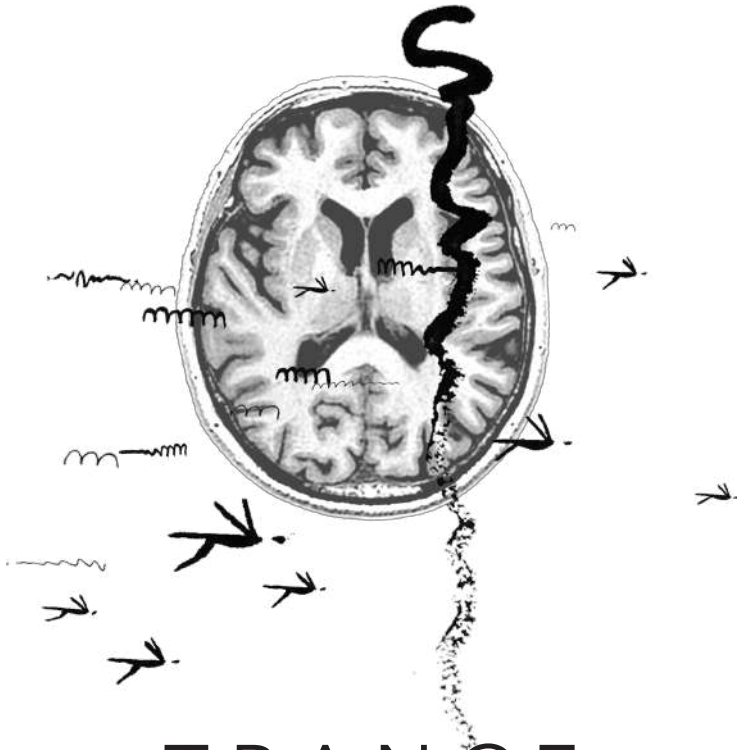


TRANCE

AN ARCHITECTURE FOR ALTERED STATES

Reintroducing ritual and altered states of consciousness to the human experience in order to promote a holistic wellbeing.

This dissertation is submitted in partial fulfilment of the requirements for the degree M.Arch. (Prof).
All the work contained in this document is my own except where otherwise acknowledged.

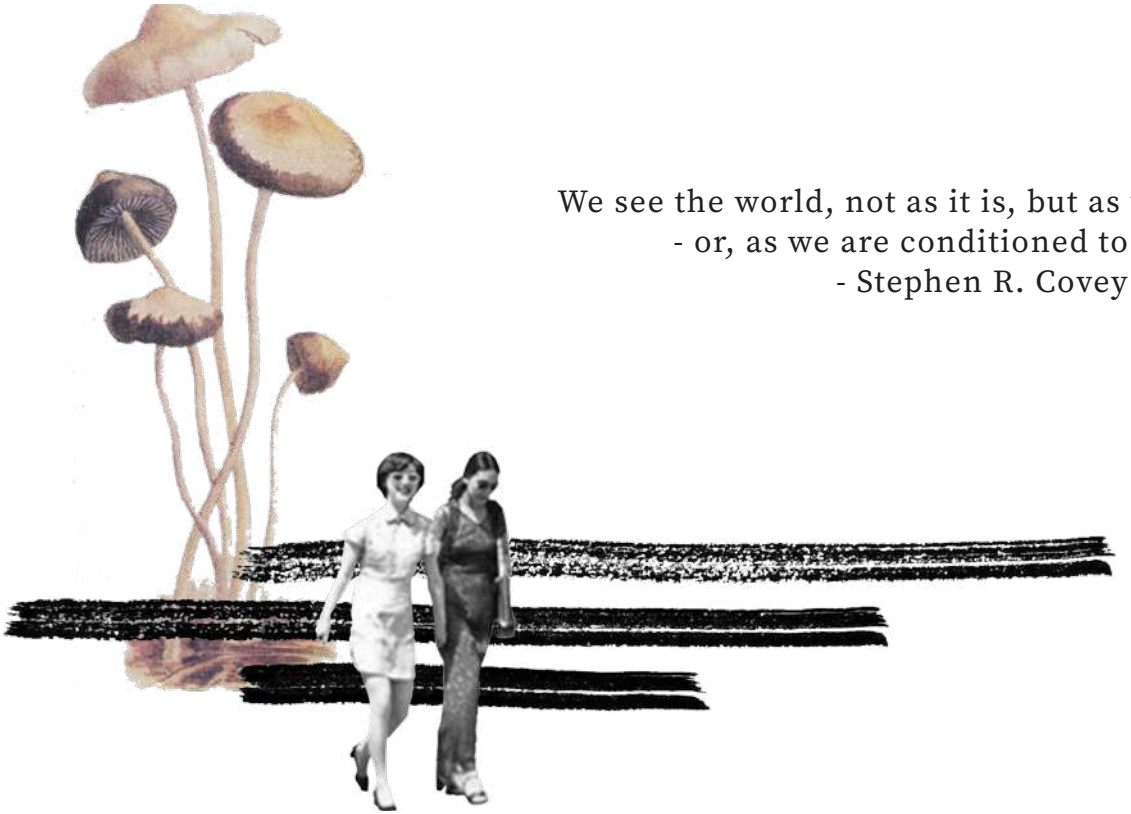
DEPARTMENT OF ARCHITECTURE, FACULTY OF NATURAL AND AGRICULTURAL SCIENCES
UNIVERSITY OF THE FREE STATE

MARGAUX LOUBSER
2014073593 | margaux.loubser@gmail.com | 079 035 4025

DATE OF SUBMISSION:
5 November 2020

SUPERVISORS:
Prof. J.D. Smit
Prof. P Smit
Dr. H.A. Auret
Hein Raubenheimer

The work contained in this document has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge, this document contains no material previously published or written by another person except where due reference is made.



We see the world, not as it is, but as we are
- or, as we are conditioned to see it.
- Stephen R. Covey (1989)

preamble

The lenses through which we see the world defines us, but we have the ability to step outside ourselves, change the lens, and see the world from a new perspective. This design dissertation investigates a proposal for a magic mushroom retreat in the Drakensberg, a substance that can bring to light the hidden aspects of ourselves, and as such enable a (w)holistic approach to being in the world. It affords us a glimpse of a world beyond our ordinary reality and allows us to bring back insights to our reality.

The aim of this proposal is to provide a physical framework for the reintroduction of ritual and altered states of consciousness to the human experience. It sets the stage for a recalibration of the self to nature and the soul. A threshold between worlds. The architecture explores the relationship between the physical and the metaphysical through symbolism and embodied experience. Both emplaced and out of this world, the building defines itself as a part of the landscape and transcends it. It is an exercise in intuitive architecture, designing for future ruin and the building as a narrative. The research conducted throughout this thesis sets out to investigate the role of altered states of consciousness, myth, ritual and trance in our experience of the metaphysical.

My interest in this topic is the natural result of a dedication to exploring the realms of consciousness and to the upliftment of the human soul. This dissertation follows the narrative of a journey. The end destination is not known, but we have faith in the process. Let us broaden the lens and open our eyes to a different way of being.

TABLE OF CONTENTS

INTRODUCTION x
Limits and sub-themes: x
Intention x
Mantra x
Document Framework x
Research Methodology x

CHAPTER 1 : SET x
1.1 Expanding consciousness x
1.2 Psychedelics x
1.3 The Phenomenology of Magic Mushrooms x
1.4 Client and user profile x

CHAPTER 2 : SETTING x
2.1 site analysis x
2.2 Site narrative x
2.3 The San and the rock face x
2.4 Nature, architecture, mushrooms and healing x

CHAPTER 3 : INGESTION x
3.1 touchstone x
3.2 concepts x
3.3 Accommodation precedent studies x
3.4 Project programme x
3.5 Proposed rituals on site x

CHAPTER 4 : ASCENT x
4.1 Towards a psychedelic architecture x
4.2 Ritual x
4.3 Myth x

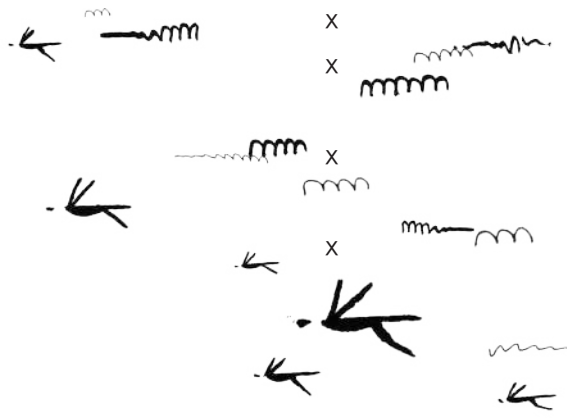
4.4 Engaging with topology x
4.5 Stonehenge: a narrative of myth and mystery x
4.6 The circle and the spiral x
4.7 Construction touchstone x
4.8 Design Development - ER 1 x
4.9 Exploring the forces between the physical world and the spiritual world x
4.10 Approach to sustainability x
4.11 Precedent study - Tectonics x
4.12 Design Development - ER 2 x
4.13 Touching the veil x
4.14 Architecture as the in-between x
4.15 Design development - ER 3 x

CHAPTER 5 : REVELATION x

CHAPTER 6 : INTEGRATION x
6.1 Walls and roofs : physical and non-physical x
6.2 The building in the landscape x
6.3 The architectural experience of ritual and myth x
6.4 Extending thresholds x
6.5 Structural system x
6.6 Sustainability report x
6.7 Dematerialisation x
6.8 What remains x

CHAPTER 7 : REFLECTION x

APPENDIX A x
Seeking the Magic Mushroom



introduction

This thesis will delve into an investigation of altered states of consciousness and how this was used throughout the ages in different parts of the world in order to gain a different perspective on consciousness. A change in perspective allows for a deeper understanding. The focus will be on how these altered states were attained within a ritualised setting and how, in modern society, the need to attain these states is still very much alive, but the element of ritual has become distorted. In ancient cultures, the ritualised setting facilitated a sense of community and oneness with the world, something our fragmented modern society is in dire need of. This thesis will also touch on communion with nature as a healing modality; how engaging and being with nature benefits physical and emotional wellbeing.

Psychedelic-assisted psychotherapy is an up-and-coming field of research. The stigmatisation of psychedelics in the 1960' s is slowly being dismantled and the overwhelming positive data on how psychedelics can assist in treating mental disorders is leading the way in psychology research. Most research is currently being done in a clinical setting, but I believe that by embedding this treatment within its traditional ritualised setting, more could be gained from the experience and the ensuing benefits.

Through research into the sub-themes mention below, I hope to gain a deep understanding of the interrelationship between consciousness, nature and healing and how these these aspects influences humanity in everyday life. By researching trance states, especially as induced by psilocybin, I hope to assimilate the kind of space that would facilitate such rituals, adding to the experience of trance as a catalyst for personal growth and healing. Designing for an altered state of consciousness depends largely on a subjective, holistic understanding of the entire process.

limits and sub-themes

1. Investigation into consciousness: 'normal' states of consciousness as well as altered states of consciousness and how the perspectives from altered states can be integrated into 'normal' states. Look at the ways in which consciousness can be altered, eg. meditation, psychedelics, breath work. How can these be represented in the architecture?
2. A comprehensive understanding of trance states and how these have been utilised throughout the ages.
3. The role of altered states of consciousness in building a sense of community and how this was perceived in a historical sense as well as how it is perceived currently.
4. Plant medicine as a means of deepening a relationship with nature.
5. Brief investigation into contemporary society and ritual.
6. The relationship between psychedelics and psychotherapy; why this modality is being used to treat mental illness rather than traditional pharmaceuticals.
7. The spatial implications of trance states.

INTENTION

Through dedication and practise, to uncover the secrets of ritual. As we spend our days, so we spend our lives.

MANTRA

I use my creativity for the liberation of the human spirit.

document framework

As this is an atypical project, it makes sense that the structure of the thesis would also be atypical, as would the design outcome of the design process. The document is structured in the way that a psychedelic trip develops. First starting with the set, or mindset; getting the reader into the frame of mind and setting up the way in which they will read the document. Second, the setting. This is the physical space in which a trip would take place. In architectural terms, this would be the site. Attention will be paid to specific aspects of the site, eg. physical properties, cultural significance and connection to nature. After these preparation stages, the drug is ingested, or in this case, design development commences. This stage relates to the touchstone and concepts: the initial engagement with the design. Stage 4 is when the drug starts to take effect and new perspectives are uncovered. In this chapter research that aids in the design process is introduced, gradually leading up to stage 5: the revelation, or final design. After this, a period of integration, stage 6 takes place, where the revelation is more thoroughly revealed. The aspects revealed would relate to the research mentioned in stage 4. After integration is complete, reflection on the entire journey takes place. Reflection on the process cements what was experienced and contributes to carrying the insights through into everyday life. The final reflection takes into account everything that was experienced in order to make sense of it.

Throughout the document there are notes which link the development of specific ideas, theory and motives. By following these breadcrumbs, one is able to gain a deeper understanding of how the final design came into being. At times, the text is kept deliberately vague. If everything was revealed at once, one is unable to comprehend the depth of thought that resulted in the revelation. It is about going on a creative journey. The destination is but one aspect.

research methodology

The research methods employed in this thesis are in direct correlation to the topic. It is not formalistic or ordered, but instead based on the experience and the unfolding of events. Once it was decided what was to be designed, the process was left to follow its own path.

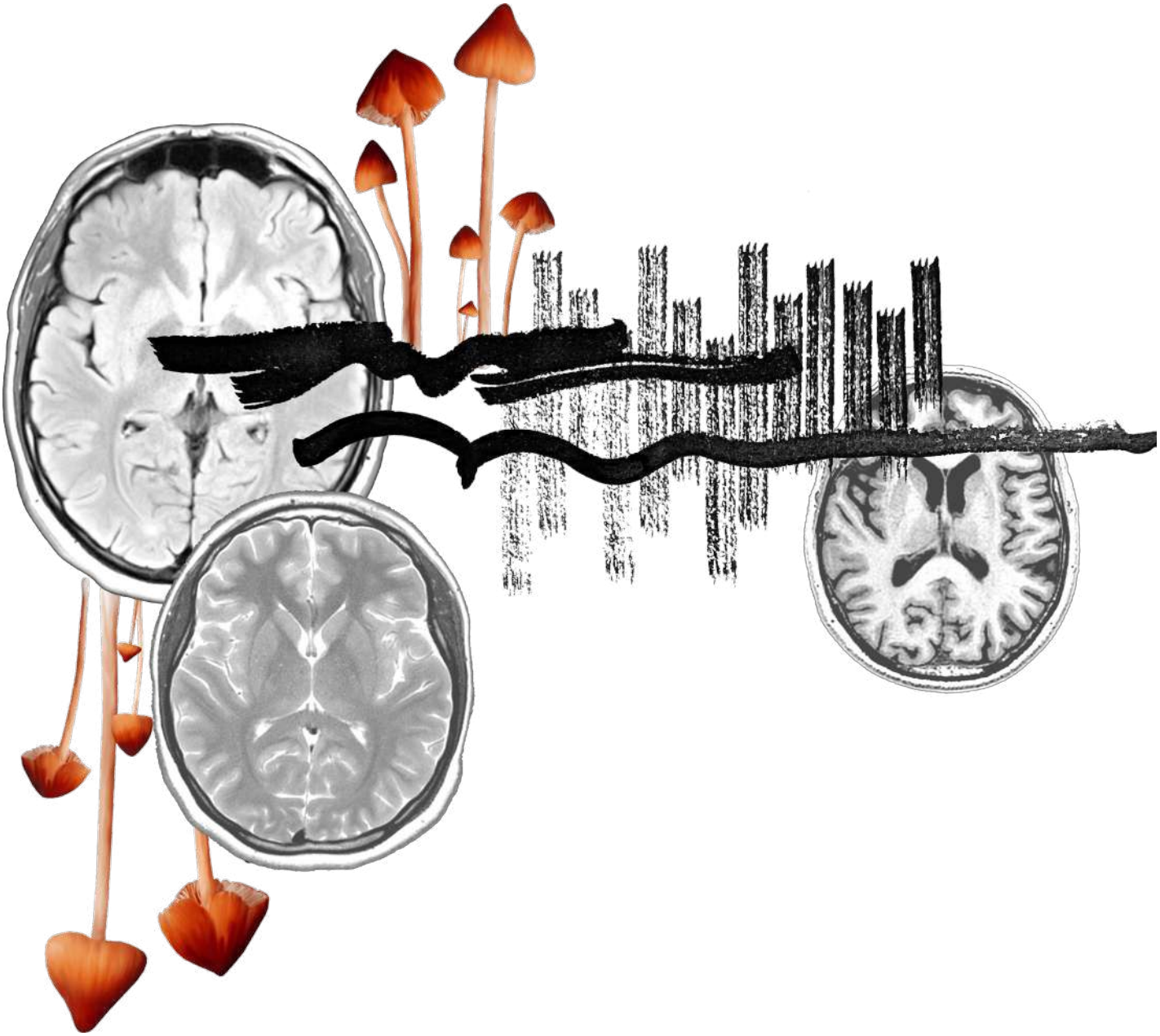
The way in which this project came into being was an organic process. First, the site was identified. Through the investigations into the site, the psychedelic history of the site was discovered. It was an idea that immediately intrigued. The conceptualisation of the project was based on what was discovered at the site. An in depth site analysis of both the physical and meta-physical attributes further determined what the brief would require.

Regarding the topic, the author aimed to understand what an altered state of consciousness entails: the experience thereof and the effect on the person who practices such states of mind. This was done through extensive research into shamanism, psychedelics and altered states of consciousness. Practical experience of ritual, meditation and altered states provided a visceral understanding.

The touchstone was utilised as a way to understand the essence of the project. The function and purpose of the building was identified, as well as the role it could play in understanding the human condition.

From the touchstone, three concepts were established. The concepts defined the project in terms of its theoretical underpinning and meaning. They provided a framework according to which the experience of altered states could be choreographed. The concepts were further investigated through literature review, interviews and investigative drawings. The development of the project is centred around the three concepts and their spatial implications. Various precedents and case studies were examined to provide a reference for the functioning, formgiving and structure of the design.

Care was taken not to impose form, structure or preexisting ideologies onto the project. But, it is still very much a reflection of the life experiences of a seeker of ritual. One tends to create as one is.



chapter 1

SET

(noun)

/s ɛ t/

the mental state a person brings to the psychedelic experience, i.e. thoughts, expectations and intentions. It includes the personality structure and mood at the time as well as thoughts regarding the sense of self.

1.1

expanding consciousness

Trance is defined as a state in which "there is a temporary loss of both the sense of personal identity and full awareness of the surroundings" (WHO, 1992:156). In trance states, the boundary between conscious and unconscious thinking is blurred, allowing access to the depths of the psyche not possible in waking states.

> "Our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. [···] No account of the universe in its totality can be final which leaves these other forms of consciousness quite discarded. How to regard them is the question, for they are so discontinuous with ordinary consciousness."
> (William James, Varieties of religious experience, 1902: 388)

Reality as we perceive it is but one, inherently subjective, perspective. What if we could change the lens through which we view this thing we call reality, turning it around in our minds to understand it in all of its forms? This changing of the lens, the altered states of consciousness, lie just beyond. In James' s words, parted only by the filmiest of screens. At times we unknowingly lift this veil, only to return to what is known, albeit with some insight gained.

Before we can delve into the depths of altered states of consciousness, we must first understand the concept of ordinary consciousness. A generally held idea that confuses our understanding of consciousness is what scientists call the naive view of consciousness: the implicit assumption that our ordinary consciousness is somehow natural and given. It' s the assumption that we simply see the world as it is; that the reality which is in our head - in our consciousness - is the same reality which is out there (Tart, 1981: 5). Applied to social landscape, this means that there is a simple, real, physical world out there. One where we can interact and communicate because we are all a part of the same reality. The same applies to our thought processes: that there is a natural way of thinking, and by extension, an unnatural way of thinking.

ALTERED STATES OF CONSCIOUSNESS

Talking about a state of consciousness means that our minds are organised; that there are patterns to its functioning (Tart, 1981:17). In an infamous analogy, the psychoanalyst Sigmund Freud likened the mind to an iceberg. It serves as a model to explain the structure and function of the tiers of consciousness. The conscious mind - all the mental processes of which we are aware - is only the tip of the iceberg. The conscious mind is where the sense of self resides. Below this is the preconscious, or subconscious, mind, the state of memory, where the thoughts and feelings a person is not immediately aware of, resides. This state can be easily accessed and brought to the level of consciousness. Finally, the unconscious mind: inaccessible to the conscious mind, it influences judgements, feelings and conduct. According to Freud (1915), the unconscious mind is the primary source of human behaviour. Past experiences, trauma and early programming are stored in the unconscious mind. It influences how an individual reacts in certain situations, feelings, decisions and motives. Like an iceberg, the most important part of the psyche is that of which you are unaware (McLeod, 2015).

An altered state of consciousness represents a recognisable change in the pattern of functioning of the mind (Tart, 1981:18). It can be explained as a dance between the conscious, subconscious and unconscious. The usual patterning is disrupted. It allows access to and the integration of experiences and emotions that are repressed in ‘ordinary’ consciousness. The ordinary states of consciousness gives access to an ordinary perception of reality, but altered states of consciousness permit access to non-ordinary realities (Simoes, 2002: 145).

Alternative states of consciousness (ASC) can be reached through a myriad of modus operandi: meditation, hypnosis, trance and hallucinogens. It allows us to see our lives and ourselves with a broader lens and from different angles of perception than the ordinary mind (Smith, 2015). Research has shown that ASC’s have been part of the human experience for millennia, predating all known religions (Van Pool, 2009). Entoptically-suggestive art (that is, art composed of motifs indicating sensory deprivation and commonly-associated forms of visual hallucination) can be seen as early as 70,000-100,000 years ago at Blombos Cave in South Africa (Henshilwood et al, 2002). There is also evidence of psychoactive plants used in religious ceremonies. The first major civilisation from Mexico, the Olmec, used the psychoactive venom from a toad to induce trance states (Ember & Carolus, 2017). Bones of the inedible Bufus marinus toad appeared in trash deposits at San Lorenzo, alongside a figure with an image of the toad inscribed on its head.

Altered states of consciousness are still extremely common in societies around the world. A study by Oohashi et al (2002) found that of 488 societies studied worldwide, 90% utilise institutionalised forms of altered states of consciousness. Furthermore, 57% of these were classified as possession trances, in which the individual acts as if taken over by another personality, deity, spirit or force (WHO, 1992:156). It is important to note that the capacity for shamanic trance is not bound to a specific culture. It is used by a vast majority of cultures throughout the world. This suggests that trance is "an inherent psychobiological predisposition … perhaps universal in the species" (Noll, 1983). Reaching altered states of consciousness is inherent to being human, and perhaps, when consciously practiced, as easily accessible as a normal state of consciousness.

ALTERED STATES: A UNIVERSAL PHENOMENA

What is defined as an altered state of consciousness, is most commonly experienced as a state of mind, subtly different from the usual thinking patterns in which one temporarily forgets one's self. Such subtle states are common in everyday life. One slips in and out of these states sometimes without even knowing.

It can happen during childbirth, sleep deprivation, sexual euphoria and in panic states. Perhaps the most common altered state of consciousness is dreaming. Though some cultures dismiss dreams as frivolous night adventures, other cultures take them quite seriously. Dreams are often interpreted to be messages from spirits. Dreams have been used in religious anecdotes to convey communication with deities, ie. Jacob's dream of a ladder to heaven as described in the book of Genesis in the Bible (Genesis, 28:10-19). Freud made use of dreams as part of his psychoanalysis, thought to reveal aspects of the unconscious. Nevertheless, dreams remain mysterious, somewhere in the realm between reality and fiction.

Contrary to dreams, meditation is a quietening of the mind. It is the practice of an altered state of consciousness. The rise of 'mindfulness' in the Western world has its roots in the Buddhist tradition. Meditation is coming to stillness, a relinquishing of the ego-self in order to experience the

interconnectedness of everything. In terms of the levels of consciousness as described by Freud, meditation stills the conscious mind, allowing for an awareness of the unconscious mind. It is a practice of continually coming back to silence. Many cultures around the world practice some form of meditation. As mentioned, Buddhism promotes meditation as the path to Enlightenment. In Judaism, Kabbalah is a form of meditative study which forms the foundation of mystical religious interpretations.

Another form of meditation is through movement. In Sufism, a branch of Islam mysticism, whirling is a traditional form of worship; a kind of active meditation by which the devotees continuously twirl around with one hand reaching toward the divine and the other to the earth. Through this practice, devotees are able to reach a mystical union with the divine. In the Eastern traditions, yoga is an active meditation by which the conscious mind is stilled in order to achieve unity between body and mind. A less well-known branch of yoga is pranayama, which consists of breathing techniques which cleanses the body and induces altered states of consciousness. A common element in these meditative practices is a setting aside of the ego-mind in order to find deeper connection, whether to divinity, the body, peace or the interconnectedness of the world.

There are of course, altered states of consciousness in which the experience is not as subtle. One of these is the trance state.

figure 1.x: A Mongolian shaman and his eagles (collage by author, 2020)

SHAMANIC TRANCE STATES

A great number of societies throughout history are known for using trance as an altered state of consciousness in order to connect with the spirit world, from the shamans in Mongolia and Siberia, to psychedelic societies in Mexico and the Amazon. Different methods are used to induce trances cross-culturally. Drumming and dancing are the most common throughout the world (Shapiro et al, 2017: 6). Other methods include fasting, sleep deprivation, social isolation and the use of psychedelic substances.

Shamanic States of Consciousness are a distinct sub-category of ASC' s characterised by lucid but narrowed awareness of physical surroundings, expanded inner imagery, modified somatosensory processing, altered sense of self, and an experience of spiritual travel to obtain information necessary for solving a particular individual or social problem. Yakov Shapiro, a psychodynamic psychiatrist at the University of Alberta, argues that shamanic trance states represents humanity' s most ancient spiritual tradition. It is at the core of culture and religion as we know it (Shapiro et al, 2017). Among shamans, trances are usually induced by mechanisms such as singing, chanting, drumming, or dancing, after which the shaman collapses and becomes unconscious, often with intense visual experiences (Ember & Carolus, 2017).

Shamanic trance states were traditionally used as a tool for social cohesion and healing. Shapiro et al (2017) conceptualises Shamanic States of Consciousness as "hyper-focussed integrative state that transcends the limits of the ordinary rational self and helps identify the sources of discord within the individual, their tribal group, and wider environment." From this definition it can be gleaned that trance states serve at least a social, if not spiritual purpose. Through transcending the ego-state, the part of the mind that identifies with the 'self', the shaman is able to have access to modes of knowledge that would not be possible in normative states of consciousness. These insights assist the shaman in navigating the physical world and provide guidance to individuals who are not able to access these trance states (Mweli, 2020). An important distinction here is between those that are able to enter into trance states and those who are not.

In a culture, trance states serve two distinct functions: social cohesion and healing.
Trance is institutionalised as a means of organising and integrating society. It provides the stage for the people of the culture to come together and take part in a meaningful aspect of their life experience. There is a social distinction between those who are able to see and those who cannot, but each person plays a role in the proceedings, whether as spectator, participant, vocalist or drummer (Lewis-Williams & Pearce, 2004). During the trance state itself, those undergoing trance preform deeds that are beneficial to the entire group. In the spiritual traditions of the Kalahari San, shamans are able to enter trance states to visit far-off camps to see how family members are and if they have enough food (Lewis-Williams & Pearce, 2004). In the Amazon, ayahuasca was used in making important tribal decisions (Shanon, 2003:127). The trance state is an occasion for the people to be together.

In relation to trance states, healing is defined as "a process of transition towards meaning, balance, wholeness, and connectedness, both within individuals and between individuals and their environments" (Katz, 1982: 3) In Mexico, the trance state induced by consuming magic mushrooms was used exclusively in treating the sick. The shaman is able to 'see' inside the patient to establish the root of the illness and to find a cure (Shanon, 2003; 127). The plant which induces the trance state is highly revered as a potent and sacred medicine which is only to be used by those who have been called (Myeni, 2020).

A well-documented phenomenon is that of the shamanic call (Shapiro et al, 2017). An individual who has not been trained in shamanic rites, hears the calling of ancestors, deities or forces. The symptoms of such a calling may manifest as violent personal crises, intense anxiety and social withdrawal. The

figure 1.x: the mind in the state of entropy is like clay before it enters the kiln (Richards, 2014)

individual may experience dreams, inner voices or visions (Wright, 1989). Shamanic elders recognise these symptoms and take it upon themselves to educate the initiate on the intricacies of the trance state. An essential part of the process is of surrendering to one' s purpose. Through this tradition, ideas of what trance is and what can be experienced, is passed along generations.

Roger Walsh, an Australian professor of Psychiatry and Philosophy states that "the experiential content of the shamanic journey is complex and coherent…highly structured, meaningful, consistent with the shaman' s learned cosmology and the purpose of the specific session, and [apparently] under partial voluntary control" (1989:1). An important point here is that the trance experience will be largely dictated by the cosmology of the individual. Trance states are highly susceptible, therefore, a person entering trance will oftentimes be greeted with images and sensations reported by other individual who have previously entered such trance states. The meaning of trance become apparent within an established cosmology (Lewis-Williams & Pearce, 2004). Furthermore, the purpose of the trance journey affects the experience. Shamans entering trance in order to heal will have a different subjective experience than a shaman entering trance in order to control rain (Lewis-Williams & Pearce, 2004).

ALTERED STATES OF CONSCIOUSNESS AND WESTERN SOCIETY

The argument was made that access to alternative states of consciousness are a cross-cultural phenomena, inherent to being human. The question thus arises: why, until recently, were trance states disregarded in Western society?

The Western society does have some acquaintance with altered states of consciousness. It has its roots in Ancient Greece, where practising altered states of consciousness was a common occurrence. In Plato' s Symposium, Socrates sits in meditation before entering the banquet hall to join in the discussions (Plato, 2008:174d-175d). In another part of Athens, initiates took part in the Eleusinian mysteries, an allegorical rite where the revelation was the culmination of the intense ritual experience and brought about a radical change of mind (Armstrong, 2009:61). Some speculate that a psychedelic fungus was used to make the potion kykeon which was used in the ritual (Nichols, 2016). With the development of the early Christianity, the practice of silence was emphasised as a way to quiet the mind in order to hear the voice of God. Along with meditation, participation in the liturgy were regarded as another of the ways which one can become closer to the Divine.

figure 1.x: Apollo, Dionysus and a field of prickly pear (author, 2020)

The low-light liturgies were filled with chants, bells and incense which all facilitates the stepping outside of oneself, in other words, and experience of an altered state of consciousness (Rossouw, 2020).

Before we can theorise why these alternative states of consciousness are so foreign to contemporary society, we must first understand the relationship between *mythos* and *logos* and how the interpretation of truth has changed throughout the ages. The terms mythos and logos denote the two recognised ways of thinking, speaking and acquiring knowledge (Armstrong, 2009: 2). The concepts are complementary to one another: logos enabled people to function effectively in the world, therefore it had to respond to the external reality. Mythos stepped in where logos could not: finding meaning. These two polarities could also be termed the intellect and the intuition, the balance of which is essential for the meaningful functioning of a person.

As Western society developed, the balance tipped in favour of logos. Rationality, facts, function and intellect became all the more important (Armstrong, 2009: 159-251). The focus shifted toward the external. Western psychology grows from this cultural context (Tart, 1981:2). Consciousness in the broadest sense is secondary to being able to function normally, i.e. to master the state of ordinary consciousness. In a world which is so focussed

figure 1.x: The balance between mythos and logos (author, 2020)

on the external norm, anything that overturns that solidified perception of reality is seen as a threat to the stability of the community. This reaction is in itself the result of an inability to imagine realities which are not ordinary.

The movement back to the internal started with Carl Jung and his studies of the collective unconsciousness and culminated in the 1960's with Timothy Leary and his psychedelic experiments at Harvard. Slowly, the West is becoming reacquainted with its mythos. But the balance between intellect and intuition cannot be restored by reasoning alone (Rossouw, 2020). This is where the transformative experience comes into play. In order to be able to experience altered states of consciousness, a person must be able to redirect the focus inward. With the Western world having little experience on what the term even means, it can be difficult to occasion such a transformative experience. This is where psychedelics finds its niche.

1.2
psychedelics

The name given to these substances which occasion radical changes in consciousness, come from the Greek *psyche* and *delos*, the combination of words meaning "mind manifesting", which is precisely what these drugs hold the power to do. That which is usually confined to the mind becomes an embodied experience. After the 60's and the connotations the word gathered, scientists have proposed that these types of molecules be called entheogens, from the Greek "the divine within", an oversimplification awash with a golden glow. Humphry Osmond, a psychiatrist who coined the term in 1956, wrote to his friend Aldous Huxley in a letter: "To fathom hell or soar angelic / Just take a pinch of psychedelic." It gives a hint as to the transcendence of polarity which is often experienced with psychedelics.

figure 1.x: A worldmap of the tradiriional use of psychedelic substances (author, 2020)

The presumption that psychedelics are dangerous is not unfounded. While the compounds have no adverse affect on physiology and are biologically safer than nearly all other substances taken by humans, it can occasion a state of mind for which a person might not be prepared. Due to its suggestible nature, the circumstances surrounding use of the psychedelic influence the experience to a large extent. The importance of the set and setting in which these molecules are ingested cannot be emphasised enough. The difference between altered states of consciousness as occasioned by psychedelics and other altered states of consciousness is one of intensity and time. While meditators take years to learn how to still the conscious mind, psychedelics does this in 30 minutes, give or take. To some degree, reaching alternative states of consciousness through other methods is more sustainable. The initiate is trained, prepared and committed. By developing these faculties through continued practice, the experience is much less overwhelming and the spirit is strengthened.

When psychedelics are taken in a ritualised setting, the shaman has the responsibility of providing a set and setting which is the most conductive to healing. This is why, in traditional cultures, the use of psychedelics is limited to those who posses the proper knowledge. Many contemporary cultures are known to make use of so-called plant medicine in rituals as a way of communicating with the spirit-world, reveal deeper truth about the human psyche or healing. Arguably most importantly, psychedelic plants enables cultures to connect with their interpretation of the divine. The plants are used a ceremonial religious tool, as a kind of sacrament. The cultures that use these sacraments stretch far and wide: from the psychedelic toad in Mexico, to ayahuasca in the Amazon, peyote by the Native Americans, magic mushrooms by the San here in South Africa and Iboga by the Bwiti tribes in East Africa. The ancient Hindu text, the Rig Veda, mentions a psychoactive drink called soma and some speculate that the Ancient Greeks ingested a potion made from a psychoactive fungus.

Deep in the Amazonian jungles, medicine men and shamans involve the use of a plant sacrament to facilitate healing, both physical and meta-physical (Shanon, 2003:127). Ayahuasca is a psychoactive tea brewed from the Banisteriopsis caapi vine and Psychotria viridis shrub. The brew is used as a traditional medicine among the indigenous people of the Amazon. The ceremonial use of Ayahuasca is believed to heal both physical and mental ailments and allow communication with the spirit world (Shanon, 2003:128). The ceremony is always preformed in the presence of experienced shamans. The ceremony is usually accompanied with purging which include vomiting and diarrhoea, which is believed to release built up emotions and negative energy. In some cases, individuals experience significant psychological stress during the experience. Since the surge of psychedelics in the 1960's,

Westerners have travelled to the Amazon to partake in these ancient rituals, most commonly for the spiritual revelations associated with it (Pollan, 2018).

Similar neurophysiological markers have been documented in diverse trance states including yoga and shamanic practices; Zen Buddhist and transcendental meditation; psychedelic experiences associated with hallucinogenic drugs; mediumship/psychography; hypnosis; and shamanic states. (Shapiro et al, 2017: 7)

A BRIEF HISTORY

The story of psychedelics in the western world started with an accidental discovery in 1938. Albert Hoffman, a Swiss chemist, was looking for a drug to stimulate circulation when he synthesised the molecule and, thinking it was useless, shelved it because he "like the chemical structure of the molecule" (Hoffman, 1980: 5). When, in 1943, he synthesised LSD for the second time, he accidentally absorbed some of the chemical through his skin and "was interrupted in [his] work by unusual sensations" (Hoffman, 1980: 7). This was the world's first LSD trip. Immediately realising its potential for exploring the mind, the compound was disseminated throughout the world to any researchers who could find a marketable use for it.

Twelve years later, an amateur mycologist travelled through Mexico to study mushrooms, specifically, the mushrooms described as " the flesh of the gods" by the Mazatec Indians (Pollan, 2018: 83). After much effort, R. Gordon Wasson was able to convince a local shaman, a woman by the name of María Sabina, to allow him to attend a mushroom rite. Two years later an article appeared in Life magazine (a transcript of the Life article can be found in Appendix A). The entire experience was recounted under the title Seeking the Magic Mushroom. This was the first time that news of these altered states of consciousness reached the general public (Pollan, 2018: 2). Wasson describe some of his experience: "I felt I was now seeing plain, whereas ordinary vision gave us an imperfect view" (Wasson, 1957). Unknowingly, I echoed this sentiment during my first ritualised psilocybin experience: "I see better with my eyes closed." Wasson arranged for samples of the mushrooms to be sent to Hoffman. In 1958 Hoffman managed to isolate the active compounds in the mushrooms; psilocybin and psilocin; and developed the synthetic version of psilocybin which is still used in research today.

During the most part of the 1950's and 60's, LSD and psilocybin were regarded as miracle drugs. Psilocybin was regarded as the gentler, more natural alternative to LSD (Pollan, 2018: 101). There

were conferences, studies and institutes, all dedicated to understanding what psychedelics could do. It was through LSD that researchers discovered the role of neurotransmitters in the brain (Pollan, 2018: 2). One of the most important discoveries was the role of serotonin in mental processes (Cozzi, 2013: 16). Psychedelics showed such promising results in treating psychiatric illnesses and addiction, that researchers deemed it the "most important breakthrough in neuroscience of the century" (Cozzi, 2013: 18).

Timothy Leary, a clinical psychologist at Harvard University, read the article and began experimenting with psilocybin. Soon after, the Harvard Psilocybin Project was born. The research methods were questionable, and in 1963 Leary was fired. After leaving Harvard, he continued promoting the use of psychedelics. With Leary at the forefront, the psychedelic movement quickly gained momentum. Leary believed that the use of these compounds should not be confined to research facilities, but that the entire population should "turn on, tune in and drop out." The psychedelic experience became a kind of rite of passage for the young, but where traditionally a rite of passage served as an initiation into society, these initiates were left in a state of mind that few adults even knew existed. Moral panic ensued.

At the other end of the spectrum was Al Hubbard, an improbable, elusive and intriguing character. A devout Catholic, smuggler, yacht captain and millionaire businessman with a third grade education who occasionally worked for the Food and Drug Administration, the Canadian Special Services and the Bureau of Alcohol, Tobacco and Firearms (Pollan, 2018:164-168). Hubbard advocated for psychedelic assisted psychotherapy and he was the first person to emphasise how one's mental state and intention could influence the experience (Psychedelic Times, n.d); what we today call the factors of set and setting. Playing the role of the psychedelic evangelist, he introduced as many as 6 000 people to LSD, including scientists, politicians, intelligence officials, diplomats and church figures.

Tim Leary and Al Hubbard were like two sides of the same coin. While Leary's approach to psychedelics was a bottoms-up, democratic manoeuvre, Hubbard believed that the compounds should first be given to those in higher positions in order to facilitate a smooth transition into a psychedelic society. Many regarded Leary's advocacy as irresponsible; there is no doubt that his methods are questionable; but he did succeed in turning on an entire generation.

From 1965, the dark side of psychedelics held the public attention. Psychedelics, particularly LSD gained a reputation as a dangerous chemical which causes madness. When the distribution of psilocybin and LSD became illegal in 1967, doctors and scientists were forced to distance themselves from any research. After the psychiatric establishment turned

against psychedelics, the entire body of knowledge was effectively erased from the field. It was as if it had never happened (Pollan, 2018: 142). The psychedelic movement was successfully buried. But not for long.

In the 1990' s a small group of scientists and psychotherapists resolved to unearth the potentials of these extraordinary compounds. They felt that with the ban on psychedelics in the 1960' s, something precious had been lost to society (Pollan, 2018: 3). The movements started small and well out of the public gaze. First, a trial was approved for studying the physiological effect of DMT, a powerful psychedelic found in many plants and in the human brain in small amounts (Psychedelic Times, n.d). Then, human trials for MDMA (Pollan, 2018: 48). A research institute was founded, then the Council for Spiritual Practices, which focussed on the mystical applications of psychedelics. Slowly, the ball started rolling again.

Today, psychedelics are undergoing a renaissance. The studies cover a wide range: from healing mental illnesses such as anxiety and depression to neuroscience. It has been an irreplaceable tool in trying to unravel the mysteries of consciousness. In the words of Michael Pollan, the value of these non-ordinary states of consciousness lies in its ability to "reflect light back on the ordinary ones, which no longer seem quite so transparent or ordinary" and to "recognise that our account of reality, whether inward or outward, is incomplete at best" (Pollan, 2018:406-407). It is through psychedelics that scientists are trying to map the terrain of the human consciousness.

EFFECT ON THE BRAIN

Dr. Stanislav Grof, one of the leading figures of psychedelic research, hypothesised in the 1950's that what the telescope was for astronomy and the microscope was for biology, psychedelics would be for understanding the mind (Grof, 2001). Since the first wave of research in the 20th century, technological advancements have enabled scientists to look deeper into how psychedelics affect the brain, and what consciousness looks like. A team of researchers at the Imperial College in West London have made vast strides in this regard.

The team, led by Dr. Robin Carhart-Harris, discovered that under the influence of psilocybin there is a decrease in activity in the default mode network (DMN), the part of the brain responsible for memory and emotion. The DMN is the place our minds go to wonder, to ruminate, to reflect on ourselves and to worry. It is most active when a person engages in mental activities such as self-reflection, mental constructs and moral reasoning (Raichle et al, 2001). Carhart-Harris describes the DMN as the brain's orchestra conductor, tasked with keeping the brain's unrulier tendencies in check (Pollan, 2018: 303). A part of the mental constructs the DMN assembles is the sense of self.

When psilocybin was ingested, the DMN in the brains of the subjects flickered to a halt; the subjects described a dissolution of the sense of self. One of the subjects reported: "I didn't know where I ended and my surroundings began" (Carhart-Harris et al, 2012). After the study was published, a researcher who was studying the brains of experienced meditators under fMRI (Brewer, 2015) realised that the scans from Carhart-Harris's study and those of the meditators were remarkable in similarity. The transcendence of self reported by the meditators showed up on the fMRI scans as a quietening of the DMN. It seems that when activity in the DMN lowers, the boundaries we experience between the self and the rest of the world temporarily vanishes (Pollan, 2018: 305). This allows us to experience the interconnectedness of everything, one of the hallmarks of the mystical experience. But what happens elsewhere in the neural orchestra when the conductor puts down his baton? The DMN acts as a kind of inhibitor; when it is quietened, the rest of the brain lights up like a Christmas tree. This might explain why things that are normally repressed resurface during a psychedelic experience; memories, emotions and childhood traumas; the things we have, through the patterns in our minds, learned to suppress.

The adult mind can be viewed as a prediction-making machine. When faced with a set of circumstances, it jumps to the most likely conclusion; conclusions which, through experience, have been proved to be correct. This ability of the mind enables it to work more efficiently at solving new problems. Entropy is the term given to describe a lack of order or predictability. The brain's predictive coding reduced entropy by establishing order. Carhart-Harris et al (2014) suggest that psychological disorders stem from an excess of order in the network of the brain, in other words, the lack of entropy. This is where psychedelics come into play: "psychedelics alter consciousness by disorganising brain activity" (Carhart-Harris, 2014).

Under the influence of psychedelics, the brain as a whole becomes more integrated (Carhart-Harris, 2014). The various networks of the brain becomes less specialised and it is able to function with greater flexibility and interconnectedness (Pollan, 2008: 316). The Imperial College team demonstrated in a 2014 paper (Petri et al, 2014) how the usual lines of communication in the brain are radically reorganised when the DMN goes offline. Figure xx and xx present a simplified representation of the networks within the brain. In ordinary consciousness (figure xx), the brain's various networks primarily communicate within themselves and where there is inter-network communication, the paths are set

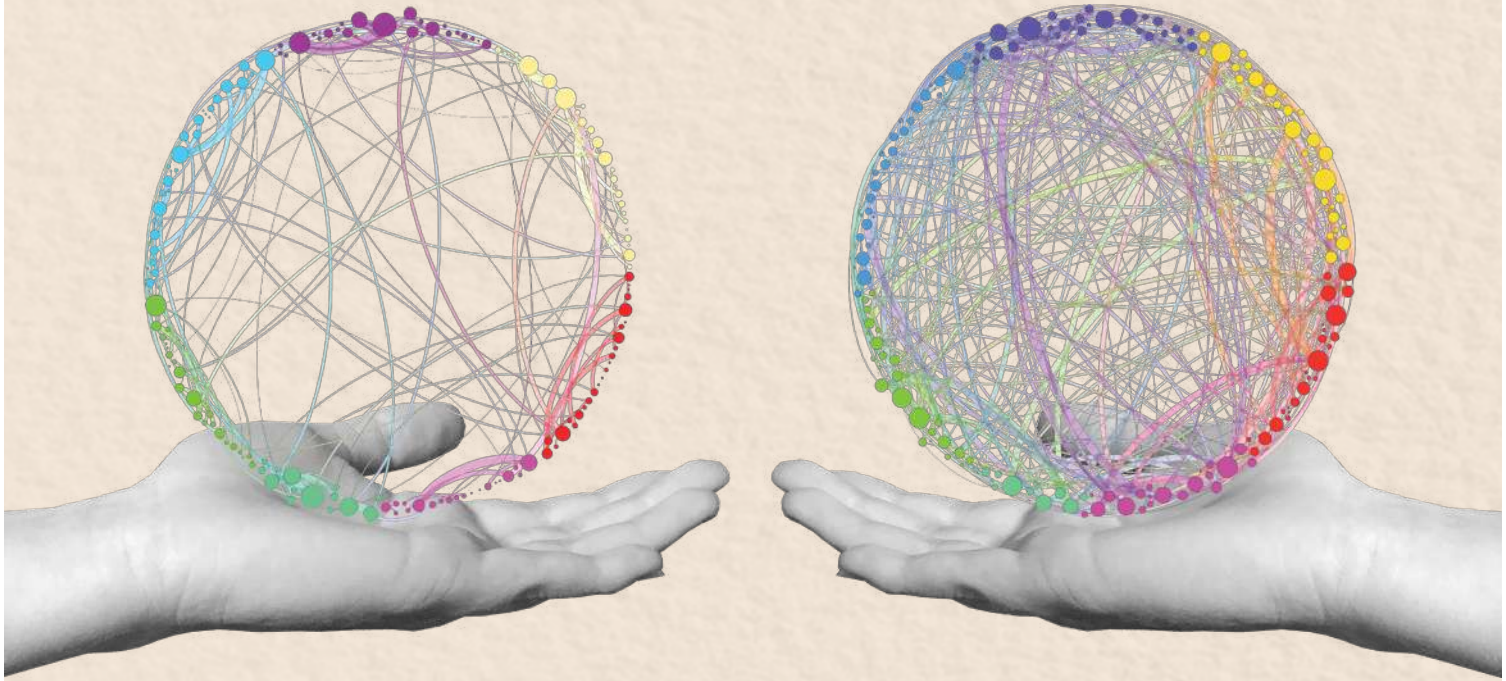
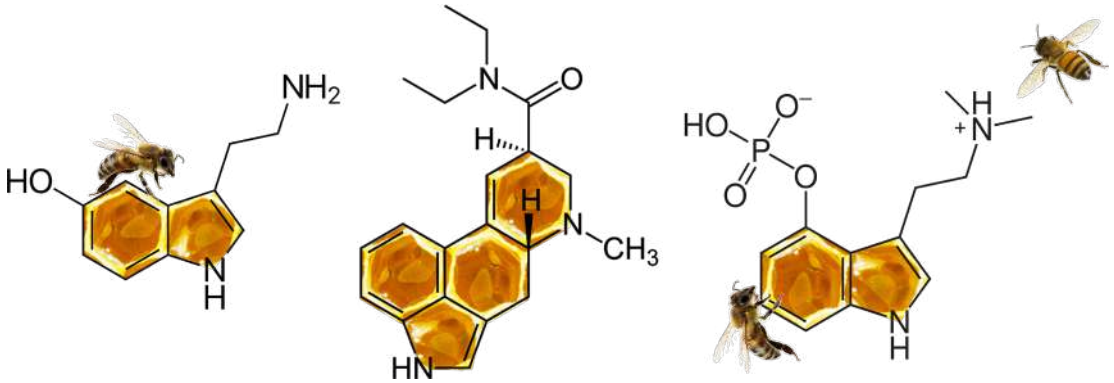


figure 1.x: Homological scoffolds of brain funcional networks (Petri et al, 2014)

figure 1.x: Similarities in the molecular structure of serotinin, LSD and psilocybin (author, 2020)



and heavily trafficked. Under the effect of psilocybin, this all changes (figure xx). Thousands of new connections form, the usual patterns of thinking are disrupted and regions of the brain that rarely communicate are now having full-on conversations (Pollan, 2018: 317). Research has not concluded whether these new pathways are enduring, but it has been suggested that some amount of learning takes place while the brain is rewired. As with most skills, the more time spent exercising them, the more enduring they become. With psychedelics this could be as simple as recalling the experience and reinforcing it during the integration process (Pollan, 2018: 320). The experience could be likened to shaking a snow globe. The brief spout of entropy can disrupt unhealthy patterns of thought and create space for flexibility, and, as the snow resettles, more favourable patterns can be integrated (Pollan, 2018:320). Some researchers suggest that a state of entropy can facilitate neuroplasticity, the ability of the brain to reorganise itself. "Psilocybin brings your mind into an acute plastic state, like a ceramic before it goes in the kiln - in that state, your brain is malleable," reveals Matthew W. Johnson, a Professor of Psychiatry from Johns Hopkins University. While the idea of one's brain becoming putty might invoke some anxiety, the process is surprisingly safe.

For the psychedelically nervous, ingesting a compound which has such a radical effect on the mind seems risky, but in reality it is much safer than many substances which are currently legal. Professor David Nutt, Britain's chief drug adviser and chair of the Advisory Council on the Misuse of Drugs, was fired after he reported that alcohol and tobacco were more harmful than LSD and Cannabis, and that Ecstasy was safer than riding a horse. In the paper Nutt (2012: 254) states that "psychedelics overall are among the safest drugs we know of… It is virtually impossible to die from an overdose of them; they cause no physical harm; and if anything they're anti-addictive." Animals, if given the choice, will not self-administer a psychedelic more than once. The classic psychedelics exhibit

remarkably little toxicity (Pollan, 2018: 50) as it leaves the physiology largely untouched. The effects of the drugs are focussed on the serotonin receptors in the brain (Nichols, 2016:10). Both psilocybin and LSD are in their molecular structure so similar to serotonin, that the molecules are able to attach to serotonin receptors. Yet, these compounds have no effect on brain dopaminergic systems which means that these compounds do not lead to substance dependencies (Nichols, 2016: 11). In contrast to other hallucinogens such as MDMA and Ecstacy, the psilocybin and LSD do no stimu ate the production of serotonin, which would lead to a shortage in the timeframe after its use. A meta-study failed to identify any significant adverse effects (Halpern & Pope, 1999). Neither were there any significant associations found between lifetime use of LSD and an increased rate of mental health disorders. In fact, the use of psychedelics was associated with a lower occurrence of mental health issues (Nichols, 2016: 11). It must be emphasised that the recreational use of psychedelics is not encouraged, but instead its use within a structure when set and setting is controlled, i.e. within a ritual. It is within a safe, controlled space where the use of psychedelics can reach its full potential.

One way to understand a complex system is to upset it. Psychedelics offers us a means to look at our self and our thoughts from another perspective, reflecting light back onto the ordinary states, so we can better understand our place within the world.

figure 1.x: the mind reaching towards the transcendental (collage by author, 2020)

THE ROLES OF PSYCHEDELICS

Psychedelics have an immense potential to help us understand our selves, our mind and our spirit. Research is only now beginning to explore all the possibilities psychedelics can offer us in knowing the human psyche. What has been evident through anecdotal evidence throughout the millennia, is being examined in the light of science.

Psychedelic psychotherapy is a type of psychotherapy in which psychedelics are used to treat mental illnesses. In its clinical applications, psychedelics are researched as treatment for mental disorders ranging from addiction to death-related anxiety. The state induced allows patients to get closer to trauma, gain new insights and a greater understanding of their place in the world. Subjects describe the experience as having a transformative effect on their perspective, and the decisions they make post-treatment.

Research has proven that psilocybin is a more effective treatment for depression than traditional SSRI-medication (Watts et al, 2017). While SSRIs need to be used on a daily basis and often become less effective as time passes, a singular psilocybin session, followed up with integration sessions can effect a relieve from previously treatment-resistant depression. For some of the subjects, it was the first time in years that they were free of depression. The study does, however, suggest that an annual follow-up session might be necessary. Studies for smoking cessation (Johnson et al, 2016), death-related anxiety (Grob et al, 2011), PTSD (Oehen et al, 2013) and autism (Grob et al, 2018) have shown similar results: psychedelics affords one the opportunity for a new perspective which has the potential to change one’s life.

Psychedelics also provide us with a means of studying the brain. It is still the most mysterious organ in the human body. It was through LSD that neurotransmitters were discovered (Pollan, 2018: 2). Already is has helped scientists to understand the role of the default mode network and entropy within the brain network. When the default mode network is suppressed, there is increased communication between the parts of the brain that are usually segregated. This gives us greater insight into what the usual relationships are and how they function. There is still much to be discovered. Psychedelics can help us understand the normal modes of consciousness by comparing it to an altered states of consciousness. Through psychedelics, we might even come to understand the nature of consciousness.

The third role of psychedelic is in the mystical. As has been evidence by prior research, psychedelics have been used throughout the ages by various peoples as a mechanism for healing, but also as an integral part of their cosmology. In contemporary use, it is often used in rituals in a retreat setting, or recreationally. The importance of an elder or shaman to guide the experience must be stressed as the experience can be alarming when not fully prepared and supported.

Psychedelics seem to afford us a glimpse into the worlds that lie beyond. This glimpse of something greater is in some cases enough to occasion a complete transformation in the human psyche. It allows us the opportunity to re-create ourselves. We can explore the realms within that was previously hidden behind closed doors. Anecdotal evidence is given of the mystical experience psychedelics can occasion and the transformation that occurs within after such an experience. We come to a deeper understanding of ourselves and can thus shed all that which is not who we truly are.

figure 1.x: Breaking free from the prisons of your perception (author, 2020)

1.3
the phenomenology of magic mushrooms

Anyone who has ever been on a psilocybin journey will tell you: everyone needs to do 'shrooms. It's a common joke between psychonauts. When someone in their company is being small-minded, they would look at each other, grin and whisper under their breath: "they should just do 'shrooms". This might be, as Paul Stamets suggests, part of the overarching intelligence of the mushroom: that the fungi produces chemicals which has exactly this effect on the human consciousness as to assist in its spread over the earth. It is indeed the case that since psilocybin has become more widely used, strains of the mushroom have become all the more prevalent, even growing in places it has not been documented before.

The mushroom is the fruiting body of the fungus. Most of the fungal organism exists underground as mycelium. It does not affect the fungus if the mushroom is eaten. The psilocybin produced by these mushrooms plays no role in its protection; the mycelium lies protected underground. As long as the mycelium is intact, the fungus can produce mushrooms. In nature, mycelium acts as a messenger. The mycelia in a forest links the roots of trees, enabling trees to send nutrients and messages about environmental threats (Pollan, 2018: 91). It sounds like fiction, but science supports it (Simard et al, 2010). Why would a fungus produce a chemical which causes such radical changes in the consciousness of the animals that consume it? Terence McKenna and Paul Stamets, an ethnobotanist and a mycologist, respectively, suggest that neurochemistry is the way in which nature communicates with us. The mythos answer to the question could be that nature is trying to tell us something through psilocybin.

What we hear, depends on who, and where, we are. By ingesting psilocybin, we are able to commune with nature in the most intimate way. One could say that she is whispering in our ears the things that we need to hear most. It is widely regarded that one has an increased environmental consciousness after a psilocybin journey (Pollan, 2018: 254). Nature takes on a new meaning. We become part of nature instead of merely observing it. There is no distinction, no separation.

In Mexico, where magic mushrooms are widely used, it serves the function of healing and divination. The majority of Mexicans are Catholic. The mushrooms are not worshipped per se, but used as a part of the spiritual life. Maria Sabina, the Mazatec curandera (medicine woman) who unwittingly introduced psilocybin to the West, was reported as saying: "Before Wasson nobody took the mushroom only to find God. They were always taken for the sick to get better." The mushroom plays a very specific role within a broader cosmological context. The same can be said of its native use in South Africa.

As in many parts of the world, psilocybin occurs naturally in the Drakensberg mountains. In the Zulu tribes of Southern Africa, the spiritual healers known as sangomas ingest psilocybin as a part of the healing ritual (Myeni, 2020; Mweli, 2020). Sometimes, a sangoma would travel up to the caves used by the San for ritual and take the magic mushroom to hear what the ancestors want to tell them (Mweli, 2020). Other times the mushroom is used by both the sangoma and the ill within a healing ritual in a rondawel where the ancestors are said to dwell. The sangoma and the patient enter into a trance state where the sangoma is able to remove the illness. The cultural belief is that the mushroom was given to us

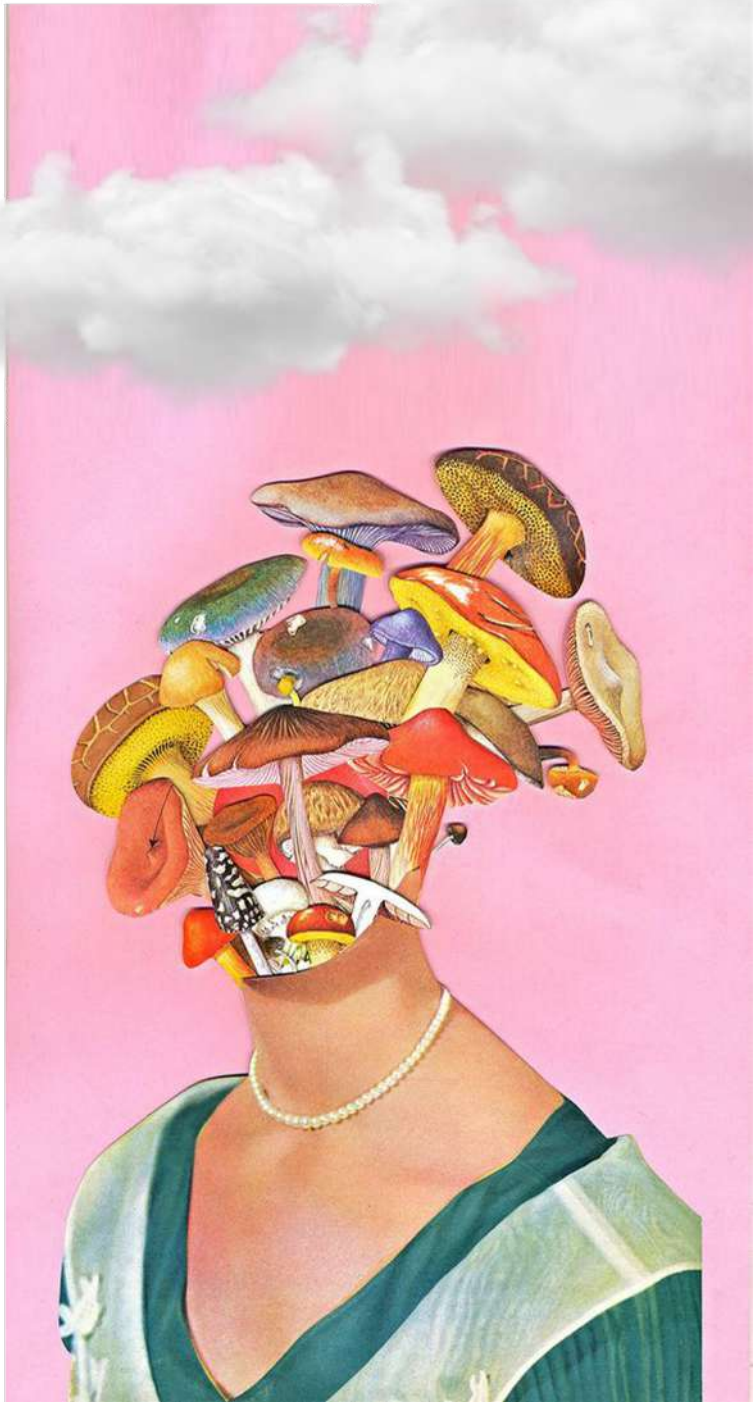


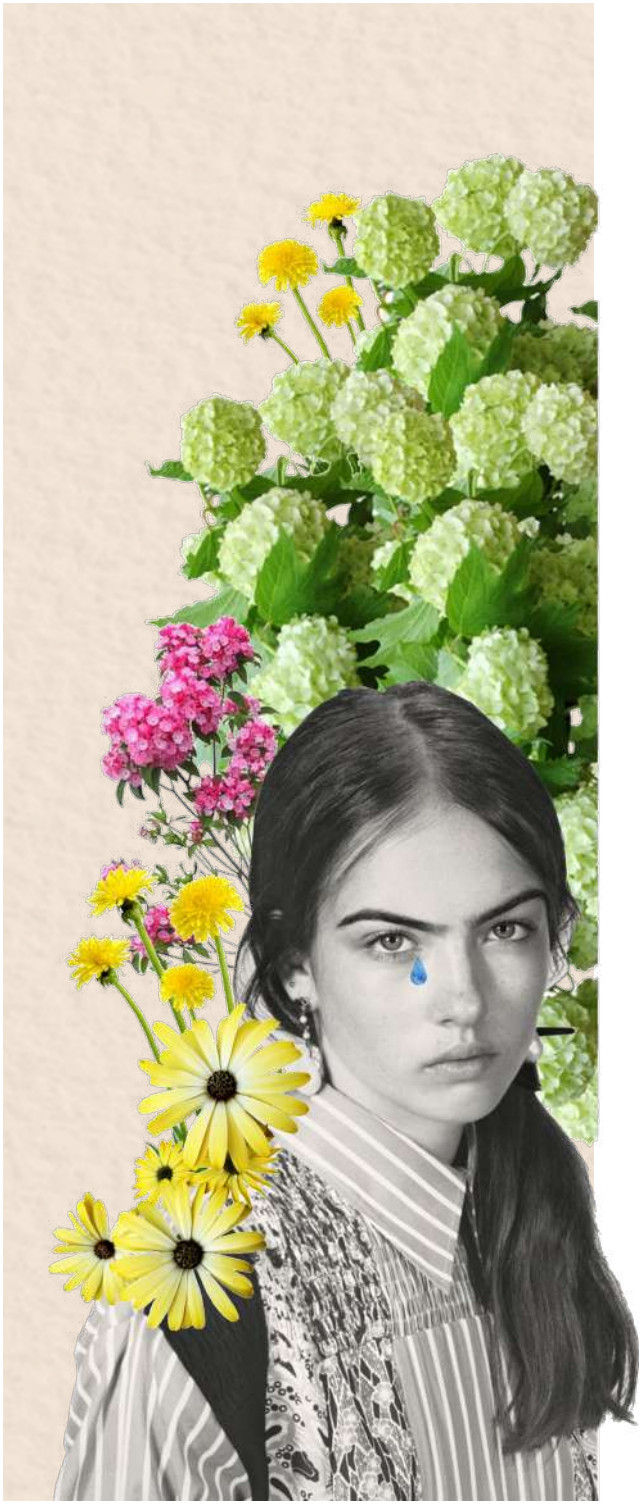
figure 1.x: Mushroom Head, Ben Giles (2017)

by the ancestors so that we can heal (Myeni, 2020). It engenders an immense respect for the mushroom. It is treated as a holy sacrament.

Psilocybin is not traditionally used as recreation. Its recreational use is frowned upon as it is seen as a misuse of powerful medicine. It is believed that bad things will happen to those who do not respect the medicine (Myeni, 2020).

This gives us a point to depart from regarding the architecture of a magic mushroom retreat. It is within a ritual where the medicine can come to its full potential. Therefore, by ritualising its use, one can pay the respects due to the mushroom, to those who have come before, and those who will come after. A ritual provides the correct set and setting for the medicine to heal. It is an embodied experience in which all parts of the psyche is involved: body, mind and soul. It is immersive and transformative. The architecture should reflect these qualities by guiding the initiate through all the aspects associated with a psychedelic state of mind. A paranormal architecture which reflects a paranormal state of mind, can lead to new insights about the physical and meta-physical by its contrast with the normal. And so we come to a deeper understanding.

figure 1.x: Garden variety unhappiness (collage by author, 2020)



1.4

client and user profile

The way in which these themes will be investigated in terms of architecture is through a retreat in the Drakensberg. The client is the Multi Disciplinary Association for Psychedelic Studies. MAPS is private research and educational organisation associated with many psychedelic retreat centres throughout the world.

The aims of this project is not to provide a clinical space where disorders can be treated. Instead, it aims to provide the platform for transformative experiences. It is aimed at the curious, the open-minded; those who are brave enough to hold up a mirror to examine their minds in all its staggering detail. It is recreational in the sense that visitors undergo experiences that allow them to re-create themselves. Recreational in this sense does not mean frivolous or careless, but an intention to bring about the integration of all the different parts of the self and beyond. In the words of Bob Jesse, it is for the "betterment of well people" (Jesse at Horizons, 2009).

Most contemporary psilocybin retreats make use of the plant medicine within a ritualised setting with experienced therapists, drawing from this ancient wisdom and providing a safe and spiritual experience. Within a ritual framework, the set, setting and dosage can be closely monitored. Therapists, who play the role of an elder, lead the initiates on their journey to healing. A journey that is so necessary in our disconnected contemporary society.

chapter 2

SETTING

(noun)

\ ˈse-tiŋ\

the physical and social environment a person finds himself in as the psychedelic journey commences. It is influenced by the physical attributes of the space and the feelings of the people present towards one another.

2.1
site analysis

figure 2.x: the main rock art panel at Kamberg's Game Pass Shelter (Lewis-Williams & Dowson, 1992)

The site is located in the Southern Drakensberg region and forms a part of the Kamberg Nature Reserve. This site was specifically chosen for its association with San spirituality and therapeutic setting in nature. The Nature Reserve is accessed by a 10km gravel road from where a hiking trail leads to the site. It is set on a steep slope, with views overlooking the Kamberg Mountain, a holy mountain according to the local Zulu tradition. Following the hiking trail past the site, one arrives at the Game Pass Shelter: an infamous rock art shelter That provided the key for understanding San rock art in terms of their spirituality and cosmology.

DRAKENSBERG REGION

The Drakensberg region is predominantly know for the mountain range with the same name, the eastern portion of the Great Escarpment. Located primarily in KwaZulu Natal, the mountain range forms the eastern boundary between South Africa and Lesotho, with peaks reaching up to 3400m. Between these peaks are plateaus and valleys, providing the perfect setting for hikers, cyclists and nature enthusiasts from around the world. Most of the Drakensberg region is protected for its biodiversity in flora and cultural significance. The Ukhahlamba-Drakensberg Park is a World Heritage site, with over 600 examples of San rock art.

The San have since left this region, driven out by the Zulu tribes and English colonialists (Lewis-Williams & Dowson, 1992:4). They dispersed to the north-western regions of South Africa, were murdered or intermarried with the now prominent Zulu tribes. Currently, Zulus make up the primary demographic of the Drakensberg region. Rural villages dot the escarpments. The region is still mostly undeveloped.

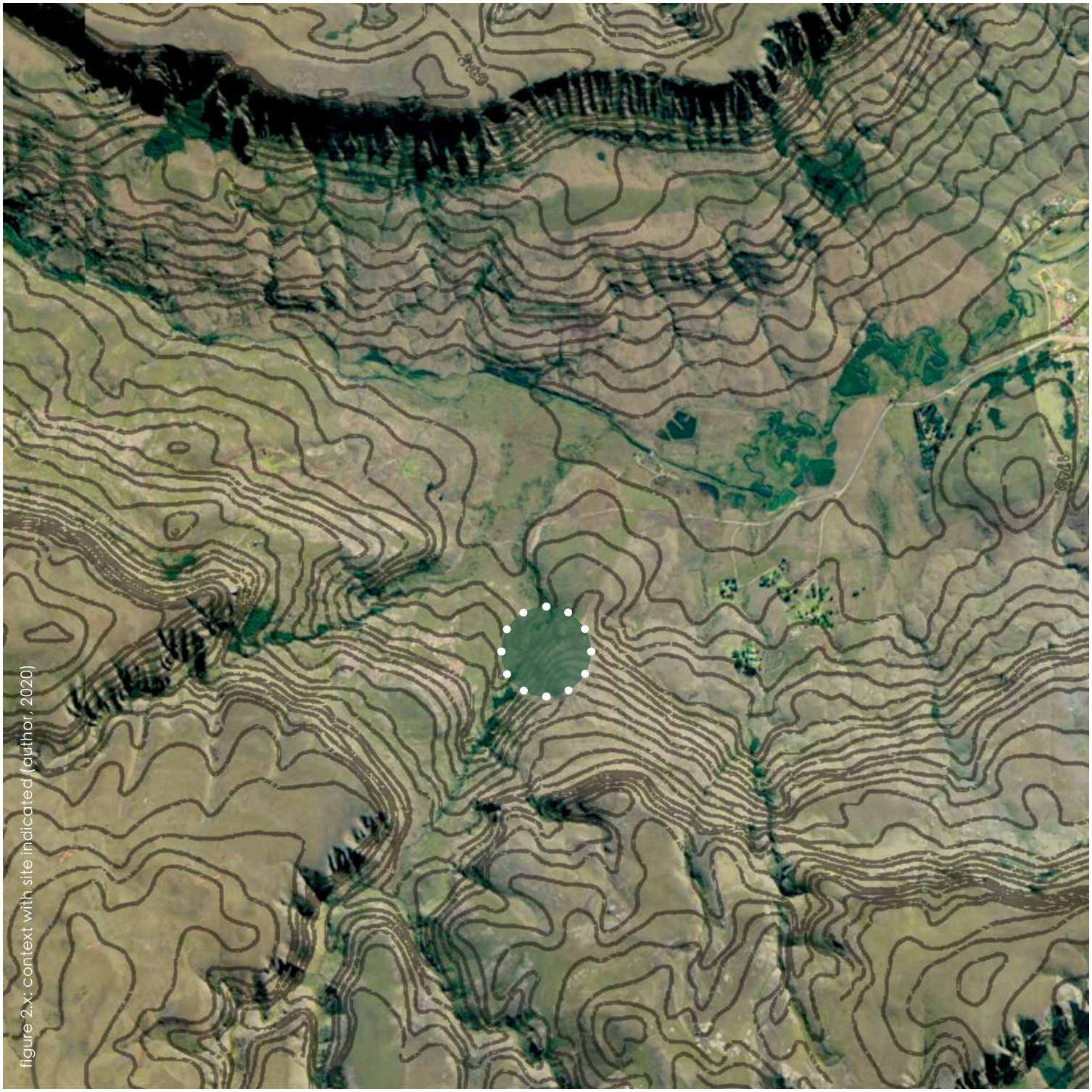


figure 2.x: context with site indicated (author, 2020)

LANDSCAPE FORMATION

When Southern Africa was still a part of Gondwanaland, this region was covered by a continental sheet of ice. When this sheet melted, the massive basin left behind formed an inland sea. With time this sea filled up with deposits and dried to become a swampy landscape. The lakes became swamps, then dry plains and later, deserts.

When Gondwanaland split apart, the tectonic activity caused cracks to open in the landscape from which lava poured and covered the area now know as KwaZulu-Natal, Free State and Lesotho. The rock layers below were heaved upwards, forming a rounded dome which was gradually eroded. What is left today is the remnants of the basalt layer which is being chipped smaller and smaller every year. The high rainfall is the primary cause of erosion.

SPIRITUAL SIGNIFICANCE OF THE DRAKENSBERG

This part of the the Drakensberg mountain range is known locally as the rainmaking mountains. The high rainfall in this area provided ample grazing for the eland: the animal most revered by the // Xegwi San, and is the origin of the three largest rivers in South Africa: Orange, Tugela and Vaal rivers. The waterfalls prevalent in the area were used as part of cleansing rituals by the San. Furthermore, Psilocybe natalensis, a species of psychedelic mushroom, grows naturally here, giving rise to another alias: the mushroom mountains.

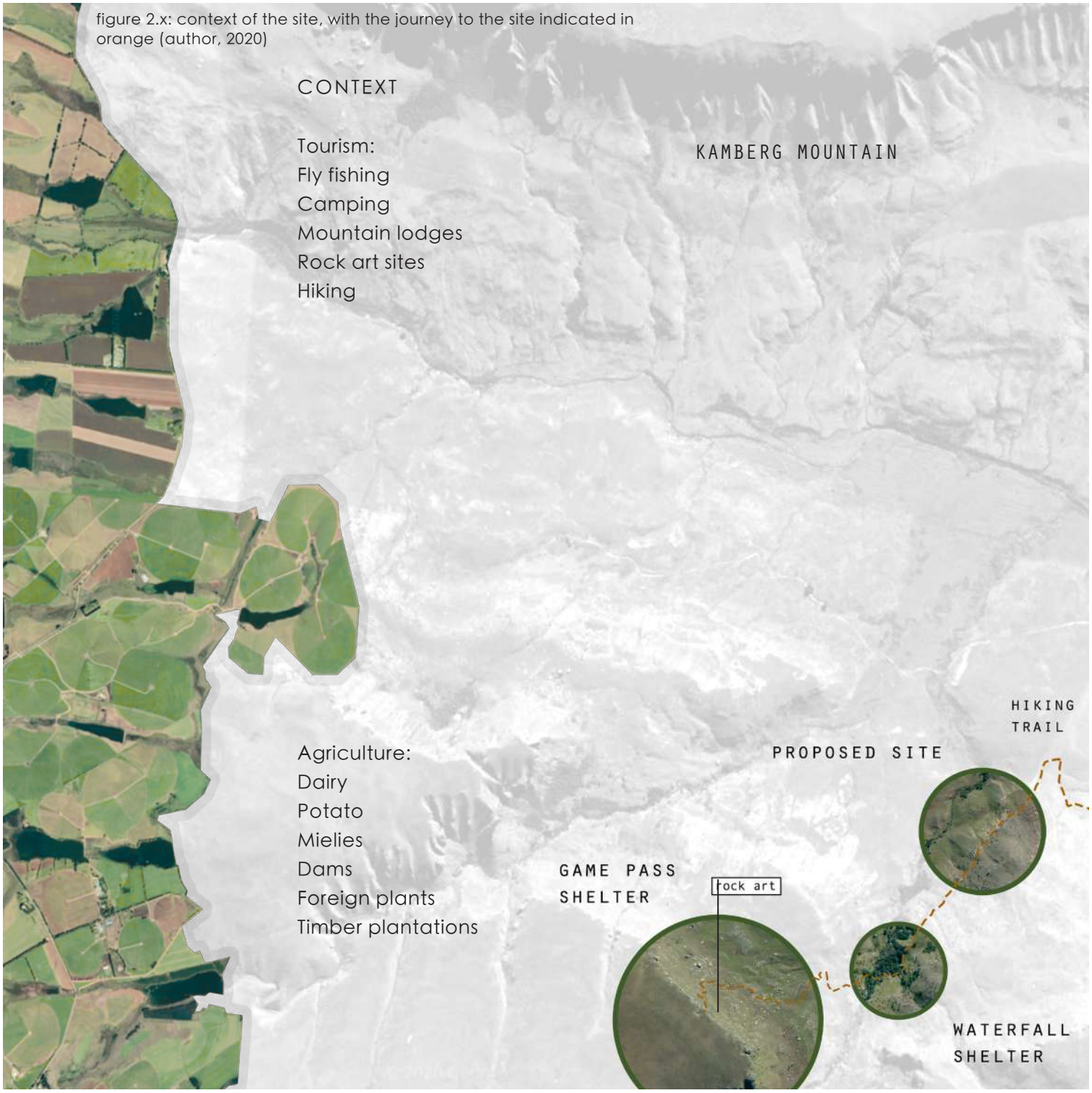
figure 2.x: rock art from the Game Pass Shelter (author, 2020)

ROCK ART AT KAMBERG

The most prominent rock art site in the Kamberg area is the Game Pass Shelter. This site carries special significance as it was the first site to be seen by Western eyes and provided the key to understanding the spiritual significance of the paintings.

The most well-known panel features an eland, the //Xegwi San' s most sacred animal, in a dying posture. A shaman is holding onto the animal' s tail as it is dying, transferring the power from the eland to the man. He stands in the same posture as the eland, legs crossed and with hooves instead of feet. To the right is the same shaman as he is entering the trance state. He is bent over and in the next figure emerges as having been transformed into an eland. He has horns, hooves, a tail and his hair stands on end. It is said that when the shamans entered this state, they communicated with the ancestors, asking for guidance and advise.

figure 2.x: context of the site, with the journey to the site indicated in orange (author, 2020)



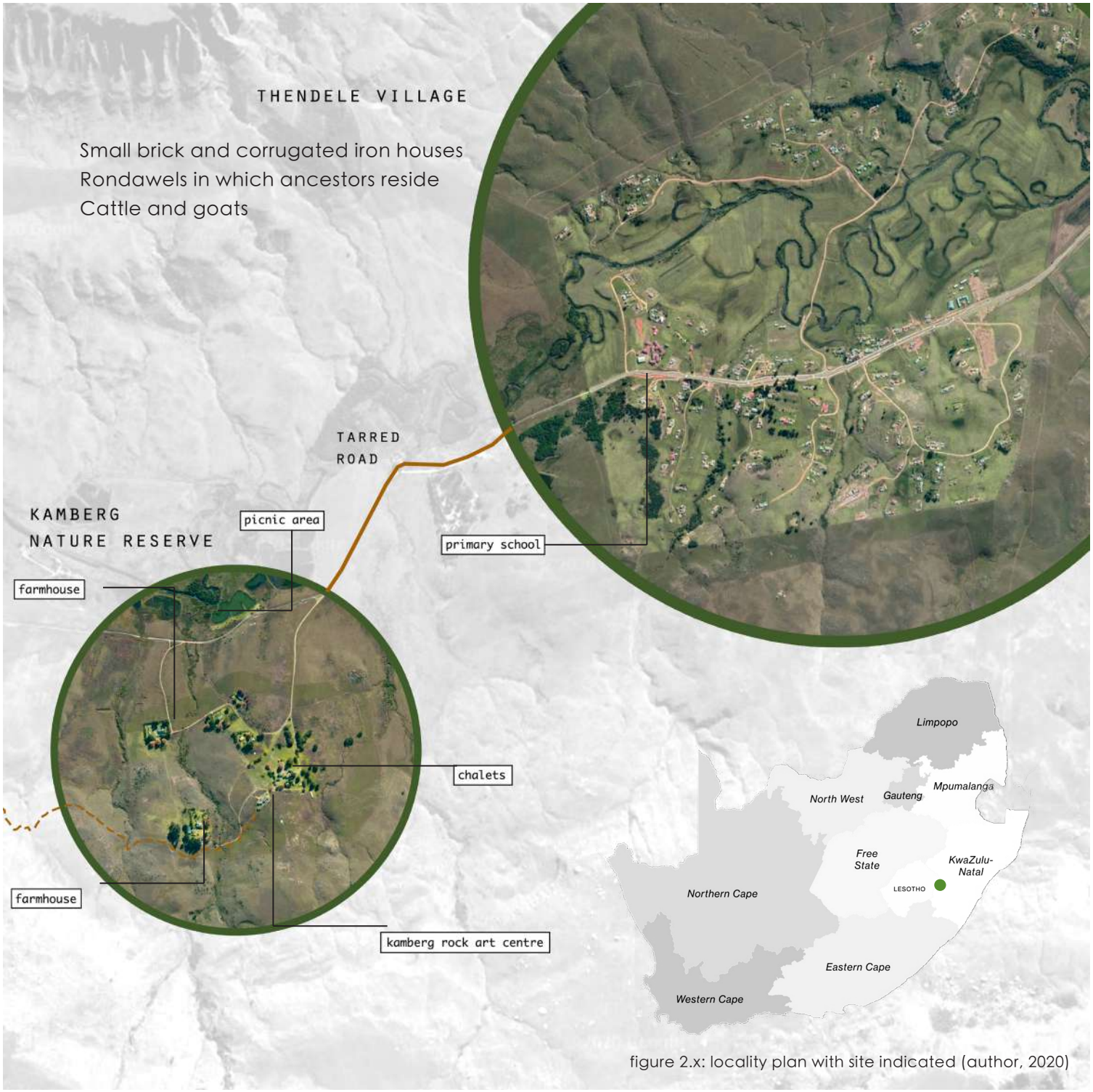


figure 2.x: locality plan with site indicated (author, 2020)

CLIMATE

Temperature:

summer:	highest recorded:	28º
	average (max):	23º
	average (min):	10º
	lowest recorded:	7º
winter:	highest recorded:	21º
	average (max):	14º
	average (min):	2º
	lowest recorded:	-10º

Precipitation:

rain: summer monthly average: 160mm
winter monthly average: 18mm
annual average: 1046mm/a

In summer, rain usually occurs from late afternoon to sunset.

snow: snow days per annum: 3
amount per year: 6,6 cm

In winter, frost is common during the night and early mornings.

figure 2.x: agricultural context (author, 2020)

Sun:

daylight hours:	summer: 14h
	winter: 10h
angle:	summer: 76.6º
	winter: 35.9º

Wind:

The site is situated in a valley and thus protected from strong winds. The prevailing winds are valley winds which alternate direction between day and night.

average gust:	22.4 kmph
max windspeed:	3.5 kmph
average windspeed:	7.5 kmph

wind direction:	day: SE
	night: NNW

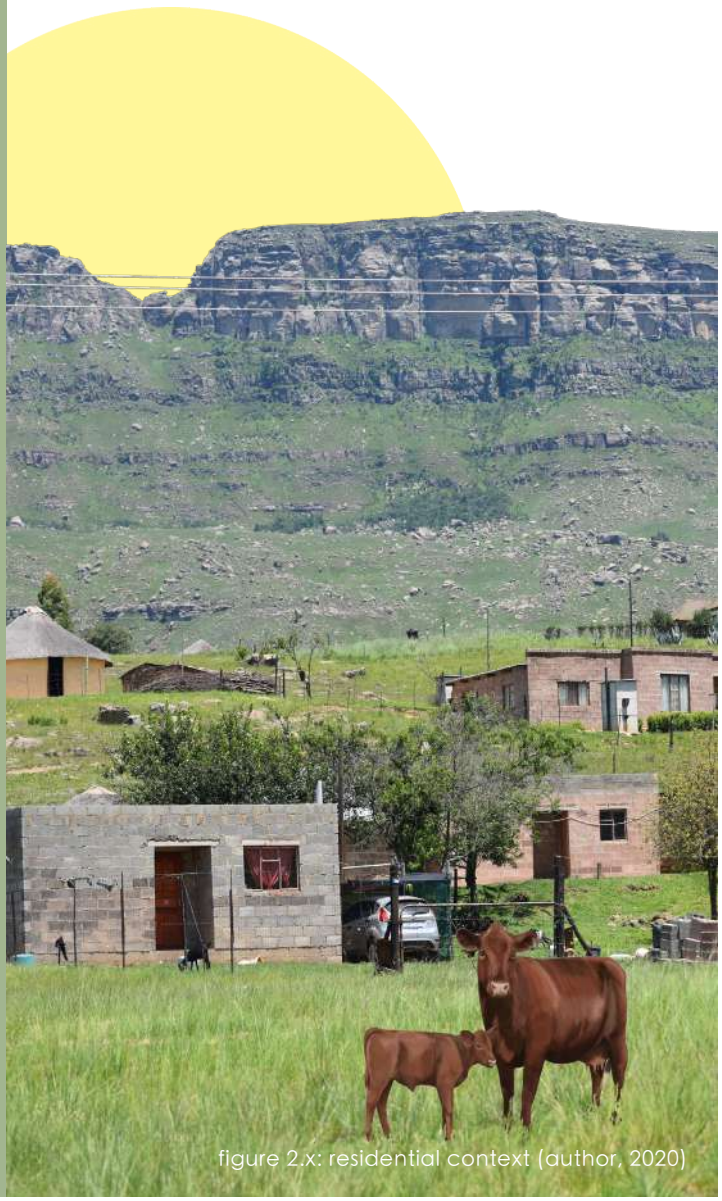


figure 2.x: residential context (author, 2020)

FLORA & FAUNA ON SITE

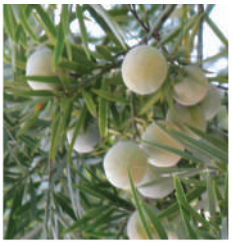
figure 2.x: fauna found in teh vicinity of the Kamberg Nature Reserve (author, 2020)

Sagewood
(Buddleja salviifolia)

Ouhout
(Leucosidea sericea)

Mountain taaibos
(Rhus dentata)

Outeniqua yellowwood
(Podocarpus falcatus)



Outeniqua yellowwooc
(Podocarpus falcatus)

Real yellowwood
(Podocarpus latifolius)

Common spikethorn
(Maytenus heterophylla)

Tree Fern
(Alsophila dregei)

Drakensberg cycad
(Encephalartos ghellinckii)

Hard fern
(Pellaea calomelanos)

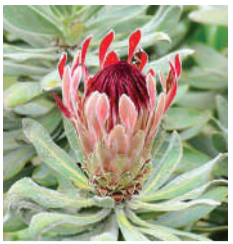
Shield ferns
(Polystichum genus)

Leatherleaf fern
(Rumohra adiantiformis)

Cape protea
(Protea roupelliae)

Cape protea
(Protea roupelliae)

Cape protea
(Protea roupelliae)



Drakensberg protea
(Protea drakomontana)

Lip-flower sugarbush
(Protea subvestita)

Magic mushrooms
(Psilocybe Natalensis)

Erica genus

Helicrysum genus

Helicrysum genus

Bromus genus

Bromus genus

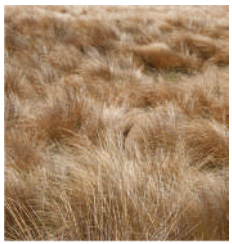
Merxmuellera genus

Aristida genus

Deschampsia genus

June grass
(Koeleria cristata)

Tussock grass
(Festuca costata)



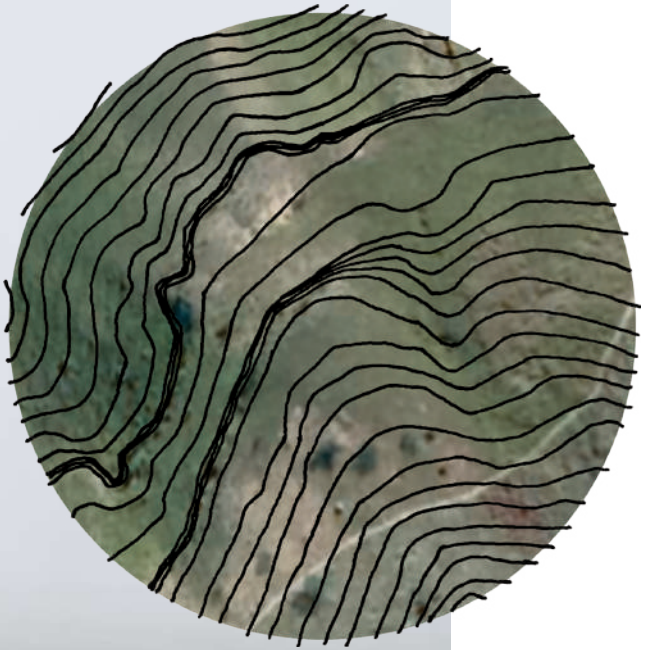
Tussock grass
(Festuca costata)

Red grass
(Themeda trindra)

MICRO ANALYSIS

av. height: 1785m
location: Kamberg Nature Reserve
(Highmoor State Forest)
position: 29º 23’ 28’ ’ S
29º 39’ 19’ ’ E

figure 2.x: photographes taken on site (author, 2020)

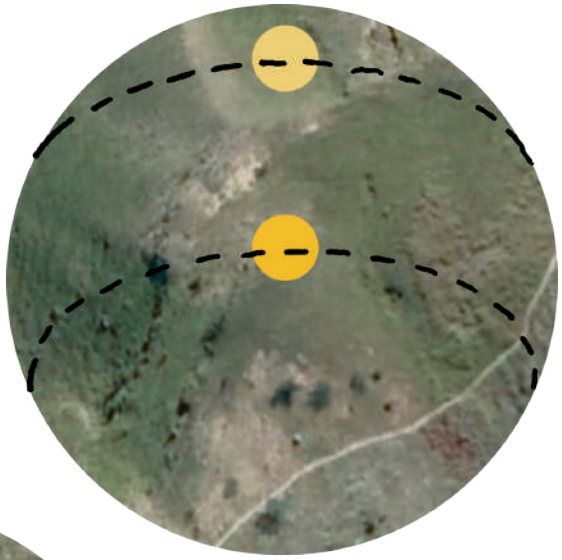


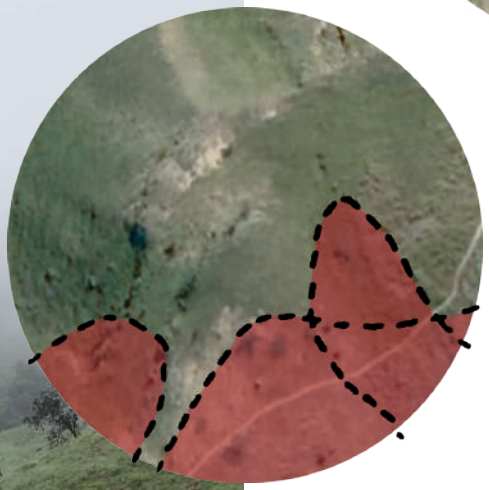
contours:
the contours generally slope towards the north-west, with two stony ridges of approx. 6m high and a depression to the right of the higher southern ridge.

wind:
the primary wind direction during the day is SE, but in the night it changes direction to NNW. The secondary wind direction is N.

(author, 2020)

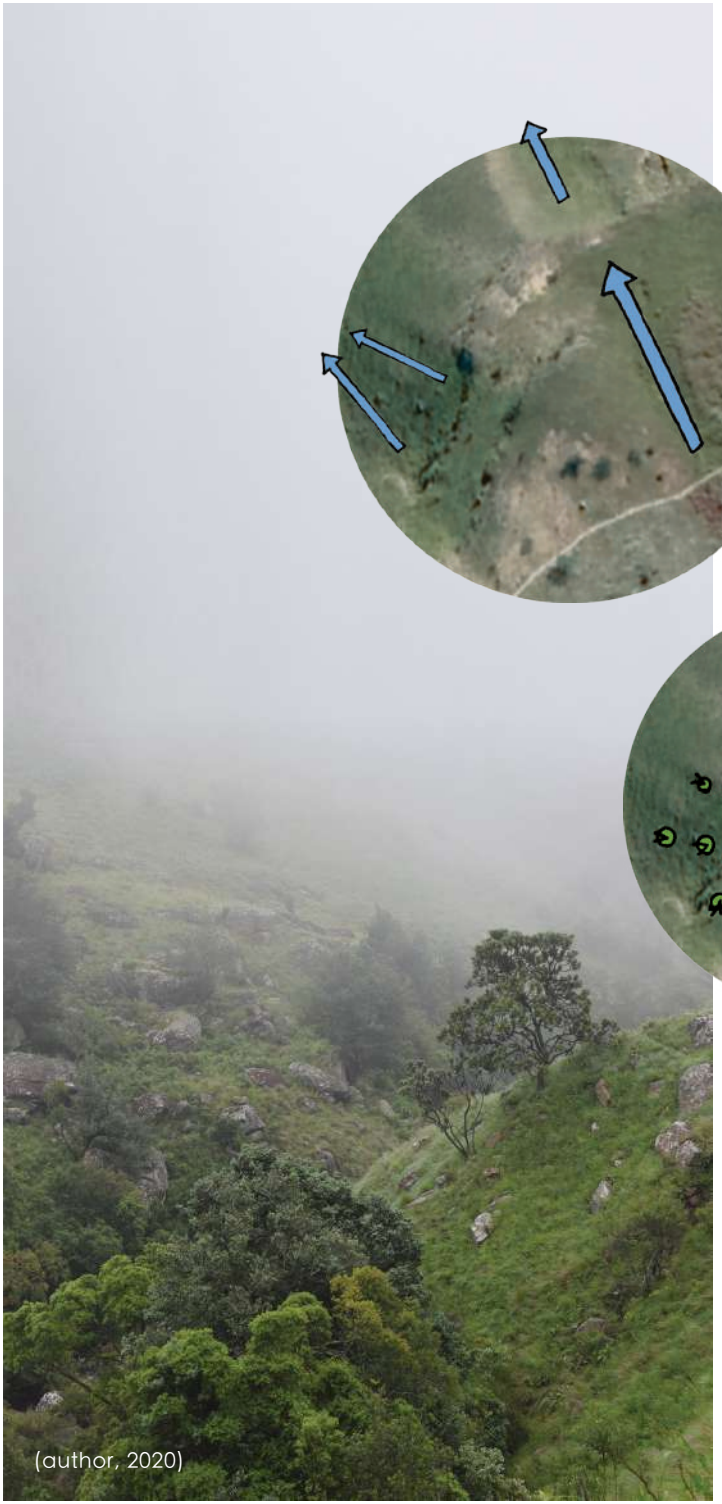
sunlight:
daylight hours vary between 10 hours and 14 hours, depending on the season. In summer, the sun angle is 76.6º and in winter it lowers to 35.9º. As the highest peaks of the Drakensberg are on the west of the site, sunset is approx. 30-60 mins earlier compared to the other places on the same longitude.





restrictions:
the red areas shows building restrictions that I have set for myself, in order to preserve the natural integrity of the site. To the right is a small depression in which ferns grow. To the south, the building would be visible to hikers on their way to the cave. To the left, the site becomes very steep, too much to make building viable.

(author, 2020)

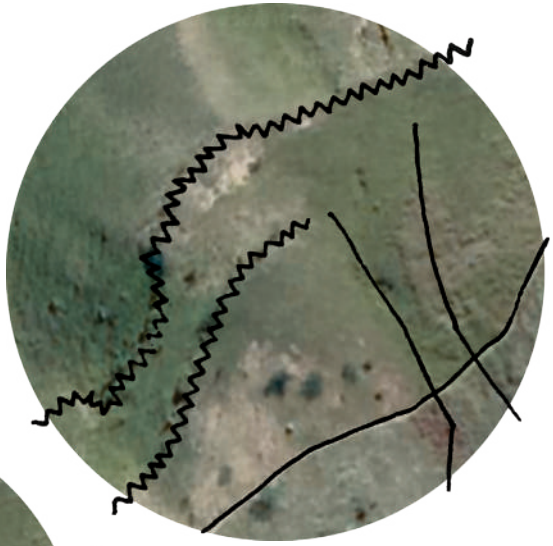


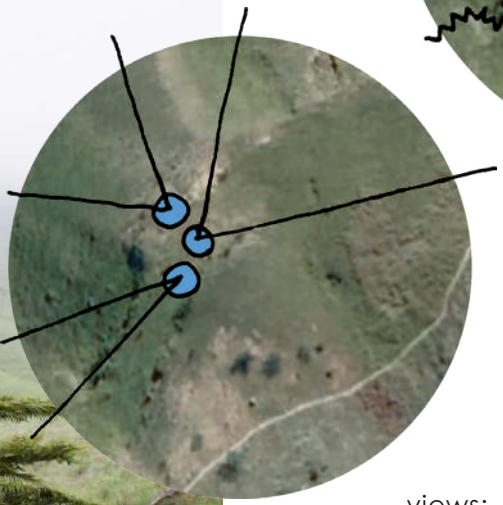
(author, 2020)

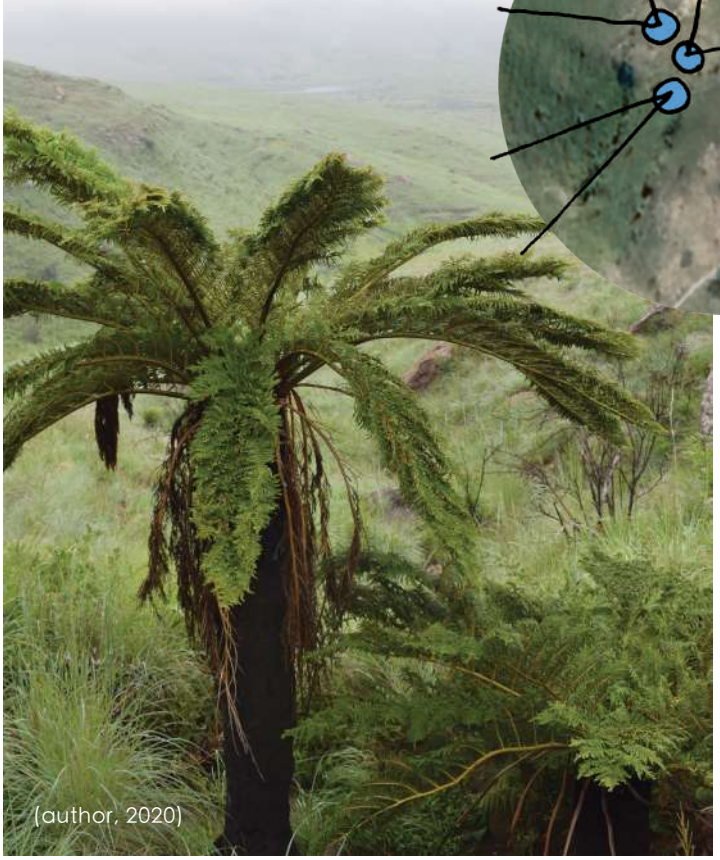
drainage:
a small depression to the right carries a portion of the water that comes down the mountain. It is not steep, therefore the water can permeate the soil and seep down the incline. To the left there is a small, steep valley which channels surface run-off.

vegetation:
the majority of the site is covered with grasses. the diagram shows the location of cape protea bushes, which are native and protected. The parallel lines indicate the depression along which indigenous ferns grow.

natural features:
as can be assessed from the contour lines, there are two rocky cliffs of about 6m high which defines the site. The other noticeable feature is the depression with the ferns growing along it.







(author, 2020)

views:
from the north to the east lies the Kamberg mountain, a holy mountain according to the local Zulu culture. To the north, at the bottom of the valley, lies a tributary of the Mooi River. From the north-west to the south west, the valley with its lush vegetation can be seen, as well as another holy mountain: Giant' s Castle.

METAPHYSICAL SITE ANALYSIS

In terms of the transcendental meaning of the site, the rock face plays the most important role. In the traditions of the San, the rock face was regarded as the veil between this world and the next. Therefore, in this project, the rock face represents the threshold between normal states of consciousness and altered states of consciousness. It was clear from the initial investigations that the building would be centered around this interpretation.

Below the rock face, is the place of the everyday. Above the rock face is the place of the ethereal. To move from below to above, one must undergo a strenuous journey, both physically and mentally, to reach a higher plane of existence. Once above, one is able to regard the world from a new vantage point. As with the architecture of Mayan temples, the sacred is elevated above the everyday.

A ephemeral stream flows through the site after heavy rains. The San regarded water bodies as a place of transition (Lewis-Williams & Pearce, 2004: 121). Thus, the stream further separates the site into two parts: east of the stream and west of the stream. By crossing the stream, one transitions into a different state of being. The eastern side of the river denotes the intimate and secluded spaces of the project, while the communal aspects of the retreat experience takes place to the west of the stream.

Thus, the site is separated into quadrants by the rock face and the river: the everyday and the sacred; the private and the shared.

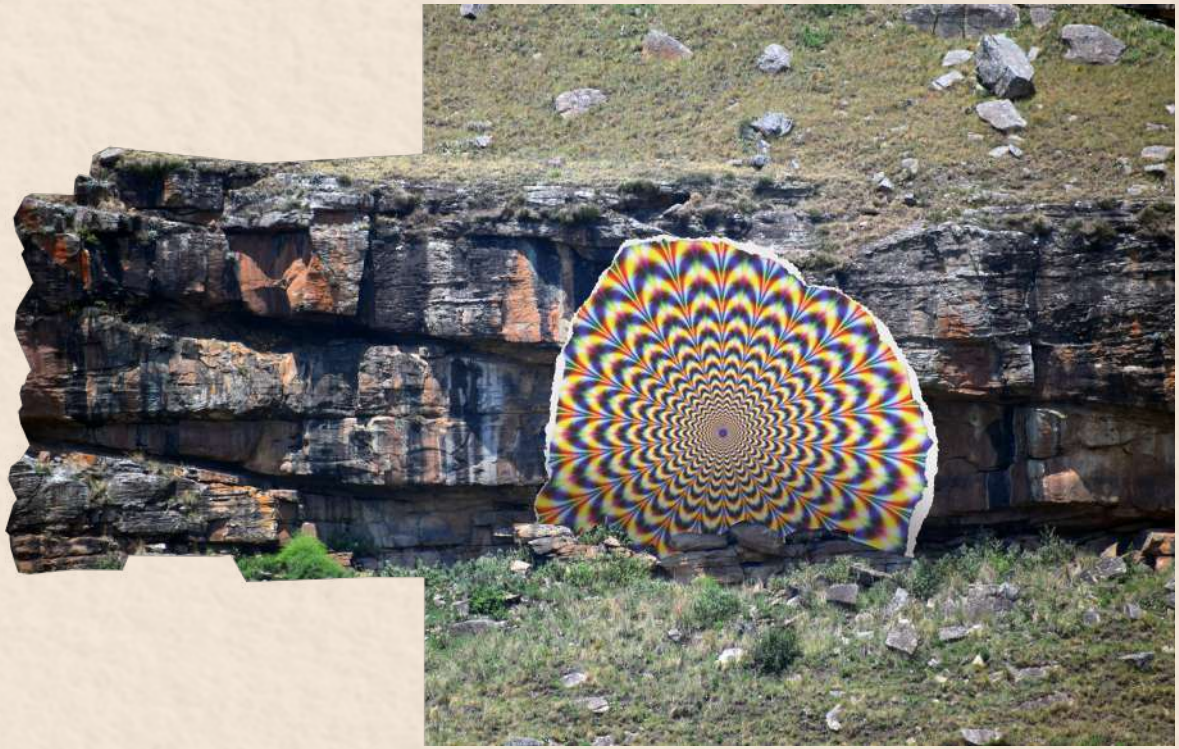


figure 2.x: the rock face as the boundary between the physical and metaphysical (author, 2020)

the beginning of the hike to the site

a written indicator along the way

rounding the bend

second river crossing

a collection of ferns

a long abandoned cattle kraal

The journey by foot to the site is characterised by rover crossings an tree ferns. The crossing of water is symbolic of the threshold between the stages of perception and the tree fern becomes a signifier for when such thresholds will be crossed. Nearing the site, a small valley of leatherleaf fern signify the entrance to the site, acting as a signifier that another world will be entered.

the first river crossing

the third river crossing

the fourth river crossing

the fifth river crossing

approach to the site

2.2
site narrative

This site tells the story of the nature of impermanence, and the impermanence of distinctions. Throughout history one truth remains: the only constant is change. As much is true in the Drakensberg. The site had seen times of peace and of war, cultures born, integrated and disintegrated, societies that came and went, changes in climate and changes in populations. What exists now is but a snapshot in an endless panorama of change.

Looming large over the grasslands below, the landscape itself seems momentous, solid and steadfast. But the Drakensberg Mountains are changing. The changes might not be visible to our mortal eyes, but the mountains are eroding at a striking pace. Even something that lasts forever is subject to transformation.

While the //Xegwi inhabited these regions, they never stayed in one place for an extended period. They were semi-nomadic hunter-gatherers; the weather and the animal herds determined their movements. The original conservationists who never hunted to excess and who preserved the sustaining bounty of nature (Lewis-Williams & Pearce, 2004: xxiii). The San did not believe in ownership: the land could not be owned. Instead, one benefitted from its gifts. In the winter months, the San lived in the Natal Midlands, venturing as far as the coast (Lewis-Williams & Dowson, 1992:19). In the summer the heavy rainfall in the mountains encouraged new growth and animals became abundant. It is speculated that the winter groups were comparatively small and that during the summer, groups joined together to perform rituals, exchange news and paint (Vinnicombe, 1976).

There is evidence that the //Xegwi and Zulu farmers had contact as long as 1 500 years ago. While some conflict is inevitable, the Zulu and the //Xegwi lived in relative harmony. The Zulu regarded the San as experts in ritual matters and at times hired them to perform rain-making ceremonies (Lewis-Williams & Dowson, 1992:18). Evidence of the contact between the groups remains in the clicks of the Xhosa and Zulu languages, borrowed from the San (Lewis-Williams & Dowson, 1992: 18). When Zulu pastoralists moved further upward into the Drakensberg region, much of the //Xegwi San' s hunting ground was lost.

figure 2.x: conflict and cattle: an incomplete visual history (collage by author, 2020)

The effects were aggravated when in 1849, the Natal government ordered the Hlubi chief Langalibalele to settle his people at the foothills of the Drakensberg as a buffer between the //Xegwi and the farmers who wished to work the fertile lower land that Langalibalele's people currently occupied. As a result, the migratory patterns of the San were cut off. They were forced to move even higher into the Drakensberg, to areas were food was scarce and the climate inhospitable (Lewis-Williams & Dowson, 1992: 2).

The San had a different understanding of ownership. Antelope, and cattle, were seen as the earth's gifts. The numbers of antelope in the mountains dwindled as settlers over-hunted game, thus the San took to pastures to sustain themselves (Lewis-Williams & Pearce, 2004: xxiii). In fact, the word San means 'thief' in Nama (Gordon, 1992:6-7). The English colonists and black farmers did not take kindly to their cattle being raided. As a result, the San were effectively hunted.

The history of the San in this area is the result of a colonialist perspective. Even the paragraphs above provides only an outsider's perspective. They are often painted as thieves and victims of an assumed extinction. While it is true that the San suffered a disproportionate amount of violence over the centuries, many of the //Xegwi integrated with the local Zulu tribes and assumed a Zulu identity as a measure of protection (Francis, 2007:37). What can be said with conviction is that by the 20th century the //Xegwi's nomadic way of life had changed forever (Francis, 2007: 38).

Today, what is portrayed as the Zulus of KwaZulu Natal is an intricate tangle of lineages (Francis, 2007:31-34) . Zulu sangomas still travel to the San rock art sites in the Drakensberg to connect to the spirits of the ancestors. They believed that the caves still hold spiritual significance; that the 'potency' the San used in their rituals still reside there (Mweli, 2020). Small villages like Thendele dots the foothills of the mountains, interspersed with commercial farms and the occasional mountain retreat.

TIME SCALES ON SITE

When looking at the site through the eyes of time, one is able to identify cycles of death and renewal, dancing around one another through time and space. Some are longer, and thus its movements are more difficult to recognise and its shape less symmetrical. Others are fast, twirling around and around in a spectacular display.

The largest cycle is geographical. To a human mind it is almost impossible to fathom, but the site is changing. The mountains were built by the forces of the earth, rising up until the pressures were exhausted. Now the mountains are in that part of the cycle where they shrink in size, only a few centimetres a year, but over millennia, the mighty Drakensberg will be reduced to flat grasslands, only for the earth to once again raise mountains from the depths.

The cultural cycle spins faster. The people that inhabit these hills fluctuate and change. At times, the slopes are uninhabited. At other times, its abundance invites people to make it their home. The culture itself of the inhabitants are also in constant flux as they evolve to suit the needs of the people and a changing worldview.

The cycles become more perceptible to the human experience as they become shorter. The cycle of the human life brings its own birth

"We forget that nature itself is one vast miracle transcending the reality of night and nothingness. We forget that each one of us in his personal life repeats that miracle"

- Loren Eiseley
The Firmament of Time (1960)

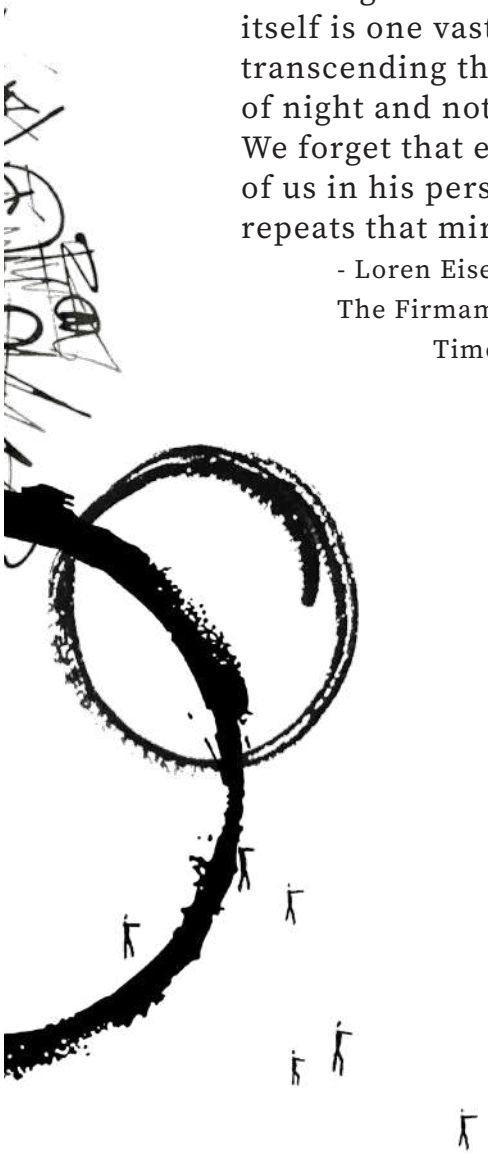


figure 2.x: time scales on site (author, 2020)

and death which ties in with natural cycles on the site. The cycle of the human life can be seen as an assemblage of cycles: as a life is lived there are patterns that transform and repeat themselves.

The seasonal cycle is perceptible to the human experience. Summer, Autumn, Winter, Spring; a cycle of death and renewal which keeps the natural world in balance. Parallel to the seasonal cycle is the cycle of tourism. The Drakensberg has fluctuations in the amount of visitors it receives throughout the year. In the warmer months, there is an abundance of tourists looking to traverse or imbibe its beauty; much less in the colder, wetter months.

One of the more subtle cycles is that of the moon. Its changes are perceptible from day to day, but it does not command the same attention as the sun. Nevertheless, it attunes us to the more subtle fluctuations in the energy of the natural world.

Finally, there is the cycle of day and night. A mere 24 hours in which so much can happen. Dawn, noon, sunset and midnight. A cycle which keeps us, as humans, moving forward in balance.

2.3

the san and the rock face

By all accounts, the San lived a rich spiritual life. For the San, the spirit world was as real as their daily world (Lewis-Williams & Dowson, 1992:26). While the complex worldview of the San is a fascinating topic, the interest for this project lies in the relationship of the Drakensberg San to the rock face.

The rock face is revered as the veil that separates the world of daily life from the spirit realms (Lewis-Williams & Pearce, 2004: 180). The rock face is not solid, but permeable to those who have the ability for extracorporeal travel. It was on the rock face where, as the shamans passed the most overwhelming part of the trance ritual, they painted scenes of their otherworldly travels. As the shamans painted these scenes, they were not quite sober and still able to readily access the spirit world (Mweli, 2020). Animals and shamans were frequently depicted as coming out of the rock itself (Lewis-Williams & Dowson, 1990: 5).

The veil becomes a threshold where transformation takes place. In order to pass through it, the shaman has to change, and is in turn changed by it. The rock face is the silent participant in the transcendental rituals of the San. The rock face, the paintings and the shamans themselves are all mediators of the cosmos.

2.4

nature, architecture mushrooms and healing

It has been a truth revealed through the ages that man’ s connection to nature affects his sense of wellbeing. Through its mysterious ways, it gives our lives meaning and a sense of purpose.

Study after study (eg. Mayer et al, 2009; Cervinka et al, 2011; Ulrich, 1984; Abraham et al, 2007; Frumkin, 2001) has proven what is already known: nature improves our sense of wellbeing, both in mind and in body. A study by the Health Council of the Netherlands (2004) have shown that nature enhances a sense of well-being through (1) recovery from stress and attention fatigue; (2) encouragement to exercise; (3) facilitation of social contact and; (4) provision of opportunities for personal development and sense of purpose. Another study (Ulrich, 1984) has shown that patients heal faster after undergoing surgery when they have a view of nature. The evidence is overwhelming, but still many would rather take pain relief medication for a headache rather than sitting in a garden.

Figure 2.4. "When we try to pick out anything by itself, we find it hitched to everything else in the Universe" by John Muir, 1911 (Author, 2020)

It makes sense: humans have evolved being in and surrounded by nature. It is only in the last few centuries that we have become increasingly disconnected from our roots. It could be argued that the environmental crisis stems from a disconnection with nature. Studies have shown that connectedness with nature predicts the pro-environmental behaviour which is associated with sustainable lifestyles (Cervinka et al, 2011: 379). Thus by reestablishing this connection with nature, one is able to take small steps towards choosing a better future. With time, the individual becomes the collective. One way of deepening the relationship with nature is through the use of so called teacher plants, one of which is magic mushrooms. When the influence of the default mode network declines, so does our sense of separateness from the world. We become one with everything around us. This realisation stays with us even as the effects of the mushroom wears off. It is easier to take care of things outside yourself if you perceive them as a part of yourself.

One of the most intimate ways in which one can engage with nature is through consuming it. This is something that happens on a day to day basis, but one tends to forget that the food comes from the earth. The thing that separates the sacred act of consumption from mindless consumerism is the intention with which one consumes. In a magic mushroom ceremony, the act of consumption is ritualised. In parts of Mexico and Southern Africa, mushrooms were used exclusively for treating the ill (Lewis-Willaims & Pearce, 2004: 118). Recently, with the influence of the West, magic mushrooms have been taken to address psychological illnesses (Pollan, 2018; Cozzi, 2013). Dennis McKenna, a renowned ethnobotanist in the world of psychedelics, describes the experience as medicine. The plant is the real medicine, and it heals through its intelligence (McKenna in Reconnect, 2020). Indeed, plants do have their own intelligence (Mabey, 2016). Not in the same way that we tend to think about intelligence, but in a way that is appropriate to them. Through engaging with plants in meaningful ways, we can gain access to some of this intelligence. This is especially true of the teacher plants. But even without the use of a sacrament, a ritual in itself can heal. We know it as the placebo effect.

> "For many years, the placebo effect was considered to be no more than a nuisance variable that needed to be controlled in clinical trials. Only recently have researchers redefined it as the key to understanding the healing that arises from medical ritual, the context of treatment, the patient-provider relationship and the power of imagination, trust and hope."
>
> - Harvard Medical School Program in Placebo Studies

With a placebo, the ritual is still performed, but without the substance that is supposed to heal. The context in which medicine is taken - symbols, interactions, encounters and expectations - sets the stage for healing to begin (Magister, 2017: online). Perhaps the sense of being taken care of and the care expressed through the ritual plays a role. At times, the ritual itself is enough to elicit a physiological response: the ritual can heal.

figure 2.x: Untitled, Agnes Miller Parker (Life of the Fields, 1947)

ARCHITECTURE, HEALING AND THE ROLE OF THE ARCHITECT

The question arises: how can architecture support, or even initiate, healing? One answer is that by bringing an individual closer to the rhythms of nature through the architecture, healing of the body and soul can begin. Architecture can play the role of the placebo, setting the stage for healing. Providing the context for ritual, interaction and connection, the architecture takes on an active role. Architecture has the ability to make visible the spirit of the place, and allowing those who dwell to access this knowledge. By focussing the attention on nature, we are able to reconnect and allow for the healing which nature enables. It enables us to live according to the rhythms of the earth, deepening the connection with and appreciation for nature. In living close to nature, the body and mind can return to optimal functioning.

Architecture offers us a new way in which to engage with the landscape. It creates a new landscape. It allows us to dwell instead of merely passing through. The role of the architect is to listen to what the site is already saying, to attune ourselves to its meaning so that the new landscape we create is what the site itself is yearning for; making the unseen visible, curating experiences and revealing the spirit of the place (Norberg-Schulz, 1980).

It is an immense responsibility to work in a natural landscape such as the Drakensberg. The land is untouched. Yet, man used to inhabit these mountains. Still the question remains: should one build here? It was decided that yes, one should. But the architecture must carry with it the narrative of the site. It should be ephemeral, changing, and, when its time has passed, return to the earth from whence it came. It should be, as the site is, a glimpse in a panorama of endless change. The role of architecture in this landscape, with this project, is to bring us back into contact with nature by reestablishing an ancient respect, which we will carry with us as we return to a bustling city life. The gratitude toward the earth remains with us as we make decisions throughout the day, hopefully influencing them for the better.

Through continued close contact with nature through the architecture, one begins to change, both in body and in mind.

“Place and a mind may interpenetrate till the nature of both is altered.”

- Nan Shepard, The Living Mountain (1977)

figure 2.x: 1124 (Adam Hale, 2018)

chapter 3

INGESTION

(noun)

\ in-ˈjes-chən\

the moment when the psychedelic substance is taken; the first interaction with the substance. In a psilocybin ritual, mushroom is taken after the individual has been psychologically prepared. From this point onwards there is no turning back.

3.1
touchstone

We go through most of life only aware of the physical; that which we see. For most of us, we are unaware spiritual world that lies just beneath the surface. The physical world is rooted in the spiritual world. One is an expression of the other. These two worlds are dependent on one another; it is not two different worlds but one. Two sides of the same coin. The one cannot exist without the other.

The aim of this project is to facilitate the engagement with the spiritual world; to make people aware of its presence in their lives by offering another lens through which to see reality. The frame of the touchstone is representative of the building. It gives us a frame of reference through which we can view this alternate reality, allowing a deeper truth to reveal itself. In a sense, the building itself will be the veil between this world and the next, facilitating the process of integration between the two. It enables holistic healing through ancient knowledge systems.

On the one side of the frame is the physical reality; that which we can easily see. On the other side is that which is usually hidden from us; the spiritual world. The viewer has to alter his position in order to view reality from a different perspective. The glass which enables one to see what is usually invisible, is the mushrooms. The glass is a means of seeing beyond the usual frame of reference and makes us aware of the interconnectedness of everything; the roots, so to speak.

It is a process, and the touchstone is where the process begins. In the beginning, it was still unknown what exactly would be uncovered. As the year progresses, the roots will grow and become more visible. So will the plants. A yearning for water as a yearning for the spiritual. The building and the direction of the thesis starts to take shape. The spiritual world is revealed as the thesis grows, and I along with it. I, and hopefully the reader, become all the more aware of the underlying connection between everything. The touchstone is a metaphor for the way nature can teach us about the deeper meanings of life.

figure 3.1: the touchstone as it grows (author, 2020)

3.2
concepts

The three concepts proposed for this dissertation are based on the mechanisms cultures throughout the world used to ‘see’ the other side: myth, ritual and trance. By looking at the physical aspects of trance rituals, indications of the physical aspects of the building might come to light. The specific traditions of the San are considered, as a way of recognising that they were the first people to make use of psilocybin rituals in these mountains.

An underlying aspect of the concepts is an architecture which is sensitive to the site. Through the use of natural materials, it is born from the earth and will again return to it someday, but not without having left some impressions. The use of earth blocks and timber in the models emphasises the relationship to the earth. Resin is used as a symbol of the other side; of a changing of perspective and an uncovering of the truth. There is an interplay between the revealing and concealing of certain truths.

figure 3.x: 1367, macrocosm (Adam Hale, 2019)

MYTH

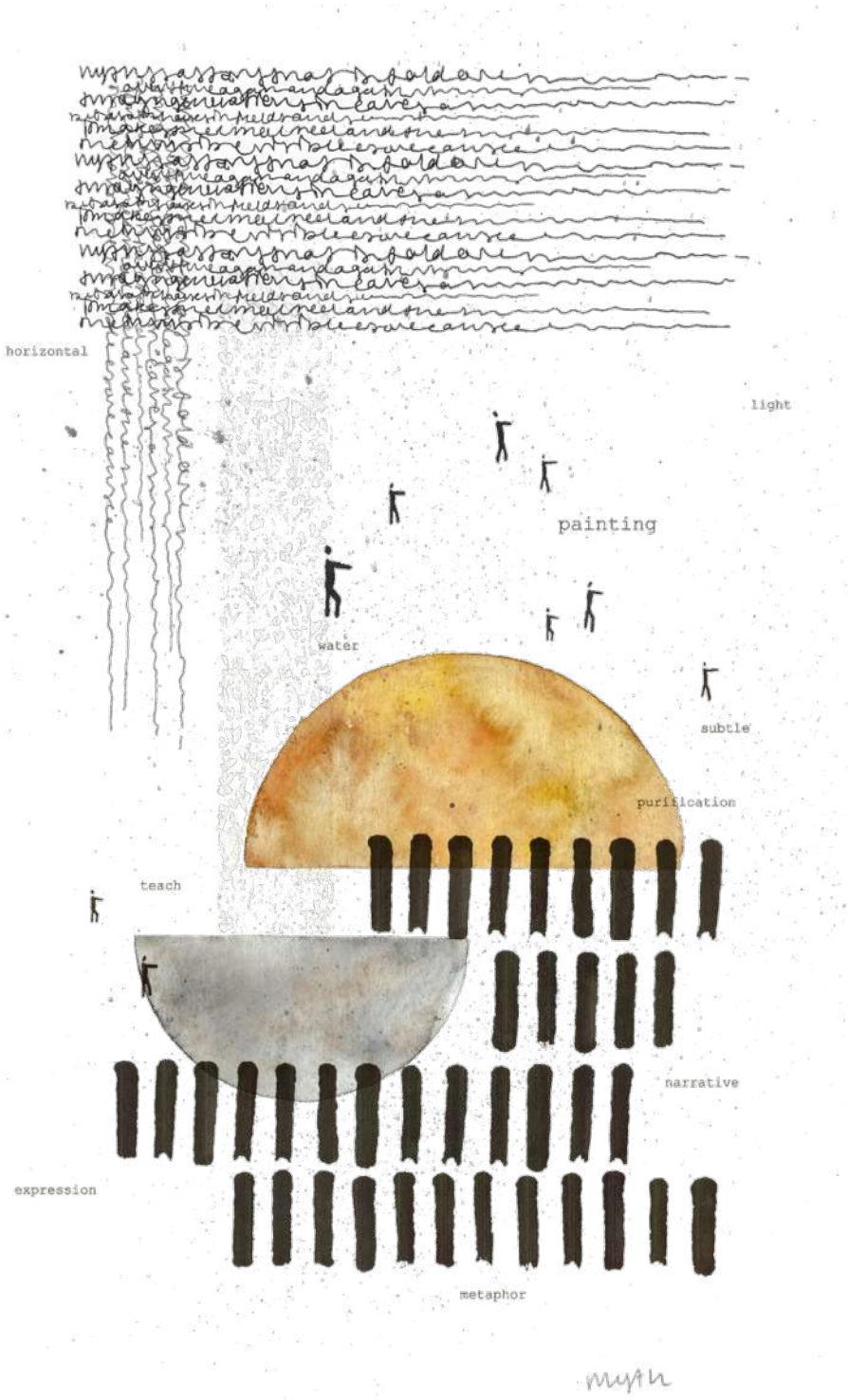
A myth is a story told which is not based on facts, but through which we can start to understand the metaphysical world. It is related to mythos as discussed in chapter 1, a way of gaining knowledge about the world which pertains to our emotion experience of it. What you understand of a story depends on where you are in your personal journey. In effect, this means that one's understanding of a certain myth will change as one changes.

The activity associated with myth is painting. Locally, the San portrayed depictions of their myths on the rock face. It was an expression of their cosmology, and they used their body as part of this expression.

In relating myth to architecture, the building as narrative arises. The way on which visitors move through the building will dictate their experience and understanding of it. The movement through the building happens on a horizontal plane, with obstacles, or stories, guiding the way, just as myth gives us a way in which to order our lives.

figure 3.x: concept model for myth (author, 2020)

figure 3.x: conceptual drawing for myth (author, 2020)



RITUAL

The second concept is that of ritual. Ritual can be defined as actions repeated through time which brings us closer to God, or the spirit-world. It is very much an embodied experience. As with myth, an individual' s understanding of the ritual and the depth to which they participate in the rituals depends on where they are on their own spiritual journey.

The activity associated with ritual is dancing. As part of the ritual, the San shamans danced round and round, with the women singing and clapping in the background. The movement is spiral in nature: moving in circles, but slowly coming closer to the divine. The body moves in circles, but the soul in a spiral; the body is used as a vehicle to move into higher realms.

In terms of architecture, ritual relates to the building as a place of gathering and of impressions left on the earth. As rituals take place over time, certain impressions are left on the earth; a smoothed rock or a deep-trodden path. As architecture, the building itself leaves traces, even after it is gone. It also relates to rhythm and the repetition of elements.

figure 3.x: concept model for ritual (author, 2020)

figure 3.x: conceptual drawing for ritual (author, 2020)

TRANCE

Both myth and ritual refer to ways in which the spirit-world can be understood, and understanding of it deepens as time goes on and the individual is able to surrender himself to the ritual or myth. By ingesting psychedelics, one is able to enter a trance state which places one into the metaphysical world. It has an immediate effect, but if the other two ways of seeing have not been practised, the experience of trance will be overwhelming or even misunderstood. Through myth and ritual, trance states are able to hold more significance.

The activity associated with trance is flying. As San shamans entered trance states, moving from one state to the next, the body was left behind. This phenomena has become known worldwide as shamanic flying. The physical world is left behind and there is a feeling of weightlessness.

The architectural principle derived from the concept of trance is dematerialisation. Perception of the physical disintegrates into something beyond. By leaving the body and flying, one mediates between the physical and non-physical. In architecture, this would be translated to the play between place and non-place. The movement happens in the vertical plane. It is a hand reaching towards the sky.

figure 3.x: concept model for trance (author, 2020)

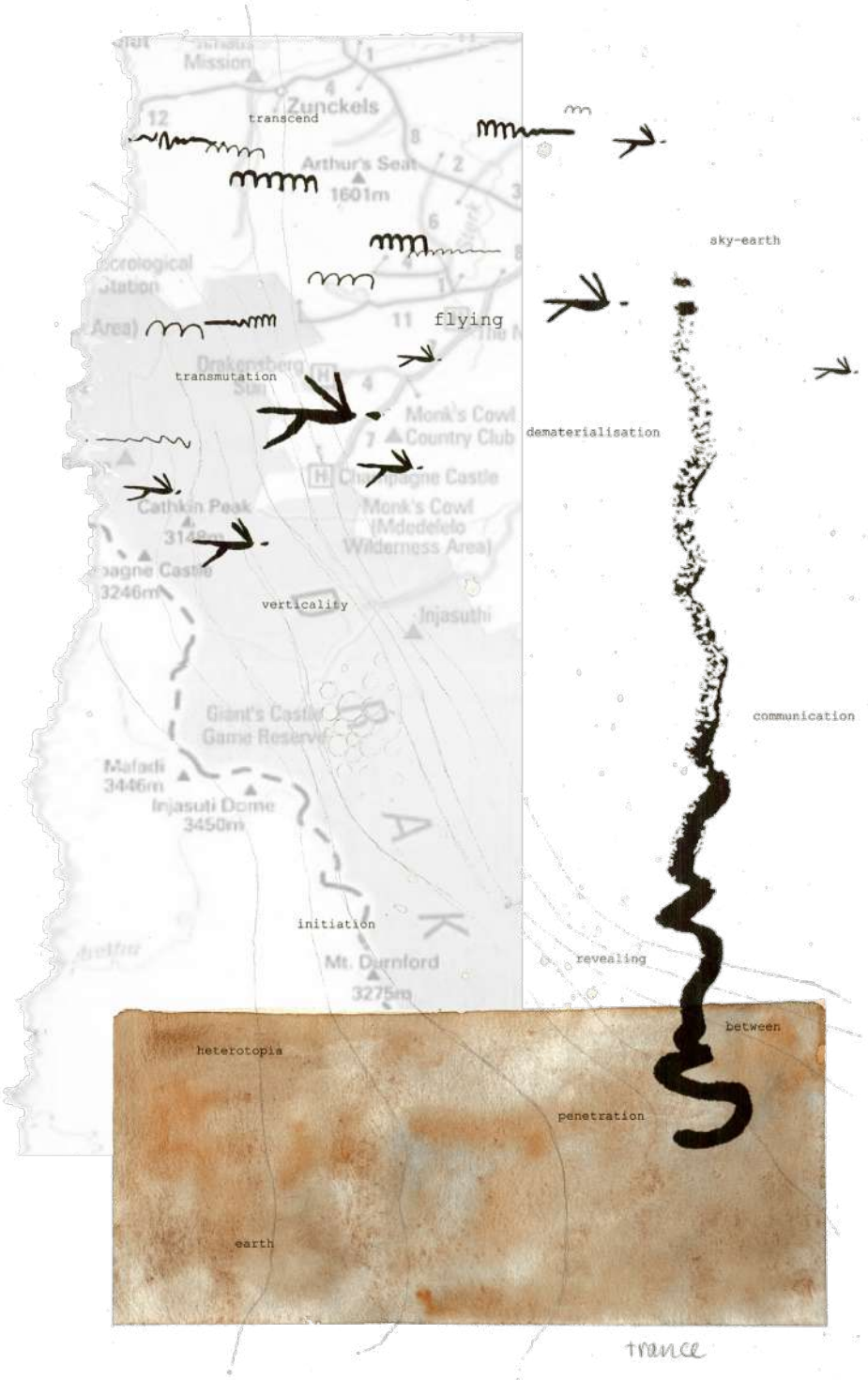


figure 3.x: conceptual drawing for trance (author, 2020)

3.3
accomodation precedent studies

Synthesis is a psychedelic psychotherapy centre in Zandvoort, the Netherlands. Set in a remodelled church on a former sand dune, the project was headed by Osiris Hertman, a Dutch designer with a focus on interior space.

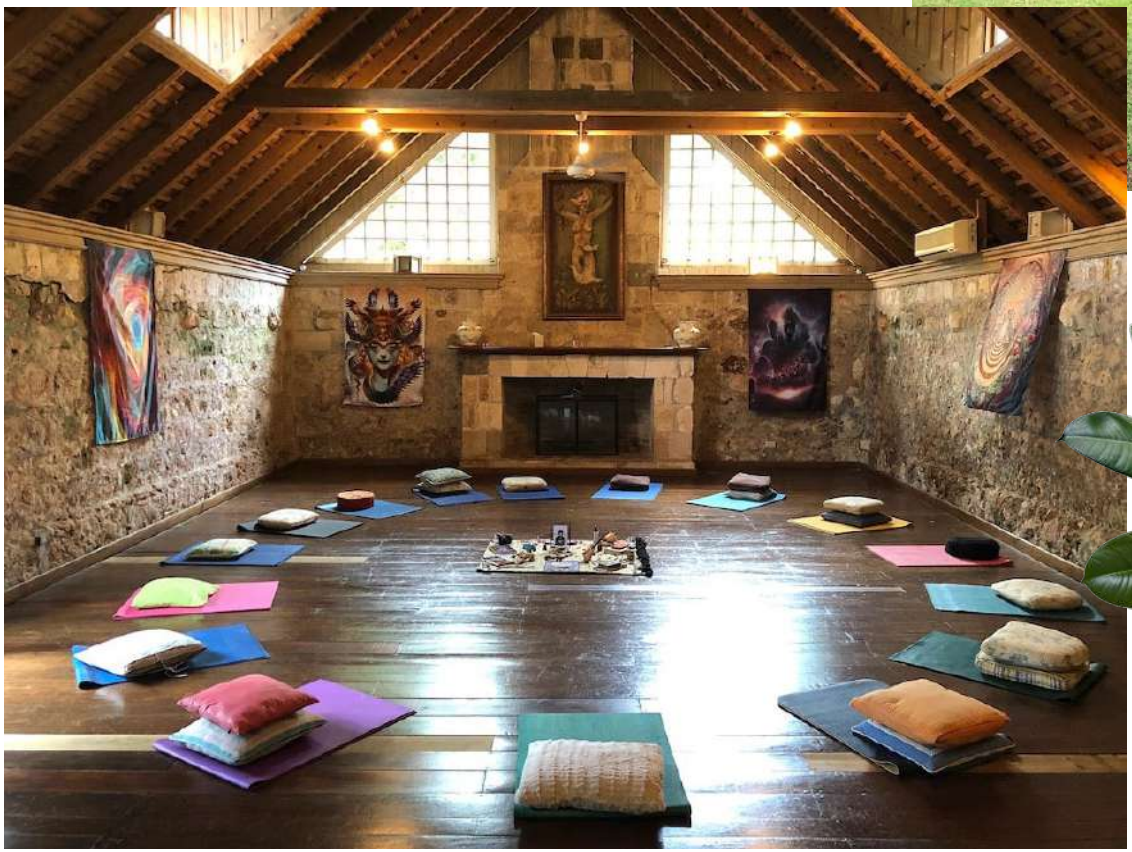
This project focusses on the individual experience. There are 6 private apartments designed for shared occupancy. The apartments feature a bedroom with a fully equipped kitchen, luxurious bathroom and a lounge with a television. A communal area with a shared kitchen and lounge is located in the main volume of the original church (figure 1). The light, contemporary space has access to the garden on two sides. Other communal spaces include a yoga room of 80 m2, a sauna and outdoor lounges (Synthesis, n.d: online).

Returning to the perception of this project as an individual experience, the therapy rooms are not designed for ritual use, which is in contrast with what is proposed for the Drakensberg centre. The therapy rooms at Synthesis allow for the psilocybin trip and subsequent integration sessions to happen independent of the communal life (figure 2). The therapy rooms take the forms of a traditional psychiatrist' s office: a couch for laying or sitting on, some plants, and a comfortable chair for the facilitator to guide the trip from (Synthesis, n.d: online).

figure 3.x: (top) main volume, Synthesis, Osiris Hertman 2017 (Haasbroek, 2018)
figure 3.x: (middle) exterior, Synthesis, Osiris Hertman 2017 (Haasbroek, 2018)
figure 3.x: (right) therapy room, Synthesis, Osiris Hertman 2017 (Haasbroek, 2018)

A psilocybin retreat centre in Jamaica, Atman Retreat, has a more ceremonial approach to psilocybin therapy. The mushroom ceremony takes place in a hall, with participants sitting in a circle on meditation pillows around the elders in the centre of the circle. Mattresses and blankets are on hand. Contrary to Synthesis, there is a focus on communal living. Participants are encouraged to eat and be together, either indoors in the communal spaces, or outside (Atman Retreat, n.d: online).

figure 3.x: (right) garden at Atman Retreat, n.d.
(Atman Retreat, 2019)
figure 3.x: (left) ritual space at Atman Retreat, n.d.
(Atman Retreat, 2019)



Rise Wellness is another psilocybin retreat in Jamaica. The organisation of space adds another layer: it allows for informal gathering spaces and nooks to which participants can retreat. Participants are encouraged to explore the landscape beyond the building and be in nature. In the evening, participants and elders commune around a fire (Rise Wellness Retreat, n.d: online).

From the theoretical investigation it has been gleaned that much more can be gained from engaging with psilocybin when it is within a ceremonial setting. Following from this, Synthesis is a good starting point, helping to identify what is necessary in a psilocybin psychotherapy centre. Specifically, incorporating private therapy rooms where participants and facilitators can have integration sessions to try to make sense of the experience. This will be in addition to the ritual space where the psilocybin ceremony itself will happen. The precedents in Jamaica highlighted the importance of communal space and breakaway spaces to which participants can retreat.

figure 3.x: (left) outdoor space at Rise Wellness, n.d. (Rise Wellness, 2020)
figure 3.x: (right) inhabiting the threshold, Rise Wellness, n.d. (Rise Wellness, 2020)

3.4
project programme

Ritual:
Ritual space
Yoga / meditation space
Integration spaces
Therapy rooms
Morning meditation / sungazing

Communal:
Lounge
Breakaway
Dining
Kitchen
Library

Accomodation:
Guest rooms
Facilitators' rooms

Services:
Office
Reception
Mechanical room
Ablutions

Outdoor:
Vegetable garden
Greenhouse
Leisure space
Fire pit

Sustainability:
Water harvesting and treatment
Hydroelectricity

3.5
proposed rituals on site

Day 1:
Explore local area
Welcome and introduction - meeting with leaders
Sound bath
Dinner
Fire gathering

Day 2:
Morning yoga flow
Breakfast
Preparation for meeting the fungi - meeting
Intention setting guided meditation
Afternoon ceremony - reconnecting with the inner child and finding joy
Dinner
Fire gathering and ecstatic dance

Day 3:
Morning meditation and yoga
Breakfast
Day hike
Integration meeting
Dinner
Stargazing

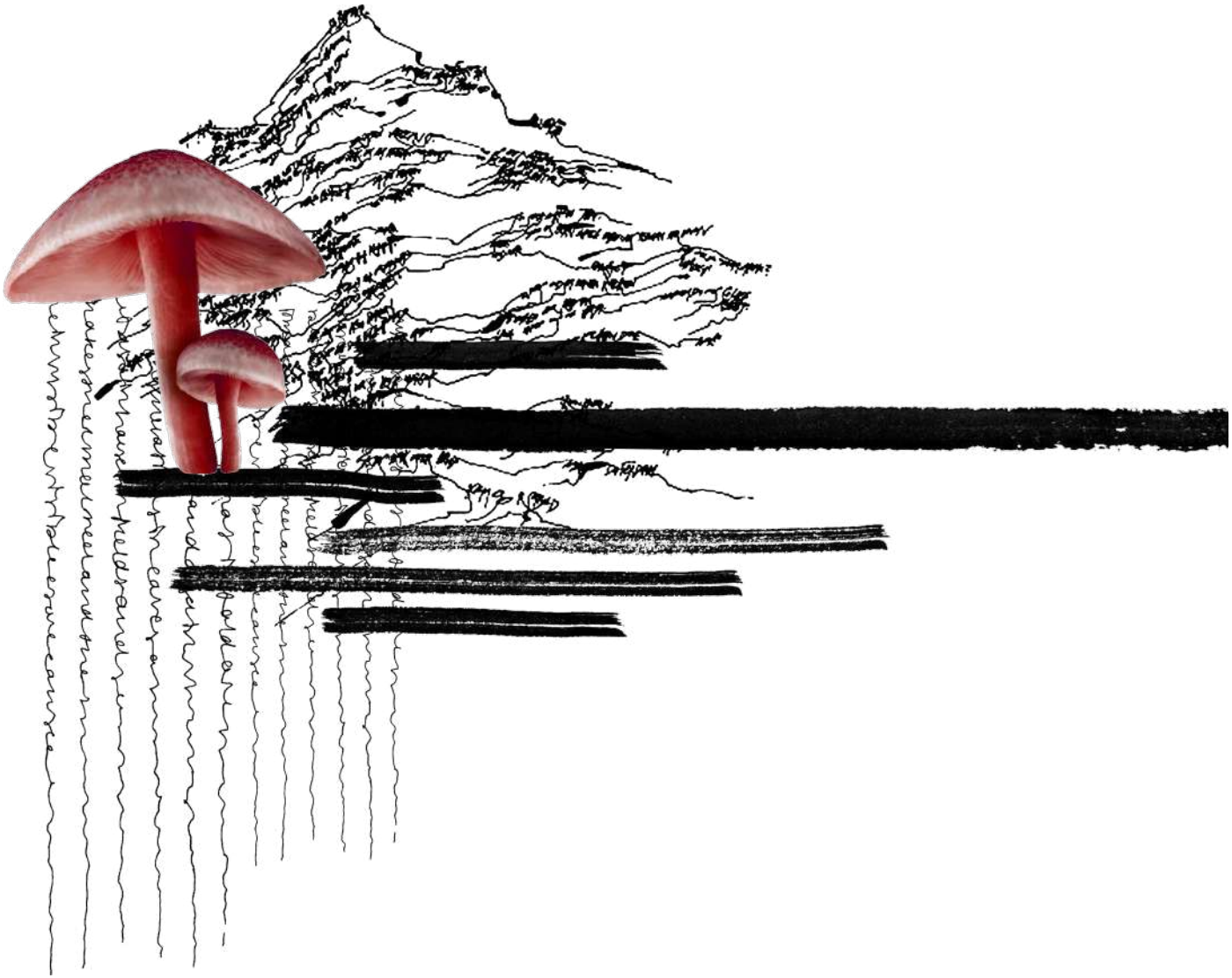
Day 4:
Morning yoga flow
Breakfast

Optional - sound bath
Mindfulness meditation
Sunset/night ritual - meeting the subconscious, deep healing

Day 5:
Morning meditation and yoga
Breakfast
Day trip
Breathwork introduction
Integration meeting
Dinner

Day 6:
Morning meditation and yoga
Breakfast
Breathwork
Afternoon ceremony
Independent reflections
Dinner
Ecstatic dance

Day 7:
Breakfast
Integration meeting - preparation for the journey ahead
Lunch



chapter 4

ASCENT

(noun)

\ ə-ˈsent\

the experience of rising upward as the substance starts to have an effect on the functioning of the mind. Many things are happening at the same time; at times the individual may find it hard to keep a hold on the reigns. The importance and meaning of some visions might not be immediately understood.

4.1

towards a psychedelic architecture

A psychedelic state of mind is being in the liminal state between this world and the next. The physical world and the spirit world both have their own order, but in the liminal state between them, the worlds seem to merge and collide. Where certainty is a closing of the mind, the psychedelic consciousness is mind-expanding. It allows both more of the physical world and the spirit world to be understood.

As humans, we are in the world, but not of it. We cannot completely leave the physical world, but we can enter into the space where both exist simultaneously. That is what this building is to be: the threshold between this world and the next made visible. As a building that dwells in the subconscious, it undermines the logical order of the world outside: a building between place and non-place. The building itself becomes a threshold. It is at the same time hyper contextual and not of this world. It takes what is suggested by the site and elevates it to an experience that challenges normative perceptions. It does not conform to the everyday, but allows us to see more of what life could be.

The psychedelic consciousness allows us to connect with the everyday in non-ordinary ways. Through use of materials, fire, water and light, the sense are opened so as to allow more of what is to enter into conscious awareness. It produces patterns where previously there were none. One is at the same time hyper-attuned to what is happening outside one' s self and what is happening inside one' s mind. One has the ability to change the entire experience with something as simple as a closing of the eyes. The threshold holds the potential for change. In the architecture, the thresholds allow for the visitor to curate their experience. It becomes what is needed as the visitor journeys through the building and their mind.

Moving through the spaces, the visitor is guided towards mind-altering experiences, both in obvious and subtle ways. The shape and texture of the walls become familiar. It provides a sense of stability and of being held. In its presence, one is safe to explore other realms.

A building where worlds collide.

4.2
ritual

Ritual, Dr. Tanya Luhrmann (2017) argues, is the way we connect the world as it ought to be with the world as it is – and orient ourselves to it. Luhrmann, an anthropologist at Stanford University emphasises the role of ritual in psychological wellbeing. If we lose sight of the world as it ought to be, we find ourselves psychologically adrift (Luhrmann in Burning Man Project, 2017). A practiced ritual has the ability to shift attention to what is important, both in the physical world and the meta-physical experience of it.

figure 4.x: ritual as mediator between the self and the world, with the Son of Man by Magritte, 1964 (collage by author, 2020)

A TRANSMUTATION OF RITUAL

Rituals can bring about transformation through subtle means. It orientates one to the right path, as described in the Buddhist tradition, so that all other parts of the psyche can follow. More often than not, rituals are not intense affective experiences, but rather a practice which requires effort, focus and surrender (Rossouw, 2020). Rituals allow us to commune with ourself, each other and the divine. It enables a sense of belonging to something larger than ourselves. In its simplest form, it allows us to reach altered states of consciousness through silencing the sense of self.

Ritual in this day and age has taken on a much different form. Where the purpose of rituals are to focus us on something larger than ourselves, modern society has neglected this aspect. Routine has become a replacement for ritual. Routine, while still important, is focussed on the self. The goal is optimal performance and when taken in the broadest sense, the efficiency of the economy. A lack of focussed, intelligent rituals lead to a disorientated society, socially as well as politically (Rossouw, 2020). Man' s spirit is still in search for something to attach meaning to, thus orientation is provided by other systems: capitalism, sport and politics are but a few examples. One way in which modern society quenches its thirst for ritual and meaning is through events such as AfrikaBurn.

THE BURN
a case study

AfrikaBurn is a seemingly strange, but culturally significant event that takes place once a year. So called Burners flood to the middle of the Tankwa Desert to lose themselves in an otherworldly mooncity for a week. There is art, music, performance and costumes, but most important of all: it is based on a culture of giving. It is something to believe in that is larger than yourself; a way of stripping down barriers between people by focussing on the common good. It is the transformative experience which for the inexperienced can change everything. It opens one's eyes to a whole new way of life, one which is authentic and communal in nature.

AfrikaBurn was born out of a societal need for ritual and the sense of community it offers. Perhaps from the feelings of ecstasy which could come from the continued practice of ritual in the traditional sense. But with AfrikaBurn there is no time for continued practice. It focusses on immediacy. As such, aids, such as psychedelics (in the broadest sense of the word) are often used to expedite such experiences. Thus, it can be said that AfrikaBurn is a seeking of ritual with the help of substances. Over its 13 years of existence, rituals have risen, literally, from the ashes. Some spontaneous, some ordered. Of the two most monumental is the main burn and the silent burn. In 2018, I went to my first Burn. It was the first of many solo adventures and set the trajectory for what would become a lifelong mission of self-exploration.

It was the second day. A new friend and I spent the day walking all around Tankwa Town, experiencing all there is to be experienced. Seeing things, connecting with strangers. It was overwhelming. During the hottest part of the day we found the chapel. We spent many hours there. We wrote our wishes and fears on the raw wood. We read messages from other people. We watched a couple get married. We observed and reflected. When the sun turned orange, we went back to our camp. As first time Burners, we had heard talk of the silent burn that evening and prepared ourselves for anything the night might offer. Water and snacks was the most important. The rest will fall in place. As we made our way to the gathering crowd, the excitement boiled up inside. We found some people we had met earlier that day and found a place to watch the burn from. Only when we sat down on the cooling sand did I realise that in the centre of the massive thong of people stood the chapel. The chapel was being burned that night.

It started slow. The volunteers traced their fiery torches along the edges. Some of the dried palms took flame, the structure started burning. Thousands of people all around us were silent. One could hear the crackling of the timber. A big arch fell and there were some murmurs among the crowd. And then again the silence. I was overwhelmed by the feeling of wanting to share this moment with someone. To my right an older man was seated. I took his hand. It felt comfortable and familiar. We sat like this, eyes warm, as the fire turned to embers. Every now and then we whispered something to each other. As the last flames disappeared there were some whoops and yells. Shivers ran down my spine. There was a flash of a naked body. Then another. Then, hundreds of people were running around the embers amongst the howls of the spectators; a sort of primal celebration. All the while I was still holding the man’ s hand. Swept up in thrall of fire, we laughed and stared with amused eyes at all the activity.

After a while, the whoops gave way to murmurs and people started leaving. My companion asked my name. It was strange getting to know someone after sharing such an intimate experience. His second question was what my mother’ s name was. It was at this moment that we realised we knew each other. 9 years before, he and his family lived in the house next to ours. His wife was an artist, his sons were my age. I had spent many afternoons playing in their sunlit house. This man had known me as a child. And now he knew my soul as an adult. We were ecstatic and emotional and hurried to find his wife, but by the time we found her, the magic of the moment was lost. We awkwardly exchanged greetings, not knowing how to explain what had passed between us. Then we parted ways. Hand in hand, they disappeared into the shadows of the night.

The next day I returned to the site. The ground was still warm and there were a few people walking about. I don't know what I was hoping to find. Maybe nothing. Maybe I was still longing for connection.

The rituals at AfrikaBurn taught me many things. The first was that a ritual can be meaningful even if you only experience it once. There is a kind of embodied energy that already exists. If you tap into that, even if just for a night, it can change you. The second was that people, and the synergy between them, makes the ritual. The verse "for where two or three are assembled in my name, there am I in the midst of them," (Matt. 18:20) reveals itself, even if a desert filled with psychedelic lights are the last thing that comes to mind when thinking of a church. Third, there is an order. It starts with the anticipation, then it begins to flow, gathering in strength until it reaches the crescendo. After, there is a moment of reflection, perhaps trying to make sense of the experience. And finally: it is an embodied experience. Every part of the being is involved; sights, smells, sounds. And movement. The more the body is a part, the more overwhelming and the more transformative the experience. The ecstasy is highlighted in shades of orange on the faces of the naked runners.

HOLY SMOKE
a case study

Let us turn back the hands of time. Before there was Shofar and religious fundamentalists, before the Industrial Revolution and the Age of Enlightenment, before there was Catholicism, there was the Orthodox Church. After Jesus' s ascension to heaven, prophets, scholars and missionaries spread far and wide to proclaim the one true God. Naturally, as Christianity was a relatively new religion, there was some conflict as to what exactly the Christian faith was. A series of ecumenical councils from 325-787 AD aimed to develop a unified religion. The doctrine of the Christendom was defined, and a liturgy came into being.

The Orthodox Christian liturgy revolves around rituals which have stayed largely the same for the past 1500 years. Each day, each week, each year were carefully curated to take the faithful on a journey towards a greater understanding of God. It is cycles in cycles in cycles. The days, months and years tell a story. They spiral around and around one another, reaching higher and higher towards the heavens. It is through time and practice that these mysteries are revealed to us. It is an unknowing which slowly unfurls through continued participation in the rituals. There is an immense depth. Layer upon layer peels off, revealing only more to be learnt. These revelations are like breadcrumbs discovered on the way to heaven. But these breadcrumbs can only be seen when we fully surrender to the experience. When we forget ourselves and become part of one another, we become part of God.

These ancient rituals bring about a change in consciousness not through substances, but through the senses. Every part of the body is engaged. Throughout the liturgy one stands, as it is believed that worshippers must stand in the presence of God. Lights are dimmed, with candles in front of the icons of Mary and Jesus. The flickering of the candles is reflected in the gold of Mary's cloak. At the beginning the air is still clear, but as the liturgy progresses, the air is thickened with the smoke from the incense. Bells jingle as the incense is dispersed from a rhythmic hand.

It begins slowly. First, a bell rings outside, calling all the faithful to the church. From the front of the church, the voice of the priest calls out, and the church reverberates with a low amen. And so a series of calls and answers begins. The monotonous chants of the priest are hidden behind the faces of Mary and Jesus. It is answered by the melodic chants of the congregation, echoing from one part of the church to the other. It fills the entire room with life. These are prayers. For peace, for the people of the Church, for the every person on earth, for abundance, for travellers on the earth, sky and water, for freedom from fear.
These conversations between priest and people are interspersed with longer hymns, the chords of which directly touches the heart. And again the chants back and forth continue. As one, the people cross themselves: from heaven to earth, from east to west. I hold my hand to my heart, so as to amplify what I am already feeling. The bells on the incense jingle. There are moments of silence, and moments of whispers. Every now and then, a flash of gold reveals what is happening behind the altar. Sometimes the hymns are fast and full of life, other times they are slow and filled with melancholy. A candle goes out and its smoke tendrils dance around those still burning. A woman takes a seat in reprieve. Another shifts the weight from one foot to the other. A moment of silence followed by another prayer: for the gifts given to us in the form of the body and blood of Christ, for a place to worship, for freedom, for a guardian angel, for everything that is good for our souls.

In spirals the liturgy builds to its moment of crescendo: the Holy Communion. The gifts given to us are dispersed among the faithful. For any Orthodox Christian, this is the moment where heaven and earth meet. A moment of silence, and then from the depths of the soul a hymn boils over. It takes with it any doubt, any feelings of isolation, any fear. In spirals, the energy descends again. A prayer, a whisper, a hymn. Slower and slower, until the faithful are dispersed with a blessing. Trailing behind them, the holy smoke.

Nearly a decade spent in Orthodox Churches has shown me the importance of continued participation in transformative rituals. It is through dedication, focus and continued practice that one begins to come closer to the essence of one' s being. The transformation that takes place in the church, eventually spills over into the everyday life. The second aspect of ritual is the moment of surrender; when everything around you becomes a part of you. It is when your voice carries with it the voice of everyone around you. For that to happen, one must be willing to let go of all notions of control. The third aspect is the moments of silence. It is in these quiet moments that one is able to internalise all that is happening outside, to make it a part of oneself. It is a moment to come back to yourself, to ground, to be present, to catch a breath before taking another deep dive. Then, there is the knowledge that rituals are spiral by nature. It consists of parts that are repeated, builds to a crescendo and comes back down again. There is a rhythm. There are also roles. Each person plays a part in telling the story. The roles interact with one another and come together in communion. And finally, as with the Burn, it is a fully embodied experience. Every part of the comprehensive experience contributes to its transcendence. The bells, the incense, the candles, the smoke, the icons, the chants, the pressure on the legs, the hands that pray, the whispers. It is the music that the soul sways to.

PSYCHEDELIC RITUALS

Throughout history, psychedelics such as ayahuasca and psilocybin have been used as part of sacred rituals. It was a serious aspect of spiritual life engrained in the culture. Through the ritual, the set and setting of the psychedelic experience was controlled. The role of the shaman serves to guide those seeking healing. In contemporary use, the plant medicine has been taken out of its context. In some regards, this allows for more freedom of experience as the experience is not dictated by the belief of a particular culture. At the same time, some of the potency of the medicine is lost. While there still value to be found in recreational use, the teacher plants truly come into their own when the experience is curated by those who have had countless meetings with the medicine.

The aim of this project is to provide a setting which returns to ritual. Where magic mushroom is used to its full potential to heal the mind and body and to bring us closer to who we really are.

RITUAL AND ARCHITECTURE

Ritual necessitates gathering, therefore, first and foremost, the building becomes a place of gathering. People come together to partake in a communal understanding of an individual experience. There is space designated for the ceremony itself. What the space entails is dependent on the nature of the ritual. The trance state requires spaces which caters to the metaphysical, or, from another perspective, the hyper-physical. It must at the same time be a blank slate which allows mental images to project themselves, while also supporting a sensual journey if that is what the seeker chooses. The procession of ritual leads to the conception of pre-ritual and post-ritual spaces. Each of these spaces supports the state of mind necessary to either prepare for or make sense of the ceremony.

Rituals through time leaves traces on spaces in which they happen. The pews in an old church are worn down and shiny, darkened with the touch of fingertips. The path to the top of a sacred hill is wide and rocky. A depression is formed in the stone which believers rub for good luck. Repeating a performance over and over again, cements it in the person as well as the place. A building which is a representation of ritual would leave traces of its own kind. Perhaps, when the building falls into disuse, parts remain which serves as reminders of the rituals that once took place. Through the repetition of elements within the architecture, the rhythm of the ritual is enforced. With considered material use one is able to create experiences which correlates to the specific states of mind. The materials of a space add to the narrative and the understanding thereof.

Ritual can create different kinds of lines in the physical space. Some lines are created through continual practice. These are smooth, meandering. Others are more like a fissure created by a singular transformative experience. Sometimes the lines are subtle, sometimes not. Sometimes they are lasting, sometimes not. Through a conscious awareness of the effect of lines in the architecture, one is able to connect the building to the more subtle implications of ritual.

4.3
myth

We tend to believe that myths are a thing of the past. Myths are not necessarily things that are not true, but things that we believe to be true, regardless of whether it can be proved or not. The anthropologist Bruce Lincoln defines myth as "ideology in narrative form" (Lincoln, 2006: 242). It is the narrative of the collective beliefs of a culture. Myths are not an objective truth, but instead gives us access to a subjective truth. It is the belief in myth, combined with these subjective truths which grants it its power. Through consensus, it becomes our reality.

Yuval Noah Harari, a philosopher and historian, is of the opinion that man's success is in part due to its ability to create and sustain grand, elaborate myths (Farnam Street, n.d.: online). Myth plays a vital role in keeping societies together. It is our collective myths that define us. When we share a common belief, it provides us with a moral and practical framework on which to base our actions and interactions. It allows the cooperation of large groups of people.The succession of myths through time is what we call human history (Farnam Street, n.d.: online). It is a record of the things we believed in.

Myths have the ability to bring individuals in a society together, but also to separate societies form one another. One society can be defined from another by its consensus realities. As one grows up, there are stories told over and over. It is repeated until its ideologies are engrained. It becomes a part of the subconscious programming and personal truth. It is rare that one will question the myths of the society in which one is raised. Its truths become irrefutable. By collective consensus, it can be decided to change a myth. For example, the myth of slavery was widely accepted throughout the 18th century. 100 years later it was abolished and seen as a crime against humanity. From a historical perspective, 100 years is but a glimpse. Being able to change the belief in a myth enables quick, large scale shifts in society (Harari in Intelligence Squared, 2015).

Harari's definition of myth is pragmatic. In his view, the primary function of myth is in enabling cooperation in a society. While myths are on the one side a practical guide for living in harmony in society, it is also a symbol of transcendence. It provides us with a way to understand that which we are not yet able to. Some things lie beyond the understanding of the human mind. Metaphors and

myths allow us to grasp an understanding of the transcendent when we are not yet able to understand it in totality. Mircea Eliade believed that myths are expressions of the sacred in words (Bhattacharyya, 2011: 54). They are stories which reminds us that we are more than purely physical beings. Myths are the narratives of a sacred history (Bhattacharyya, 2011: 54).

The truth of a myth lies in what it reveals to us about the human experience. Myth evolved as an answer to questions when the answer was not evident. It is a way of making sense of the world and finding meaning in it. How a myth is interpreted, and its expression in ritual, is what gives rise to meaning.

Ritual, myth and symbols are subject to change over time. Even when the myth itself does not change, the interpretation thereof changes as the society evolves. Myths are superimposed. Its meaning compounds with repetition. As such, there is a depth and a layering of meaning that can be uncovered through continual engagement with it.

There is a relationship between the recital of myth and the enactment of ritual. Myth expresses in language what ritual expresses in action (Buxton, n.d.: online). Through sound and music, myth provides the context in which ritual can be understood. Myths and rituals bring healing, inspiration and renewal (Buxton, n.d.: online). In terms of this thesis, narrative can be used as a tool by which individuals can be led to believe in the healing ritual of magic mushrooms, if they so choose. Through narrative, one can add meaning and understanding to a ritual which might otherwise be overwhelming. Symbolism and iconography are the visual counterpart to myth and ritual. Architecture can play the role as visual symbol of the transcendent by identifying motifs which carry meaning. When the symbols are understood, the architecture becomes meaningful.

INITIATING ARCHITECTURE

As a precursor to developing architecture, I explored landscape art as a way to represent an ephemeral essence of myth. The sensitive nature of the landscape lends itself to a building which is mutable, just as myths are mutable.

Myths are stories told that guide us in the decisions we choose to make. Initially this was interpreted as elements which guide movement while still leaving room for choice. There is a contrast between the grid of the outside world vs. the retreat world. There were some initial explorations of how these interact with one another. After a while, the realisation came that myths were not as fixed as walls, but rather like breadcrumbs that help us on our way. Stories and myths change with retelling. With them, they carry a little of each person that gave life to them. Depending on who hears the story, the myth takes on another meaning. The landscape intervention should reflect that same changeable quality; more like fabric floating on the breath of the wind, than stone walls. The things that guide us are not solid and stable, but fragile and subject to change. It falls prey to other, greater powers, sometimes unseen.

As such, the stone walls become layers of fabric floating in the wind. As a person moves through the landscape, they are both touched by the fabric and the fabric takes on the impression of the body. When the shapes are translated into architecture, it loses some of its fluidity and freedom. It becomes a moment frozen, but nonetheless reminiscent of the things that shaped it. This motif was intuitively understood as the roof structure. While some of it was lost along the way, it regained its integrity in the final design.

The narrative guides the experience of the building. Moments are curated which led the visitor on a journey through the building which culminates in the participation in the ceremony. The moments leading up to the ceremony prepares the individual for what is to come, and in the moments after the meaning of the event is dissected. The narrative of the building tells a story of returning to nature and to ourselves, of finding peace, of finding purpose. It is an explicit metaphor for what awaits in the world outside.

4.4

engaging with topology

Bubble digrams exploring the oragnisation of functions on site.

figure 4.x: intuitive reactions to the site (author, 2020)

figure 4.x: intuitive reactions to the site (author, 2020)

4.5

stonehenge: a narrative of myth and mystery

figure 4.x: the imaginary rituals of stonehenge (collage by author, 2020)

Stonehenge is shrouded by mystery. It occupies the imaginations of children and adults around the world. But what is it exactly? A royal monument, or a calendar? A space for religious ceremonies, a measuring system for astronomy, a tourist destination? A vortex for the Earth' s energy? A navigation system for alien ships?

A structure more than 5000 years old, it rises from the English countryside in an ancient formation. An outer circle of upright stones and lintels surround a semi-circle of trilithons. Stones are dotted around the circle in a supposed order, but to what purpose, it is not exactly known. A ditch of a 100m diameters encircles the entire arrangement. The construction must have taken centuries, with many different groups of people adding to it and repurposing the structure to fit their own worldview.

Upon sunrise on the morning of the summer solstice, the sun rises in exact alignment with the heel stone and the grand trilithon. Watching the sun greet the longest day of the year leaves one in a kind of primal awe. What remains today is only a part of the whole truth; it lies in ruins as nature and humans have taken its toll. No one knows exactly why it was built here, and by who.

Some time in the 5th century, a battle took place on the Salisbury plain, the current site of Stonehenge. Many British nobles were slain in the clash with the Saxons. The high king, Aurelius Ambrosius, wanted to erect a memorial fitting for the fallen nobles. His wizard assistant, Merlin, suggested repurposing the sacred stones from the Giant' s Ring in Ireland. According to the legend, the stones were originally transported to Ireland from Africa by giants. The stones had magical properties and thus the site was used for performing rituals and healing. When the expedition arrived in Ireland, the Britons realised that they would not be able to move the heavy stones to the Salisbury Plain. Merlin the Wizard stepped in. He used his powers of magic to fly the stones to England, settling them neatly around the mass grave of the slain nobles.

But perhaps it was the devil who tricked an old lady from Ireland into giving him the stones. He disguised himself as a man and struck a deal: in return for the stones, he agreed to pay her as many gold coins as she could count before he finished moving them. The lady thought it would take him a long time to move the heavy stones and agreed. But the devil had a magic trick up his sleeve. He transported the stones instantly and the old lady was left empty handed. Or perhaps Stonehenge came into being when the giants who lived on the plain danced in a circle and suddenly turned to stone. None of these myths provide the concrete answers we need to understand its full significance, but that is not the purpose of myths.

Perhaps not knowing is what enables us to identify with it in such a compelling way. A skeleton of rituals past, it leaves us with clues of what it might have been. The outlines of the structure leaves our imagination with the freedom to add colour. As we engage with the ruins in this way, we orientate the landscape into what we want it to be, instead of the structure orientating us. We are able to craft a narrative around it which supports our own worldview. This is especially true of ritualistic structures which embody the energy of countless performances. In this age, we think about structure and architecture in terms of a singular lifetime or purpose, not multiple uses over centuries.

The end product of every new construction is ruin, but the ruin in itself can be meaningful. This idea is foreign to us. Buildings are built for a specific purpose and when that purpose becomes redundant, it is destroyed. It is selfish to some extent. Surrendering a building to nature allows for a future generation to orientate it around themselves. Just as a house in the early stages of its construction, it leaves a playground for the imagination.

As more and more of the building returns to the earth, its meaning shifts, and with each phase in its ruin, it can tell a different story. One could only imagine what a building could be when it is not longer for us.

figure 4.x: 943 (Adam Hale, 2018)

4.6

the circle and the spiral

The circle and the spiral. Similar in shape, varied in meaning. The circle is symbolic of moving through cycles. There is no change. The cycles are continuous and never-changing. It is symbolic of timelessness, wholeness and the infinite. The spiral, on the other hand, leads us upwards. It signifies progress. It stands as a symbol for life, evolution and consciousness. The architectural interpretations of the shapes attest to their meaning.

The Solo House by Office KGDVS is located at the top of a hill in the Spainish countryside. It combines the geometry of the circle with the geometry of the square. The circulation of the building moves around the circle in the centre. What is of importance with this precedent is

the creation of a sacred space at the centre. Its location leaves it vulnerable to the elements. It is exposed, and thus it necessitated a space which is protected from the world beyond. The circle at the centre holds an otherworldly character. It is physically separated from the outside world, but still allows perspectives thereof. The metaphor of a sacred space surrounded but not part of the everyday appeals to the nature of this dissertation.

The Hemeroscopium House by Ensamble, also in Spain, is not spiral in shape, but in construction. Colossal industrial elements are stacked upon one another, spiralling upwards, becoming lighter as the structure grows, and ends in a granite boulder which keeps the entire structure in balance. The organisation of the elements allows for interior spaces that flow from one to another, upward, downward and across. It suggests that the construction of a building itself can symbolise evolution. It is balance and tension manifested.

Both of these are residential projects. The first exudes a sense of calmness and tranquility, the other is alive, with a focus on moving forward. The one seems older, almost ancient, while the other suggests growth and liveliness. Could one create a sacred space, while still maintaining the allusion to evolution?

4.7
construction touchstone

As a building in the natural landscape, the architecture should be in conversation with its setting. The aim is to create a temporal architecture that emerges from and returns to the earth. This can be achieved by using natural materials readily available in the area and on site, as well as the formgiving of the building.

The walls and roofs of the building are representative of the physical and metaphysical worlds. It is two sides of the same coin. The two reflect and influence one another, but are in essence two different systems that combine to create a place where we can dwell between earth and sky. The building extends outward and the landscape is invited into the building.

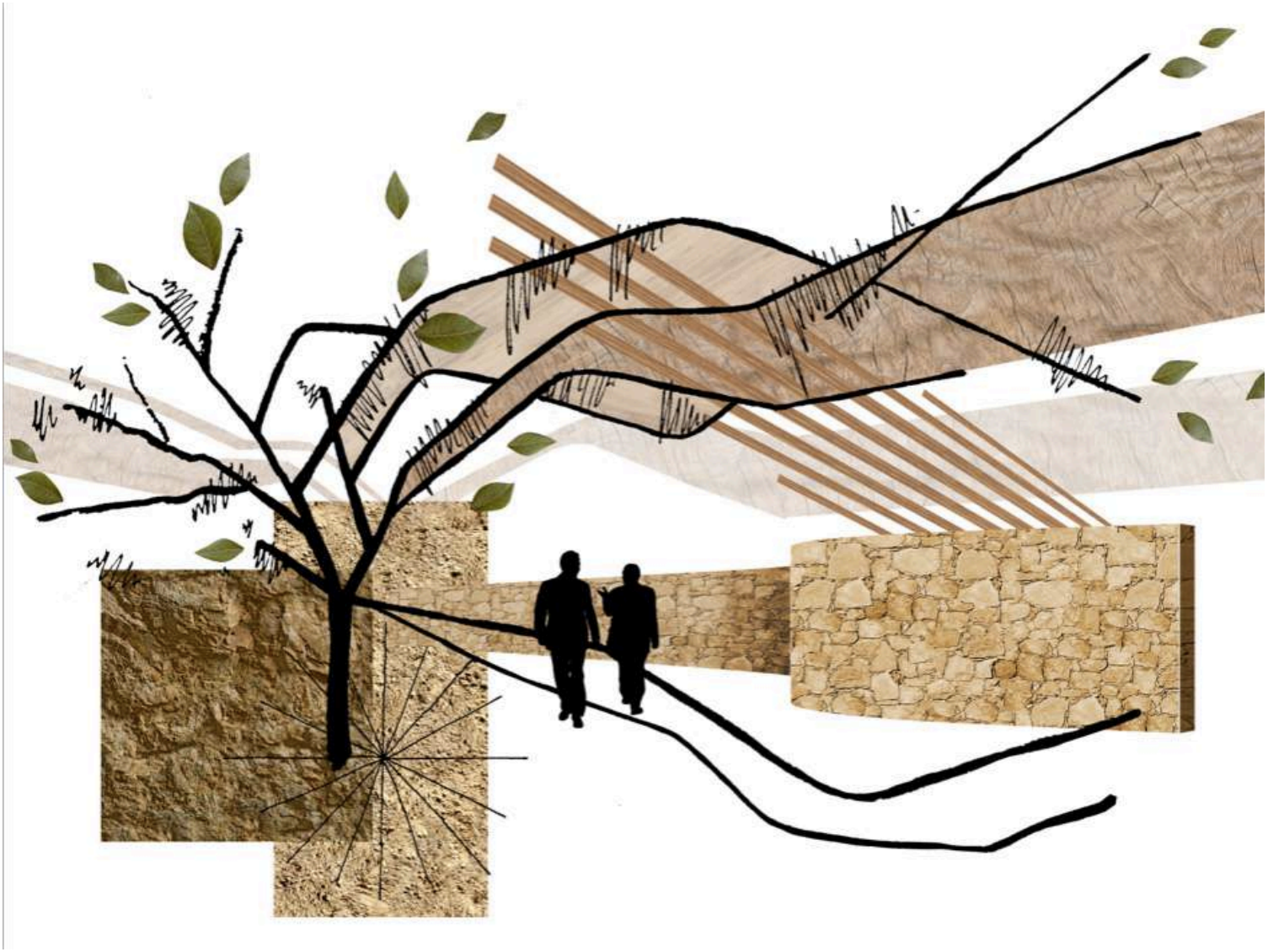


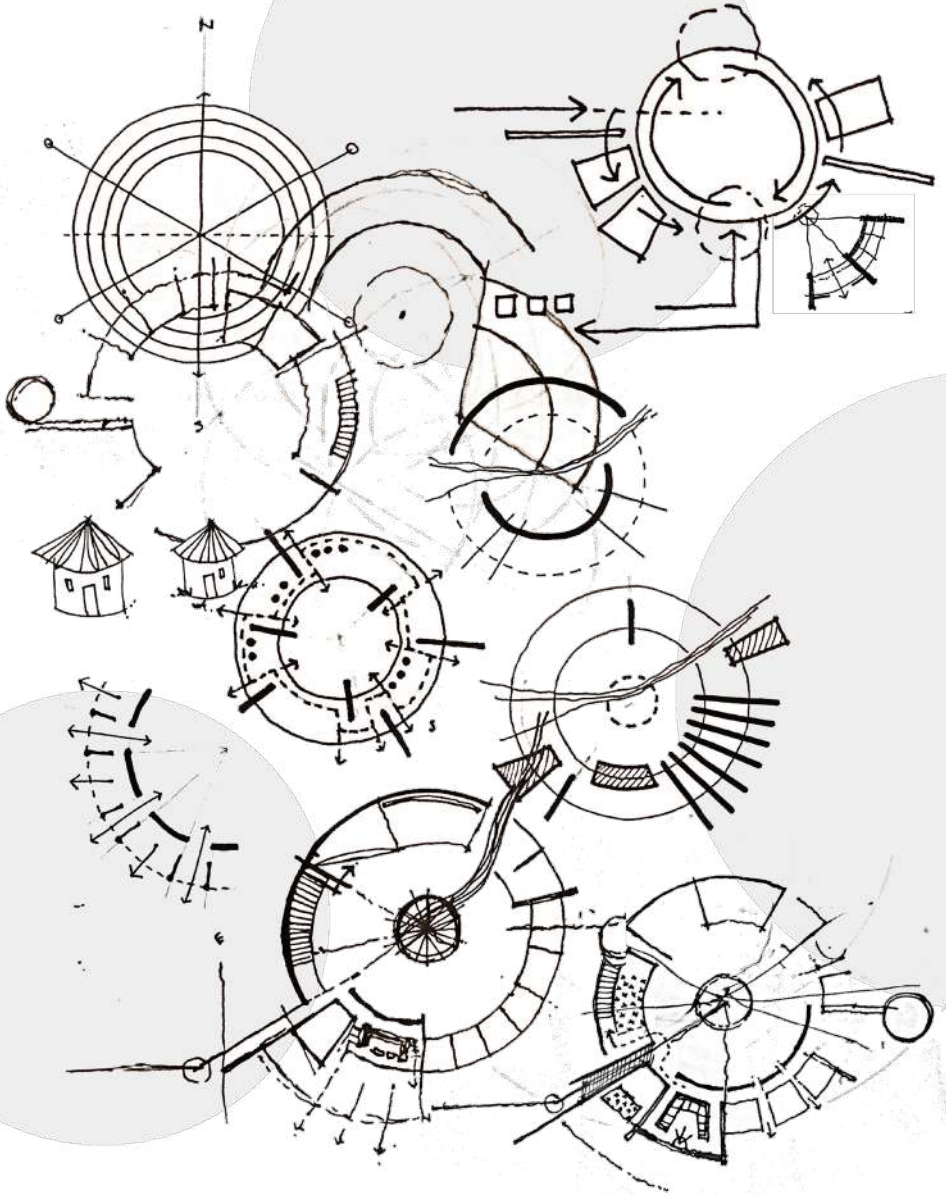
figure 4.x: construction touchstone (author, 2020)

4.8

design development - external review 1

The design with the first external review focussed on simplifying transcendent concepts in order to understand them better. In hindsight, perhaps it was simplified too much. The circulation of the building would tell the story of how one can reach an understanding of the metaphysical world. The circular form pulled together the program in order to create a sacred space at the centre of the circle. While visitors moved around the building they would be unaware of the sacred interior, and, only once initiated, will be able to make use of the space. Walls extended from the centre into the landscape as a first attempt at integrating the building with its surroundings.

The critique regarding this initial iteration was that the circular form is a restrictive order and that it feels imposed on the landscape. It would be difficult to integrate such a strict geometric form with its surroundings.



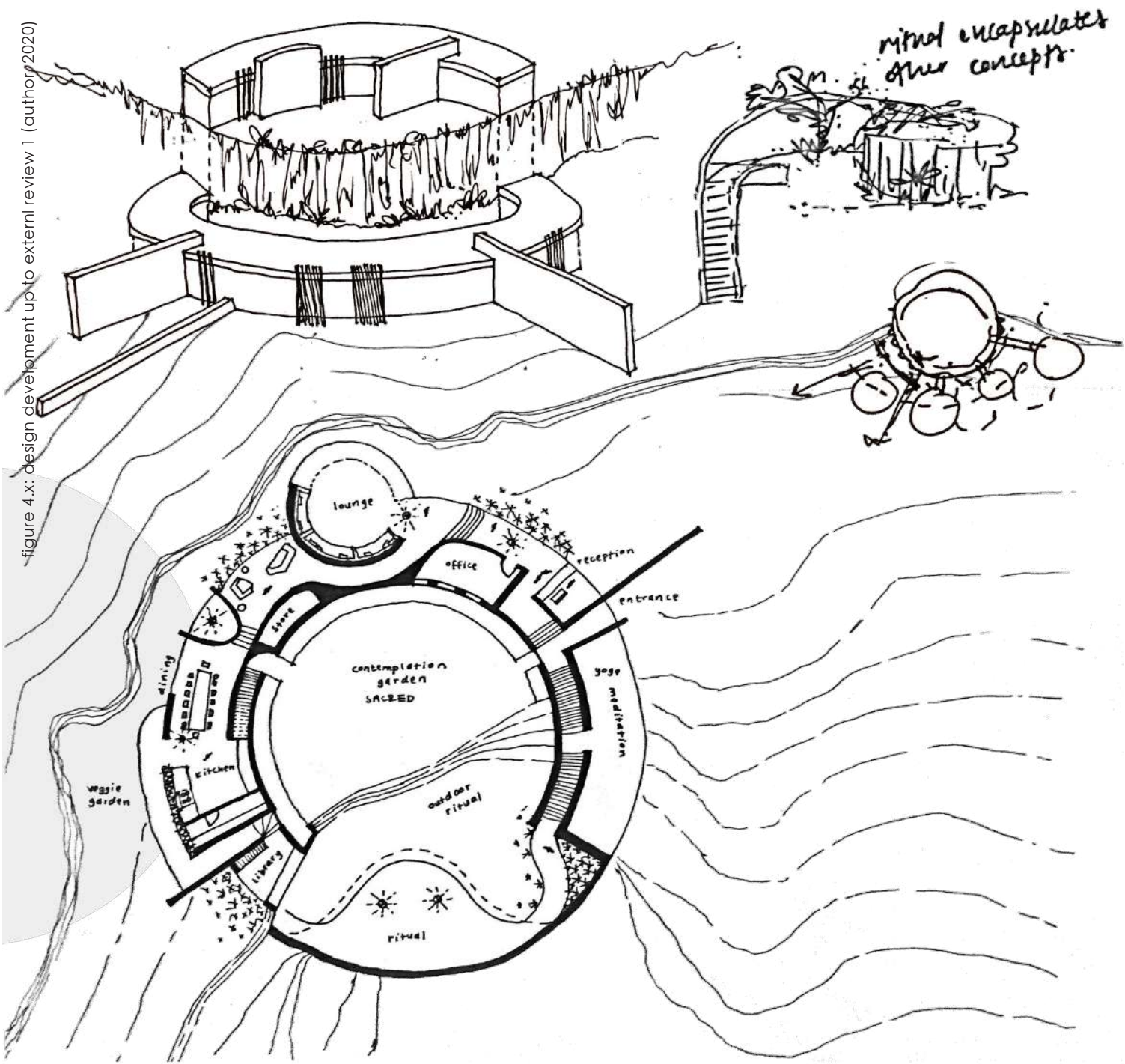


figure 4.x: design development up to externl review 1 (author, 2020)

4.9

exploring the forces between the physical world and the spiritual world

As humans dwelling between the earth and the sky, we are as much part of the spirit world as we are of the physical world. We are constantly walking the line between the physical and the meta-physical. Architecture is the embodiment of the threshold between the two, and thus should make visible the relationship between this world and the next.

TENSION

When one first becomes aware of the spirit world, it is difficult to navigate. One is being pulled in both directions. This tension adds a structure and meaning of which one was always faintly aware, but now it has become apparent.

If the roof is symbolic of the meta-physical world, tension offers us one way to approach its structure. The Sawmill Shelter is a project by the students of the Architectural Association in the UK, to investigate the limits of timber in tension. The roof consists of a lightweight timber net spanning 11m. On one side, the net is supported by a frame and tension cables. On the other side, 18 tree trunks were sliced and steam bended. The structure was engineered with digital precision and assembled on site.The lathes are only 38x38mm, but each lathe can hold up to 2 tons of tension (Design + Make, 2017: online).

BALANCE

Balance is the result when tension is practiced and refined. It is the goal to reach a place of balance, but it can only be practiced when one is first made aware of the tension. It brings harmony to one' s lived experience, but it is in no way effortless. Through architecture, we can be made aware of the effort of balance.

An example of a timber roof which utilises balance in its construction, is Die Es by Gawie Fagan. A timber balancing beam spans the length of the house. Timber lathes are balanced on this beam, tilted at various angles to form an undulating roof line on elevation. The lathes are glued to one another to ensure structural rigidity. The result is a curved roof profile made up entirely of straight elements.

Hemeroscopium House, as previously discussed, also provides us with an example of how balance was utilised as the essence of construction.

Integrating the concept of tension with that of balance, begins to provide us of clues to what the roof as metaphor could become.

PRECEDENT STUDY
the Miralles line

As balance and tension offers us a way of understanding the relationship between the physical and the metaphysical, engagement with the metaphysical leaves traces on the physical in the form of the lines of ritual. Translated to architecture, this would come to signify the walls.

The lines used by Miralles in much of his work can be seen as an embodiment for the interplay between the physical and metaphysical. The lines consist of two elements - the linear and the circular. The result of these lines on plan, is an architecture which directs the flow of experience. The linear relies on the circular for direction; the circular relies on the linear for movement. Relating the circular and the linear back to the initial conceptual understanding of myth and ritual - myth, which is linear; ritual, which is circular - one comes to understand that the human understanding of the metaphysical is represented in the Miralles line.

figure 4.x: Archery Pavilion by Enrique Miralles & Carme Pinos, 1992, with roofs and roof supports indicated (original drawing by Miralles, 1992, edited by author, 2020)

The Archery Pavilion in Barcelona is but one example where the line crafts the experience. On plan, the curvilinear walls are juxtaposed with the rectilinear roofs. The sloping site dictated a linear development along the contour lines. The spaces are defined by two primary walls: an exposed concrete wall which overlooks the archery range, and a retaining wall which hides the services (Langdon, 2014: online). Through its shape, the exposed concrete wall determines the relationship between inside and outside spaces. The relationship is extended with habitable threshold spaces.

The walls and roofs function as two distinct systems. The roofs float over the walls, suspended by columns. The openings between the walls and roofs are treated as a lightweight third element which allows light into the building.

Inspired by Miralles, various line studies were drawn in order to understand how the shape of a wall could impact the experience of a space. These lines were translated onto the site to support the proposed functions of the mushroom retreat.

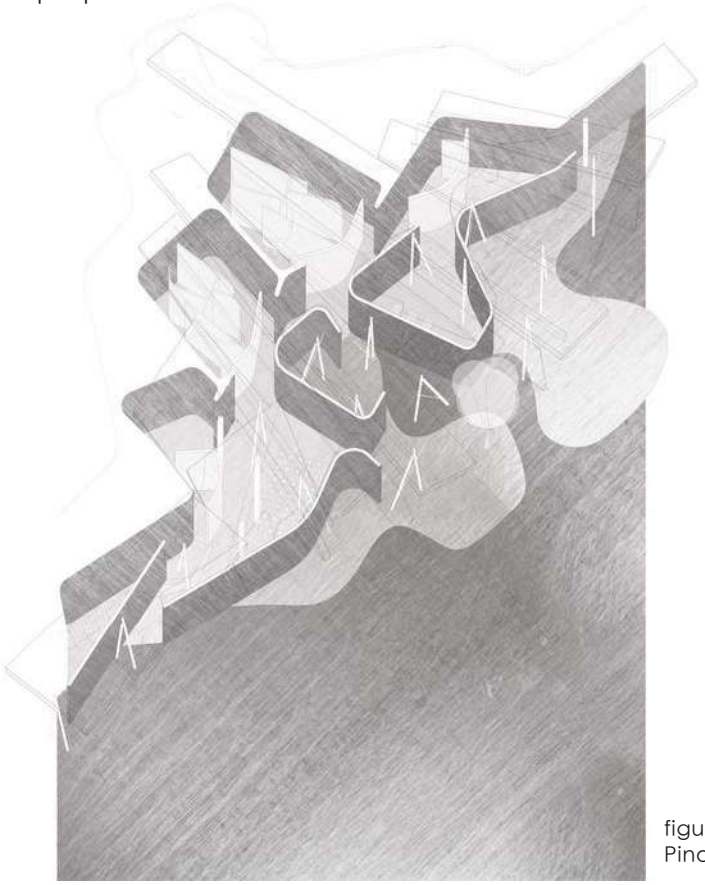


figure 4.x: axonometric study of the archery pavilion, Miralles & Pinos, 1992 (Michael DeGirolamo, 2018)

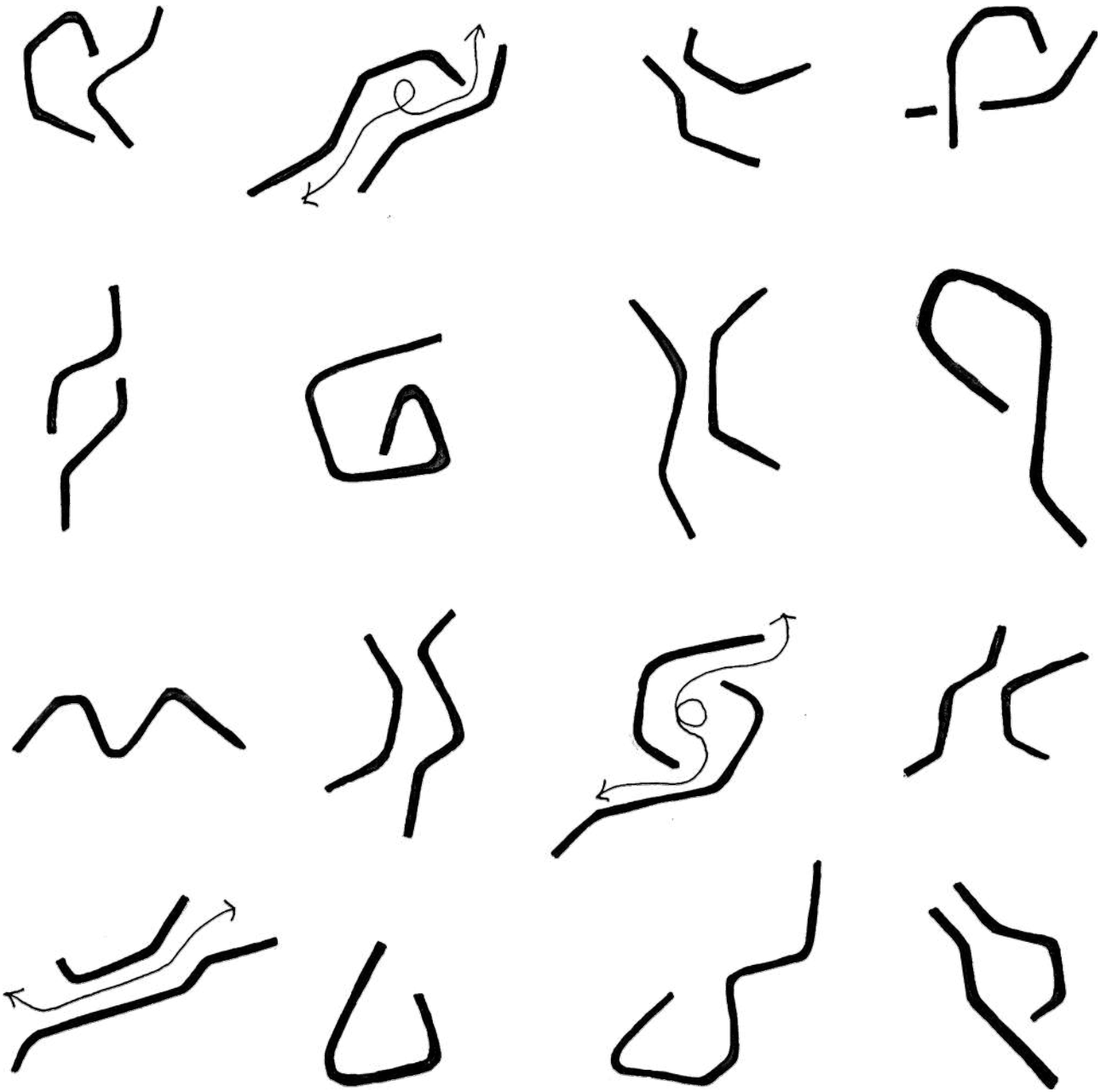


figure 4.x: line studies (author, 2020)

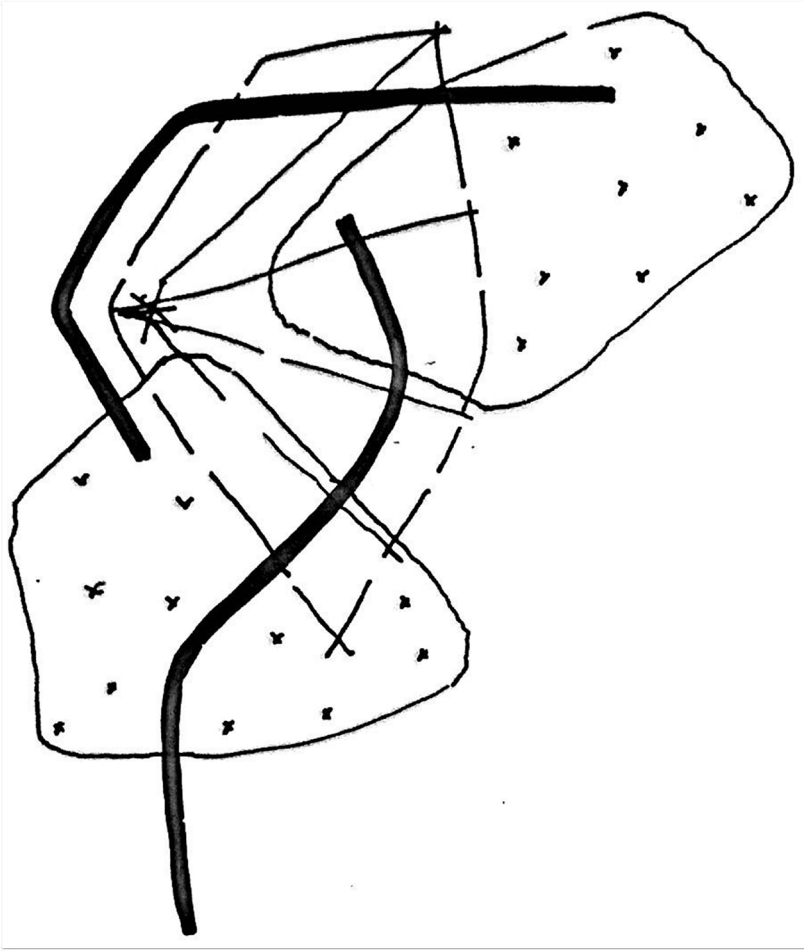


figure 4.x: plan partii (author, 2020)

4.10
approach to sustainability

An approach to sustainability was considered as the project was conceptualised. It was never a question whether the building should be sustainable, but of how sustainable it can be. The aim is to design a building which is entirely self-sufficient, from water and sewage treatment to energy.

The strategy for sustainability encompassed seven main aspects:

1. materials and finishes
   locally sourced materials + materials available on site + access is a challenge + timber sawmills and plantations + stone + earth

2. water harvesting and treatment
   rainwater harvesting + surface run-off + reuse and filtering water

3. lowering energy requirements
   candles + solar water heating + natural lighting

4. generating electricy
   hydroelectricity from the river just below the site

5. passive design
   passive heating + cooling + natural lighting

6. active heating
   fires + candles + steam heating

7. sewage treatment
   botanical cells + composting

4.11

precedent study - tectonics

Sandibe Lodge
Nicholas Plewman Architects
Okavango Delta, 2015

Sandibe Lodge designed by Nicholas Plewman Architects in the heart of the Okavango Delta, is a 24 bed boutique hotel. Considered as one of the seven wonders of the natural world, this canvas of waterways and wetland was listed as a UNESCO world heritage site in 2014. The landmarked status of the location imposed severe, but appropriate limitations on the design of any buildings there. The new lodge would replace an existing one, designed by the same architect 16 years before.

The design of Sandibe took these restrictions in its stride. According to the architects (Plewman, n.d: online), the design was inspired by the abundant fauna on site. The lodge took cues from the pangolin, a shy, elusive creature that roams the savannah at night. The creature is able to find shelter within its formidable array of scales when threatened by predators. The organic building sits comfortably within its surroundings, almost as if it were some endemic creature.

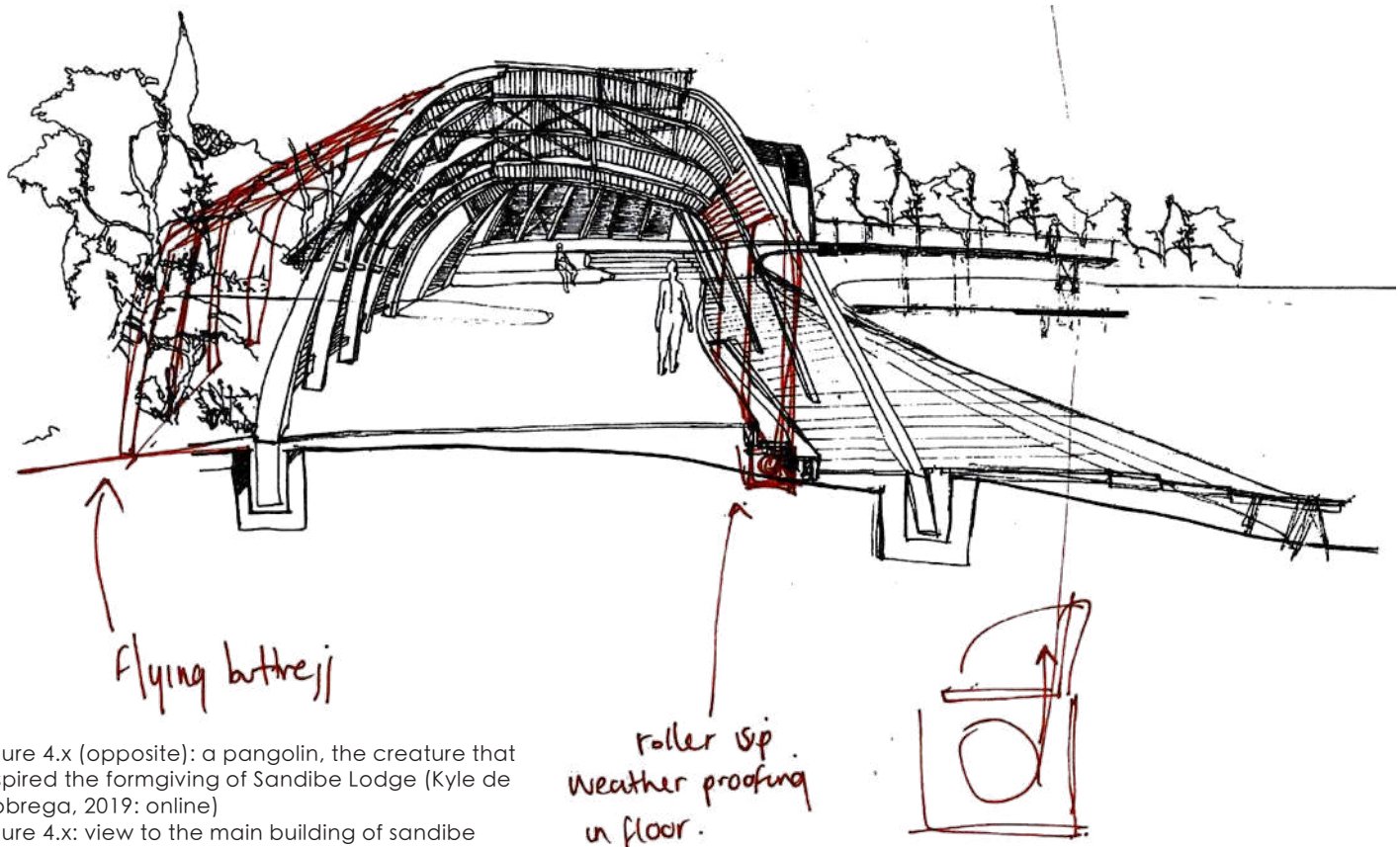


figure 4.x (opposite): a pangolin, the creature that inspired the formgiving of Sandibe Lodge (Kyle de Nobrega, 2019: online)
figure 4.x: view to the main building of sandibe Lodge, Nicholas Plewman Architects, 2014 (Dook, 2015)
figure 4.x: hand-drawn section of the communal space (drawing supplied by the architect)

SITE AND SUSTAINABILITY

The restrictions imposed on the site dictated that the building be completely constructed with ultimately biodegradable materials. In addition, 70% of the lodge' s energy requirements had to be of a sustainable origin. There should be minimal to zero impact on the site and its fauna and flora and all waste and refuse must be treated on site. In effect, the building must be off-grid. Nevertheless, the design brief required that the building be of the highest quality, with no compromise on comfort and luxury (ArchDaily, 2015: online).

The site is separated from civilisation by expanses of swampland, making accessibility a challenge. With the exception of the parabolic timber frames and cedar shingles, most of the materials were locally sourced. With the exception of concrete footings, the buildings were built entirely from wood (Schuler, 2016: online). Walls and roofs become one element, draped over raised timber floors. As the building is located on an expanse known for its seasonal flooding, by necessity the buildings are raised from the ground. Leadwood members were reused from the previous building as stilts to elevate the bungalows (Schuler, 2016: online). A detailed discussion of the structural systems will follow.

The raised floors have a minimal impact on the landscape. The project required minimal groundwork, and no existing trees were disturbed. In some instances, the buildings were even formed around existing trees (figure 4). Before construction could even commence, the restrictions required that all inorganic building material be removed from the site. As a result, tons of brick, concrete and mortar was carefully removed from the site and trucked out of the delta (Schuler, 2016).

Power to the building is supplied by a 100 KVA photovoltaic array, ensuring that the generators need only run 3 to 4 hours a day. A system of heat pumps and solar water heaters circulates hot water through a 2,5 km ring which ensures that hot water is delivered instantly. The pools are also heated through use of solar water heaters. In order to safely discharge of effluent, water and soil waste is collected and pumped through a certified biological waste treatment plant. The effluent can then be discharged into the sensitive environment with no adverse effects (ArchDaily, 2015).

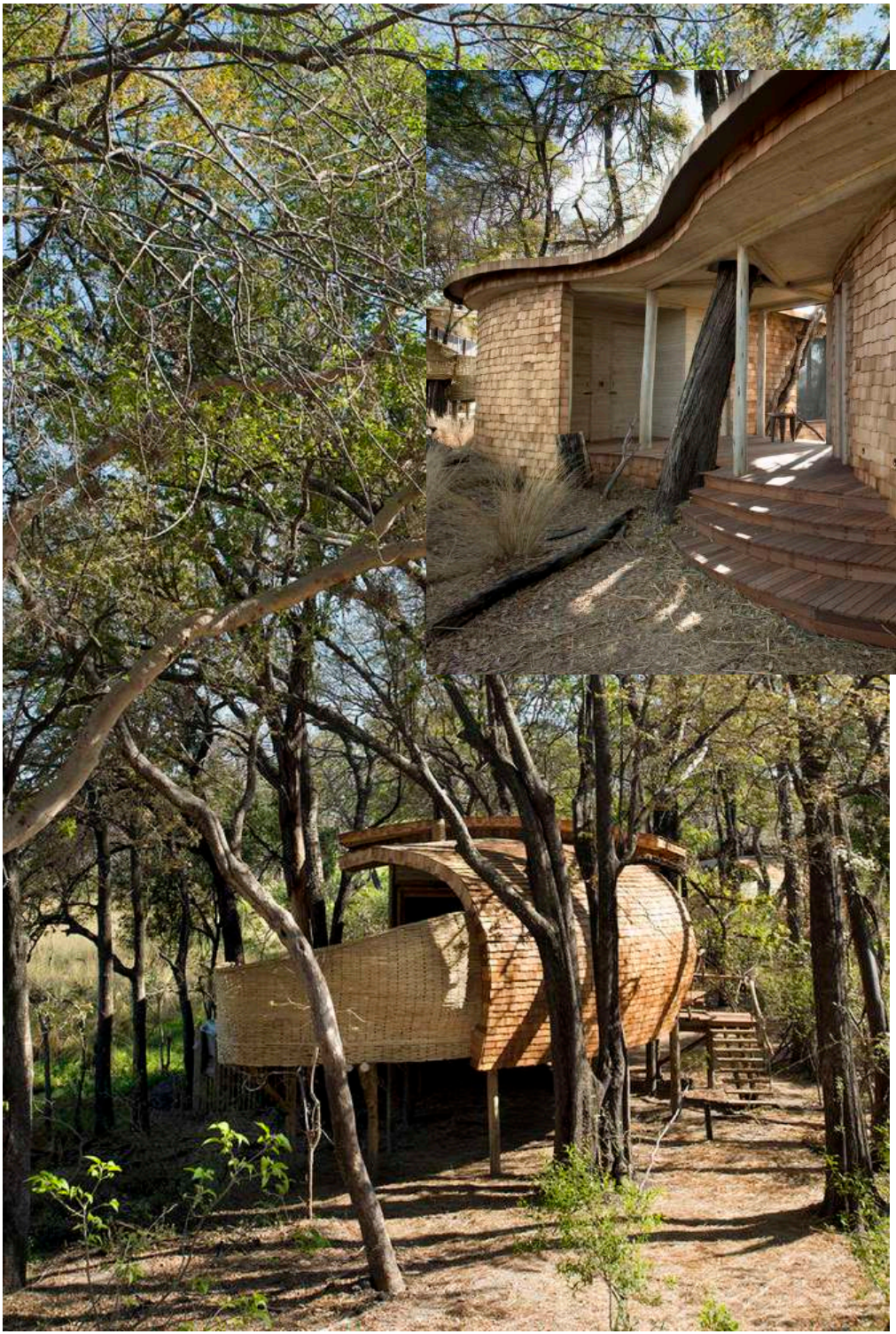


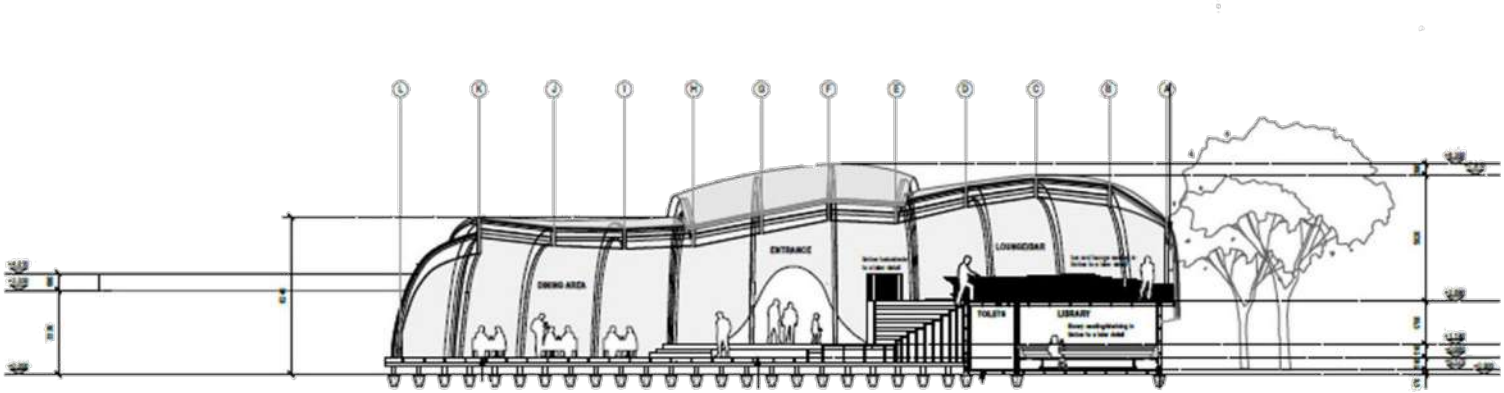
figure 4.x: some of the trees on site were even incorporated into the architecture. Sandibe Lodge, 2014 (Dook, 2015: online)

figure 4.x: buildings are raised from the ground with repurposed leadwood stilts. Sandibe Lodge, 2014 (Dook, 2015: online)

ENVIRONMENT AND MICRO-CLIMATE

Botswana is classified as having a subtropical climate, with a very short, but intense rainfall season. Summers average at around 26ºC with reported maximum temperatures of 34ºC, while winters are dry and cold, with temperatures often falling below 0ºC at night (Encyclopaedia Britannica, n.d). The winter days are temperate, with temperatures up to 25ºC. In the Okavango the temperatures are slightly more moderate than in the rest of Botswana due to the prevalence of water (Safaribookings, n.d).

For the most part, the temperate climate enables a fluidity between inside and outside spaces. The buildings are set apart from one another and connected via timber walkways. The main building has no discernible threshold between outside and inside, with floors extending out to become decks. Both the main building and the bungalows are open to the elements: the only glazing used in the project is in the library and the retail shop (ArchDaily, 2015). The rest of the spaces make use of a material developed by Sergio Ferrari: a fabric which is highly water resistant and thermally efficient (Schuler, 2016). The light and breezy design of the buildings allow for ample natural ventilation, natural lighting as well as shade, keeping the interiors cool during the summer heat. Rising 8m from the forest floor to the peak, the high ceilings assist with temperature control. By separating the roof structure into three parts, as figure 5 illustrates, natural ventilation is improved and warm air is able to escape from the interior.



Longitudinal section through the main building. Sandibe Lodge, 2014 (Drawing supplied by the architect)

SPATIAL ORGANISATION

The main building is entered through the southern side after passing a collection of service buildings. The entrance hall can be seen as an intermediate space. Circulation is not particularly defined, beckoning visitors to curate their own experience. This supports the lodge's function as a leisurely escape. Visitors can either step down to the communal dining area which flows outside onto a dining terrace, or up the stairs to the bar and lounge. Figure 7 demonstrates how a guest might move through the building, with the choices he might be presented with. A timber walkway leads from the lounge to a viewing platform looking over the savannah. Below the lounge and bar, visitors have access to a library and restrooms. The main building is a served space, with the services set apart. The plans supplied by the architect (figure 6) indicates a 'back of house' area, which can only be assumed to house the services needed to supply food and house a shop, as well as mechanical rooms and stores. The bungalows are set away from the main building as to ensure privacy and a sense of tranquility. They can be accessed through various routes through the wetland forest which encourages visitors to engage with their surroundings.

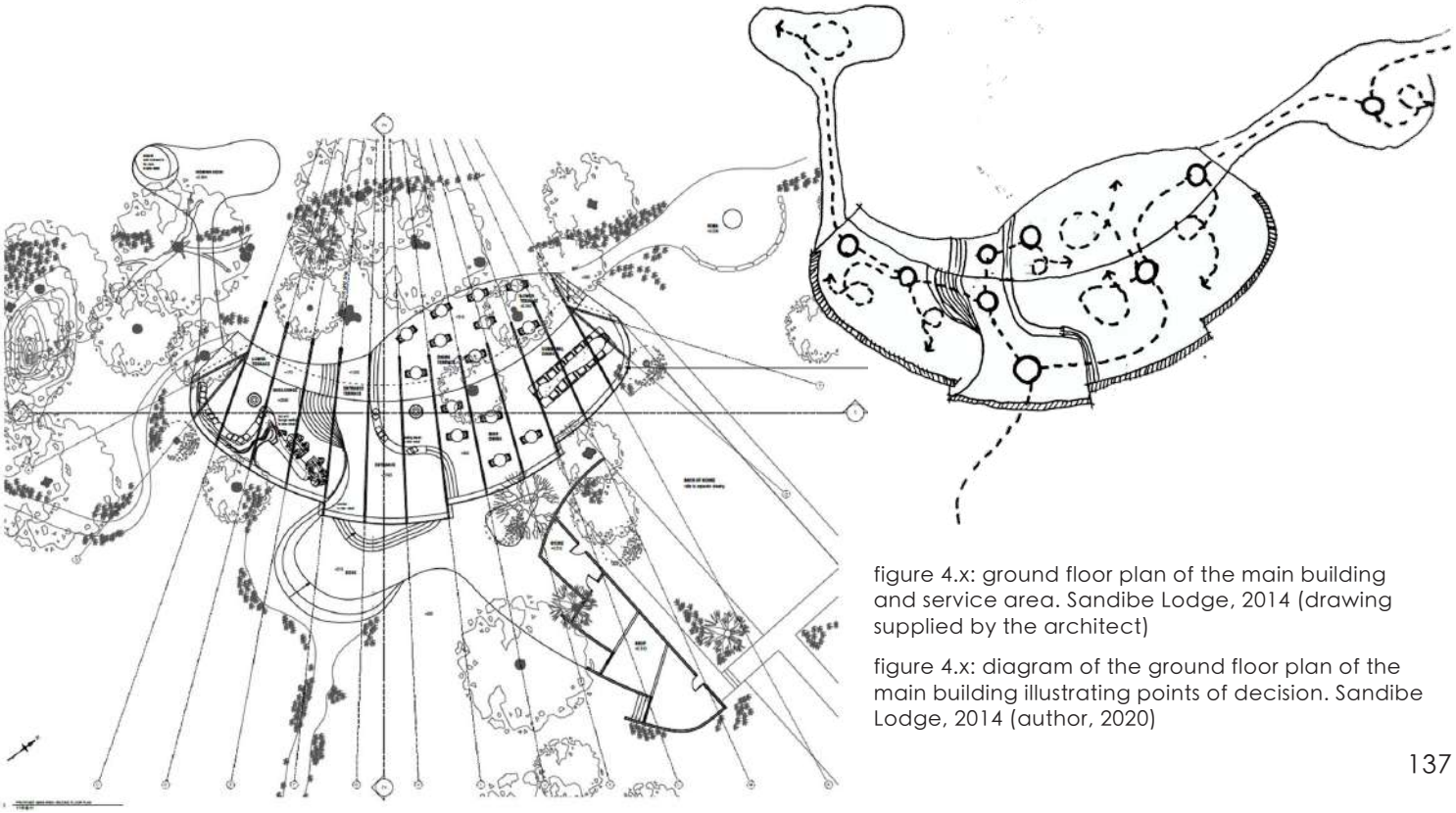


figure 4.x: ground floor plan of the main building and service area. Sandibe Lodge, 2014 (drawing supplied by the architect)

figure 4.x: diagram of the ground floor plan of the main building illustrating points of decision. Sandibe Lodge, 2014 (author, 2020)

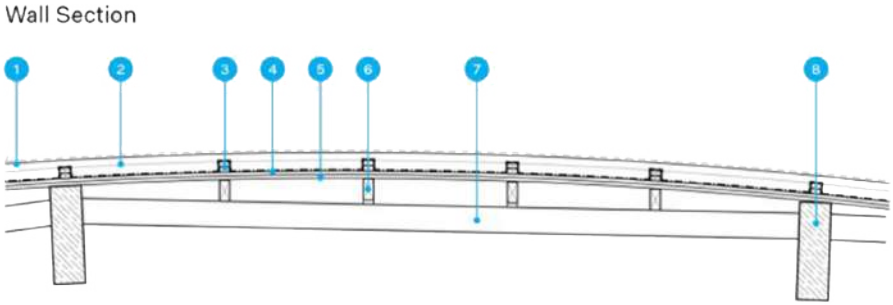
STRUCTURAL SYSTEM

The structure of the building can be likened to that of an upside down boat. 12 glulam pine portal frames form the primary structure. Glulam, or glued laminated timber, is an engineered timber product consisting of layers of timber bonded with moisture-resistant structural adhesives. The frames are broken into three sections and joined with steel plates in order to complete the required curve. Due to its complexity, the parabolic frames could only be manufactured by a sawmill in White River, South Africa and were transported more than 1300km to site. By the time the frames completed the journey, many had warped. The help of a structural engineer was called in to determine new radii, and a local contractor was able to re-cut the glulam frames, ensuring a smooth form and sound structure (Schuler, 2016).

The frames are bolted to a concrete footing, which is exempted from the biodegradable material requirement, and cross braced with double 50x150 pine beams. Secondary arch ribs were soaked in a nearby river and bent on site, spaced 600mm apart, to support the butt-jointed pine strips that forms the skin of the structure (Schuler, 2016). The pine strips are waterproofed with a roll-on acrylic membrane and covered with cedar shingles, which are attached to pine battens and purlins. Figure 8 illustrates a section of the roof construction.

MATERIALS

In keeping with the site requirements, the buildings are largely constructed from timber. Laminated pine beams provide the primary structure, with a system of supports and strips to form a waterproofed shell. The cedar shingles that cover the outside of the shell have been sourced form Canada, due to its limited availability locally (Archdaily, 2015). Cedar was primarily chosen for its flexibility, longevity and weather resistance (Custom Shingles, 2016). Interior spaces such as the library and restrooms are clad with pine. Massaranduba, a long-lasting hardwood, was used for the floors and decking. External screen walls and balustrades are fashioned from an interlocking mat of eucalyptus lathes woven onto stiff wire (Schuler, 2016). Leadwood members from the previous building was repurposed as stilts which elevated the buildings from the ground.



1. Cedar shingles
2. Pine battens
3. 2mm × 22mm × 44mm blocking
4. Roll-on acrylic waterproof membrane
5. ½" × 3" pine strips, 12' to 18' long
6. Secondary wood arch, 600mm o.c.
7. Twin 2 × 6 pine cross-bracing
8. Glulam pine portal arch frame

figure 4.x: detail drawing of a typical wall section. Sandibe Lodge, 2014 (drawing supplied by the architect)

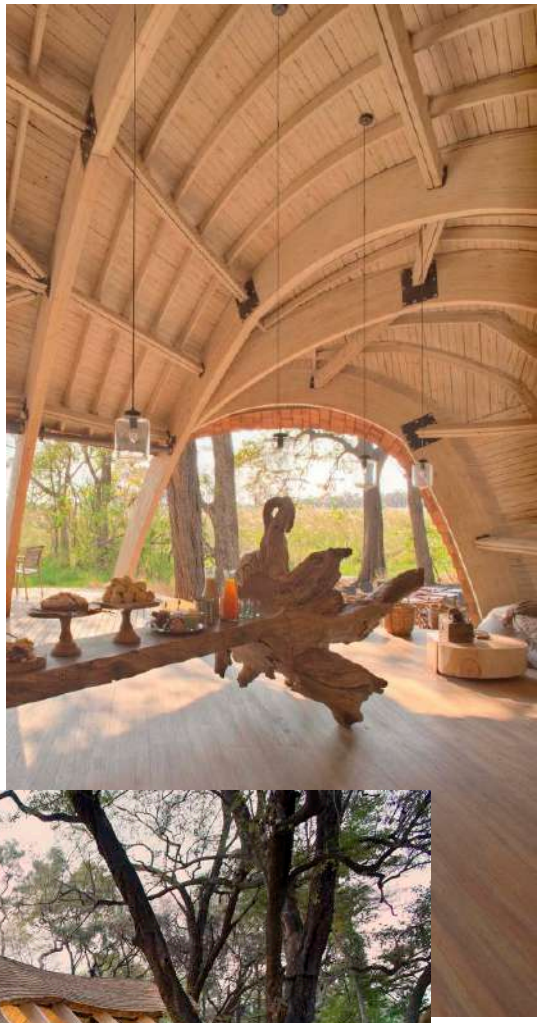


figure 4.x, 4.x, & 4.x: roof structure of the communal space. Sandibe Lodge, 2014 (Dook, 2015)

APPLICATION

In terms of approach to tectonics, Sandibe Lodge sets an example as to how an environmentally sensible, organic building can be designed. Though the methods it uses are simple, the execution thereof is not. While I am not proposing that wall and roof become one element, I am investigating organic roof structures similar to that of Sandibe Lodge. In the proposed design, the walls and roofs are independent systems. Through the interaction of these systems, spaces are created.

Another principle gleaned form Sandibe Lodge is that of fluid space. There is no real boundary between the exterior and the interior. Spaces lend themselves to be used according to the seasons. The exterior is an extension of the interior and vice versa. The chosen site is in many ways similar to that of Sandibe Lodge. It is part of a pristine natural landscape, with difficult access. Therefore, materials should be locally sourced as far as possible and be easy to transport. What I find especially alluring is the use of the materials that will ultimately biodegrade. It is an architecture from the earth, and once its role is over, will return to it.

Finally, the element of choice. With Sandibe Lodge, guests had the leisure to dictate their experience. In a psychedelic setting, having a choice means retaining some sense of control over the experience. Not only the choice to participate in the psychedelic experience or not, but choice in the everyday sense; choosing which path to take, which space to utilise, which activities to partake in.

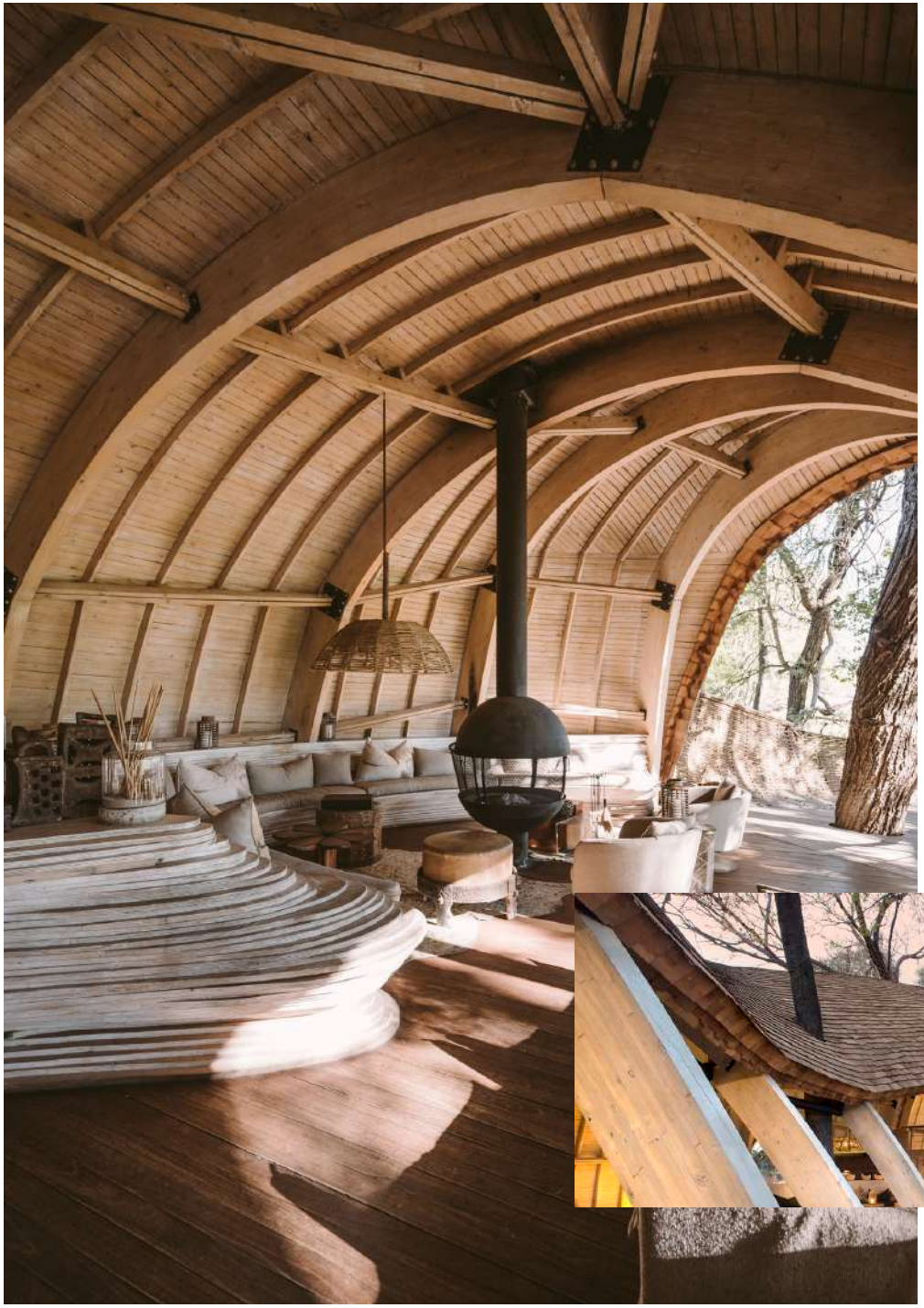


figure 4.x, 4.x, & 4.x: Sandibe Lodge (Dook, 2015)

4.12

design development - external review 2

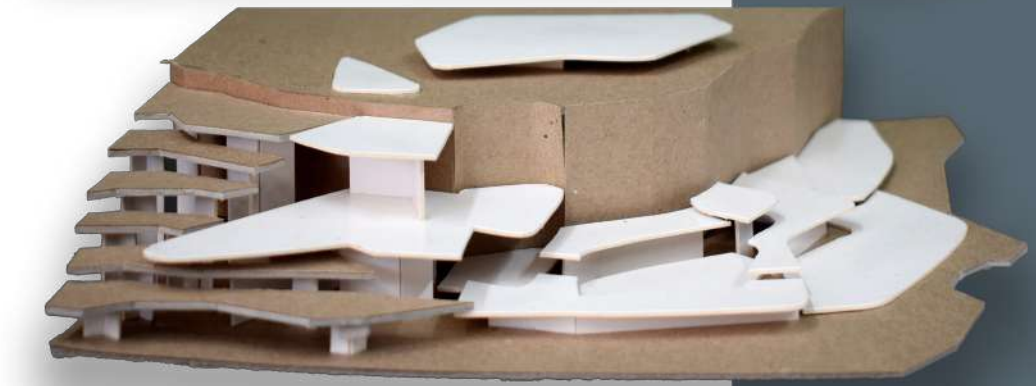
With the onset of the second external examination, the character of what the building would become started to reveal itself. The interior spaces became a place of refuge found within the landscape itself; an extension of the landscape that allows for dwelling. The walls and roof were conceptualised as two separate systems that, when combined, creates a spaces with meaningful experiences. The spaces are the product of the interplay between these two systems.

The walls leads the visitors on their way, but are also functional. It relates to our understanding of the physical world: it is obvious, leading us towards and providing an experience of life. It is concrete; unchanging and permanent. The meander of the walls allows for communication between different spaces as the visitors flows from one to the next. The roof, on the other hand, is symbolic of the spirit-world. From the human experience it can seem haphazard and privy to change. In reality, it is well ordered and mathematical, but its order is not always perceptible to our eyes. It binds the spaces together to form a collective experience which can only be regarded from a bird' s eye perspective.

The materials proposed are stone for the walls, earth for the floors and timber for the roof. It is a simplified narrative of the function of the elements. The permanence of stone as a reminder of our fleeting presence as humans. The earth floors which keep us in direct contact with the Earth. An undulating timber roof which is impermanent and not bound to physicality. The rock face was integrated as part of the design. As visitors move from the everyday to the sacred, they have to pass through the rock face itself. It is an uncomfortable journey, both physically and psychologically, which prepares one for the ritual of the magic mushroom that is to come.

The critique after the second external examination was primarily concerned with the shape of the roof. The idea is there, but it did need some more work. The lines of the roof should reflect the lines of the plan, allowing for communication between plan, section and elevation. There were questions raised regarding the organisation of the accommodation as the organic lines might lead to difficulties in terms of its function. There is also still some work to be done with the connections between outdoor spaces and landscaping.

figure 4.x: conceptual plan exploration (author, 2020)
figure 4.x: conceptual roof exploration (author, 2020)



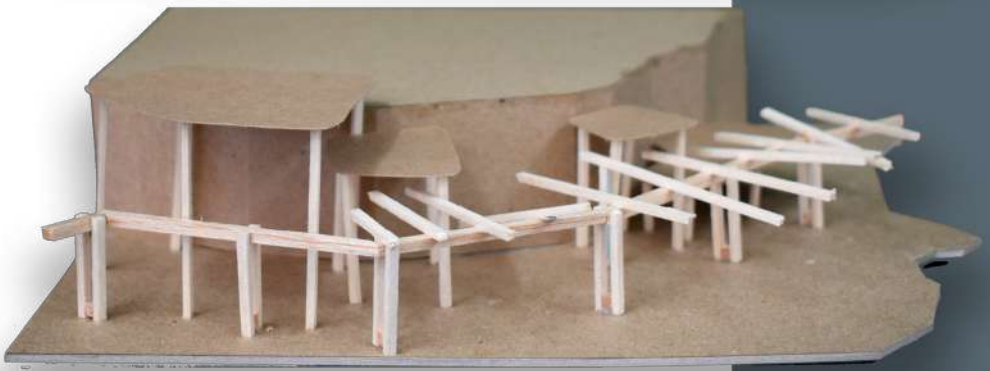


figure 4.x: roof and floor models (author, 2020)

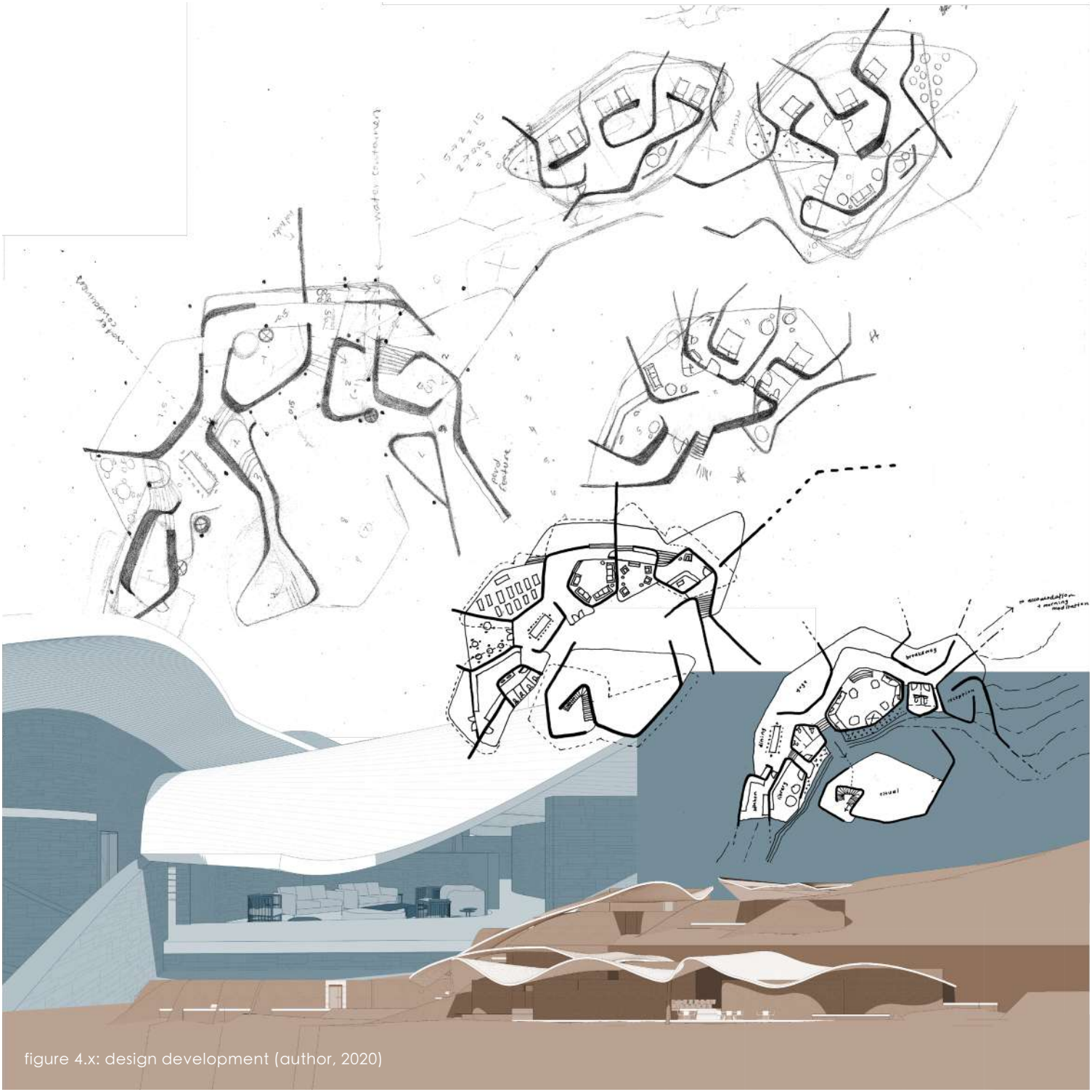


figure 4.x: design development (author, 2020)

4.13

touching the veil

When choosing a specific site within the Kamberg Reserve, I did not know what I was looking for. Wandering from the trail, I stumbled upon a ledge wedged between two precipices. It was north-facing, with incredible views of both the Game Pass Shelter and the sacred Kamberg mountain. But what made it exceptional was the exposed rock face that hid it from the hiking trail. It seemed like a natural space for gathering. The rock face itself was too exposed; the San would not have used it as part of their painting ritual. If they did, the paintings have long since disappeared. Standing with one' s back against the rock face, it provides the sense of physical safety that is necessary before undergoing a psychedelic journey.

The relationship with the rock face is approached in four ways:

1. penetrating it - in order to cross a threshold
2. imitating it - to provide a sense of safety in the main ritual space
3. seeing it - visual but not physical connection - to generate an awareness of its presence and importance
4. touching it - using the rock face as a wall - to facilitate an intimate relationship with it

It is a constant metaphor for the thin veil that separates the physical from the metaphysical. A reminder that, with the smallest amount of courage, one can raise the veil in order to look the spirit world in the eyes.

4.14
architecture as the in-between

Trance is the way in which we consciously mediate between two worlds. The building, as a stage for the trance ritual, becomes a metaphor for the transition one undergoes during trance. The building is the facilitator which guides the experience. The concept of the building as a threshold between this world and the next has been briefly mentioned; here it will be elaborated.

The building as a whole is an expression of the liminal. Visitors travel by foot to reach to retreat. At the retreat, they partake in a way of living that is different from the everyday. An awareness of an alternative mode of living is cultivated. After the visit has run its course, the visitor returns home, but with a renewed mindset. The combination of the mushroom rituals and the immersion in nature, has expanded the perspective of what life is and what it can be. The liminal space is where transitions take place. The retreat, as the setting for a transformative ritual, is the manifestation of liminality.

An architecture for altered states of consciousness correlates the use of spaces to the state of mind associated with the space. The building becomes the path along which the mind wanders: the experience of the building leads the visitor on a tour of his own consciousness. Through materiality and symbolism, clues are ingrained in the subconscious. The architecture is highly sensual; smells, light, textures and sound influence the state of mind.

The thresholds of the building are developed as a solitary experience within the larger experiential context. Moving between worlds is a journey meant to be undertaken by oneself. The narrow thresholds serve to isolate one in a liminal state, and extend the experience of crossing the threshold. It is within the liminal space that an aspect of the transcendent is understood. By consciously moving through the thresholds, one is made aware of the transcendence of the physical through the use of vertical elements.

The extended thresholds between the building and its surroundings aims to blur a distinct boundary between the two. The building becomes an extension of its surroundings. It allows for a gradual interaction which prepares the individual for what is to come. The liminal state allows one access to knowledge which one cannot reach in normal states of consciousness. In slowing down the movement and allowing for a moment of stillness and reflection, the information is revealed. This is integrated in the architecture through secrets hidden in within the thresholds, only visible when one enters into liminality. The threshold becomes a sacred space.

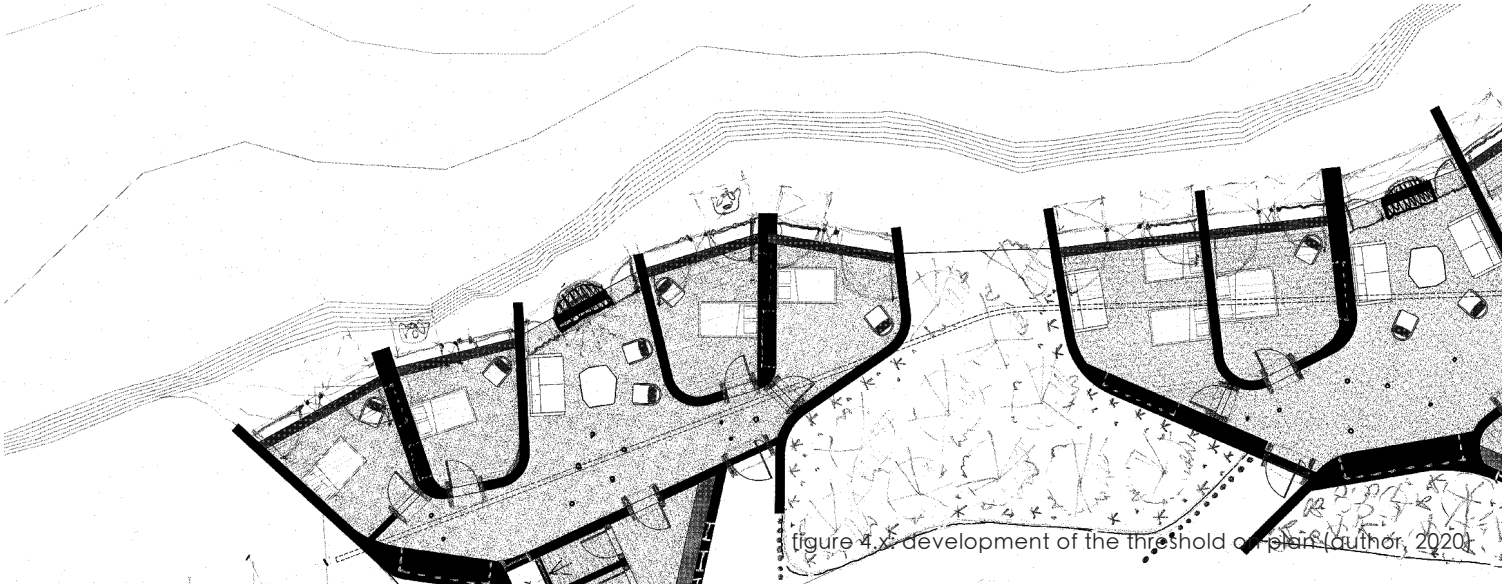


figure 4.x: development of the threshold on plan (author, 2020)

The threshold is not only a space for moving through, but also a place in which one can dwell. The Amangiri Hotel in Utah, USA provides us with an example of how the threshold between the inside and outside is extended in order to cultivate identification with one’ s surroundings. The bedrooms extend onto an stoep open to the sky. The floor continues, while the roof ends, allowing light to enter the bedroom. High walls on both sides provides privacy and focusses the gaze on the landscape. The stoep ends in built-in seating which invites the visitor to linger in the threshold. Spending time in the place between allows one to build a different kind of relationship with the outside world than one would staying inside. One becomes a participant rather than merely an observer.

DEMATERIALISATION

The concept of trance is related to dematerialisation: leaving the physical in order to commune with the metaphysical. Leaving the physical and reaching towards the non-physical. The movement takes place on the vertical axis; the axis mundi which connects the earth to the divine. The element associated with the connection to the divine is light. With the threshold conceptualised as the place where the connection with the divine is most evident, it suggests that within the thresholds vertical elements should be placed to remind us of this connection and the significance of the threshold.

When left to the earthly elements - fire, water, earth and air - a building can return to the earth from which it was made. It comes into a state of plasticity, not of a human time scale, but of a geographical. In this state, it becomes unstable, but not meaningless. The formgiving of the walls already suggests what might happen in the future. They rise up from the ground plane and return to it when their function is complete. As such, when the function of the building has run its course, it will be left to the elements. Its ordered form is broken down into parts that are carried away by the wind and the water. The stones merge with the earth. Through its materials, it dematerialises.

4.15

design development - external review 3

Leading up to the third external examination, the focus shifted towards the experience of the architecture and the extension of thresholds. How could the building assist the visitor in his experience of the trance state? Care was taken to design the more emotional aspect of the project and the experience of the narrative.

The use of materials in a space reflects and supports the state of mind the person might be experiencing. The programme was classified into two main types of spaces: cognitive and emotional. The movement through the space determines its materials: rough for slow movements, smooth surfaces for faster. Cognitive spaces denotes the state of mind that is direct and literal. It is primarily functional spaces, rather than experiential. It includes spaces such as the reception, toilets, kitchen and circulation.

Emotional spaces allows the mind to wander as well as express itself. In such spaces, the focus is on the experience of the visitor, either as an individual or as part of the collective. These spaces include bedrooms, lounges, ritual and pre-ritual spaces. Generally, the cognitive spaces have polished stone floors, while surface of the emotional spaces vary between earthen floor, timber and rough stone. For example, gathering spaces have earthen floors, rough stone walls and timber accents to add warmth. It is not an intimate space, but loud and conducive to conversation, which the earthen floors and rough stone walls absorb. Circulation spaces are of smooth stone, both the floors and the roofs to allow for

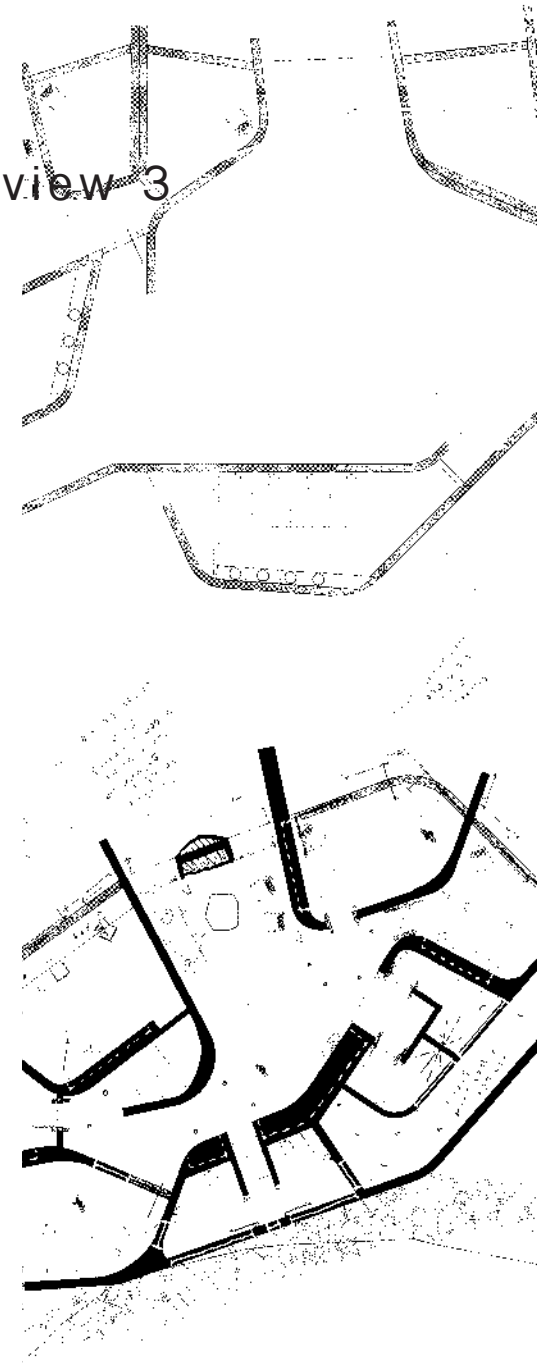
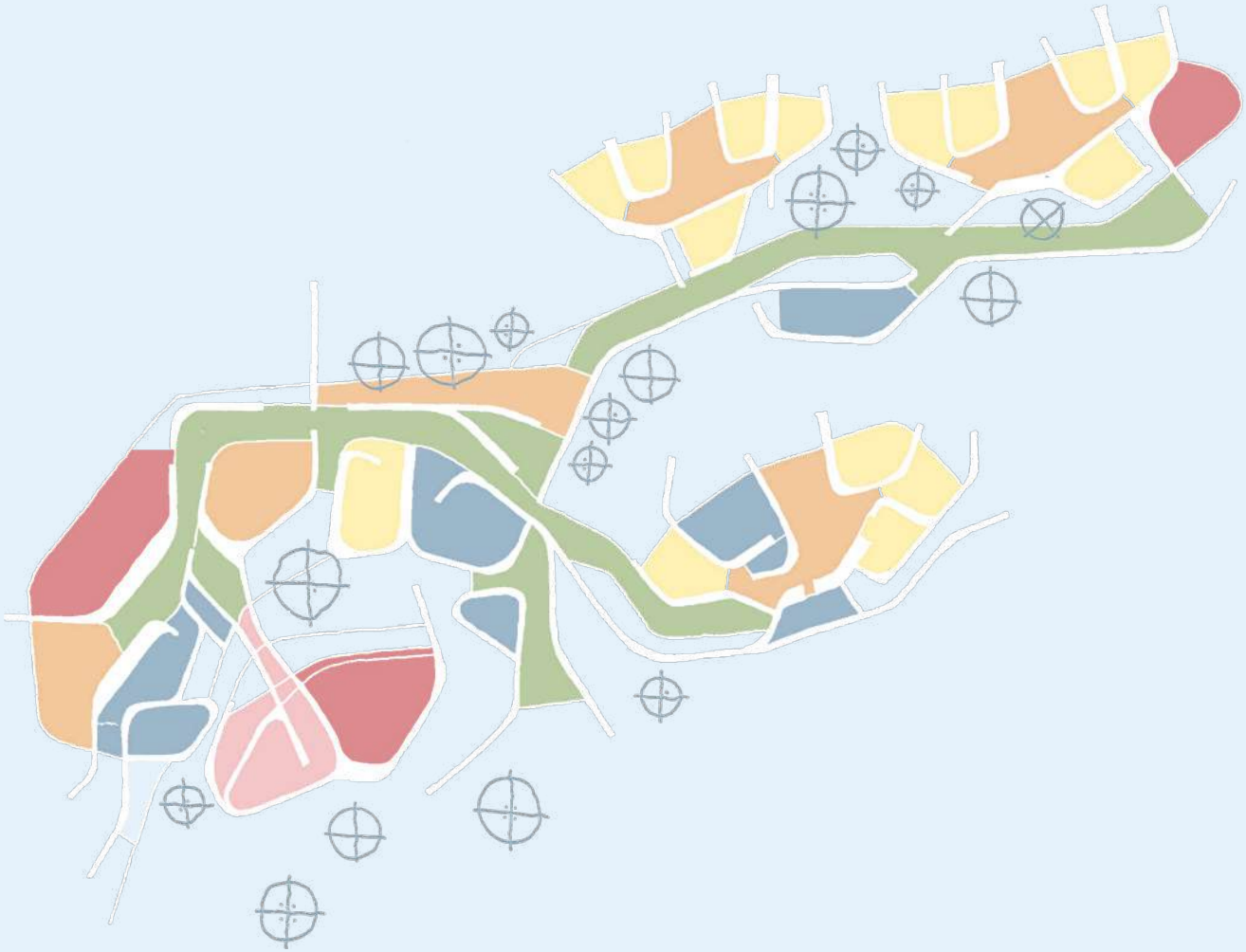


figure 4.x: plan develpment (author, 2020)



RITUAL
ritual hall - yoga
floor: earthen
walls: plastered stone

PRE-RITUAL
tunnel
floor: rough stone
walls: plastered stone

GATHERING
lounges - dining - outdoor
floor: earthen
walls: rough stone

INTIMATE
bedrooms - showers
floor: timber
walls: plastered stone

CIRCULATION
corridor - entrance
floor: polished stone
walls: platered stone

UTILITY
reception - toilets - study - kitchen - mechanical
floor: earthen
walls: rough stone

figure 4.x: digram of experiential material use (author, 2020)

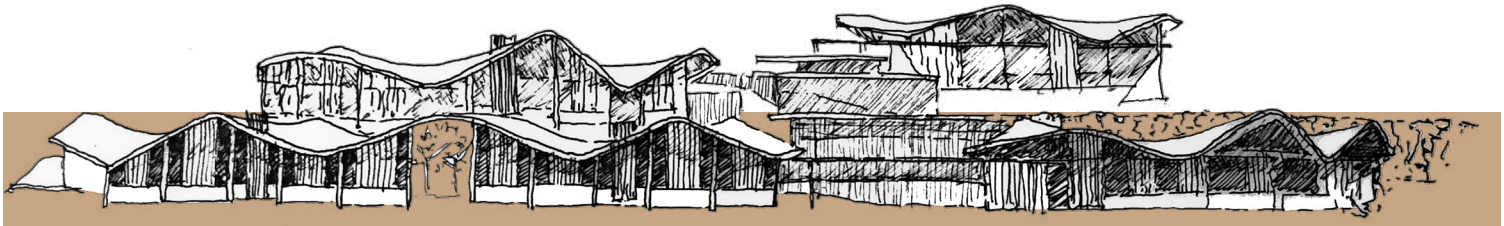


figure 4.x: development of a layered elevation (author, 2020)

figure 4.x: first model for external review 3 with the roof structure as columns and balanced beams (author, 2020)

swift movement. The bedrooms are warm and intimate, with timber floors and polished stone walls. The ritual spaces have earthen floors to allow visitors to connect to the earth, and polished stone walls to create the sense that the space has been used over centuries for countless rituals. The pre-ritual spaces also have polished stone walls for the same reasons, but rough stone floors to encourage the visitor to look down at their feet while walking, a posture that encourages humility as one prepares for the ritual.

The roof was developed as a connected element which reflects the balance and tension between this world and the next. Trusses are balanced at varying angles on a meandering timber beam and tension cables at both ends strengthen the structure. The structure of the roof is solved, but the lines on elevation are not quite what it needs to be. The roof creates unique experiences in each space as it undulates across the site.

Through conversations about the more practical side of things, the decision was made to separate toilets from other structures in order to treat and use sewage with greater ease. Rainwater is collected and filtered to be used, among other things, for flushing toilets. The sewage is stored and treated at an above ground facility. After 6 months, the treated sewage can be distributed to various botanical cells throughout the site as

figure 4.x: communal lounge (author, 2020)

figure 4.x: entrance to the tunnel (author, 2020)

figure 4.x: second model for external review 3 with the roof structure as columns and balanced trusses (author, 2020)

a fertiliser. The alteration in sewage and water treatment also influenced the organisation of the accommodation. Toilets were separated from the main accommodation buildings, while showers were grouped together.

With the third external examination, it was realised that the drawings and presentation do not yet reflect the essence of the project and are merely the skeleton of what the design entails. The renders should be more integrated with the landscape and drawings should communicate the systems on site. It was suggested that the furniture becomes as part of the design. Attention was also drawn to the journey from the point of arrival to the building itself; a hike of around 2km. The experience of the journey should be choreographed just as the experience of the building is choreographed.

figure 4.x: residential lounge (author, 2020)

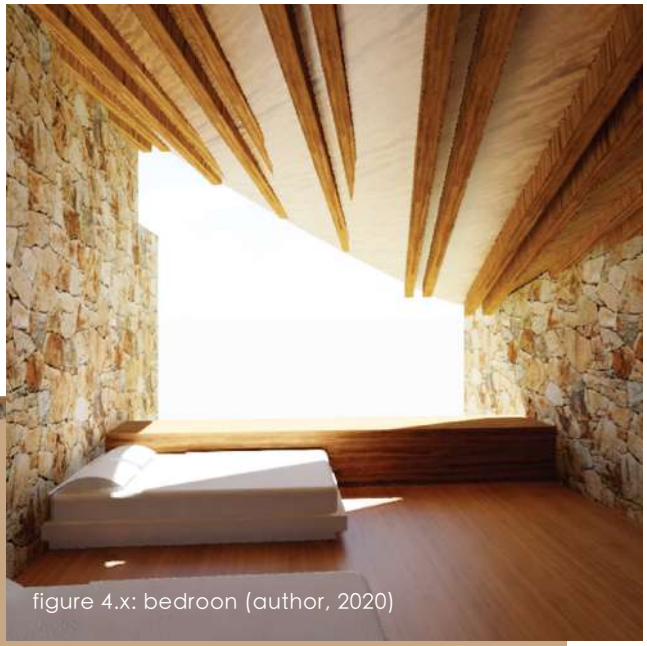


figure 4.x: bedroon (author, 2020)

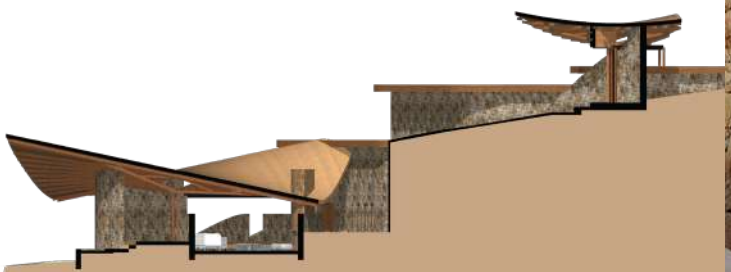
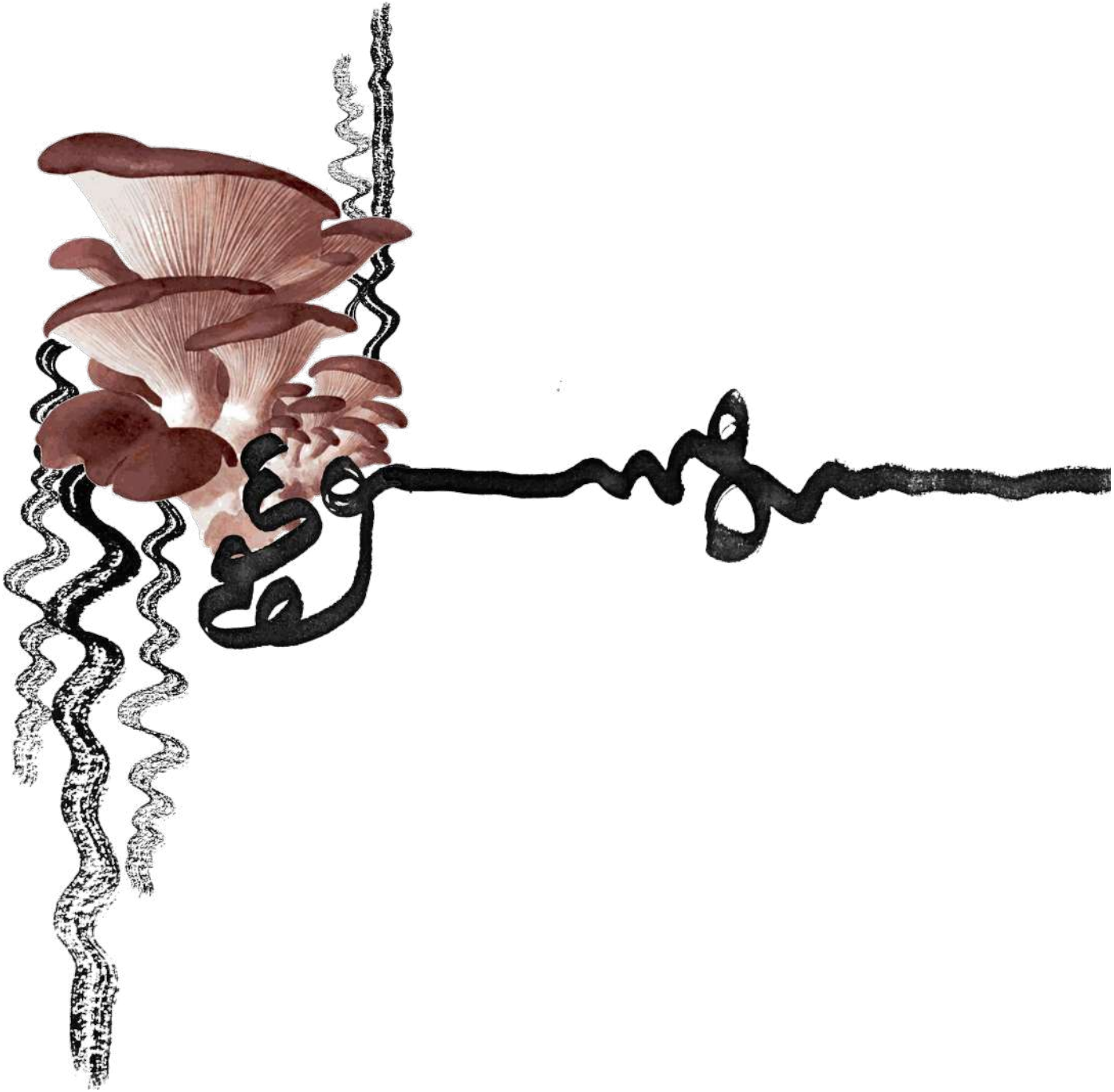


figure 4.x: section through the communal lounge and ritual space above the rockface (author, 2020)



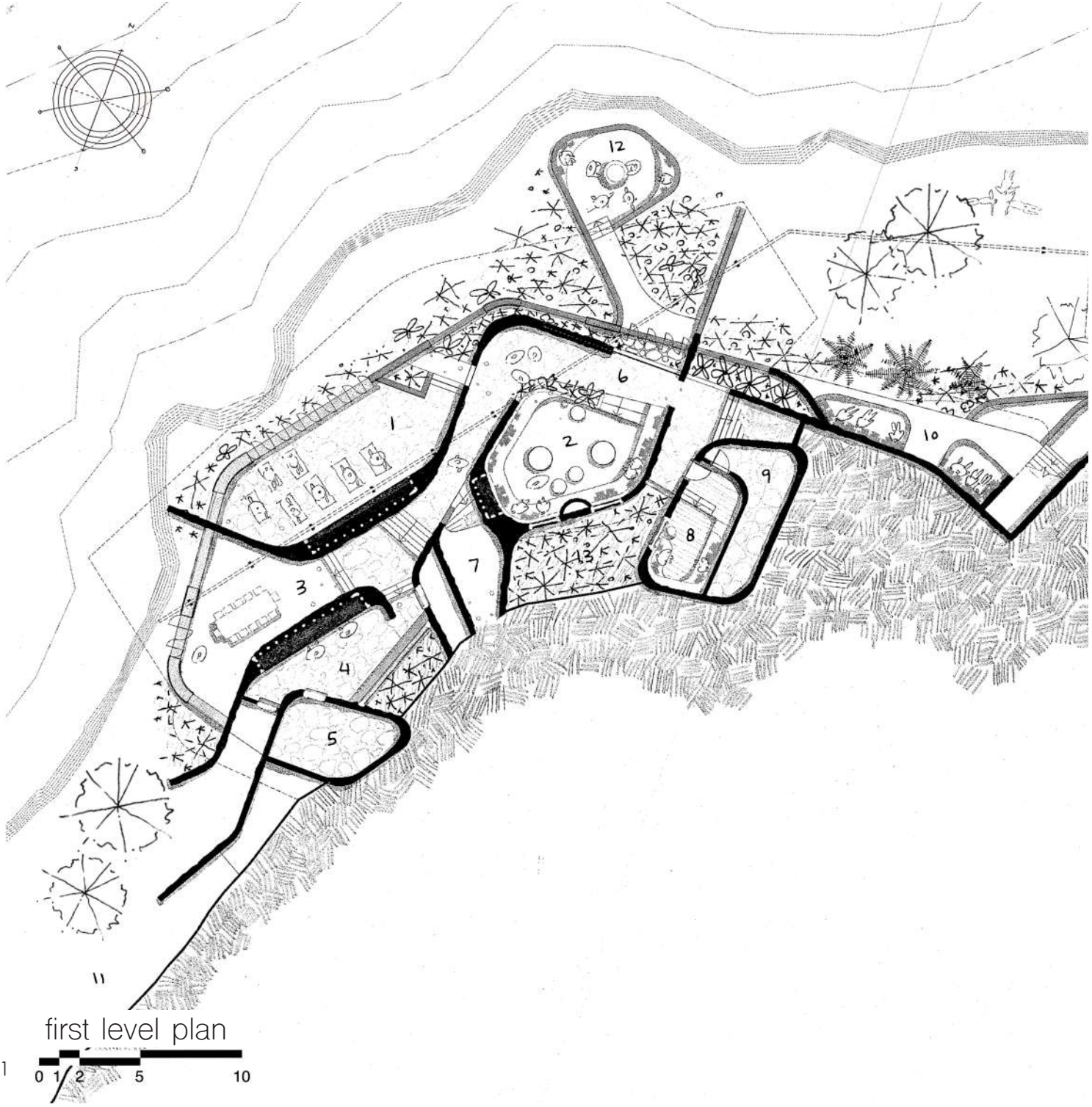
chapter 5

REVELATION

(noun)

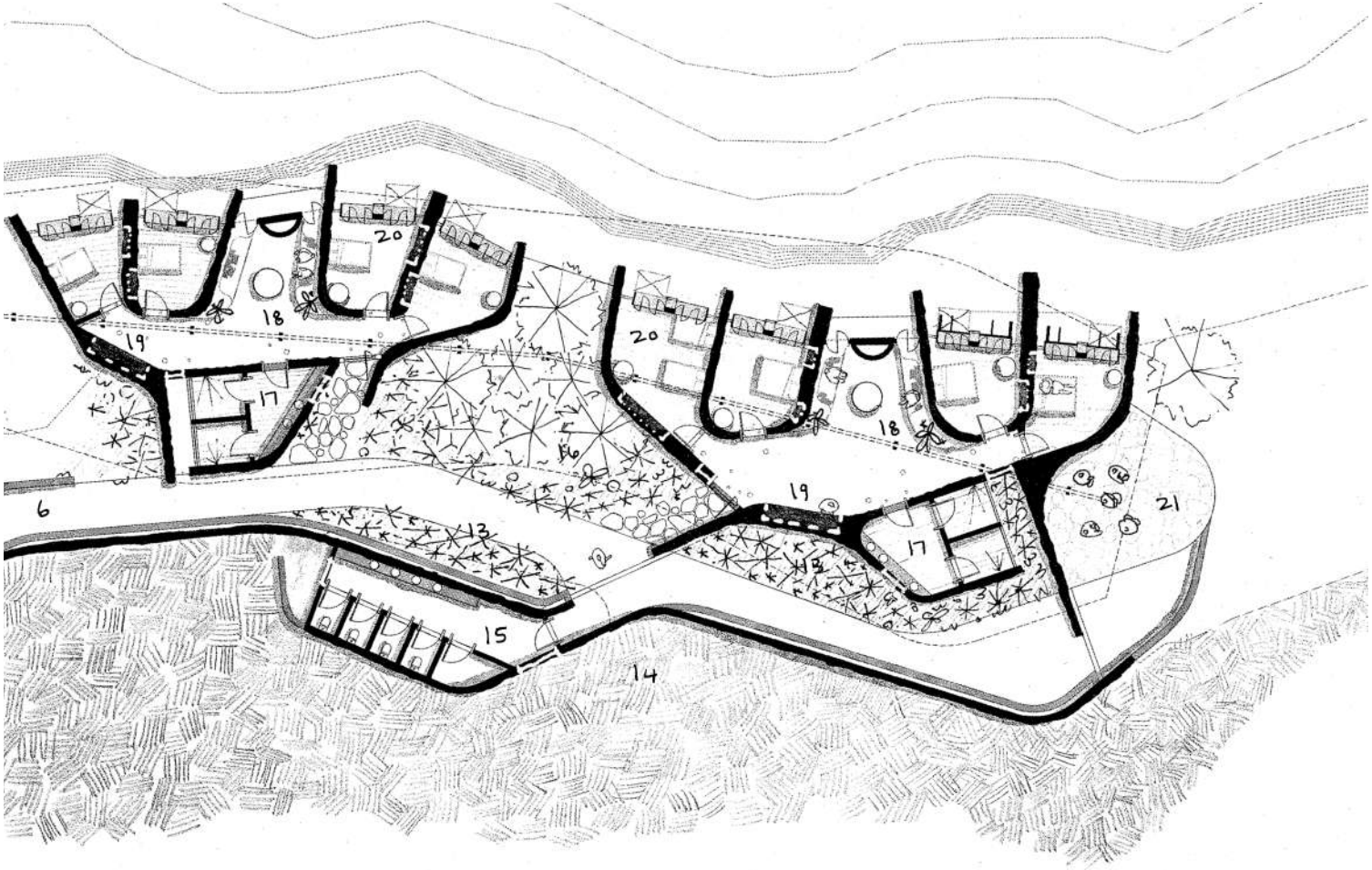
\ ˌre-və-ˈlā-shən\

the peak of the psychedelic experience. During this stage the visions and experiences of the previous stage falls into place and a divine truth is understood viscerally. It is a moment of enlightenment.

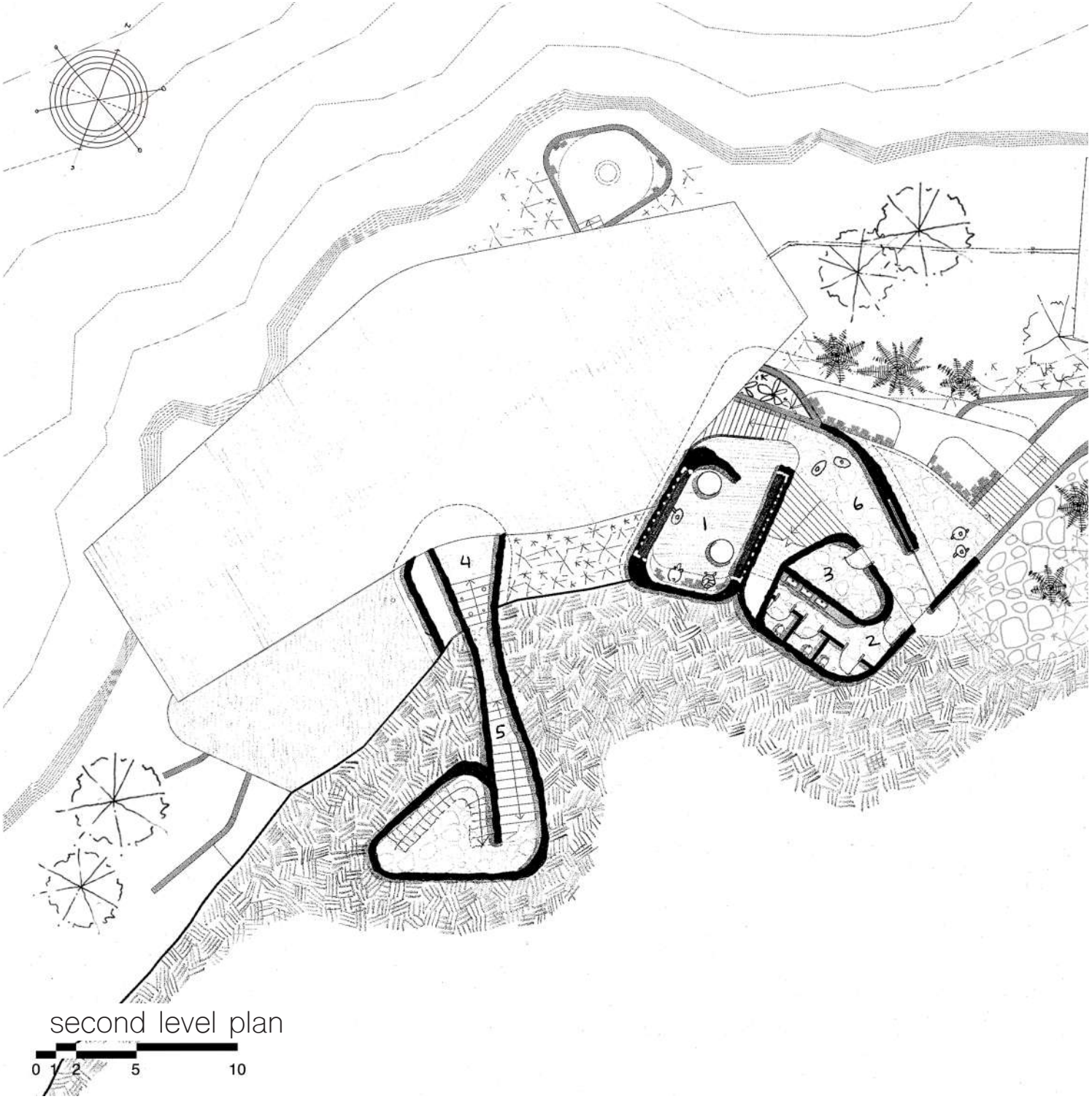


first level plan

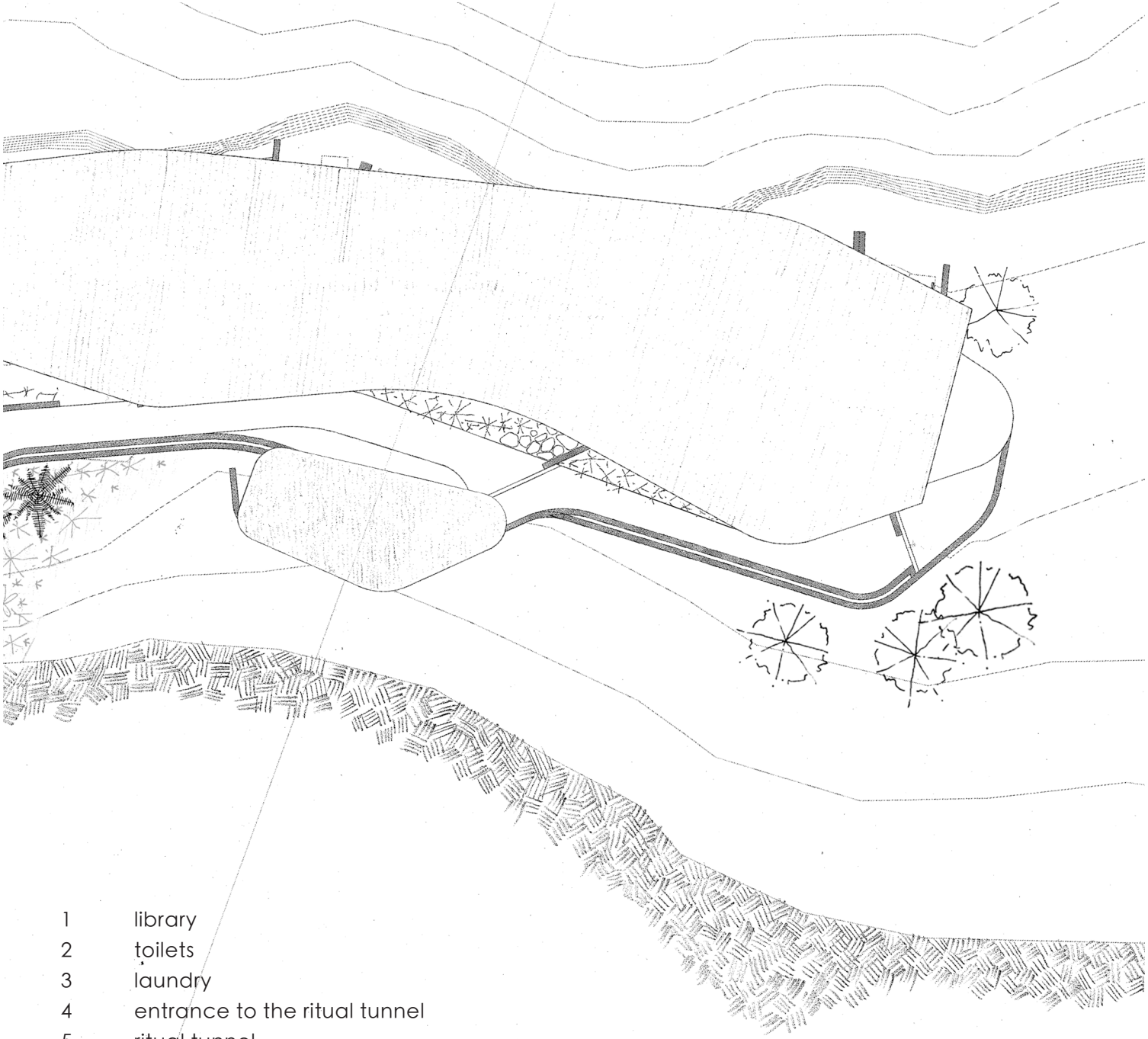
0 1 2 5 10



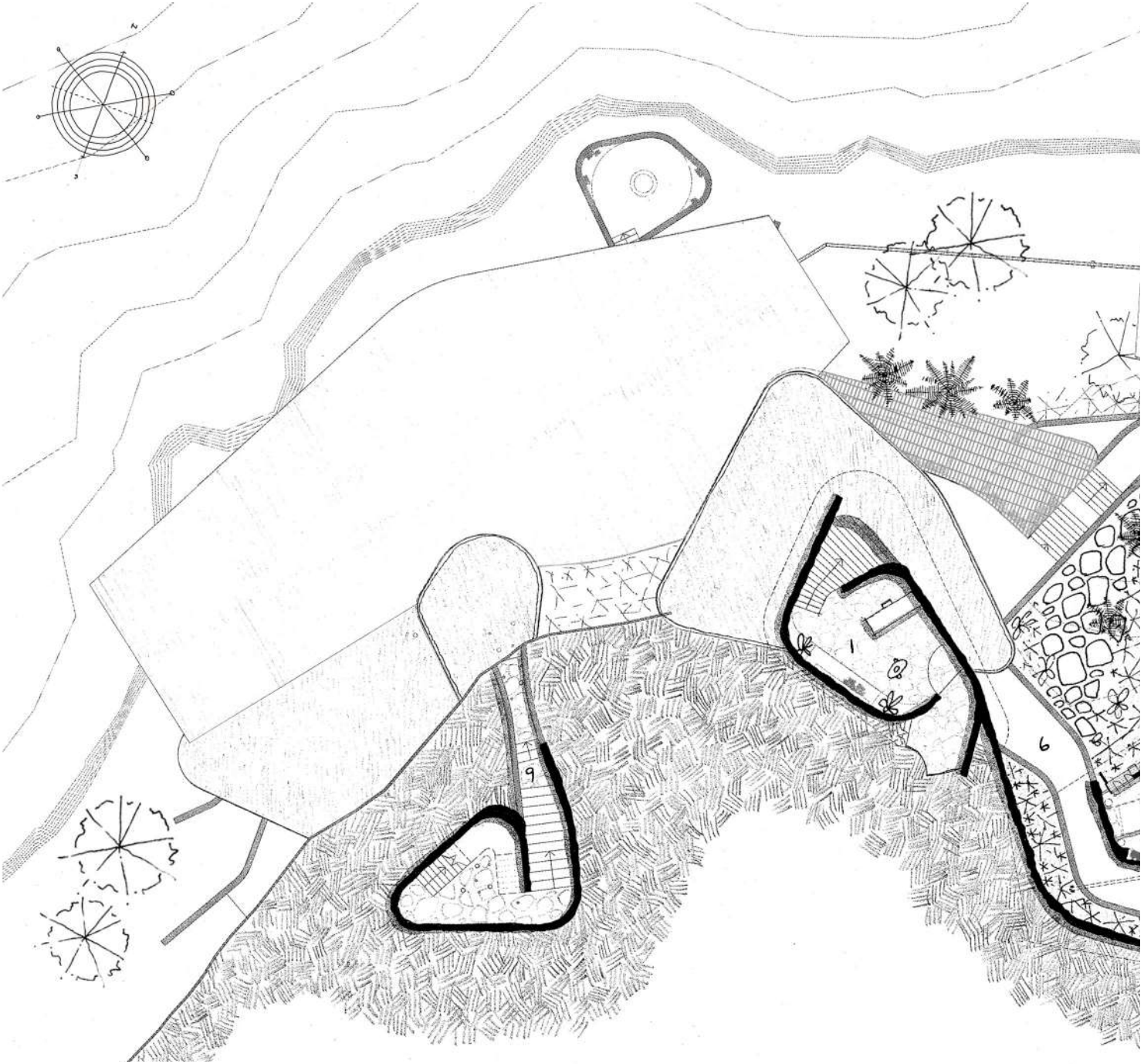
1	pre-ritual / yoga	12	fire pit
2	communal lounge	13	primary botanical cell
3	dining room	14	above ground septic tank
4	kitchen	15	unisex toilets
5	kitchen storage	16	secondary botanical cell
6	circulation	17	showers
7	entrance to the ritual tunnel	18	residential lounge
8	integration therapy	19	kitchenette
9	mechanical room	20	bedroom
10	outdoor seating	21	meditation platform
11	vegetable gardens		



second level plan

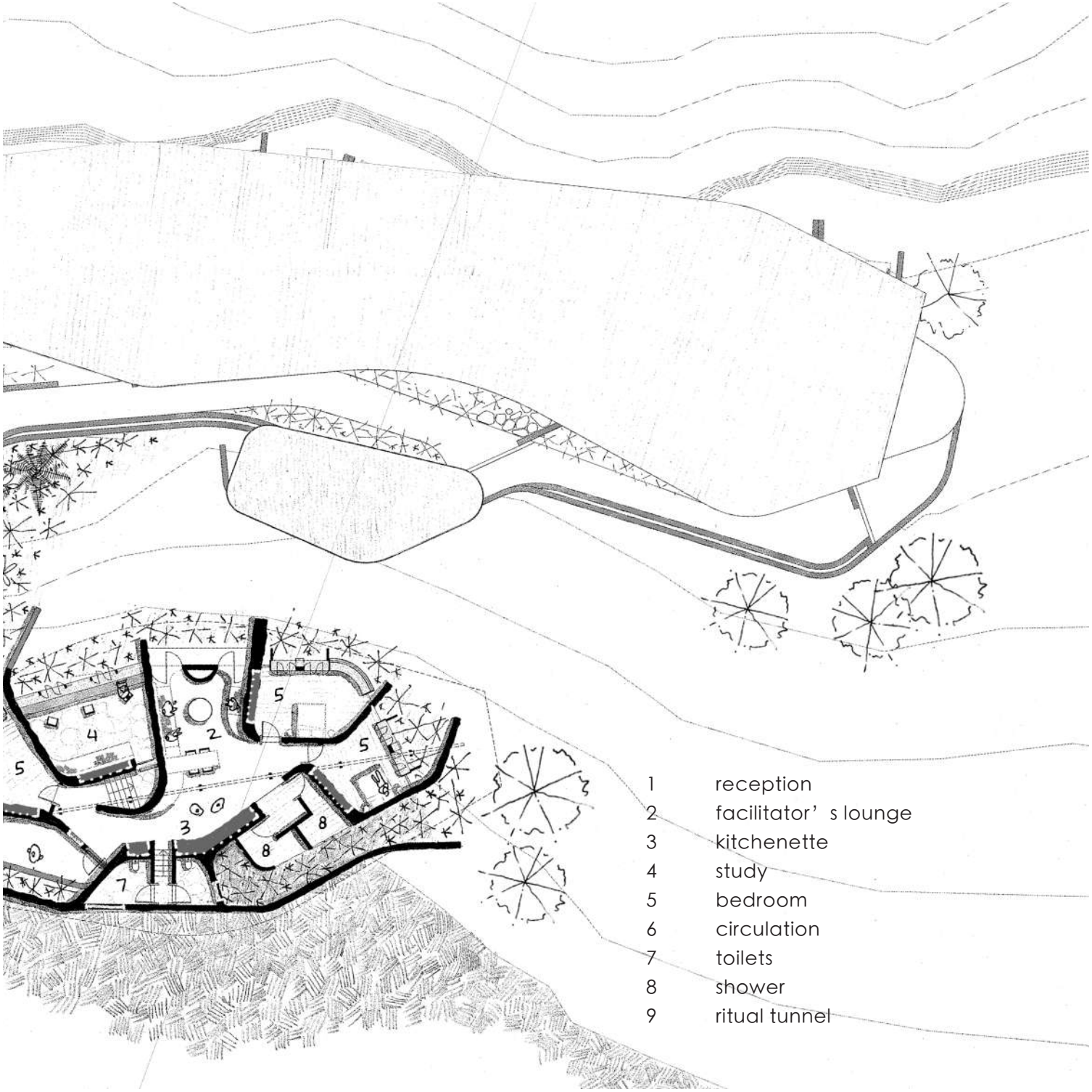


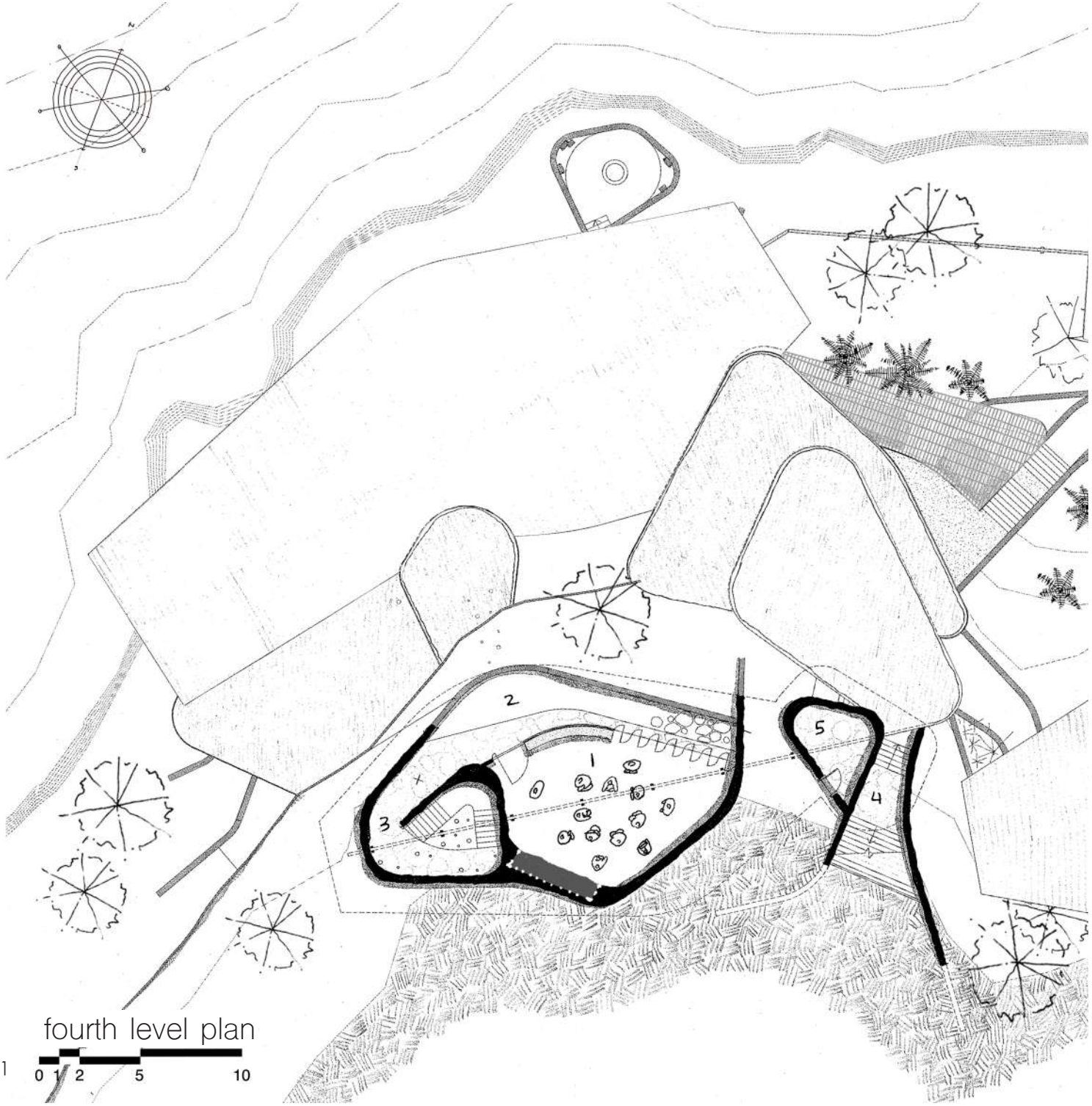
1 library
2 toilets
3 laundry
4 entrance to the ritual tunnel
5 ritual tunnel
6 circulation



third level plan

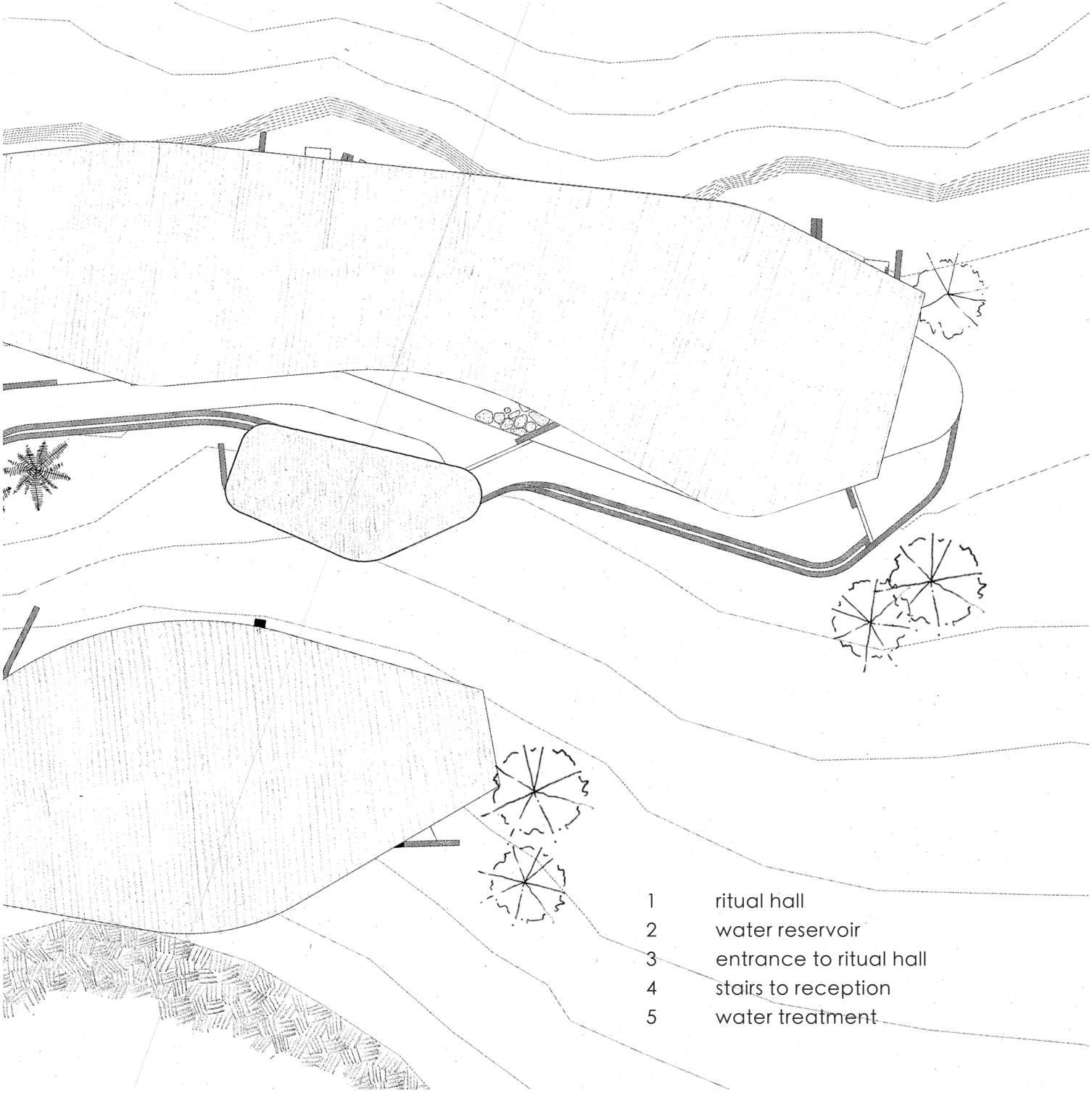
0 1 2 5 10

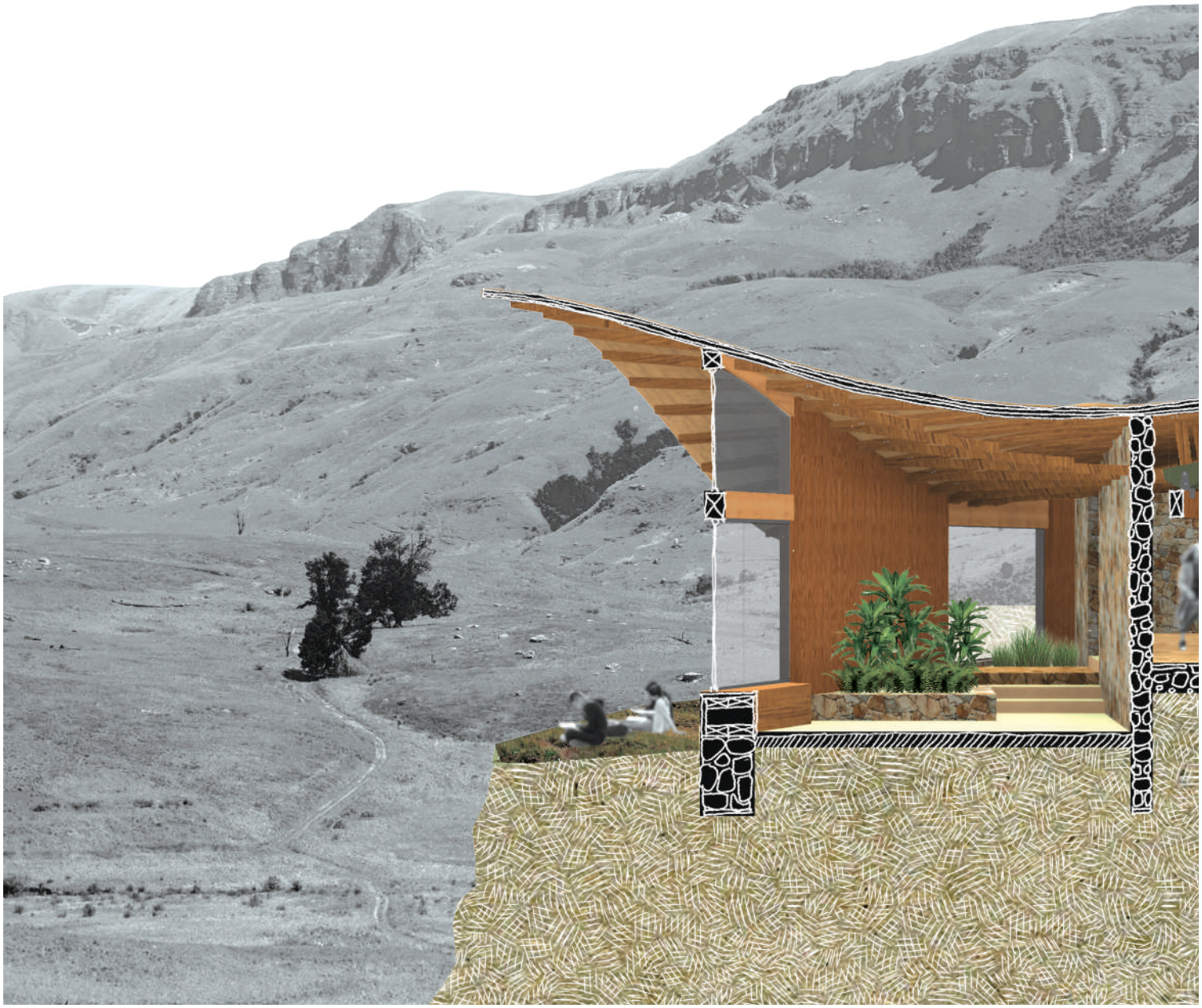

1 reception
2 facilitator’ s lounge
3 kitchenette
4 study
5 bedroom
6 circulation
7 toilets
8 shower
9 ritual tunnel



fourth level plan

0 1 2 5 10


1 ritual hall
2 water reservoir
3 entrance to ritual hall
4 stairs to reception
5 water treatment



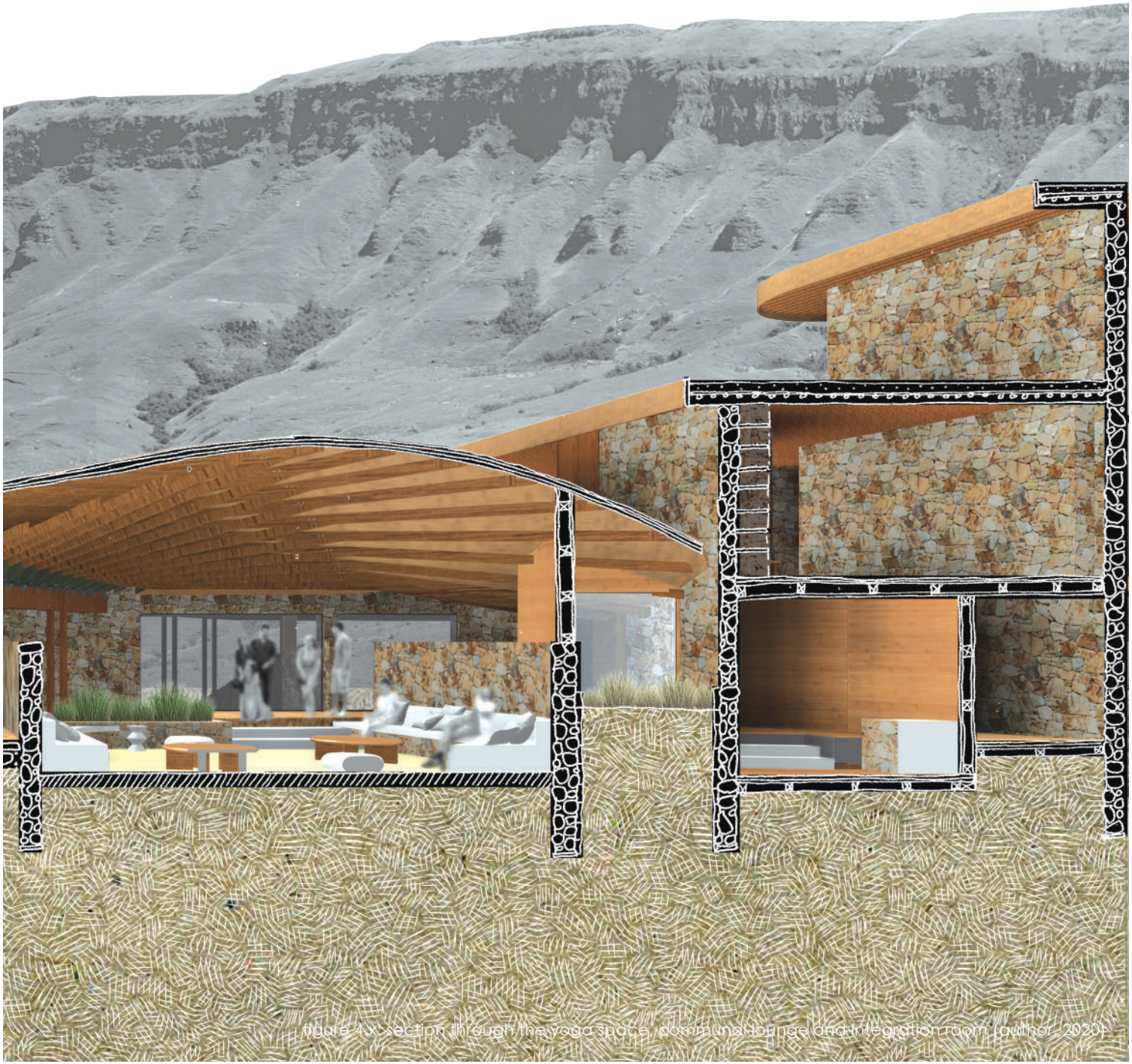
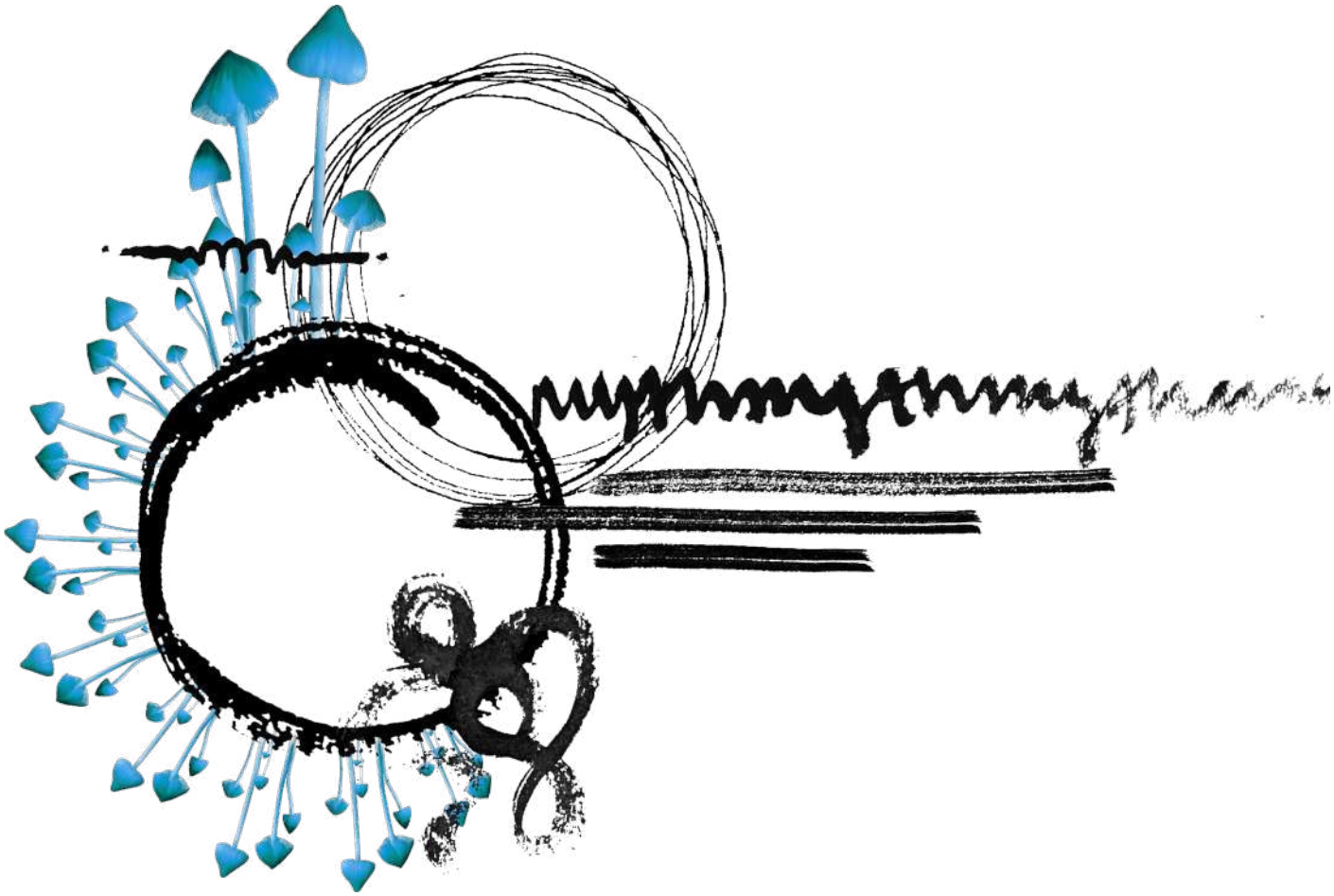


figure 4x: section through the yoga space, communal lounge and integration room (author, 2020)



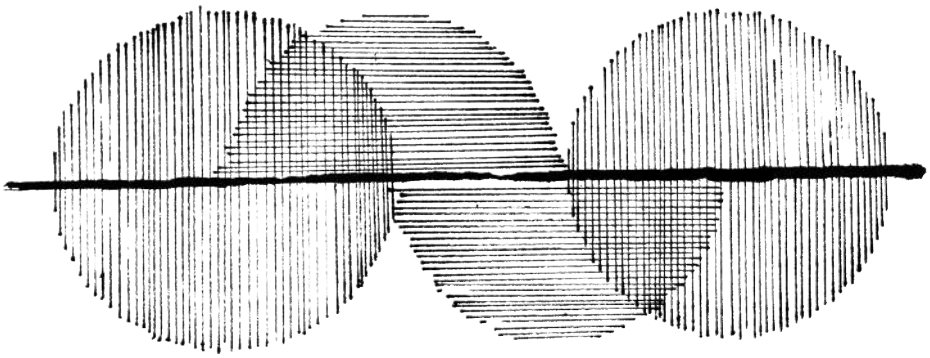
chapter 6

INTEGRATION

(noun)

\ ˌin-tə-ˈgrā-shən\

trying to make sense of the revelation. The revelation is dissected and a myriad of meanings and interpretations are explored in order to gain a more comprehensive perspective. The uncovered meanings are then integrated with everyday life in order to live with intention.



Now that the complete design has revealed itself, we can begin to make sense of it in terms of the ideas presented in Chapter 4. It is in this chapter where everything can come together as an integrated whole, integrating theory with practice. The parts of the design are understood as part of a whole.

6.1

walls and roofs : physical and non-physical

The interplay between walls and roofs is a metaphor for the human experience. The physical world is represented by the walls. It is that which is concrete and easily accessible. We have the opportunity to interact with it physically, extending a hand to feel the texture of the wall as we move along it. The walls serve to guide us and define the places in which we can dwell.

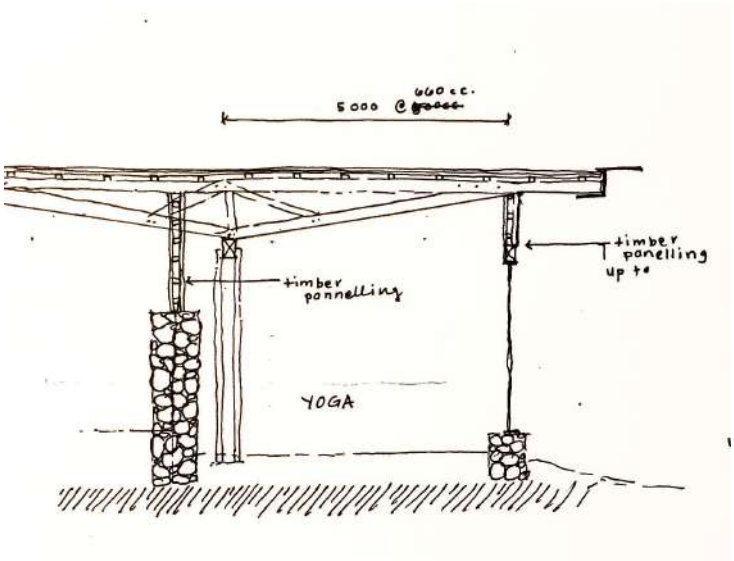
The meta-physical in the other hand, is not so easily accessible. It is defined by its own order which we as humans sometimes struggle to understand. What we do understand of the meta-physical is the experience that it provides us with. We might not understand how it works, but we can understand how it makes us feel. This is also true of the roof. It creates unique experiences in each space as it undulates across the site. As one cannot see the roof in its entirety, the experience of it is specific to the space one finds oneself in. It is not understood as a whole, because we do not have to perspective from a human point of view to experience it as such. The roof does not makes sense in the same way that we can make sense of the walls.

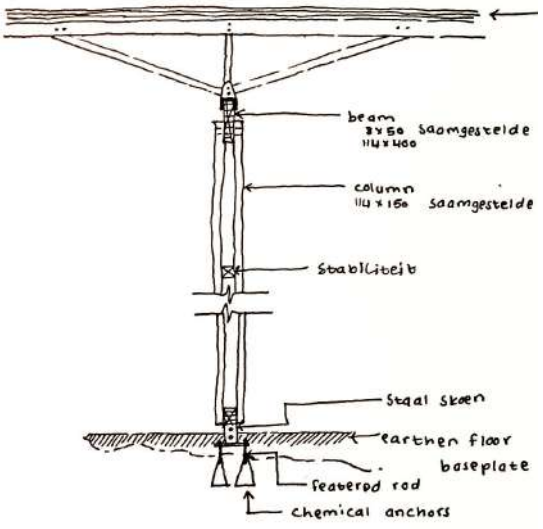
The lines on plan are reflected in section: curvilinear lines which suggest a flow of energy. It enables a conversation between the functioning of plan and the experience in section. The rise and fall of the roof is influenced by the function of the space below. In the intimate spaces, it falls; in the communal spaces it rises to reveal more of the landscape. It is a metaphor for the way in which the physical and the meta-physical are organised according to their respective orders, but that the orders reflect one another. As above, so below.

figure 6.x: roof interior and exterior show similarities to the underside of a mushroom (author, 2020)

BALANCE AND TENSION MANIFESTED

The roof structure makes use of the principles of balance and tension. A timber beam meanders through the design, independent of the walls, with inverted trusses resting upon it. The trusses are angled on the beam with mathematical order to effect an undulating roof line. As the inverted truss is balanced in the beam, it utilises tension for its structural stability. The top member is stressed as it ties the members together. Additionally, tension cables are spaces at regular intervals for added structural stability. The structure of the roof is evidence of the effort of balance.





6.2

the architectural experience of ritual and myth

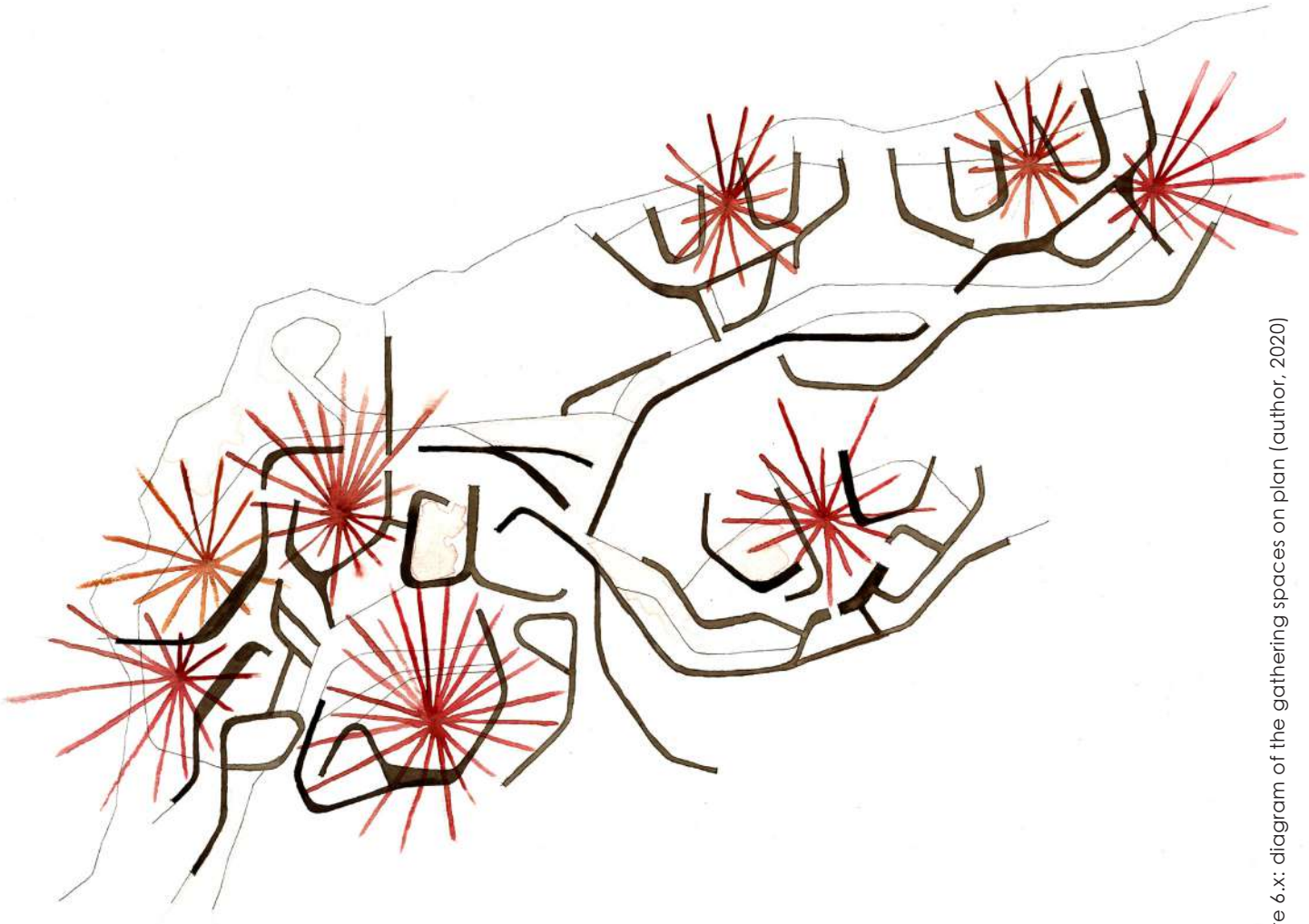


figure 6.x: diagram of the gathering spaces on plan (author, 2020)

figure 6.x: diagram of the circulation and narrative on plan (author, 2020)

figure 6.x: en route to the retreat (author, 2020)

figure 6.x: first glimpses of the retreat (author, 2020)

figure 6.x: towards the entrance (author, 2020)

figure 6.x: outside the accomodation (author, 2020)

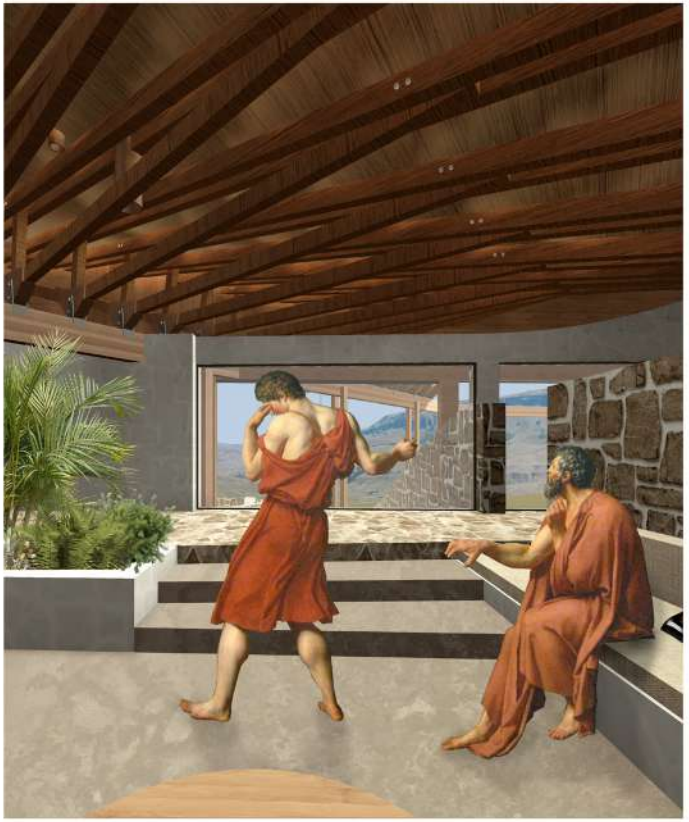
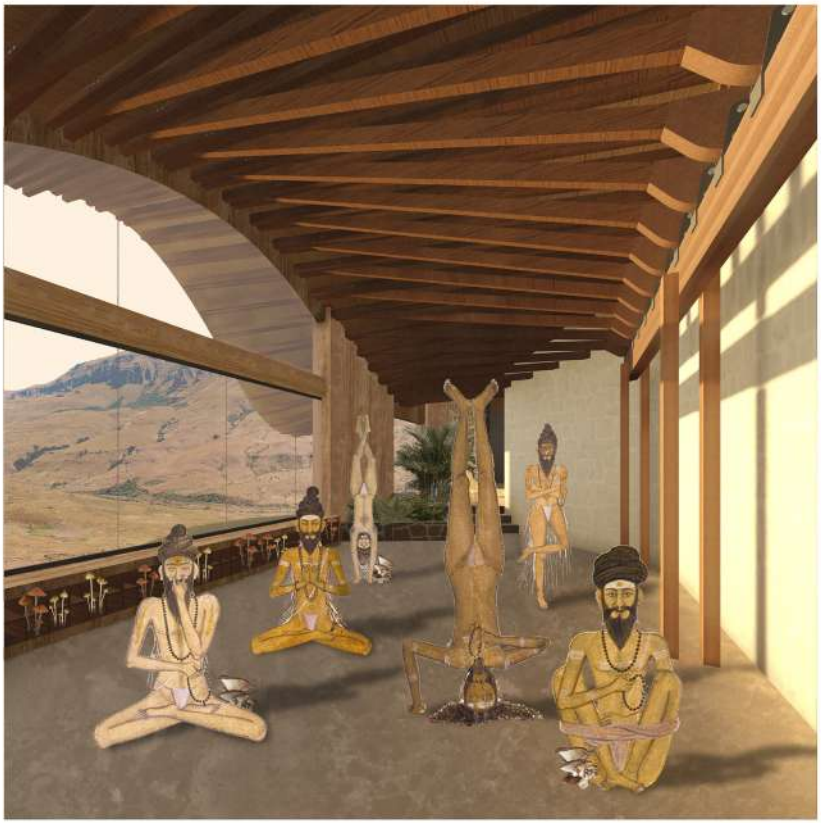


figure 6.x: communal lounge (author, 2020)



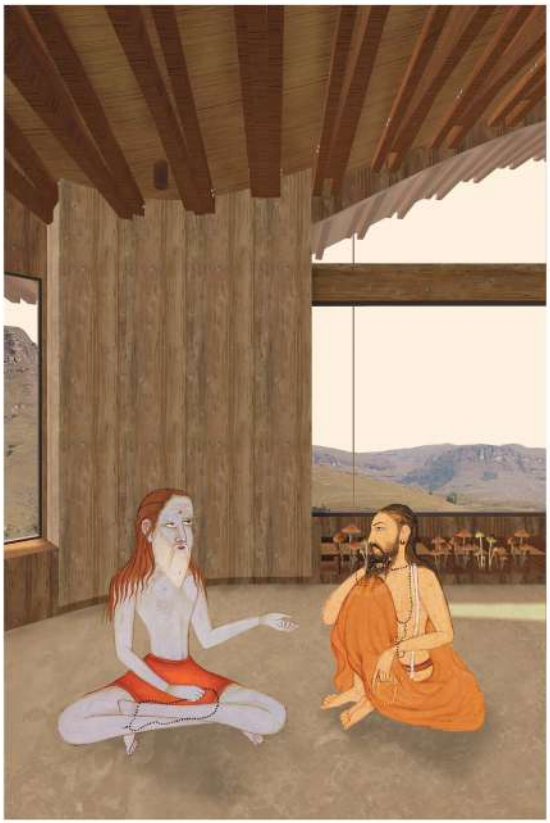


figure 6.x: pre-ritual / ypga space (author, 2020)

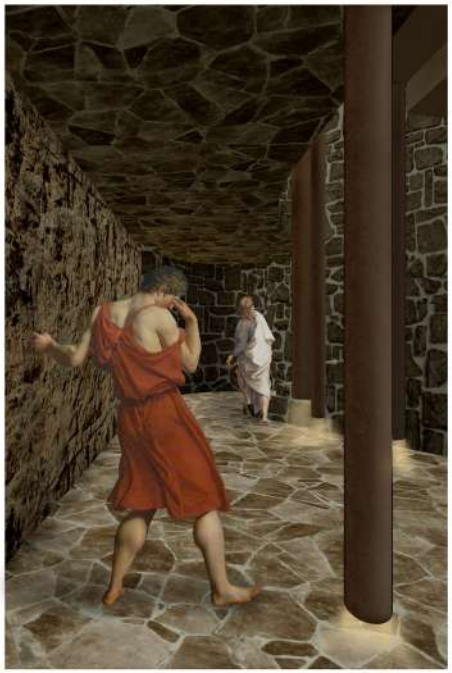


figure 6.x: journey along the ritual tunnel (author, 2020)

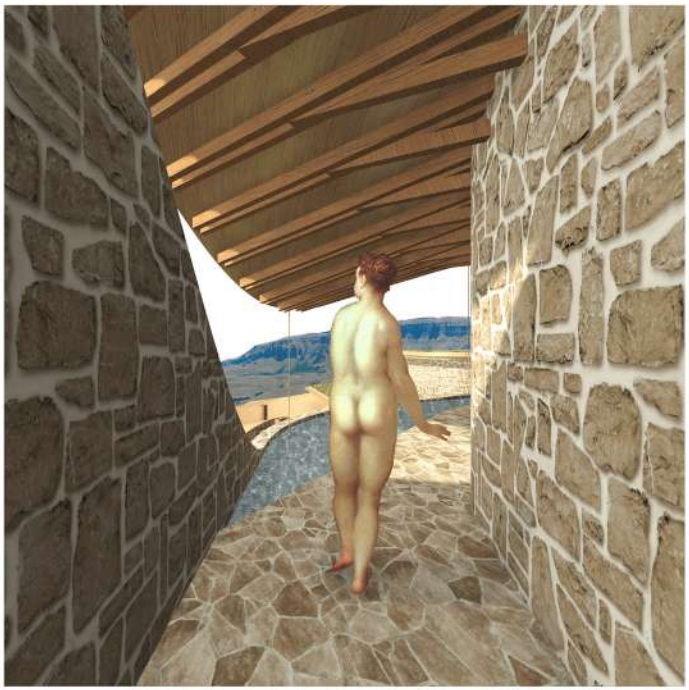


figure 6.x: the ritual space (author, 2020)

figure 6.x: integration spaces (author, 2020)

figure 6.x: bedrooms (author, 2020)

figure 6.x: fire pit (author, 2020)

6.3

extending thresholds

The building itself is a manifestation of the threshold. The attention given to the thresholds of the design serves to underline its liminal nature by making the threshold an integral part of the experience of the visitor. The extended threshold aims to make one conscious of moving from one state to the next. It makes explicit that which might already be subconsciously understood.

When one surrenders to being in liminality one is able to see the transcendental. Glimpses of transcendence is offered in the thresholds, connecting one to the meta-physical. For example, the doors that separate spaces from one another have frames that extend beyond the walls. When passing through the door, one becomes aware of pin prick skylights that allows one a glance of the sky beyond. In this brief moment, one is reminded of the sky and that which is usually hidden from view. It is a promise of a future transcendence and moving beyond the physical.

A threshold can also provide us with an opportunity to engage with the physical in a new way. It can bring conscious awareness of one' s surroundings. The extended indoor-outdoor thresholds in this project brings about a gradual change in the interaction with nature. From a visual connection, to a physical connection, to complete immersion. This principle is integrated through indoor gardens as well as by cultivating psilocybin mushrooms in the pre-ritual hall. In the threshold between inside and outside, one comes into contact with that which enables the state of liminality: the magic mushroom.

Mushroom cultivation is divided into two parts: growing mycelium, the roots of the fungi, and fruiting. In the first stage, the substrate is inoculated with the spores of the mushroom. The conditions for growing mycelium require a dark space. When the mycelium has completely turned the substrate white, it is moved to the fruiting chamber, a humid container with natural light and ventilation. Here, the mushrooms grow from the mycelium. Both parts of the mushroom cultivation takes place in the threshold between outside and inside. Growing the magic mushrooms in this space allows the visitor to deepen their relationship with the plant medicine, watching it grow and develop throughout their stay at the retreat. When the time comes to consume the mushroom, the initiate is able to do so mindfully.

The thresholds to the outside in the ritual hall is extended with a wall of pivoting glass doors. When closed, the threshold is one-dimensional, but when the doors are opened, it reveals itself as an extended experience. Moving through the open glass doors, one is physically separated from what is next to you, but the visual connection remains. It is a reminder that even though the experience of liminality is isolating, one is never truly alone. Others before have reached this plane of awareness, and after, others will too.

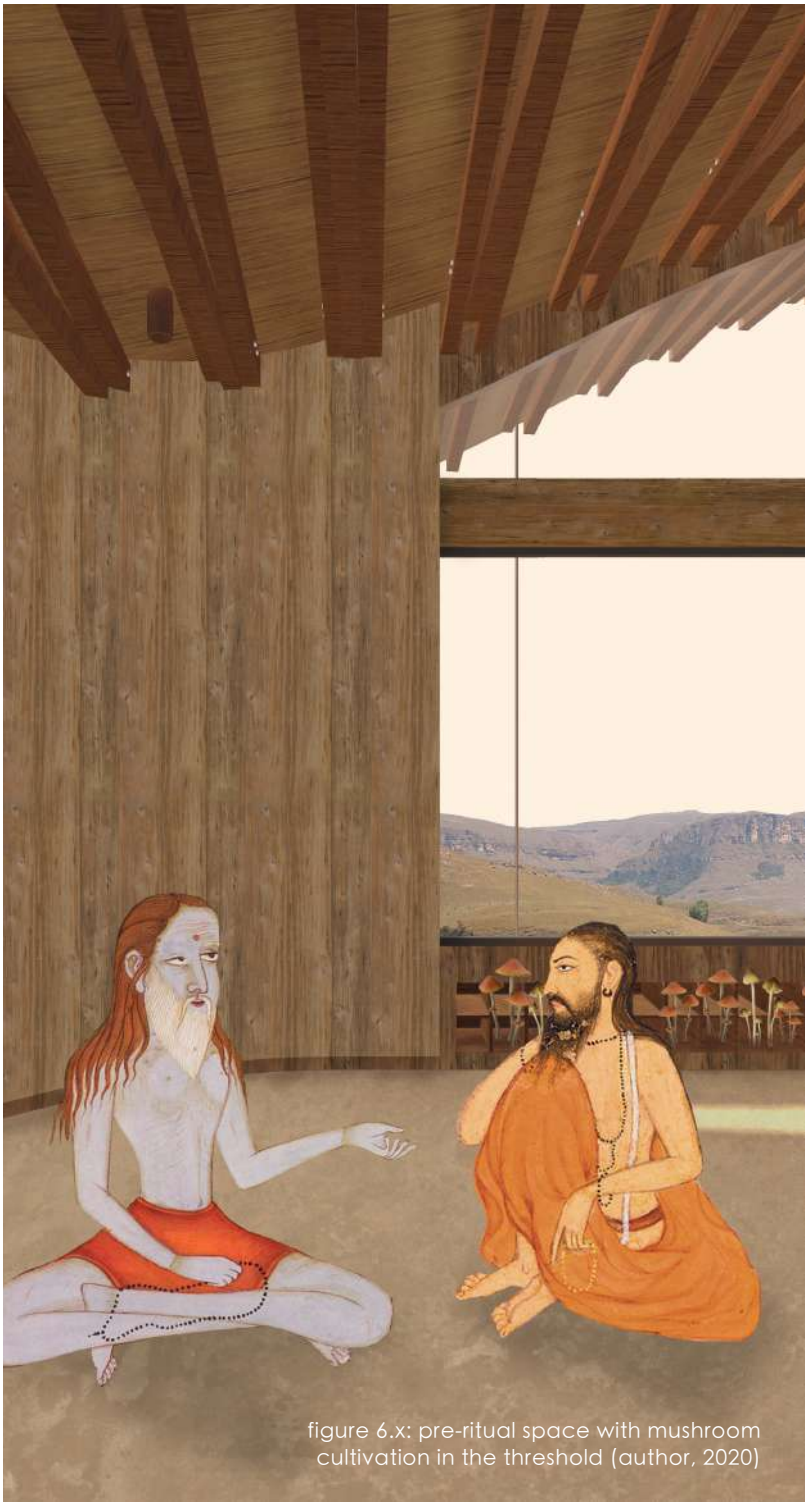


figure 6.x: pre-ritual space with mushroom cultivation in the threshold (author, 2020)

Another aspect of the liminal state is being privy to information which is not accessible under normal states of consciousness. In the bedrooms the threshold to the outside is extended by making it habitable. A deep functional windowsill allows the visitor a moment of reflection. It is only when sitting in the windowsill that one becomes aware of a small aedicula - a sacred place for the divine - hidden from view in the structure of the timber screens. The sacred hidden within the everyday, only visible when one is surrendered. Shutters can open and close in various formations, allowing the visitor to curate his experience according to what he needs at the time. On the outside of the windowsill, a platform drops down, extending over the precipice: a moment of surrender suspended in the air. Throughout the project, surprises such as these are hidden in the thresholds. It is only by spending time in the liminal state that one can experience them.

figure 6.x: bedrooms with thresholds which allows the user to dictate the experience (author, 2020)

Arguably, the most important physical threshold of the project is where one crosses from the everyday into the world of the sacred. It is the tunnel that connects the living spaces below to the ritual hall above. The purpose of the tunnel is to prepare the initiates for the ritual to come. One must be prepared to go down the rabbit hole in order to reach wonderland. Upon entering it, it is dark; the eyes take some time to adjust. The tunnel narrows as one progresses along it. The floor is uneven and the eyes are fixed on the path forward. The walls are smooth and damp. There is a sound of water falling. Cylinders protrude through the roof of the tunnel, obstructing the path and illuminating the rough stone floor in dim circles. The skylights provide a glimpse of what is to come.

Moving through the tunnel, one becomes aware of openings in the wall which reveal the rock face beyond. As one nears the sound of water, the tunnel widens. Turning the corner, one arrives at the staircase leading up into the world above. Light from above fills the underground space. As one moves up the stairs, the light becomes more and more intense until one reaches the ritual space. From above, one gains a new perspective. It is the same place, but it is viewed with eyes changed by the tunnel. It is the first of many rebirths to happen in the hours to come.

figure 6.x: the ritual tunnel as an extended threshold (author, 2020)

6.4

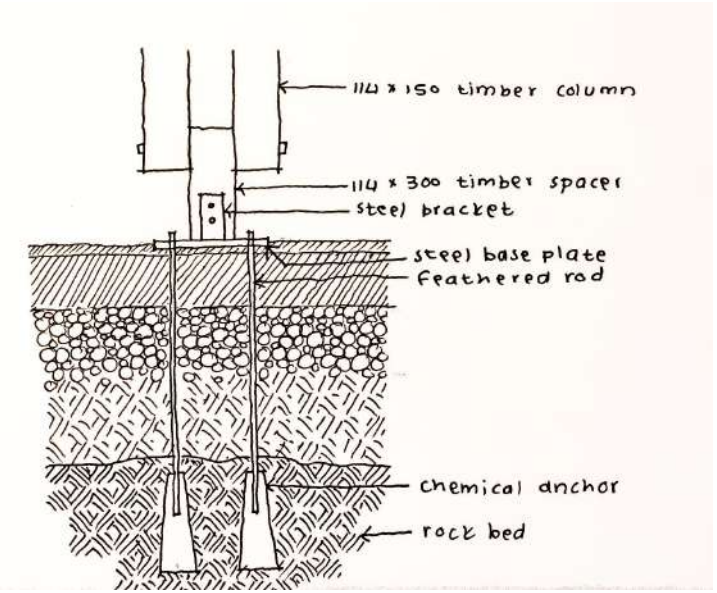
structural system

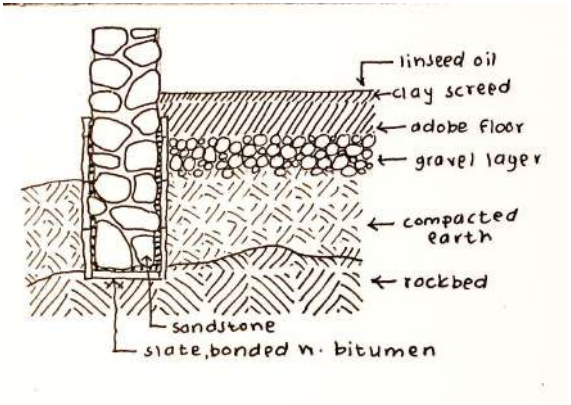
FOUNDATIONS AND FLOORS

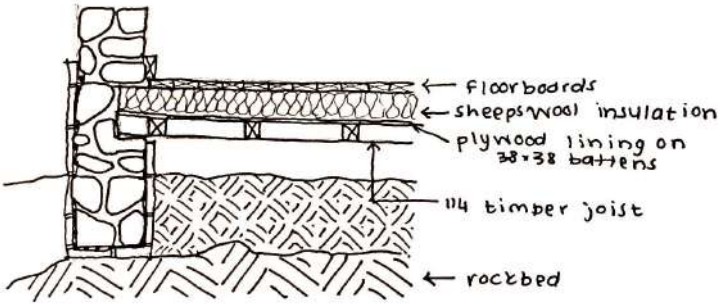
Building on the mountainside has its perks. For one, the rock bed is close to the ground surface, making foundations redundant. The stone walls are built directly onto the rock bed. The timber columns supporting the roof, on the other hand, require some additional stabilisation. Four threaded rods are fastened into the rock bed with chemical anchors. A base plate is bolted to the rods to ensure a flat surface onto which the metal bracket holding the timber column in place can be bolted.

The floors are filled in between the stone walls. There are three types of floors: earthen, timber and stone. Each corresponding to the function of the space. Earthen floors consist of a mixture of sand, clay and straw and is compacted in layers in top of a bed of gravel. Straw improves the tensile strength and reduce cracking. Though some moisture will inevitably seep through, the gravel bed prevents excessive moisture penetration. The floor is sealed with linseed oil which strengthens and adds flexibility to the floor. With time, the floor will wear, but it is relatively easy to maintain. Earthen floors are shaped by the human hand and carries with it the traces of touch.

Similar to the earthen floor, the stone floors are constructed on a bed of compacted gravel. Stone is cut to provide a flat surface and puzzled together with lime plaster. The stone is also treated with linseed oil. With the suspended timber floors, the joists are built into the stone walls at 1000 cc. Battens between the joists support a plywood lining. Sheep wool is used as insulation between the floorboards and the plywood lining.


114 x 150 timber column
114 x 300 timber spacer
steel bracket
steel base plate
feathered rod
chemical anchor
rock bed

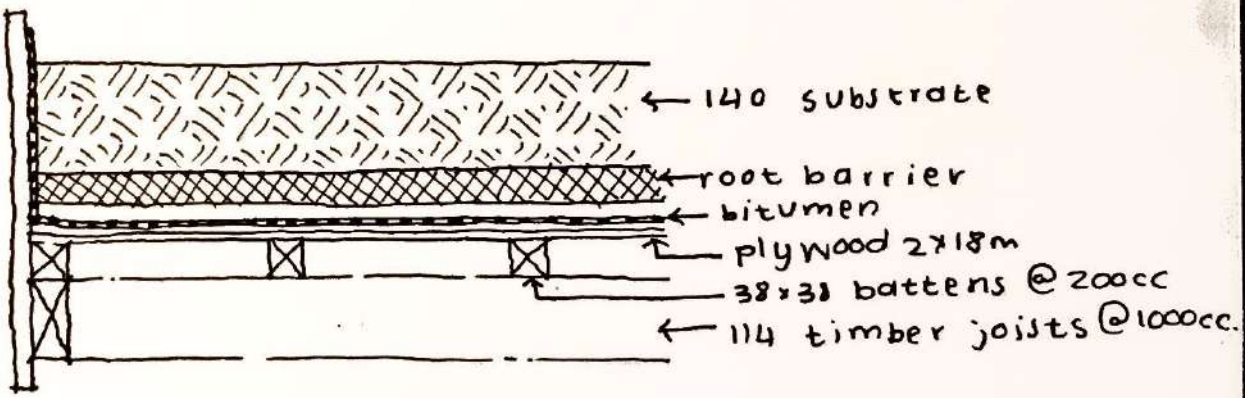

linseed oil
clay screed
adobe floor
gravel layer
compacted earth
rockbed
sandstone
slate, bonded w. bitumen

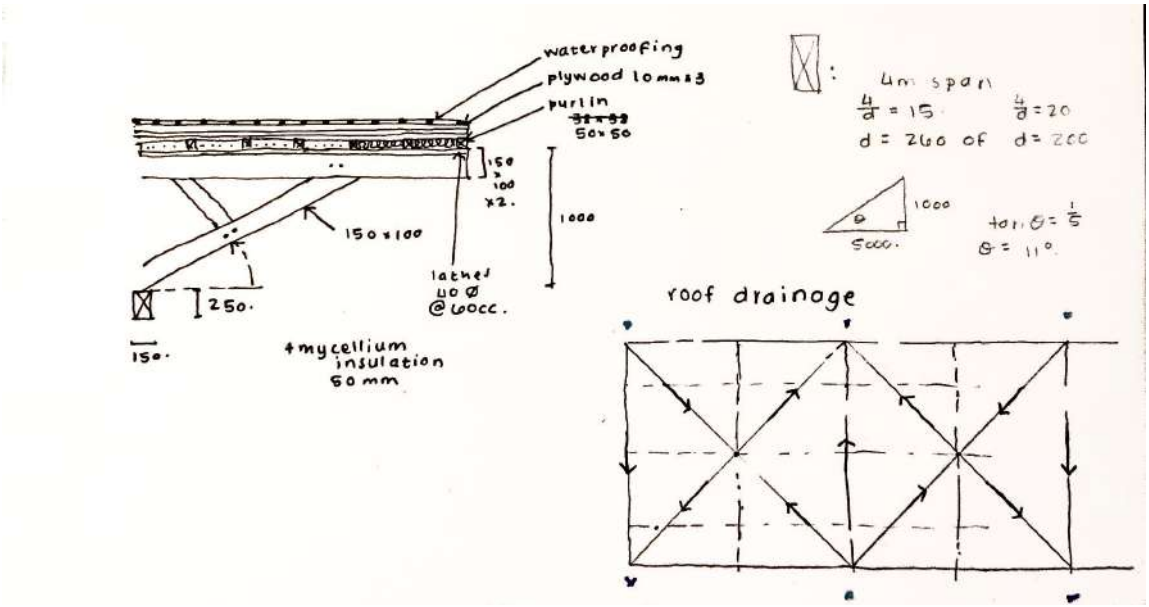

floorboards
sheepswool insulation
plywood lining on 38x38 battens
114 timber joist
rockbed

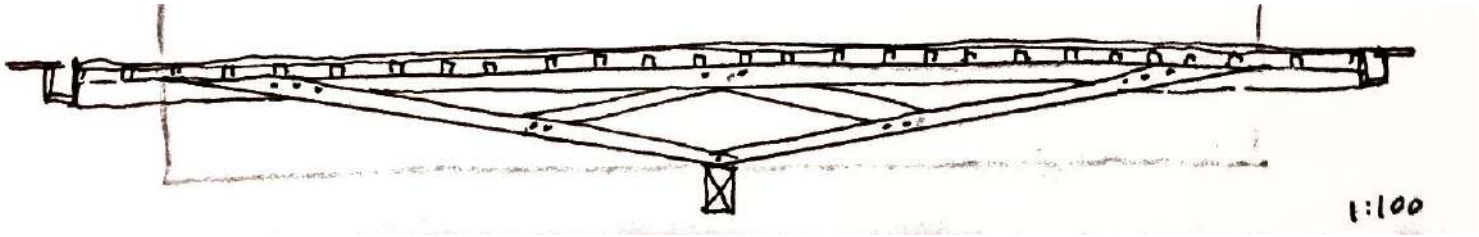
ROOF SYSTEM

Getting the timber to site poses a challenge. Both the columns and the beams are transported in smaller 114mm sections and laminated on site.Twin timber column support the beam which carries the load of the roof trusses. The steel brackets on the beam and the apex of the truss are bolted to determine the angle of the truss, which varies from 0 º to 12 º. Plywood sheets are cut into 300mm strips to allow greater flexibility and are nailed directly onto the trusses. The first layer of plywood strips are placed at a right angle to the trusses. The next layer is parallel to the trusses and so forth so comprise a total of 6 18mm layers. The layers are bonded with bitumen and the top layer acts as a sacrificial layer to preserve the plywood layers beneath.

The green roofs are also constructed from timber. A frame is built from 114mm sections, and filled with 114mm joists at 1000 cc. 38x38 battens at 200 cc support two layers of 18mm plywood, bonded with bitumen. A 28mm root barrier membrane and an additional layer of bitumen protects the timber. 140mm of substrate is provided for the sedum plants, which have a shallow root system. Water which filters through the substrate is collected in a gutter and redirected towards a botanical cell. The roof is angled at 2 º.


140 substrate
root barrier
bitumen
plywood 27x18m
38x38 battens @200cc
114 timber joists @1000cc.


waterproofing
plywood 10mm x3
purlin
50x50
150 x 100 x2.
1000
150x100
250.
150.
lathes 40 Ø @ 600cc.
+mycellium insulation 50mm
4m span
d/4 = 15 d/4 = 20
d = 260 of d = 200
1000
5000.
tan θ = 1/5
θ = 11°
roof drainage


1:100

6.5
the building in the landscape

From the beginning, the aim was to design a building that is of the landscape, and transcends it, rather than a building in the landscape. Throughout the design process, clues from the site and surroundings influenced the organisation and formgiving, ultimately resulting in a building that sits amongst its context.

The mountains raise up on all sides. In comparison the building seems small and insignificant, as it should. Man could never equal the monumentality of the mountains. The rise and fall of the roof echoes the peaks and valleys of the topography. The stone walls merge with the stone of the rock face. As the sacrificial layers of the roof weathers, the building becomes all the less imposing. Vegetation will grow around it. From afar, it will be but a shadow in the distance, much like the caves that dot the mountainside.

The building is situated around the rock face which initially inspired the location of the project. Huddled up against it, the rock face provides a sense of safety. The rock face separates the everyday below from the sacred above. The programme is further separated by the ephemeral stream. Living spaces are located to the east and communal spaces to the west. Rock separates sacred from everyday. Water separates isolated from communal.

figure 6.x: the building in the landscape (author, 2020)

WATER AND WASTE

As the project is situated on a mountain in a climate with high rainfall, there is an abundance of groundwater. The project is organised so that the surface run-off is either collected, redirected, or flows through the building. The treatment of surface water in and around the building reflects the function and of the spaces. As such, water becomes a part of the design.

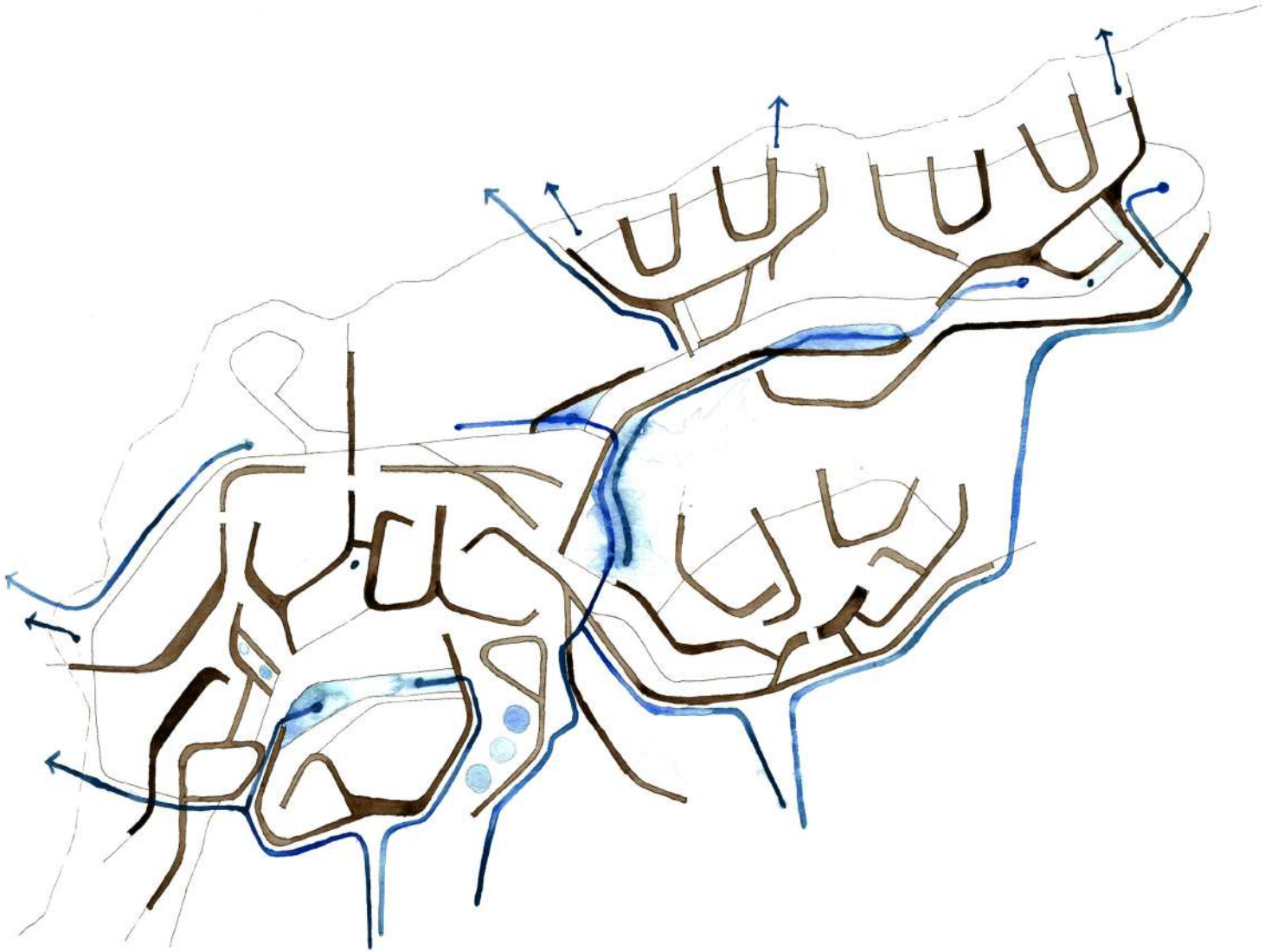


figure 6.x: diagram of the path of water (author, 2020)

The water system works in tandem with the waste disposal system. Figure xx illustrates the cycle of water on the site. The roof of the building conducts rainwater into channels which feed into the primary botanical cells. In the botanical cells, water is filtered and separated into three functions: potable water, irrigation and flushing toilets. The potable water is filtered through a carbon filtering system and purified with UV-light. After the potable water has fulfilled its purpose, it is redirected to the primary botanical cell to restart the cycle.

The second function of water from the primary botanical cell is irrigation. Crops are grown on site to provide for a large portion of the nutritional requirements of the retreat. The vegetable gardens for hardier crops are located to the west, and the more sensitive crops such as bananas and tomatoes are planted in the threshold of the communal spaces.

The third function of water from the primary botanical cell is for toilets. Composting toilets were investigated as a potential solution, but eventually it was decided that flushing toilets would be more applicable to the function of the building as a retreat, especially as there is an abundance of water on site. Water from the primary botanical cell is directly used for flushing toilets. Waste from the toilets are collected in one of two above ground septic tanks. When one is in used, the solid waste from the other is chemically processed to produce compost which is used for fertiliser for the crops. The process works in a 6 month cycle. The run-off from the active septic tank flows into the secondary botanical cell in which fruiting tress are planted. Experiments in Earthship architecture has proven that this is an effective and safe method of treating sewage run-off. The fruiting trees utilise the nutrients in the run-off and filters out impurities.

With such a high rainfall, there is bound to be on overflow of water. The overflow is directed to the natural water channels already existent on site towards a river which flows just below the cliff. The natural forces of the river is used to generate electricity. Due to the low energy requirements, the primary load is the water pumps which move water around the site to fulfil the various functions. Thus, water is used to generate electricity which is primarily used for moving water; a closed energy cycle. Wood burning water heaters are used to heat water for amenities. During the winter, these water heaters contribute to the thermal mass of the building.

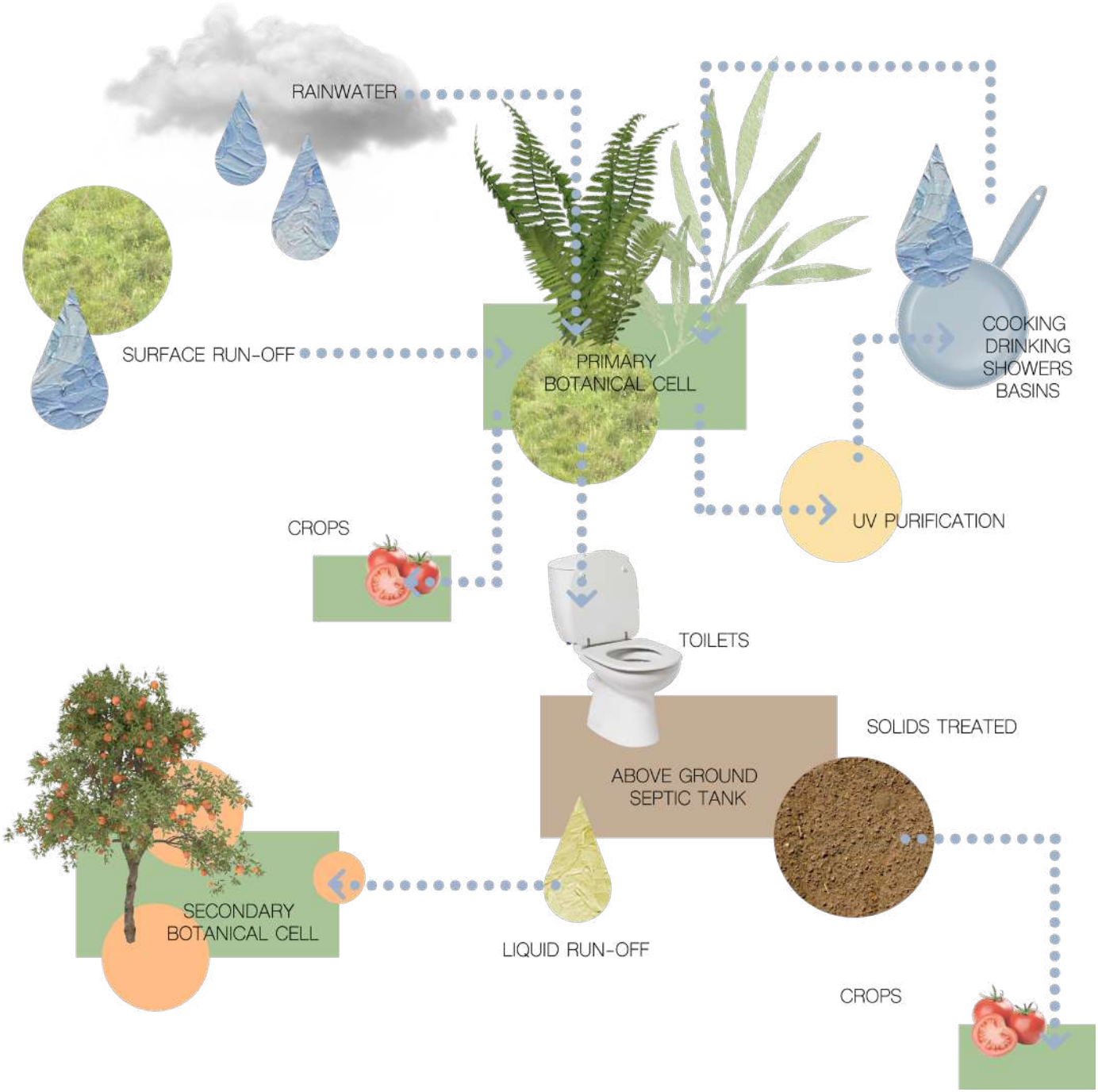


figure 6.x: diagram representation of water and waste treatment on site (author, 2020)

WEATHER

The principles of passive design were used to lower the energy requirements of the project as well as to improve liveability. The building is orientated to the north to maximise natural lighting. The rock face is utilised in reflecting light into the lounge from south facing windows. Stereotomic walls orientate the gaze to the northern views as well as protecting interior spaces from harsh eastern and western sun. During the summer, the interior spaces are shaded, but during the winter, the sun is at a lower angle and sunlight is able to penetrate. Minimal artificial lighting is used. The bedrooms, communal and ritual spaces make use of candles and fires after the sun has set.

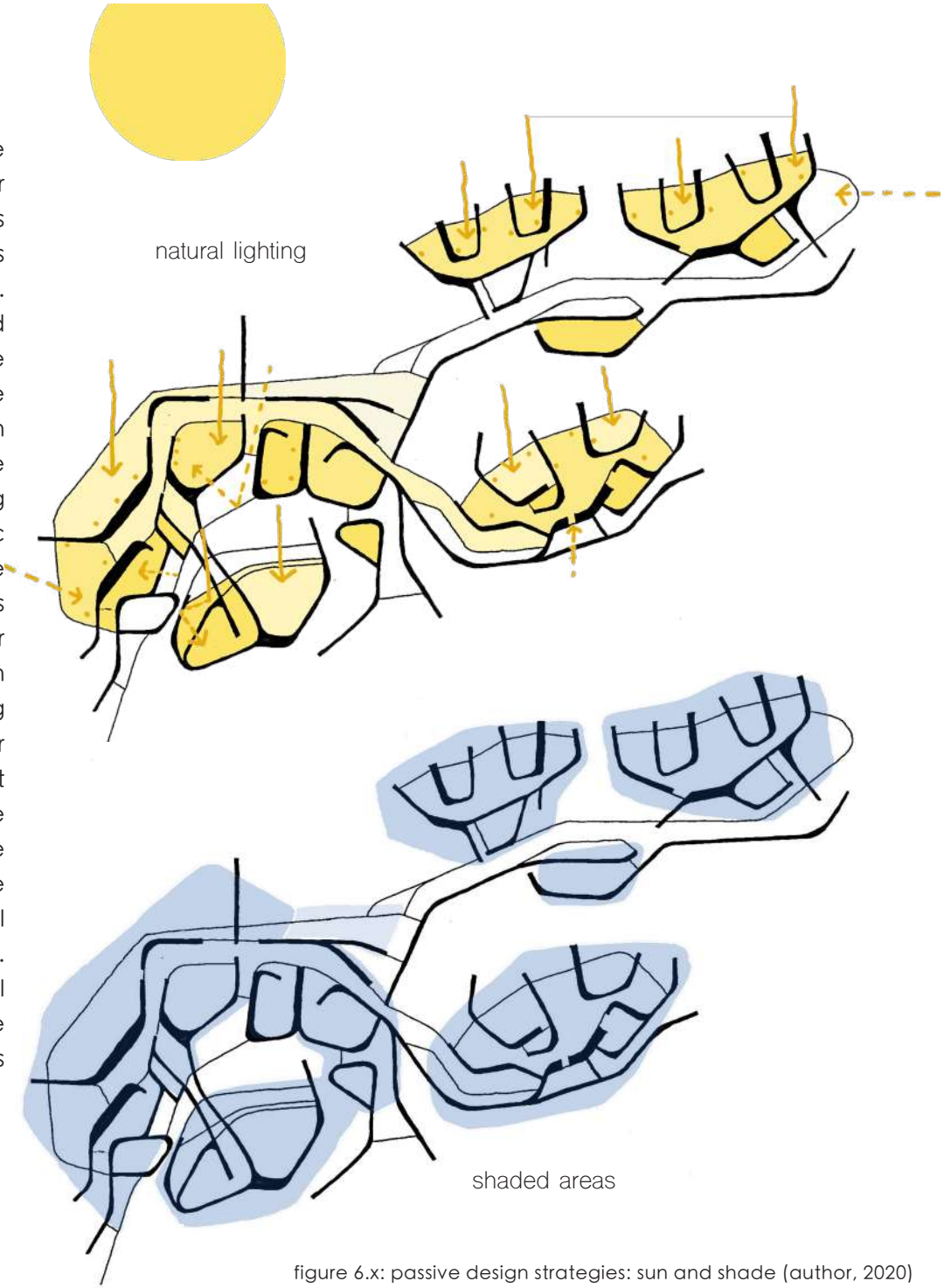


figure 6.x: passive design strategies: sun and shade (author, 2020)

The temperate summers do not require intensive cooling systems. Ventilation and shading are sufficient to ensure a comfortable temperature range. The building utilised cross ventilation where possible. Air travels through the circulation spaces from east to west and vice versa, depending on the time of day and prevailing wind direction. In the ritual space, air is cooled before it enters the building. A breeze crosses over a pond before in enters the building at floor level. As the air warms inside, windows at a higher level allows the air to escape ensuring a constant flow of cool, fresh air. In the bedrooms, windows can be opened to allow for ventilation, but the interior can be kept shaded with timber screens.

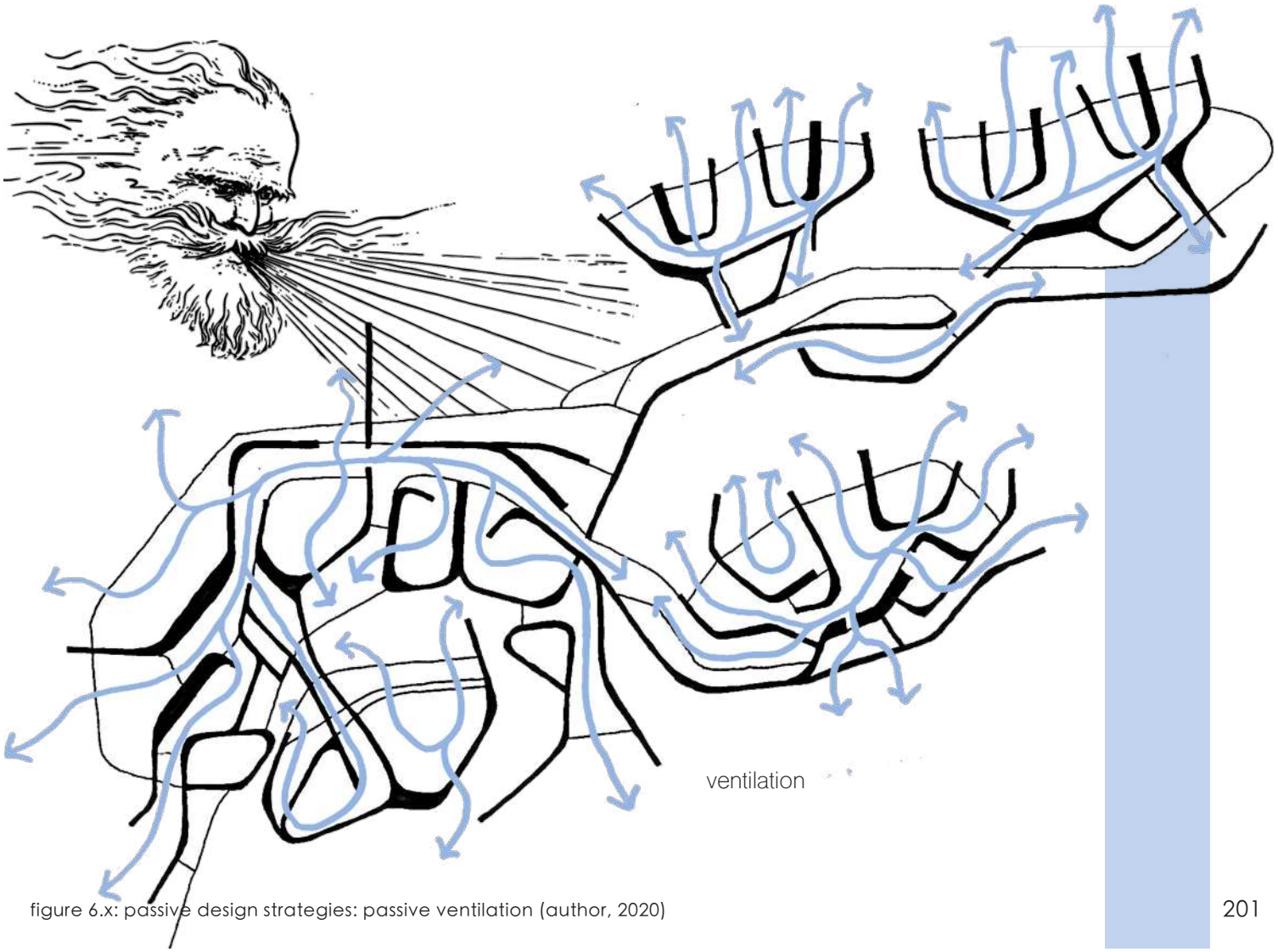


figure 6.x: passive design strategies: passive ventilation (author, 2020)

Due to climatic considerations, heating is more important than cooling, therefore a more active approach is taken. Wood fires are located in central spaces. During the winter, the fires will be kept going throughout the day, with the floor and walls serving as a thermal mass. The stereotomic walls also serve the function of a thermal mass. During the day, the walls are heated by the sun. At night, the heat is released into the building, serving to keep a more constant temperature throughout the day.

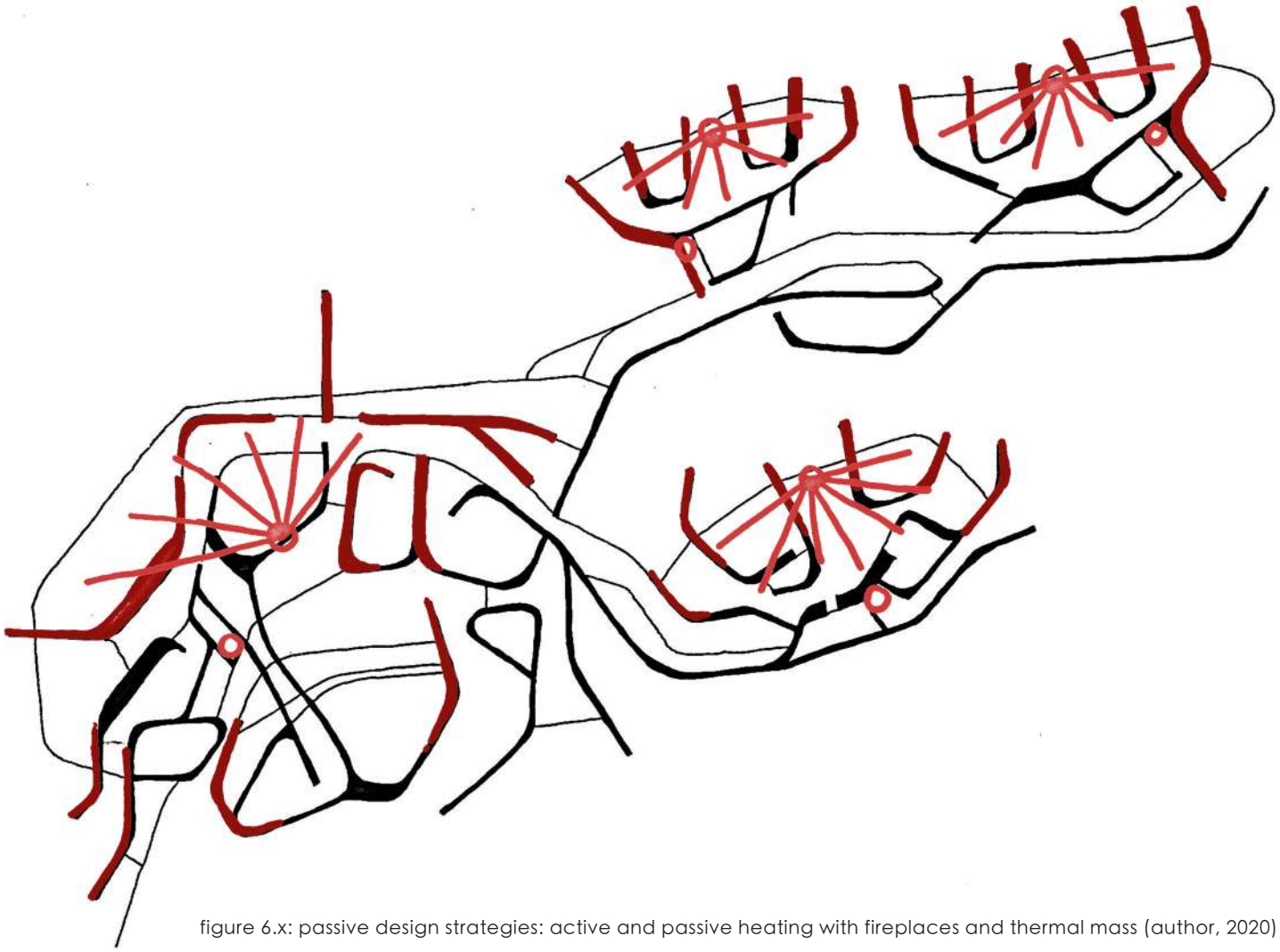


figure 6.x: passive design strategies: active and passive heating with fireplaces and thermal mass (author, 2020)

MATERIALS AND DEMATERIALISATION

The building is constructed with the end in mind. The aim is for the building to eventually disappear into the landscape from whence it came. The materials for the project were carefully considered. The requirements were twofold: the materials are a determining factor in the emotional understanding of a space, and it must be of a sustainable nature. Materials were chosen that would either disappear completely over time or leave traces of the building in the landscape. The materials are either sourced on site, such as the stone which is used for the walls, or transported to site from a local manufacturer. Natural construction methods were employed in order to minimise the long-term impact of the building on the landscape. The concept of the sacrificial layer was used to waterproof the building and protect the structure. Both walls and roof employ this method.

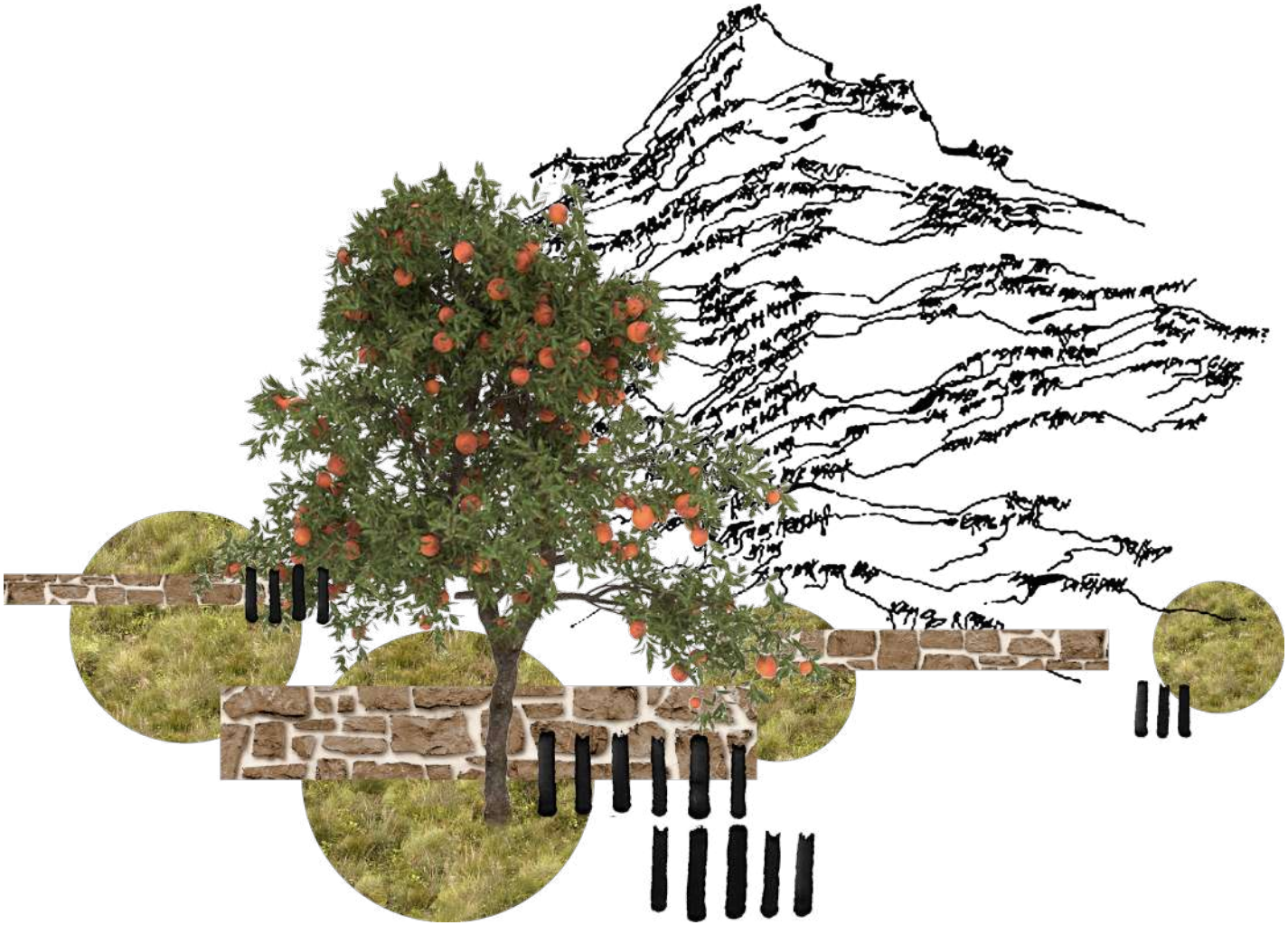
Stone from the site is used as the primary wall mass. As the site is prepared for the building, the stone that is excavated is reused for the walls. Lime plaster is used as it is a natural material that will disintegrate with time, thus assisting in the ruination. The sandstone used for the walls are prone to erosion, thus a layer of slate protects the sandstone from direct contact with groundwater. It is also used as a coping on exposed walls and as material for the water channels. Bitumen is used as an adhesive between the slate and the sandstone. The stone walls require considerable skill to build. It is labour intensive. Through the timespan of construction, craftsmen are employed and trained. It provides an opportunity for the people of the local community to participate in meaningful place-making and in learning new skills. For the most part, the construction methods simple, but the execution will require innovation as unforeseen problems are bound to occur due to the non-linear nature of the design. For example, where wall and roof meet will be slightly different in every instance, but a simple method is employed to solve the problem.

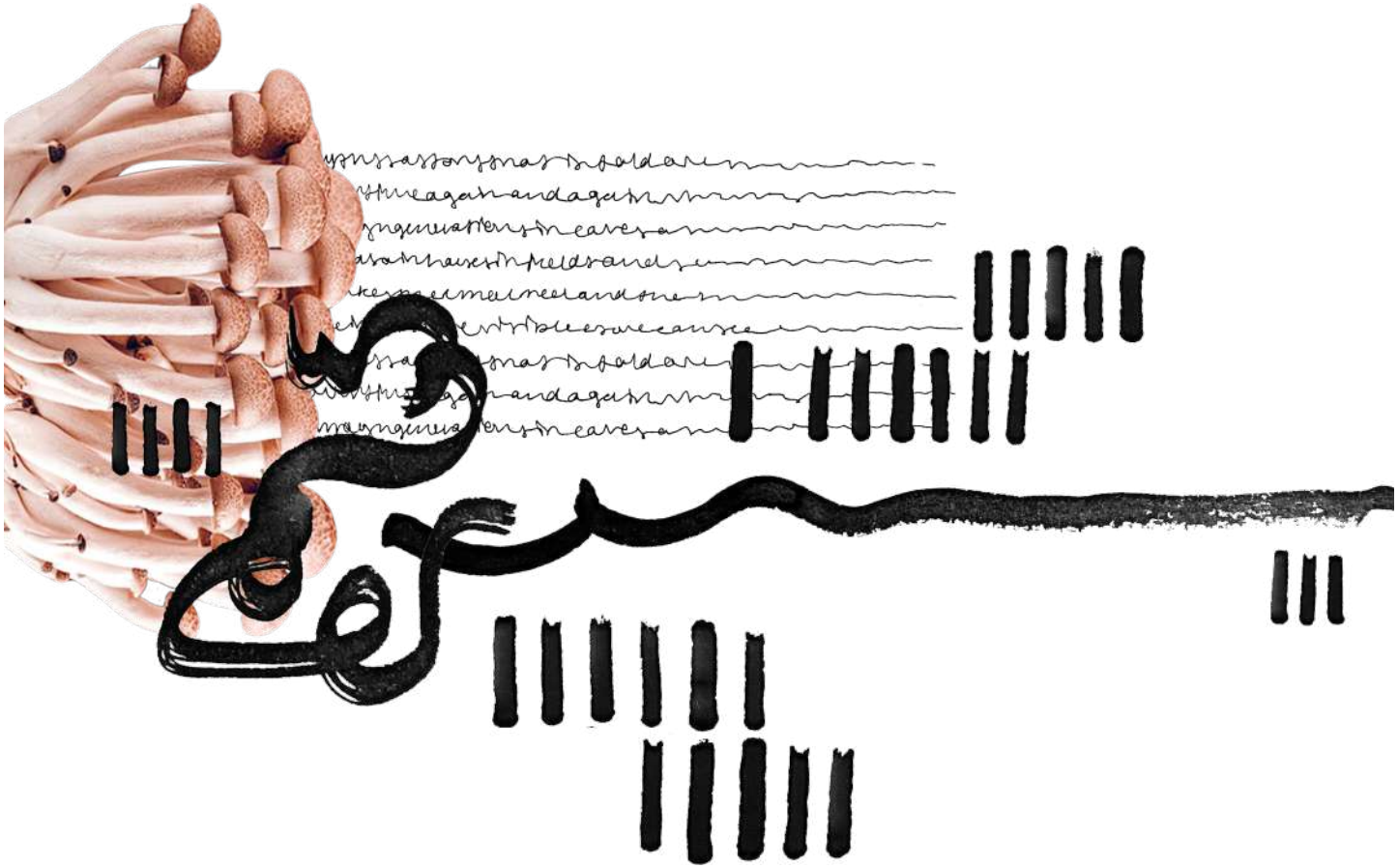
The infill walls are of local timber. There is an abundance of timber plantations and sawmills in close proximity to the site. When the lifecycle of the building is completed, termites and fungi are introduced to speed up the disintegration of the wood into the landscape. As it rots, it becomes a substrate for new life, encouraging new growth among the ruins of the building. The timber walls are never in direct contact with the earth and are protected from the elements by the overhang of the roof. The roof however, is exposed. The outer sheet of plywood serves to protect layers below by sacrificing itself. It is allowed to ruin so that is may preserve the other layers and so form a waterproof and protected roof structure. A layer of bitumen between the layers of plywood serve as additional protection from the elements.

6.6
what remains

When all is said and done, when the building has fulfilled its purpose, it too will return to the earth. Its materials were chosen for the purpose of returning to the earth when the time comes. Through the consideration of material and innovative building methods, the building can dematerialise in the most physical sense. Parts of it will be carried away by wind and water. Others will be devoured by plants and fungi. Its orders will be slowly dismantled.

Even so, it will leave its traces, both in the minds of those who partook in the experience, and on the place where it stands. The timber will rot, the steel will rust. It may take many years for the elements to disintegrate the building. The walls will crumble, but the stone will remain. The faintest of clues of a moment in a panorama of endless change.





chapter 7

REFLECTION

(noun)
\ ri-ˈflek-shən \
a meditation on the experience in its entirety.

AN EPILOGUE

This is less a thesis than it is a manifesto. It is about the things that are inherent to my being. Nature, consciousness, the soul, transcendence, ritual and our place in the world. As we are, so we create.

It was a year of practising a psychedelic state of mind, without needing to take psychedelics. From this psychedelic consciousness arose a psychedelic architecture. It is an architecture that is focussed on the experience and cultivating alternative states of mind through the places we find ourselves in. Material, light, sound, texture and the landscape were integral aspects of designing an embodied experience. It was successful in focussing the attention on the psychedelic ritual, crossing the threshold and connecting to nature. In some way, it will always be incomplete as the process keeps unfurling in the mind even after the deadlines have passed. In the end, there was much more that happened in the mind than on the paper, but there is beauty in that. Some parts will only ever belong to me.

The journey of this thesis was in parallel to the journey of my personal life. Chapter 1 and 2 were spent physically and mentally preparing for a pandemic. Chapter 3 coincided with a national lockdown. During chapter 4, I spent my time trying to make sense of what was happening. Chapter 5 brought a return to studio

and chapter 6 introduced a new way of living amidst eternal chaos. Inherently emotional, it was an exercise in intuitive architecture and intuitive living. Preconceived ideas and projections were set aside as I settled into the flow. Ritual became a part of the design process. It required a continual surrender of the self in order to reach a truth which does not belong to me. It was a constant exercise in acceptance - of myself, of the work that needs to be done - and in dismantling - of fears and illusions. The concept of reality was shattered over and over again as the unthinkable became the new normal, only to be replaced by a new reality again.

But with the surrender to the process, came the flow. When I stopped trying to control everything, the stagnant became fluid. Key aspects were revealed at exactly the right time, no sooner, no later. And when the puzzle pieces came, it had to do the work to fit them into their places. Amidst all that was happening, there was always a sense of peace and of purpose. A knowing that everything is happening for a reason, although that reason might not always be clear. Ultimately, I arrived at the end of my thesis year with a renewed raison d' être.

As we spend our days, so we spend our lives.

references

Abraham, A., Sommerhalder, K., Bolliger-Salzmann, H. & Abel, T. 2007. Landscape and Health. The potential of a combination of two concepts. Bern: Institut für Sozial- und Präventivmedizin.

Archdaily, 2015. Sandibe Okavango Safari Lodge / Nicholas Plewman Architects in Association with Michaelis Boyd Associates [online] Available at: <https://www.archdaily.com/638271/sandibe-okavango-safari-lodge-nicholas-plewman-architects> [Accesse: 18 May 2020]

Atman Retreat, n.d. Venue and Accomodations [online] Available at: <https://atmanretreat.com/venue/> [Accessed 16 May 2020]

Bhattacharyya, S. 2011. Mircea Eliade on Myth and Its Significance in Socio-Religious Culture from an "Antireductionist Orientation". International Journal on Humanistic Ideology, 4(2), pg. 54-59.

Brewer, J.A. et al, 2015. Meditation leads to reduced default mode network activity beyond an active task. Cognitive, Affective and Behavioural Neuroscience, 15, pg. 712–720.

Burning Man Project, 2017. Ritual Practice and Mental health (Tanya Luhrmann). Aural Pleasures for the Ride to BRC [podcast] iTunes, 27 March 2017. Available at: <https://podcasts.apple.com/za/podcast/ritual-practice-and-mental-health-tanya-luhrmann/id1143219515?i=1000383052068>

Carthart-Harris, R. L. et al. 2012. Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin. Proceedings of the Natural Academy of Sciences, 109(6), pg. 2138-2143.

Carthart-Harris, R. L. et al. 2014. The Entropic Brain: A Theory of Conscious States Informed by Neuroimaging Research with Psychedelic Drugs. Frontiers in Human Neuroscience 8(20).

Cervinka, R., Röderer, K. & Hefler, E. 2011. Are nature lovers happy? On various indicators of wellbeing and connectedness with nature. Journal of Health Psychology 17(3), pg. 379-388.

Cozzi, N.V. 2013. Psychedelic Breakthroughs in Neuroscience: How Psychedelic Drugs Influenced the Growth and Development of Psychopharmacology. MAPS Bulletin Special Edition, Spring 2013. pg. 16-19.

Custom Shingles, 2016. Different types of wood shingles and their use [online] Available at: <https://www.customshingles.com/blog/2016/12/9/different-types-of-wood-shingles-their-uses> [Accessed 18 May 2020]

Design + Make, 2017. Sawmill Shelter [online] Available at: <http://designandmake.aaschool.ac.uk/project/sawmill-shelter/> [Accessed: 11 October 2020]

Ember, C.R & Carolus, C. 2017. Altered States of Consciousness in C.R. Ember ed. Explaining Human Culture. Human Relation Area Files. [online] Available at: <https://hraf.yale.edu/ehc/summaries/altered-states-of-consciousness> [Accessed 20 May 2020]

Encyclopaedia Brittanica, n.d. Botswana: Climate [online] Available at: <https://www.britannica.com/place/Botswana/Climate> [Accessed 18 May 2020]

Farnam Street, n.d. Yuval Noah Harari on Why Humans Dominate the Earth: Myth-Making [online] Available at: <https://fs.blog/2016/01/why-humans-dominate-earth/> [Accessed 15 October 2020]

Freud, S. 1915. The Unconscious, In: S. Freud. 1915. General Psychological Theory: Papers on Metapsychology. New York: Macmillan. pg. 117 - 150.

Frumkin, H. 2001. Beyond toxicity: Human health and the natural environment. American Journal of Preventive Medicine 20(3), pg. 234–240.

Grob, C. S., Danforth, A. L., Chopra, G. S. et al 2011. Pilot study of psilocybin treatment for anxiety in patients with advanced-stage cancer. Archives of General Psychiatry, 68(1), pg. 71–78.

Grob, C.S., Danforth, A.L., Struble, C. et al 2018. Reduction in social anxiety after MDMA-assisted psychotherapy with autistic adults: a randomised, double-blind, placebo-controlled pilot study. Psychopharmacology 235, pg. 3137-3148.

Grof, S. 2001. LSD psychotherapy: The healing potential of psychedelic medicine. Sarasota: Multidisciplinary Association for Psychedelic Studies

Harari, Y.N. 2015. The Myths We Need to Survive [online video] Filmed at the Royal Geographical Society, London, on 23rd September 2015. Available at: <https://www.youtube.com/watch?v=UTchioiHM0U> [Accessed 17 October 2020]

Hoffman, A. 1980. LSD: My Problem Child. Washington: McGraw-Hill.

James, W. 1902. Varieties of Religious Experience: A Study in Human Nature. New York: Longmans, Green & Co. pg. 388.

Jesse, R. 2009. Entheogens, Awakening and Spiritual Development. In: Horizons, Perspectives on Psychedelics. New York, 8-11 October, 2009. [online video] Available at: <https://vimeo.com/10968562>

Johnson, M.W., Garcia-Romeu, A. & Griffiths, R.R. 2016. Long-term follow-up of psilocybin-facilitated smoking cessation. The American Journal of Drug and Alcohol Abuse 43(1), pg. 55-60.

Katz, R. 1982. Boiling Energy: Community Healing Among the Kalahari Kung. Cambridge: Harvard University Press.

Langdon, D. 2014. AD Classics: Olympic Archery Range / Enric Miralles & Carme Pinos [online] ArchDaily. Available at: <https://www.archdaily.com/539870/ad-classics-olympic-archery-range-enric-miralles-and-carme-pinos> [Accessed 13 October 2020]

Lewis-Williams, J.D. & Dowson, T.A. 1992. Rock Paintings of the Natal Drakensberg. Pietermaritzburg: University of Natal Press.

Lewis-Williams, J.D. & Dowson, T.A. 1990. Through the Veil: San Rock Paintings and the Rock Face. South African Archaeological Bulletin 45, pg. 5-16.

Lewis-Williams, J.D. & Pearce, D.G. 2004. San Spirituality: Roots, Expression, and Social

Consequences. Walnut Creek: Altamira Press.

Lincoln, B. 2006. An Early Moment in the Discourse of ‘Terrorism’: Reflections on a Tale from Marco Polo. Comparative Studies in Society and History, 48 (2), pg. 242–59.

Mabey, R. 2016. The Cabaret of Plants: Thousand Years of Plant Life and the Human Imagination. New York: W.W. Norton Company.

Magister, C. 2017. (Re)Discovering Ritual’s Role in Medicine. The Burning Man Journal [online] Available at: <https://journal.burningman.org/2017/07/philosophical-center/the-theme/rediscovering-rituals-role-in-medicine/> [Accessed 28 July 2020]

Mayer, F.S., Frantz, C., Bruehlman-Senecal, E. & Dolliver, K. 2009. Why is nature beneficial? The role of connectedness to nature. Environment and Behavior 41(5), pg. 607–642.

McLeod, S. A. 2015. Unconscious mind. Simply Psychology [online] Available at: <https://www.simplypsychology.org/unconscious-mind.html> [Accessed 20 May 2020]

Mweli, R. 2020. Interview during a hike to the Game Pass Shelter. Interviewed by Margaux Loubser [verbal] 30 January, 2020. Kamberg Reserve.

Myeni, M. 2020. Interview on Magic Mushroom use under Zulu tribes. Interviewed by Margaux Loubser [telephonically] 24 July 2020. Prince Albert.

Nichols, D. E. 2016. Psychedelics. Pharmacological Reviews, 68(2), pg. 264-355.

Noll, R. 1983. Shamanism and schizophrenia: A state-specific approach to the “schizophrenia metaphor” of shamanic states. American Ethnologist, 10. pg. 443–459.

Norberg-Schulz, C. 1980. Genius Loci: Towards a Phenomenology of Architecture. New York: Rizzoli.

Nutt, D. 2012. Drugs Without the Hot Air : Minimising the Harms of Legal and Illegal Drugs. Cambridge: Cambridge Ltd.

Oehen, P., Traber, R., Widmer, V. et al 2013. A randomised, controlled pilot study of MDMA (±3,4-Methylenedioxymethamphetamine)-assisted psychotherapy for treatment of resistant, chronic Post-Traumatic Stress Disorder (PTSD). Psychopharmacology 27(1), pg. 40-51.

Oohashi, T., Kawai, N., Honda, M., Nakamura, S., Morimoto, M., Nishina, E. & Maekawa, T. 2002. Electroencephalographic measurement of possession trance in the field. Clinical Neurophysiology, 113, pg. 435–445.

Petri, G. et al. 2014. Homological scaffolds of brain functional networks. Journal of the Royal Society Interface, 11(101) [online] Available at: <https://royalsocietypublishing.org/doi/10.1098/rsif.2014.0873> [Accessed 26 July 2020]

Plato, The Symposium. Trans. M.C. Howatson. Cambridge: Cambridge University Press [online] Available at: <https://philpapers.org/archive/FREAR-4.pdf> [Accessed 20 July 2020]

Plewman, N., n.d. Sandibe: inspired by the endangered pangolin, Sandibe is unique in its approach and response to the site [online] Available at: <https://plewmanarchitects.co.za/portfolio-sandibe.html> [Accessed 18 May 2020]

Pollan, M.A. 2018. How to Change Your Mind: The New Science of Psychedelics. New York: Penguin Books.

Psychedelic Times, n.d. Psychedelic Timeline [online] Available at: <https://psychedelictimes.com/psychedelic-timeline/> [Accessed 24 July 2020]

Raichle, M. et al. 2001. A default mode of brain function. Proceedings of the Natural Academy of Sciences, 98(2), pg. 676–682.

Reconnect, 2020. [film] Directed by Luis Solarat. London: LondonReal.

Rise Wellness Retreat, n.d. The Location [online] Available at: <https://risewellnessretreat.com/the-location/> [Accessed 16 May 2020]

Rossouw, J.H. 2020. Interview on ritual, western society and meditative states of consciousness.

Interviewed by Margaux Loubser [telephonically] 24 July 2020. Prince Albert.

Safaribookings, n.d. Weather and Climate - Botswana [online] Available at: <https://www.safaribookings.com/botswana/climate> [Accessed 18 May 2020]

Schuler, T.A. 2016. Innovative Detail: Sandibe Okavango Safari Lodge Wall Section [online] Available at: <https://www.architectmagazine.com/technology/detail/sandibe-okavango-safari-lodge-wall-section_o> [Accessed 17 May 2020]

Shapiro, Y., Flor-Henry, P. & Sombrun, C. 2017. Brain changes during a shamanic trance: Altered modes of consciousness, hemispheric laterality, and systemic psychobiology. Cogent Psychology [online] Available at: <https://www.tandfonline.com/doi/full/10.1080/23311908.2017.1313522> [Accessed 20 May 2020]

Shanon, B. 2003. Altered States and the Study of Consciousness - The Case of Ayahuasca. The Journal of Mind and Behaviour, 24(2), pg. 125-153.

Simard, S.W., Beiler, K.J., Durall, D.M., Maxwell, S.A. & Kretzer, A.M. 2010. Architecture of the wood - wide web: Rhizopogon spp. genets link multiple Douglas - fir cohorts. New Phytologist, 185(2), pg. 543-553.

Smith, C. 2015. Altered States of Consciousness [online] Available at: <https://www.psychologytoday.com/za/blog/shift/201508/altered-states-consciousness> [Accessed 20 May 2020]

Steiger, B. & Steiger, S.H. 2013. Real Encounters, Different Dimensions and Otherworldly Beings. Canton. Visible Ink Press.

Synthesis, n.d. Our Venue [online] Available at: <synthesisretreat.com/venue> [Accessed 16 May 2020]

Tart, C.T. 1981. Altered States of Consciousness in Western and Buddhist Psychology. In: Claremont College, What is Sanity? Conference at Claremont College, California.

Ulrich, R.S. 1984. View through a window may influence recovery from surgery. Science 224 (4647), pg. 420–421.

Vinnicombe, P. 1976. People of the Eland: rock paintings of the Drakensberg Bushmen as a reflection of their life and thought. Pietermaritzburg: Natal University Press.

Walsh, R. N. 1989. What is a shaman? Definition, origin and distribution. Journal of Transpersonal Psychology, 21(1). pg. 1–11.

Wasson, R.G. 1957. Seeking the Magic Mushroom. Life Magazine. 10 June.

Watts, R. Day, C., Carhart-Harris, R. et al, 2017. Patients' Accounts of Increased "Connectedness" and "Acceptance" After Psilocybin for Treatment-Resistant Depression. Journal of Humanistic Psychology, 57(5), pg. 520-564.

Winkelman, M. 2010. The shamanic paradigm: Evidence from ethnology, neuropsychology and ethology. Time and Mind, 3. pg. 159–182.

World Health Organisation (WHO), 1992. The ICD-10 classification of mental and behavioural disorders : clinical descriptions and diagnostic guidelines. Geneva: World Health Organisation.

Wright, P. A. (1989). The nature of the shamanic state of consciousness: A review. Journal of Psychoactive Drugs, 21, pg. 25–33.

appendix a

seeking the magic mushroom

A New York banker goes to Mexico's mountains to participate in the age-old rituals of Indians who chew strange growths that produce visions

R. Gordon Wasson
(Life Magazine, June 10, 1957)

The author of this article, a vice president of J.P. Morgan & Co. Incorporated, together with his wife, Valentina P. Wasson, M.D., a New York pediatrician, has spent the last four summers in remote mountains of Mexico. The Wassons have been on the trail of strange and hitherto unstudied mushrooms with vision-giving powers.

They have been pursuing the cultural role of wild mushrooms for 30 years. Their travels and inquiries throughout the world have led them to some surprising discoveries in this field in which they are pioneers. They are now publishing their findings in Mushrooms, Russia and History, a large, richly illustrated two-volume book, which is limited to 500 copies and is now on sale at $125 (Pantheon Books, New York).

On the night of June 29-30, 1955, in a Mexican Indian village so remote from the world that most of the people still speak no Spanish, my friend Allan Richardson and I shared with a family of Indian friends a celebration of "holy communion" where "divine" mushrooms where first adored and then consumed. The Indians mingled Christian and pre-Christian elements in their religious practices in a way disconcerting for Christians but natural for them. The rite was led by two women, mother and daughter, both of them curanderas, or shamans. The proceedings went on in the Mixeteco language. The mushrooms were of a species with hallucinogenic powers; that is, they cause the eater to see visions. We chewed and swallowed these acrid mushrooms, saw visions, and emerged from the experience awestruck. We had come form afar to attend a mushroom rite but had expected nothing so staggering as the virtuosity of the performing curanderas and the astonishing effects of the mushrooms. Richardson and I were the first white men in recorded history to eat the divine mushrooms, which for centuries have been a secret of certain Indian peoples living far from the great world in southern Mexico. No anthropologists had ever described the scene that we witnessed.

I am a banker by occupation and Richardson is a New York society photographer and is in charge of visual education at The Brearley School.

It was, however, no accident that we found ourselves in the lower chamber of that thatch-roofed, adobe-walled Indian home. For both of us this was simply the latest trip to Mexico in quest of the mushroom rite. For me and my wife, who was to join us with our daughter a day later, it was a climax to nearly 30 years of inquiries and research into the strange role of toadstools in the early cultural history of Europe and Asia.

Thus that June evening found us, Allan Richardson and me, deep in the south of Mexico, bedded down with an Indian family in the heart of the Mixeteco mountains at an altitude of 5,500 feet. We could only stay a week or so: we had no time to lose. I went to the municipio or town hall, and there I found the official in charge, the síndico, seated alone at his great table in an upper room. He was a young Indian, about 35 years old, and he spoke Spanish well. His name was Filemón. He had a friendly manner and I took a chance. Leaning over his table, I asked him earnestly and in a low voice if I could speak to him in confidence. Instantly curious, he encouraged me. "Will you," I went on, "help me learn the secrets of the divine mushroom?" and I used the Mixeteco name, 'nti sheeto, correctly pronouncing it with glottal stop and tonal differentiation of the syllables. When Filemón recovered from his surprise he said warmly that nothing could be easier. He asked me to pass by his house, on the outskirts of town, at siesta time.

Allan and I arrived there about 3 o' clock. Filemón' s home is built on a mountainside, with a trail on one side at the level of the upper story and a deep ravine on the other. Filemón at once lead us down the ravine to a spot where the divine mushrooms where growing in abundance. After photographing them we gathered them in a cardboard box and then labored back up the ravine in the heavy moist heat of that torrid afternoon. Not letting us rest Filemón sent us high up above his house to meet the curandera, the woman who would officiate at the mushroom rite. A connection of his, Eva Mendez by name [author' s note: Wasson used this name to protect the identity of the curandera, but in a later article provided her real name: María Sabina], she was a curandera de primera categoría, of the highest quality, una Señora sin mancha, a woman without stain. We found her in the house of her daughter, who pursues the same vocation. Eva was resting on a mat on the floor from her previous night' s performance. She was middle-aged, and short like all Mixetecos, with a spirituality in her expression that struck us at once. She had presence. We showed our mushrooms to the woman and her daughter. They cried out in rapture over the firmness, the fresh beauty and abundance of our young specimens. Through an interpreter we asked if they would serve us that night. They said yes.

About 20 of us gathered in the lower chamber of Filemón' s house after 8 o' clock that evening. Allan and I were the only strangers, the only ones who spoke no Mixeteco. Only our hosts, Filemón and his wife, could talk to us in Spanish. The welcome accorded to us was of a kind that we had never experienced before in the Indian country. Everyone observed a friendly decorum. They did not treat us stiffly, as strange white men; we were of their number. The Indians were wearing their best clothes, the women dressed in their huipiles or native costumes, the men in clean white trousers tied around the waist with strings and their best serapes over their clean shirts. They gave us chocolate to drink, somewhat ceremonially, and suddenly I recalled the words of the early Spanish writer who had said that before the mushrooms were served, chocolate was drunk. I sensed what we were in for: at long last we were discovering that the ancient communion rite still survived and we were going to witness it. The mushrooms lay there in their box, regarded by everyone respectfully but without solemnity. The mushrooms are sacred and never the butt of the vulgar jocularity that is often the way of white men with alcohol.

At about 10:30 o' clock Eva Mendez cleaned the mushrooms of their grosser dirt and then, with prayers, passed them through the smoke of resin incense burning on the floor. As she did this, she sat on a mat before a simple altar table adorned with Christian images, the Child Jesus and the Baptism in Jordan. Then she apportioned the mushrooms among the adults. She reserved 13 pair for

herself and 13 pair for her daughter. (The mushrooms are always counted in pairs.) I was on tiptoe of expectancy: she turned and gave me six pair in a cup. I could not have been happier: this was the culmination of years of pursuit. She gave Allan six pair too. His emotions were mixed. His wife Mary had consented to his coming only after she had drawn from him a promise not to let those nasty toadstools cross his lips. Now he faced a behaviour dilemma. He took the mushrooms, and I heard him mutter in anguish, "My God, what will Mary say!" Then we ate our mushrooms, chewing them slowly, over the course of a half hour. They tasted bad--acrid with a rancid odor that repeated itself. Allan and I were determined to resist any effects they might have, to observe better the events of the night. But our resolve soon melted before the onslaught of the mushrooms.

Before midnight the Señora (as Eva Mendez is usually called) broke a flower from the bouquet on the altar and used it to snuff out the flame of the only candle that was still burning. We were left in darkness and in darkness we remained until dawn. For a half hour we waited in silence. Allan felt cold and wrapped himself in a blanket. A few minutes later he leaned over and whispered, "Gordon, I am seeing things!" I told him not to worry, I was too. The visions had started. They reached a plateau of intensity deep in the night, and they continued at that level until about 4 o' clock. We felt slightly unsteady on our feet and in the beginning were nauseated. We lay down on the mat that had been spread for us, but no one had any wish to sleep except the children, to whom mushrooms are not served. We were never more wide awake, and the visions came whether our eyes were opened or closed. They emerged from the center of the field of vision, opening up as they came, now rushing, now slowly, at the pace that our will chose. They were in vivid color, always harmonious. They began with art motifs, angular such as might decorate carpets or textiles or wallpaper or the drawing board of an architect. Then they evolved into palaces with courts, arcades, gardens--resplendent palaces all laid over with semiprecious stones. Then I saw a mythological beast drawing a regal chariot. Later it was though the walls of our house had dissolved, and my spirit had flown forth, and I was suspended in mid-air viewing landscapes of mountains, with camel caravans advancing slowly across the slopes, the mountains rising tier above tier to the very heavens. Three days later, when I repeated the same experience in the same room with the same curanderas, instead of mountains I saw river estuaries, pellucid water flowing through an endless expanse of reeds down to a measureless sea, all by the pastel light of a horizontal sun. This time a human figure appeared, a woman in primitive costume, standing and staring across the water, enigmatic, beautiful, like a sculpture except that she breathed and was wearing woven colored garments. It seemed as though I was viewing a world of which I was not a part and with which I could not hope to establish contact. There I was, poised in space, a disembodied eye, invisible, incorporeal, seeing but not seen.

The visions were not blurred or uncertain. They were sharply focused, the lines and colors being so sharp that they seemed more real to me than anything I had ever seen with my own eyes. I felt that I was now seeing plain, whereas ordinary vision gives us an imperfect view; I was seeing the archetypes, the Platonic ideas, that underlie the imperfect images of everyday life. The thought crossed my mind: could the divine mushrooms be the secret that lay behind the ancient Mysteries? Could the miraculous mobility that I was now enjoying be the explanation for the flying witches that played so important a part in the folklore and fairy tales of northern Europe? These reflections passed through my mind at the very time that I was seeing the visions, for the effect of the mushrooms is to bring about a fission of the spirit, a split in the person, a kind of schizophrenia, with the rational side continuing to reason and to observe the sensations that the other side is enjoying. The mind is attached as by an elastic cord to the vagrant senses.

Meanwhile the Señora and her daughter were not idle. When our visions were still in the initial phases, we heard the Señora waving her arms rhythmically. She began a low, disconnected humming. Soon the phrases became articulate syllables, each disconnected syllable cutting the darkness sharply. Then by stages the Señora came forth with a full-bodied canticle, sung like very ancient music. It seemed to me at the time like an introit to the Ancient of Days. As the night progressed her daughter spelled her at singing. They sang well, never loud, with authority. What they sang was indescribably tender and moving, fresh, vibrant, rich. I had never realized how sensitive and poetic an instrument the Mixeteco language could be. Perhaps the beauty of the Señora' s performance was partly an illusion induced by the mushrooms; if so, the hallucinations are aural as well as visual. Not being musicologists, we know not whether the chants were wholly European or partial indigenous in origin. From time to time the singing would rise to a climax and then suddenly stop, and then the Señora would fling forth spoken words, violent, hot, crisp words that cut the darkness like a knife. This was the mushroom speaking through her, God' s words, as the Indians believe, answering the problems that had been posed by the participants. This was the Oracle. At intervals, perhaps every half hour, there was a brief intermission, when the Señora would relax and some would light cigarets.

At one point, while the daughter sang, the Señora stood up in the darkness where there was an open space in our room and began a rhythmic dance with clapping or slapping. We do not know exactly how she accomplished her effect. The claps or slaps were always resonant and true. So far as we know, she used no device, only her hands against each other or possibly against different parts of her body. The claps and slaps had pitch, the rhythm at times was complex, and the speed and volume varied subtly. We think the Señora faced successively the four points of the compass,

rotating clockwise, but are not sure. One thing is certain: this mysterious percussive utterance was ventriloquistic, each slap coming from an unpredictable direction and distance, now close to our ears, now distant, above, below, here and yonder, like Hamlet' s ghost hic et ubique. We were amazed and spellbound, Allan and I.

There we lay on our mat, scribbling notes in the dark and exchanging whispered comments, our bodies inert and heavy as lead, while our senses were floating free in space, feeling the breezes of the outdoors, surveying vast landscapes or exploring the recesses of gardens of ineffable beauty. And all the while we were listening to the daughter' s chanting and to the unearthly claps and whacks, delicately controlled, of the invisible creatures darting around us.

The Indians who had taken the mushrooms were playing a part in the vocal activity. In the moments of tension they would utter exclamations of wonder and adoration, not loud, responsive to the singers and harmonizing with them, spontaneously yet with art.

On that initial occasion we all fell asleep around 4 o' clock in the morning. Allan and I awoke at 6, rested and heads clear, but deeply shaken by the experience we had gone through. Our friendly hosts served us coffee and bread. We then took our leave and walked back to the Indian house where we were staying, a mile or so away.

From the many mushroom celebrations that I have now witnessed, nine in all, it is clear to me that at least in the Mixeteco country the congregation is indispensable to the rite. Since the congregation, in order to participate, must be brought up in the tradition, any white persons should be greatly outnumbered by the Indians. But this does not mean that the mushrooms lose their potency if not eaten communally. My wife and our daughter Masha, 18, joined us a day after the ceremony that I have described, and on July 5, in their sleeping bags, they ate the mushrooms while alone with us. They experienced the visions too. They saw the same brilliant colors; my wife saw a ball in the Palace of Versailles with figures in period costumes dancing to a Mozart minuet. Again, on Aug. 12, 1955, six weeks after I had gathered the mushrooms in Mexico, I ate them in a dried state in my bedroom in New York, and found that if anything they had gained in their hallucinogenic potency.

It was a walk in the woods, many years ago, that launched my wife and me on our quest of the mysterious mushroom. We were married in London in 1926, she being Russian, born and brought up in Moscow. She had lately qualified as a physician at the University of London. I am from Great

Falls, Montana of Anglo-Saxon origins. In the late summer of 1927, recently married, we spent our holiday in the Catskill Mountains in New York state. In the afternoon of the first day we went strolling along a lovely mountain path, through woods criss-crossed by the slanting rays of a descending sun. We were young, carefree and in love. Suddenly my bride abandoned my side. She had spied wild mushrooms in the forest, and racing over the carpet of dried leaves in the woods, she knelt in poses of adoration before first one cluster and then another of these growths. In ecstasy she called each kind of by an endearing Russian name. She caressed the toadstools, savored their earthy perfume. Like all good Anglo-Saxons, I knew nothing about the fungal world and felt that the less I knew about those putrid, treacherous excrescences the better. For her they were things of grace, infinitely inviting to the perceptive mind. She insisted on gathering them, laughing at my protests, mocking my horror. She brought a skirtful back to the lodge. She cleaned and cooked them. That evening she ate them, alone. Not long married, I thought to wake up the next morning a widower.

These dramatic circumstances, puzzling and painful for me, made a lasting impression on us both. From that day on we sought an explanation for this strange cultural cleavage separating us in a minor area of our lives. Our method was to gather all the information we could on the attitude toward wild mushrooms of the Indo-European and adjacent peoples. We tried to determine the kinds of mushrooms that each people knows, the uses to which these kinds are put, the vernacular names for them. We dug into the etymology of those names, to arrive at the metaphors hidden in their roots. We looked for mushrooms in myths, legends, ballads, proverbs, in the writers who drew their inspiration from folklore, in the clichés of daily conversation, in slang and the telltale recesses of obscene vocabularies. We sought them in the pages of history, in art, in Holy Writ. We were not interested in what people learn about mushrooms from books, but what untutored country folk know from childhood., the folk legacy of the family circle. It turned out that we had happened on a novel field of inquiry.

As the years went on and our knowledge grew, we discovered a surprising pattern in our data: each Indo-European people is by cultural inheritance either "mycophobe" or "mycophile," that is, each people either rejects and is ignorant of the fungal world or knows it astonishingly well and loves it. Our voluminous and often amusing evidence in support of this thesis fills many sections of our new book, and it is there that we submit our case to the scholarly world. The great Russians, we find, are mighty mycophiles, as are also the Catalans, who possess a mushroomic vocabulary of more than 200 names. The ancient Greeks, Celts and Scandinavians were mycophobes, as are the Anglo-Saxons. There was another phenomenon that arrested our attention: wild mushrooms from

earliest times were steeped in what the anthropologists call mana, a supernatural aura. The very word "toadstool" may have meant originally the "demonic stool" and been the specific name of a European mushroom that causes hallucinations. In ancient Greece and Rome there was a belief that certain kinds of mushrooms were procreated by the lighting bolt. We made the further discovery that this particular myth, for which no support exists in natural science, is still believed among many widely scattered peoples: the Arabs of the desert, the peoples of India, Persia and the Pamirs, the Tibetans and Chinese, the Filipinos and the Maoris of New Zeland, and even among the Zapotecs of Mexico... All of our evidence taken together led us many years ago to hazard a bold surmise: was it not probable that, long ago, long before the beginnings of written history, our ancestors had worshiped a divine mushroom? This would explain the aura of the supernatural in which all fungi seem to be bathed. We were the first to offer the conjecture of a divine mushroom in the remote cultural background of the European peoples, and the conjecture at once posed a further problem: what kind of mushroom was once worshiped and why?

Our surmise turned out not to be farfetched. We learned that in Siberia there are six primitive peoples--so primitive that anthropologists regard them as precious museum pieces for cultural study--who use an hallucinogenic mushroom in their shamanistic rites. We found that the Dyaks of Borneo and the Mount Hagen natives of New Guinea also have recourse to similar mushrooms. In China and Japan we came upon an ancient tradition of a divine mushroom of immortality, and in India, according to one school, the Buddha at his last supper ate a dish of mushrooms and was forthwith translated to nirvana.

When Cortez conquered Mexico, his followers reported that the Aztecs were using certain mushrooms in their religious celebrations, serving them, as the early Spanish friars put it, in a demonic holy communion and calling them teonanacatl, "God's flesh." But no one at that time made a point of studying this practice in detail, and until now anthropologists have paid little attention to it. We with our interest in mushrooms seized on the Mexican opportunity, and for years have devoted the few leisure hours of our busy lives to the quest of the divine mushroom in Middle America. We think we have discovered it in certain frescoes in the Valley of Mexico that date back to about 400 A.D., and also in the "mushroom stones" carved by the highland Maya of Guatemala that go back in one or two instances to the earliest era of stone carvings, perhaps 1000 B.C.

For a day following our mushroom adventure Allan and I did little but discuss our experience. We had attended a shamanistic rite with singing and dancing among our Mixeteco friends which no

anthropologist has ever before described in the New World, a performance with striking parallels in the shamanistic practices of some of the archaic Palaeo-Siberian peoples. But may not the meaning of what we had witnessed go beyond this? The hallucinogenic mushrooms are a natural product presumably accessible to men in many parts of the world, including Europe and Asia. In man' s evolutionary past, as he groped his way out from his lowly past, there must have come a moment in time when he discovered the secret of the hallucinatory mushrooms. Their effect on him, as I see it, could only have been profound, a detonator to new ideas. For the mushrooms revealed to him worlds beyond the horizons known to him, in space and time, even worlds on a different plane of being, a heaven and perhaps a hell. For the credulous primitive mind, the mushrooms must have reinforced mightily the idea of the miraculous. Many emotions are shared by men with the animal kingdom, but awe and reverence and the fear of God are peculiar to men. When we bear in mind the beatific sense of awe and ecstasy and caritas engendered by the divine mushrooms, one is emboldened to the point of asking whether they may not have planted in primitive man the very idea of god.

It is no accident, perhaps, that the first answer of the Spanish-speaking Indian, when I asked about the effect of the mushrooms, was often this: Le llevan ahí donde Dios está, "They carry you there where God is," an answer that we have received on several occasions, from Indians in different cultural areas, almost as though it were in a sort of catechism. At all times there have been rare souls--the mystics and certain poets--who have had access without the aid of drugs to the visionary world for which the mushrooms hold the key. William Blake possessed the secret: "He who does not imagine in... stronger and better light than his perishing mortal eye can see, does not imagine at all." But I can testify that the mushrooms make those visions accessible to a much larger number. The visions that we saw must have come from within us, obviously. But they did not recall anything that we had seen with our own eyes. Somewhere within us there must lie a repository where these visions sleep until they are called forth. Are the visions a subconscious transmutation of things read and seen and imagined, so transmuted that when they are conjured forth from the depths we no longer recognize them? Or do the mushrooms stir greater depths still, depths that are truly the Unknown?

In each of our successive trips to the Indian peoples of southern Mexico, we have enlarged our knowledge of the use of the divine mushrooms, and as our knowledge has increased, new and exciting questions keep arising. We have found five distinct cultural areas where the Indians invoke the mushrooms, but the usage varies widely in every area. What is needed is a perceptive approach by trained anthropologists in every area, cooperating with mushrooms specialists. Of these latter

there are in the whole world relatively few: mushrooms are a neglected field in the natural sciences. In this field Professor Roger Heim is known the world over. He is not only a man with vast experience in the field of mushrooms: he is an outstanding scientist in other fields, a man steeped in the humanities, the head of the Muséum National D' Historie Naturelle in Paris. At an early stage of our inquiries he had lent us his counsel, and in 1956 our progress had been such as to justify him in accompanying us on another field trip. There came with us also a chemist, Professor James A. Moore of the University of Delaware; an anthropologist, Guy Stresser-Péan of the Sorbonne; and once again our loyal friend Allan Richardson as photographer.

This time the immediate problem was to identify the hallucinogenic mushrooms and to command a steady supply of them for laboratory study. This is harder than a layman would think. Though the early Spanish writers wrote about the divine mushrooms four centuries ago, no anthropologist and no mycologist had been sufficiently interested to pursue the problem until our own generation. Those who know these mushrooms are Indians belonging to tribes farthest removed from us culturally, locked in their mountains remote from highways, locked also behind the barrier of their languages. One must win their confidence and overcome their suspicion of white men. One must face the physical discomforts of life and dangers of disease in the Indian villages in the rainy season, when the mushrooms grow. Occasionally a white face is seen in those parts in the dry season, but when the rains come, those rare beings--missionaries, archaeologists, anthropologists, botanists, geologists--vanish. There are other difficulties. Of the seven curanderos that by now I have seen take mushrooms, only two, Eva Mendez and her daughter, were dedicated votaries. Some of the others were equivocal characters. Once we saw a curandero take only a token dose of mushroom, and there was another who ate and served to us a kind of mushroom that had no hallucinogenic properties at all. Had we seen only him, we should have come away thinking that the famed properties of the mushrooms were a delusion, a striking instance of autosuggestion. Do we discover here an effort at deception, or had the dried mushrooms through age lost their peculiar property? Or, much more interesting anthropologically, do some shamans deliberately substitute innocent species for the authentic kinds in a retreat from what is too sacred to be borne? Even when we have won the confidence of a skilled practitioner like Eva, the atmosphere must be right for a perfect performance and there must be an abundance of mushrooms. Sometimes even in the rainy season the mushrooms are scarce, as we have learned from costly experience.

We now know that there are seven kinds of hallucinogenic mushrooms in use in Mexico. But not all the Indians know them even in the villages where they are worshiped, and either in good faith or to make the visitor happy, the curanderos sometimes deliver the wrong mushrooms. The only certain

test is to eat the mushrooms. Professor Heim and we have thus established beyond challenge the claims of four species. The next best thing is to obtain multiple confirmation from informants unknown to each other, if possible from various cultural areas. This we have done with several additional kinds. We are now certain as to four species, reasonably sure about two other kinds, and inclined to accept the claims of a seventh, these seven belonging to three genera. Of these seven, at least six appear to be new to science. Perhaps in the end we shall discover more than seven kinds.

The mushrooms are not used as therapeutic agents: they themselves do not effect cures. The Indians "consult" the mushrooms when distraught with grave problems. If someone is ill, the mushroom will say what led to the illness and whether the patient will live or die, and what should be done to hasten recovery. If the verdict of the mushroom is for death, the believing patient and his family resign themselves: he loses appetite and soon expires and even before his death they begin preparations for the wake. Or one may consult the mushroom about the stolen donkey and learn where it will be found and who took it. Or if a beloved son has gone out into the world--perhaps to the United States--the mushroom is a kind of a postal service: it will report whether he still lives or is dead, whether he is in jail, married, in trouble or prosperous. The Indians believe that the mushrooms hold the key to what we call extrasensory perception.

Little by little the properties of the mushrooms are beginning to emerge. The Indians who eat them do not become addicts: when the rainy season is over and the mushrooms disappear, there seems to be no physiological craving for them. Each kind has its own hallucinogenic strength, and if enough of one species be not available, the Indians will mix the species, making a quick calculation of the right dosage. The curandero usually takes a large dose and everyone else learns to know what his own dose should be. It seems that the dose does not increase with use. Some persons require more than others. An increase in the dose intensifies the experience but does not greatly prolong the effect. The mushrooms sharpen, if anything, the memory, while they utterly destroy the sense of time. On the night that we have described we lived through eons. When it seemed to us that a sequence of visions had lasted for years, our watches would tell us that only seconds had passed. The pupils of our eyes were dilated, our pulse ran slow. We think the mushrooms have no cumulative effect on the human organism. Eva Mendez has been taking them for 35 years, and when they are plentiful she takes them night after night.

The mushrooms present a chemical problem. What is the agent in them that releases the strange hallucinations? We are now reasonably sure that it differs form such familiar drugs as opium, coca,

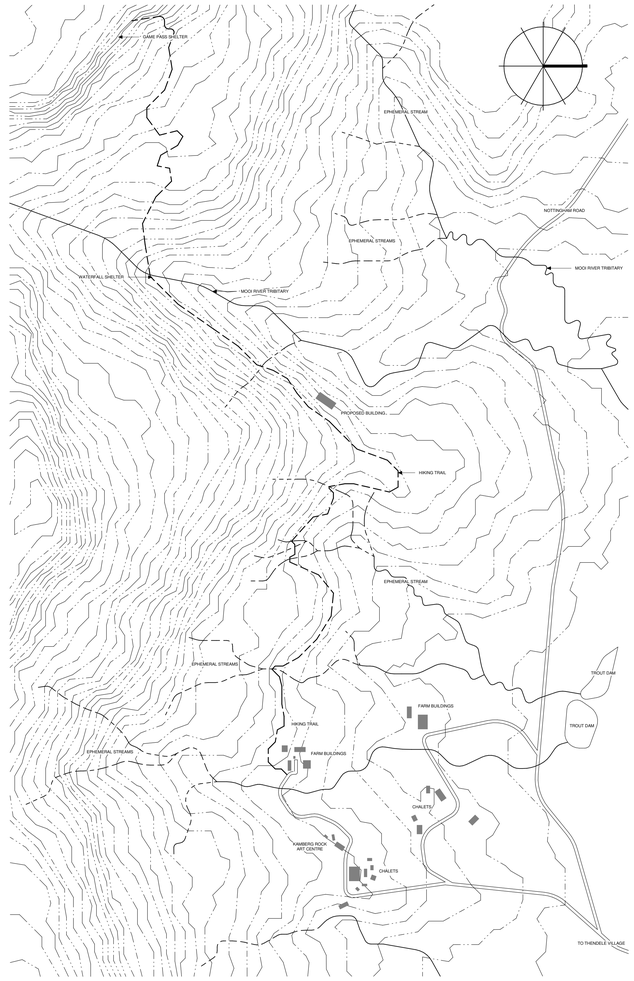
mescaline, hashish, etc. But the chemist has a long road to go before he will isolate it, arrive at its molecular structure and synthesize it. The problem is of great interest in the realm of pure science. Will it also prove of help in coping with psychic disturbances?

My wife and I have traveled far and discovered much since that day 30 years ago in the Catskills when we first perceived the strangeness of wild mushrooms. But what we have already discovered only opens up new vistas for further study. Today we are about to embark on our fifth expedition to the Mexican Indian villages, again seeking to increase and refine our knowledge of the role played by mushrooms in the lives of these remote peoples. But Mexico is only the beginning. All the evidence relating to the primitive beginnings of our own European cultures must be reviewed to see whether the hallucinogenic mushroom played a part there, only to be overlooked by posterity.

Accessed via Imaginaria [online]. Available at: <http://www.imaginaria.org/wasson/life.htm>

That's one way to jump to conclusions.

SITE AND ROOF PLAN
SCALE 1:200



LOCALITY PLAN
SCALE 1:5000

MAGEIA
Psilocybin Retreat

LOCATION:
Kamberg Reserve, Drakensberg

SHEET NO:
A 101

SHEET SIZE:
A0

DRAWING:
Site and locality plan

SCALE:
1 : 100

DATE:
19 November 2020

Margaux Loubser
2014073593
University of the Free State
M.Arch (Prof)

BED 01
BED 02
BED 03
BED 04
BED 05
BED 06
BED 07
BED 08
LOUNGE
SHOWERS
MEDITATION PLATFORM
FIRE PIT
TERRACE
WALKWAY
TOILETS
MECHANICAL ROOM
INTEGRATION THERAPY
COMMUAL LOUNGE
RITUAL ENTRANCE
PRE-RITUAL HALL
DINING ROOM
KITCHEN
KITCHEN STORAGE
STORAGE
GARDEN STORAGE
LIBRARY
LAUNDRY
RITUAL TUNNEL
SUSPENDED TIMBER PLATFORM
FOLDABLE TIMBER SCREENS
AEDICULA
FIREPLACE
KITCHENETTE
BOTANICAL CELL
SANDSTONE STEPPING STONES
WATER CHANNEL
WATER RESERVOIR
SLATE EDGE
SLATE PLANTER EDGE
POLISHED SANDSTONE
ROUGH SANDSTONE
EARTHEN FLOOR
BUILT-IN SEATING
TIMBER DOOR WITH EXTENDED FRAME
TO VEGETABLE GARDENS
GROUND FLOOR PLAN
SCALE 1:100
FIRST FLOOR PLAN
SCALE 1:100
MAGEIA
Psilocybin Retreat
LOCATION:
Kamberg Reserve, Drakensberg
SHEET NO:
A 102
SHEET SIZE:
A0
DRAWING:
Ground and 1st floor plan
SCALE:
1 : 100
DATE:
19 November 2020
Margaux Loubser
2014073593
University of the Free State
M.Arch (Prof)

MAGEIA

Psilocybin Retreat

LOCATION:
Kamberg Reserve, Drakensberg

SHEET NO:
A 103

SHEET SIZE:
A0

DRAWING:
Second floor plan

SCALE:
1 : 100

DATE:
19 November 2020

Margaux Loubser 2014073593
University of the Free State M.Arch (Prof)

MAGEIA
Psilocybin Retreat

LOCATION
Kamberg Reserve, Drakensberg

SHEET NO
A 104

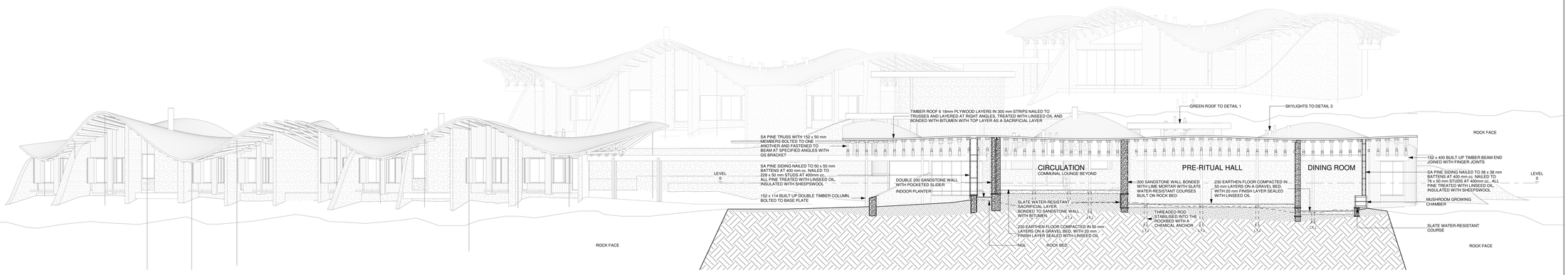
SHEET SIZE
A0

DRAWING
Third floor plan

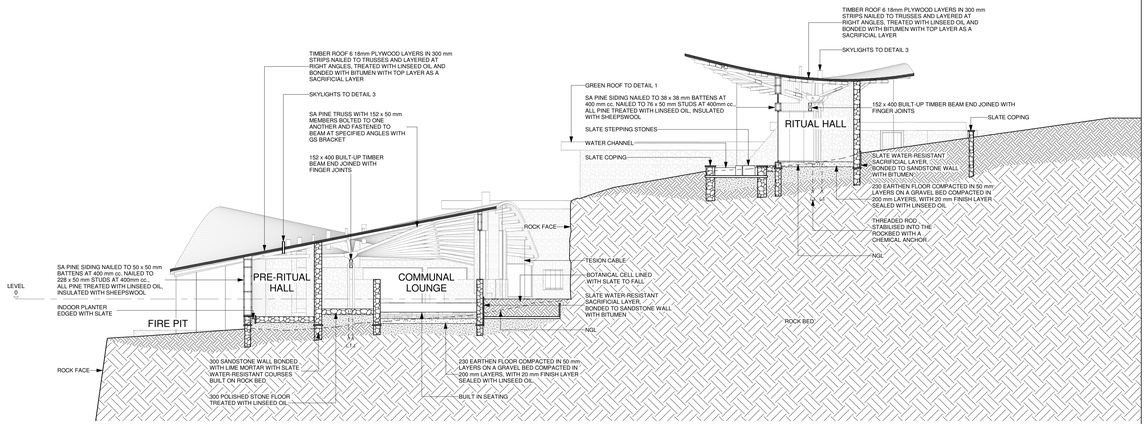
SCALE
1 : 100

DATE
19 November 2020

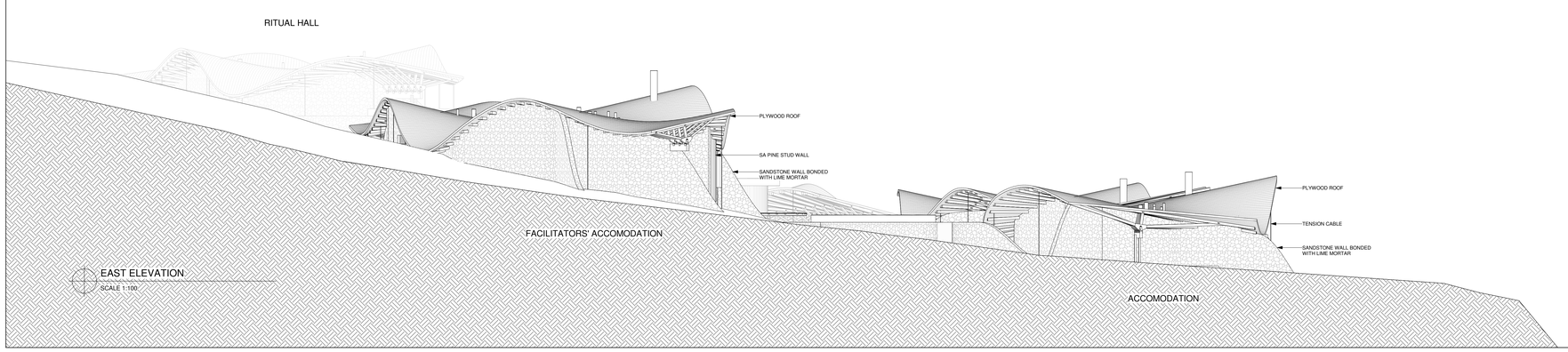
Margaux Loubser 2014073593
University of the Free State M.Arch (Prof)



SECTION AA
SCALE 1:100



SECTION BB
SCALE 1:100



EAST ELEVATION
SCALE 1:100

MAGEIA
Psilocybin Retreat

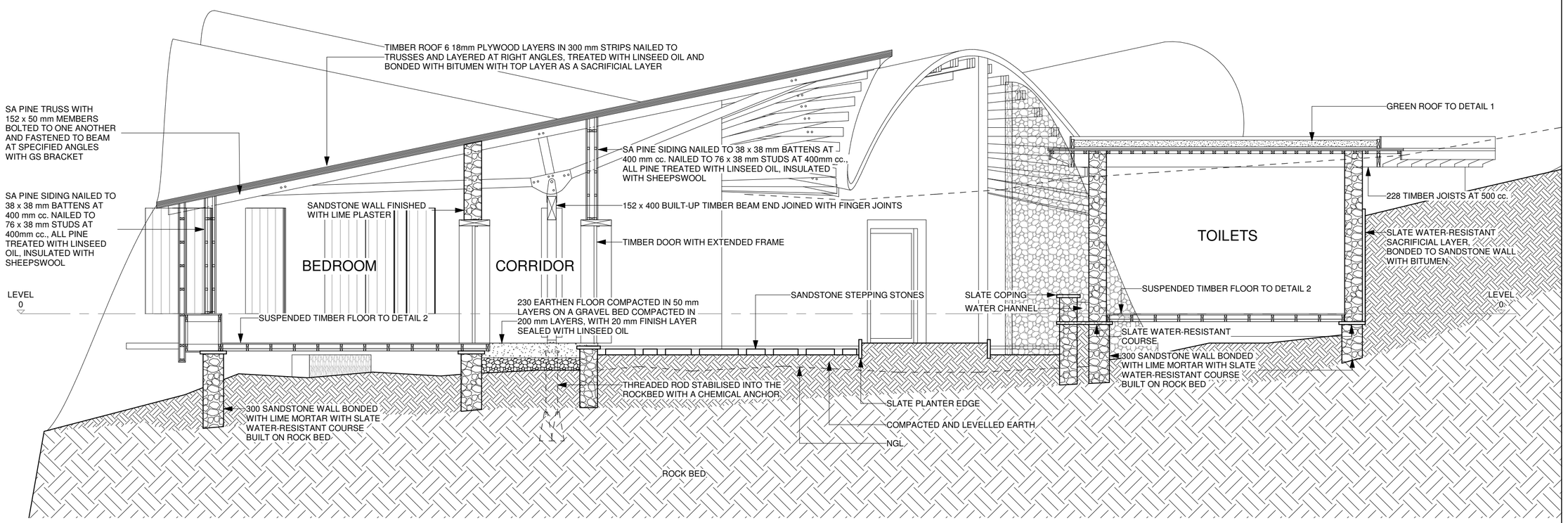
LOCATION:
Kamberg Reserve, Drakensberg

SHEET NO: A 301
SHEET SIZE: A0

DRAWING: Sections and elevations
SCALE: 1 : 100

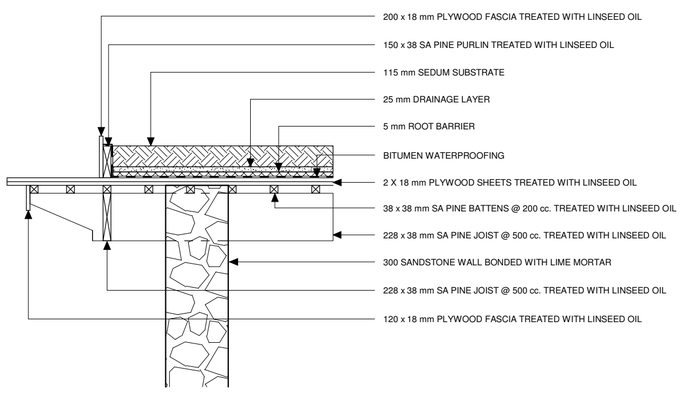
DATE: 19 November 2020

Margaux Loubser 2014073593
University of the Free State M.Arch (Prof)



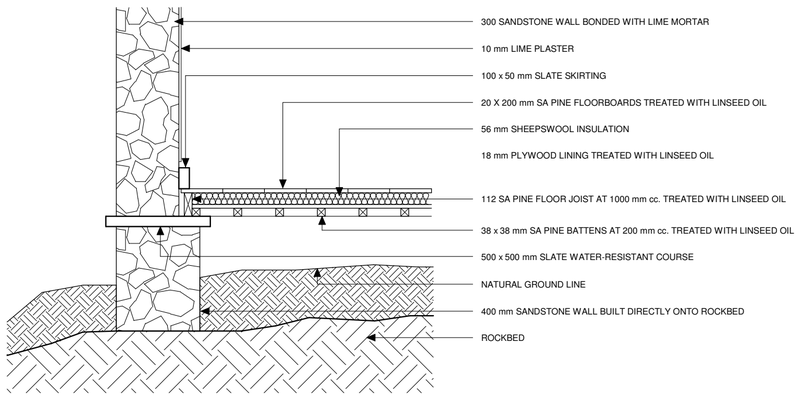
SECTION CC

SCALE 1:50



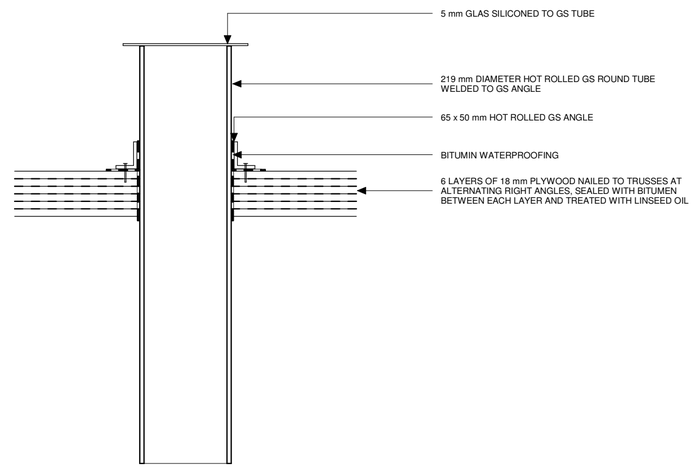
DETAIL 1 - GREEN ROOF

SCALE 1:20



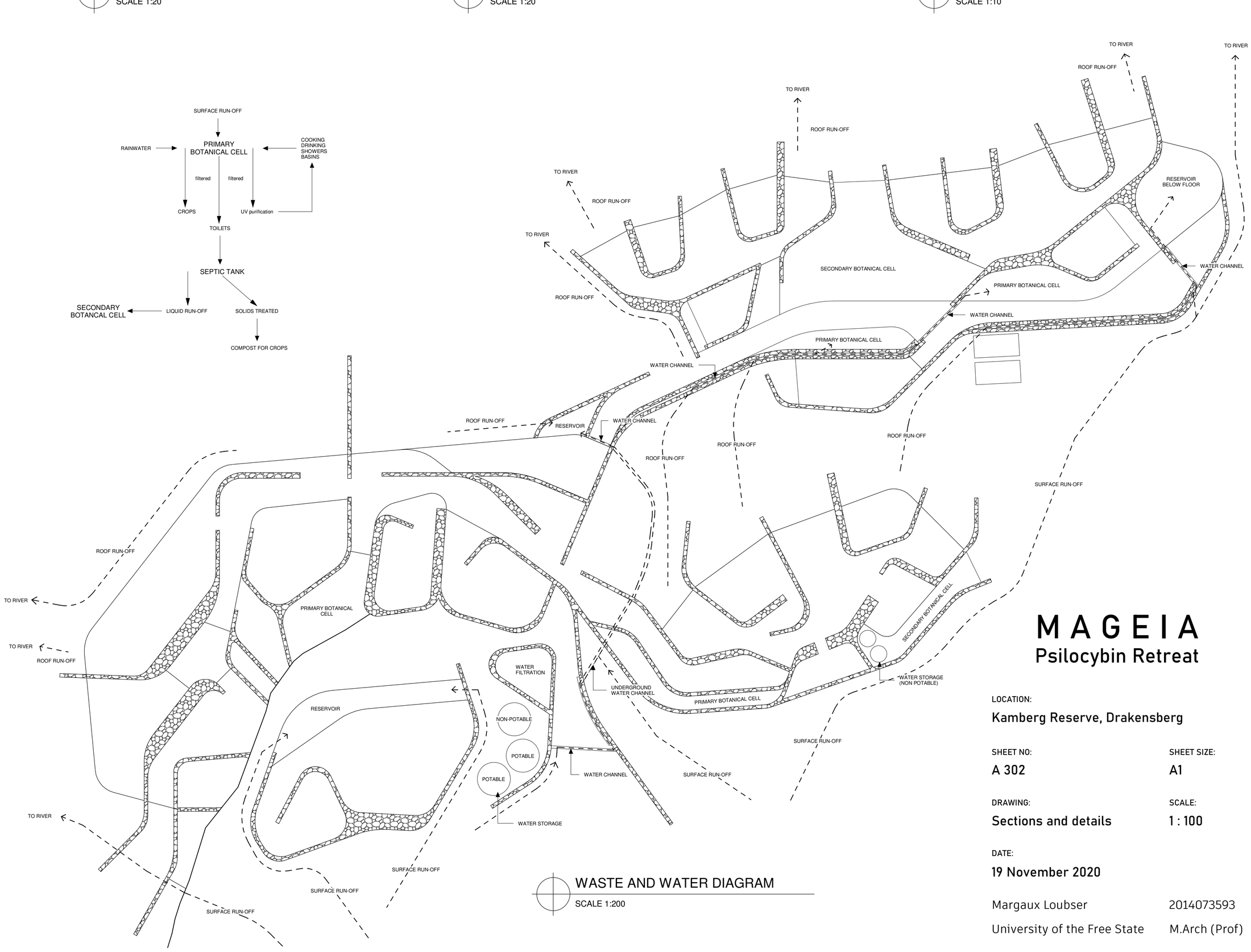
DETAIL 2 - SUSPENDED TIMBER FLOOR

SCALE 1:20



DETAIL 3 - PIN PRICK SKYLIGHTS

SCALE 1:10



WASTE AND WATER DIAGRAM

SCALE 1:200

MAGEIA

Psilocybin Retreat

LOCATION:
Kamberg Reserve, Drakensberg

SHEET NO:
A 302

SHEET SIZE:
A1

DRAWING:
Sections and details

SCALE:
1 : 100

DATE:
19 November 2020

Margaux Loubser 2014073593
University of the Free State M.Arch (Prof)