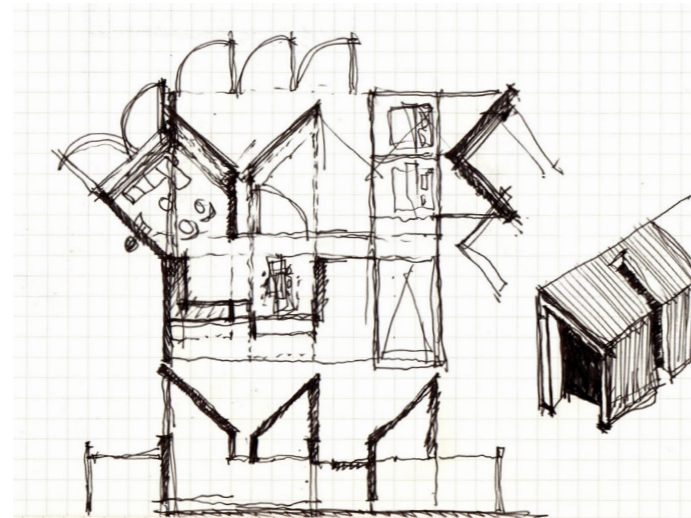
In Illustration 12, four separate roof elements are positioned perpendicular to one another with roof lines opening diagonally out to release the central space captured by the arrangement on site (refer to Design 5 – cabins surrounding an open yard in Chapter 2). Each of the roofs acts as a unifying element that completes the intentions on plan and section and is specific to each composition (Illuss. 13 & 14).

### 1.2.7 Window and door openings in relation to enclosures

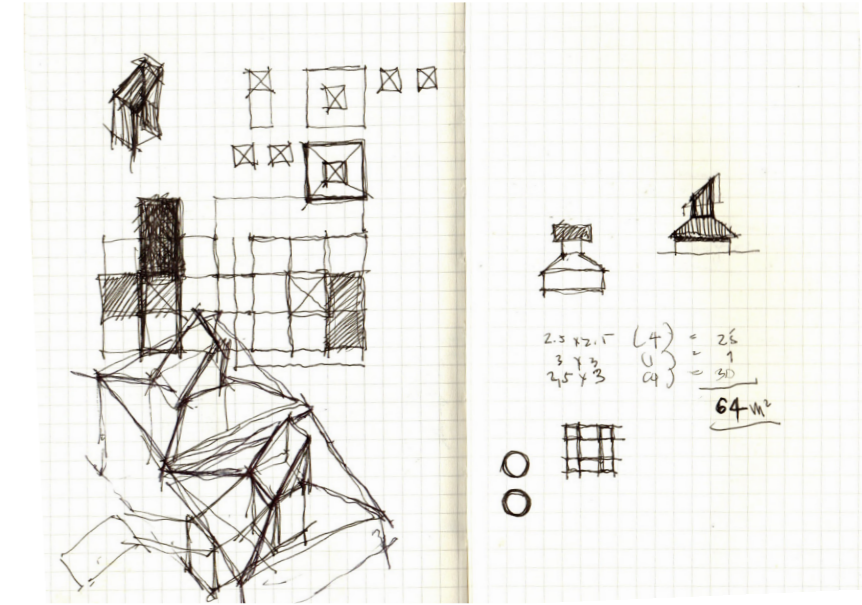
Attention to the detailing of openings is paramount to the intention of locking up and leaving the structure unattended for long periods of time. In this regard the openings are limited in number and size. In most of the designs a double door system is implemented, where the external door acts as a second skin, protecting the glazed doors on the inner leaf of the wall opening. These doors either become sliding panels on the façades, which need to be supported by external frames projecting past the elevations, or larger boisterous door leaved on wheels that create large openings. Masonry brise soleil skins (Illus.15) are implemented in the smaller designs to protect window openings and exterior spaces from external visibility.



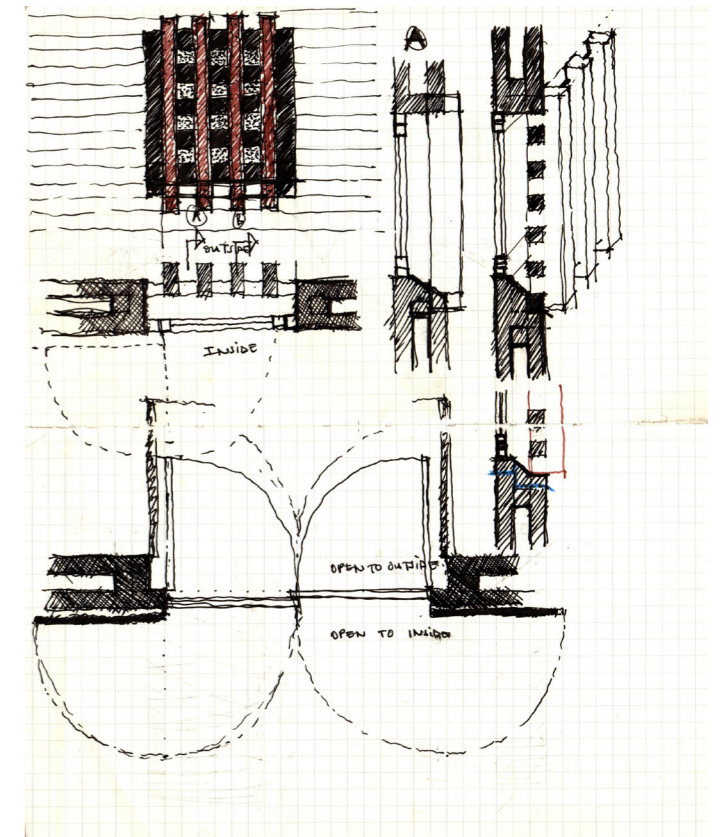
*Illus. 12 Early section diagrams showing the roof incline towards the internal open space around which four separate pavilions are grouped.*



*Illus. 13 Discovering the roof*

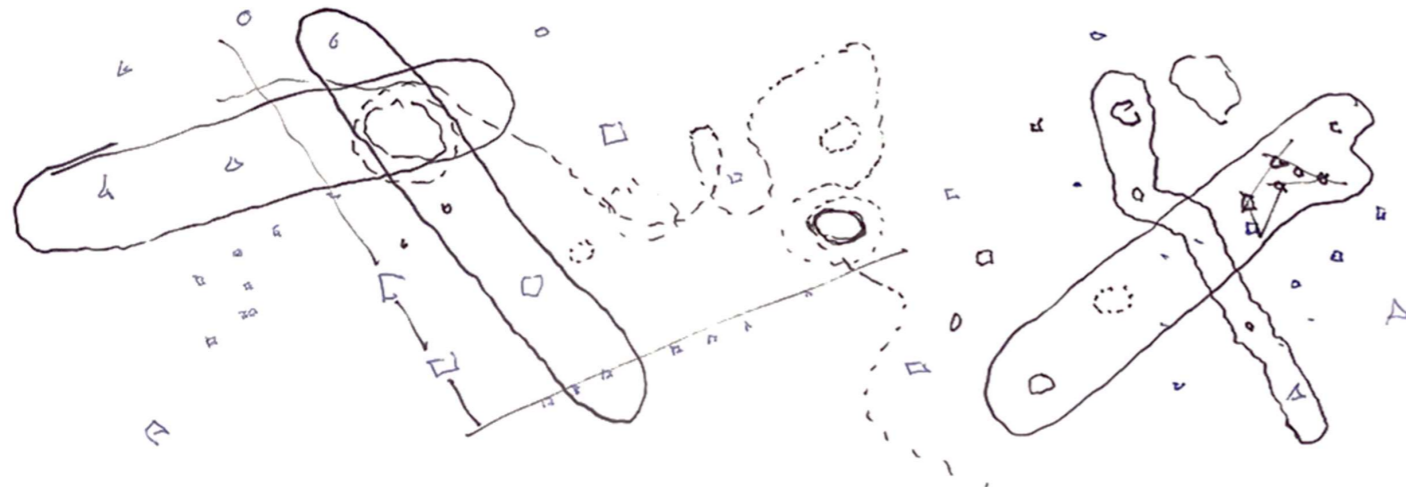


*Illus. 14 Early roof concept for HOUSE 4.*



*Illus. 15 Masonry brise soleil detailing and double door system detailing*

### 1.3 IDENTIFYING EIGHT RELEVANT DESIGNS



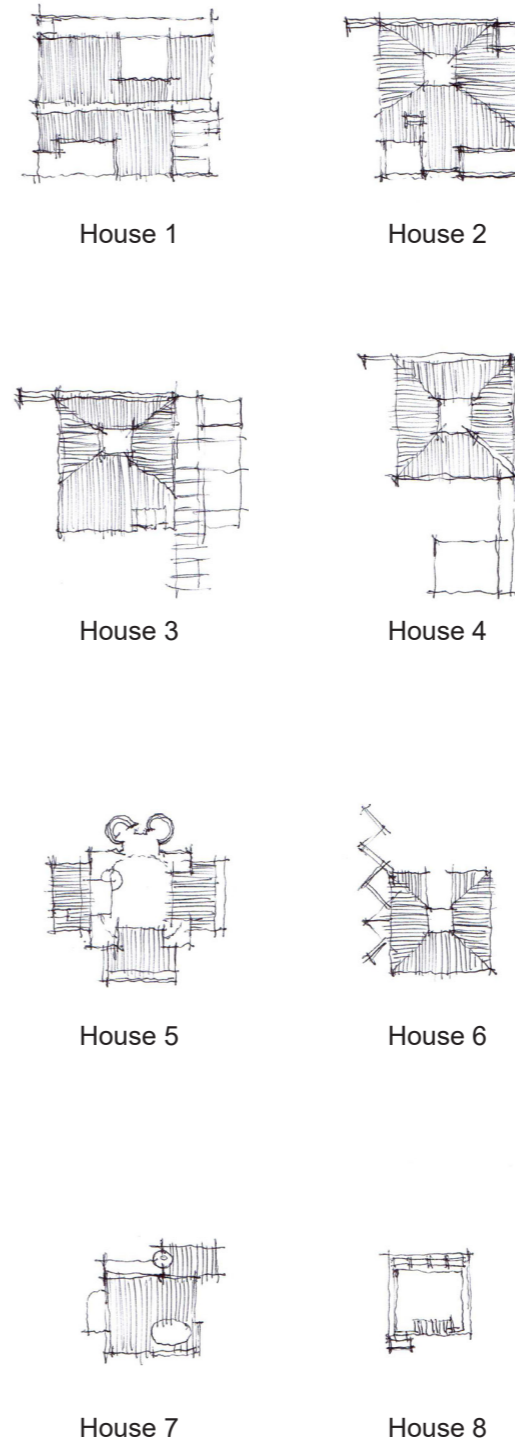
Illus. 16 The process of grouping designs

The process of identifying recurring design themes as discussed in 1.2 instigated an enquiry which can be best visualised in Illustration 16. This is a method of connecting the dots, so to speak, and entails following various diagrammatic ideas to the full fruition of a design. Some of the ideas sparked new investigations, and veered away from the original design ideas. Others became more focused and went through a series of transformations before their conclusion. Some ideas became irrelevant and were discarded.

Having said that, it is clear from all the different design investigations that there is a single original conceptual idea with many divergent solutions. This is the simple idea of a compact hide-away that focuses inwards, while its connection with the surroundings and town is carefully negotiated through selective openings and layered through a series of inside-outside spaces. The investigation of this concept is prioritised through selected design themes, and becomes the driver which piques the interest to venture off into different objectives as the process evolves and extrapolates. Illustration 16 tries to capture this process of identifying strands and mutations which are generated, while simultaneously trying to follow the trail of a singular idea - which is in the process of concluding.

It was therefore vital to follow through on each strand which was developed and transformed and ultimately refined into a design conclusion, and to collect the various concluded designs in this way.

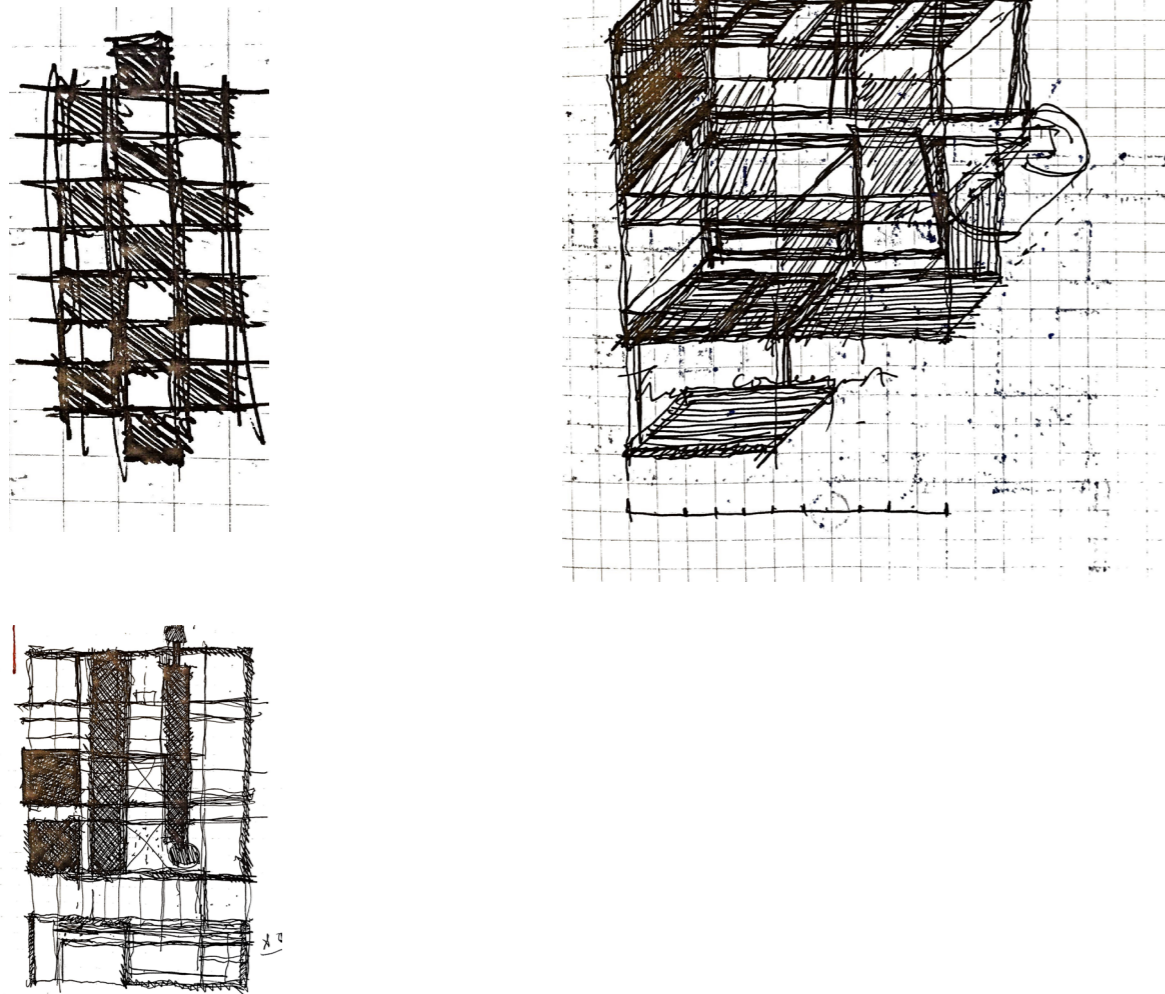
The above formula allowed me to identify eight designs (Illus. 17). The second and third designs are variations on plan of the first, but were included as a result of the roof explorations. Seeing that none of the designs exist as fully completed sketch plans, the illustrations that I have selected from the sketchbooks aim to show what I believe each design aspires to be.



Illus. 17 A drawing showing the roof plan of each of the 8 designs

### 1.3.1 HOUSE 1: Courtyard house

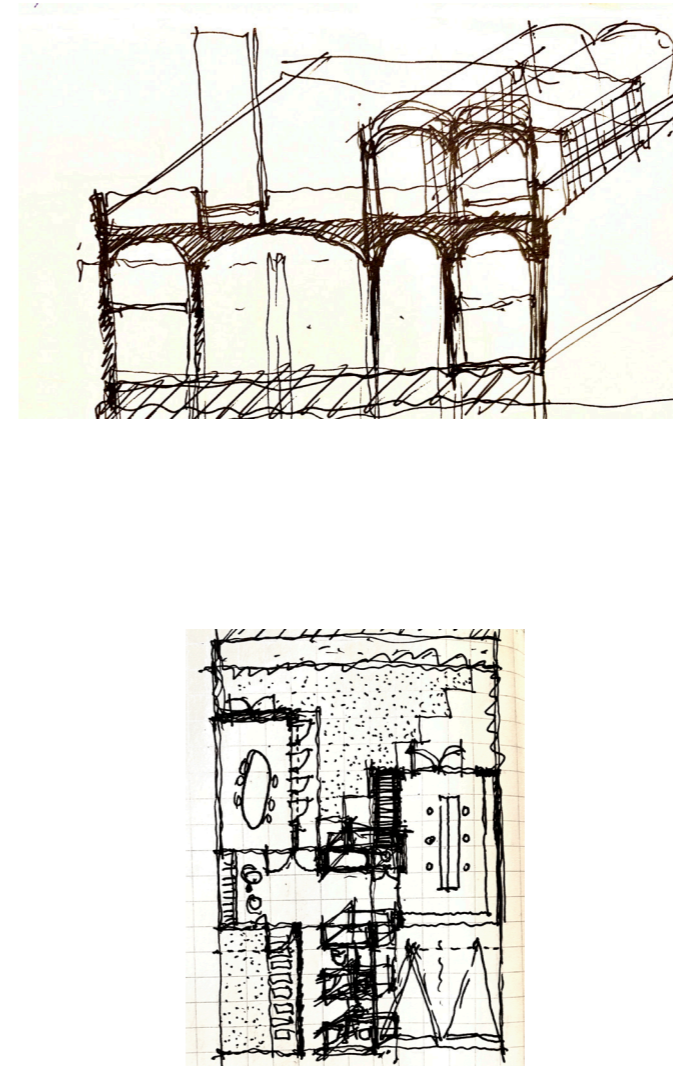
This design (Illus. 18) underlies all the solutions, and forms the basic conceptual idea on plan. Designed as an interplay of inside–outside spaces, the entire layout is surrounded by a walled perimeter which opens towards north to reveal views of the town and mountains in the background. It also sets the stage for enquiry into the relevance of all required commodities, and from this point a substantial reduction of plan is noted.



*Illus. 18 Sketches and diagrams of the courtyard house showing the interplay of inside-outside spaces of HOUSE 1*

### 1.3.2 HOUSE 2: Courtyard house with vaulted unified roof

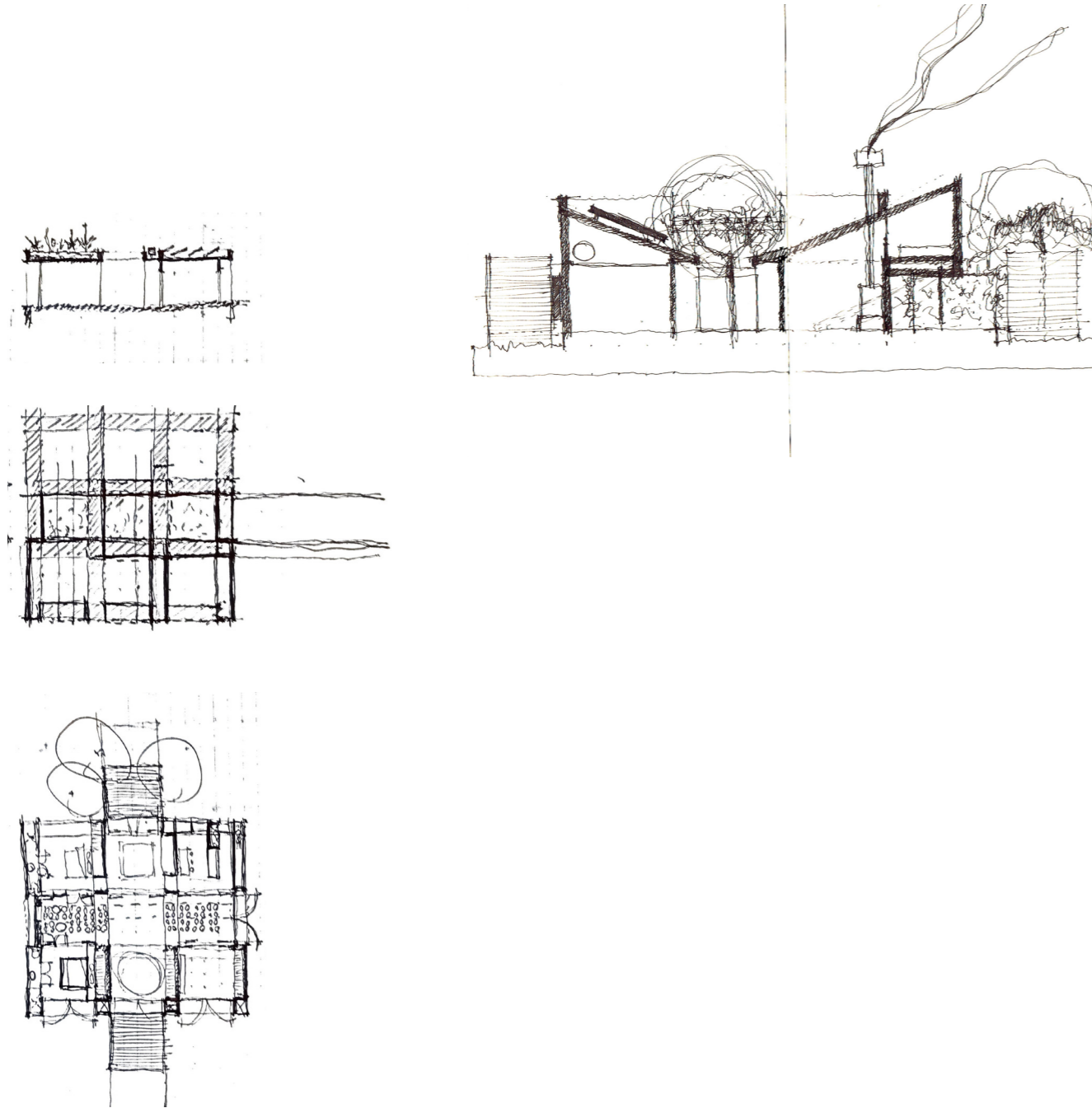
This design aims to reduce the number of utilities, and experiments with a vaulted internal roof structure with accessible rooftop (Illus. 19).



*Illus. 19 Sketches and diagrams of shows the smaller footprint with vaulted roof system of HOUSE 2*

### 1.3.3 HOUSE 3: Courtyard house with inclined unified roof

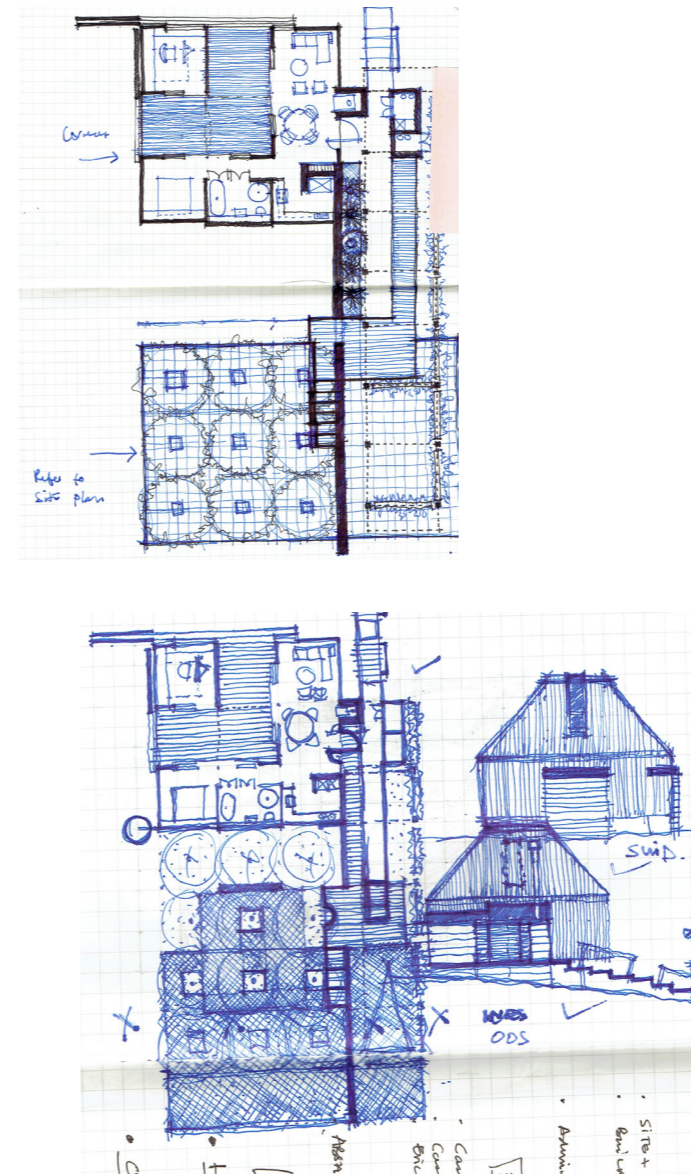
House 3 (Illus. 20) involves a further reduction in footprint towards a square shape by re-arranging the service spaces on plan with an inclining lean-to roof system. This is also the beginning of a nine-square grid plan



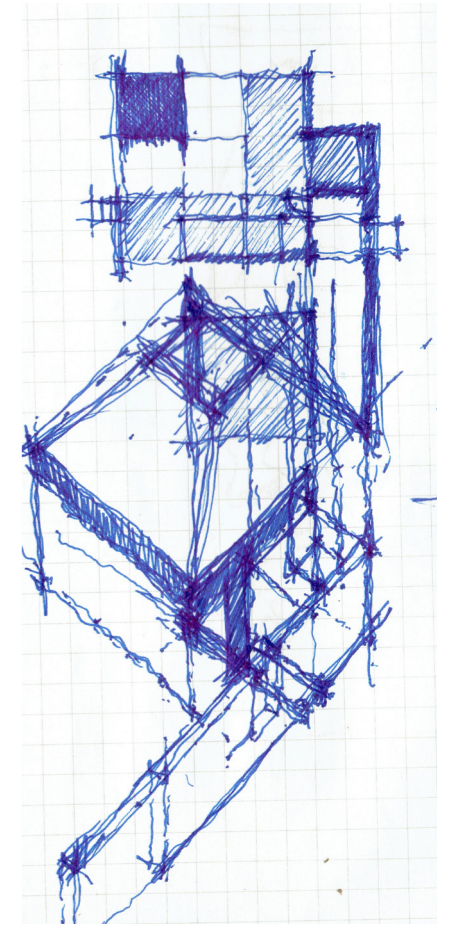
Illus. 20 Sketches and diagrams of HOUSE 3

### 1.3.4 HOUSE 4: House with the hole in the roof

In House 4 the footprint of the courtyard typology – as introduced in the design of House 1 - becomes more compact and squared in nature (Illus. 21). The roof system ultimately unifies the plan with a steep pitch and opens in the centre. This corresponds with the plan layout on a nine-squared grid, which combines the inside and outside spaces and a separated enclosed square, directing vistas onto the main views to north and west. Movable wall panels on both the northern and western façades give the opportunity to close the space off from the outside, while retaining the feeling of being outside due to the hole in the roof.

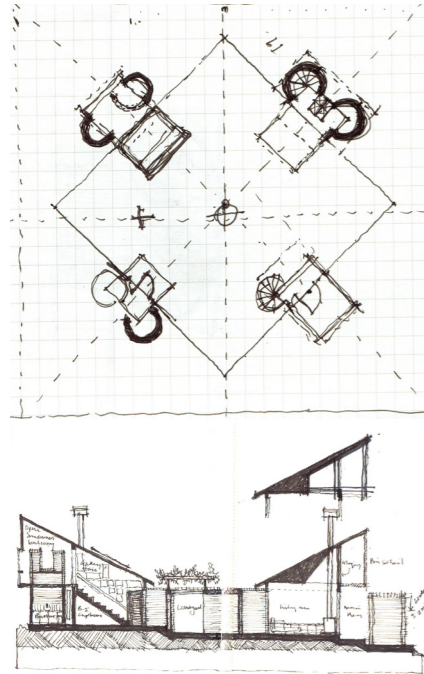


Illus. 21 Sketches and diagrams of nine-square block and the hole in the roof of HOUSE 4

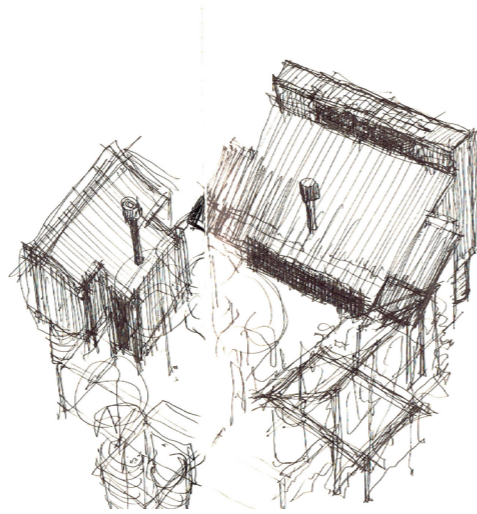


### 1.3.5 HOUSE 5: Pavilions around the open yard

The use of a square geometry is continued in this design, but here it manifests as a large courtyard which acts as a void containing the four separate solids perched on the four sides of the square (Illus. 22). The accommodation is separated into four main pavilions: arrival, fireplace and cooking, guests, and a pavilion for private use. With this, the original design idea of a geometric courtyard grid is re-imagined as a centralised courtyard in a square shape, with separated blocks ordered on its perimeter. The separated pavilions are positioned halfway in and halfway out, and this continues the idea of being in contact with the surrounding context while protecting the privacy of the user. The idea of a unified roof is replaced by a roofline consisting of separated roofs. To minimise the footprint and to strengthen privacy, the planning provides for elevating certain functions to an upper level in three of the pavilions. Furthermore, the pavilions are similar in design but differ in the level of enclosure, based on the different functions hosted in each.



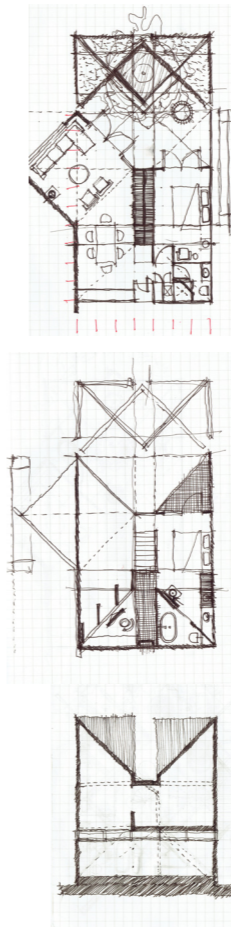
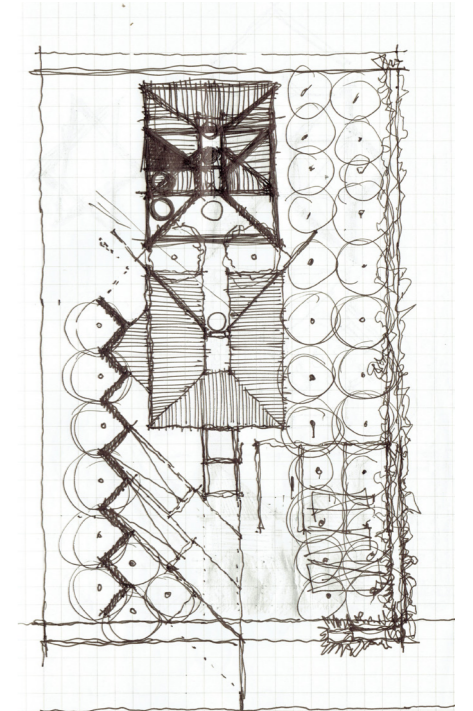
*Illus. 22 Sketches and diagrams of HOUSE 5*



### 1.3.6 HOUSE 6: Zigzag house

The notion of going up to a first-floor level is further explored in this design, which represents the forerunner of the juxtapositioning of spaces. This can be noted in the living area on the ground floor that extends outward on the western façade to create a triangular shape on the façade, which becomes a repetitive sequence to create a zigzag westerly boundary wall (Illus. 23).

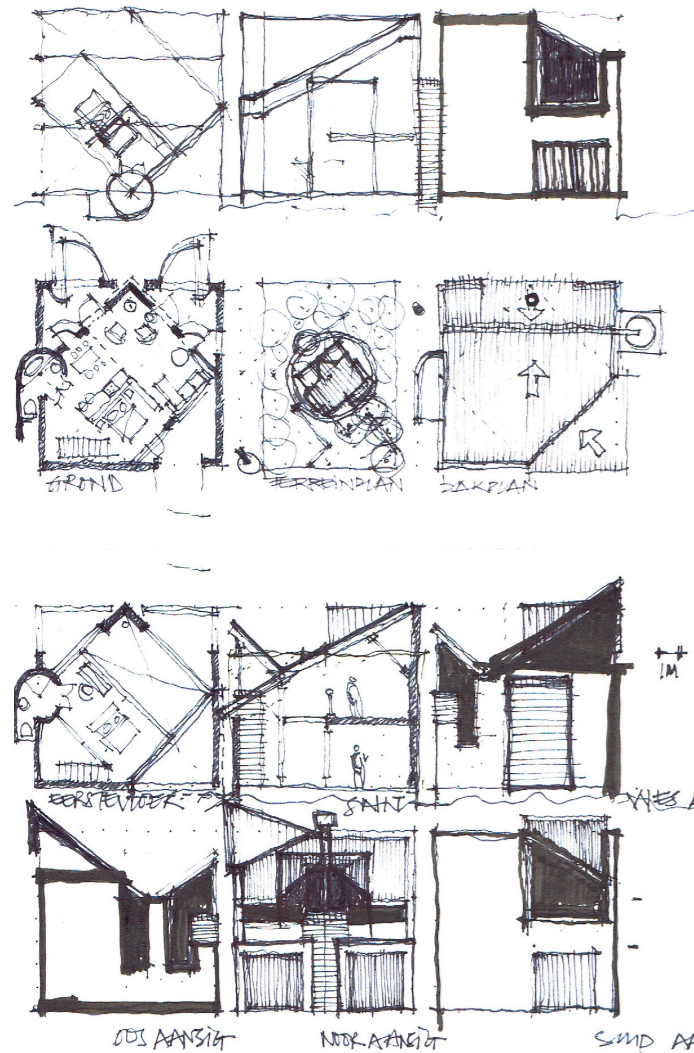
The diagonal roof line of the house is cleverly hidden in elevation by falling inward, only to flip up at a 45-degree angle to open up on the northern façade. The diagonal ceiling on the interior creates high volumes, which is counteracted by a pitched ceiling over the bedroom, as will be shown in Exploration #2. The footprint is compacted into a squared shape and the idea of the nine-squared plan is replaced by a symmetrical layout in both horizontal and vertical planning on section.



*Illus. 23 Sketches and diagrams of HOUSE 6*

### 1.3.7 HOUSE 7: Juxtaposed house

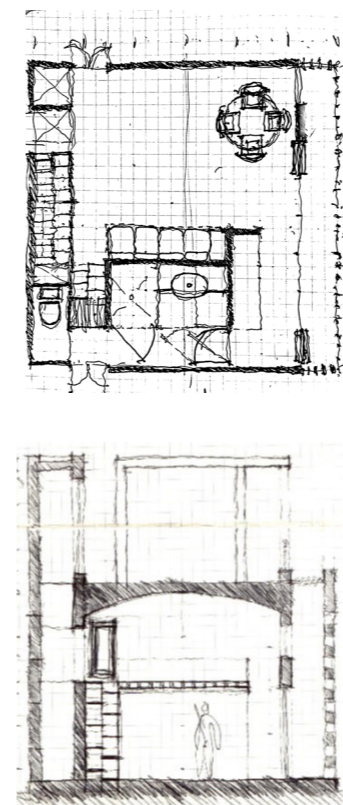
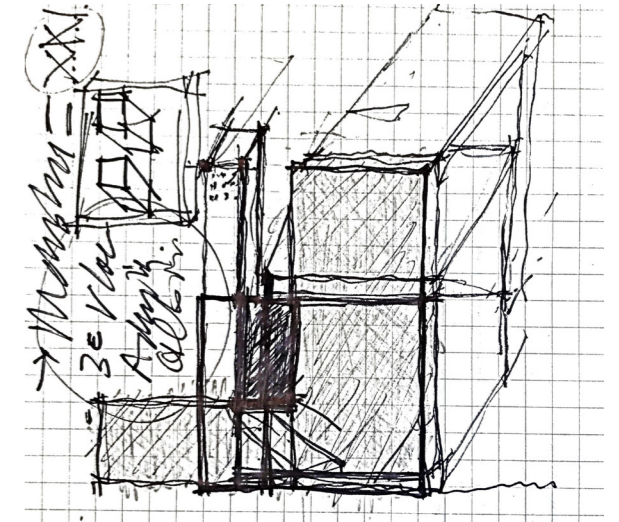
Juxtaposing the enclosed functions as a solid entity, within a courtyard space as a void, is the premise of this design solution (Illus. 24). A double volume space allows for a main bedroom on the first-floor level. The organisation on plan is concerned with making connections with the resultant triangular left-over spaces created by the juxtapositioning of the two square shapes. The roof is simplified as a singular diagonal that flips up over the external north-facing spaces.



Illus. 24 Sketches and diagrams of HOUSE 7

### 1.3.8 HOUSE 8: Perforated box house

House 8, as shown in Illustration 25, is the smallest of all the designs with a 36 m<sup>2</sup> footprint. It focuses on providing all the required utilities into one pavilion-type building, and concludes the process that was introduced by design number 5. The design focuses on creating a box-within-a-box, with all services packed into a service box, so to speak, with seating, kitchen, and bathroom below a bedroom space. This is contained within a large double volume vaulted space, which provides roof access. The roof replaces the former square courtyard approach, which was present in all the previous designs. While views across the town and far into the surrounding landscape is possible from the roof, external views are obscured from the internal spaces via a double volume intermediate space, which is open to the top but veiled by a masonry brise soleil wall.



Illus. 25 Sketches and diagrams of the minimalist box design of HOUSE 8

## 1.4 DRAWING AS A UTILITY TOWARDS PLEASURE

In concluding the first exploration of taking stock and quantifying the designs, I began to get a sense that there is more at play here, and more to be understood. It is evident that there was some value in revisiting the sketchbooks to understand the significance of their contents, and how this should be appreciated in terms of the design act.

The number of different design ventures, and their vigour, points toward the fact that a great deal of pleasure was gained from producing them. The inquisitive nature by which various design strands were interrogated to the extreme, speaks of an instinctive compulsion to release an endless dance of cause and effect. Improvisation becomes a tool through which different avenues and options are explored. Each new design move is in free flow and driven by a previous intention, which is then differently choreographed towards a new effect. The design improvisations are all within the original scope, but explore different results.

I refer to the ideas regarding pleasure as put forward by the Austrian neurologist and psychoanalyst, Sigmund Freud (1856-1939), as a vehicle to try and explain the phenomenon of repetition. This can be clearly observed in the number of designs which were produced by means of improvisation. Reimagining solutions to the same design problem by an ever-changing hierarchy of priorities, becomes the main methodology through repetitive improvisation. Each resultant design outcome sparks new ventures, which are explored to a point where all possibilities have been exhausted. But then the rules of the game are changed, and there is a venture into a different exploration.

In Freudian psychology, the pleasure principle is the instinctive seeking of pleasure and avoidance of pain to fulfil needs as a way of self-preservation (Freud, 1966:V12, 218). Freud contrasts the pleasure principle with the concept of the reality principle, which describes the capacity to defer gratification of a desire when circumstantial reality disallows its immediate gratification (1966:V12, 219). The gridded pages of the sketchbooks provide an ordering mechanism through which these almost primitive desires can be harnessed and

controlled. The metaphorical gridded net on the pages of the sketchbooks, delves into the deep oceans of the mind's pleasure vortex and transfers the ungovernable aspirations into an ordered format. It allows this to be expressed in the archetypal language of architectural wall, floor, and roof relationships by means of two-dimensional plans, sections, and elevations. When this is achieved, it allows for further exploration down various possible roads on a map which leads to similar solutions which differ in appearance.

In his essay *Beyond the Pleasure Principle* (1924), Freud identifies a conscious/unconscious ego, which guards predispositions of play as an instinctive compulsion to repeat. This series of repetitions creates an activity which is almost like a game. By actively playing it, experiences are created, and this leads to its mastery. The ideal is therefore mastery through play, where compulsive repetition becomes a way of dealing with a design problem. Each attempt brings another level of mastery. During the act of design, I can relate the *Pleasure Principle* to the free flow of improvised design explorations. This is an irrational state during which possibilities are vast and unlimited, and directed by gut feelings. There are no rules, no order, and no constraints. Even though these subconscious desires are limitless, there must come a time when they are put to use and channelled into reality. The Freudian *Reality Principle* speaks to the delayed gratification of desires. During my design process, the rational gridded pages of the sketchbooks provide an ordered reality into which these desires can be released. Since the sketchbooks represent the world of architecture, design tools such as order, geometry, symmetry, and hierarchy – to but name a few - come into play. These are used to harness desires and to bring them into reality through scaled plans, sections and elevations on the surface of the gridded page. Serialising this process alludes to the Freudian ideas of play, where conscious constructs of mastery are extrapolated and strengthened through each design process.

Now, the act of design can hardly be described as traumatic. Or can it? The pleasures of mastering the design question and finding a solution is, in my opinion, unparalleled in any other profession. And so, the various design iterations in the sketchbooks can

be understood as a series of *ad lib* games. The action of play is governed by different sets of rules which are in a permanent state of, which constantly changes the outcome. The skill to master the outcome by knowing which rule sets to impose, becomes the real game. The various design solutions then become evidence of mastery through pleasure. Mastery, in this regard, refers to control, and is transferred as a game of catch-and-release. Each repetition strengthens the sought-after mastery, and by instinctively repeating the game, the ability to master it is strengthened.

## EXPLORATION #02: ABOVE THE SURFACE OF THE PAGE

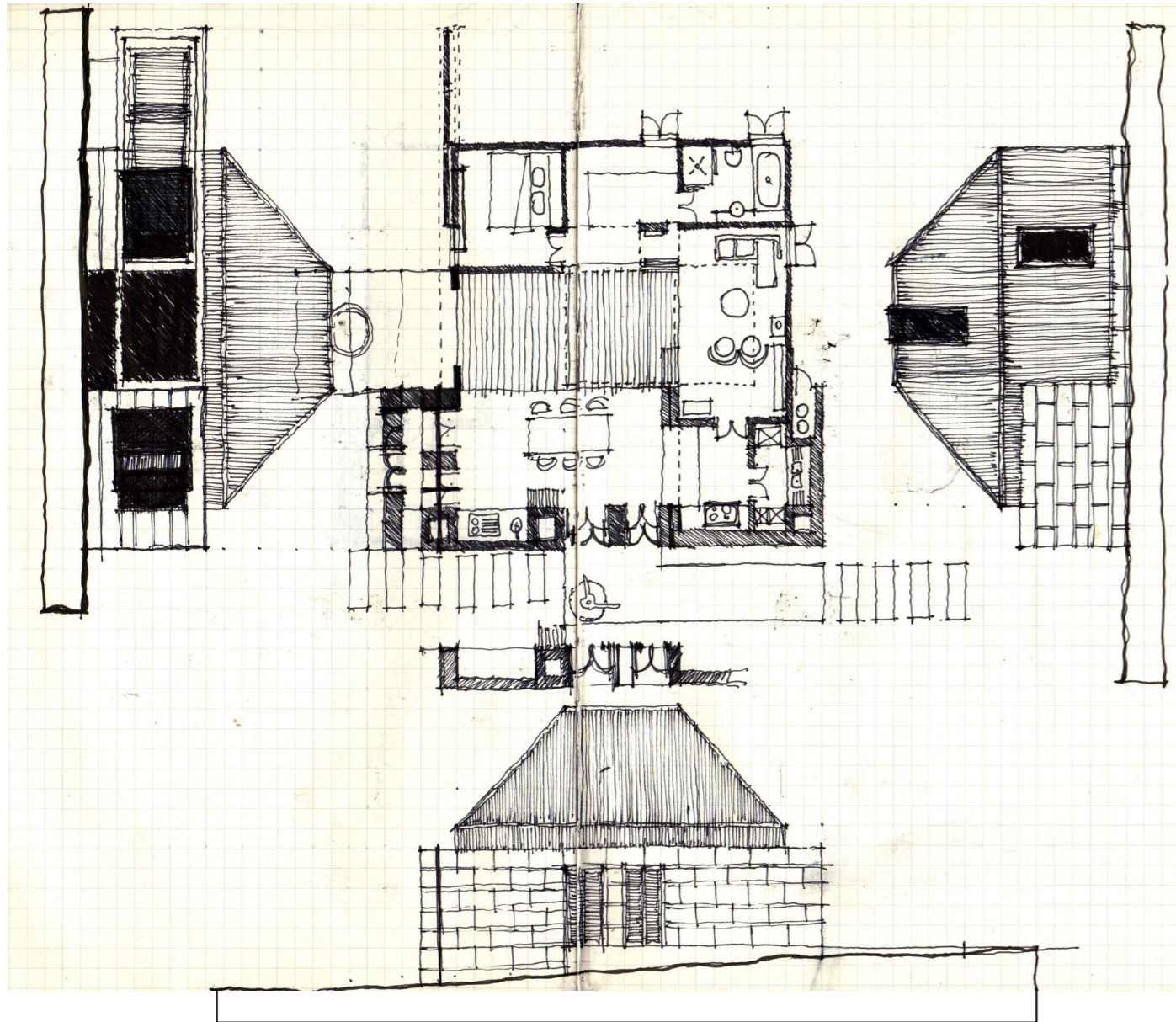
Rationalising the drawings in a digital space-time world – Scale and Proportion

### 2.1 THE ILLUSIONS OF DRAWINGS

Understanding the underlying pleasure of sketching and instinctively improvising new ideas while producing a multitude of drawings, made me realise that a final answer, or solution, was not the endgame of the sketchbooks. Under normal circumstances a design investigation needs to result in a physical building (in other words 'reality') and the sketch (Illus. 26) would

only be a rudimentary investigative tool towards all the practicalities awaiting the design idea. After all, these sketches are not buildings. Or are they?

In a similar vein to the subject matter in the Belgian Surrealist artist René Magritte's (1898–1967) painting "The treachery of images" (Illus. 27), the sketchbook drawings are merely pictures of several small weekend houses. The inevitableness of a 'reality' which is



Illus. 26 This is not HOUSE 4, or is it?



Illus. 27 René Magritte (1898–1967) *The Treachery of Images* (French: "La Trahison des images") (1926). Oil on canvas (60cm x 81cm); County Museum of Art, Los Angeles. (in FOUCAULT, 1983: Plate 2)

awaiting the realisation of each of these designs can in fact not be fully contemplated by staying within the confines of sketching. And so, each of the design ideas are limited to the extent by which they can be explored by remaining hand-drawn and scaled by a gridded page.

Free-hand sketches allow for a flow of ideas which can be penned down and explored across scales. There is an immediateness in drawing the plan-section relationship by hand on the same page, while being able to rotate and approach the sketchbook page from any desired angle.

This enables the designer to sustain the flow of ideas, which is critical in the process of harnessing the different design strands which are sparked by a single idea. Even though this process allows for the rapid transmission of ideas onto paper, it is limiting to the level of a detailed *reality* which can be achieved. At some point, the design should be drafted in another medium, which can bring the ideas closer to actual existence. This process requires a mind shift from the pleasures of playing with ideas, to the realities of construction.

At this point a hierarchy of reality is implicated above the sketch, a parallel dimension where the building exists in its projected architectural form. From here it casts a shadow, which is in turn captured by the sketch on the surface of the page. However, for this to exist, we must understand the visual dependence between the idea and the visionary ability of the mind's eye. Magritte's

painting of a pipe which resembles a tangible object, depends on the semantics of language to seduce the mind's eye to recognise the visual treachery through memory (Foucault, 1983:16). It is not a pipe, but the spectator's memory is that of a physical object, and so indeed the pipe does exist somewhere in an external reality - where it was seen before.

In the same way, the design idea exists above the page in its full architectural form and is accessible through the visionary mind's eye. It is however not a retrospective memory, as with Magritte's pipe, but a progressive futuristic vision, which is simultaneously captured via its shadow through a sketch on the page. What I therefore intend to do in Exploration #02 is to harness the paralleled existence of the designs, and draw them nearer into my current reality by transferring them to a digital Cartesian reality.

### 2.2 THE PARALLEL WORLDS ABOVE THE SURFACE OF THE PAGE

It is a critical part of the design process to maintain control of the coinciding implications of each line which is drawn on plan, and the subsequent effects on section and eventually on the final form and shape of the building. Even though the drawing of a plan deals with the organisation of space on the horizontal plain, it also configures, as a result, the proportional, spatial, and three-dimensional aspects on the vertical plain of the design. This begins to speak to the peculiar ability of drawing one thing on plan, but thinking or seeing into another dimension in section through the mind's eye, while anticipating the consequences of each design decision. Each decision in the world of drawing inevitably becomes a series of projections into a parallel world. The designer can "see" into the parallel world through the mind's eye to envisage the consequential results of the decisions which are made in the present moment. It can be said that the sketch drawings therefore exist above the sketchbook page, and can be transposed by the mind's eye into a parallel spatial dimension. This alternative world is reachable by understanding the implications of each design decision and the resultant outcome, while the sketch still only exists on the surface of the sketchbook page.

1

2

3

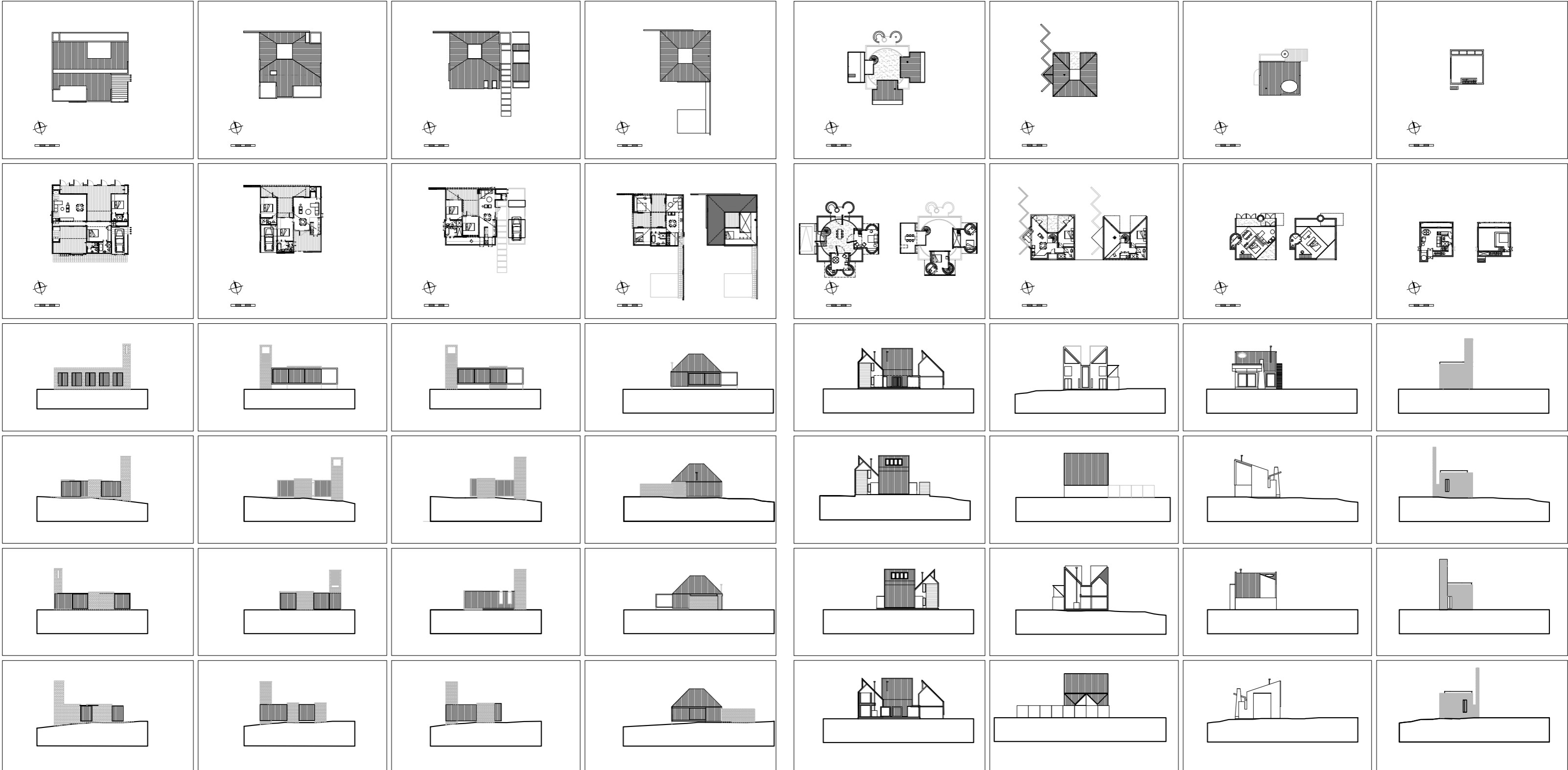
4

5

6

7

8



Illus. 28 Houses 1 - 4 (Refer to Appendix)

Illus. 29 Houses 5 - 8 (Refer to Appendix)

### 2.2.1 The cold realities of the 2D Cartesian grid

A step closer towards attaining the fully emerged architectural form, is to draft the designs on a computer. This will bring the designs closer to our current space-time reality and harness them as a projection above the page. Each of the sketches will have to face the technological realities of making architecture, and likewise that of materiality and construction methodology. The two-dimensional reality inside a Cartesian cyberspace only allows expression by means of numerical coordinates. This means that scaled hand drawings need to be re-interpreted to exact dimensions.

AutoCAD is my preferred drafting tool. The program is set up for line drawings on a 1:1 scale. Everything can be drawn as an original sketch, and you are not dependent on a library of block images from which to choose and then copy and paste onto the current drawing. In most architectural drafting software programs, 3D modelling allows automated functions to generate sections and elevations together with 3D perspective views. This is not how I draw. I draw as if it were a page on a drawing board and I use the Cartesian drawing conventions of 2D projections from 3D objects.

### 2.2.2 The play of back-and-forth towards realising the sketches on the Cartesian grid

Drawing up Houses 1 - 8 very much followed the same back-and-forth process that occurs on other designs in my practice. During this rational stage, the sketch designs are re-drawn in CAD, and a series of unresolved design aspects are very quickly revealed because of exact coordinated dimensioning. During the act of re-drawing the sketches in the Cartesian dimension of AutoCAD, the sketches are also measured against technical and constructional expectations. Issues such as choice of material and structural capability start to influence the original intended scales and, as a result, proportion.

To re-align the intended design outcomes and scales with the realities of construction technology, the process takes on a back-and-forth approach. The CAD drawings show incompatibilities between the intent of the hand-

drawn designs and construction technology, for which new solutions have to be found. Inevitably the process often reverts to drawing by hand over a print-out of the CAD drawing. The hand-drawn solution is re-entered onto the CAD drawing until the next problem occurs, for which the process is then repeated. This is an onerous process which generates an inevitable repeated back-and-forth, where CAD drawings are regularly printed out, reworked by hand, and then inserted back into the computer. It is, however, an effective method to ensure that the CAD outcomes achieve what was intended by the hand-drawn designs.

### 2.2.3 Scale and proportion

Very early in the process of making CAD drawings of the eight houses, the ratio between the gross plan area – calculated over the width of the walls - and the usable interior space, had to be negotiated. The total wall area in relation to the usable floor area became critical due to the small scale of the project, and the proportions of the individual rooms and internal spaces had to be critically assessed. Houses 1, 2 and 3 investigated the possibility of single skin 190mm width concrete blocks, while the design of House 4 investigated a combination of block and light steel frame construction. This combination of load bearing and light steel frame construction as the two main materials was applied further to Houses 5, 6 and 7. House 8 mainly relied on load bearing masonry construction.

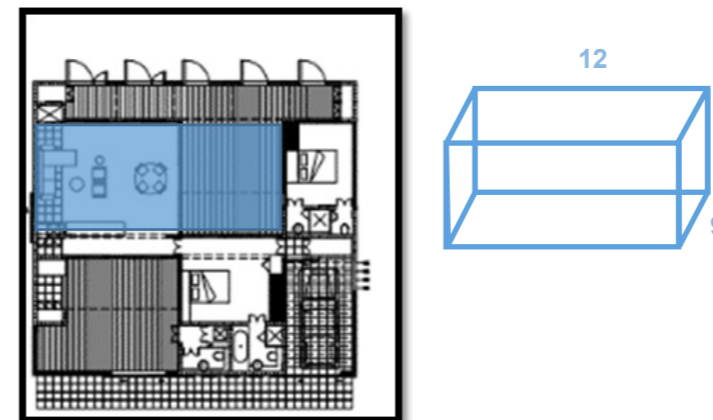
On the vertical plain, the section of each design was originally intended to be simple and easy to construct. Window openings were limited in size as a security precaution, but also to limit the span across the width of the windows. The same principle applied to door openings. In the case of House 4 where entire wall panels were designed to slide open, the material was restricted to light steel frames clad in corrugated iron sheeting. The sketches for House 2 investigated a homogenous structural system of vaulted masonry, which was a novel idea, but ideally realised in a single cell space with lean-to roofs, which made more sense with regards to plan arrangement. The material palette was kept robust and simple throughout all eight designs and limited to face brick, concrete blocks, or corrugated iron sheeted wall claddings. This was in line with the

concerns for maintenance and upkeep, as the designs were envisioned as a lock-up-and-go typology.

A spatial relationship was developed through designs 1 – 4. In House 1, a Palladian 6-9-12 harmonic relationship (Wittkower, 1945:71) was attempted as a uniform arithmetic mean, specifically with reference to the relationship between the inside-outside spaces (Illus. 30). A resultant ceiling height of 3 meters became a common denominator which resulted in a mean of 2-3-4 for interior spaces. However, due to the relationship of length of a room equals double the width (2:4), which resulted in long narrow room typologies, it was soon discarded during the computer drafting process. The ceiling height of 3m was, however, kept as a constant and thus a grid layout of 3.5 x 3.5 x 9 was the resultant relationship which came to fruition in House 4.

In the final CAD drawings of designs 1 – 4 (Illus. 28), the relationship between the courtyard spaces and the overall composition on plan can be seen. Various organisational layouts contributed to a proportional compound grouping, which had to carry through on section and elevation, and resulted in a nine square block geometry in House 4.

The CAD drawings of Houses 5 – 8 (Illus. 29) show an overall change of the rule set, and focus on the single cellular space and its internal relations and proportions. Whereas House 5 is still keen on investigating the grouping of individual single cell spaces around an open courtyard space, the focus from House 6 onwards, is firmly on the individual block organisation.



Illus. 30 Palladian proportional means to resultant House 1 design

## 2.3 IMPROVISING GAMES TO HARNESS AND MASTER DESIGN POTENTIAL

Harnessing architectural formations from a parallel world to bring it closer into my current world with different realities, is achievable through the process of making CAD drawings. When displaying the drawings as shown in Illustrations 24 and 25, it becomes possible to identify four main designs, which are Houses 1, 4, 5 and 8, as shown in Illustration 31.

The ideas of House 1 are imprinted in all the designs. Introverted arrangements of interplaying inside-outside spaces are the main drivers, and become optimised plan arrangements which culminate with the design of House 4. The design investigation which was set into motion by House 1 concludes in House 4. House 5 sets the tone for a new design investigation, within the original introverted plan typology, but becomes an inversion of the courtyard. Here each function of the house is separated into a loose-standing single cellular pavilion, grouped around a central open space. The ideas of a singular space develops through the zigzag and juxtaposed plans of Houses 6 and 7, and ultimately culminates in House 8. House 8 is a single cellular box-within-a-box, with a strong vertical chimney axis and roof garden.

In their book, *Precedents in Architecture*, Roger Clark and Michael Pause create a vocabulary for architectural analysis in order to understand design. This methodology of diagrammatic summation to "... investigate the formal and spatial characteristics in such a way that the building parti can be understood" (Clark & Pause, 2005:3), provided a tool to uncover the various rules sets at play in each of the designs.

Clark and Pause identified their own so-called 'issues' with which to investigate and developed a drawing legend, according to which the diagrams are annotated. I used this as a starting point, and once again, led by my gut feeling, I began to draw simple CAD diagrams. Through this process I began to understand what the dominant underlying games at play were, and could then write about it afterwards. Houses 1, 4, 5 and 8 were set next to each other in a single line to enable

a comparison of the appearance of each diagrammed *issue* (Illus. 32). The first *issue* compared the silhouette of each of the houses, and a massing diagram illustrated the character of each.

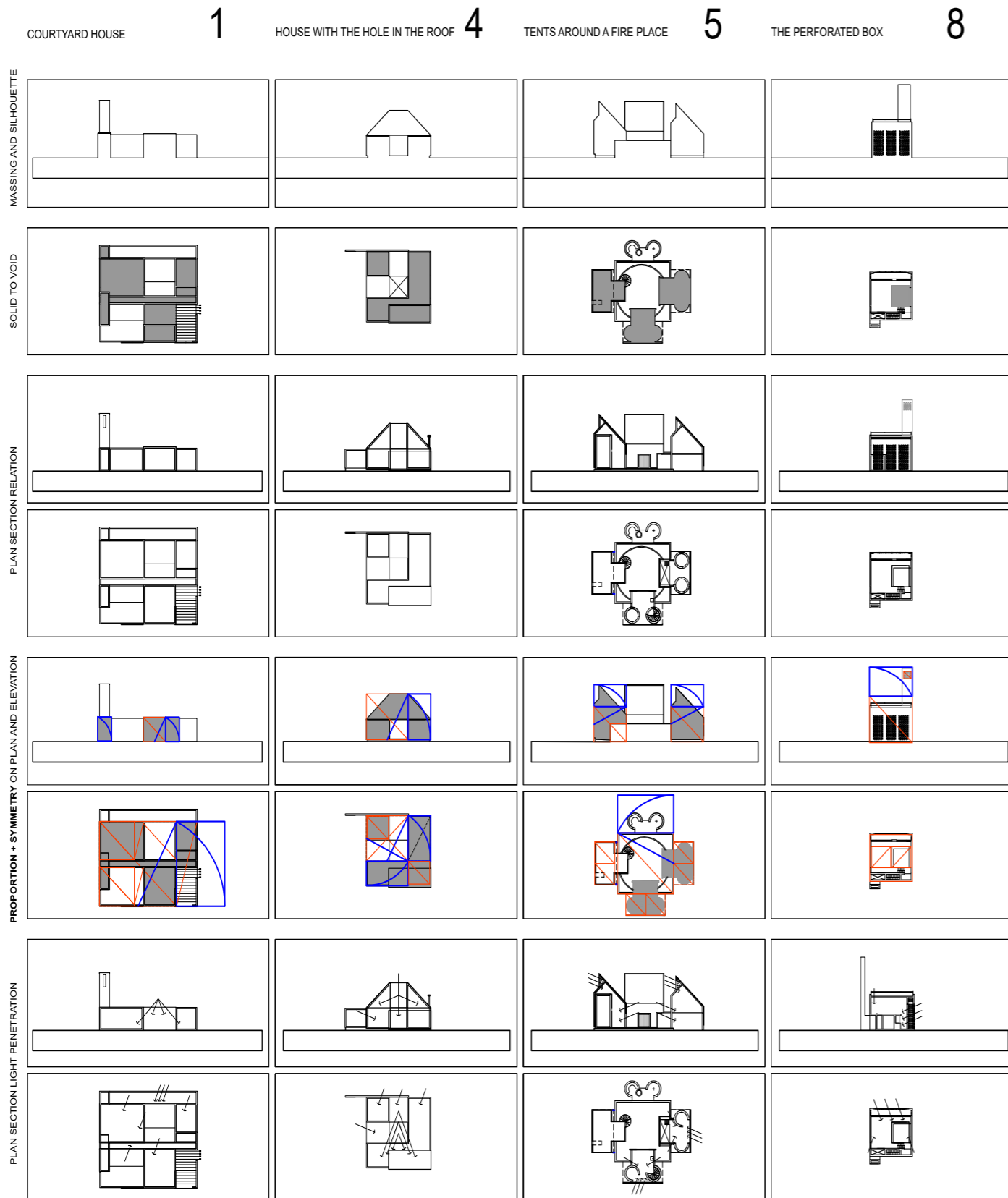
Illustrating the **solid to void** relationships on each of the plans was achieved by simply hatching the enclosed spaces with a solid dark grey colour.

**Plan and section relationships** indicated the interrelationship between horizontal and vertical plains by varying the width of line.

**Proportion** was indicated by superimposed blue and red lines over each plan and section of each of the houses, and finally **light** penetrations into interior spaces were shown in section diagrams with diagonal arrows.



Illus. 31 The four main designs



Illus. 32 A summarised table of all the games at play during the act of design

### 2.3.1 The game of solids and voids

The plan of House 1 sets the stage for all the improvisations to follow. The theme of the courtyard is clearly the underlying premise of this design. The idea of a world within a world (McHale, 1987:27) is articulated by a protective wall element surrounding the entire layout, and in this way creates a play between the inside-outside spaces. The introverted nature of the spaces corresponds with the ideals of a weekend retreat, and creates opportunities for inside spaces to be completely opened up without being exposed to the outside.

The solid and void patterns are investigated almost as a series of designs where different locations and relationships are considered. Houses 1 – 3 consider a car port as part of the composition. The car is considered as an external element in designs 4 and 5, and is thereafter totally discarded from the composition. It is also noticeable how the footprint becomes reduced in size, specifically in the designs of Houses 2 and 3, where room size and number of bedrooms become a big concern.

Through the analysis in Illustration 33, the process of rethinking the compositional relationship between internal and external spaces shows the various possibilities, but also shows the simplification of this idea until it results in the final design of House 8. In this design the interplay is concluded with a functional box inside a masonry shell with a vertical connection to the outside rooftop. It solidifies the experience and stacks a hierarchy of spaces from private to semi-public on the vertical axis.

### 2.3.2 The interplay between plan and section

Parallel to solid-void-compositions, the interplay between plan and section creates spatial expression and results in form-giving. The roof component as the final ingredient contributes to expressing the unique characteristics of each design. What is at play here, is understanding the direct implication between plan and section (Illus.34), but also expecting the unexpected when the realities of construction is acknowledged. The

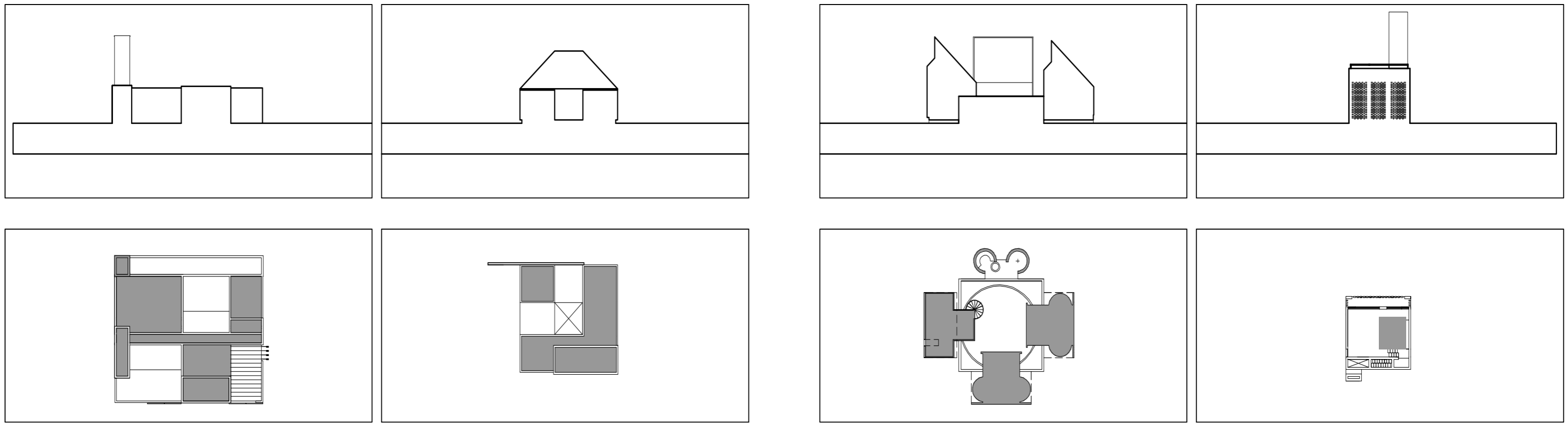
expression in section and the understanding of scale are vital towards mastering the game of relating plan organisation into section, and ideally into form. This requires skill and understanding of minimalist structural composition, where every small aspect of the physicality of the design plays a role towards transforming it into an architectural form. The importance of symmetry became evident in the compositions and in the proportioning of each design.

### 2.3.3 The pageantry of proportion

Mastering proportion is by no means achievable without the understanding of plan-to-section relationships through materiality and scale. In my opinion, the ultimate test of any design remains the proportional appeal. Due to the pavilion typology of the designs, as well as the small scale, it was important that the proportions of form be conducted under a watchful eye. Although the room proportions were discussed in paragraph 2.1, the proportional systems in houses 1, 4, 5 and 8 are shown in illustration 35. The proportional systems of each design were subconsciously influenced by the golden section. A mathematical relationship of 1.618 is found in both the plan and section compositions. Although this was not part of the initial design parameters, I suspect that the gridded pages of the sketchbook in some way propelled the design towards similar proportional appeal.

### 2.3.4 The marvel of light

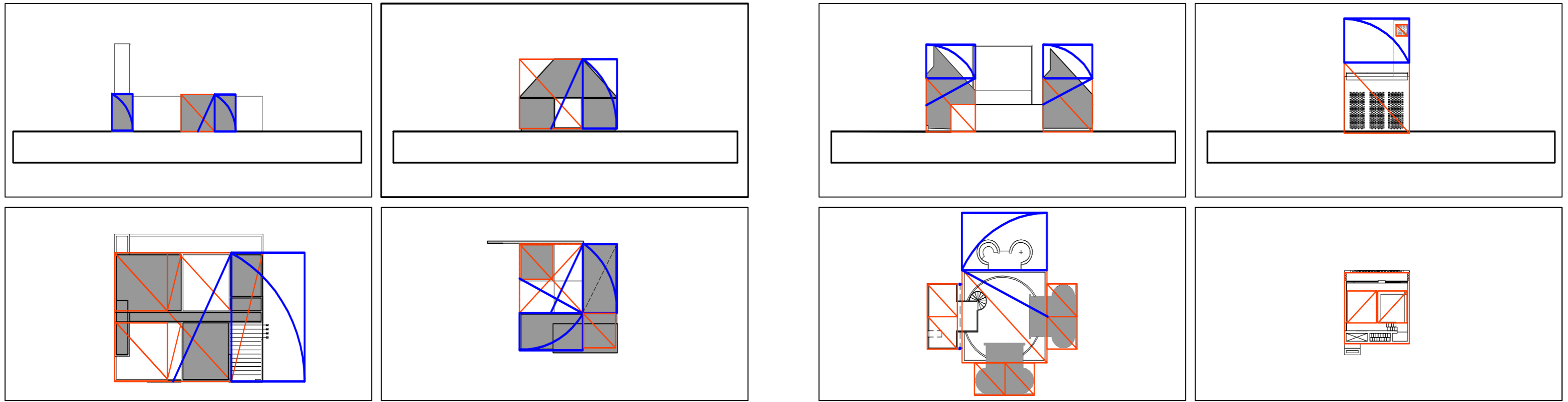
The final game at play, is one that is entwined with all the other improvisations. Like all the other games, it is layered together with the acts of solid-void, plan-section and proportion, yet it cannot be understood as a mere implication of the other games. This has to do with the fact that it relates to the spatial organisation, and specifically to the way in which light is manipulated to become part of the composition. The way in which light and space come together (Illus. 36) in the resultant spaces, and the unique quality of each, is at play here. Each composition, section and relationship between elements contribute to the formulation and expression of space, which is ultimately what leaves a lasting impact on the architectural experience.



*Illus. 33 An analysis of solid and void compositions of Houses 1, 4, 5 and 8*

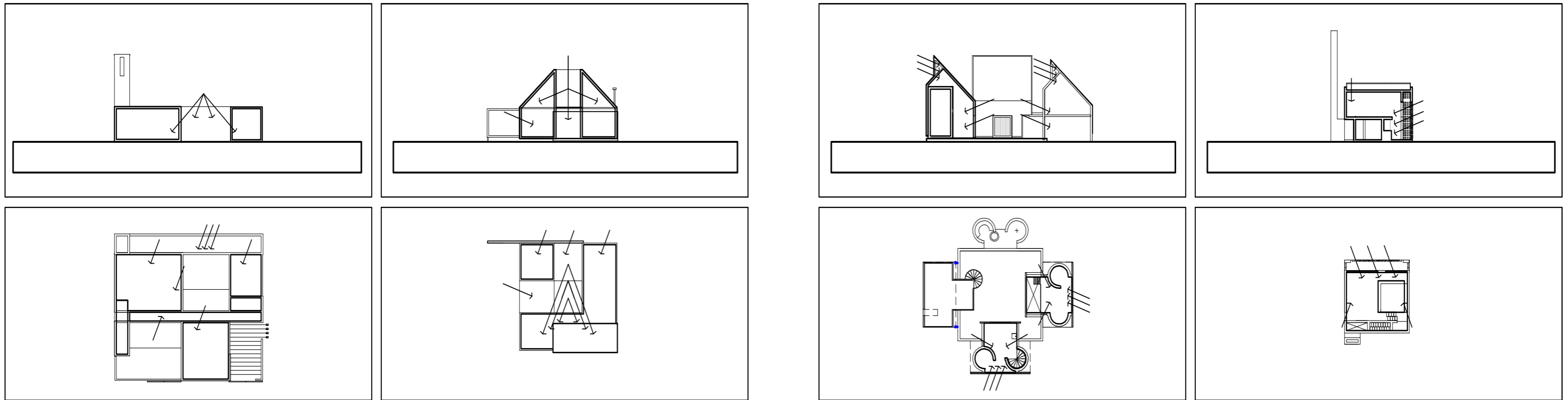
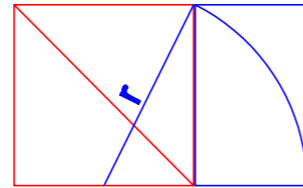


*Illus. 34 Plan to section relationships in Houses 1, 4, 5 and 8*



*Illus. 35 Proportional analysis of Houses 1, 4, 5 and 8*

*The golden ratio*



*Illus. 36 Plan and section diagrams of Houses 1, 4, 5 and 8 illustrating light penetration*

## 2.4 IN CONCLUSION

Exploration #02 set out to investigate the projection of the sketch above the page, and by doing so provided me with the opportunity to fully engage with each design by redrawing it on CAD. Through this process I not only ended up with a full set of computer-drafted sketch plans, but also came to appreciate the conflicting interdependence between the lucid rationality of the Cartesian grid and implausible bodily feelings. I say this because during the process of redrawing the hand sketches on computer, my body began to remember the emotional responses which were present during drawing in the sketchbooks. These feelings are still difficult to explain, and this attempt becomes the pursuit of Exploration #03 namely, a journey into the world below the page.

## EXPLORATION #03: BELOW THE SURFACE OF THE PAGE

*Approaching the unseen*

### 3.1 REMEMBERING WHAT THE SKETCHES DO NOT SHOW

In their book *The Invisible Gorilla*, Christopher Chabris and Daniel Simon question the intuitive way in which we see the world. In one of their well-known experiments, which one is available to watch on YouTube (<https://www.youtube.com/watch?v=vJG698U2Mvo>), spectators are asked to count the number of times a group of three people dressed in white shirts pass a ball amongst themselves, while a group of three people in black shirts do the same. The participants are not told that halfway through the video, a person dressed in a gorilla suit passes through the group, stands in the middle of the screen, bangs on its chest, and walks off. According to Chabris and Simon, 50% of participants in this experiment do not notice the gorilla, until they are told about it, and then re-watch the video (Chabris and Simon: 2010: 2)

With this experiment Chabris and Simon illustrate what they refer to as selective attention. The idea, simply, is that you do not notice what you are not looking for. If your attention is on players in white shirts passing a ball around and you are trying to count the passes, the last thing you would expect to see is a gorilla walking across the screen. However, if you ask someone if they would notice a gorilla walking through a group of people playing with a ball, they would intuitively be convinced that they would notice the gorilla. This experiment shows that we see, notice, and remember far less of the world around us than we think we do. The Austrian-born art historian, Ernst Gombrich (1903 -2001), noted the importance of perceptual psychology for aesthetics and the interpretation of art. For art is illusory, in a certain sense, and one does not merely perceive what is there (Gombrich, 1960).

In Exploration #01, I was confronted by the sketches in the sketchbooks. These were extrapolated in Exploration #02 into detailed, two-dimensional CAD drawings. It was during this process of redrawing that I started to remember senses of emotion and feelings

of ambience that were not noticed before. What was previously described as an endless play of cause and effect, which resulted in plans, sections and elevations, started to evoke memories of sub-conscious processes. In a sense I “remembered” how I would feel inside the spaces. Not what the spaces would feel like, but how they would make **me** feel. How it would feel to sit on the couch looking out through a series of inside-outside spaces, through openings in a surrounding wall, or experiencing a vertical shaft of light in the centre of a space which is neither inside nor outside. Or what it would feel like to walk up a narrow stairway at dusk onto a roof terrace to look at the sunset. I recalled that all the design improvisations were also instigated by this experiential gut feeling towards what atmosphere or ambience the architecture might embody. What was even more interesting, besides the fact that it went by unnoticed, is that none of these spatial experiences are captured in any of the sketchbooks. There are no drawings of interior spaces, or drawings communicating what it would feel like to be in any of these houses. All the drawings are two-dimensional in nature and deal with plan, section, and elevational configurations. The sketches do not show the underlying emotive spatial desires of the houses, and like the gorilla in the room, nobody would even know that they exist, nor about their seminal importance in driving the design inquiries. Like the gorilla, they go by unnoticed, while the attention is on the physical contents of the page.

Gradually I became aware of the fact that there is an unseen layer below the pages of the sketchbooks, which played a major part in the unfolding of the designs on the pages above. However, this is invisible to anyone looking at the drawings. This is different in the case of the gorilla experiment, where proof of the existence of the gorilla can be achieved by simply rewinding the video and re-focusing the viewers’ attention. For the sketchbooks, unfortunately, the unseen layer below the page remains unseen, no matter how many times you look at the drawings.

### 3.2 THE PRESENCE OF ABSENCE

Intrigued by the idea that an unseen underworld is continuously directing the act of design on the surface of the page, I had my mind set on discovering the dark corners of my subconscious. It became clear that, while playing the grand design game on the surface of the page, direction was coming from the submerged realm of the subconscious, and this is what I wanted to encounter.



*Illus. 37 Howard Hodgkin (1932-2017) In Mirza's room (1995-1998) Oil on wood (117.8cm x 133.4cm); Gagosian Gallery, New York. (Available on the internet at <https://howard-hodgkin.com/artwork/in-mirzas-room>. Visited on 18 November 2018)*

This new adventure led me back to one of my favourite artists. Like so many times before, where architecture relies on ideas set forth in art, this was once again the case. I was spontaneously introduced to the work of Howard Hodgkin during a visit to the Bartlett in London, together with my colleague and friend, Jonathan Noble. We had been attending a design symposium hosted by RMIT for the European contingent of students hosted in Barcelona. Our flight had a stay-over in London on the trip back from Spain to South Africa, and we decided to see if we could meet up with some of Jonathan’s old colleagues at the Bartlett where he completed his PhD in 2010.

As fate would have it, the National Portrait Gallery at St Martin’s Place had an exhibition on the work of Hodgkin. Not being familiar with the artist and expecting to see an exhibition of portraiture by one of Britain’s foremost artists, we ventured into the exhibition. We were met by a single work on a white wall in the entrance foyer, entitled *Absent Friends*. This was also the title of the exhibition.

One by one the “*portraits*” (Illus. 37) were displayed, showing Hodgkin’s journey as an artist over a period of 50 years. Very soon I noticed that this was not a regular portrait exhibition, and that the marks and bold brush strokes in striking colour combinations were indeed representative of the artist’s *feelings* upon remembering encounters with his friends.

The marks and bold brush strokes on his canvases had been developed since the late 1960s. It started as layered blocks of colour which were used to create meaning and feelings representative of experiences. The mind abstracts these experiences, and certain details assume prominence in a world which is reshaped by the mind’s eye. The ego is also present here and keeps watch over what makes it into this experiential world of colour and imagination.

It was only from 1990 onwards, when the paintings entered a phase of only mark-making, that Hodgkin succeeded in developing his own visual language. This enabled him to paint memories of emotional moments of engagement, of conversations or of places by using only colour and his own iconography to produce glimpses of his experiences in each situation (Ollman, 2011).

Soon I started to become aware of how much we are confronted by the unseen in our daily lives. Whether it is covert missions at work, mistaken identities on social media, or hidden carbohydrates in our food, it is part of our daily lives. However, just because it goes by unnoticed does not mean that it is not there.

### 3.3 AUTOMATIC DRAWING

Inspired by the work of Hodgkin, I started looking for a means to find my way into the driving forces below the surface of the pages of my sketchbooks. As realised through the process of Exploration #02, my gut feelings

directed the drawings in the sketchbooks. Initially, these drawings were identified in Exploration #01 as a series of *ad lib* games on the surface of the page. Governed by different rule sets which are in continuous flux, the real game, however, was deduced to be the skill of knowing which rule sets to impose. This so-called 'skill of knowing' is what I believe to be unseen tacit knowledge which only exists as an inquisitive gut feeling, which is stirred by the subconscious. As mentioned, I only became aware of this through memories which were triggered while doing CAD drawings of the sketch designs, and noticing the absence of any drawings depicting spatial experience.

I was looking for the unseen gorilla in my gut. Accessing the subconscious is onerous. I supposed that it could simply be achieved through remembering, meditation or dreaming. Although since reflecting on the inward journey would require outward writing, I instead looked for a more creative way into the subconscious and the subsequent documentation of the experience. As I see it, not everything we experience can always be expressed in words.

Doodling is a familiar method to access the subconscious. During long departmental staff meetings I used to notice how everyone around the table would keep themselves busy with drawing on the agenda while the meeting rolled by. Apart from the fact that this was probably a form of escapism, I also know from experience that it is a method to relax and access a creative problem-solving state while listening to the conversation at hand. I knew that everyone was paying attention in the meeting due to frequent commenting without even looking up from the pages they were doodling on. I interpreted this as a method of participation by means of thoughts flowing automatically while being comfortable within an environment amongst peers. What I describe here I believe to be common behaviour, especially among architects.

The problem-solving state, as described above, is also akin to the idea of the Freudian pleasure-ego deep inside the flows of the subconscious. The 20<sup>th</sup> century English artist and occultist, Austin Osman Spare (1886 – 1956), wrote about the unique methods of obtaining control over subconscious energies, which are latent in the human subconscious mind. The objective in his

book, *The book of Pleasure (self-love) - The Psychology of ecstasy* (1975), was to put forward the first vague searching by which energies from the subconscious can be tapped and channelled through the *Zos* and the *Kia* (Illus. 38) – the *Imagination* and the *Will*. It came as no surprise to later discover that Spare sent a copy of the book to Freud. According to Spare, automatic drawing is one of the tactile and visual methods of penetrating the subconscious, to plant the vitalising current of *Will* into its soils of sensation (Spare, 1975:44).



Illus. 38 Austin Osman Spare (1886 – 1956) *Threshold of the Qlipoth. Drawn for Magical Connotation* (1955). Pencil, coloured crayon, wash, and charcoal on panel (30.4cm x 30.4cm). Archer Gallery exhibition. London, Oct-Nov 1955. (Available on the internet at: <https://www.theguardian.com/artanddesign/gallery/2011/may/06/austin-osman-spare-art-painting>. Visited on 19 January 2019)

Automatic drawing thus becomes a method of bypassing the conscious mind and allowing spontaneous surrealist expression willed by the imagination. Spare believed that if these energies could be tapped, it could lead to either creative or destructive ends on a scale infinitely beyond anything achievable by the waking conscious mind. Although Spare's writings ended up in the *Sigil*

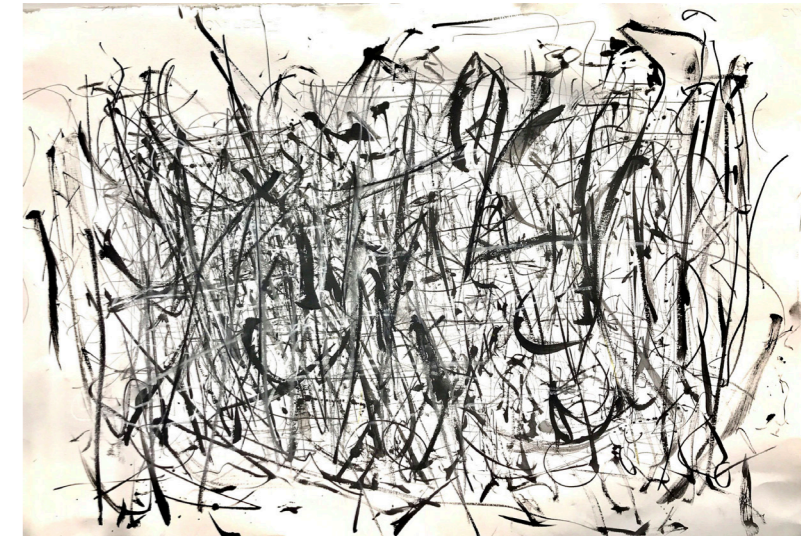
*Formulae*<sup>2</sup>, which are related to mysticism and magic, the idea of tapping into the subconscious through automatic drawing was a method I wanted to explore further.

### 3.4 ALIBIS

Approaching the irrational world of the subconscious via a tranquil meditative state is the subject matter of a series of drawings produced over weekends after reading Spare's ideas. The drawings were initially intended as representations of the bodily sensations while recalling the design processes of Houses 1, 4, 5 and 8, and the intent was to produce an automatic drawing recalling whatever I could remember from below the pages of the sketchbooks, while the design occurred on the surface of the pages above.

The drawings were done on A1 size Fabriano paper, laid out on the tiled floor of my living room. Initially I played music while attempting the first drawing, but this proved to be distracting. To enhance isolating myself from my conscious surroundings, I blindfolded myself. Feeling the edges of the A1 paper as parameters, I could physically throw myself onto the page and express emotional sensations with wide and large arm movements. In the first sketches I used charcoal, due to the size of the page and the intensity of the hand movements. Subjecting myself to the subconscious required a profound feat of letting go. I found that rhythmic breathing helped to free myself of inhibitions. This led to peculiar humming noises, murmurings, gasping and even later some loud grunting. The mark-making on the page started off with flowing lines, regulated by different intensities of pressure, which allowed the lines to breathe. It was easier to lie flat on my stomach over half of the page, and later even on my side, to allow for more bodily relaxation. As the emotions intensified, I would stand on my knees, bending over the page while making short staccato marks by using the length of the charcoal stick turned on its side for wider and more intense strokes. The idea was to be very

2. Spare (1975:784-786) argues that "...all thought can be expressed in visual form..." and from this idea sigils are created by combining the letter of the alphabet after a process of simplification. Thus, sigils are "...monograms of thought...a mathematical means of symbolising desire and giving it form...". Sigil pictograms are used to visualise desire through meditative manifestation.



Illus. 39 *The first automatic drawing later referred to as Alibi 1*

honest and to let marks accumulate on the paper free from judgment and conscious influence, partly because I was blindfolded but also because I could just let go. This allowed me to turn the drawing into a memory of the whole process, of everything that was happening around it at the time. I realised that this was an interesting combination of control and chance, of representation and freedom (Illus. 39). It was thoroughly gratifying.

More drawings followed, but without the blindfold. It became impossible not to look. Even with the first drawing, I had to peek towards the end, and recall making a few final marks on the page to correct the composition.

With the second drawing (Illus. 40) I started experimenting with ink pens, which provided detailed background and depth, and finished this up with thick ink brush strokes. The final two drawings, *Alibi 3* (Illus. 41) and *Alibi 4* (Illus. 42), were done with pencil and ink line drawings, combined with watercolours. Adding colour to the drawings added a totally new dimension. With *Alibi 4* I realised that there is a point of no return, where the drawing ceases to be documenting the experience, and takes on a life of its own. It becomes dreamlike



Illus. 40 Alibi 2

and futuristic, as if the energies in the subconscious are harvested towards manifesting a trancelike future, born from the energy vortex of the subconscious. The drawings are not attempting to be representational of the subconscious, as I initially intended them to be.

The experience of accessing the subconscious and the subsequent bodily sensations were revisited. These drawings are, however, not representational of my feelings, but rather allowed me to re-visit and re-enact them towards understanding and appreciating the influence of subconscious bodily experience, or gut feelings, during the design process. In other words, the unseen pleasures and desires below the page remain hidden and are not depicted, but can be re-lived afterwards through the act of drawing.

The drawings were a way to conjure up all the associated emotions of the design process, and in a sense these drawings become proof of the re-lived journey inward. Like the plots in murder mysteries (which I like to watch while I design, as mentioned before), locations are corroborated by alibis. These drawings therefore attest to the journey inward and become the external conscious embodiment of the journey into the internal energy vortex, where I was made aware of the undercurrents of vibrational energies.

During the re-lived enactment of Alibi 1, I started to remember the underlying search of a formula in the design of House 1. The search for a logical system to arrange solid and void spaces in a courtyard diagram was confronted with the re-lived uneasiness of potential

chaos which lay in the plethora of organisational possibilities. The only way to find a logical system was to be illogical about the process, and allow gut feelings to guide the decision-making process. It was interesting to me to become aware of the fact that despite the logical redrawing of plan on the surface of the page, and generating various plans in search of an optimum composition, the deciding factor came from below the page through subconscious gut feelings.

In Alibi 2, a sense of order and ease was achieved, and I deduced that this energy could be transferred through the arm as a conduit, and that it could manifest as hand drawings on the surface of the page. Through this process it also became apparent to me that the subconscious will always remain hidden, but can stir sensations into actions on the external surface above and beyond. It is this energy as driver which willed the creation of the design explorations in the sketchbooks. The sense of ease and order had to do with the fact that the drivers of House 1 culminated in the design of House 4. This was achieved through the unified roof over a nine-block grid plan layout, with interrelated internal and external spaces.

Re-living the design process of House 5 through Alibi 3, re-awakened the same feelings of discontent experienced during Alibi 1. This had to do with the sense that not all design possibilities had been explored. This made me wonder about the idea of unpacking the main rituals of eating—sleeping—bathing, and re-



Illus.41 Alibi 3

arranging them as separated spaces. The notion of an organism which consists of different parts that all work together to create a system, became the subject of the design exploration. It was during the making of Alibi 3 that I realised that the intention to achieve order in the design of House 4, was re-interpreted in the design of House 5, by turning the design inside out. Alibi 3 unveiled the desire to be an organism which is defined by its surroundings, yet separate from it. Alibi 4 revealed to me that the ideas of system, order and organism came together as a unified whole in the design of House 8. The design intentions of all eight houses are consolidated by a sense of wholeness which is appreciated through re-living the design act of House 8.

### 3.5 THE PLEASURE-EGO, THE ENERGY VORTEX, AND THE INSTINCT OF SELF-PRESERVATION

Freud theorised about the economic polarities of pleasure/non-pleasure, and the opposing polarities in the human psyche between the ego and external realities. In his 1915 essay *Instincts and their vicissitudes* (1966:V14, 113-137), Freud describes the nature of the ego, fueled by the instinctive drive for self-preservation, to objectify what is deemed pleasurable from experiences to which the ego is attracted, and to purify them from the external world. Subsequently, it becomes implanted into the internal psyche as part of the pleasure-ego, while the ego is ambivalent towards the remainder of the object, which is expelled and remains in the external world.

It is my conviction that these enigmatic introjections subsequently feed a designer's pleasure-ego to exist as a vibrant energy force, which then becomes the subconscious creative psyche.

These introjections align with the vibrations of specific pleasure experiences and develop an ego, based on the input, to become recognisable in the external world as design characteristics.

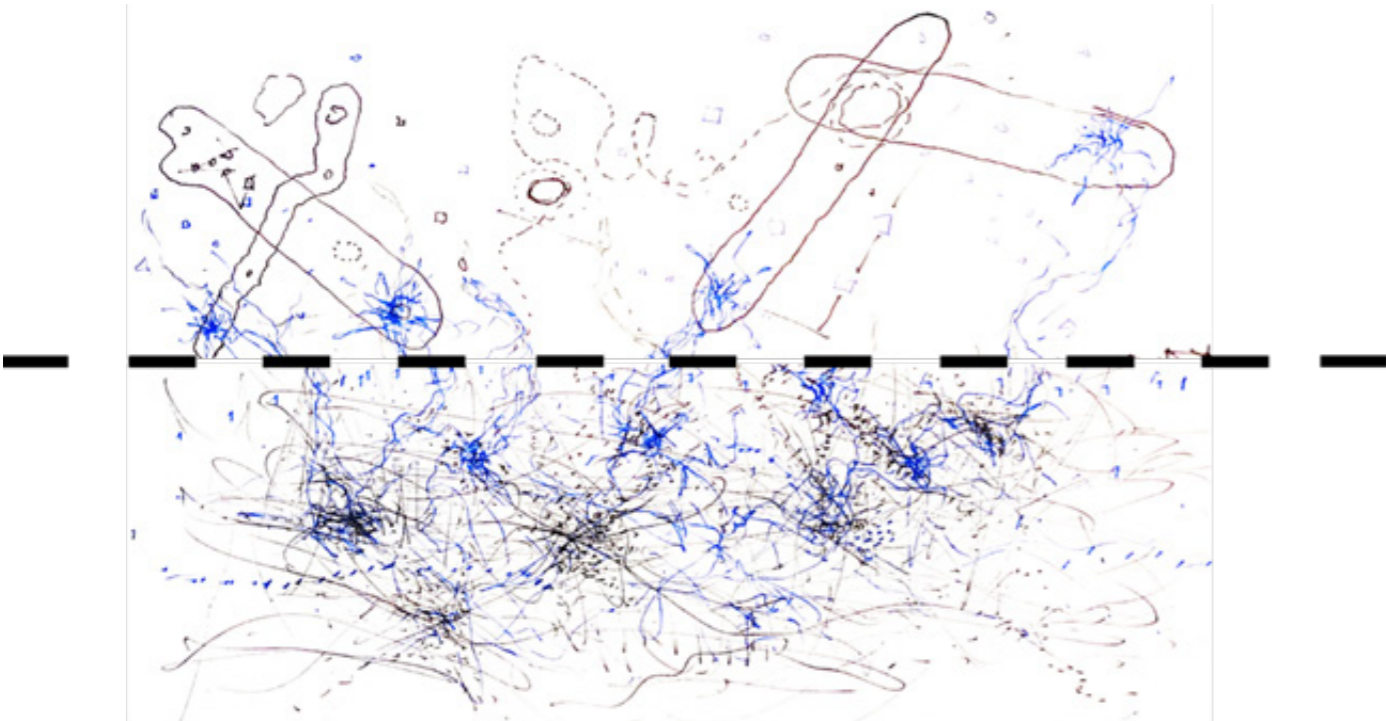


Illus.42 Alibi 4

Essentially, they are all connected to the artist's personal processes or ideas, which become visible as individual expressions or specific traits in their work. From my own point of view as a designer, this is how the will to form is nurtured. This source can be drawn from during the act of designing. The term *Nachträglichkeit* (Freud, 1966:V10, 35) is used frequently by Freud in connection with his views on physical temporality and causality - purified experiences, impressions and memory traces provide a pleasure repository as stimulus from which design reactions can be drawn and is also known as *afterwardsness*. Although Freud uses the term to analyse prior traumatic input into his patients' lives, resulting in adverse deferred actions later in their lives, a design ambition is formed in the same way.

The pleasure-ego subconsciously cultivates a design energy vortex which is stirred up during the design process. Ideas which resonate within the energy vortex are transferred back onto the surface of the page. This means that gut feelings, which were mentioned previously, become the barometer of what will ultimately matter most for the design prerogative. Belated design responses are stirred up by gut feelings, which offer direction from the submerged realm of the subconscious.

In Illustration 43, I drew a stippled line, which represents the gridded page of the sketchbook through which desires from the subconscious are filtered, becoming almost real, on the surface of the page. This becomes the catalyst which sparks the design explorations and leads to different outcomes. Since the source of the inspiration is from the pleasure-ego, trends and characteristics become noticeable in an architect's work which are repeated in their designs. Perhaps this is what creates a personal architectural style? The particular way in which an architect makes buildings might refer back to the cultivation of a subconscious pleasure-ego which is drawn upon during the act of designing. In my own experience, these gut feelings are well worth noticing as they are stirred up by the energy vortex that lies below.



*Illus.43 Sourcing from the pleasure-ego energy vortex below as impetus for design on the surface of the sketchbook pages*

## EXPLORATION #04: BEYOND THE SURFACE OF THE PAGE

### Worldmaking

#### 4.1 THE GREATER ENDEAVOUR BEYOND THE SKETCH ON THE PAGE

The concluding thoughts of Exploration #03 focused on the cultivation of an inner pleasure-vortex, which drives the external design act. This was revealed through the fact that the sketches on the surface of the sketchbook pages signify a subordinate act of a greater endeavour. The process of grouping and re-grouping objectified functions on plan, as actions in relation to one another, creates interdependent experiences which are unique to each composition. This chapter explores the projection from a scaled drawing into a space that lies beyond – the space of an architectural world.

The focus of this dissertation is therefore on the layering of parallel phenomena, which include hidden desires and impulses, the flow of free drawing, rationalised geometries, and projections out into three-dimensional space. A change in any of these layers might translate into a whole new architectural world. This compounding relationship between the layers are suggestive of worlds within a world (McHale, 1987:31). It is parallel to reality, but withdrawn and created by desires of the pleasure-ego, through the act of architectural three-dimensional composition. So even though the mind's eye is - or can be - visionary by seeing the designs as projected three-dimensional architectural spaces in a parallel world, the bodily sensations of these worlds are similarly projected through gut feelings. Even though I believe that these gut feelings are essential for creating a *Genius Loci* (Norbergh-Schulz, 1980), they are withdrawn. The character of these worlds, which exist through the architectural composition, therefore remains unseen.

Guided by my gut feeling, I now understand that the obsessive and orderly re-arrangements of the internal functions of the composition intuitively become attuned to ultimately create a logical formal system. In the context of Antique Greece, historians refer to this as

divinatory thinking. It is seen in the meticulously ordered Greek temple precincts referred to as the *temenos* (Tzonis and Lefaivre, 1988:1-3).

*“Every classical work is, in a sense, a temenos, cut out from the rest of the universe by virtue of its special order. To fashion this work is to make a world within the world”* (Tzonis and Lefaivre, 1988:5).

When I think back to the compulsions which drove the designs in the sketchbooks, I now realise that, apart from everything else which was discovered during Explorations #1, 2 and 3, the overarching rhetoric was to orderly assemble a unified totality beyond the plan-section-form trinity. This becomes the ultimate desire, and results in worldmaking as the greater endeavour beyond the design of each house, and resembles the Greek ideals of the *temenos*.

#### 4.2 WHAT IS WORLDMAKING?

The American philosopher Henry Nelson Goodman (1906–1998) argues that there are conflicting statements that cannot be accommodated in a single world version, because some truths are in conflict (Goodman, 1981:109–116). Roughly put, he claims that the world dissolves into different versions, and refers to this epistemological paradigm as an *“irrealism”* (Cohnitz & Rossberg, 2018:6.1). This begins to explain the two-dimensional plan projected as a three-dimensional space, as explained in Explorations #02, and can be understood from Tzonis and Lefaivre as *“...cut from the rest of the universe by virtue of its special order”* (1988:5). The focus is therefore not so much on the world itself, but rather on the parallel phenomena which are layered on top of each other. Through the subconscious changes in the orderly arrangements of a world, a whole new way of being can be allowed to come into existence.

*“We are not written for one instrument alone; I am not, neither are you”* (Aciman, 2007)<sup>3</sup>.

Literary ontological strategies of worldmaking are also explored by the literary theorist, Brian McHale (b. 1952). He refers to fictional literary worlds as universes set apart (McHale, 1987:28). The alternative world is a place of equal in importance to our current reality. It is however subject to separate truths, susceptible to its own laws and values (Sinclair, 2013:6). The artist as a divergent thinker is in control of the rule sets which will allow ideals to legitimately exist in a place where they can be nurtured and protected. It is necessary to understand that these ideas of worldmaking are not limited to literature, and it is my intention to also claim this ability for myself as an architect. The Greek *temenos* is representative of such a universe which is set apart from our own reality. It is an ordered sanctuary that provides a world within the world, systematically ordered to exist in self-reliant wholeness. It creates its own power dynamics which need to be understood and respected.

To me, Houses 1, 4, 5 and 8 are four different worlds, and each a *temenos* in its own right. Each is a unique domain which is self-determined by logical systems to allow a unique way in which to find yourself. However, as noted before, evidence of these worlds is uncommon in the sketchbooks. And so, Exploration #04 endeavours to find a way of constructing these worlds through digitally aided modelling.

Assisted by one of the millennial-generation staff members in my office, three-dimensional CAD models of each house were meticulously generated. The proposition was to use these models to capture images that would give a glimpse into the so-called inner world of each. However, these images as shown in Illustrations 44 - 47, proved to be only representational of the morphology and spatiality of each of the designs. They did not achieve what I intended, and another way to draw them had to be found.

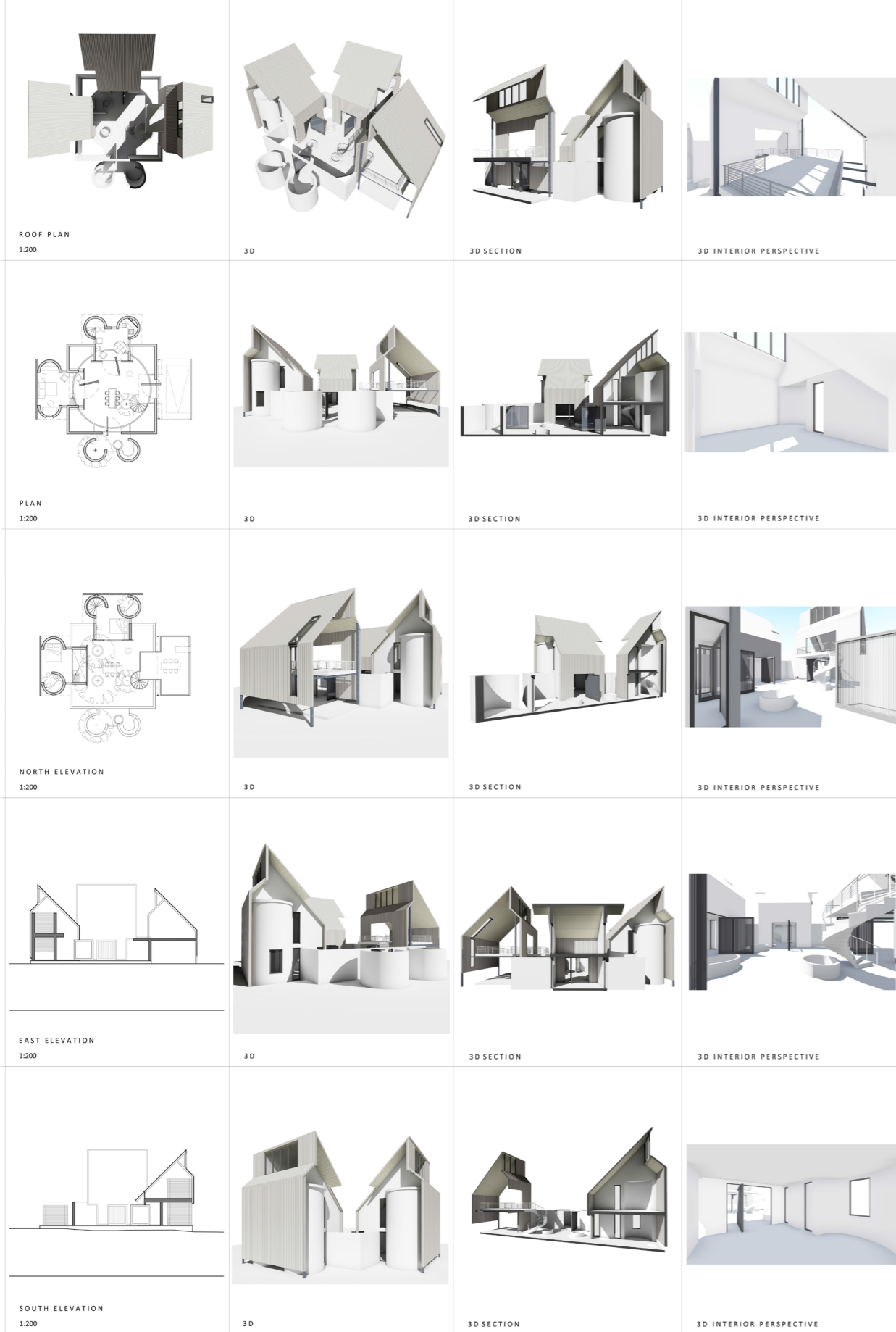
3. In the 2007 novel “Call me by your name”, the author Andre Aciman creates a hidden world parallel to the setting of the Italian town of Bordighera. The protagonist, Elio, spends an Italian summer discovering his bisexuality with the live-in doctoral student Oliver, who assists his father rewriting a manuscript. The author succeeds in creating a world within a world, a safe space for the discoveries of a teenager losing his innocence.



Illus. 44 3D-modelling of House 1 (Van Dyk, 2019)



Illus. 45 3D-modelling of House 4 (Van Dyk, 2019)



Illus. 46 3D-modelling of House 5 (Van Dyk, 2019)



Illus. 47 3D-modelling of House 8 (Van Dyk, 2019)

## 4.3 FOUR WORLDS

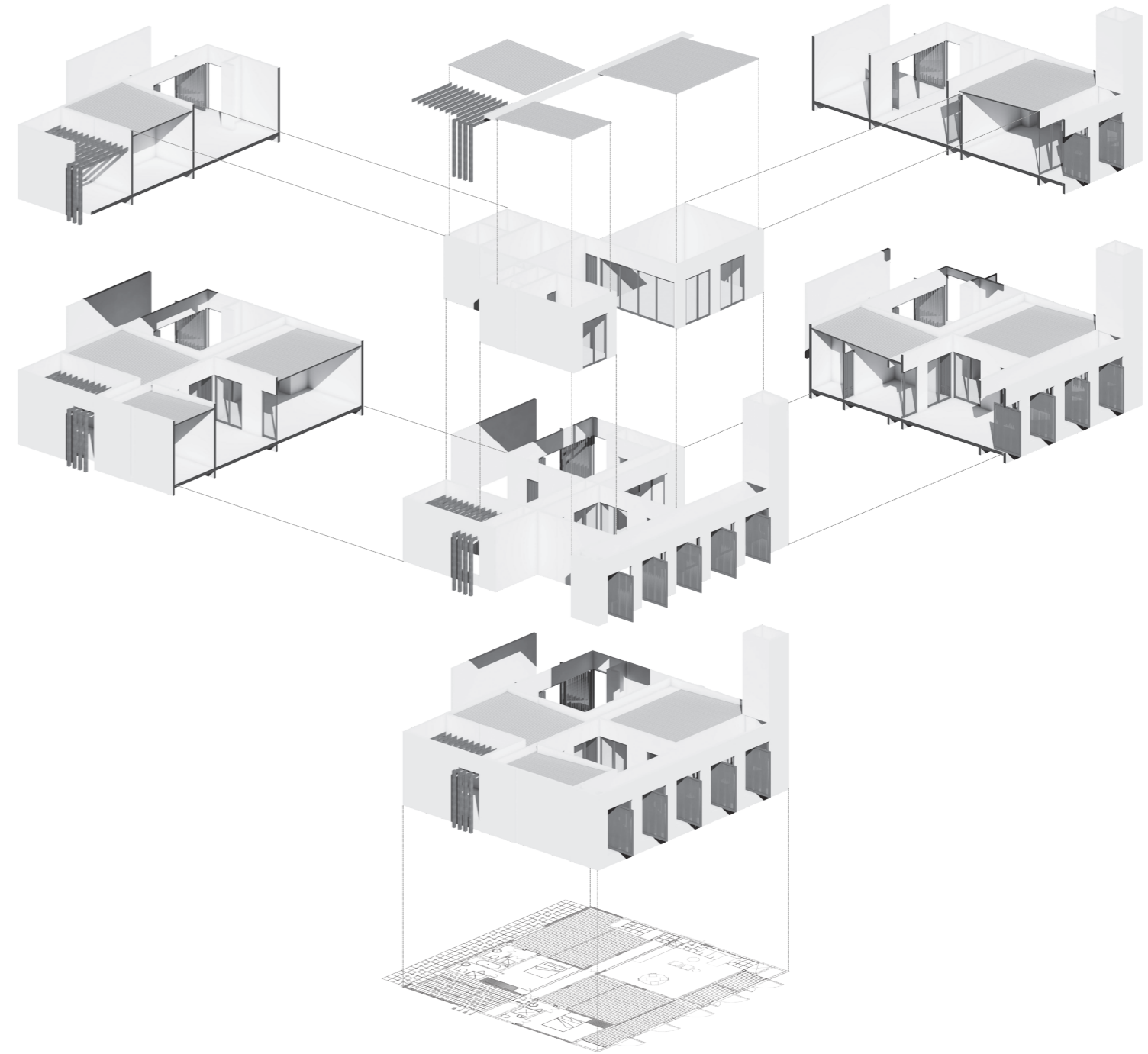
I have always had an affinity towards exploded axonometric drawings, and find them to be an extremely helpful tool to communicate the different parts of the whole, of which a design is made up of. Although these drawings could not automatically be generated from the existing 3D models, we nevertheless succeeded in producing one for each design. This was achieved through the onerous task of capturing each separate component as an individual image, which were assembled afterwards into an exploded-view composition of the design.

Each drawing was put together in the same order. It started with a plan, turned at 45 degrees. Hovering directly above it we had a 3D image of the entire house, from which the external spaces as voids, followed by the internal spaces as solids, were extruded vertically upwards, culminating in the roof elements. In a horizontal direction, sectional axonometric perspectives indicated the spatial composition and relationships. These images, together with detailed descriptions, will attempt to introduce the four worlds to the reader.

### 4.3.1 World 1 (House 1)

Illustration 48 communicates how varied inside-outside experiences blur thresholds and create voids without definite public-private demarcations. Moving through the spaces is a continuous journey without a definite destination or point of arrival. The spaces fold into one another and continue as layered vistas. This allows you to see a space beyond a space through a void, and into another space. It is both open and closed at the same time. It is inside, but also outside. It is always safe, and it is orientated by a strong vertical chimney axis which towers over the daily activities below.

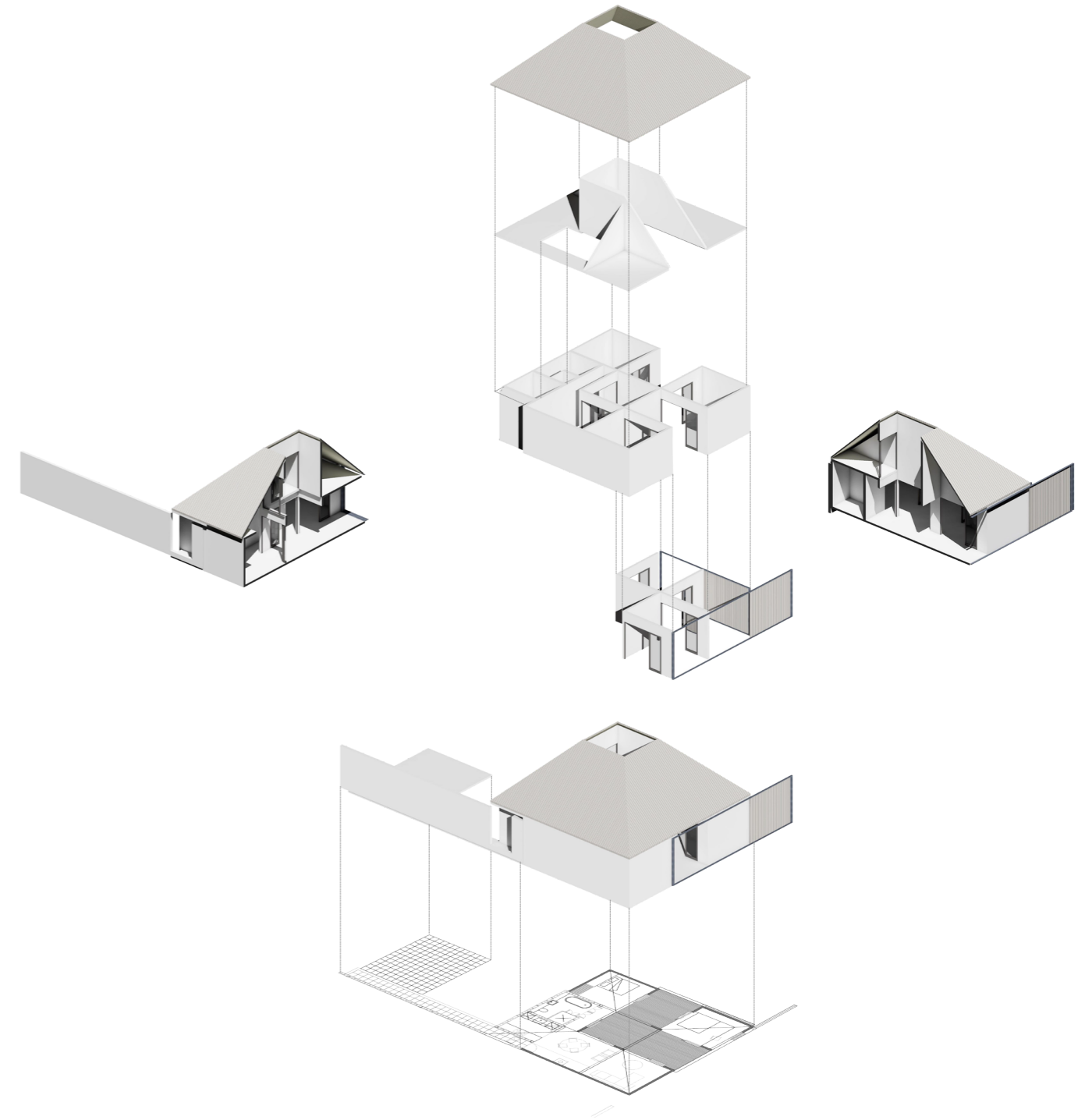
There are always options. Cool courtyards on the southern side provide a hide-away during hot summers. Expanding this space by opening large timber gates in the perimeter wall, connects with the outside world, and frees up the courtyard space. During cold winters, sun drenched northern courtyards will become the main attraction, with cold winter evenings spent huddled around the large fireplace in the living area. Continuous retraction and expansion of spaces are achieved by the folding and stacking of wall elements, creating spaces which are in continuous flux. The external perimeter wall which surrounds the entire house, is perforated with repetitive openings on the northern side. This creates a portico threshold which connects the northern courtyard and the outside world. It can be closed when privacy is required.



Illus.48 Exploded axonometric (Van Dyk, 2019)

### 4.3.2 World 2 (House 4)

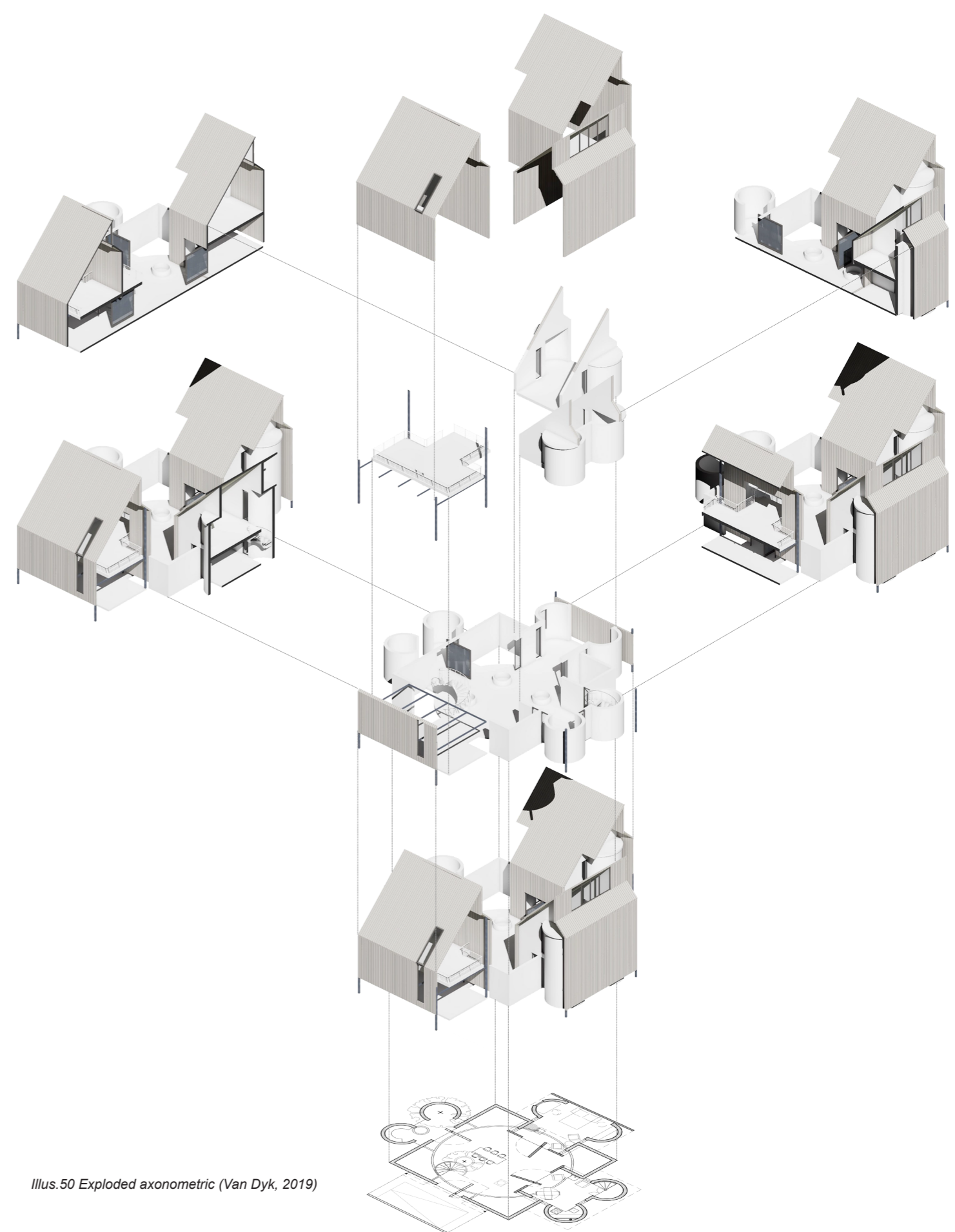
This design (Illus. 49) creates a world defined by a dominant roof. It binds all the spaces below and creates a sense of compaction. Surprisingly, a void in the roof completely frees up the space and allows light to penetrate into the centre of the nine square block plan. The vertical void in the centre of the plan focuses the organisation of space, and allows for an L-shaped internal void. It is not a courtyard, but rather a space carved out from the original square plan to allow movement. The ceiling heights of the spaces are varied, and this contributes to a sense of connection to the roof overhead. Diagonally inclined ceiling lines further connect with a loft bedroom inside the roof void. The sense of the vertical shaft in the roof is strengthened by a space located above the floor plain. All the functions are positioned around the centralised light shaft, and creates a sense of a single space being contained within the large squared plan, vertically anchored by light. The horizontality of the L-shaped void can be extended by sliding open northern and western wall panels to connect with the outside area. From here the surrounding town can be monitored from inside the comfort of the house. When these wall panels are closed, the only connection to the outside world is vertically, through the hole in the roof.



*Illus.49 Exploded axonometric (Van Dyk, 2019)*

### 4.3.3 World 3 (House 5)

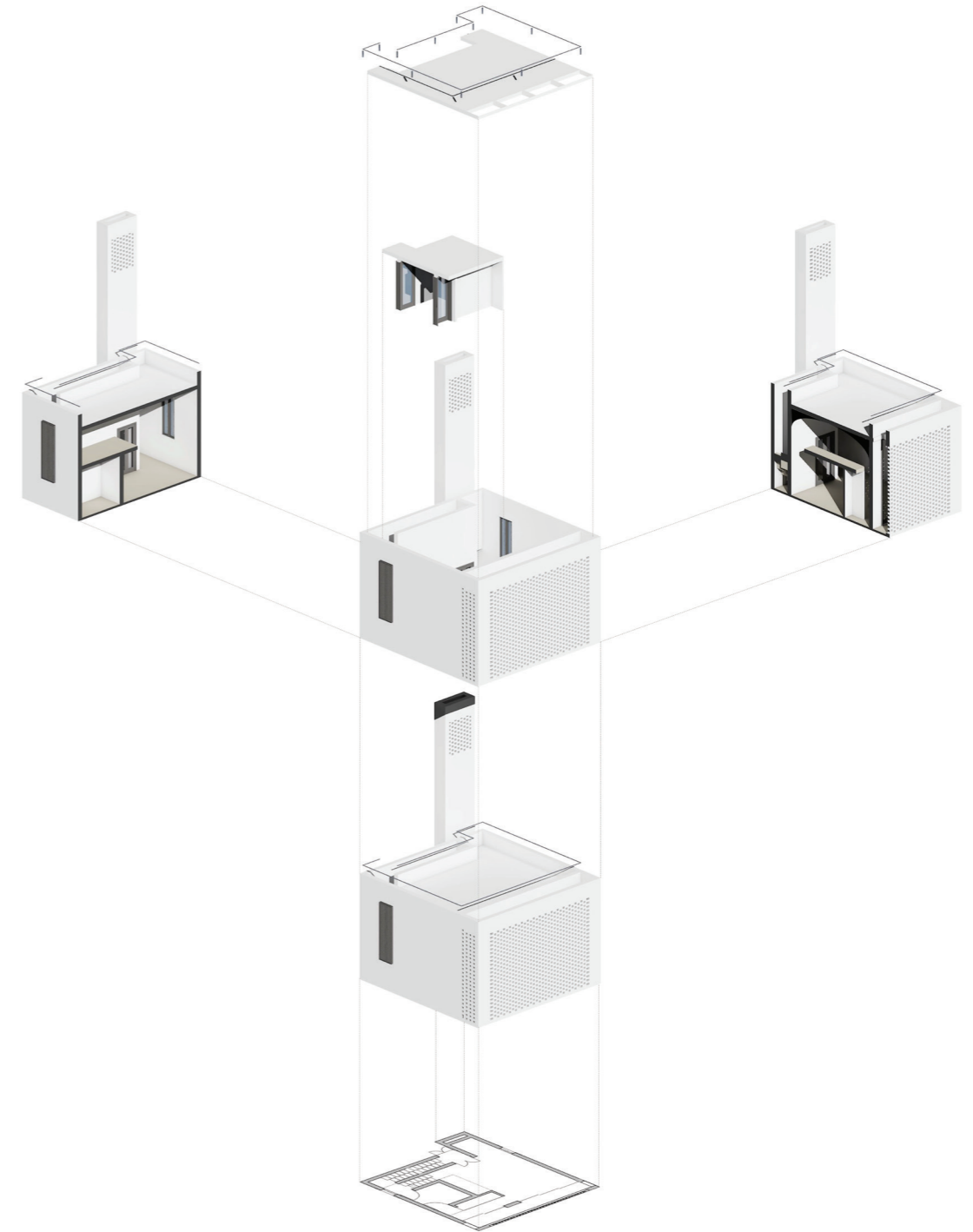
Three pavilions (Illus. 50) with high pitch roofed structures keep watch over a centralised open space. At night, the flickering bonfire casts shadows over the rippled textures of the corrugated iron wall cladding. From the kitchen pavilion comes the aromas of freshly made pap and tomato relish. Later we will braai some lamb chops and enjoy these in the open space around the fire. Most of your time is spent here out in the open, next to the fire in the evenings, or in the shade of the trees during the day. The necessary functions are separated into two enclosed pavilions – one for cooking and washing, and one for sleeping. The third pavilion is a sundowner deck from where the spectacular sunsets over the Witteberge can be viewed. It is as if you are glamping – glamorous camping – with all the necessities at hand. From a distance one can almost image three tents pitched around a fire. The courtyard wall is strong and steadfast. It encloses the courtyard, almost like a town square with small houses grouped around it. This setup is ideal for accommodating family and friends. Its plurality lies in the sizeable communal space, and the adaptability of the pavilions. At night, the sundowner pavilion can accommodate additional sleeping spaces. The first floor space above the kitchen doubles up as a sleeping space or a studio, for times when you seek solitude. When the weekend comes to an end, you appreciate the attributes of the simple life.



*Illus.50 Exploded axonometric (Van Dyk, 2019)*

#### 4.3.4 World 4 (House 8)

A solid masonry block is anchored to the site with a towering vertical chimney (Illus. 51). Its strength lies in its simplicity. It has been stripped of all pretention. Here you are safe. You can retract and get away from the burdens of everyday life. The only connection with the outside world is the dappled light that filters through the brise soleil wall. Compacted to one side of the large singular space is the kitchen and bathroom, cleverly hidden below the raised bedroom podium. At dawn, when it cools down, narrow steps lead to the roof terrace, which is open to spectacular views over the town and the landscape beyond. It is in total contrast to the enclosed space beneath. When winter comes, the giant hearth provides heat and becomes the cooking area. Dinners for one. Exactly the way you like it.



#### 4.4 WORLDMAKING, SPACE AND ARCHITECTURAL ATMOSPHERE

According to Tzoniz and Lefaivre (1988:9), logical organised divisions of space are continuously established by the placing of architectural elements within an ordered framework. This is central to the aspirations of creating a completed whole during the act of worldmaking, which by now is understood as an overarching theme as contained in the sketchbooks. A metaphorical dialogue between these elements creates architectural spaces through the second-hand arrangement of voids. Architectural space “instructs and persuades” (Aristotle, 1975:1) the “purging of a catharsis of emotions” (Aristotle, 1975:2). This becomes the purpose of worldmaking (Tzoniz & Lefaivre, 1988:5). And so, the void becomes a space which ultimately carries invisible emotion. It cannot be seen but it can be experienced in other ways.



Illus. 52 Transference of emotions from the author's pleasure-ego through the bodily presence of spectators in a space (Wessels, 2012).

The Swiss architect Peter Zumthor (b. 1943) refers to the emotional sensibilities of a space as atmosphere, and describes it as the first impression, or “feeling”, one gets upon entering a building (Zumthor, 2003:12). I would like to believe that worldmaking is the undercurrent of all the design investigations in the sketchbooks. The most important aspect of architecture is how people feel in and around buildings. It is certainly also one of my own main prerogatives when I design. However, I would like to hypothesise that there is a relationship between the undercurrents of gut feeling during the design process, as described in Exploration #03, and what to expect as architectural atmosphere in the actual built work.

The German philosopher and author Gernot Böhme (b. 1937) argue that architectural atmosphere is the result of the bodily sensations of attuned space (Böhme, 2017:35). This relates to the idealised ordered spatiality of the *temenos*, which becomes the logical organisation of the completed whole. More importantly, the only way of perceiving this is by sensing it through the body. Emotional reactions can vary. It can overwhelm or elicit resistance. Likewise, I would like to believe that atmospheres are created as place-endowed characteristics through spatial organisations informed by gut feelings of the pleasure-ego.

Through this process emotions are transferred back into the reality of the external world as a residue of the subconscious pleasure-ego of the designer. It finds a foothold through worldmaking and may therefore be allowed to exist again for other users once they are inside these worlds (Illus. 52). Much like the paintings of Hodgkin, the projections of moods and the perception of emotion need a certain amount of trust from the user, but one might very well end up seized and possibly transformed by them.

#### 4.5 WORLDMAKING UNPACKED AS A DESIGN PARADIGM CONTAINED IN THE SKETCHBOOKS

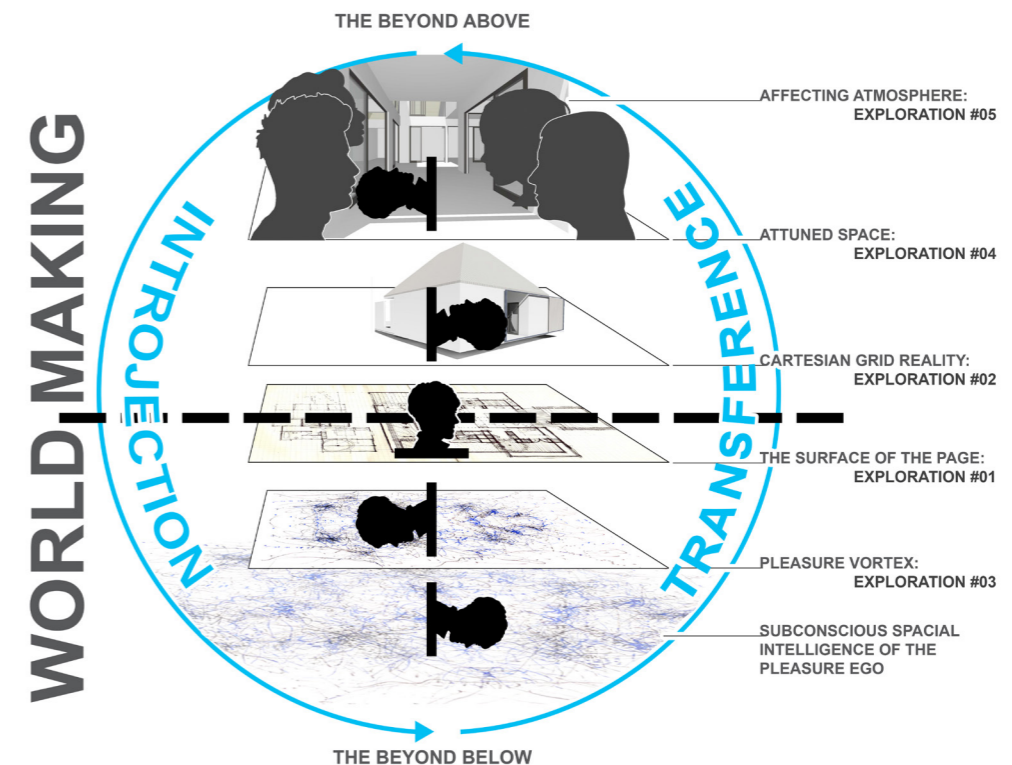
Illustration 53 summarises what I believe to be the unseen layered processes at work above and below the pages of the sketchbooks. They are hidden from sight. As a unified whole, these processes result in

the formation of a world within a world (Goodman, 1981:97). Present, future and past coincide with each line which is drawn on the surface of the page. What is drawn, will eventually become, but also already exists and has existed before. The persuading internalised gut feelings which direct the design process, are introjected emotions which are selected and purified through the pleasure-ego (Freud, 1966:V12, 218) from external experiences such as conversations, personal relationships and the many events which are part of everyday life. The pleasure-ego builds up a pleasure vortex from which can be drawn, and is part of the main drive of the ego, namely self-preservation. It affects all our actions and behaviours. This is even more enhanced when you are an architect who is designing a house for himself.

The dark horizontal dotted line in the illustration represents the grid on the surface of the sketchbook page. It is also the now, the moment of the realisation of the drawing. The grid network orders, structures and scales ideas, and allows them to exist. It therefore

becomes a threshold through which ideas come into being. It selectively brings together what is below and above the page, and allows it to be contained within the page boundaries. However, this threshold also conceals what is below the page and only allows that which can be rationalised and controlled up onto the surface.

Below the page is the energy vortex of the pleasure-ego. It is irrational and unpredictable. It is also a driver for decision-making and directs the actions on the surface of the page from within the subconscious. Glimpses of energy are filtered through the gridded net on the page and are captured with a sketch. I therefore want to argue that what is unseen in the sketch already exists within the bodily sensation of the pleasure vortex, and this finds a way to exist through architectural design composition. The introjected emotions of gut feelings are synthesised into layered ‘*irrealisms*’ as projections through the sketches on the surface of the page, and will eventually find a way to exist again as spatial atmosphere.



Illus. 53 The worldmaking design paradigm as explored through the explorations in this study

Above the page lies the architectural formation as intended by the sketch. What is drawn on the page is simultaneously projected in a parallel world, but also casts a shadow back onto the realm below the page. It is like a chess game, where every design move has a game-tree complexity (Allis, 1994:27) with cause and effect. It changes according to every new decision taken. As the drawing on the page unfolds, it is simultaneously guided by gut feeling from below, and instantly envisioned by the mind's eye. All of this happens in the blink of an eye and continues repeatedly as the design progresses. I believe that this ability, once appreciated and recognised, can be developed over time to become instantaneously present when any design drawing is made. It is a unique ability that supersedes 3D computer modelling and becomes a design tool more valuable than any man-made technology.

Beyond this process are outlier fields in both directions - above and below the level of the page. Above, beyond the architectural formation which is perceived by the mind's eye, lies the *temenos* and the sensations of attuned spaces. What Gernot Böhme describes as atmosphere, is in my opinion the highest aspiration of any architectural design endeavour. Part of this perception is being emotionally affected by a space, through corporally experiencing it by what can be described as "*felt space*" (Böhme, 2017:72). The German Jewish philosopher Walter Benjamin (1892-1940) describes it as:

*"To sense aura means to absorb it into one's own bodily disposition. What is sensed is an indetermined, spatially diffused quality of feeling"* (Benjamin, 2008:32).

I concur with Benjamin's ideas of "*aura*", and am especially interested in the notion that bodies in attuned spaces might possibly even be re-tuned by these spaces. This relates to the Freudian idea of introjection, as explained in Explorations #01 and #02. Subsequently this would affect the opposite end of the *beyond* spectrum, which lies below, in the subconscious. It is here where I believe that spatial intelligence (Van Schaik, 2008:4) is nurtured and developed. Subsequently I would like to argue that spatial intelligence lies in the '*below*' and in the gut, rather than in the '*above*' of the mind.

## EXPLORATION #05: ATTUNED SPACES

Predicting atmosphere through drawing and installation

### 5.1 SPATIAL CARRIERS OF MOOD

The experience of space and the emotions that it elicits, is profound when considering that it is, in the absence of a clear definition, actually a void. We can perceive the physicality of the architectural elements of floor, wall and ceiling, and appreciate the compositional aspects of how they relate to one another, but in essence it remains nothing more than a container or a spatial carrier. Herein, however, lies the greatest virtue of the void, namely that it can be accessed, and experienced by the senses. It is upon entry that the cooperative relationship between the bodily presence and the surrounding space comes into play. The ability of the body to feel its surroundings is the overriding feat to experience architectural atmosphere or mood, and therefore architectural space is both void and totality. The body perceives a spatial totality, feels the mood and consequently becomes a felt body (Schmitz, Müllan & Slaby, 2011:245) The Italian philosopher Tonino Griffero (b.1958) argues that atmosphere is subjective perception, filtered through the ideal, and an evaluation by the perceiver's body (Griffero, 2014:17). Atmosphere therefore exists between the surroundings and the subjective *feeling body*<sup>4</sup>, upon entering a spatial carrier of mood.

Even though the word '*feel*' is used to describe the feeling body as a perceiver of atmosphere, it actually has very little to do with physical touch. The bodily senses, and therefore the phenomenological aspects (Husserl: 1970:142), cannot be ignored. Smell, taste, touch and so on, will also be present as part of the

4. The felt body is not to be opposed to the material body, but rather "...the felt body is a feeling body - its mode of existence cannot be separated from its becoming manifest to the conscious subject in specific kinds of corporeal feeling." (Schmitz, Müllan, Slaby, 2011:245) It is withdrawn into the crevasses between the body and the soul and provides experience beyond the senses of the material body.

"...the feeling body becomes manifest in holistic corporeal stirrings such as vigour and languidness, in one's being corporeally gripped by emotions and room filling atmospheres, and equally in one's corporeal orientation in the world in contexts of perception action and spatial navigation." (Schmitz, Müllan, Slaby, 2011:245)

In Exploration #05, I will refer to the felt body principle of Schmitz's philosophy as a feeling body.

body's way of perceiving the world around it. The feeling body, however, is more than the sum of the parts of its senses. It surpasses physicality and becomes aligned with more than what can be seen. It can perceive the unseen and is transcendental in the sense that it relies on intuition to understand that architectural space and atmosphere cannot exist outside of the body (Allison, 2015:403). The intuitive comprehension of spatial atmosphere, or mood, is an ability that can be developed and refined, in the same way that the senses can be improved. The appreciation of architectural space as a carrier of mood can therefore become an acquired ability.

### 5.2 ATTUNED SPACES

Unfortunately, not all spaces carry mood. Some spaces are indeed nothing more than a void. This is what Walter Benjamin (2008:23) alludes to when he refers to the awe surrounding original works of art, which he describes as the aura. It is the aura which becomes absorbed by the disposition of the body in the presence of artistic expression. In counterfeits or reproductions, or poorly executed creative work, the aura is lost, and the work is surrounded by emptiness.

For a space to carry atmosphere, it must be attuned - very much like a musical instrument that must be in tune to carry a melody or be a part of an orchestral performance. Similarly, architectural spaces should be attuned, but by way of architectural composition. This is what I came to appreciate about my own design process as revealed by Exploration #02, namely the serialisation

of different rule sets as games at play towards mastering the design. In a way I would argue that this can also be understood as the process of fine-tuning architectural composition. Through corporeal gut feelings, these processes are guided from the subconscious below the page, and drives the decision-making process. The pleasure-ego, as described in Explorations #01 and #03 - and has been attuned itself by selecting and purifying experiences to be introjected as part of the designer energy vortex - is in control here. Bodily sensations and emotions of pleasure become the unseen building material which is transferred back into the architectural making. The attuned space allows this transference to fill up the void, which is in turn perceived by the *feeling body* inside the attuned space.

For this purpose, it is paramount for the architect to recognise the visual treachery of the drawings on the surface of the page, and rather rely on the ability to be visionary by way of the mind's eye and the feeling body. Architectural composition by means of plan, section, and elevation can be at the disposition of attuned spaces if the composition cannot be visualised as a totality above and beyond the page.

### 5.3 ATMOSPHERE AS A QUASI-THING AFFECTING THE INTROJECTION OF PLEASURE

Corresponding to the ideas in 5.2 above, atmosphere is reliant on two things: firstly, attuned space as a container for bodily presence, and secondly a *feeling body* in the presence of attuned space, which has the ability to perceive atmosphere as emotion. Griffero (2014:17) argues that atmosphere is a half-thing that needs the interpretation of a *feeling body* to become emotion, which can only exist inside of a human body. He describes atmosphere as a quasi-thing: it cannot exist in full by itself and is reliant on attuned spaces and *feeling bodies*.

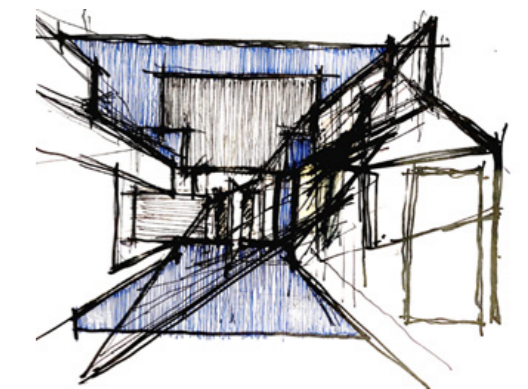
For the purpose of this study, I concede to this understanding of atmosphere and the way that it can evoke emotion in people when they are in awe while inside of a space. For this reason, it is important to acknowledge the fact that *feeling-bodily* communication occurs



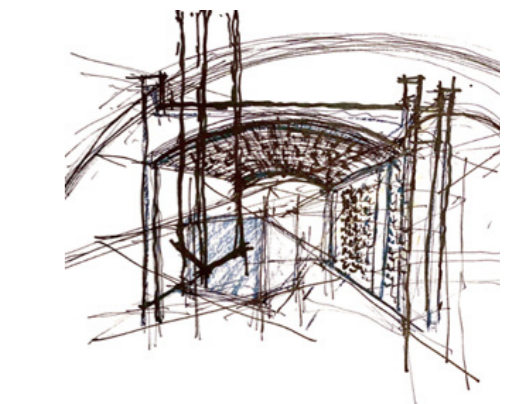
Illus.54 HOUSE 1: Attuned space



Illus.55 HOUSE 4: Attuned space



Illus.56 HOUSE 5: Attuned space



Illus.57 HOUSE 8: Attuned space

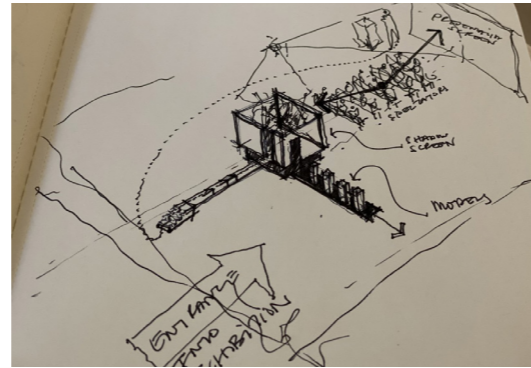
“...when someone gets felt-bodily affected and afflicted by something in a way that puts him under its spell and tempts him to involuntarily comply with its demands and to find immediate orientation for his condition and behaviour in his situations of suffering a reaction” (Schmitz in Gugutzer, 2020:194).

This speaks to the Freudian idea of introjection, where pleasurable external experiences are purified to become part of the pleasure vortex inside the subconscious pleasure-ego. As explained in Exploration #03, this guides the designer’s process both on and above the page, and ultimately leads to attuned spaces as a part of architectural composition. However, what I am suggesting with these ideas of Griffero on atmosphere (2014), is that the designer’s gut feelings and emotions are transferred - through the processes of designing attuned spaces - back into the *feeling bodies* of visitors when they are inside these spaces. Arguably, I cannot claim that the experienced emotions will be the exact same ones as the designer’s gut feelings, but surely it might be complicit in affecting and even re-tuning the *feeling body* to become more attuned in itself through internal cohesion and differentiation from the outside.

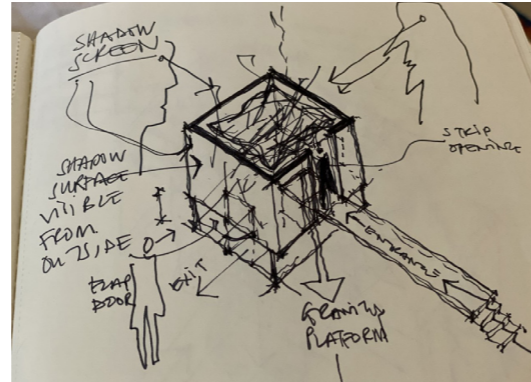
What is described above, constitutes the fuller extents of integrated meaningfulness, which is, in its totality, required for worldmaking. The production of a world within a world, is what this study deems successfully achieved when all the aspects are contained as a whole in the design act.

## 5.4 ATMOSPHERE AS THE CONCLUDING ELEMENT IN WORLDMAKING

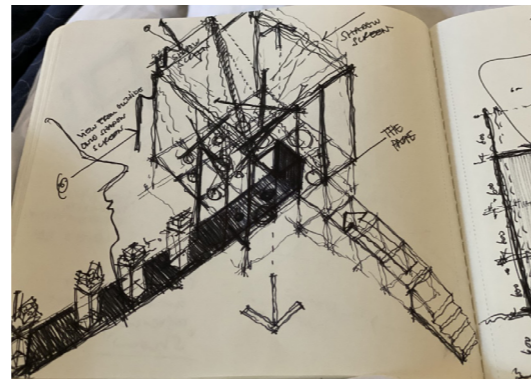
Exploration #05 seeks to conclude the journey into the unseen as presented above, below and beyond the sketchbook pages. Even though the conclusion to this study was already partly discussed in Exploration #04, namely that the unseen processes are all simultaneously at work to achieve the goal of worldmaking (Goodman, 1981), it was necessary to discuss this main component as one of the parts of a compound and complex whole.



Illus.58 Exhibition box



Illus.59 The hidden experience inside



Illus.60 Entering into another world



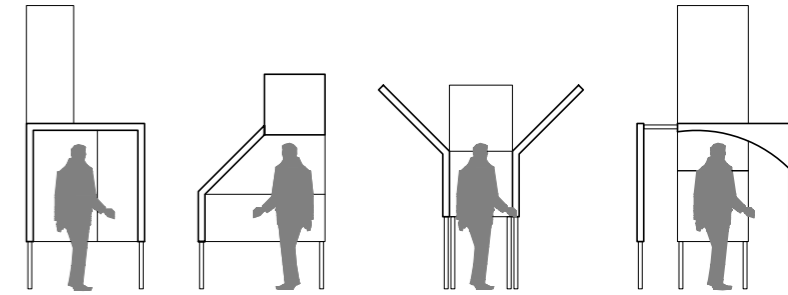
Illus.61 Experiencing atmosphere through composition of an installation of architectural elements representative of an attuned space

Atmosphere, which comes into its fullness as introjected emotion of a *feeling body*, is the core substance that informs worldmaking. This allows the architectural world to exist, and as a totality. The fact that most of these components are unseen parallel actions and entities - even more so when it comes to the idea of atmosphere - initially complicated the design of Exploration #5. Atmosphere cannot be represented, as such, through creative output, due to the fact that it is a subjective perception of a *feeling body* in an attuned space. None of the four houses have been built, which presented me with a difficult situation.

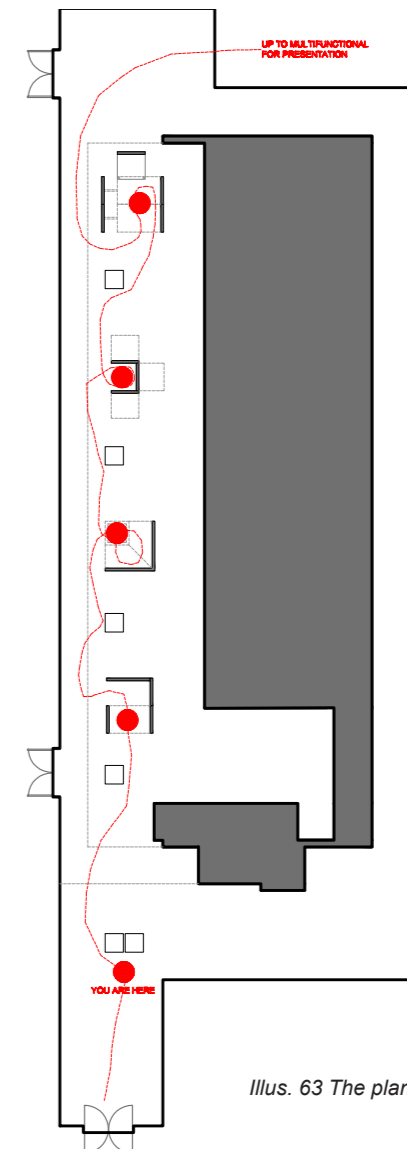
My first attempt to solve this unseen mystery was to approach atmosphere through predicting the qualities of the attuned space in each of the four houses. The intention was not to simply represent the interior spaces, as captured from a digital 3D model, but to try and draw the essence of the space as I perceived it through my mind’s eye. Hopefully in some way I would be able to predict what the atmosphere would be by writing about it. This is the same methodology as used in all the previous extrapolations. First do and then write about it afterwards.

The sketches, presented as illustrations 54 – 57, tried to capture the essence of each of the spaces, and tried to verify their status as attuned spaces. Up until now the study has assumed that each of the designs will in fact produce an attuned space, which will elicit an atmosphere perceived through a bodily presence. These sketches try to illustrate that, but in the process of producing these, I realised that this might indeed not be the case. However, the best I can do now is to abide by the intention of achieving worldmaking and then to predict what the spatial atmosphere might be once each of the houses have been hypothetically constructed.

Illustration 54 shows the layered courtyard nature of House 1, with different perspectival viewpoints. The core quality of the space would be multiple frames and backdrops, to be perceived on a horizontal level, as opposed to House 4 (Illus. 55), where the spaces are centered around the vertical light shaft. In House 4, the verticality of the hole in the roof and the diagonal lines of the ceilings will allow the user to be continuously aware of what is happening overhead, and the user will continuously be looking upward.



Illus. 62 The four derivations



Illus. 63 The plan lay-out of the exhibition

This will also be the case in the House 5 (Illus.56), where the main spatial encounter is centralised in the external open space in between the grouping of the loose standing pavilions. Vertical roof lines will draw the attention to the sky above and result in the attunement of earth and sky through the architectural roof line.

The spatial composition of House 8 (Illus.57) is in total contrast to that of House 5, since it retracts into an internalised space. Simplified solidity focuses the attention on the floor, wall and specifically the ceiling, which is envisioned in Illustration 54 as a masonry vault to emulate the idea of a sky above. The space is illuminated by filtered daylight, which will be in continuous alignment with the passing time during the day.

Making the sketches shown in illustrations 58 – 61 used the idea that each could be further extrapolated into a scaled, physical installation. A person can then physically enter a container which holds a conceptual glimpse of the intended spatial qualities, which are representative of the expected attuned space for each design. This becomes the final exhibition of the dissertation.

The design of these installation boxes, four in number, attempts to re-create a spatial experience which will enable a feeling body to be introjected with emotion. This will enable the atmosphere to exist. The feelings elicited by this experience become the final exhibition of this study, which started off with multiple sketches on a page. The installations are derived from the original design but is not specifically representational of a part of the house enlarged in scale. Rather, it is referred to as the derivations of houses 1,4,5 and 8 through which the characteristic atmosphere of each can be experienced. The four derivation installations are representative of the act of worldmaking, with the final prediction of what the architectural atmosphere for each of the four houses will be.

What is put on display is not so much an object to look at, but rather a composition of architectural elements derived from a sketch which intended to predict the attuned spatial composition for each house. This, together with the smaller scaled model of each design,

will allow the spectator to experience an emotional response together with the experienced architectural atmosphere.

The unseen remains unseen. However, each device will enable the user to become emotionally aware of the predicted architectural atmosphere of each design, and thus the totality of the act of worldmaking, as explained by Exploration #04.

In a way, the derivations are representative of the act of worldmaking. Even though they only offer a momentarily glimpse of the totality, it is the emotional awareness of architectural atmosphere which concludes the making of a world within a world.

Illustration 62 shows the final design of the four derivations, which are positioned in a row, separated by black podiums carrying the scale model of each design as shown in illustration 63.

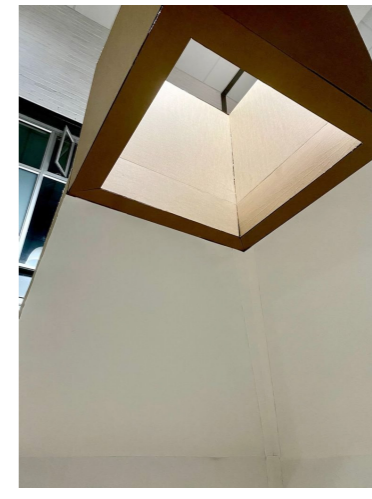
Illustrations 64 – 68 are photographic images of the exhibition.



*Illus. 64 The four derivations*



*Illus. 65 Derivation 1*



*Illus. 66 Derivation 2*



Illus. 67 Derivation 3

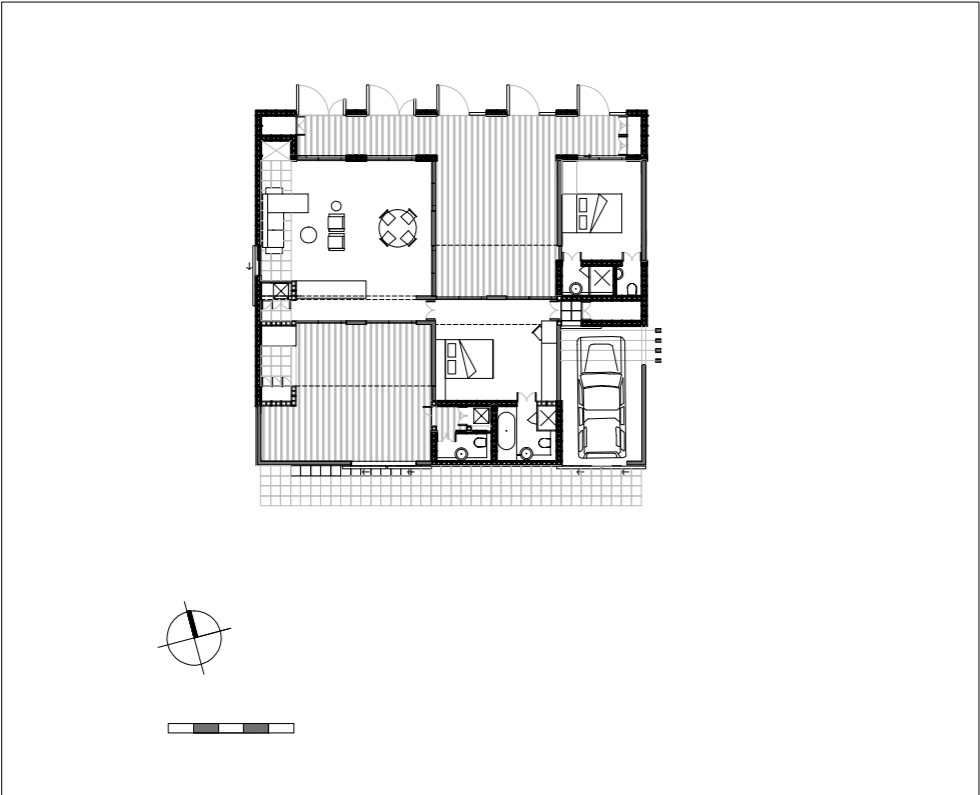
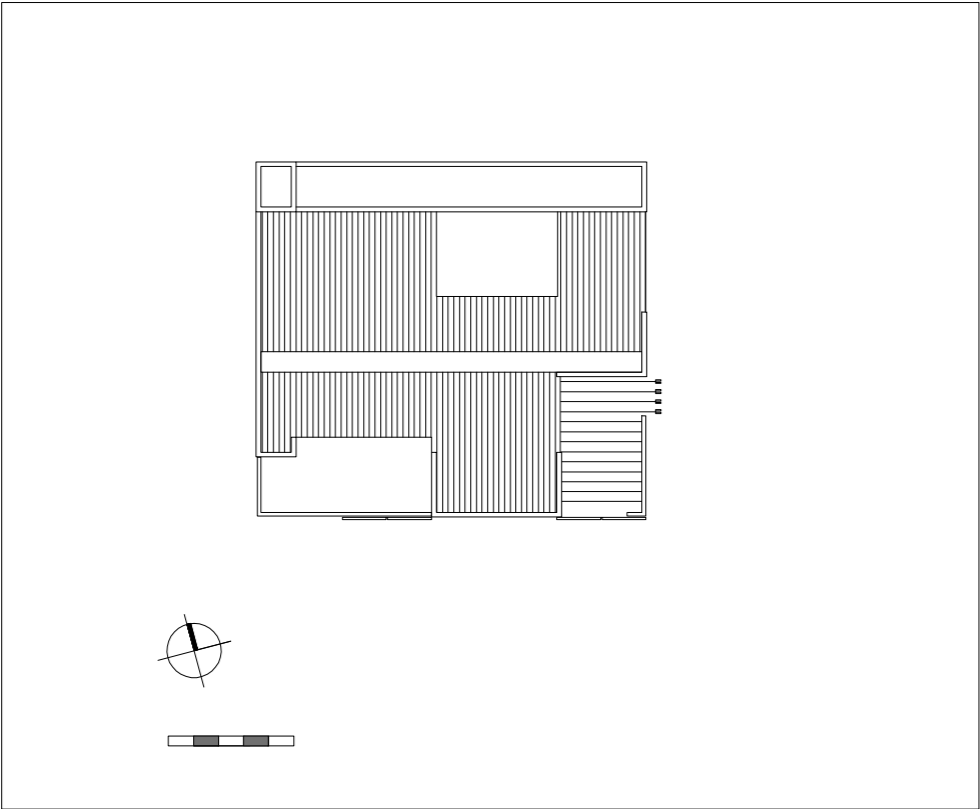


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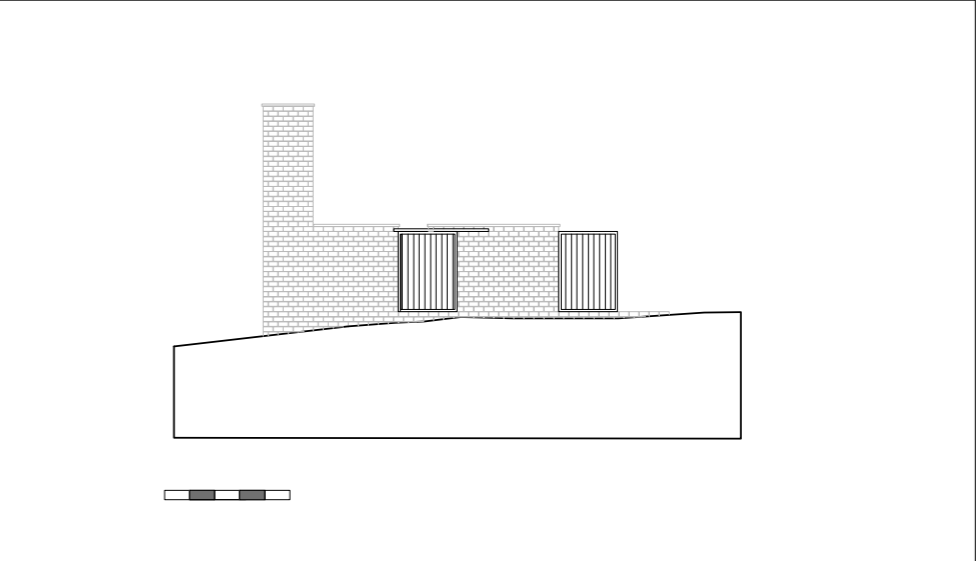
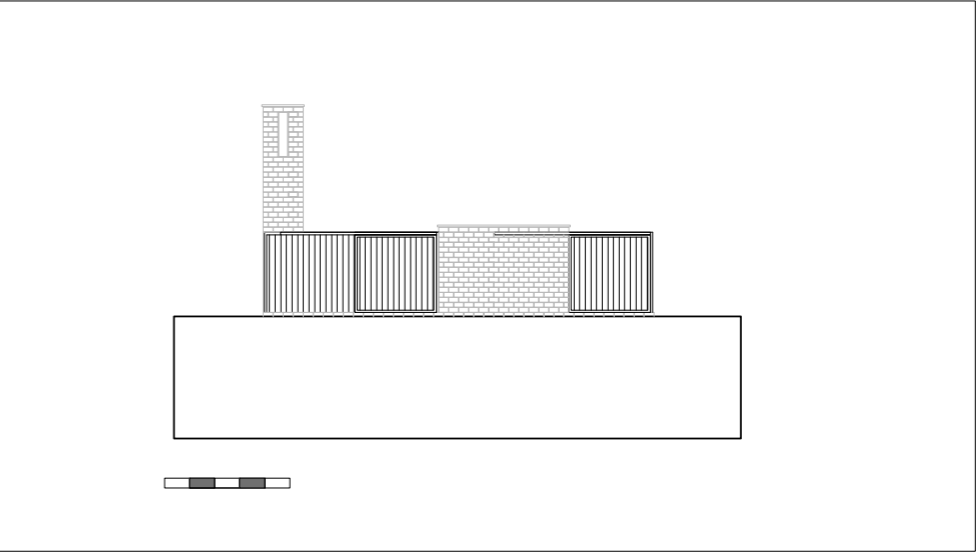
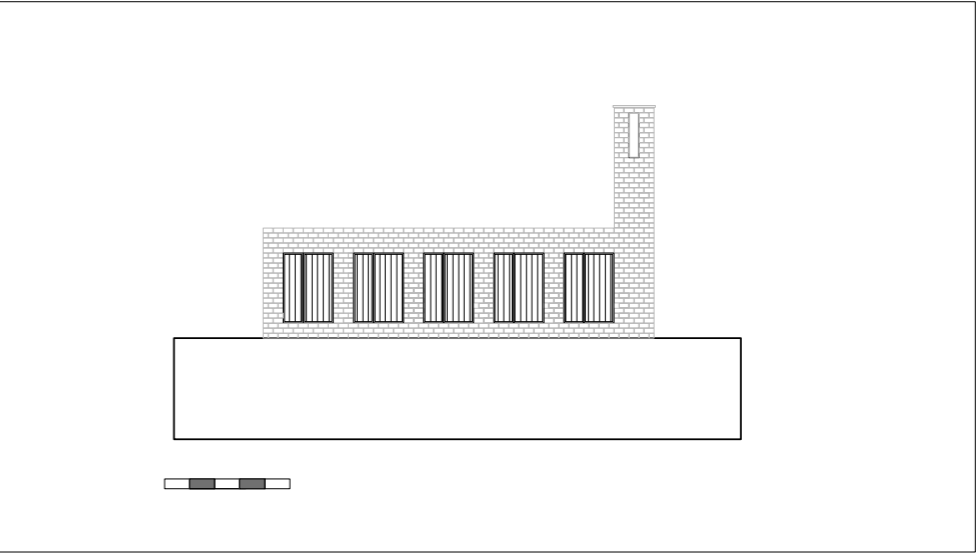
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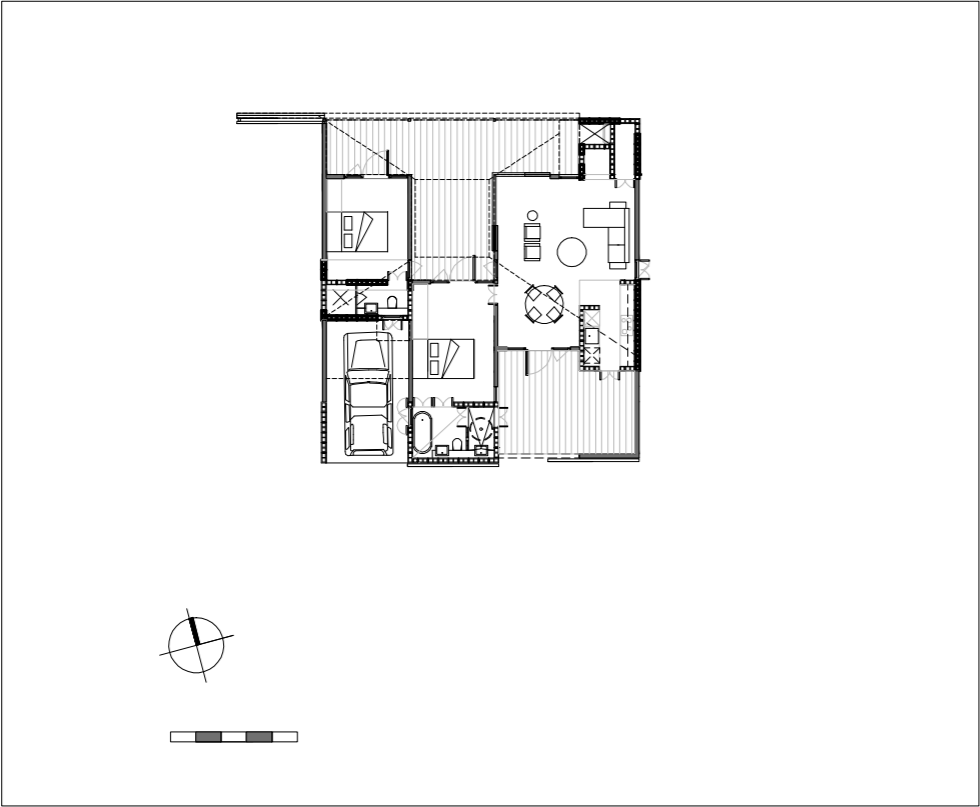
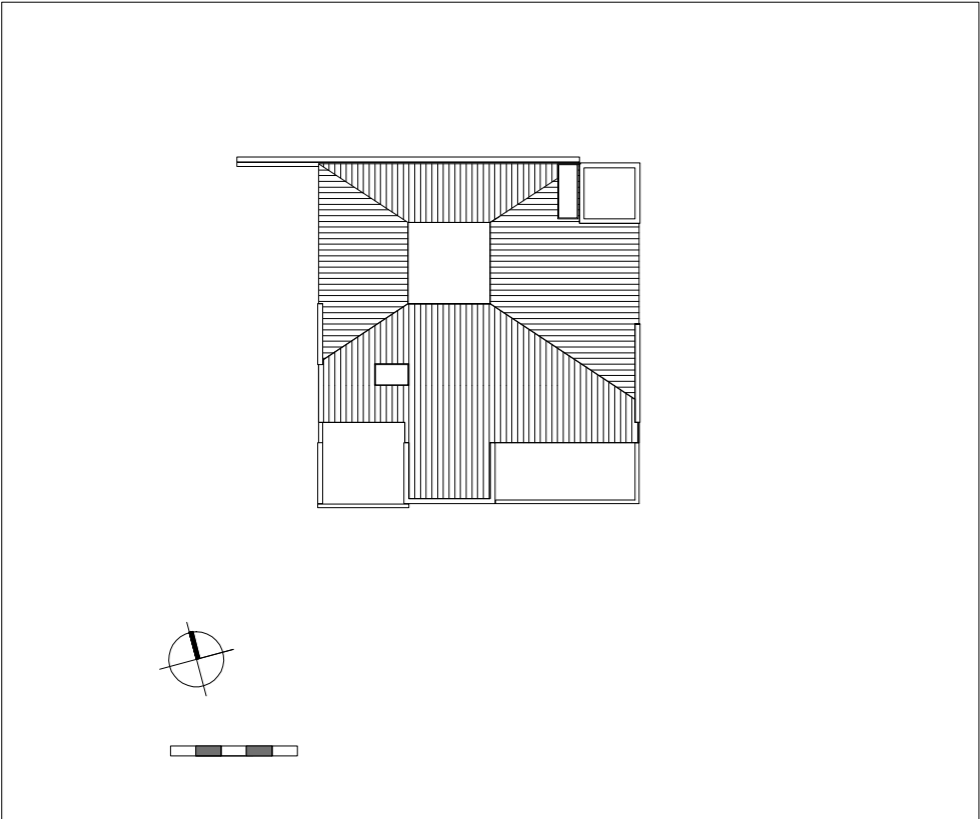
HOUSE 1 PLANS



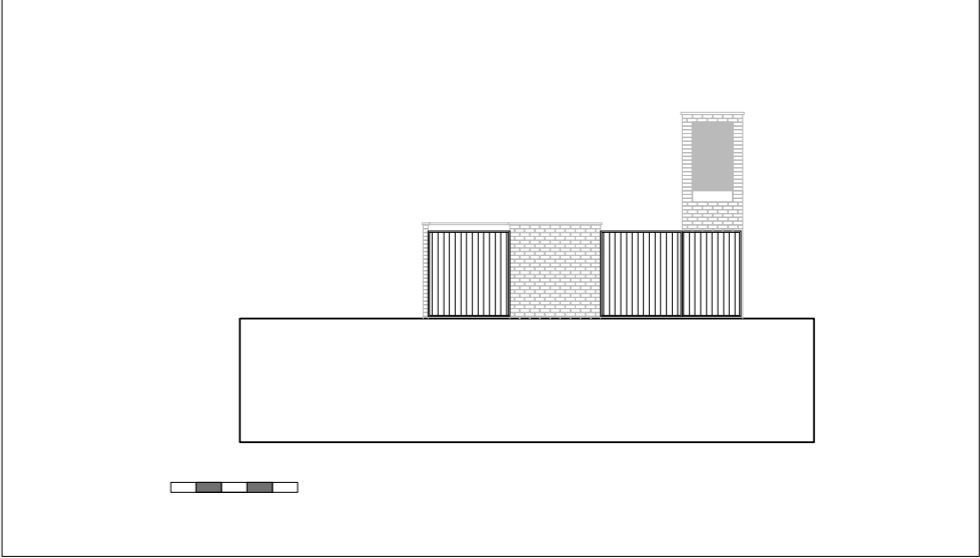
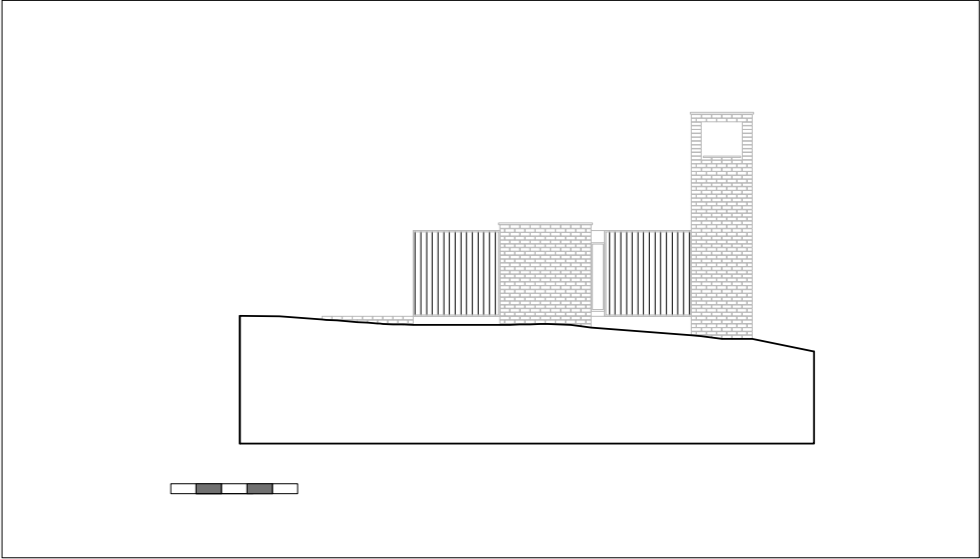
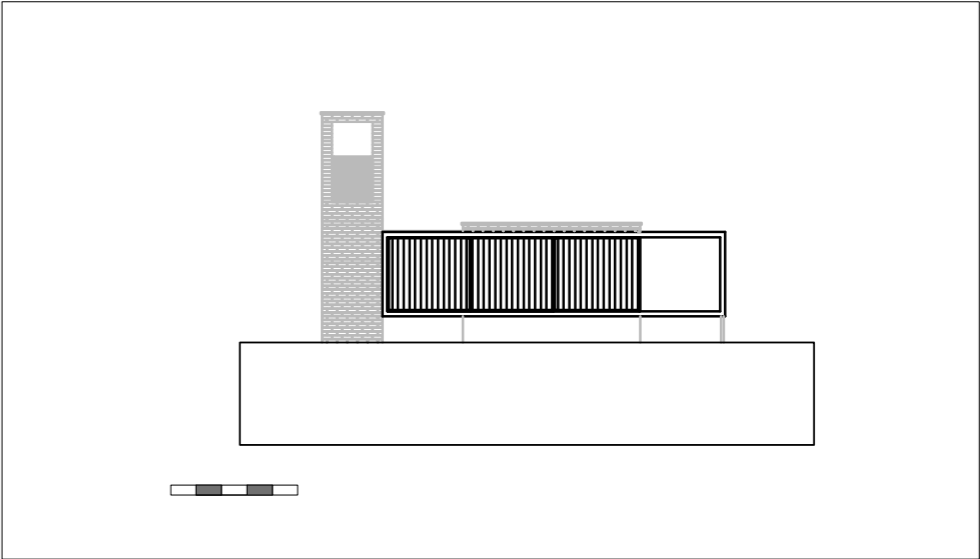
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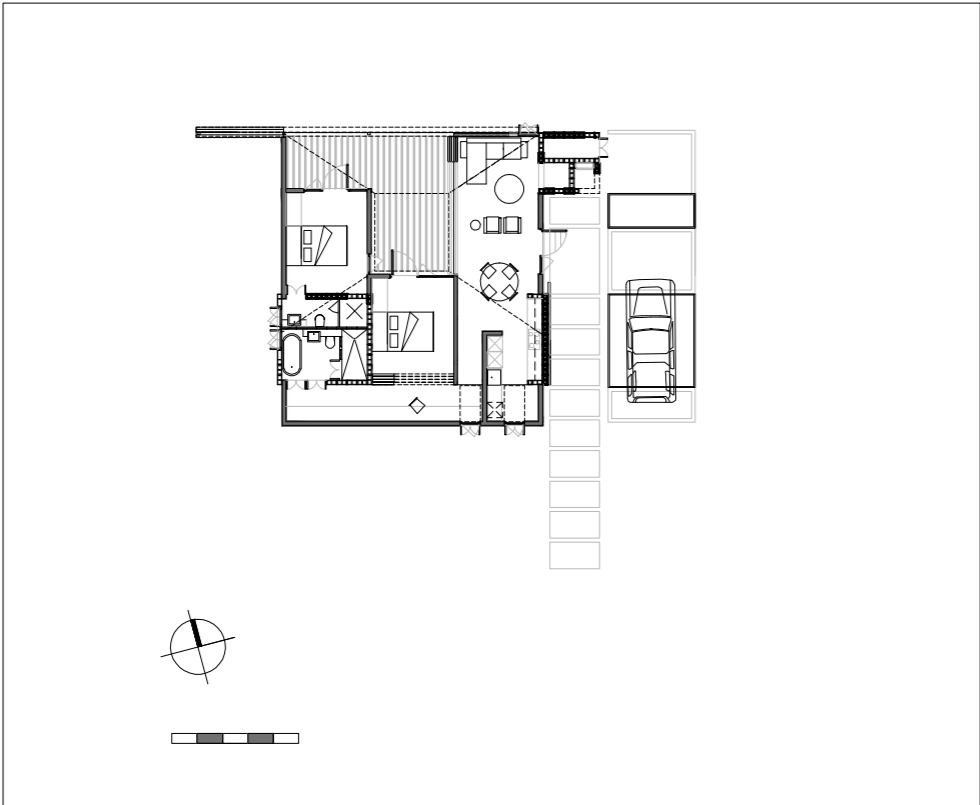
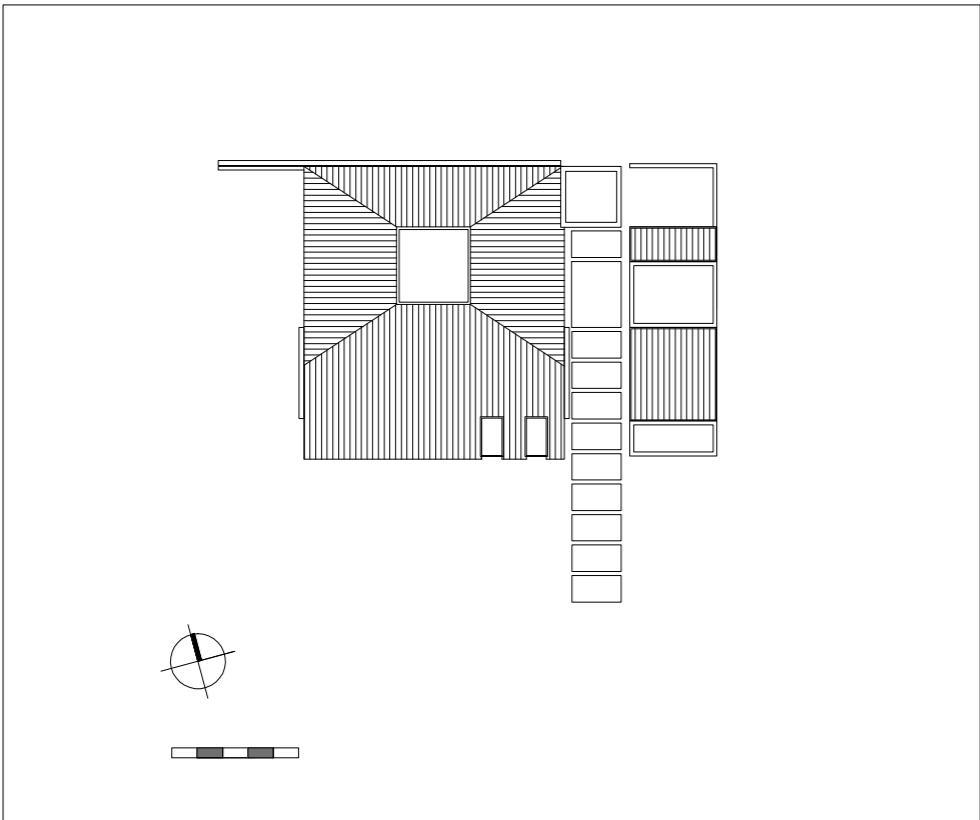
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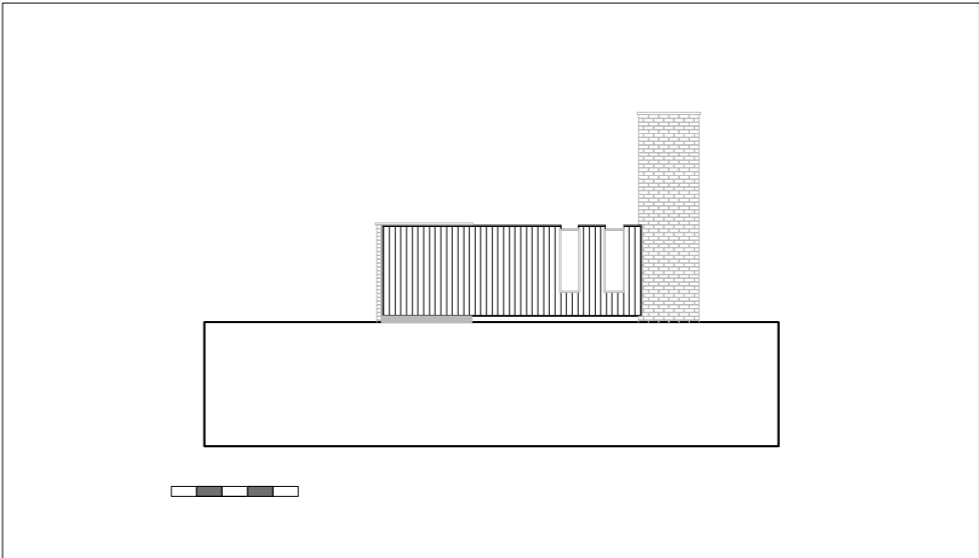
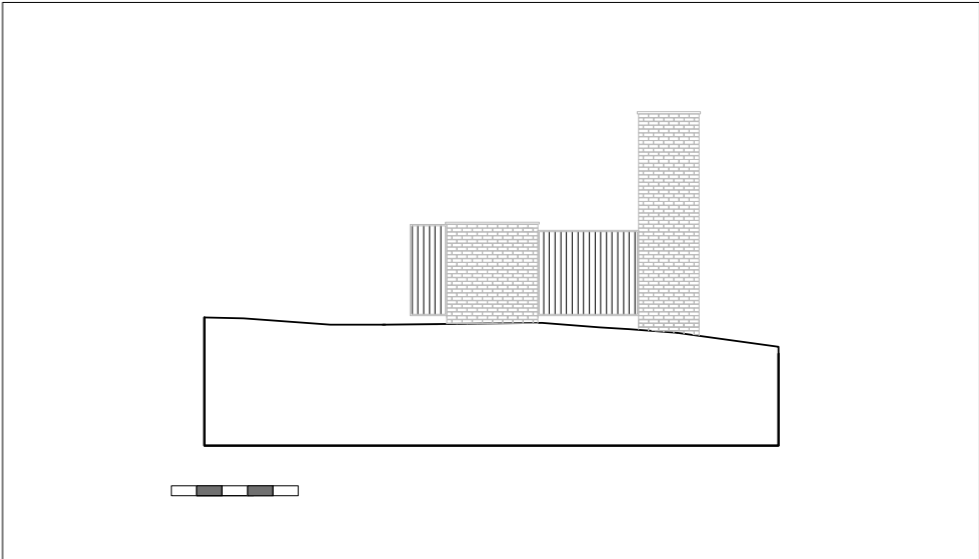
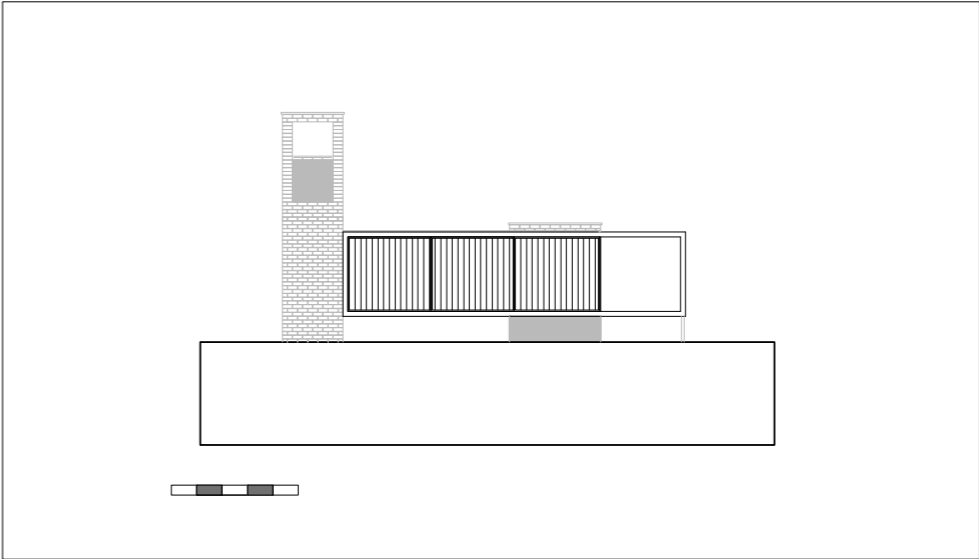
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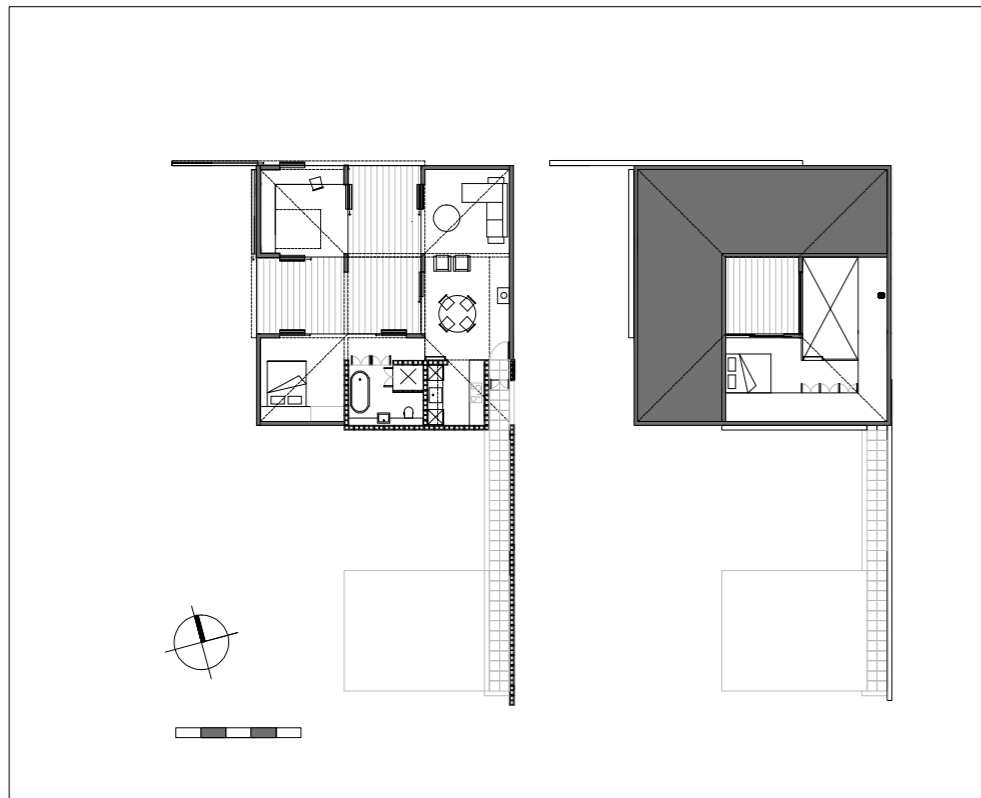
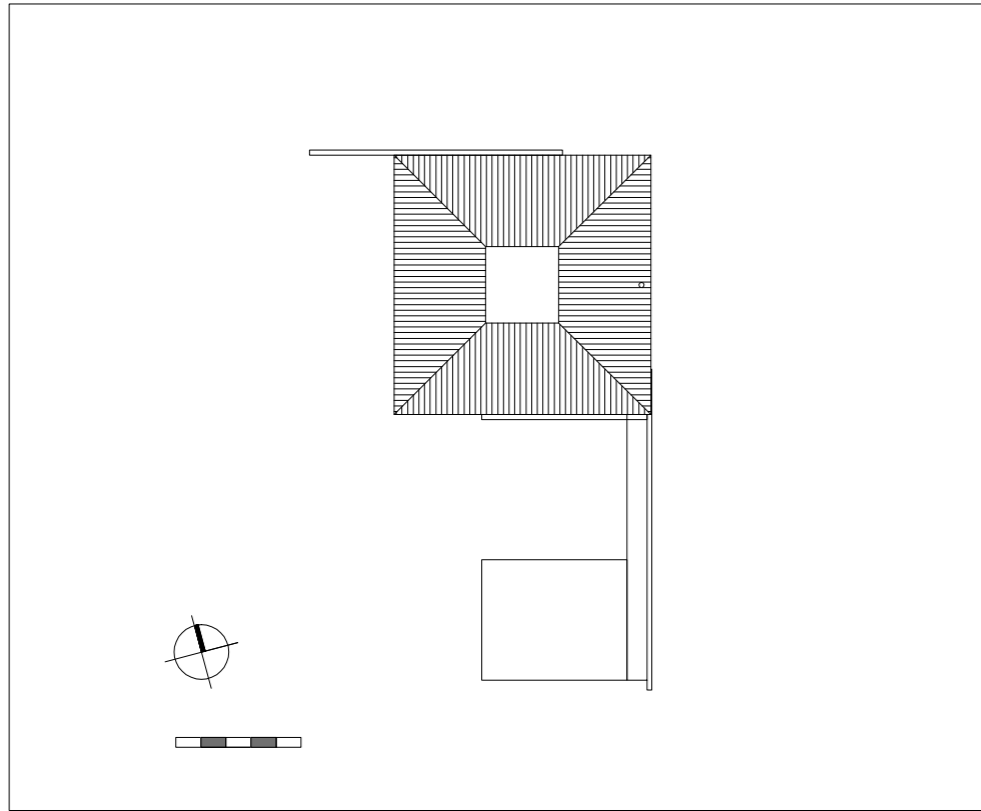
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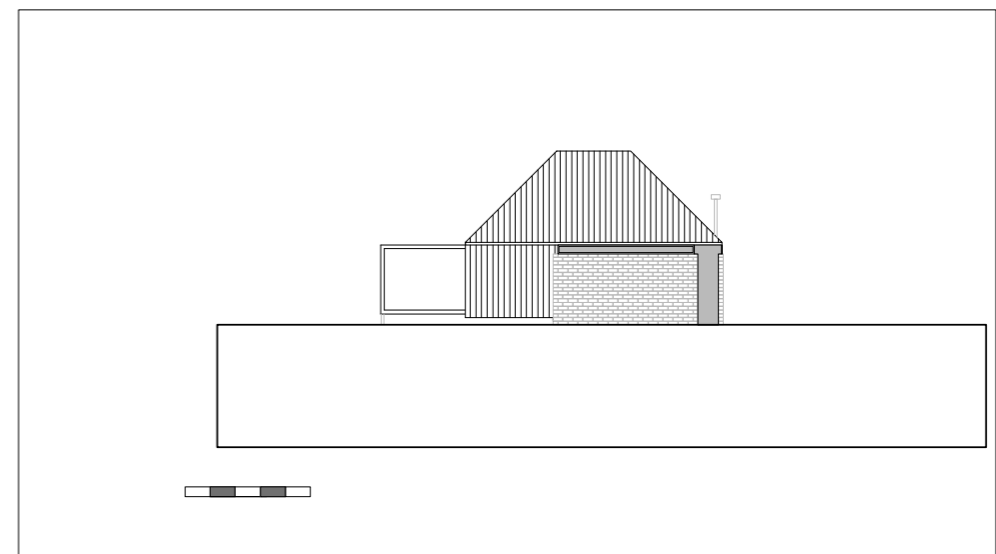
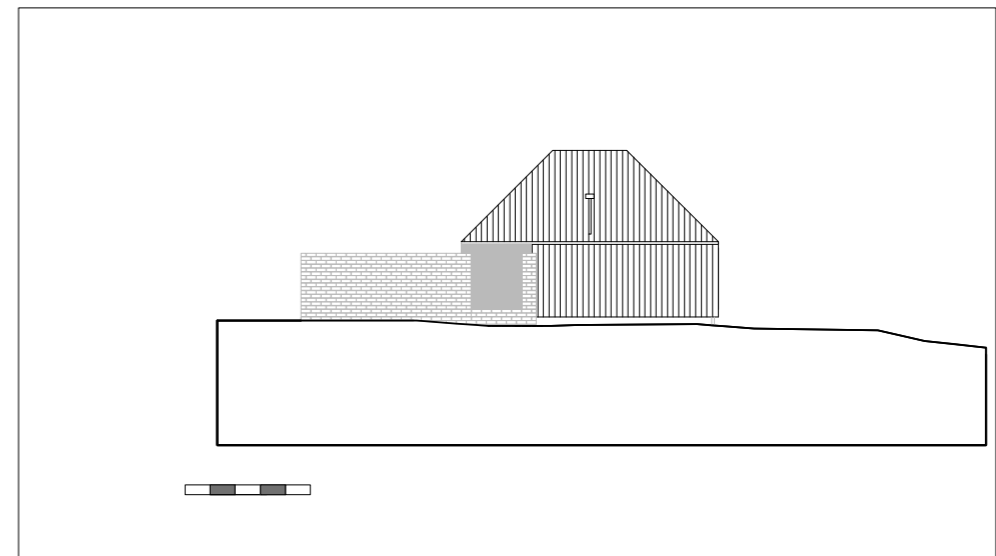
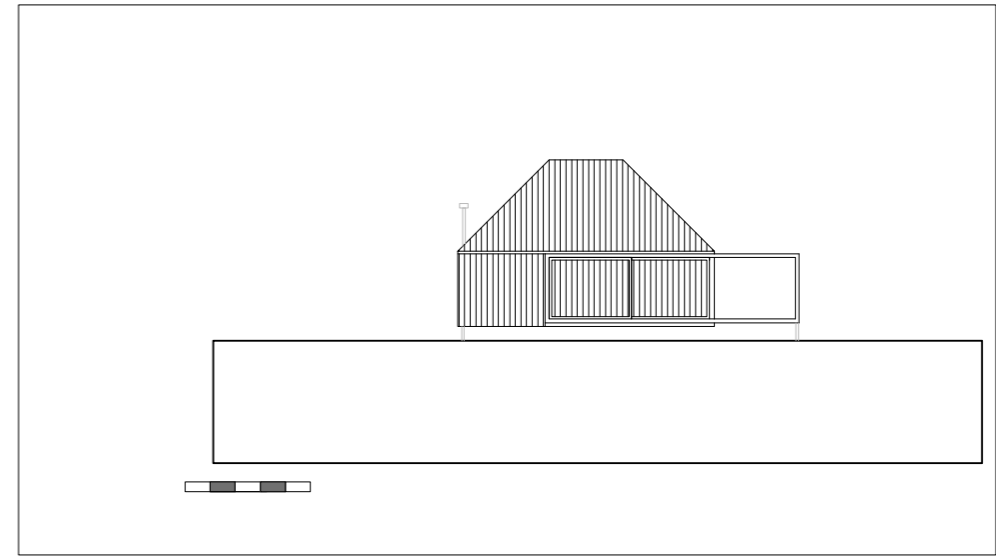
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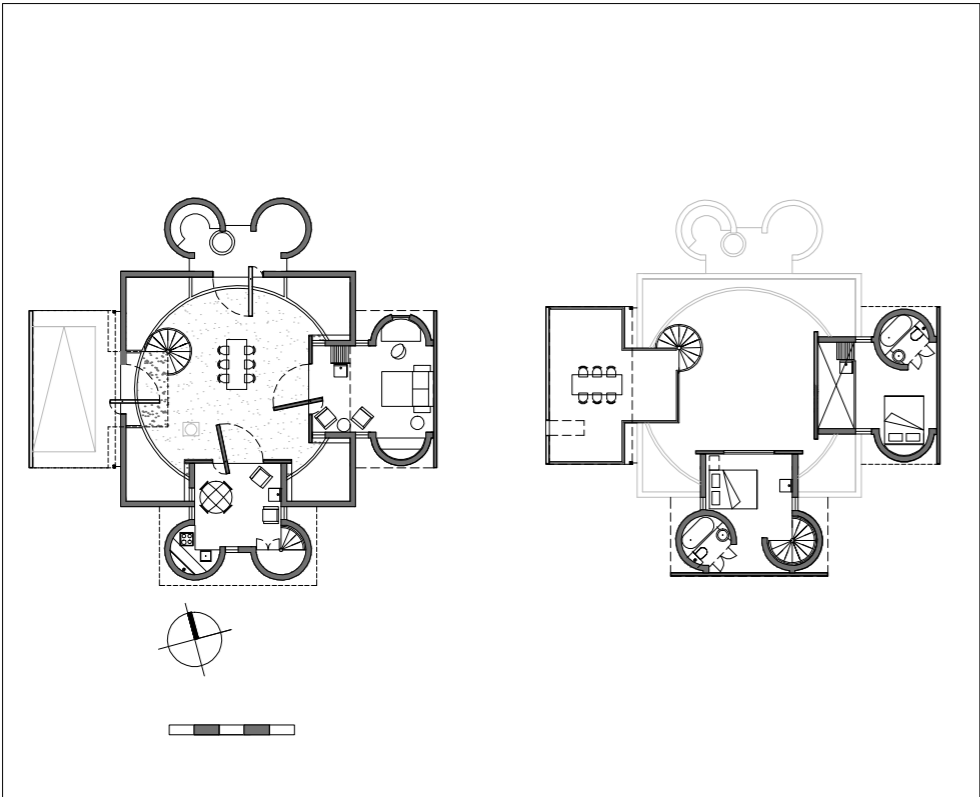
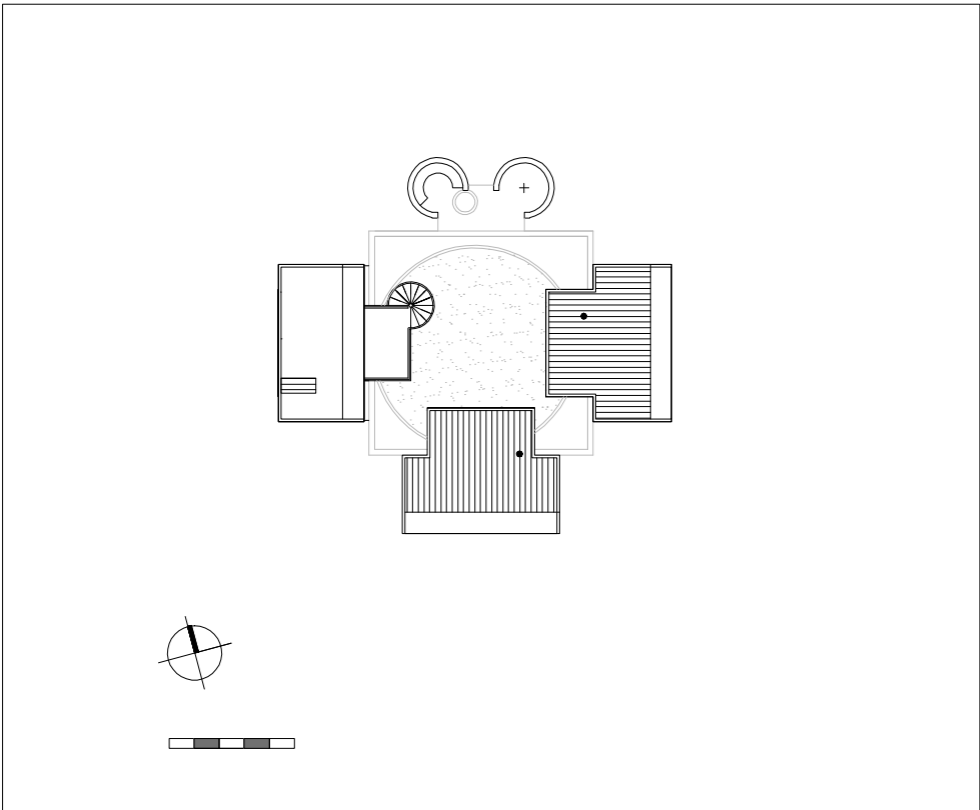
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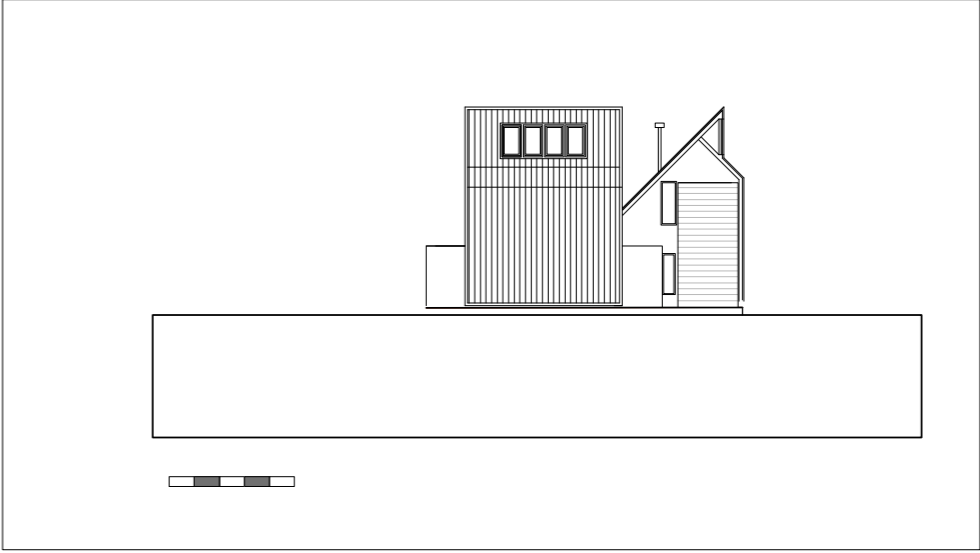
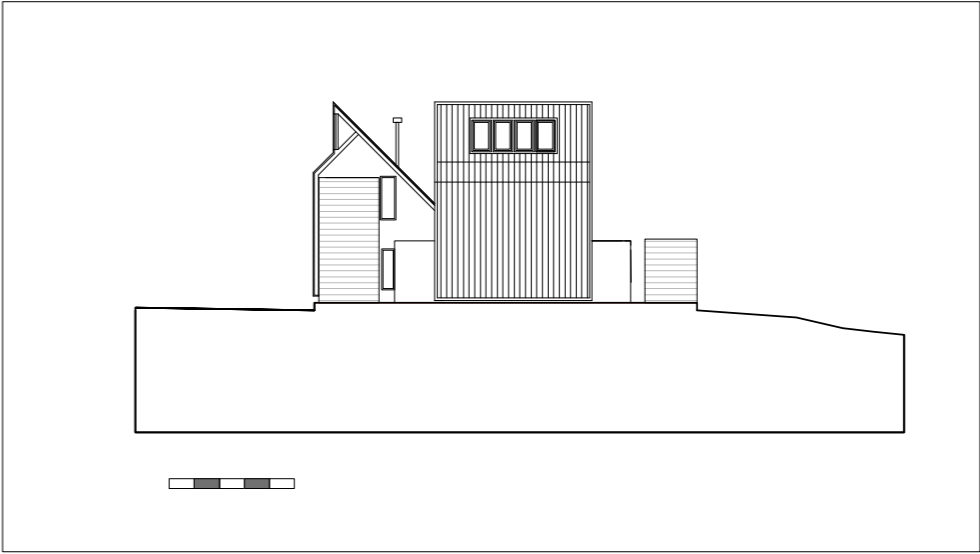
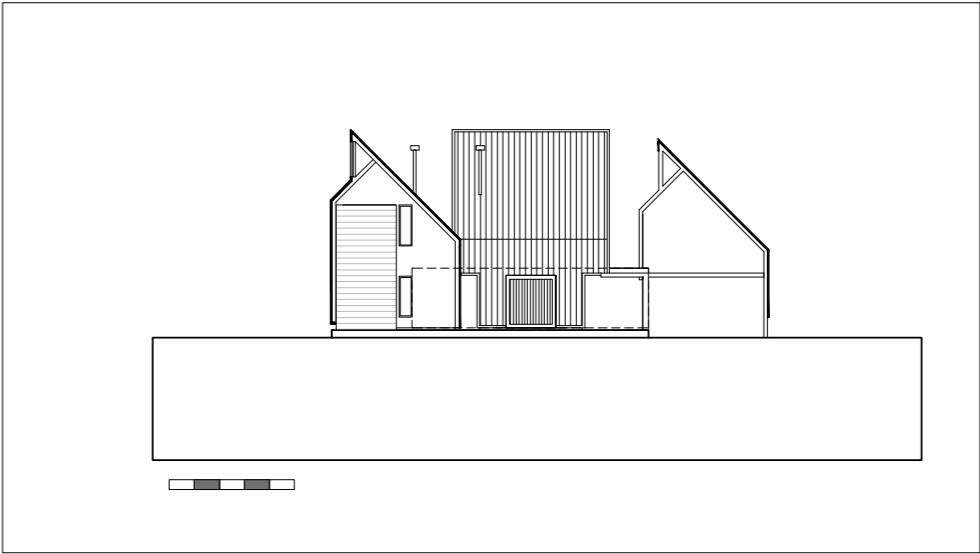
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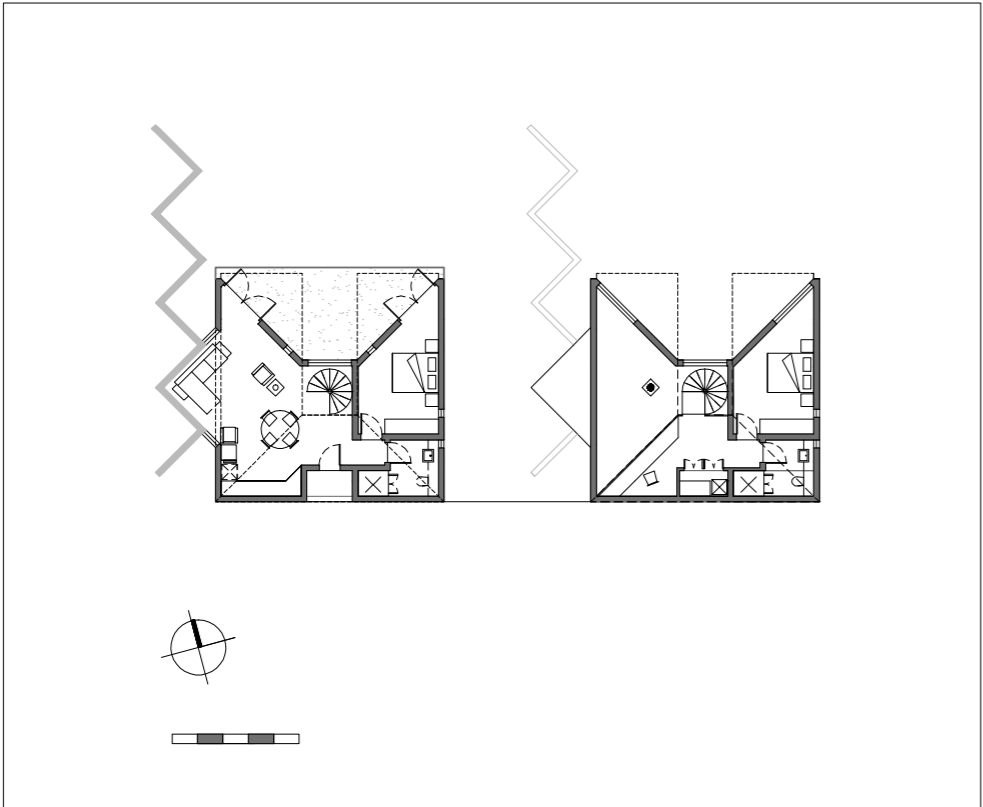
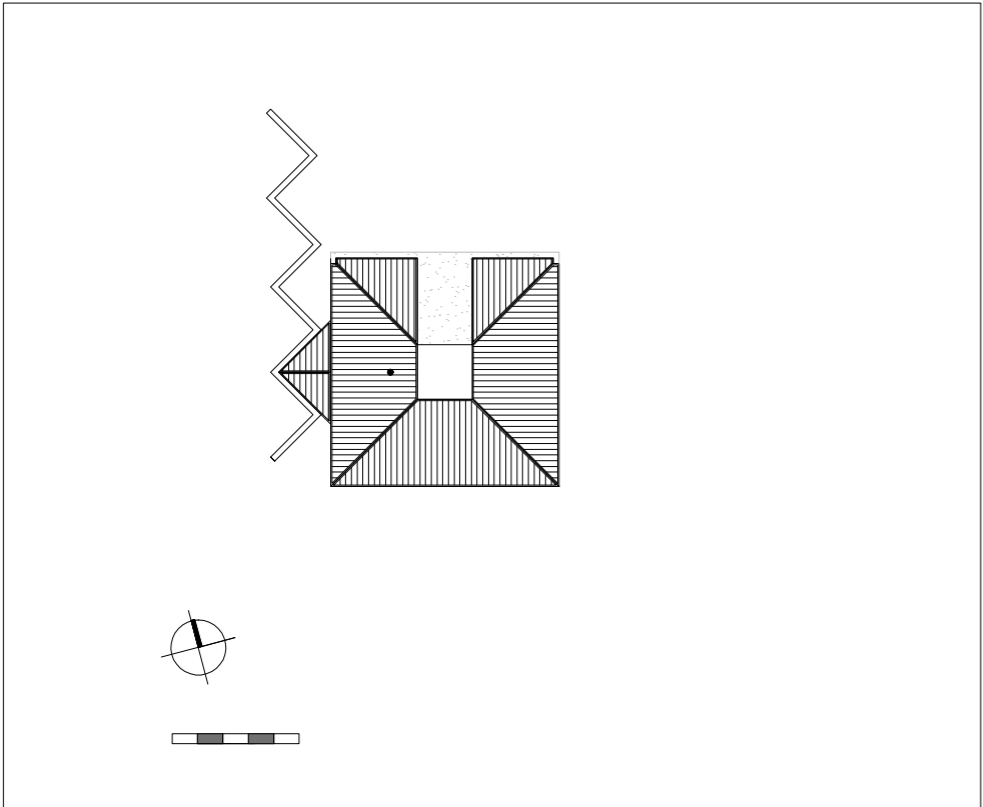
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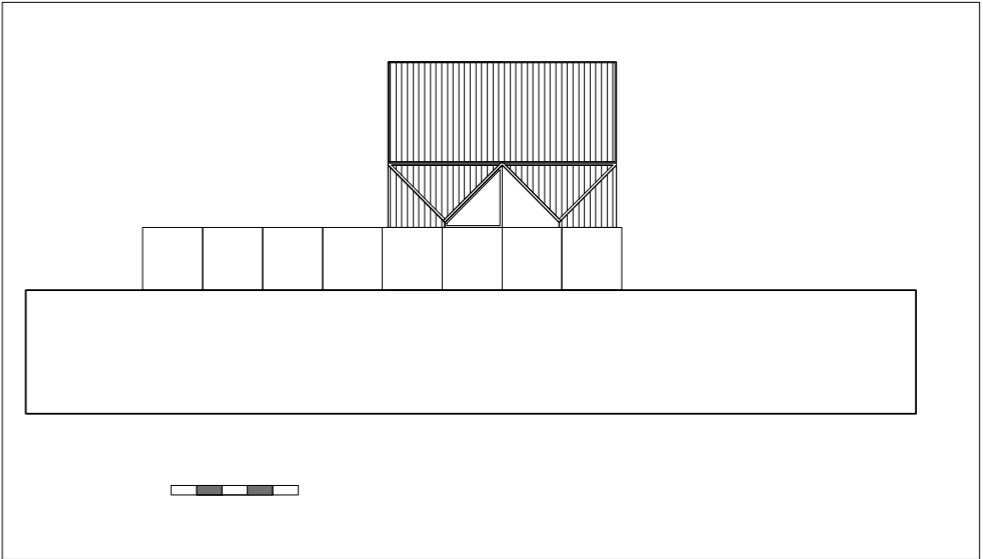
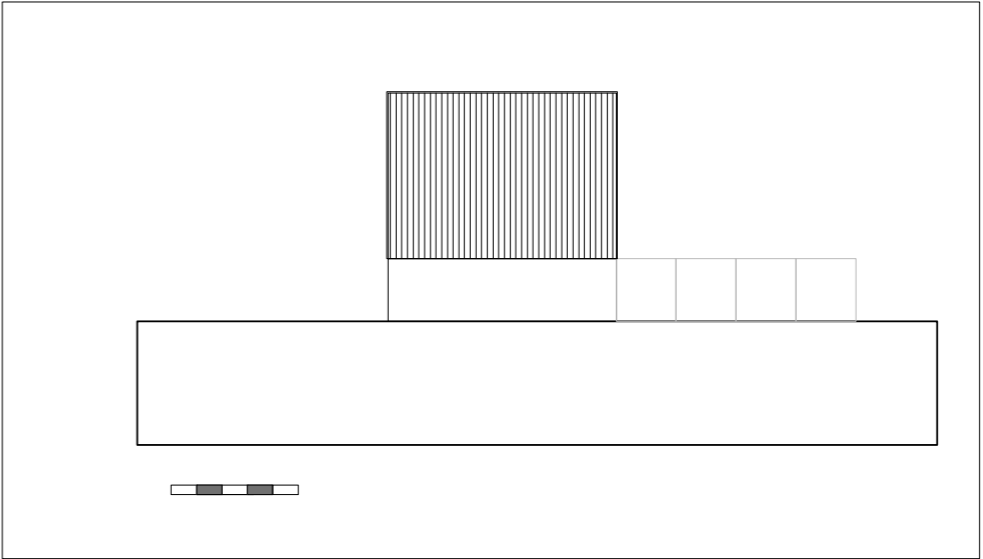
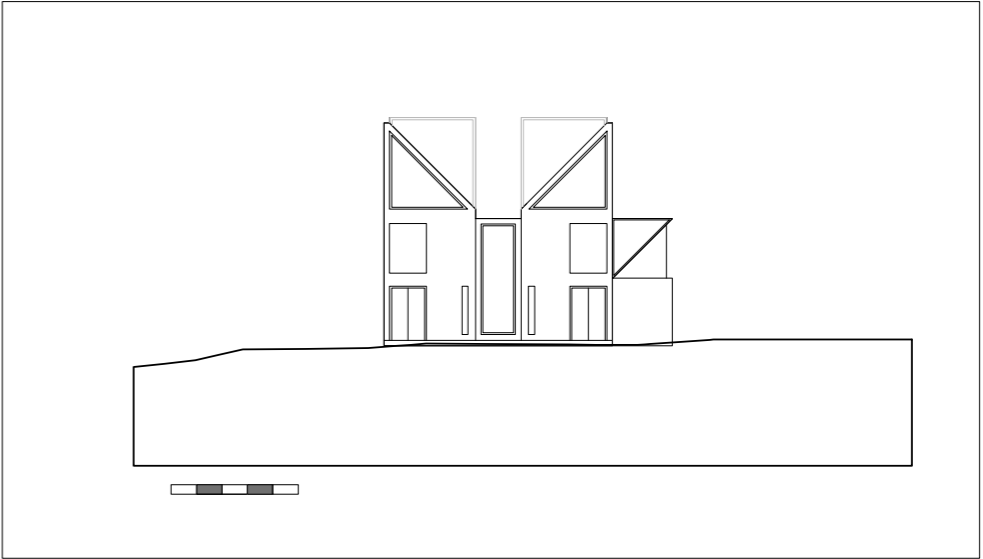
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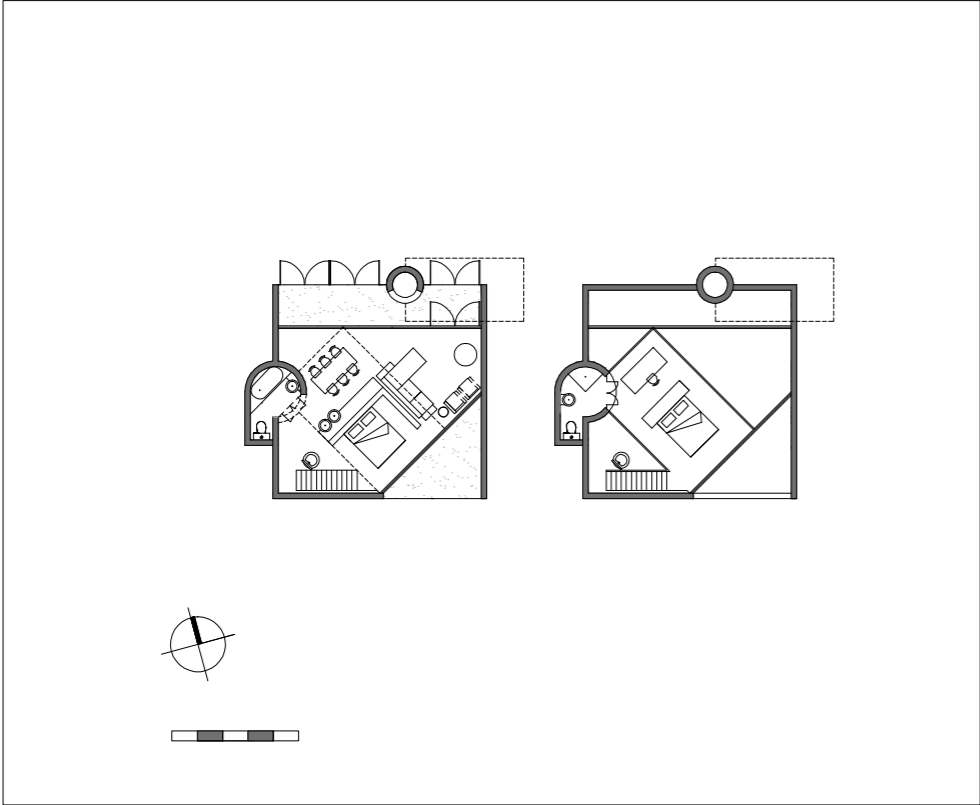
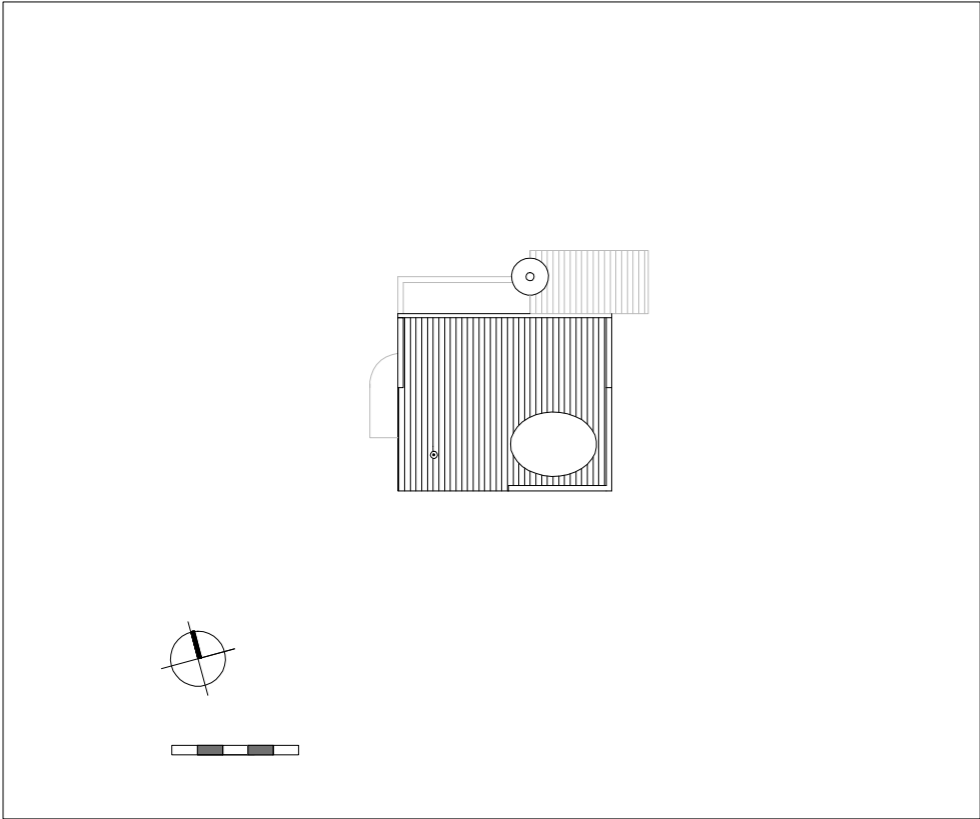
HOUSE 6 PLANS



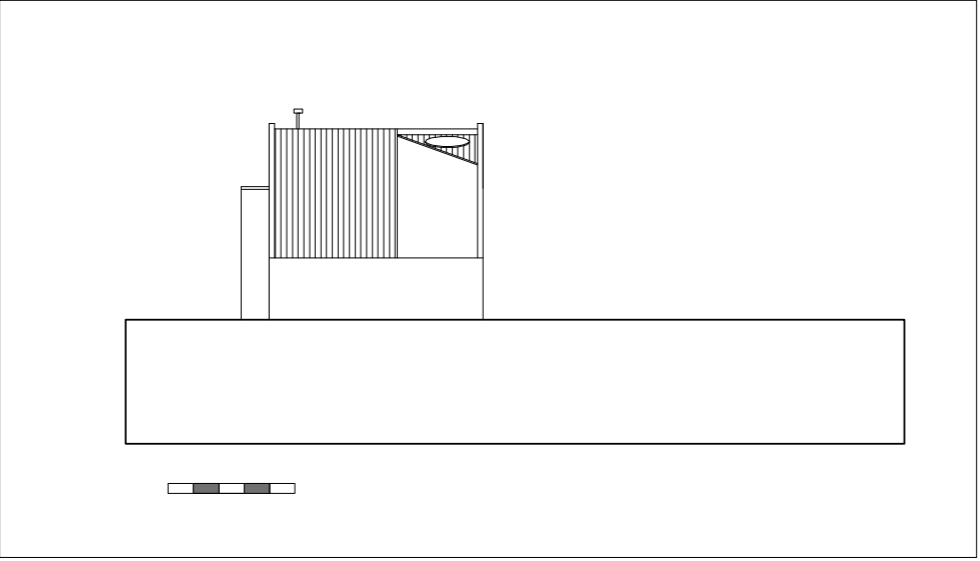
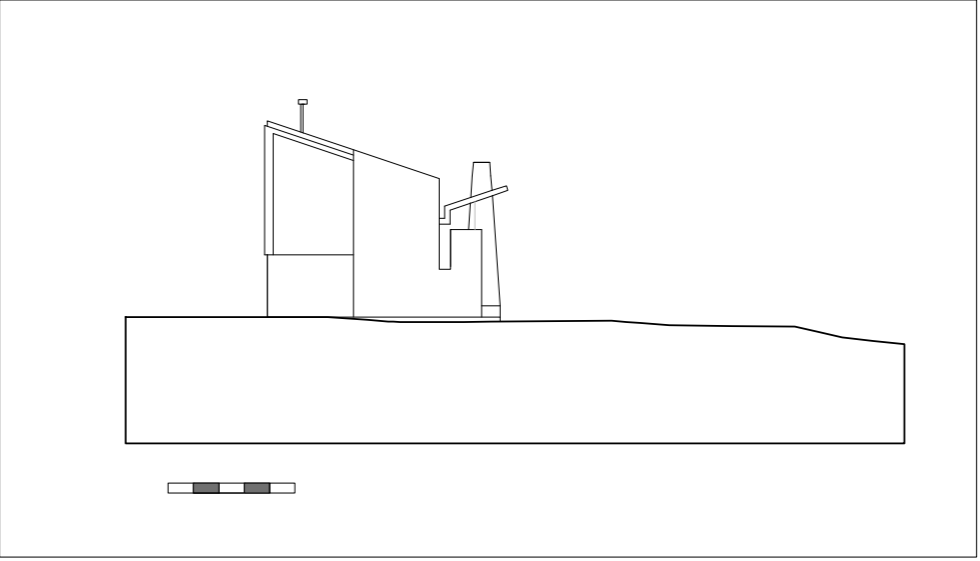
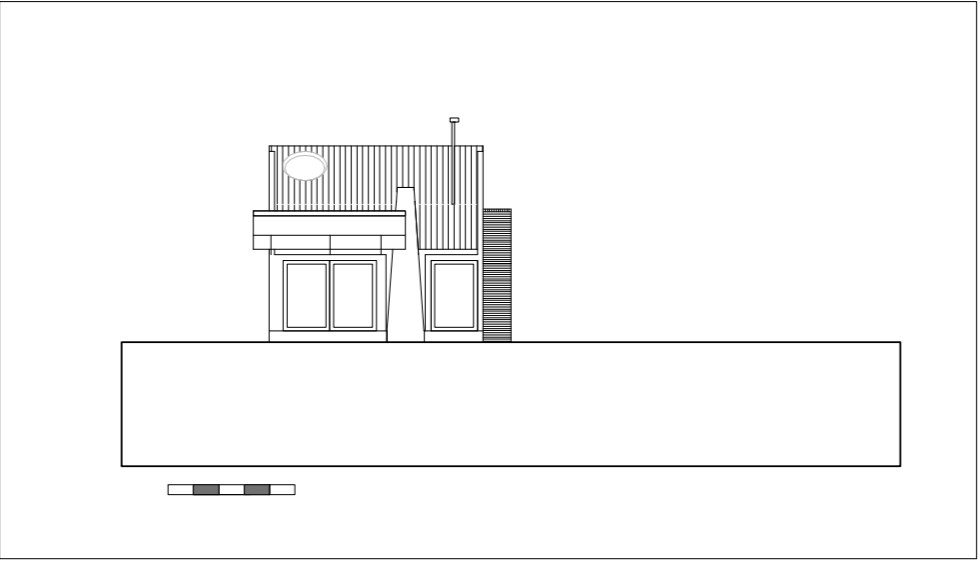
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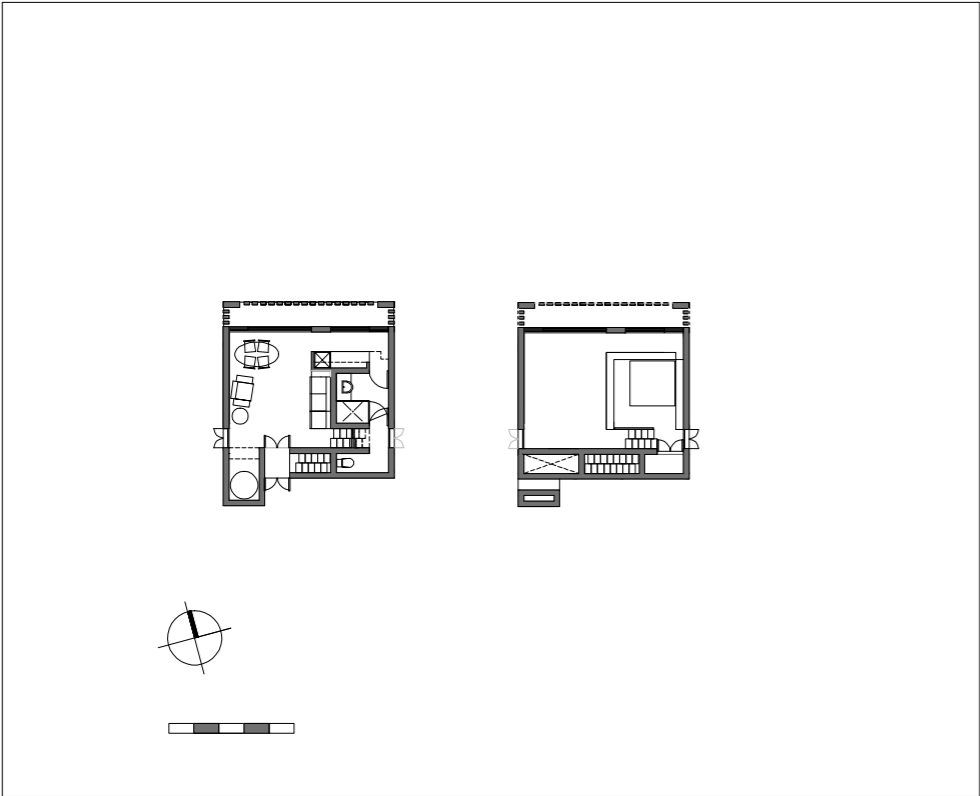
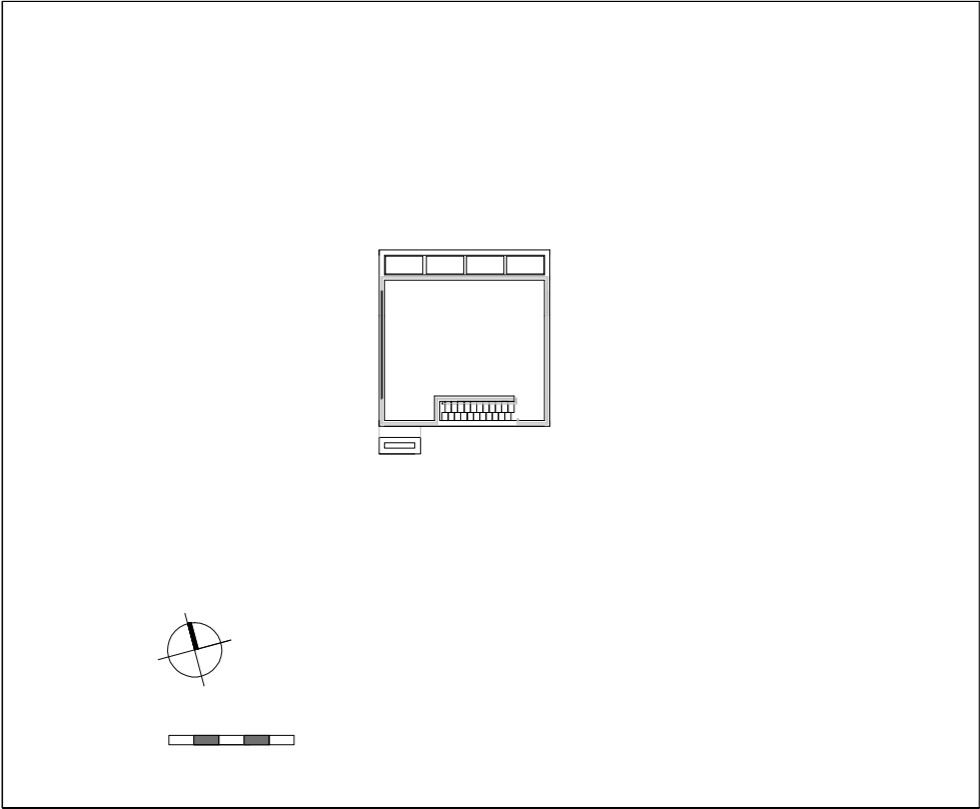
HOUSE 7 PLANS



HOUSE 7 ELEVATIONS



HOUSE 8 PLANS



HOUSE 8 ELEVATIONS

