

Sensuous & Sacred Architecture as Mediators of the Psychedelic State

by

Livingston Boyd

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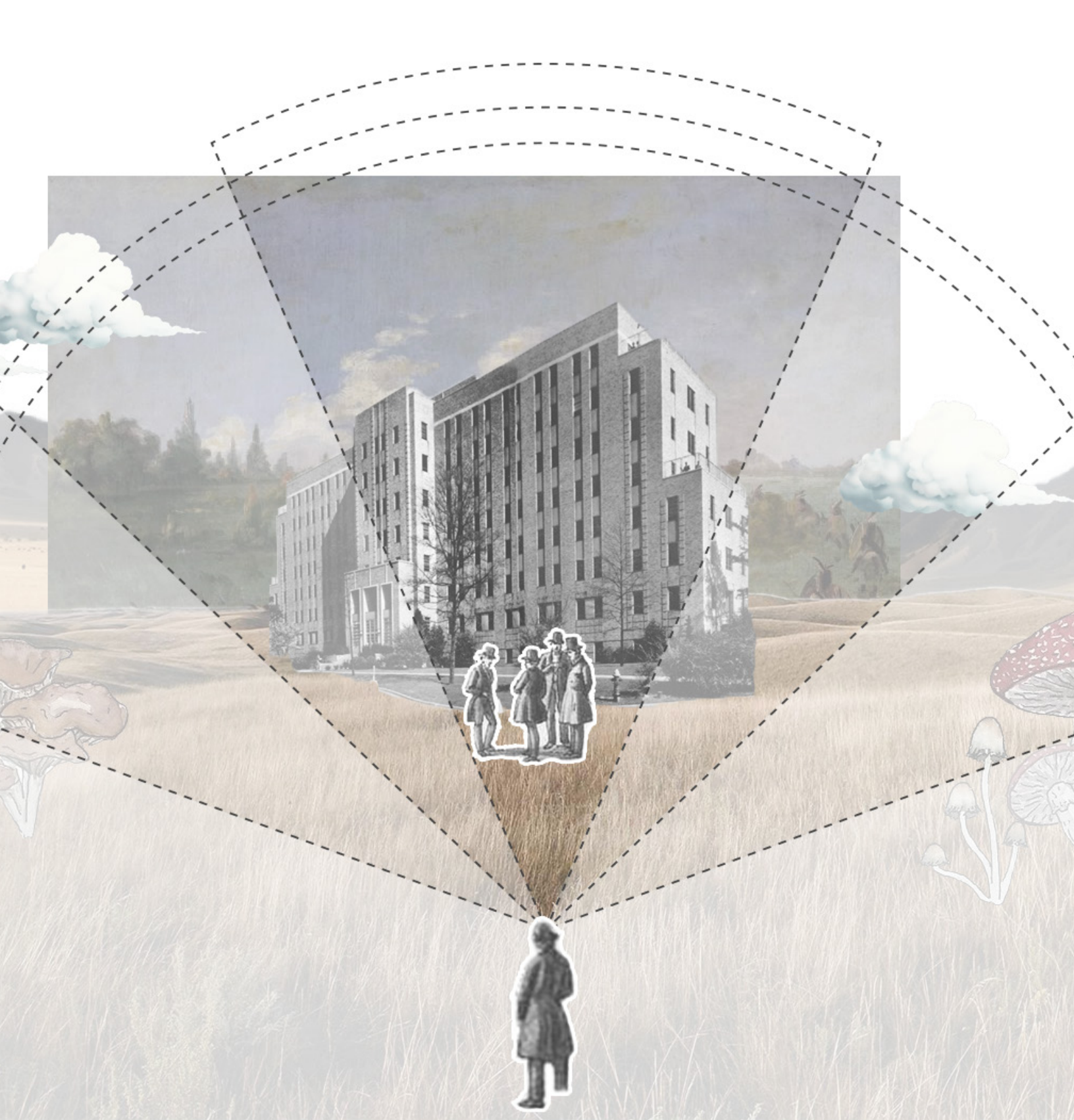
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Sensuous & Sacred Architecture as Mediators of the Psychedelic State

Livingston Boyd
2022/23 M.Arch Thesis

Abstract

Spurred by recent studies that attest to their therapeutic benefits, psychedelic medicine is experiencing a renaissance in scientific and public reception. Founded on indigenous ceremonial practices and the work of pioneering researchers of the twentieth century, today's psychedelic therapists, guides, and researchers apply the tenets of set & setting by controlling for the influence of mindset and physical context on attaining consistent positive results from psychedelic-assisted therapy. On the basis that the ideal setting is not just a visually appealing space, but one that positively engages all the senses, a phenomenological design approach will be employed in the psychedelic-assisted therapy retreat proposed by this thesis. It draws from the sensory richness of its remote, natural surroundings, and maintains that quality within its interiors. Sited in the Lawson Quarry between Espanola and Little Current, Ontario, the retreat would service rural townships which are among the least served by mental health resources.

KEY WORDS: *Psychedelics, Set & setting, Phenomenology, Holistic medicine, Psychedelic assisted-therapy retreat, Indigenous wisdom*

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Preface: An Unveiling of My Own

The research in the pages to follow support the idea that fundamentally, the value of psychedelics lies in their capacity to silence the ego and reconnect the individual to the wider, more-than-human world in which play a part. If the senses are our interface with that world, then perhaps it is by doing away with sensory and perceptual barriers that this bond is re-established. Aldous Huxley described such a sensory filtering as the “reducing valve” of consciousness, and that psychedelics serve to fling wide the “doors of perception” as coined by William Blake in *The Marriage of Heaven and Hell*. Unlike Huxley, Blake made no association between the drug and the unlocking of perceptual barriers, and my own experience unlocking a few of those doors attests that there are indeed more keys than psychedelics alone. For myself, that key was cannabis. Having ingested the plant before taking a hike in the woods behind my house one day, what I experienced would go on to inspire the subject of this thesis and my view of the world forever after.

With unprecedented intensity, I’d been focused on the ground beneath me that day, partly bewildered by insects that formed a bouncing sea of reflected light like morning dew on the grass, partly because more than ever my motor skills, once enacted so effortlessly, suddenly seemed to require my active, conscious guidance to keep me from stumbling. Preoccupied this way, the emergence of a cell-phone tower - one I’d faced so many times in my normal waking consciousness - now suddenly had a profound, earth-shattering effect on my awareness. I stood in awe for an uncertain amount of time, at once mesmerized by its immensity and mortified by its defiance to the

natural surroundings. In the moment, I only knew that I was reckoning with the tower in a way I never had, but it wasn’t until a later “integration” of the experience (the same integration that tends to follow psychedelic assisted therapy wherein the meaning of the experience is discussed with a guide) that I made sense of the encounter. What occurred to me is that prior engagements with the tower may not have been proper engagements at all! Instead, it was as though previously my mind would replace the tower, as it presented itself presently and proximally, with a one-dimensional stand-in for the multi-dimensional thing that stood before me. Rather than my mind fully rendering the tower as it was, then and there, I wondered if I previously beheld it as an approximation of all cell-phone towers I had hitherto perceived, in all the thens and theres I perceived them, conglomerating as a timeless, placeless archetype rather than a physical and individualized thing. Do we perceive other things this way, I wondered? Most things, even? When driving through a neighborhood, do we attend to and appreciate every house for the unique characteristics that make it what it is, or is each simultaneously processed as the archetypical house so that our brains might save precious energy? I wondered if we could forget how to reckon with things as they are, as presumably a child does while looking at the world with fresh eyes. Could this be a muscle, liable to atrophy if not exercised occasionally?

Being powerful catalysts for such a widening of perceptions, my experience that day sowed the seeds for my eventual interest in psychedelics.

0.1 The cell-phone tower where it all began.





1 Introduction

Taken in a therapeutic context, psychedelics have shown, since the 1950s, to treat a wide range of neurological disorders including addiction, depression, anxiety, PTSD, and obsessive-compulsive disorder.^{1,2,3} As a result, scientific consensus and public reception look increasingly favourably on these internationally regulated substances for therapeutic purposes,⁴ rendering the possibility of future deregulation more and more plausible. In light of this reality, this thesis proposes the design of a psychedelic-assisted therapy centre that channels the healing potential of the medicine; sited in the Lawson Quarry

between Espanola and Little Current, Ontario.

The following introduction summarizes research according to the chapters of this thesis, falling under the categories of the default-mode network, psychedelic history, psychedelics & phenomenology, set & setting, and architectural case studies. To gather this research, the following methodologies were employed: cartography; case study analysis; information compiled from secondary sources; and qualitative observation of Lawson Quarry and its surroundings.

The Default-Mode Network (DMN)

The DMN is a brain system containing multiple interacting regions that activate during states of rest and mental passivity, characterized by introspective mental activity like self-reflection.⁵ Through functional magnetic resonance imaging (fMRI) of the brain, leading DMN researcher Robin Carhart-Harris observed that alongside an overactive DMN and prolonged states of self-reflection, a host of neurological conditions can surface including addictions, obsessions, eating disorders, depression, and anxiety.⁶

The answer to this dilemma? Carhart-Harris proposes a few: meditation, breathwork, exercise, and psychedelics, among others.⁷ In each, a common underlying mechanism serves as our link between the worlds of psychedelics and architecture: the stimulation of body and senses, reconnecting the individual with the sensuous world and removing them from the very idle physical and mental states that engender destructive habits of introspection.

The History of Psychedelics

In spite of growing favour, a perception of psychedelics that ranges from obliviousness to outright stigmatization remains common to this day. This is due in part to the preceding decades-

long lapse in scientific research brought about by criminalization, the erasure from history books of more than a decade of rigorous research by a generation of qualified psychologists, as well as

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sensationalized news coverage at the onset of the drug war. Relaying the history of psychedelics will illustrate to readers their longstanding, global history as tools for healing and divination that likely began in prehistoric times.⁸ On this topic, special consideration will be given to the history of the psychoactive compound mescaline.

Psychedelics & Phenomenology

As indicated by recent studies, psychoactive compounds have the potential to expand not only the reach⁹ and synaesthetic quality¹⁰ of one's sensory perception, but a recognition of the value and beatific nature of such heightened interface with the world.¹¹ Furthermore, the profound influence of set & setting supports the crucial relationship between one's environment - or the qualities of the sensory data they are receiving - and the positive or negative results of a session. The philosophy of phenomenology will be illuminating in this regard, as will be illustrated by revealing its intrinsic link with the notion of set & setting. Phenomenologists like Jean-Paul Sartre

Set & Setting

Set & setting is a fundamental concept in psychedelics research which looks at the impact of psychological, sociocultural, and environmental context on the effects and curative potential of the drug.¹⁴ Set refers to the subject: their personality, mood, intentions and expectations for the session, while setting refers to the contents and qualities of the physical

Whereas other classic psychedelics (psilocybin, lysergic acid diethylamide (LSD), and dimethyltryptamine (DMT)) have only seen widespread use in North America since the original phase of research in the 1950s, mescaline has seen a long tradition of structured, sacramental use for millennia.

and Maurice Merleau-Ponty provided some of the most influential reports in the early years of peyote experimentation in the west, and were directed toward the sole examination of "the things themselves", as founder of phenomenology Edmund Husserl famously called for.¹² That is, to embrace a new way of looking at the world and a perception of the mescaline sensations and hallucinations unimpeded by theories, categories and definitions.¹³ With respect to the effects of psychedelics observed on the DMN outlined previously, this unbridled gaze toward the sensuous things themselves is the very opportunity they may offer.

surroundings as well as the social and cultural context.¹⁵ Betty Eisner's early research in this area identified aids to therapy in the form of soothing music, a comfortable sofa to lie down on, attractive plants and pictures, and access or views to the natural environment. Such observations point to the idea that wellness derived from psychedelic

assisted therapy is, on one level, a product of the interaction of the patient with their environment and, more fundamentally, of the multi-sensory experience. From the smallest gestures and grandest surroundings to the curation of sensory experiences, these are the means of the

architect, and the bridge between their world and that of psychedelic therapy. On this basis, the thesis aims to imagine the kinds of architectural spaces which would be conducive to positive, productive psychedelic therapy.

Architectural Case Studies

As those with the most experience in the use of psychedelic plants, traditional indigenous practices and the vernacular buildings they take part in will be investigated; namely, the Native American Church (NAC) peyote meetings. By focusing on specific contemporary examples, that of a modern tipi ceremony of the NAC, and the Beckley foundation's wellness retreat in Jamaica, thorough investigation into the methods and tools of their guided psychedelic ceremonies will help to inform a new methodology. Both instances employ a range of sensory stimulants as a means of guiding the session and creating a positive set and setting: the incorporation of music, use of incense, encouraging a sense of community, nature

immersion, and a focus on traditional spiritual practices like meditation or yoga.¹⁶ As such, Beckley Retreats represent a return to form after more than a century of western interference with the psychedelic experience as it should be: a force for communal healing and holistic wellness. The architectural proposal will offer a similar range of "integrative" modes of healing, that being natural and less invasive interventions, and health promotion and illness prevention as opposed to symptom management. Though they do not involve psychedelic-assisted therapy, general wellness retreats will also be studied, on account of their similar aims and programmatic affinities.

Research Question

Drawing on these areas of research, the thesis ventures to answer the following research question: How can a phenomenological and spiritually sensitive approach to architecture help guide the influx of powerful psychedelic medicine into Western society?

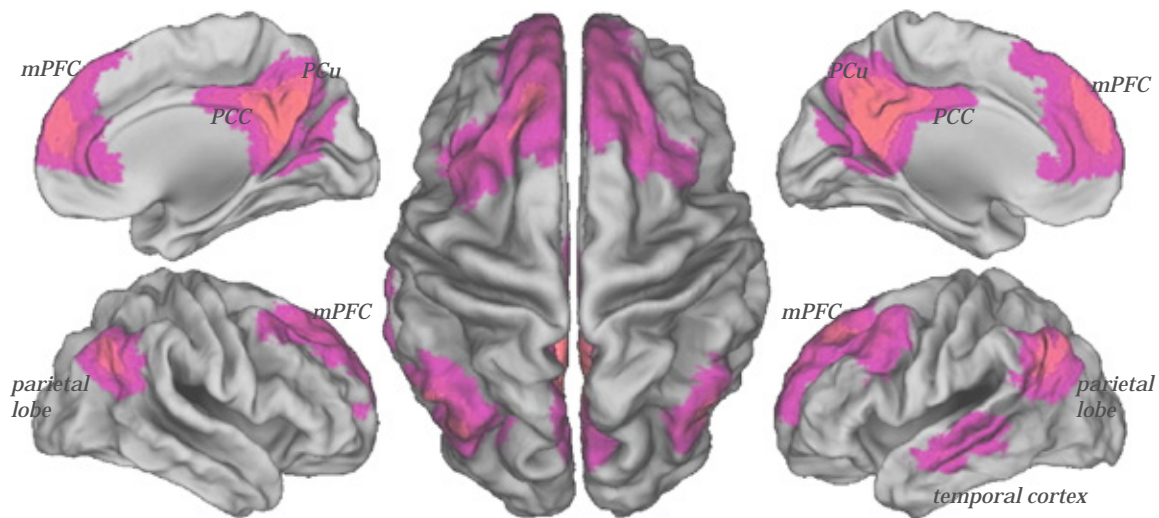
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- 1 Michael Pollan, *How to Change Your Mind the New Science of Psychedelics* (Harlow, England: Penguin Books, 2019), 141.
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2 Escaping the Default Mode

“Psychedelics, used responsibly and with proper caution, would be for psychiatry what the microscope is for biology and medicine or the telescope is for astronomy.”
– Stanislav Grof



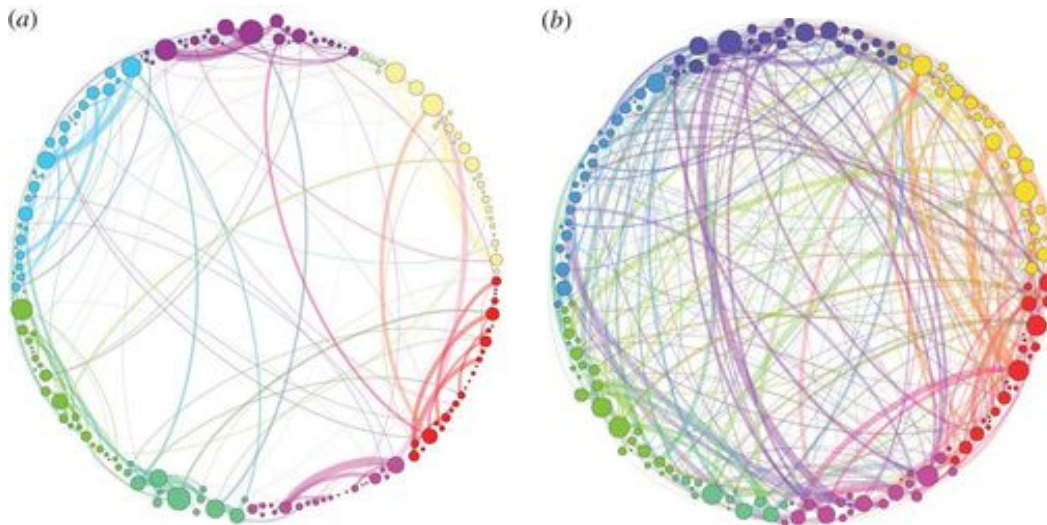
2.1 The interacting regions of the default-mode network: medial prefrontal cortex (mPFC), posterior cingulate cortex (PCC), precuneus (PCu), inferior parietal lobe, lateral temporal cortex and the hippocampal formation.

The default-mode network (DMN) is a network of interacting brain regions consisting of the medial prefrontal cortex (mPFC), posterior cingulate cortex (PCC), precuneus (PCu), inferior parietal lobe, lateral temporal cortex and hippocampal formation (fig. 1.1).¹ Of all the benefits psychedelics have been shown to provide, there are perhaps none with greater significance to a phenomenological design methodology than its impact on the DMN.

The regions in this brain system activate during rest or passive mental states - states which are characterized

by introspective mental activity like contemplation or self-reflection.² In this sense, DMN functions represent the internal mind and sense of self; the ego, in other words. As the DMN activates, the brain begins filtering out external data in order to process what it has previously uploaded.³ Conversely, the execution of goal-oriented physical tasks has shown to deactivate or quiet the DMN.

In essence, processing external data and enacting inward directed mental activity initiates the DMN, whereas engaging the body with the outward environment and being attentive



2.2 The coloured circles represent brain regions while the curves represent connections between them. Diagram A is the brain of an average, healthy adult during ordinary waking states of consciousness, while diagram B shows the brain of someone experiencing an altered state of consciousness induced by LSD. This state is not unique to psychedelics - similar patterns of activity occur in as diverse places as the brains of children, people with schizophrenia, and those engaged in meditation and exercise, among others.

to sense stimuli deactivates it. Two distinct modes are thus established: receiving to admit chaos in the form of unprocessed information, and the processing of that information to establish order out of it.

Without question, the DMN provides a critical function. According to leading DMN researcher Robin Carhart-Harris, it enables the very capacity for organized and focused thought, foresight, and minimizing surprise and uncertainty within foreign environments.⁴ It does so, by way of its filtering of external data, in a heuristic process. When a problem arises, the

DMN sorts through prior responses to similar problems, selecting for those which have served the self-interests of the individual in the past.⁵ The brain saves precious energy this way, minimizing the mental processing of infinite potential responses to novel problems. While this represents another vital and necessary role of the DMN, left unchecked, thought patterns can begin to rigidify as they select from an increasingly limited set of options.

As the scales of this delicate balance between receiving and processing remain tipped toward the latter for too

long, the mind can begin closing itself off from the world and fall into destructive, **habitual patterns of introspection.**⁶ After that, any number of issues may begin to take hold in this constrained state of cognition. The full spectrum of **states of consciousness and psychiatric conditions** associated with DMN activity or inactivity are as follows. On one end, an overactive DMN is associated with all forms of automatic and habitual behaviour: addiction, obsessive compulsion disorders, eating disorders, **depression & anxiety** (as habits of debilitating self-reflection) – an excess of **order in the brain**. Such behaviours may be thought of as the mind returning to a ‘default mode’ of operation. On the other: psychosis, infant and youthful consciousness, creative thinking, and psychedelic states – an excess of **chaos in the brain.**⁷

In sum, we have two interdependent **conditions established by the DMN** and the associated ego-functions: a **constrained perception of reality** induced by a filtering of sensory data, and **constrained patterns of behaviour and thought metastasizing as**

destructive habits. Carhart-Harris’ now famous analogy offers up one solution: to “shake the snow globe” of the mind, resettling the snow so that new paths and new habits may be forged amid the chaos of snowfall.⁸ As Carhart-Harris observed with fMRI imaging, psychedelics represent one of the most effective ways to achieve this, having a profound inhibitory effect on the DMN in a way that allows for new pathways (Figure 1.2) and modes of perceiving the world to form.⁹ Similar results have been observed alongside meditation and **physical exercise.**^{10 11}

If the DMN is associated with data processing during a similar state of physical and mental inertia as our settled snow, then perhaps it is by sensory stimulation and bodily activation that it will be suppressed. This would suggest that on a deeper level, there is more to resetting the brain and promoting change than taking a psychedelic, meditating, or **physical exercise alone**. The underlying mechanism and the primary benefit shared by each of these methods might, in the end, be the unveiling of the senses.

Endnotes

- 1 Xiaoxiao Xu, Hong Yuan, and Xu Lei, “Activation and Connectivity within the Default Mode Network Contribute Independently to Future-Oriented Thought,” *Scientific Reports* 6, no. 1 (February 12, 2016): 21001, <https://doi.org/10.1038/srep21001>.
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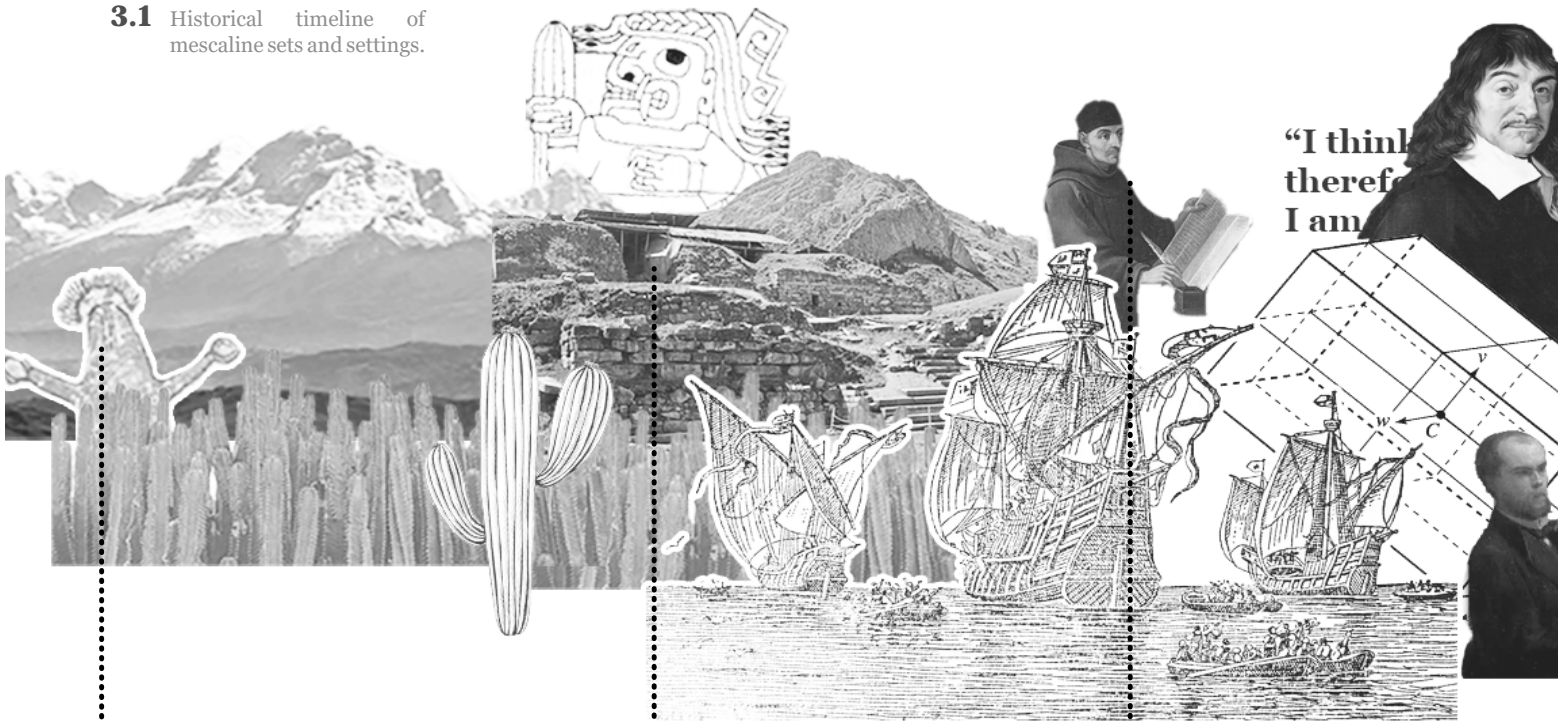
3 Psychedelic History

3.1 Mescaline, Phenomenology, Set & Setting

Throughout the graphic timeline that spans the following pages, events from three different strands of history explored in this thesis will unfold: that of mescaline, phenomenology, and the set and setting hypothesis. Events associated with the latter two categories will be further discussed in subsequent chapters.

The theme of un-inhibiting the senses explored in the previous chapter continued to surface in one avenue of psychedelic research after the other, as it did in this historical analysis of mescaline, which is the psychoactive compound within the peyote cactus. Historically, psychedelics use was regarded as the utmost sacred

3.1 Historical timeline of mescaline sets and settings.



4000 BCE
Shumla Caves - Texas

Carbon dating of peyote buttons containing mescaline alongside rock art (Jay 2019, 34)

1200 BCE
Peru

Chavin de Huántar archaeological site
Depicts the psychoactive San Pedro cactus in stone reliefs, and tubes for snorting hallucinogens were found on site.
"places mescaline at the origins of South America's first monumental culture"
Drew participants from great distance, united the cultures of the coast, and became the "founding nexus of Peruvian culture" (Jay 2019, 23)

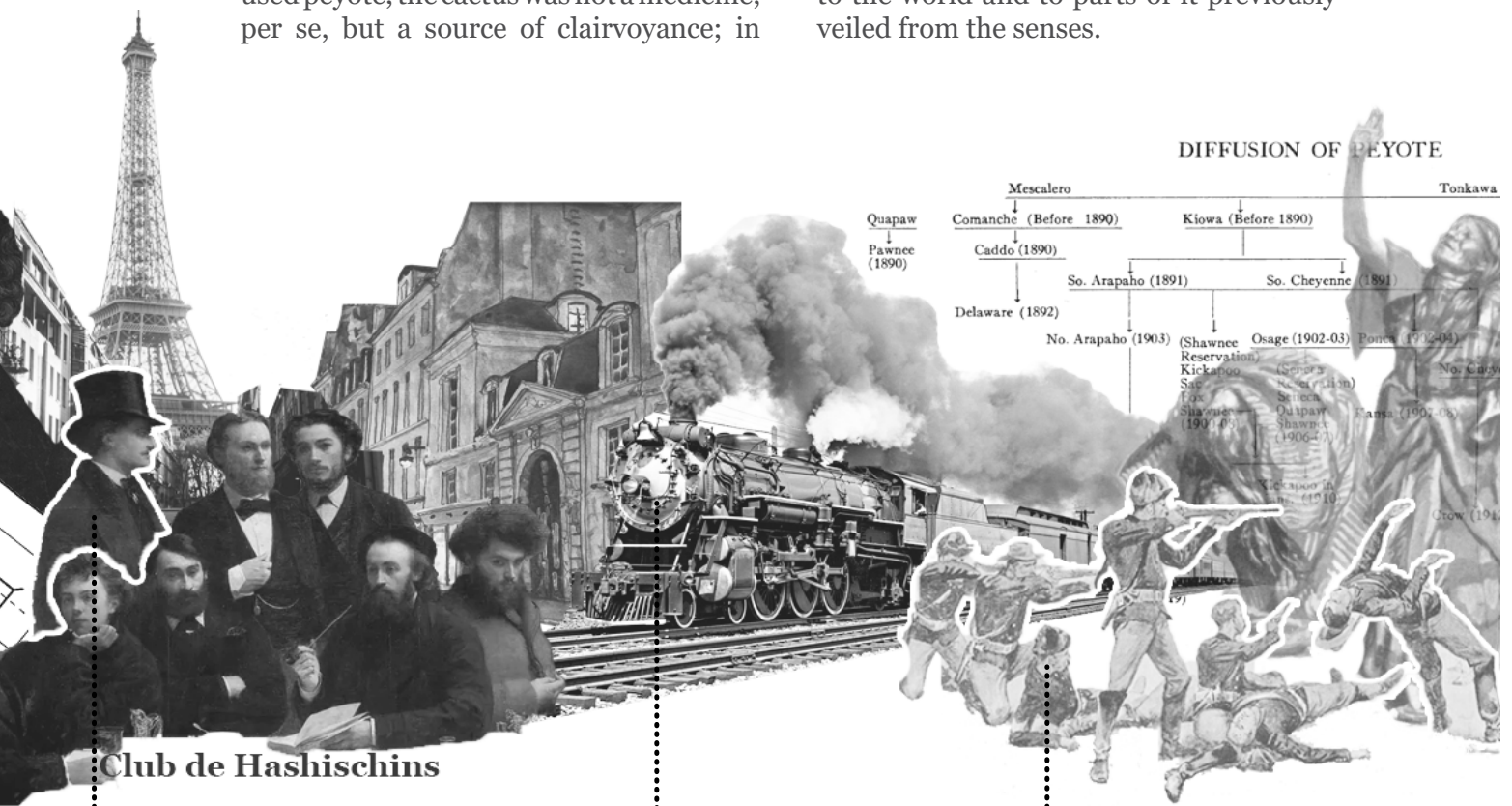
1529

First written evidence of peyote use by Spanish missionary Bernardino de Sahagun (Jay 2019, 34)

act, with entire temples and elaborate ceremonies designed specifically around this sacrament. One such example is Chavin de Huantar, the first monumental culture of South America.¹

Part of the reason for all the effort invested into preparing such a ceremony, is that these plants were regarded as offering far more than the alleviation of some specific ailment, rather, what they offered was a veritable panacea.² In the case of the Nahua (Aztecs) of Mexico who used peyote, the cactus was not a medicine, per se, but a source of clairvoyance; in

other words, it expanded their senses to a supernatural degree.³ That clairvoyance could treat an ailment, insofar as it allowed a shaman to use their new senses to locate the source of the sickness in the body, but it also afforded a sense of how weather is going to behave, a foresight of how an upcoming battle will play out, or a sensitivity to the location of lost items or family members.⁴ At the very core of the experience, by expanding the senses, psychedelics were about an opening up to the world and to parts of it previously veiled from the senses.



Club de Hashischins

1844
Paris

Club de Hashischins is founded. One of its members, Charles Baudelaire, establishes what would become fundamental tenets of Timothy Leary's set and setting hypothesis: A successful hallucinogenic session requires a calm mindset and a picturesque environment. (Hartogsohn 2020)

1850
Laredo, Texas

Intertribal peyote trade network established, known as 'peyote gardens' (Jay 2019, 61)

1881
Texas-Mexico railroad opened, transportation of dried peyote began, bringing the plant as far as Oklahoma. This is how it would eventually make its way into Quanah Parker's hands. (Jay 2019, 8)

1890
Wounded Knee, South Dakota

Massacre of 250 Lakota over Wovoka's ghost dance (Jay 2019, 57)

Psychedelics continue to be used within a spiritual, ceremonial context, and to be viewed as a panacea or magnifier of the senses for a long time. Everything would change in 1893 when Quanah Parker, a founder of the Native American Church which uses peyote, gifted the ethnographer James Mooney a 50lb bag of the cacti.⁵ Upon delivering these to a number of labs, Mooney was responsible for the first ever clinical trials with a major psychedelic two years later.⁶

Immediately, researchers were

confounded. Where Peyotists reported community bonding alongside mental and physical health benefits alike, the researchers turned up only random results; sometimes the plant induced euphoria, sometimes a state of panic, but was never consistent enough to reliably produce a particular medical usage.⁷

All the while, the peyote cactus was transforming from a living spirit and holistic medicine toward a synthetic, colourless, crystalline powder, all in an effort to minimize its physical side effects,

3.2 Historical timeline of mescaline sets and settings.

1891
 James Mooney assigned to Bureau of Indian Affairs agency in Anadarko, Oklahoma where he begins learning about local indigenous culture and the ghost dance. He becomes the first white person to seriously study peyote sacraments. (Jay 2019, 73)

1893
 Quanah Parker/ James Mooney peyote ceremony at Fort Sill - Quanah passing off of peyote over to Mooney. From there, Mooney distributed to the labs that conducted the first clinical trials
 Quanah Parker would be foundational to the history of the Native American Church (NAC) and their sacramental use of peyote (Jay 2019, 73)

1895
 First clinical peyote trial
 Daniel Webster Prentiss and Francis Morgan (Jay 2019, 79)

1916
 Greenwich Village, New York
 Mabel Ganson-Dodge disastrous party incident. With no adequate preparation or appropriate atmosphere, the first non-indigenous peyote ceremony held at this Greenwich Village party ends in a now famous disaster. (Jay 2019, 117)



Mescaline is a naturally occurring psychedelic substance found primarily in the Mexican peyote cactus (*Lophohora Williamsii*) and the San Pedro cactus native to Peru and Ecuador.

Effects (9-14 hours):

- altered time and space perception
- changes in bodily experience/sensations

- euphoria
- increased energy
- audible and visible hallucinations
- difficulty concentrating
- intense nausea and vomiting
- increased blood pressure and heart rate
- reduced appetite

“Mescaline - Alcohol and Drug Foundation,”
<https://adf.org.au/drug-facts/mescaline/>.

phenomenology takes a trip

<p>1918 Oklahoma</p> <p>Native American Church formation. Following James Mooney's recommendation, Mack Haag sought out a certificate of incorporation from the state of Oklahoma to officially organize the Native American Church (Jay 2019, 127)</p>	<p>1919 Austria</p> <p>Ernst Spath chemically synthesizes mescaline</p>	<p>1927 Germany</p> <p>Martin Heidegger publishes <i>Being and Time</i>. The text includes a critique of the Cartesian worldview which severs the connection between the individual and the material world</p>	<p>1934</p> <p>John Collier Indian Religious Freedom and Indian Culture executive order. Defended the right of indigenous communities to use peyote for religious purposes. (Jay 2019, 172)</p>	<p>1938 France</p> <p>Phenomenologist Jean-Paul Sartre writes about his mescaline experience and the giant crabs he hallucinated for some time afterward. Maurice Merleau-Ponty shares a more positive experience some years later. (Jay 2019, 158)</p>
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maximize its potency, and isolate specific chemicals to suit specific purposes.⁸ Of the pioneering researchers, novelists, artists, and intellectuals who used mescaline, most would further attempt to bend the will of the drug to fit their individual purposes: a creative stimulus, spiritual catalyst, pleasure drug, or scientific instrument.⁹

But eventually, as psychedelic history unfolded, mainstream science systematically revealed what traditional applications had long since established.

Beginning in the 1950s, psychedelics were employed in the treatment of addiction, depression, obsessive-compulsive disorder, and end-of-life anxiety, as well helping to uncover the neurobiological bases for schizophrenia and autism as described in more than a thousand research papers combining around forty thousand research participants.¹⁰ Today, that list continues to grow as psychedelic therapy shows promising results in the treatment of anxiety disorders and PTSD.¹¹ Outside of the mental health benefits

3.3 Historical timeline of mescaline sets and settings.

trip

psychotomimetic era

1944
Native American Church of the United States was formed to incorporate chapters of the NAC now spread across the country

1950s
Most researchers are now switching to LSD over mescaline. A similar shift is seen within the wider drug culture (Jay 2019, 190)

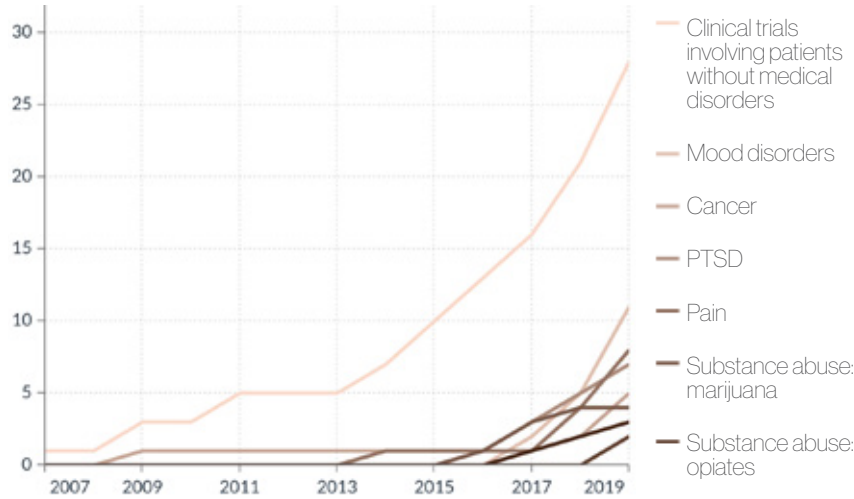
1950s
LSD and mescaline termed 'psychotomimetics' - they mimic psychosis. This brought mescaline into the psychiatric research mainstream, but pushed its subjective effects aside. The overall experience was no longer being investigated, only its ability to treat specific pathologies. (Jay 2019, 192)

1953
Hollywood Hills
Aldous Huxley mescaline trip. Huxley's writings on psychedelics were among the first to denote a spiritual significance to the experience, a perspective that would inspire subsequent generations. (Jay 2019, 3)

1960
Peyote/mescaline distributors selling for the first time to the average "bohemian and beatnik". (Jay 2019, 228)

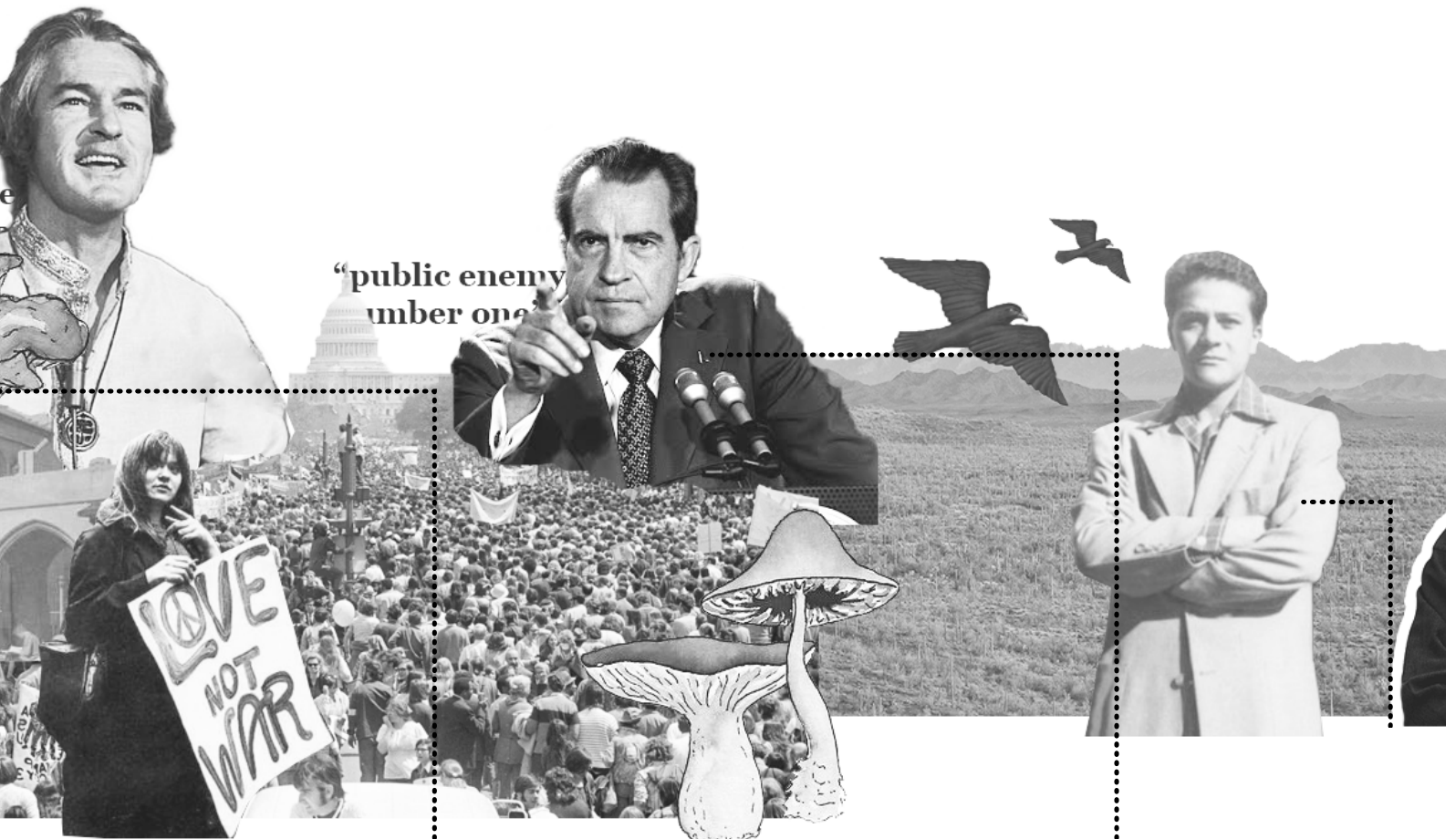
"the most dangerous man in America" - Nixon

Cumulative clinical trials over time



3.4

The number and types of clinical trials using psychedelics in the USA. Suggests the broad range of applications, not only for treating psychological disorders, but physical pain.



1960s

In contrast to the bohemian scene of the 1920s, many 1960s bohemians now regarded indigenous peyote traditions as an attractor toward indigenous culture and spirituality (Jay 2019, 228)

1962
Marsh Chapel, Boston

Timothy Leary and Walter Pahnke's Good Friday Experiment. Psilocybin was tested as a catalyst for mystical experiences in religious subjects. Decades later, **all of the** participants who received psilocybin in the study report persisting psychological benefits. (Hartogsohn 2020, 113)

1964

Timothy Leary and Ralph Metzner publish *The Psychedelic Experience*, their guidebook for psychedelic experiences.

1970

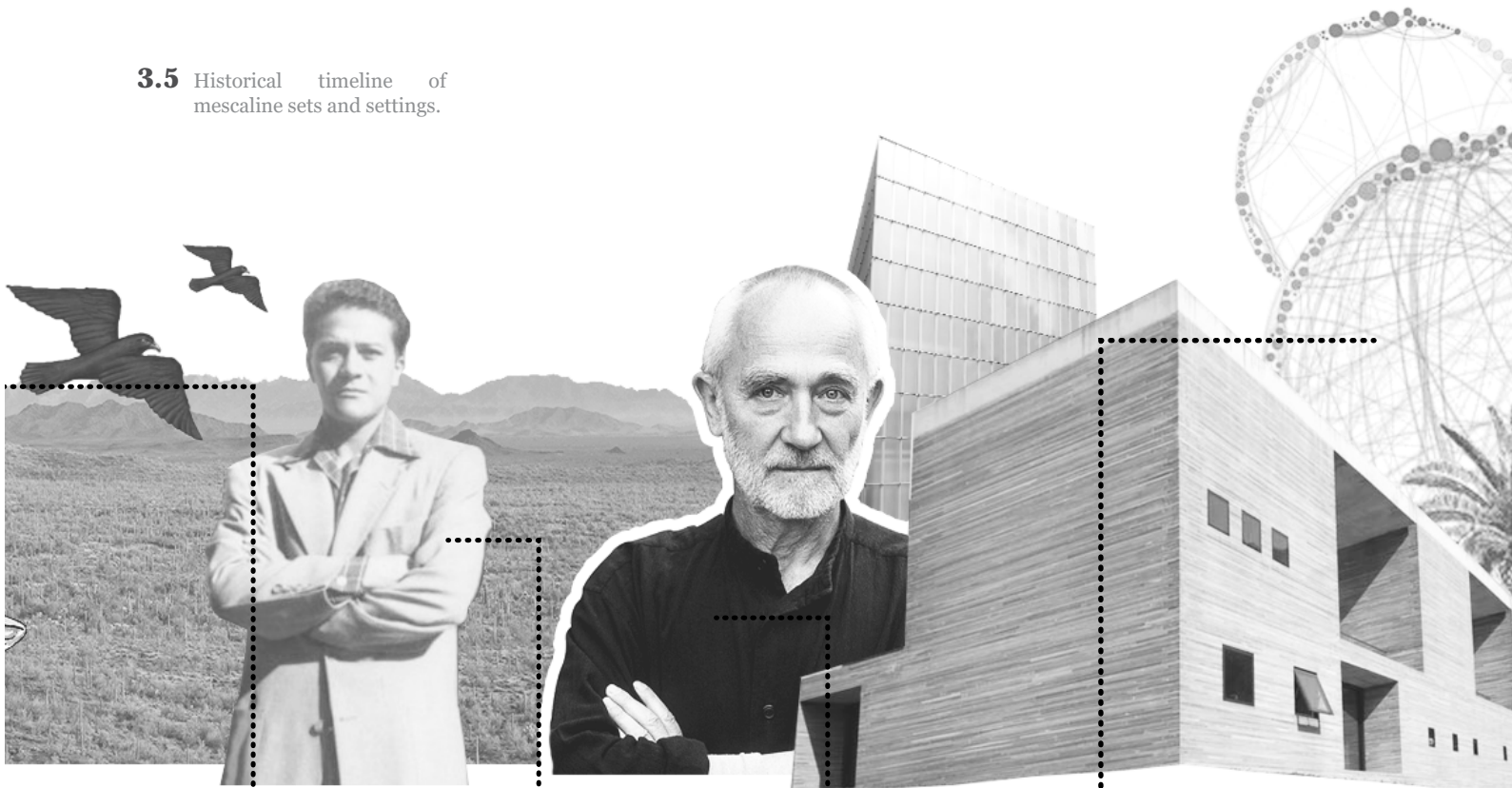
The Crackdown: Under president Nixon, psilocybin, mescaline and LSD were placed under schedule 1 of the US Controlled Substances Act, meant for drugs with a high potential for abuse and no recognised medical use.

listed, physical health benefits like those purported by NAC Peyotists are now being observed in contemporary clinical trials as well. For example, some researchers purport a potential for chronic pain relief (Figure 3.4).¹²

To an ever increasing extent, modern understanding of psychedelics falls in line with that of traditional practices. Considering the length of the previous list of treatments, psychedelics are essentially regarded once again as a cure-

all, a panacea capable of alleviating widely differing types of ailments. This is the story one hopes to convey by recounting this history – that after having a kind of fall from grace, modern, Western science has returned to regarding psychedelics like its traditional users, and most experienced users, always have. Today, leading psychedelic assisted therapy retreats like Beckley Retreats offer therapy through a similar structured, spiritual framework as the Native American Church. Chapter 6

3.5 Historical timeline of mescaline sets and settings.



1970

Carlos Castenada's *The Teachings of Don Juan* sells 25 million copies. Another sign of growing interest in indigenous peyotism among the counterculture. (Jay 2019, 232)

1996

Switzerland

Peter Zumthor's Therme Vals is constructed, in many ways an interpretation of phenomenological concepts. Emphasizes sensory aspects of architectural experience as a means to involve the individual with the world.

2014

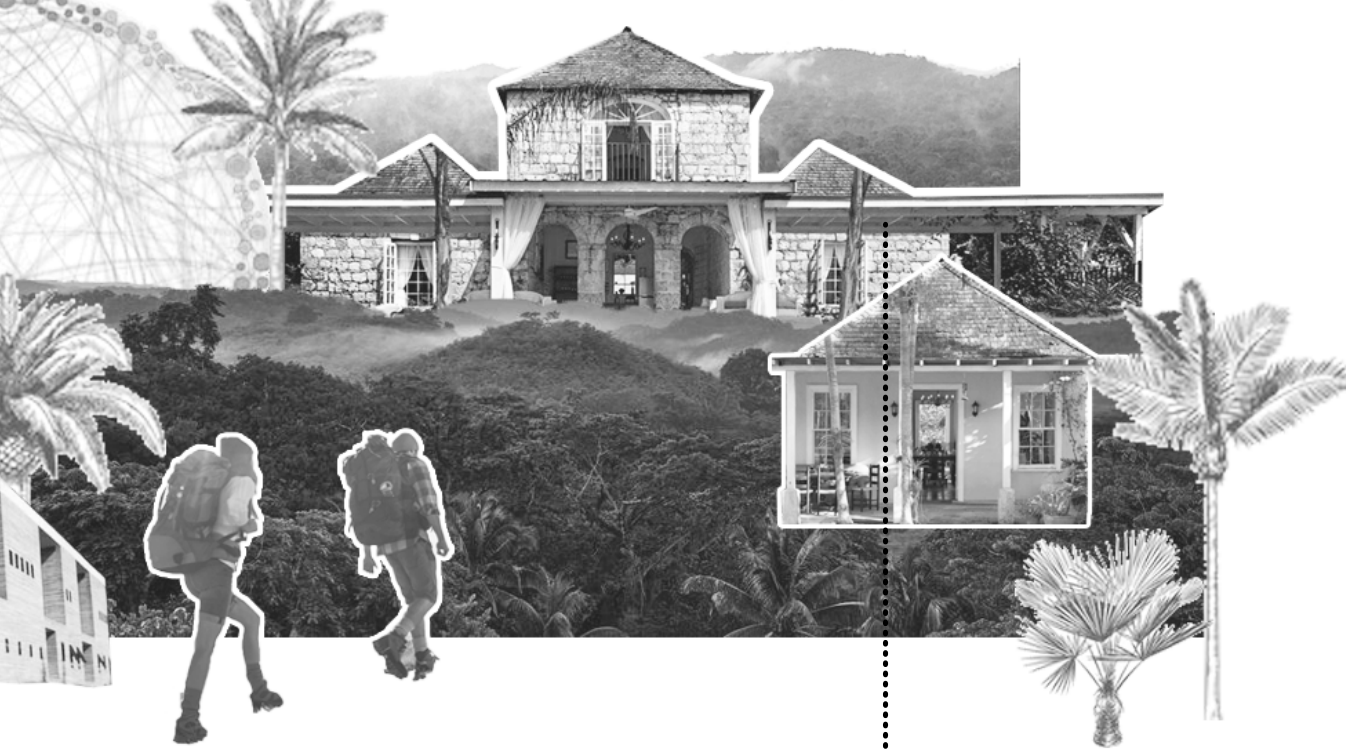
Robin Carhart-Harris et al. develop the entropic brain theory, suggesting a link between activity in the DMN region of the brain and a range of psychiatric disorders: depression, anxiety, PTSD, addiction, and more. Psychedelics, meditation, and sensory stimulation are all found to suppress the DMN in a way that can "reset the brain" along with negative behaviours. (Carhart-Harris et al. 2014)

will explore such methods in further detail.

At this time, psychedelics remain a controlled substance in Canada, requiring an exemption through Section 56.1 of the Controlled Drugs and Substances Act for use in therapy.¹³ Enacted in 2022, the exemption represents a recent advancement toward loosened regulations of psychedelics, but further progress is still to be made. Strictly provided on the condition that patients face serious health problems and only after all conventional options have been

expended, accessibility to psychedelic-assisted therapy remains severely limited. This thesis envisions a future which appears to be imminently unfolding based on trends in psychedelic medicine research hitherto described. A future where access to psychedelic-assisted therapy joins the list of therapy options currently provided to underserved Canadians through their government-subsidized health insurance plan.¹⁴

“this is your
mind on drugs”



2016

Robin Carhart-Harris' study shows promising results for treating "treatment-resistant" depression with psilocybin. Indicates safety and efficacy of the method, motivating further trials thereafter. (Lyons 2018)

2022

McChulloch et al. study indicates that mystical-type psilocybin experiences have persisting positive psychological effects compared to non-mystical experiences (more evidence to suggest benefits of structured, spiritual experiences common to traditional peyotist ceremonial use) (McChulloch et al. 2022)

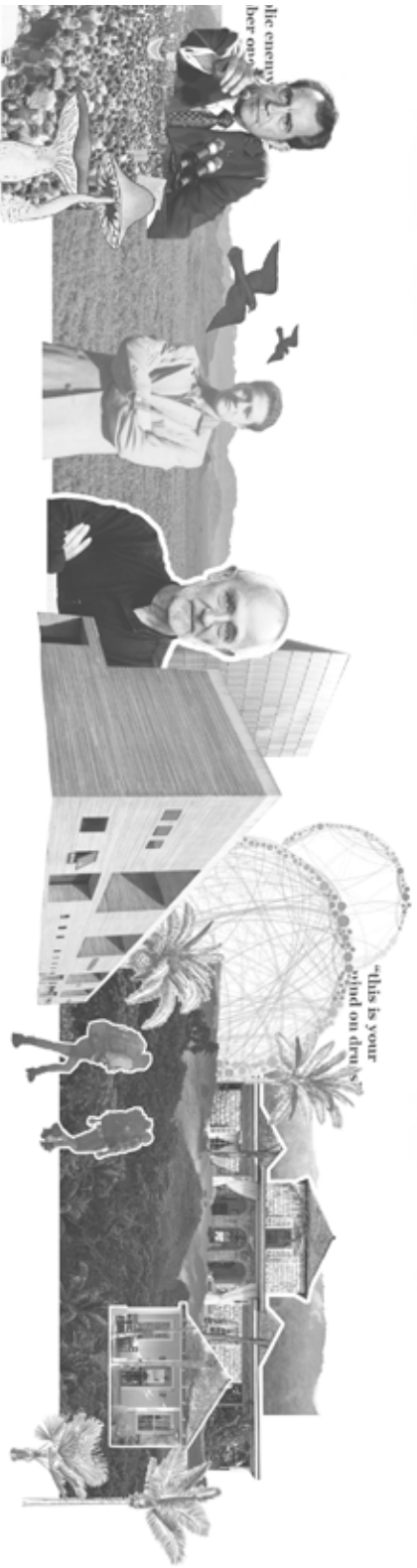
2022

Leading holistic wellbeing company Beckley Retreats launches psychedelic assisted therapy retreat in Jamaica - spearheading a trend in contemporary psychedelic therapy settings.



DEPARTMENT OF PSYCHICS

Person	Current Status	Year of Birth	Year of Death
John F. Kennedy	Deceased	1917	1963
Lyndon B. Johnson	Deceased	1908	1973
Hubert H. Humphrey	Deceased	1896	1978
Richard M. Nixon	Deceased	1913	1994
Democratic Party	Active	-	-
Republican Party	Active	-	-
Independent	Active	-	-



Endnotes

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4 Psychedelics & Phenomenology

“go back to the things themselves.”

– Edmund Husserl

In light of its exploration of an uninhibited, sensuous engagement with the world, the philosophy of phenomenology will be illuminating. The philosophical movement is also heavily linked with the set and setting theory because, at its core, the theory explores how the qualities of sensory data being received during a psychedelic experience impact its outcome.

Edmund Husserl’s dictum, “go back to the things themselves”¹ pleads that Western philosophy yield its predilection for theorizing about, categorizing, and presupposing how things “ought to be” (according to some logic or common sense) rather than how they are actually given in experience.² At the core of the psychedelic experience is this return to the things themselves, offering a fresh look at surrounding phenomena that are daily taken for granted. It is a return, this thesis will argue, that is akin to the shaking of the snow-globe that psychedelics offer by rewiring the DMN. Of its most influential reports in the early years of peyote experimentation by Westerners, those from the likes of Silas Weir Mitchell, Havelock Ellis, Jean-Paul Sartre and Maurice Merleau-Ponty, many were directed toward the sole examination of “the things themselves”, as it relates to the psychedelic experience.³ That is, to embrace a new way

of looking at the mescaline sensations and hallucinations, unimpeded by theories, categories and definitions.

By disabling sensory gating caused by the DMN, psychoactive compounds have the potential to expand not only the reach and synaesthetic quality⁴ of one’s sensory perception, but a recognition of the value and beatific nature of such heightened interface with the world.⁵ This is outlined perhaps most famously in novelist Aldous Huxley’s eloquent description of his 1953 mescaline experience, wherein he describes, for instance, his perception of books in the study:

“they glowed... with brighter colors, a profounder significance. Red books, like rubies; emerald books; books bound in white jade; books of agate; of aquamarine, of yellow topaz; lapis lazuli books whose color was so intense, so intrinsically meaningful, that they seemed to be on the point of leaving the shelves to thrust themselves more insistently on my attention.”⁶

Furthermore, various studies indicate a correlation between activation of a given sense and deactivation of the DMN.^{7 8 9} The findings outlined in the DMN chapter also raise the question: if prolonged states of

What is phenomenology?

A twentieth century philosophical movement which attempts to perceive and describe immediate occurrences and circumstances (phenomena) as they manifest within one's subjective experience, rather than according to conceptual presuppositions.¹⁰

inward directed mental activity throw the DMN functions out of balance and give rise to disorders like depression and anxiety, just where does this propensity originate from? Why do modern humans tend to veil themselves from the physical world and avert their attention toward a psychical one?

In the 17th century, French philosopher René Descartes proposed a scientific method founded on theoretical deductions and reasoning rather than experimentation or empirical observation of worldly phenomena.¹¹ Having identified the “problem

of reality”, that being the difficulty of proving that the exterior world exists outside of subjective consciousness,¹² Descartes adopted a transcendental subjectivist view wherein truth itself was relative to the transcended individual – the outer world played no part in uncovering it.¹³ Founded on these observations, Descartes makes his famous statement, “I think therefore I am”, declaring thinking as the fundamental source of existence, and the mind as the starting point of sense-making.¹⁴

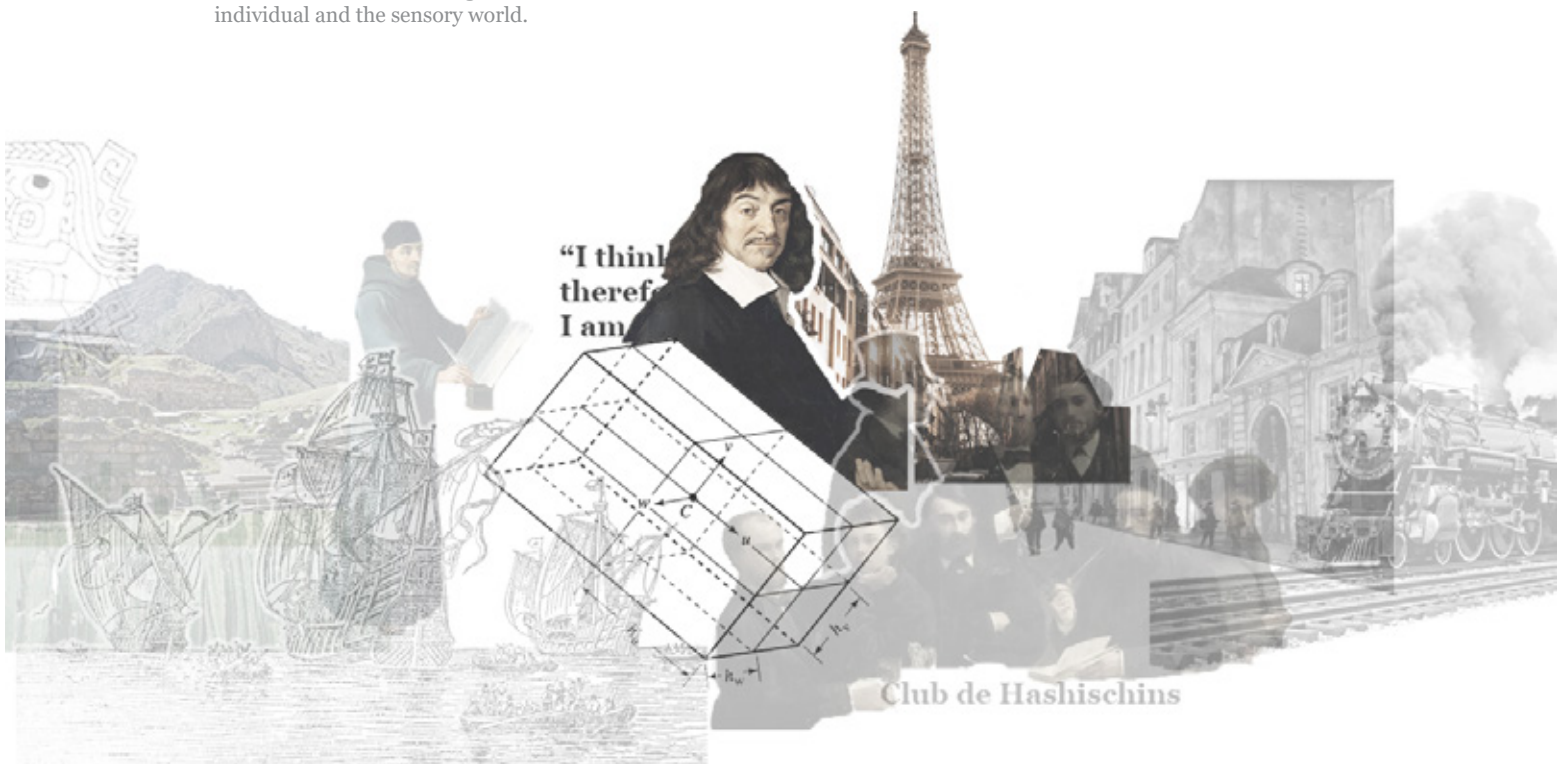
Martin Heidegger

Two centuries later, it was phenomenologists like Martin Heidegger who called into question this Cartesian ontology of the world, which, by his approximation, had by then permeated Western philosophy and science.¹⁵

In Heideggerian terms, the Cartesian view is concerned with entities as they are “present-at-hand”, that is, as pure, idealized mental representations detached from their physical counterpart within the world. Doing

so, these distinct, individual manifestations are effectively flattened, purified of their characteristics and extraneous features so that they conform to a general category or archetype. In *Being and Time*, Heidegger exemplifies this idea by calling to mind the individual sounds that characterize one’s daily affairs being reduced to the category of “pure noise”:

4.1 René Descartes sets the stage for a disconnect between the individual and the sensory world.



“What we ‘first’ hear is never noises or complexes of sounds, but the creaking waggon, the motor-cycle. We hear the column on the march, the north wind, the woodpecker tapping, the fire crackling... It requires a very artificial and complicated frame of mind to ‘hear’ a ‘pure noise’.”¹⁶

The creak of the wagon occurs proximally, within a specific context, in the present time, and is sensed by the body. Context, proximity, senses, and time are all evoked in that single occurrence. On the other hand, “pure noise” as an abstract category, is placeless, timeless, and perceived wholly as a mental concept detached from any particular, sensible sound. We are beginning to paint a picture of how a particular worldview can bring the subject nearer or further from the encompassing world and the senses which engage them with it. In contrast to this apprehension of the “present-at-hand”, there is a view of entities as being “ready-to-hand”. Here, the character of things *is* apprehended: their softness or roughness,

roundness or sharpness, hotness or coldness; all in accordance with how the body engages them in daily life to fulfill a present need. The second half of the previous quote touches on this readiness-to-hand quality:

“The fact that motor-cycles and waggons are what we proximally hear is the phenomenal evidence that in every case [the subject]... already dwells alongside what is ready-to-hand within-the-world; it certainly does not dwell proximally alongside ‘sensations’ [another abstract category]; nor would it first have to give shape to the swirl of sensations to provide a springboard from which the subject leaps off and finally arrives at a ‘world’.”

With that, Heidegger speaks to the idea that the subject needn’t rely on theoretical apprehension of the abstract category of ‘sensations’ as a starting point from which to understand any individual sensation. They need only feel it -- understanding will follow.

4.2 Martin Heidegger questions Descartes’ transcendental subjectivity.



‘Things’ are Ready-to-Hand, ‘Objects’ are Present-at-Hand

Martin Heidegger, like the most influential figures of the psychedelic 60s, was drawn to Eastern philosophy. According to Adam Sharr, the author of *Heidegger for Architects*, Heidegger likely refers to the *Tao Te Ching* by Lao Tse in his discussion of a pot as a “thing” as opposed to an “object”. According to Sharr, Heidegger was likely inspired by verse 11: “One hollows the clay and shapes it into pots:/ In their nothingness consists the pot’s effectiveness”.¹⁷ Sharr adds to this observation, noting that the pot as a thing is immediate and real because the individual engages with it physically and tangibly. Thinking about this thing, he writes, “only properly begins after the physical presence of the thinker and the presence of the jug, together”¹⁸

For Heidegger, it is this sort of embodied interaction which renders the jug a “thing” which is ready-to-hand as opposed to an “object” which is present-at-hand. The thing is understood in terms of its essence: subjectively experienced qualities which are formless, immeasurable and intrinsic. These are the interactions which inform subsequent thinking about the nature of that thing. By contrast, extrinsic form and measurable

dimensions (which necessarily follow a detached, methodical analysis) are what define the jug as a Cartesian object.¹⁹

Thus far, two important ideas are posited. First, that the Cartesian worldview engenders an alienation from the external world resulting from detached, quantitative analyses, as well as an emphasis on extrinsic forms, surfaces, and appearances which can be measured rather than intrinsic, experienced qualities. Second, that embodied interaction with the “immediate and real” things of the world is in fact, contrary to Descartes’ claim, the starting point for further sense-making. Thus, to understand the world by analyzing abstract ideas (objects), the subject turns inward to a mental, immaterial realm, severing their connection to the world. To understand the world by interacting with the real things it is composed of, the subject is always heavily engaging the body and senses, maintaining a connection to their environment. As in previous chapters, we once again find an opening up to the world, and an unveiling of the senses.

Phenomenology in Architecture

Various prominent architects have interpreted Heidegger’s work as a call for multi-sensory engagement and, in doing so, revealed the value of applying some of the fundamental phenomenological tenets to the realm of architecture.

Sharr quotes from Zumthor’s *Thinking Architecture*, underscoring the architect’s interpretation of phenomenologically driven design as a means to craft a rich and multi-sensory interior experiences in architecture, rather than mere visually stimulating surfaces and appearances:

“I used to take hold of [the door handle] when I went into my aunt’s garden. That door handle still seems to me like a special sign of entry into a world of different moods and

smells. I remember the sound of gravel under my feet, the soft gleam of the waxed oak staircase, I can hear the heavy front door closing behind me as I walk along the dark corridor and enter the kitchen”²⁰

Zumthor is in league with architect and writer Juhani Pallasmaa with these sentiments, lamenting the fact that sight is the only sense calibrated for modernity: “in a world where technologies operate so fast that sight is the only human sense which can keep pace, architecture should emphasize other senses which remain more immediately resonant.”²¹ More than what they should look like, Zumthor designs spaces according to what they should feel like. He searches for immediate, spontaneously experienced

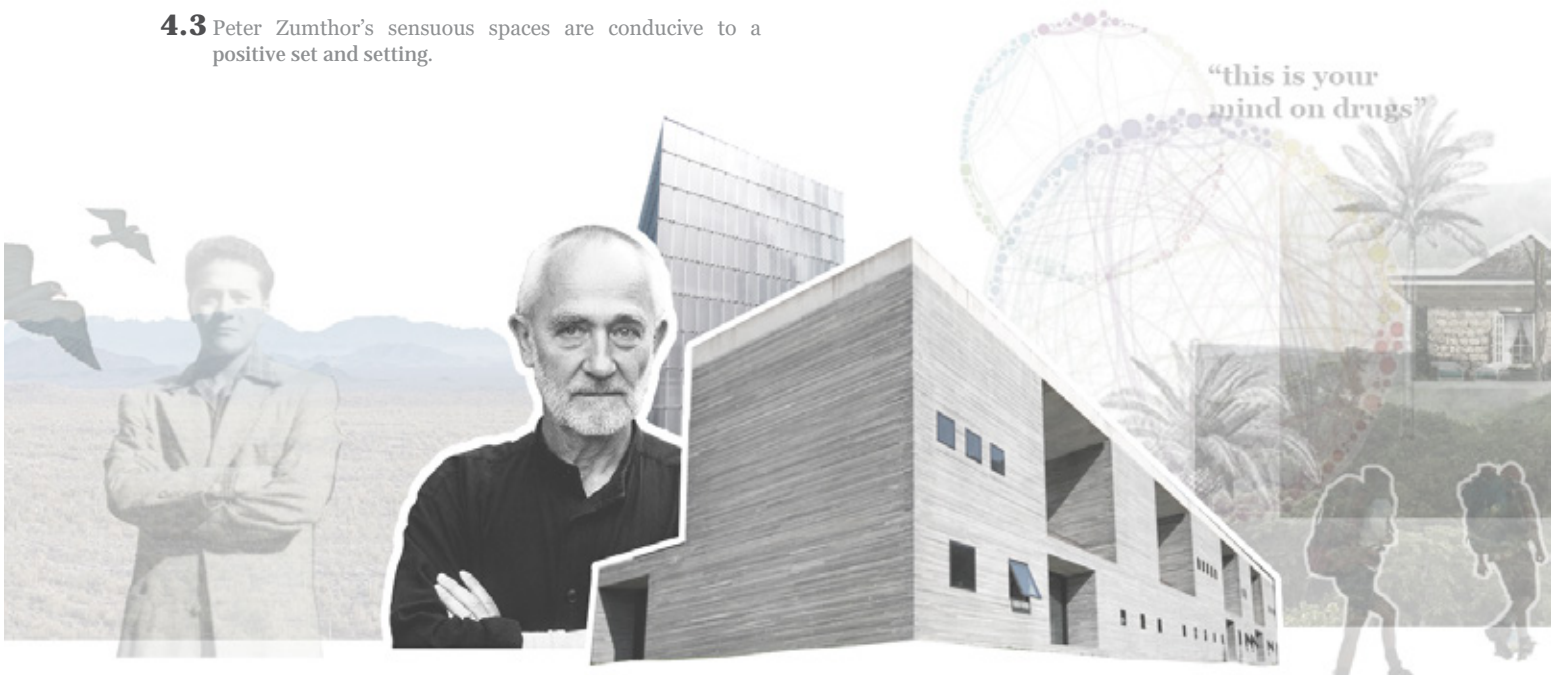
phenomenal qualities more than any appeal to that which follows a process of detached mental analysis. Here is one of the critical take-aways from Zumthor's methodology as well as Phenomenology more broadly: the relationship between the senses and time. The senses are stimulated, and experiences are felt long before any rational analysis can be proffered. They are inherently present, spontaneous occurrences. To view the world through a Cartesian lens is to mistrust that present, felt engagement with materiality, and to mediate it through the measuring and magnifying instruments of scientific experiment.

At Zumthor's Therme Vals spa, he designs a sensory experience as a means to reconnect the individual with the physical world, evoking memories that may be tied to similar sensuous experiences from their past. His method involves an elaborate consideration of materiality, not only in the selection of materials, but considerations for how to emphasize their most expressive features. Zumthor contemplates more than the look of a material, but how it feels on the skin, how it smells, and how it tastes. In terms of vision and light, Vals displays it in as many different forms as possible. Extreme darkness contrasted with extreme brightness, dappled

light and washes of light, coloured and colourless light, linear and pointed light, and light reflected off water or diffused through a cloud of steam. Doing so, the building not only offers a particular, evocative kind of experience, but a varying array of distinct ones nested within. What's more, this is in spite of a consistent material palette pervading most of the rooms, suggesting the way light can lend flavour without sacrificing this degree of uniformity.

Finally, it is worth noting Zumthor's predilection for the mystical and the mythological in his architecture. It was the "ritual of bathing" at the core of the experience at Vals, and at the core of that, a potential to create associations, confer meaning, or strengthen a community by concretizing values and traditions which are shared amongst it. The marble drinking fountain echoes those of the old spas of the area, the long flight of stairs reminiscent of some theatrical entrance common to popular films of the time.²² These elements are intimately rooted in their context, and offer the 'existential foothold' in the world that Heideggerian architecture theorist Christian Norburg Schulz claims an architecture rooted in place, traditions, and rituals is capable of.²³

4.3 Peter Zumthor's sensuous spaces are conducive to a positive set and setting.



Endnotes

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5 Set & Setting

5.1 History of Set & Setting

“Set & setting” is a fundamental concept in psychedelics research which looks at the impact of psychological, sociocultural, and environmental context on the effects and curative potential of the drug – that is, the extra-pharmacological factors.¹ According to its founding practitioners such as Timothy Leary, the psychologist credited for coining the term, set and setting are in fact the prime determinants of the content of the psychedelic experience. Set refers to the subject: their personality, mood, and expectations for the session, while setting refers to the contents and qualities of the physical surroundings along with the social and cultural context it takes place in.²

Psychedelics researcher Ido Hartogsohn indicates in *Constructing Drug Effects: A History of Set and Setting* that such extra-pharmacological factors have been considered

with respect to drugs and their healing potential since prehistoric times – long before the 1960s invention of the term. As he points out:

“Shamanic healing rituals are fundamentally a performance in which various elements are carefully brought together to enhance the purported healing process induced by a psychoactive... [they manipulate set and setting using] ritual songs, whistles, smoke blowing and sucking, as well as host of other indigenous techniques”.³

Various cultural figures of Western society, like those of the Parisian Club des Hashischins, had also hinted in the past at the power of set and setting. Formed in 1844, the club consisted of such notable names as Charles Baudelaire, Victor Hugo, Honore

5.1 The Club des Hashischins blueprint the early tenets of set & setting.



de Balzac, and Alexander Dumas. They recognized, for instance, that the same dose of a given drug can produce widely varying results depending on the individual and their “temperaments and nervous susceptibility”⁴ (terms which describe one’s set) as well as their surroundings (representing the setting). Charles Baudelaire goes on to highlight yet another foundational principle of set & setting, that of preparation before the experience and time to relax and integrate what was learned afterwards. He suggests clearing one’s schedule of commitments so that anxiety, thoughts of duty, or any diverted attention away from the experience itself won’t spoil it.⁵ In *Artificial Paradises*, he states the following of positive set and setting conditions: “if you find yourself in the right environment, such as a picturesque landscape or an apartment that has been decorated artistically, and if you can

also hope for a little music.”⁶ Several crucial factors that remain topical in set and setting literature today have thus been put forth: preparation, an individual’s mindset, the physical surroundings, and the incorporation of music.

Closer to the turn of the 19th century, American ethnographer James Mooney made further contributions to the set and setting hypothesis. Being one of the only people who lived between these two worlds, it was James Mooney who observed the marked difference between peyote as a failed clinical experiment and peyote as a sacred panacea. In that, we now know set and setting played a large part. The trial participants had no preparation, no idea of what to expect, and were hallucinating in a sterile hospital room within a bustling city. According to today’s understanding, this set and setting is far from optimal.

5.2 Quanah Parker gifts peyote buttons to James Mooney, setting in motion the first mescaline clinical trials.



5.2 Timothy Leary

American psychologist and 1960s icon of psychedelic history Timothy Leary is responsible for coining the term “set and setting” and has made some of the most extensive contributions to this theory which was central to his research.⁷

Based on everything he learned, he proposed that psychedelics, alongside a change of set and setting, offer an opening up to the world, and the dropping of a sensory veil which he called a “reality tunnel”.

Social Games and Reality Tunnels

Being a social psychologist by trade, Leary subscribed to the social game theory.⁸ The theory states that every member of society plays a role in multiple social games, narrowing their perspective toward the goal of that game and following the rules that govern it. Inevitably, this limits the way a subject perceives and engages with the world.⁹

Like DMN functions which are associated with a similar “narrowing”, social games are

healthy and necessary. After all, being a friend, a father or mother, sister or brother, each of these qualifies as a social role. What Leary sought to point out is that if the individual never steps outside of them, social games will have more and more sway on their behaviour and perception across time. Leary speaks to this concept in *The Psychedelic Experience*, saying “people tend naturally to impose their personal and social game perspectives on

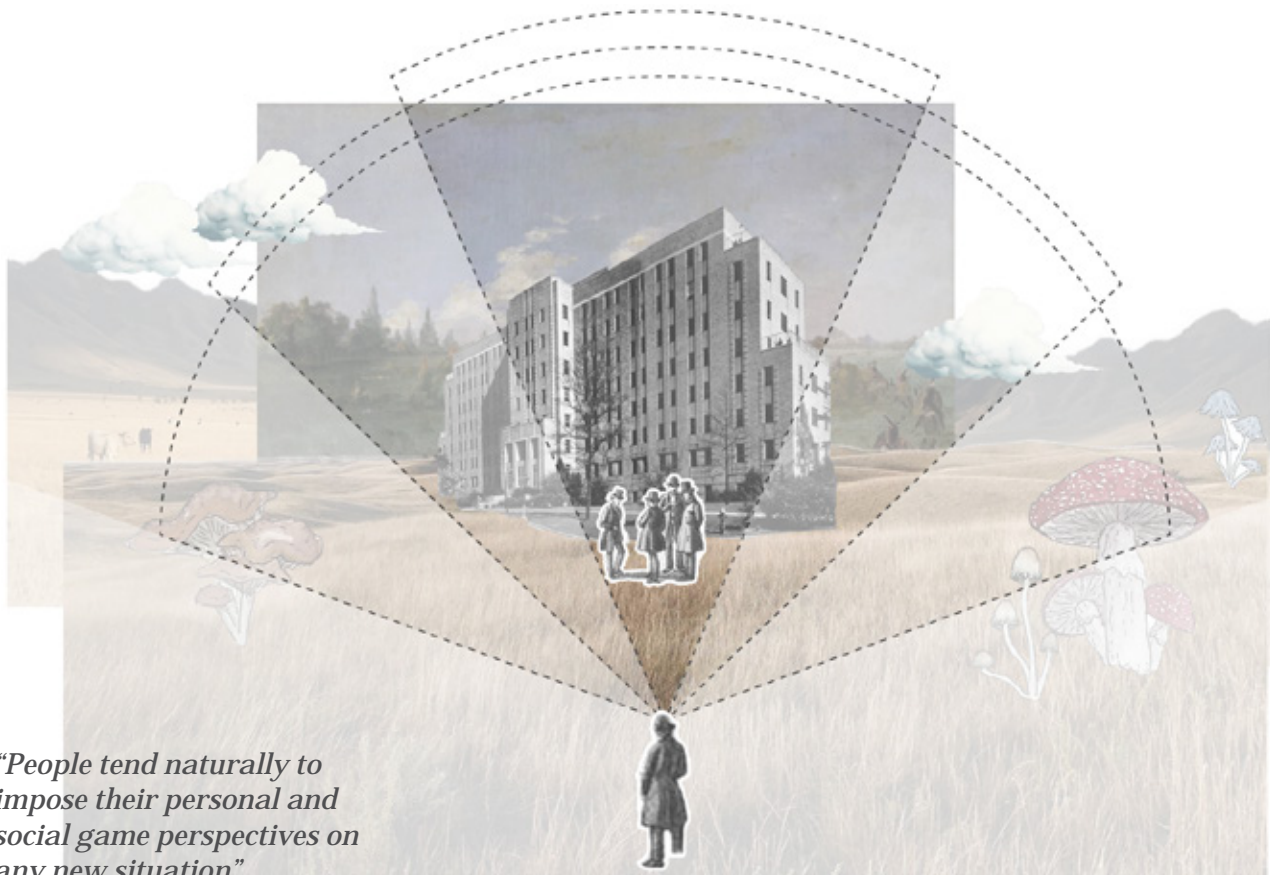
5.3 Timothy Leary, one of the most prolific modern contributors to the subject of set and setting.



any new situation”.¹⁰ It was this narrowing of perception and focus on a goal that represented Leary’s reality tunnel (Figure 5.4).

In essence, the typical social games people play and the settings they take place in would also represent familiarity; the

conventions they fall back on time and again to the exclusion of novel data. On this, a clear parallel can be drawn to the veiling and closing off from reality that Heidegger and the DMN research speaks to.



“People tend naturally to impose their personal and social game perspectives on any new situation”

- Timothy Leary

5.4 The Reality Tunnel

In the diagram, the man is closing off from the world, filtering out a view of the wider landscape in order to hone in on the goals of his social game through a kind of reality tunnel-vision. It may be his place of work, a familiar setting, familiar faces, and the familiar roles he plays there that he focuses on to the exclusion of that wider world.

The Psychedelic Experience

The Psychedelic Experience is a guidebook for the use of psychedelics which presents Leary's most comprehensive analysis of what it means to establish a positive internal (set) and external environment (setting).

First, Leary explores the importance of setting aside ample free time before and after a session to reduce anxieties about forthcoming engagements and detach from the typical daily routines and concerns. He recommends taking no fewer than three days,¹¹ something that will determine the accommodations offered in the proposed retreat centre so that clients can remain in a tranquil atmosphere for sufficient time. With respect to Leary's reality tunnel and social game theories, part of the reason for taking time away from daily concerns is to distance oneself from their usual social games¹² – the very forces which cause a narrowing of reality tunnels and the separation from the wider world. For the same reason, siting a psychedelic retreat in a remote and naturalistic setting might encourage a similar withdrawal from social games. Enacting the kind of pilgrimage required to reach the site ensures not only that sufficient time is spent away from one's familiar roles, but spatial distancing from the environments they take place in.

During the preparatory portion of the days set aside for a session, Leary advises meditation, introspective contemplation, and reading psychedelic literature (such as Aldous Huxley's *Doors of Perception* or the writings of Charles Baudelaire).¹³ The significance of the first two can not be understated, as they train the mind to banish any destructive thoughts that might surface during a session.¹⁴ Some years later in *On Programming Psychedelic States*, Leary and Ralph Metzner add

walking, bathing, and listening to music to the list of preparations.¹⁵ As will be explored in Chapter 6, these are more elements which are seen today as integral to psychedelic retreats and wellness retreats more broadly, taking the form of hydrotherapy (saunas, steam baths, cold and hot water baths¹⁶), access to walking and hiking trails, and the inclusion of live music. In any case, all three elements of meditation, quiet contemplation, and reading appropriate literature constitute information that may inform spatial decisions for a psychedelic-assisted therapy centre - as in a library or spaces for meditation.

Since people will not feel like walking for long periods, Leary recommends providing comfortable seating or beds. These are typically arranged in a circle so that patients face each other, but one or two should be provided off to the side or in an entirely separate but adjoining room should someone feel the need to be alone.¹⁷

Next, Leary highlights the difference between night and day sessions or the type of indoor or outdoor setting they take place in, emphasizing that above all, locating whatever environment and time of day the individual feels most comfortable in is critical.¹⁸ This may influence the inclusion of various types of spaces and atmospheres offered in the retreat centre to account for varying sensibilities. In Chapter 6.2, Peter Zumthor's design of multiple, distinct atmospheres within the Therme Vals spa will provide an exemplary application of this concept as it relates to Leary's philosophy, as well as to phenomenological themes discussed previously.

Leary goes on to discuss the importance of engaging the senses: music for the

ear, careful considerations of lighting for the eye, food and drink for the tongue. Hunger, Leary writes, is not typically the issue, but a desire to taste is heightened in the psychedelic state: "Hunger is usually not the issue. The senses are wide open, and the taste and smell of a fresh orange are unforgettable."¹⁹ Once again, such factors will have direct spatial and material implications in designing for acoustics, admittance of and interaction with light, and the facilities required to cater to the appetite. Finally, Leary addresses the arrangement of the room and its occupants in relation to each other. He makes suggestions about the provision of beds and their optimal arrangement to facilitate group cohesion or for individuals to isolate themselves should they feel the need to.²⁰

Leary proposes that a person may

seek one of two fundamental types of experiences: introverted or extroverted.²¹ The extroverted experience is characterized by a focus toward external objects like flowers, objects of sentimental value, pictures, or other people. In the introverted experience, more readily attained in a one-on-one session, the mind is focused inward toward visual and audible hallucinations enabled by a complete rejection of their external, physical counterparts. Doing so does not negate the importance of the body, the senses, and the material world they interact with, rather, it focuses attention toward the perception of "internal life processes" -- of bodily events and interior sensations.²² These requirements may manifest as large well lit rooms designed for larger groups, or small dark rooms for one on one sessions.

On Programming Psychedelic Experiences

In Timothy Leary and Ralph Metzner's paper *On Programming Psychedelic Experiences*, the two expand on the particulars of set & setting first laid out in *The Psychedelic Experience*. These include the areas of preparation, use of audio-visual aids, and stimulation of the remaining senses that were not detailed previously.

By now, the pair are working outside of the confines of western academic discourse, drawing instead from eastern spiritual practices such as Hinduism, Buddhism, and the practice of yoga. It is this eastern framework which provides the basis for their elaboration of earlier set & setting research. As the title suggests, Leary proposes that there are reliable, accurate preparations to deploy in the programming of a specific and preordained outcome from the session. These outcomes may fall within one of six

categories: diagnosis, therapy, intellectual understanding, aesthetic appreciation, interpersonal communication, self-understanding or self development.²³ A key point of the article with relevance to the thesis design is the discussion of set and setting as a tool to engage each of the sense organs, thereby helping to guide the session in a desired direction.

The Tibetan mandala, a circular diagram common to Hindu and Buddhist meditation practices, provides for Leary a focal point and stimulant for the eyes.²⁴ This may seem at odds with the assertions put forth by this thesis and by Leary himself in earlier work -- the idea that the environment should offer a rich and multitudinous display of stimulating features rather than a sterile, muted setting. Are such features overridden, if all focus is diverted away from the environment and toward a

two-dimensional diagram? Deeper investigation of the meaning behind the mandala suggests otherwise. According to Eastern tradition, the mandala is itself a “rich and multitudinous display of stimulating features” in the sense that it is a symbolic representation or microcosm of the entirety of the universe, in all its richness and multiplicity.²⁵ Perhaps focusing attention around a mandala does not eliminate visual diversity, but rather, provides an infinite bounty of it.

Similarly, the use of a mantra, a single word or phrase uttered repeatedly, to engage the ear represents far more than the single chosen word and the limited range of sounds used to pronounce it. Once again, the word may represent an entire world of meaning via one’s personal emotional, spiritual, and intellectual associations tied to it.²⁶ Leary refers to the Native American Church in this section, highlighting another valid approach to auditory stimulation:

“The Road Chief sings the opening song which is always the same and three others which he chooses for himself. Then the Drummer Chief sings and the Road Chief drums and then the Cedar Chief sings and the Road Chief drums. Now the drum and rattle, staff and sage go around the room and people sing and drum in pairs.”²⁷

Leary address the remaining senses, again in terms of how they direct one’s consciousness in a productive manner. Returning to NAC traditions, he describes the use of sage which is passed around to be smelled and rubbed into the skin. The benefit, he asserts, is to trigger “instinctual, pre-cultural impressions” by activating one of the most “primitive” portions of the brain, that being the olfactory

cortex.²⁸ Presumably, this undermines Leary’s reality tunnels and social games which are culturally conditioned.²⁹ The olfactory cortex is closely connected to the limbic system, which is associated with emotional states and memory formation.³⁰ As a result, smell often elicits intense feelings and memories, both of which are core elements of a psychedelic experience.

Taste and touch could be stimulated with an array of foods and textures, allowing the individual to systematically explore a “sensory communication” which is integral to yogic practice.³¹

Finally, the sense of body movement would be engaged using mudras, or hand gestures common to Japanese Buddhism.³²

The paper repeatedly emphasizes the fact that the individual’s level of experience using each method has a radical impact on the overall quality of the psychedelic voyage. This fact may necessitate the design of spaces which are dedicated to sessions of varying levels of intensity and experience required at the proposed retreat centre design.

In sum, Leary’s article makes a clear case for a phenomenological approach to architecture as a setting for the psychedelic experience. By systematically engaging each of the senses, architecture can guide the experience in a productive and enlightening manner. In Figure 5.5, each of Leary’s preparation methods and sensory stimulation tactics outlined in *The Psychedelic Experience* and *On Programming Psychedelic Experiences* has been condensed and diagrammed. Going forward, the same set of elements will repeatedly emerge in the analysis of case studies.

Preparation Methods



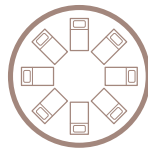
Bathing



Reading
psychedelic
literature



Preparation
& integration
time



Room
arrangement



Choice of
environment



Meditation



Walking

Sense Stimulation



Mudras



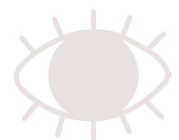
Music,
singing/
mantra



Incense



Food and
drink



Dynamic
lighting/
mandala

5.5 Diagramming Leary's methods of preparation before therapy, and sensory stimulation during therapy.

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6 Case Studies

6.1 Native American Church

The following investigations show not only how a meticulous activation of each of the senses is achieved in a Native American Church peyote meeting, but the potential value of the spiritual, ritual set and setting in which it is practiced. This will reveal why contemporary psychedelic-assisted therapy increasingly

employs similar methods to the NAC. As a preamble to the qualitative analysis of its sensory components, two studies will be referenced to provide evidence for the benefits of a spiritual or “mystical-type” psychedelic experience; and of achieving this within a structured, ceremonial setting.

Psilocybin-Induced Mystical-Type Experiences are Related to Persisting Positive Effects: A Quantitative and Qualitative Report

The 2022 *Frontiers in Pharmacology* article by McCulloch et al. provides the first qualitative descriptions of the “Complete Mystical Experience” (CME) elicited by orally administered psilocybin in healthy volunteers. Mystical-type experiences are characterized by “substantial and persisting personal meaning and spiritual significance to which volunteers attributed sustained positive changes in attitudes, moods and behavior.” Alongside quantitative data, the qualitative findings of McCulloch et al. suggest a positive relationship between a particular, mystical type of psilocybin experience and positive effects that lasted several months after the trial. In addition to corroborating this aspect of an NAC ceremony, a summary of these findings will represent a qualitative analysis of one of the possible subjective experiences induced by psilocybin and, crucially, of the kind that can take place at the retreat centre proposed by this thesis.

In the study, 28 healthy volunteers were given 35 medium-high doses of psilocybin, each providing self-reports of their experience afterward. Three months later, participants reported any persisting effects following the trial. An association between the subjective intensity of the



Psilocybin is the psychoactive chemical in “magic mushrooms”.

Effects (4-6 hours):

- altered time and space perception
- changes in bodily experience/sensations
- pseudohallucinations (as opposed to “true hallucinations” which are indistinguishable from reality)
- sense of interconnectedness with all people and things
- dissolution of ego or personhood
- heightened mood and ecstasy
- increased aesthetic appreciation
- greater connection with the senses
- emotional acceptance as opposed to avoidance/numbness
- altered perception of relationships and appearance of meaningful and visual phenomena

“Psilocybin - Alcohol and Drug Foundation,”
<https://adf.org.au/drug-facts/psilocybin/>

acute mystical-type experience and lasting positive effects was examined, followed by a comparison to participants for whom psilocybin did not occasion a CME.

Eleven of the most common terms used by participants to describe their CME were identified, listed here from most to least prevalent: “universe,” “dad,” “magnetic resonance” (the trial took place in a magnetic resonance imaging (MRI) room), “beautiful,” “simultaneous,” “infinite,” “purple,” “in relation to,” “ray,” “happy,” and “brother.” In contrast, non-CME experiences were characterized predominantly by the terms “gloomy,” “cycle,” “evil,” “cold,” and “need.” This may suggest that mystical-type experiences are integral to a positive, uplifting experience, as opposed to the “bad trip” that non-CME patients are describing.

McCulloch et al. observe that the most common term, “Universe,” may relate to item 14 from their Mystical Experience Questionnaire (MEQ), which describes a common feature of mystical-type experiences: “Freedom from the limitations of your personal self and feeling a unity or bond with what was felt to be greater than your personal self”; in a word, interconnectedness.

The following CME self-reports relate to this concept of interconnectedness:

“The trip was mostly concerned with the love pertaining to the different relations in my life, but also the love that exists between human beings in general, to the planet and to the universe.” (Report 3)

“The light of love brings clarity to everything. I get a deep feeling

of purity and feel that everything is beautiful, and that love is what makes up the world and the universe and connects everything like a network of roots.” (Report 22)

“Several times during the trip, I found myself laughing in sheer admiration of the impressive and wonderous universe of human consciousness.” (Report 10)

“When I close my eyes, I am in a fantastic world. Suspended in the whole universe. Stretched across the cosmos. When I open my eyes, I am being prepared for the MR-scanner. [...] I can hear the sounds of the scanner which influences my universe, white and silver lines unfold, make sudden angles and travel onwards abruptly.” (Report 31)

These observations align with Carhart-Harris’ DMN research, wherein suppression of DMN functions allows the individual to reconnect with previously filtered sensory data. Further, there is the association with DMN hyperactivity and the narrowing of behaviour patterns analogous to the characteristic outlined in MEQ item 14: “limitations of the personal self.”

In the end, the researchers showed a relationship between the intensity of the psilocybin-induced mystical-type experience and lasting positive psychological effects in the realms of behaviour, attitudes about life, attitudes about self, mood, social effects, and spirituality.

Personality, Psychopathology, Life Attitudes and Neuropsychological Performance among Ritual Users of Ayahuasca: A Longitudinal Study

Ayahuasca has traditionally been a core component of Amazonian shamanism.¹ Today, the plant medicine maintains this status in a number of Brazilian syncretic churches that have spread out to North America and Europe.² In the article *Personality, Psychopathology, Life Attitudes and Neuropsychological Performance among Ritual Users of Ayahuasca*, Jose Carlos Bouso et al. provide further evidence for the psychological benefits of psychedelic consumption in not only a spiritual setting, but a structured, ritual context as is practiced in the NAC.

The study evaluated the personality, life attitudes, mental health and neuropsychological performance in 127 ritual ayahuasca users from Brazilian ayahuasca churches, comparing these results to a control group of 115. Each participant used ayahuasca at least twice a month for a minimum of 15 years. These members were grouped in two categories, those taking ayahuasca in an urban setting (“urban sample”) compared to those in a suburban setting (“jungle sample”). The study had participants engage in activities which tested executive function (requiring

strategic planning, organized searching, the ability to use environmental feedback to shift cognitive set, or modulation of impulsive responding), working memory, sense of spirituality, perceived “meaning of life” (as opposed to existential distress), and psychosocial well-being (a measure of self-acceptance, autonomy, and psychosocial bonds).

In the end, the data revealed a number of pertinent findings. First, they found no evidence for pathological disorders in the ayahuasca group compared to the non-ayahuasca control group. Ayahuasca users from the jungle sample showed significantly lower scores in all nine categories: OCD, depression, anxiety, interpersonal sensitivity, hostility, phobic anxiety, paranoid ideation, and psychoticism. The urban sample indicated lower scores than the control group in seven out of the nine categories. Ayahuasca users performed better in neuropsychological tests, higher in spirituality, better psychosocial adaptation (reflected in traits like purpose in life and subjective well-being), and saw persisting benefits up to one year later upon a follow-up study.



Ayahuasca is a liquid concoction made by boiling the Banisteriopsis Caapi vine with the leaves of the Psychotria Viridis shrub. It has been used for centuries for religious, ritual and therapeutic purposes by indigenous cultures in Peru, Brazil, Colombia and Ecuador.

Active chemical: DMT (dimethyltryptamine) and monoamine oxidase inhibitors (MAOIs).

Effects (4-6 hours):

- nausea and vomiting
- diarrhea
- euphoria
- feelings of connection and unity
- introspection
- intense visual and auditory hallucinations
- experiencing powerful emotions
- altered sense of time
- ego-dissolution/depersonalization
- anxiety
- panic and fear
- moderate increase in blood pressure and heart rate
- increased body temperature.

In ritual contexts, negative effects like anxiety, paranoia, and frightening hallucinations take on a different meaning. They may be interpreted as lessons and an integral part of spiritual, psychological, and physical healing. The first two emetic properties listed may also be seen positively, as a necessary purging and detoxification process.

“Ayahuasca - Alcohol and Drug Foundation,” accessed December 6, 2022, <https://adf.org.au/drug-facts/ayahuasca/>.

NAC Tipi Ceremony

Before assessing the sensory qualities of an NAC ceremony, it is necessary to identify which senses will be discussed and exactly how those senses are defined. For the purposes of this thesis, the nine senses will be considered as outlined by John M. Henshaw, author of *A Tour of the Senses: How Your Brain Interprets the World*. In addition to the classic five, that list includes:

Temperature is sensed by six types of thermoreceptors, each responding to a different temperature range. 45°C represents the pain threshold of the average person.³

Proprioception (body awareness) is the sense of posture, movement, balance, and location of limbs and torso as perceived by proprioceptors. To lose feeling in a limb due to loss of blood circulation is akin to

the loss of proprioception.⁴

Vestibular (balance) is the sense of motion in the body and head, enabling a sense of balance and orientation. Among other things, the vestibular system provides the critical function of keeping someone from continuously falling over.⁵

Nociception (pain). Nociceptors perceive pain whenever a stimulus falls above or below a certain threshold. The threshold is relative to the individual, and indicates the point at which a stimulus will harm their body if actions are not taken to remove it.⁶

The following pages detail the elements of a typical NAC tipi ceremony and how each of the nine senses are engaged over its duration (Figure 6.3).

6.1 Diagrams of the nine senses.



Thermo-reception



Proprio-ception



Vestibular sense



Noci-ception



Hearing



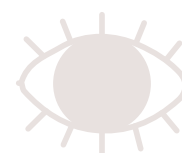
Smell



Touch

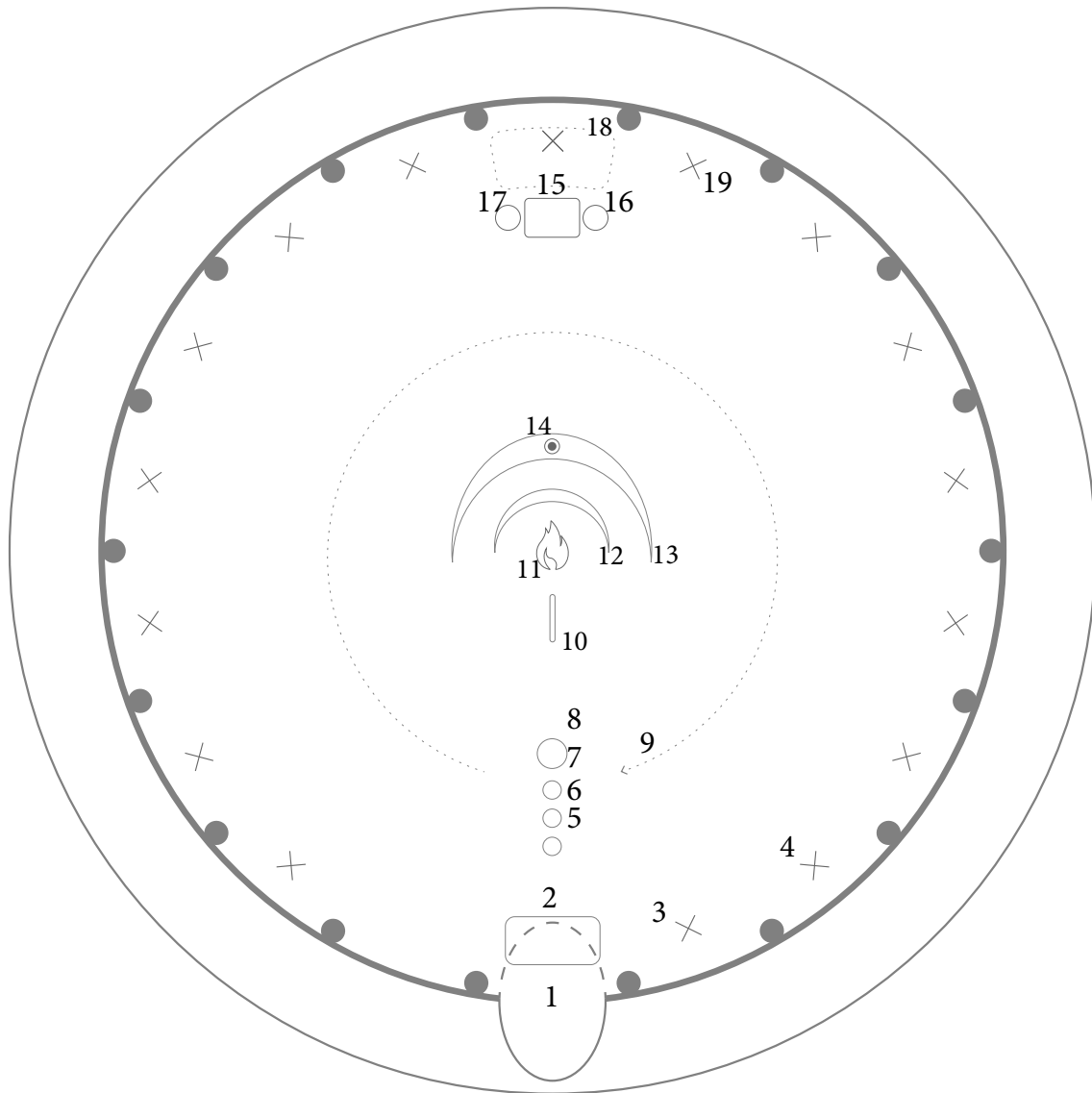


Taste



Sight

6.2 The arrangement of a tipi interior during a peyote meeting.



- | | | | | | |
|----------|--------------|-----------|-------------------------|-----------|--|
| 1 | Entrance | 8 | Water | 15 | Altar cloth |
| 2 | Cloth | 9 | Direction of movement | 16 | Drum |
| 3 | Water bearer | 10 | Smoke stick | 17 | Gourd rattle |
| 4 | Fireman | 11 | Fire | 18 | Place for sage, staff, peyote and incense bags |
| 5 | Meat | 12 | Ashes | 19 | Cedar man |
| 6 | Fruit | 13 | The peyote road / altar | X | Peyote members |
| 7 | Corn | 14 | Peyote on top of sage | | |

6.3 Diagramming how each of the nine senses are engaged over the course of an NAC tipi ceremony.

1 Formed out of a translucent fabric, the tipi itself becomes a beacon of light in the nighttime. Within, peyote members are treated to the spectacle of a dancing fire, and without, onlookers are treated to the shadows of dancing celebrants painted onto the canvas by the firelight.

2 At specific moments throughout the night, water and food will be passed around the circle, stimulating the sense of taste.⁷

3 Massaging out aches and pains is achieved by rubbing sage into the skin,⁸ an act which may be as therapeutic for the one performing the massage as the one receiving it. Exposed to the earthen ground below, peyote members also maintain a tangible connection to the earth.

4 In addition to the already distinct and pungent smell of a wood fire, various types of incense may be burned like cedar or sage.⁹ Different cultures use different incense - for the Navajo (Diné) members of the NAC, sweetgrass may be used instead.

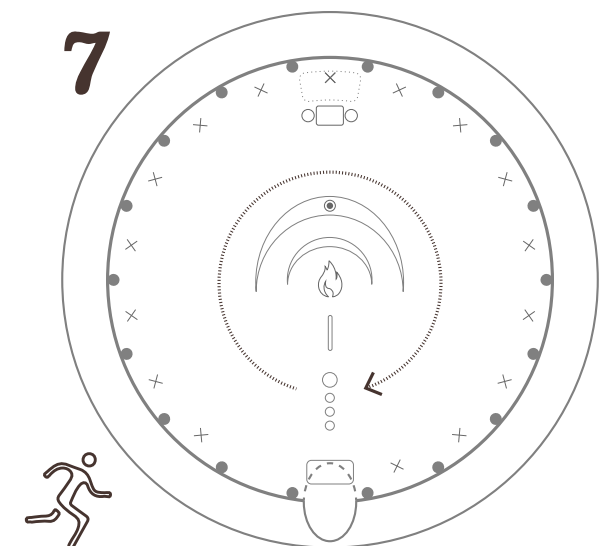
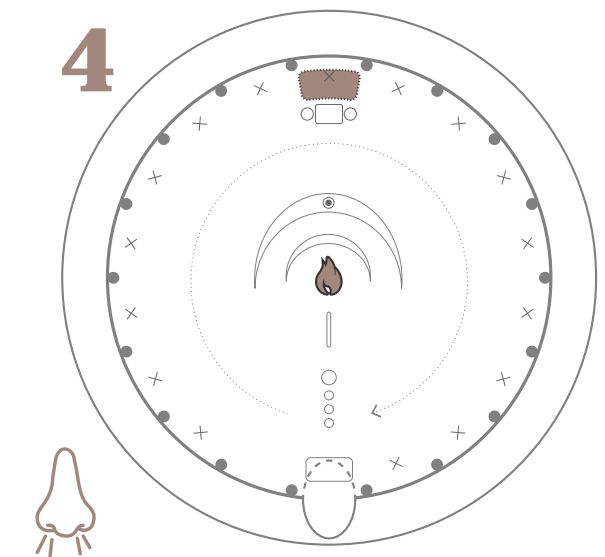
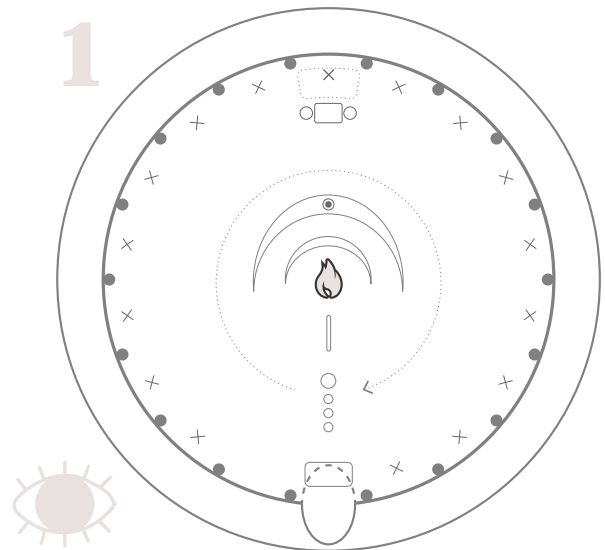
5 The playing of drums, shaking of a gourd rattle, singing and the crackling fire all contribute to a strong stimulation of the sense of hearing. James Mooney recalls the way sound “echoes and multiplies” within the conical tipi canvas.¹⁰

6 The central fire provides a sense of warmth, while quick access to the cool outdoors is always maintained in this free-standing structure, separated from nature by a thin veneer.

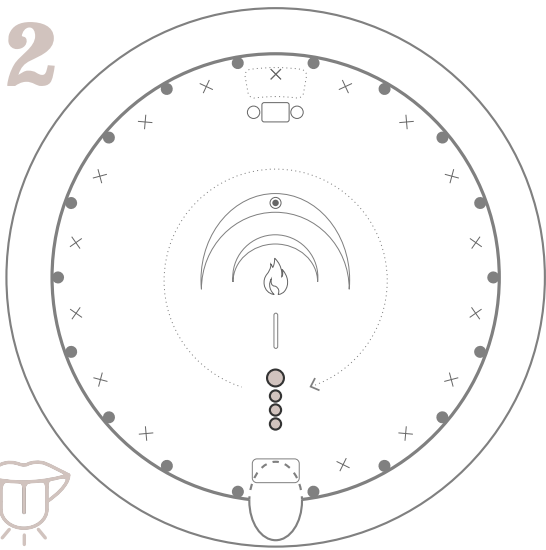
7 Sense of body movement, outside of the long bouts of dancing, occurs in a particular and sacred fashion. It follows the direction of the peyote road, a path that signifies the cycle of life and death that begins and ends in the east.¹¹

8 Sense of balance is integral to the act of dancing, something that goes on for long hours throughout the night in an NAC peyote ceremony.

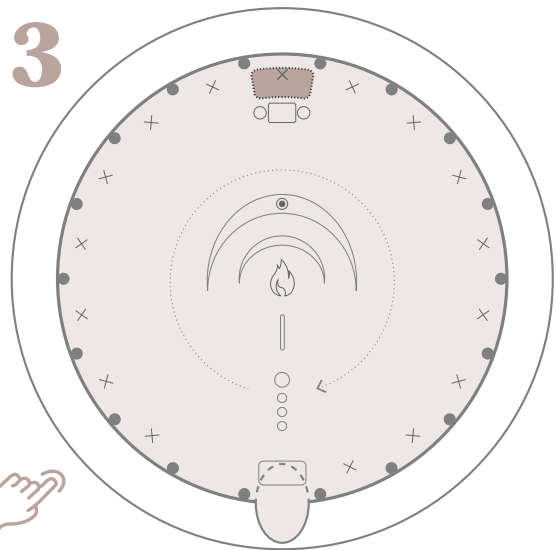
9 Even the sense of pain is celebrated here. Rather than trying to eliminate it, NAC members regard the discomfort caused by peyote to be integral to the experience.¹²



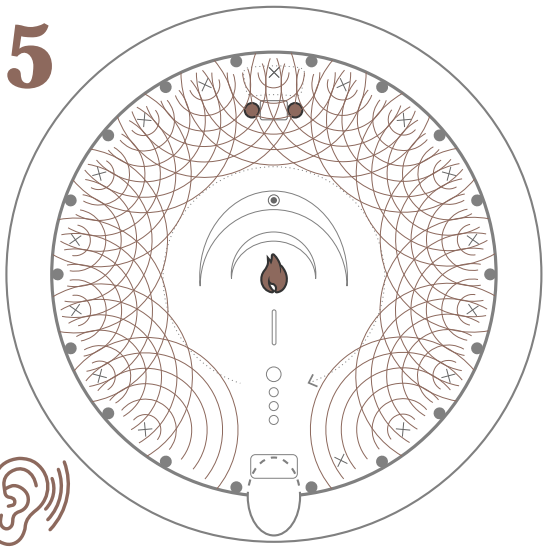
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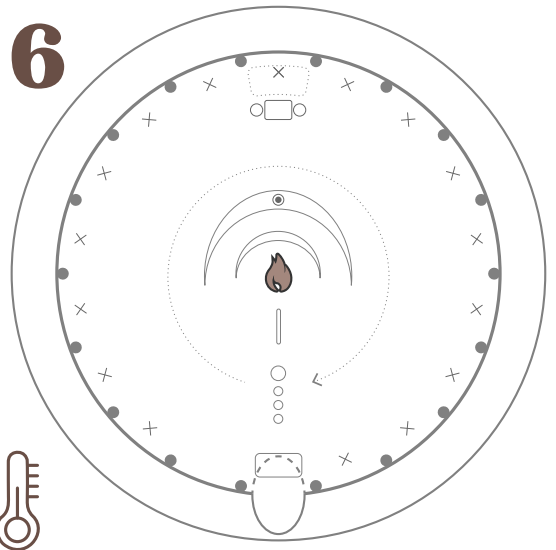
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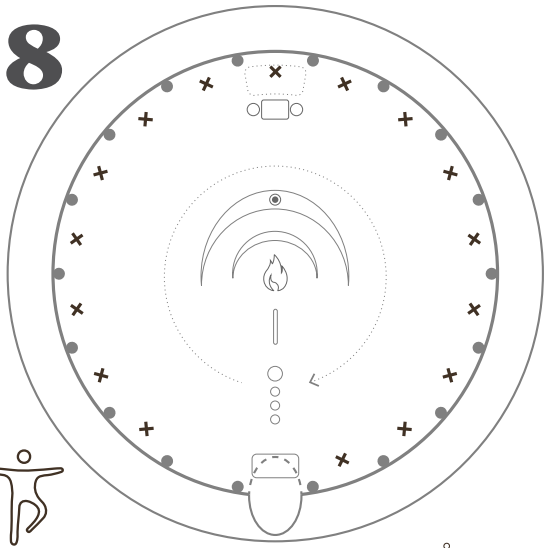
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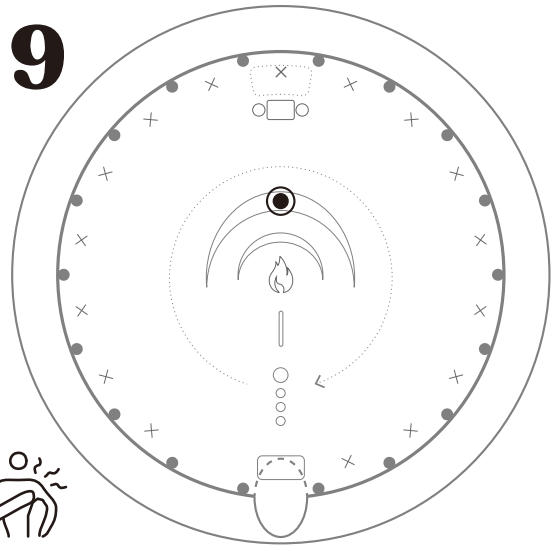
6



8



9



6.2 Western / Contemporary

When it came to analyzing contemporary western examples of settings designated for psychedelic assisted therapy, Beckley Retreats became a blueprint to follow. The company takes an evidence based therapy approach informed by the Beckley Foundation, a research institute which is a member of the International Drug Policy Consortium and at the forefront of the ongoing psychedelic renaissance.¹³

At a Beckley retreat, so many of the elements which characterize traditional Peyotism and other indigenous psychedelic ceremonies are included. To name a few, the importance of sound resurfaces in the form of live music during the session, of scent in the form of incense, of community bonding in the form of group therapy and bonding exercises, of movement in the form of yoga, and a focus on spiritual practices in the form of yoga and meditation. Their research indicates that results rely on more than the psychedelic substance itself, but how it is integrated into a holistic model of healing and therapy.¹⁴

Studying their methods, one finds very quickly that this is a therapy which can go a long way with very little. There are but a few fundamentals: a large space for each patient to gather around during a session; access to nature; opportunities to hike, surf, and physically engage with nature; a distancing (or “retreating”) from society; and the basic necessities required for meditation, breathwork, and yoga. There are no complicated medical instruments used in this kind of medicine, and the therapists are merely there to talk the guests through their experience. It is perhaps for these reasons that, rather than taking place in a building

designed specifically for psychedelic use, Beckley successfully provides therapy while occupying what is instead a resort destination for the duration of the retreat (Figure 6.4). As such, this building typology will be studied alongside the scant few dedicated psychedelic retreats that have been documented in detail: settings which are dedicated to holistic and integrative* wellness practices.

The case studies to follow provide a more definitive index of those fundamental elements that are common to most wellness retreats. These were found to be: access to nature, a kitchen for guests, a pool

* Integrative medicine represents a more holistic and individual method of healing which is slowly gaining traction around the world.¹⁵ It integrates alternative and complementary medicine into the western conventional methods, with the aim of attending to the whole of a patient’s needs: physical, mental, and spiritual.¹⁶ It prioritizes prevention and general well-being by enriching one’s natural immunity.¹⁷

Integrative medicine stands out from other alternative medicines in that it emphasizes evidence-based practices.¹⁸ These are informed, for example, by the doubling of research publications on the topic since 2012; primarily in USA, China, Germany, England, and Italy.¹⁹

or nearby lake, equipment for excursions like bicycles or kayaks, a sauna, hot tub or warm water bathing, a restaurant, spa, and yoga studio. Identifying these features helps to indicate the types of programs which may be required in the thesis proposal. Patterns have also been

recognized in terms of the typical forms of psychedelic used, the number of guests per retreat, duration of retreats, types of supplementary wellness practices, and whether the retreat offers post-session integration of what was learned from the experience.



6.4 Beckley Retreats, Jamaica

Beckley Retreats, Jamaica

Psychedelic used

Psilocybin truffles

Guests per retreat

15

Duration of retreat

6 days

Supplementary therapies

Breathwork, meditation, yoga


Integration sessions

Yes

nature 

kitchen 

pool 

excursion eqpt. 

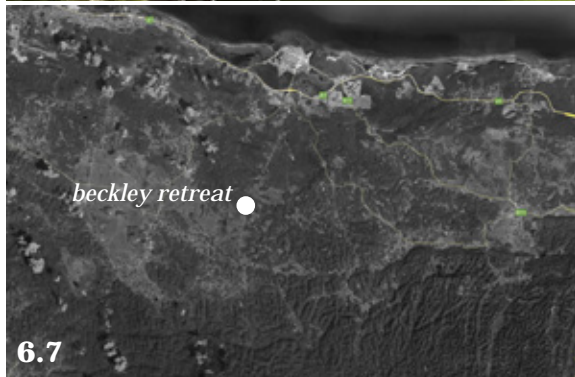
sauna 

hot tub 

restaurant 

spa 

yoga studio 



The Sentinel, British Columbia CA

Psychedelic used

Ayahuasca (DMT)

Guests per retreat

20

Duration of retreat

3 days

Supplementary therapies

Breathwork, meditation, yoga, sound healing


Integration sessions

Yes

nature 

kitchen 

pool 

excursion eqpt. 

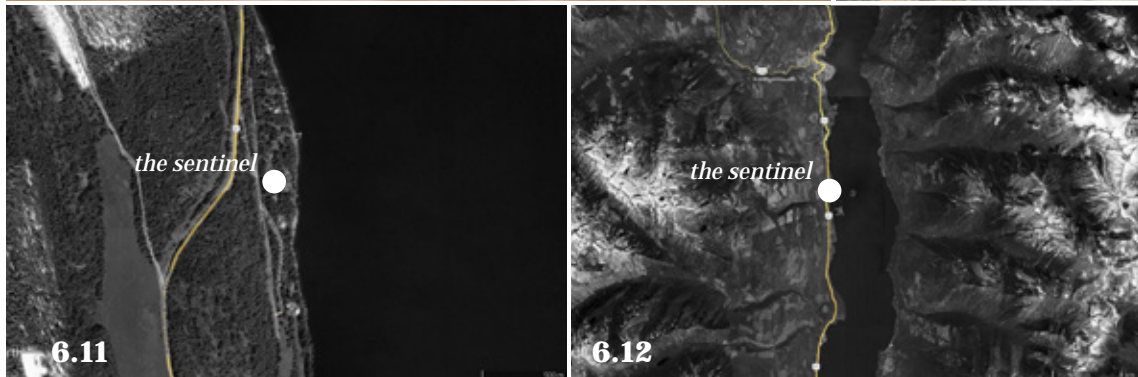
sauna 

hot tub 

restaurant 

spa 

yoga studio 



Venwoude, Netherlands

Psychedelic used

Psilocybin truffles

Guests per retreat

21

Duration of retreat


5 days

Supplementary therapies

Breathwork, meditation, yoga

Integration sessions


Yes

nature 

kitchen 

pool 

excursion eqpt. 

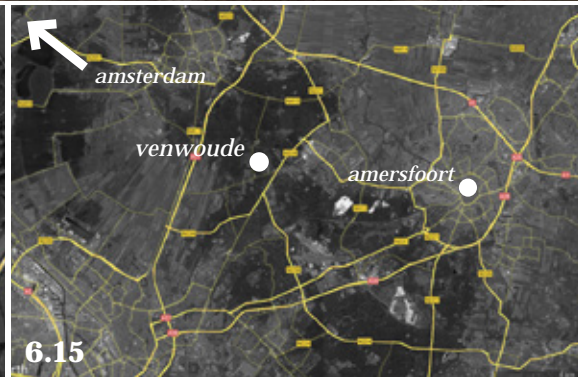
sauna 

hot tub 

restaurant 

spa 

yoga studio 



Dimensions, Ontario CA

Psychedelic used

Psilocybin truffles

Guests per retreat

15

Duration of retreat

6 days

Supplementary therapies

Breathwork, meditation, yoga

Integration sessions


Yes

nature 

kitchen 

pool 

excursion eqpt. 

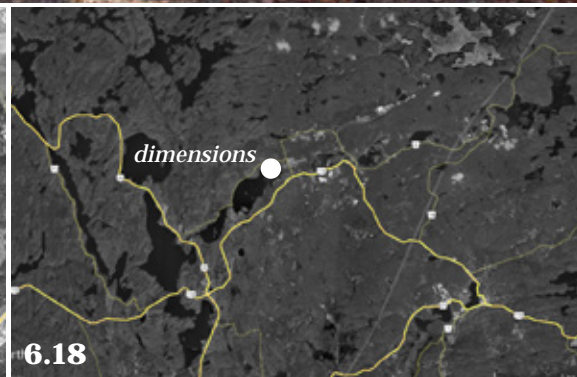
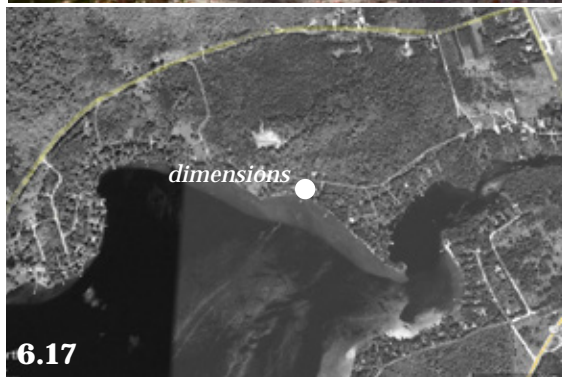
sauna 

hot tub 

restaurant 

spa 

yoga studio 



Therme Vals, Switzerland

Going forward, the case studies being analyzed are *not* designated as settings for the use of psychedelics. Even so, they share many of the same elements, and retain the fundamental aim of providing a holistic wellness methodology. First, is Peter Zumthor's Therme Vals and the adjoining 7132 Hotel in Vals, Switzerland.

Of the previous examples, Therme Vals is perhaps the closest to urbanity - being surrounded by a number of large hotels. The author's own visit to Vals revealed this issue to be negated by thick walls that block out noise and by framing the view of the mountain rather than buildings, the town, and the social realm. The images opposite attest to this condition.

nature 

kitchen 

pool 

excursion eqpt. 

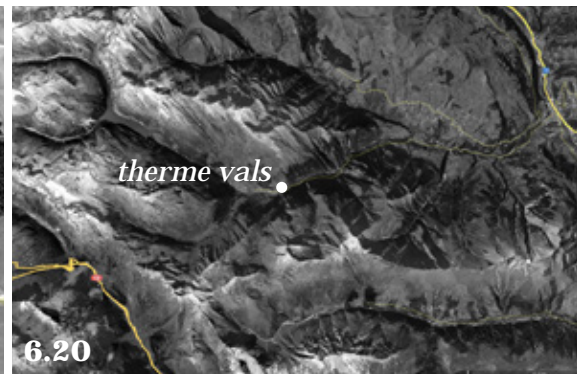
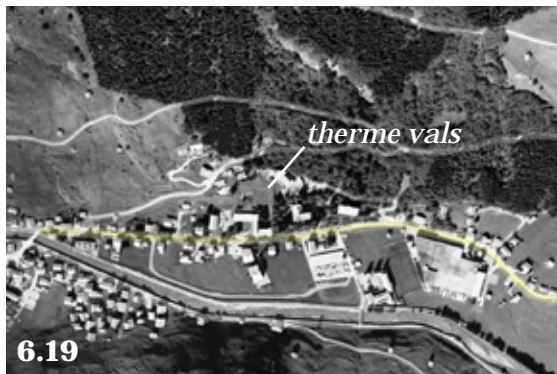
sauna 

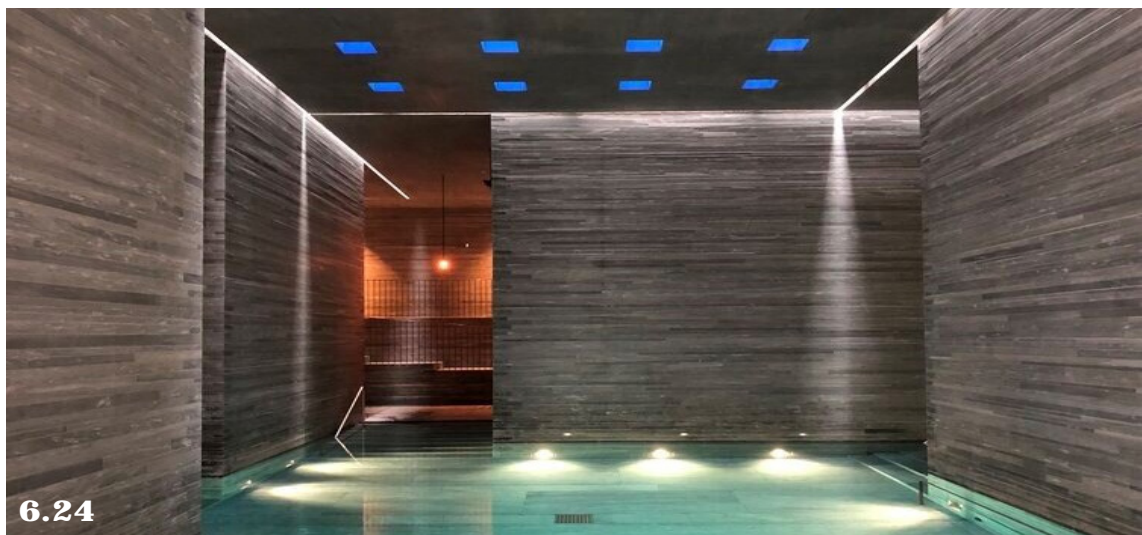
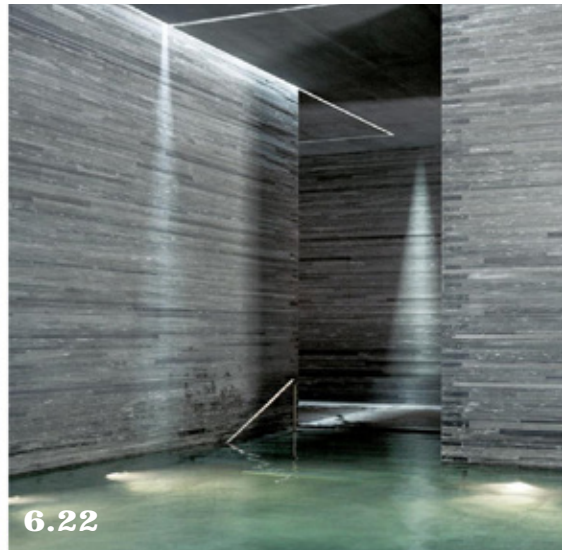
hot tub 

restaurant 

spa 

yoga studio 





The site plan highlights the relationship between Therme Vals; the built, human landscape; and key features of the unbuilt, natural landscape. Those features include the heavily wooded area to the north and the glacial melt-water river to the south. A general east-to-west direction of movement through the building and the paths surrounding it can also be identified (detailed further on the following page). Along this route in the building, the individual not only moves from more intimate and dimly lit spaces toward larger and brighter spaces, but from a temperate and sheltered space toward the untempered elements of the outdoors. Two focal points mark this transition, that being the central indoor pool and the central outdoor pool.

The building is relatively cloistered, blocked from sight by the trees, if not the buildings, that surround it. This supports the idea that Therme Vals is designed as more of an experience to be had up close than an aesthetic object to be viewed at a distance.

Finally, there is a lengthy and sinuous approach to the building which skirts the dense forest, rather than direct access from an adjacent parking lot. Might this prolonged exposure to nature begin to establish a certain mindset prior to the experience?



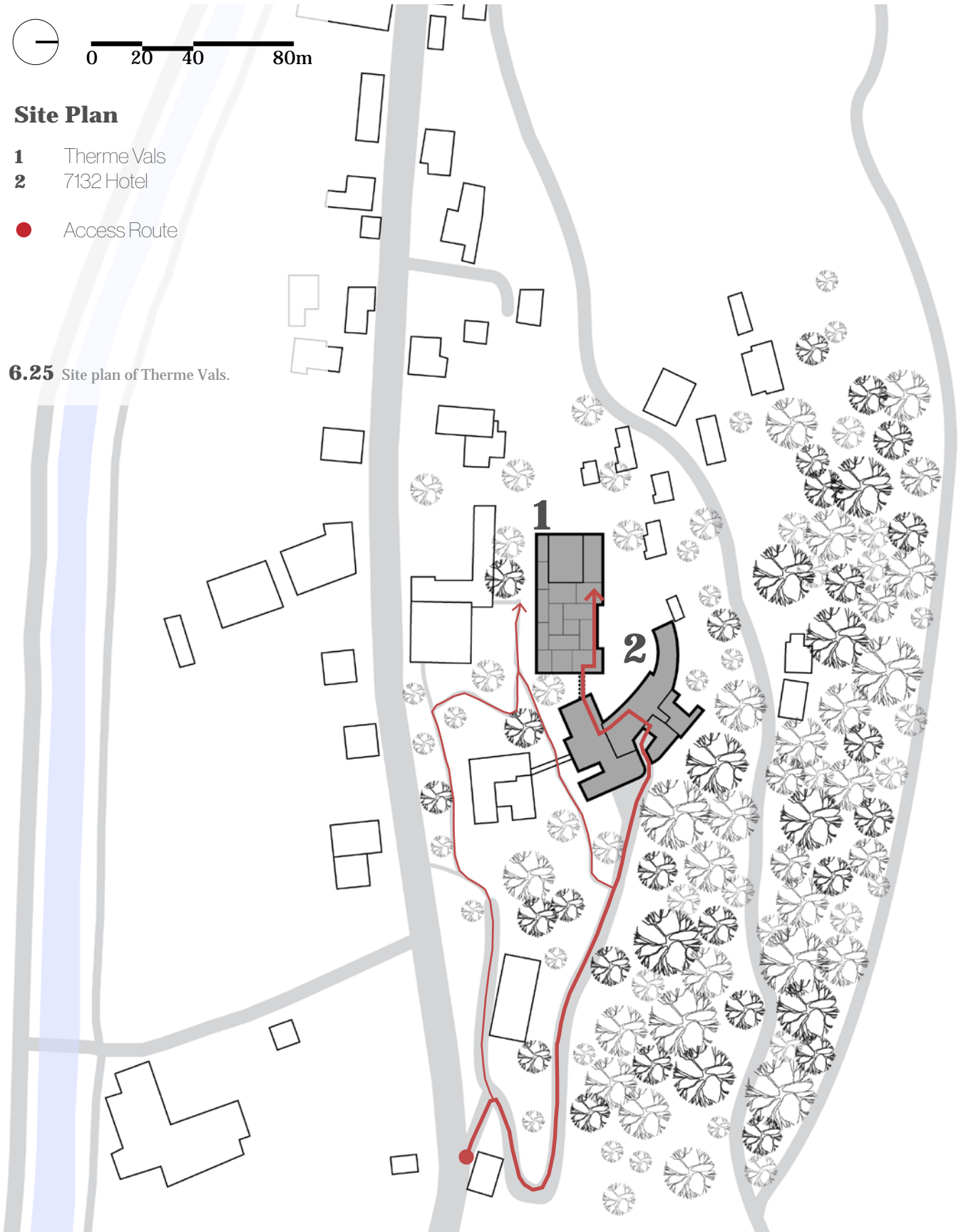
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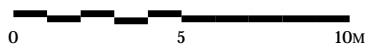
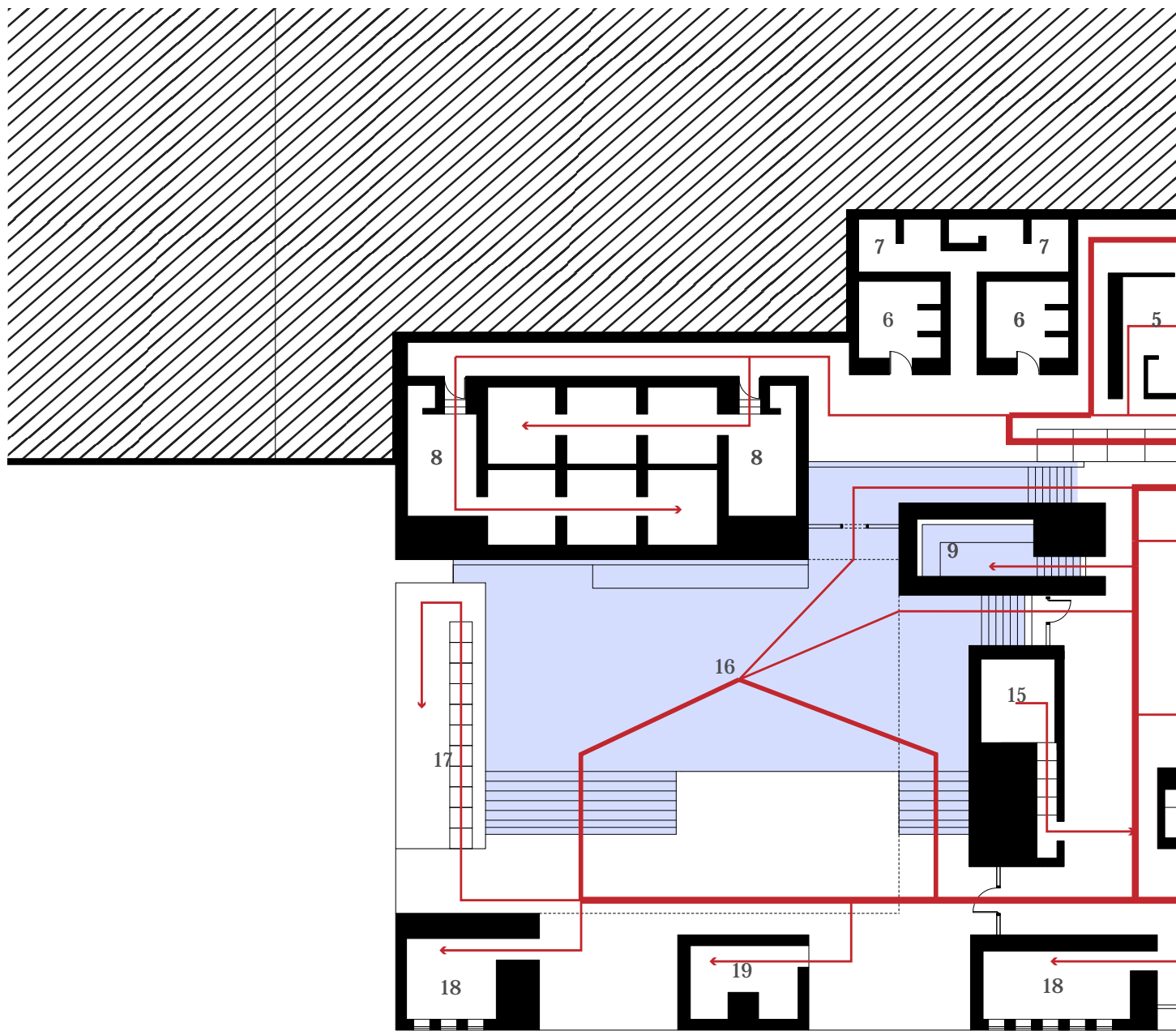
Site Plan

- 1 Therme Vals
- 2 7132 Hotel

● Access Route

6.25 Site plan of Therme Vals.





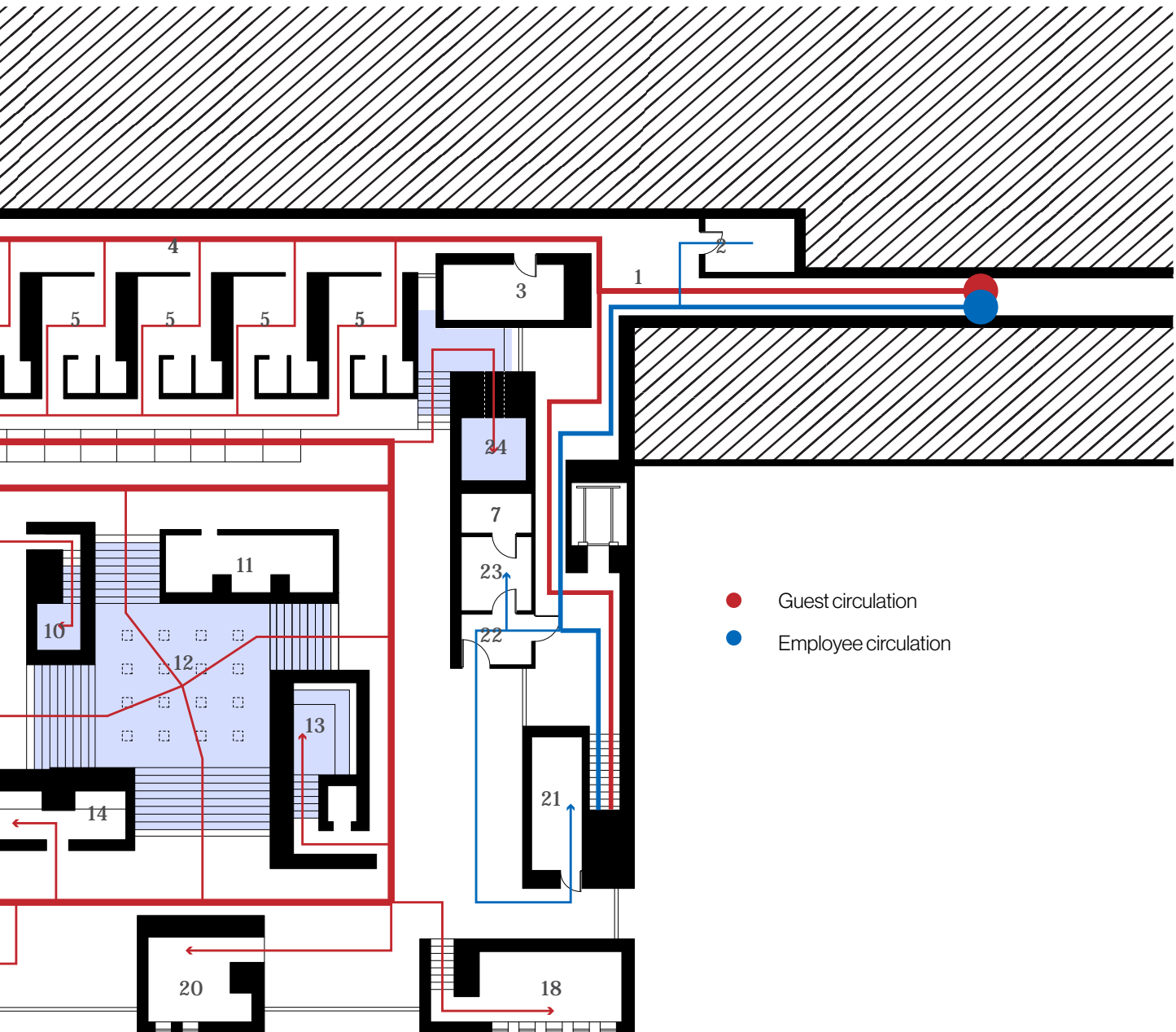
bath level

- 1** entrance
- 2** utility
- 3** makeup room
- 4** hallway with drinking fountain

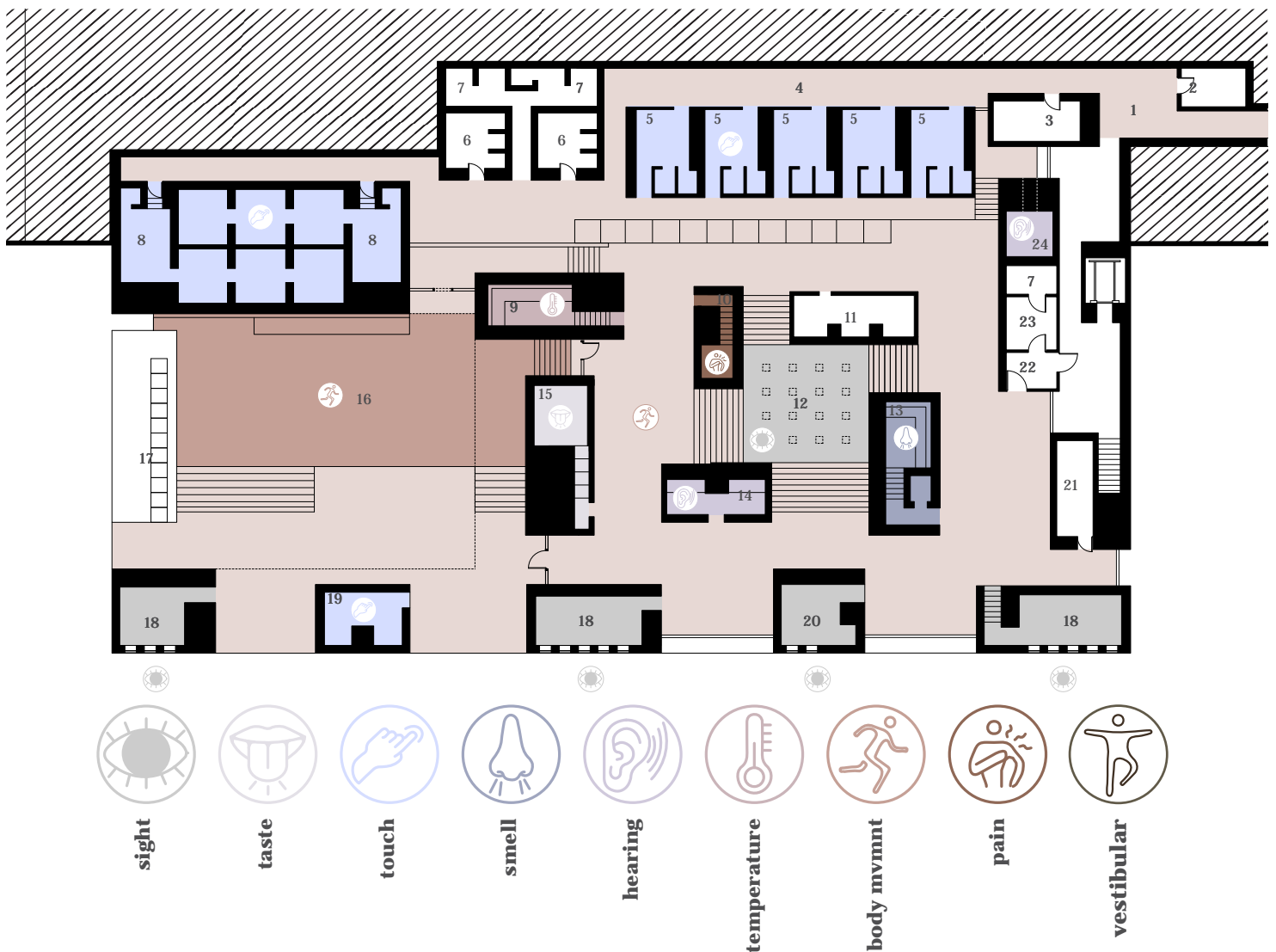
- 5** change rooms
- 6** showers
- 7** washrooms
- 8** sweat stone (sauna)
- 9** fire bath 42°
- 10** cold bath 12°
- 11** shower

- 12** indoor pool 30°
- 13** flower bath
- 14** sound stone
- 15** drinking stone
- 16** outdoor pool 36°
- 17** terrace
- 18** rest area

- 19** outdoor shower
- 20** massage room
- 21** bath attendant office
- 22** barrier-free access
- 23** barrier-free first aid room
- 24** sound bath



6.26 Therme Vals floor plan. Circulation reveals a crisscrossing, up-and-down staircases movement that constantly engages the proprioceptive sense.



6.27 Plan of sensory stimulation at Thermen Vals.

On the bath level, six different baths can be identified, each taking on an entirely distinct atmosphere and experience. Figure 6.27 maps this landscape of sensations. Every one of the nine senses is heavily and purposefully stimulated at Thermen Vals. For Zumthor, this became a way to anchor visitors to their surroundings and connect them with the *real things* in a way at least partially inspired by Heidegger.²⁰

Sight is engaged in what are essentially viewing rooms facing the mountain to the south (room 18). In general, there is a

north-to-south orientation about the whole experience, starting on one end within the depths of the mountain and gradually moving out into the wider world. All the while, it is the occasional glimpse of the mountains which orients the individual along this sacred procession, emphasized by a use of the aforementioned view framing. Here, framing involves far more than a window in a thin wall that faces a certain direction (effectively a two-dimensional frame). Zumthor extrudes and three-dimensionalizes the frame (Figure 6.28) so that everywhere one looks, they're directed toward a single vanishing point which is the

mountain and trees. Where this represents a morphological technique, Zumthor achieves the same with the materials. The exaggerated length of the bricks also serve to direct the view towards that vanishing point. Finally, the indoor pool forms a nexus of visual stimulants. From this location in the space, a blue light enters the sixteen skylights above, yellow light shines from beneath the water, and red light from the long entrance stair is framed between two walls (Figure 6.29). Beyond these various hues, one finds direct and indirect light, soft and hard, reflected and diffused; all coming together in a phantasmagoric exchange at this focal point of the building.

Taste is engaged in a room entirely dedicated to drinking fresh glacial melt-water (room 15). Not only is this a large room with a centrally located fountain, but Zumthor crafts yet another unique experience around this act by separating it from the rest of the space with an elongated staircase. Unlike the baths where a stair is necessary in order to descend into the water, this room stands as evidence that there may be more to the use of stairs throughout the space than pure functionality.

Touch is engaged in the act of a massage (room 20), but also throughout the many dark crevices and particularly in the steam baths (room 8). Because this room is especially dark and difficult to see, it almost necessitates feeling around for a place to sit.

Scent is engaged in the flower bath (room 13), where the scent of flower petals permeate the space.

Hearing is engaged in the sound bath (room 24) and the room referred to by Zumthor as the “sound stone” (room 14).

Temperature sensors are engaged in the hot and cold baths (rooms 9-10), and to varying degrees throughout the entire experience. One constantly transitions between rooms of varying temperatures or from indoors to outdoors.

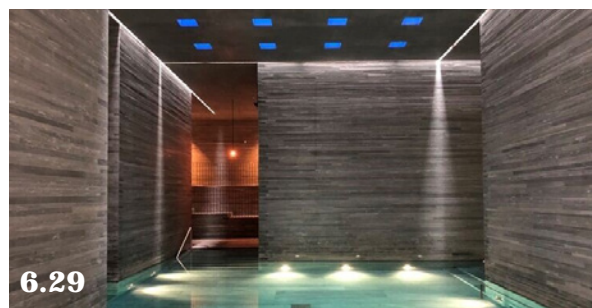
Pain (nociception) may potentially be engaged in the same hot and cold baths. This depends on the pain threshold of the individual, but these extremes will likely feel painful to the average person. Both were certainly painful for myself during a 2018 visit to Therme Vals.

Body movement (proprioception) is constantly engaged throughout the spa. The obvious example is in the act of swimming, a quintessential use of limb movement and coordination, but Zumthor takes this sense a step further. For those seeking a taste of every experience this building has to offer, this requires wandering all about a labyrinthine space, crisscrossing the halls, and climbing and descending stairs to get in and out of baths (Figure 6.26). There is a wide variety of ways for the body to move about the space compared to the use of a singular path, back and forth from A to B. Here, there are a hundred different ways to get to A and B as well as C, D, E, F and so on.

Sense of balance (vestibular sense). If the presence of a hand-rail is any indication that a given terrain will require balance, then stairways represent a prime use of the vestibular sense. The act of ascending and descending stairs makes up a large portion of the time spent at Therme Vals, as evidenced by the bath level floor plan. Stairs mark the entry to nearly every room, and come in a range of shapes and sizes.



6.28












6.29

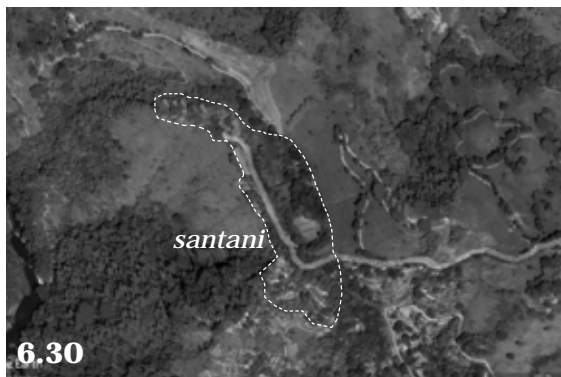
Santani Resort and Spa, Sri Lanka

Santani Wellness Resort and Spa is located near Kandy, Sri Lanka. In contrast to Therme Vals, Santani reveals the more common approach to psychedelic retreats: having all the guest houses and amenities spread out across a large site. Seeking a harmonious and seamless relationship between my proposed retreat centre and its site, Santani exemplifies this concept with their integration of the spa facility into the landscape. Following their example will be one way to avoid a building that dominates its surroundings and appears out of place (Figure 6.32). The architects summarize core aspects of their design and touch on themes central to this thesis with the following description:

“Framed views, play of light and cool winds, rustic natural materials create a multi-sensory experience, in a design that embodies its natural landscape, purifying the mind with silence.”²¹

Locating Santani on the map indicated that once again, here is a case study which is distanced from main roads and cities.

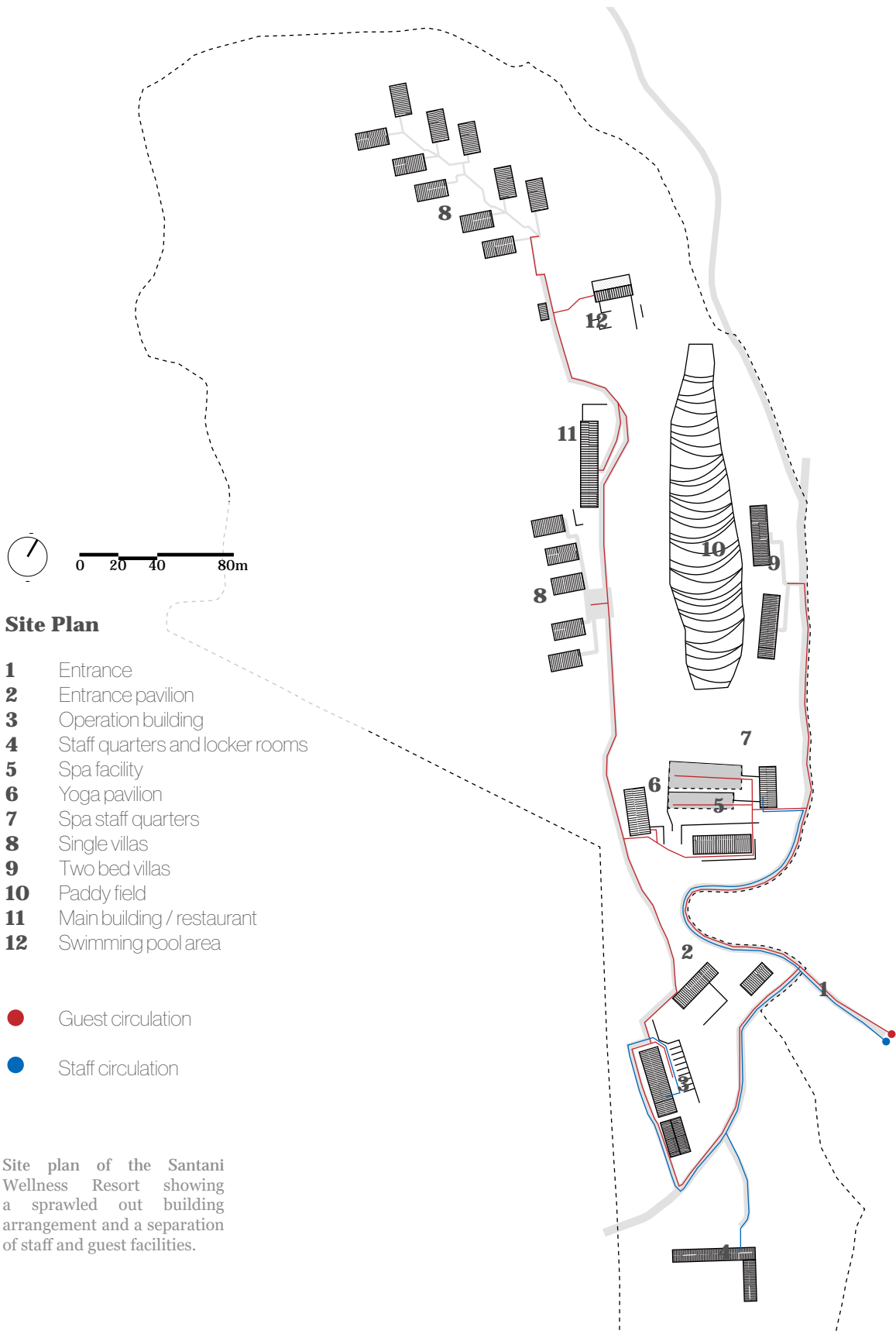
- nature 
- kitchen 
- pool 
- excursion eqpt. 
- sauna 
- hot tub 
- restaurant 
- spa 
- yoga studio 





Studying the site plan, there is a notable separation of staff and guest buildings. Considering the importance of a certain calm and stable mindset for the participants of psychedelic therapy, separating these two groups, which will be occupying two very different mindsets as a result of their short-term goals (one being relaxation, one being working and providing service) will also be important to the thesis design proposal. Remaining within social games that relate to work-life, the duties of staff may remind guests of the social games that they have left behind. It is perhaps for the same reasons that Santani makes a policy of limiting internet and wifi access throughout the site. Invariably, social media is a reminder of social games.

The plan also provides a good sense of acceptable distances between accommodations and amenities. The Lawson Quarry Retreat Centre will also spread out across a large site wherever possible. Evidently, walking and exploring the site is a critical component of the experience.



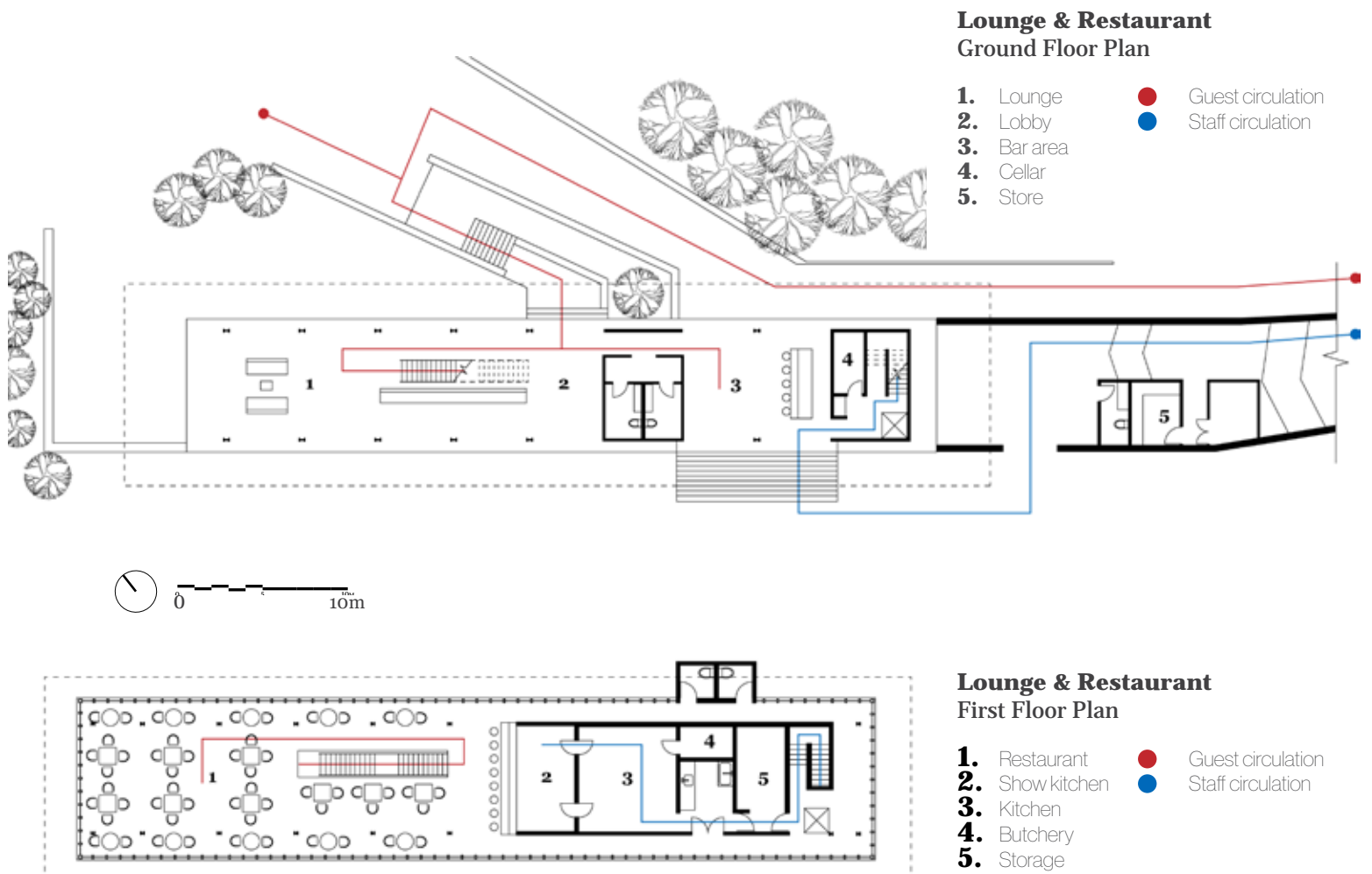
6.35 Site plan of the Santani Wellness Resort showing a sprawled out building arrangement and a separation of staff and guest facilities.

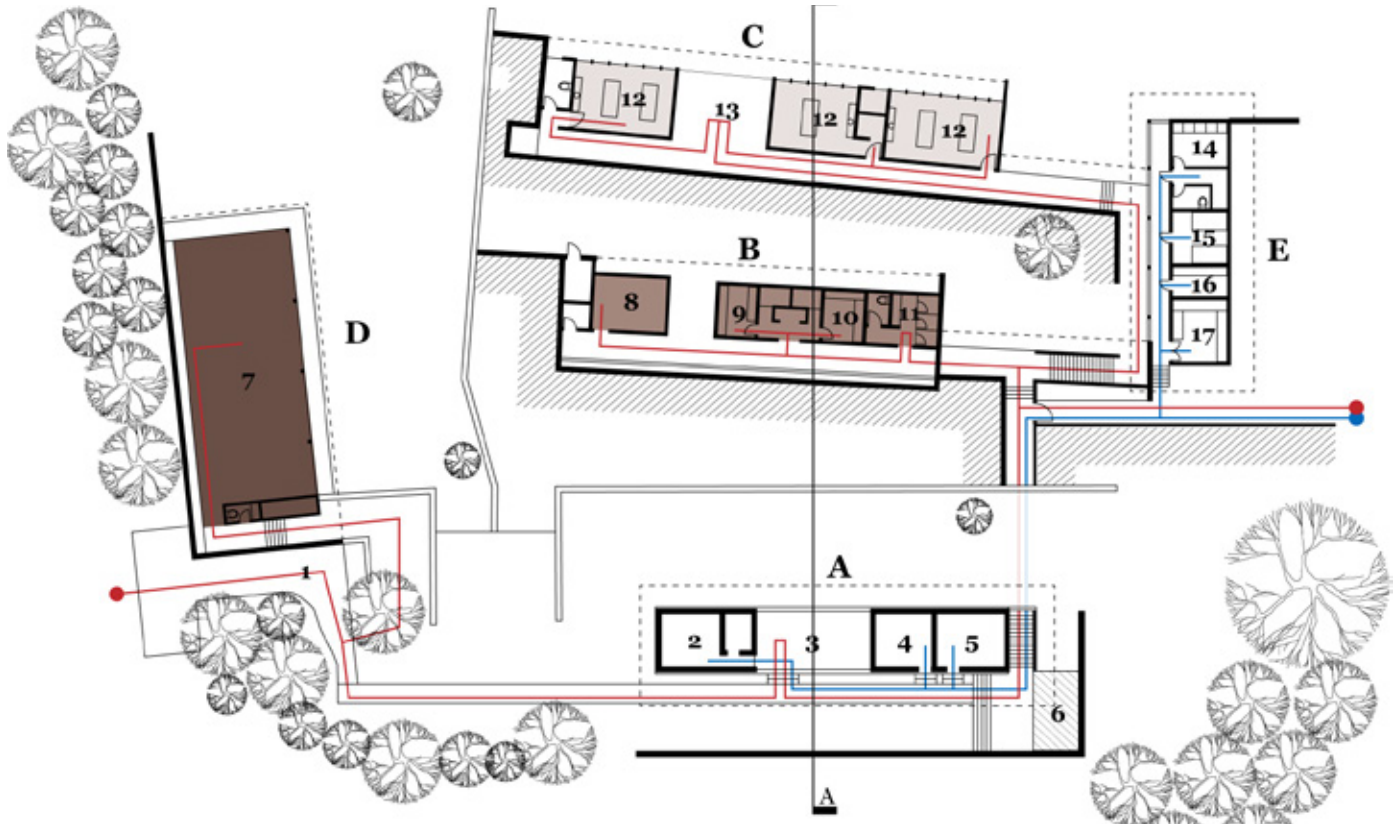
The following floor plans helped to determine program adjacencies and circulation for the proposed retreat centre. For instance, in terms of circulation, entirely separate entries were included to accommodate staff who are approaching from an opposite end of the site to the guest rooms. It seems there were great efforts to maintain a straight path for the staff to maneuver the grounds in a timely and efficient manner. Service

corridors are not only separate, but visually concealed from the public routes, separated by thick stone walls in the case of the lounge & restaurant. Once again, it would be apt to imitate this strategy in the context of a psychedelic retreat centre where staff and guests should be separated.

The cross section (opposite) illustrates the idea of shaping the landscape in order for the building to blend itself in.

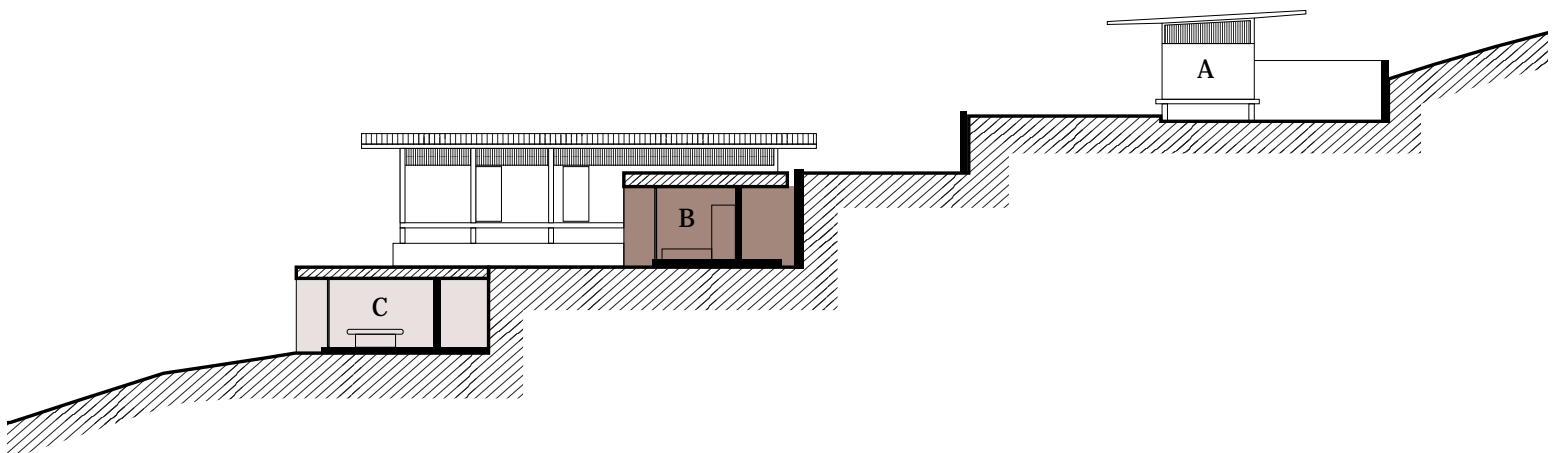
6.36 Section and floor plans of the Santani Resort.





Spa Facility Floor Plan 0 10m

- | | | | | |
|-----------------------|------------------------|---------------------|-------------------|-----------------------|
| A - Entrance Pavilion | B - Water/Heat Therapy | C - Massage Therapy | D - Yoga Pavilion | E - Worker's Facility |
| 1. Entrance | 8. Hydrotherapy | 12. Massage therapy | 7. Yoga area | 14. Locker room |
| 2. Consultant's room | 9. Steam room | 13. Lobby | | 15. Waiting room |
| 3. Lobby | 10. Sauna | | | 16. Pantry |
| 4. Pantry | 11. Change room | | | 17. Linen room |
| 5. Office | | | | |
| 6. Shallow pond | | | | |

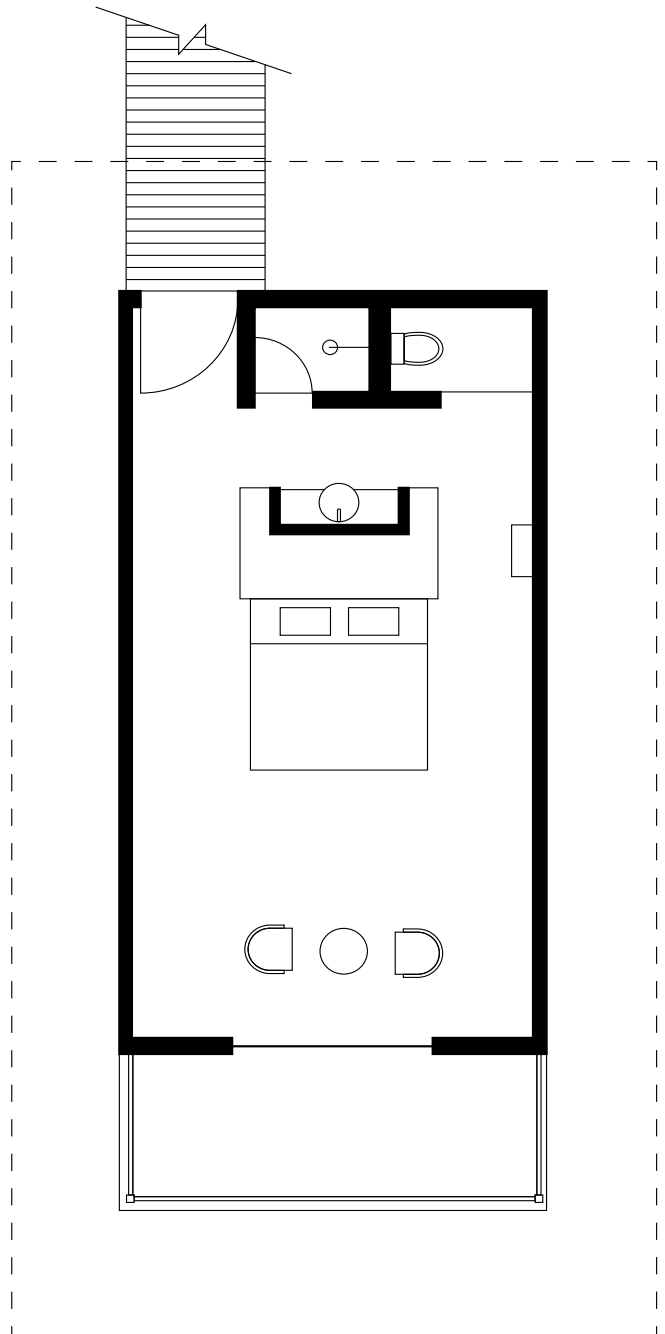


Spa Facility Cross Section 0 10m

Previously, it was established that there are a few fundamental elements that define the experience offered at a psychedelic retreat centre: a getaway in nature, physical activity, a meeting place to have the therapy session, and a spot to meditate and practice yoga. The guest lodging at Santani Resort speaks to this simplicity with a design that is raw, unadorned, and unsophisticated. There are no features like televisions or stereos to distract from the surroundings. This would seem to emphasize the idea that the essential experience is to be had out of doors or with the company of others at places of gathering, rather than in quiet solitude within private living quarters.

6.37 Floor plan of one bedroom villa at Santani Resort.

Single Villa Floor Plan



Endnotes

- 1 José Carlos Bouso et al., “Personality, Psychopathology, Life Attitudes and Neuropsychological Performance among Ritual Users of Ayahuasca: A Longitudinal Study,” *PLOS ONE* 7, no. 8 (August 8, 2012): e42421, <https://doi.org/10.1371/journal.pone.0042421>.
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- 14 “Beckley Retreats | Psilocybin Retreats,” accessed October 23, 2022, <https://www.beckleyretreats.com/>.
- 15 Eunhye Song, Lin Ang, and Myeong Soo Lee, “Increasing Trends and Impact of Integrative Medicine Research: From 2012 to 2021,” *Integrative Medicine Research* 11, no. 4 (December 2022): 100884, <https://doi.org/10.1016/j.imr.2022.100884>.
- 16 Ibid.
- 17 Ibid.
- 18 Ibid.
- 19 Ibid.
- 20 Adam Sharr, *Heidegger for Architects* (270 Madison Avenue, New York: Routledge, 2007): 1
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7 Site Analysis: Lawson Quarry

Adjacent to Lawson Quarry lies Willisville Mountain, falling between Little Current on Manitoulin Island in Ontario and the city of Espanola. They are a fifteen and twenty-four minute drive from the site, respectively, while the drive from Sudbury is approximately one hour. The mountain is, for the author and many other Sudburians who frequent Manitoulin Island, a special place. Of all the spectacular views to take in along the route from Sudbury, Willisville Mountain may be counted as the most breathtaking among them.

More than just a mountain, it becomes a sign of the vast and open valley soon to sprawl itself out after one finally emerges

from the long, claustrophobic stretch of dense bush that precedes the site. Bisected by a sinuous stretch of Highway 6, the valley offers a range of perspectives from which to take everything in.

The reasons for choosing the quarry as the site are threefold. First, so that the view of the mountain may be enjoyed. Second, to minimize the disturbance of established ecosystems, the likes of which have already been stripped from the quarry. Lastly, to occupy a novel form of landscape, an alien environment unlike any that define one's daily, familiar environments where typical social games play out.



7.1 Map of Ontario, marked with the location of Lawson Quarry.



7.2 Map of Lawson Quarry and surrounding townships.

Site Analysis

The location and its surroundings offer every imaginable form of landscape endemic to Northern Ontario: mountains above, wetlands below, and dense forest everywhere in-between. Even the unmistakable mark of humanity, good and bad, makes itself known in the nearby town of Willisville or Lawson Quarry. Rivers are visible from its base, and distant Lake Huron from its peaks. Minutes away lies Whitefish Falls, and minutes more reveal the sprawling flatlands on the approach to a locally famous threshold: Manitoulin Island's swinging bridge. What's more, the site invites one not only to view these landmarks from a distance, but experience them directly and intimately in the hiking trails that criss-cross the area. Willisville mountain marks the east entrance of the Heaven's Gate trail, and another trail of its own leads one to its summit.

It is as phenomenologically rich as a place can be. While there are others like it, what this area offers is a nexus between local, northern, and rural townships who

are among the least serviced by health services of any kind, but particularly mental health.¹ Figure 7.3 illustrates the relationship between population density and prevalence of mental health services. On the same map, the locations of the many townships surrounding the proposed site that stand to benefit from it are indicated.

Next, various utilities and amenities which are crucial to a retreat were mapped (Figure 7.4): airports where visiting guest therapists can arrive from, nearby hotels indicating where they may choose to stay. There's a highway and hydro lines running directly along the site. Nature immersion being so critical, the hiking trails are an important feature and include the aforementioned Heaven's Gate Trail and the Killarney Trail accessible by portage routes. Finally, culturally or spiritually significant sites were noted: Dreamer's Rock and the Bell Rocks on La Cloche Island.

Sinmedwe'ek (Bell Rocks)

According to legend, the La Cloche mountain range that Lawson Quarry is situated in derived its name from the Bell Rocks on La Cloche Island – La Cloche being the French word for the “bell”.² The surrounding site was once the home of Ojibwa/Nishnaabeg people of Wiigwaaskingaa, otherwise known as the Whitefish River First Nation.³ In his article *Sinmedwe'ek: The Other-than-Human Grandfathers of North-Central Ontario*, Darrel Manitowabi said this of the rocks:

“Sinmedwe'ek translates as “bell rocks” or “sounding stones” - they produce a ‘bell-like’ sound when struck with a hard object... Oral history states the rocks were

used as a communication device marking celebrations, events, and ceremonies.”⁴

Manitowabi regards the rocks as sacred, fulfilling the role of “other-than-human” grandfathers that evoke the culture, history and identity of the Wiigwaaskingaa Nishnaabeg.”⁵

Stones which possess this acoustic quality may be described generically as rock gongs or lithophonic stones. They are found sparingly across the world, but heavily reported in various African countries including Nigeria, Uganda, Sudan and Rhodesia.⁶ Their purported uses in aboriginal communities through history and to present day are many: as warning signals, for celebrating, warding

off spirits, fertility rites, communication with spirits, harvest ceremonies, etc.⁷

While lithophonic stones are rare in nature, they can be artificially reproduced, as in the case of stone chimes which have been used for centuries in China.⁸ According to Australian archaeologist Robert G. Bednarik, rock gongs can be of many different types of rock, but tend to consist of granite.⁹ That said, the crucial characteristic, he states, is not the material but the shape and contact with the supporting mass beneath it:

“Irrespective of rock type, the best lithophonic sound results are always obtained from rocks that are thin, discoid or elongate, and only supported at very limited contact surfaces. Ideally, they are long and slender, and supported only at one end, which is why stalactites are excellent candidates. To function best, the

stone must be as free as possible to resonate unhindered when struck, which allows it to increase the intensity and prolongation of sound by sympathetic vibration.”

With these characteristics serving as a guideline, a series of lithophonic stones will be proposed for the thesis design, designated at various points along a pathway through the quarry. Hearing a fellow guest “tolling the bells” while taking a walk, the hope is that one is reminded, if subliminally, of their place within the community that forms during the six days of the psychedelic-assisted therapy retreat -- encouraged by four weeks of online meetings beforehand when guests get to know each other. Furthermore, the sounding of stones and their echoes through the hills adds another layer to the multi-sensory experiences sought throughout the design.

Dreamer’s Rock

Just across the channel from the Bell Rocks lies Dreamer’s Rock. In spring, youth from the Ojibwe village at the Bell Rocks journeyed there for a rite of passage called a dream quest, during which their calling would be revealed to them in a vision. Later in the year during autumn, their elders went there to fast.

On this topic, two of the four concepts that define the aboriginal worldview as put forth by the aboriginal author N. Scott Momaday will be of special relevance to this thesis. First, he outlines the direct relationship between the physical world and Native American culture and cultural narratives: “... the Native American ethic with respect to the physical world is a matter of reciprocal appropriation: appropriations in which man invests

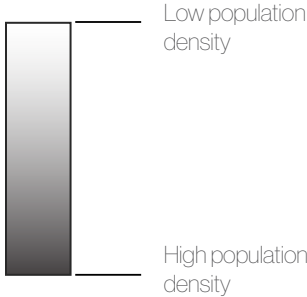
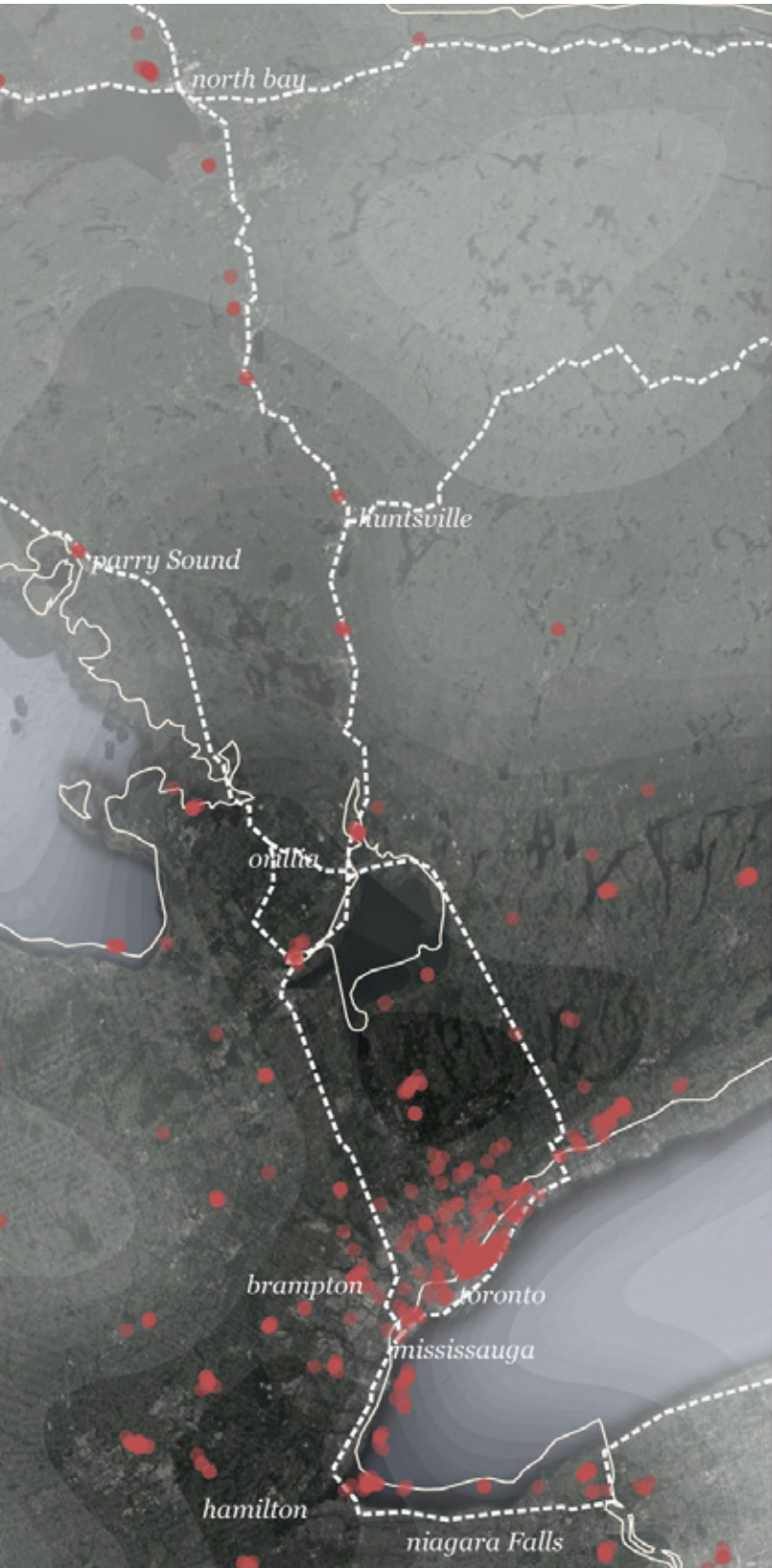
himself in the landscape, and at the same time incorporates the landscape in to his own most fundamental experience”.¹⁰

The second concept describes a particular investment among Native Americans in the experience of visions, brought about by fasting or dreaming at a sacred site in the landscape.¹¹ Dreamer’s rock, it would seem, fits that description.

In sum, the area carries an extremely rich history, it poses parallels to the “psychedelic journey”, and it reveals a local precedent for many of the concepts being proposed in the retreat centre: strengthening one’s bond to the physical world via the senses, the passage and cycles of time, the passage of thresholds, the passage into outer worlds, and dream worlds.

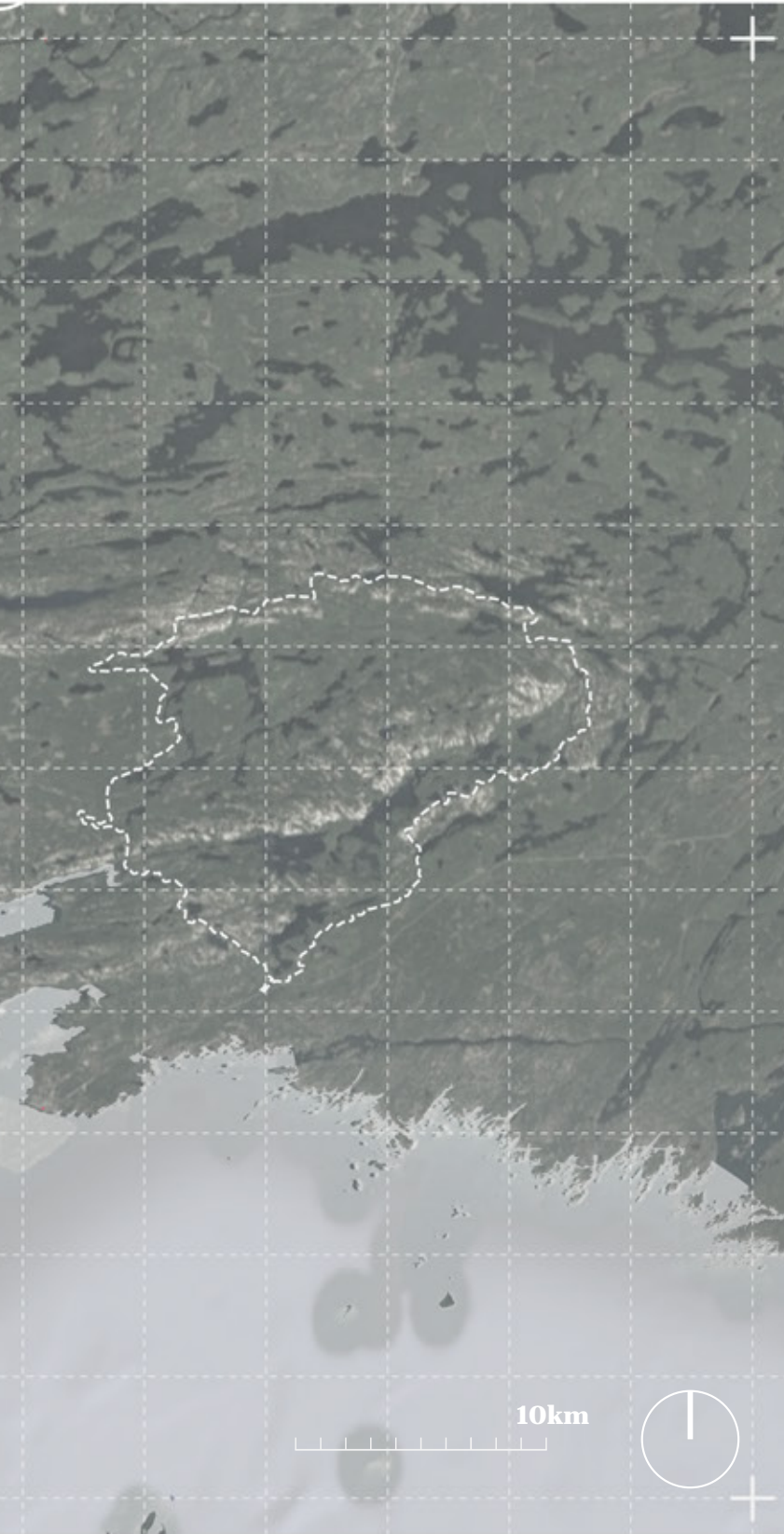
Site Analysis









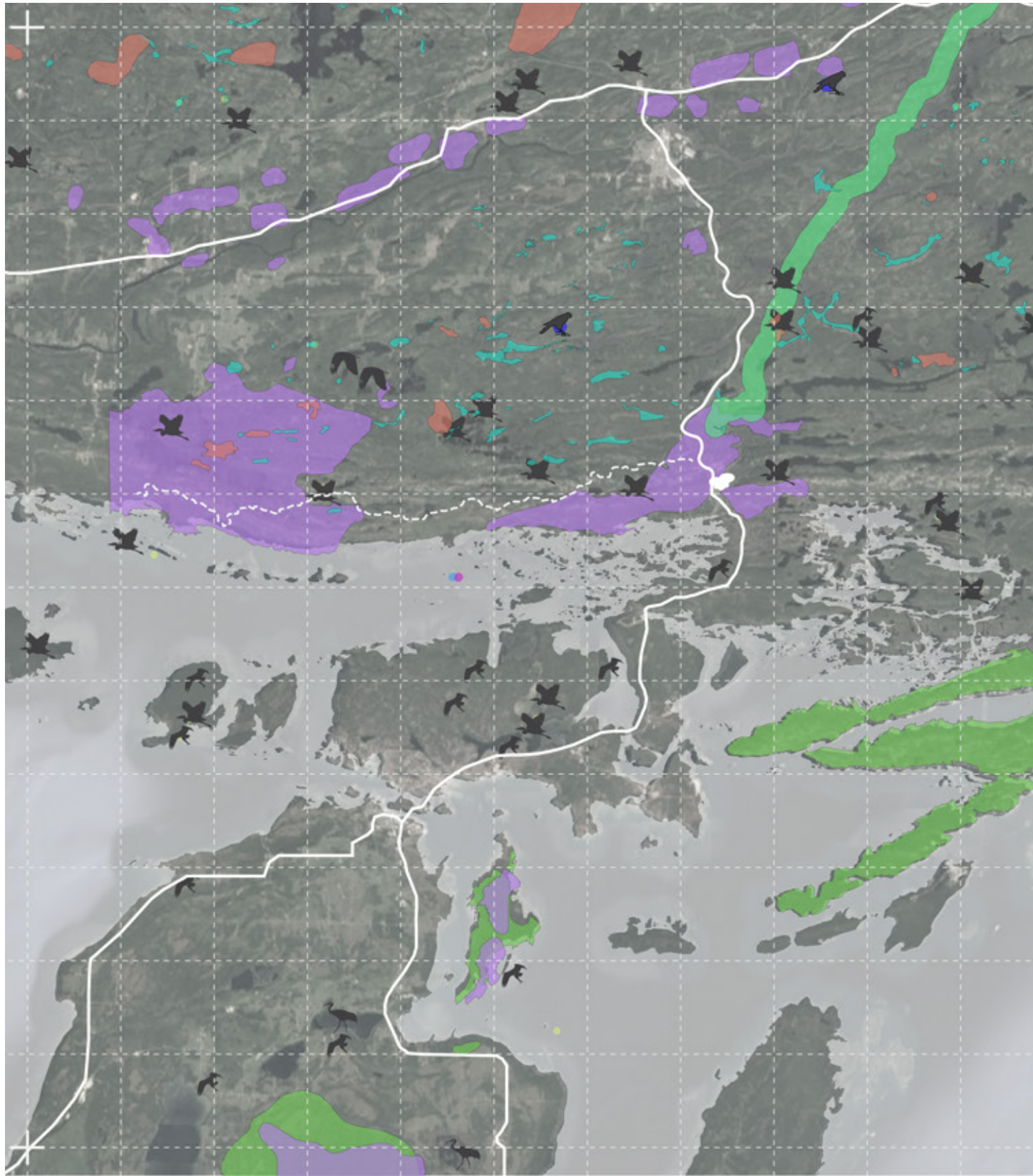
7.3
Map of sections of Northern and Southern Ontario, highlighting the relationship between population density and mental health services.
1:1,750,000 scale

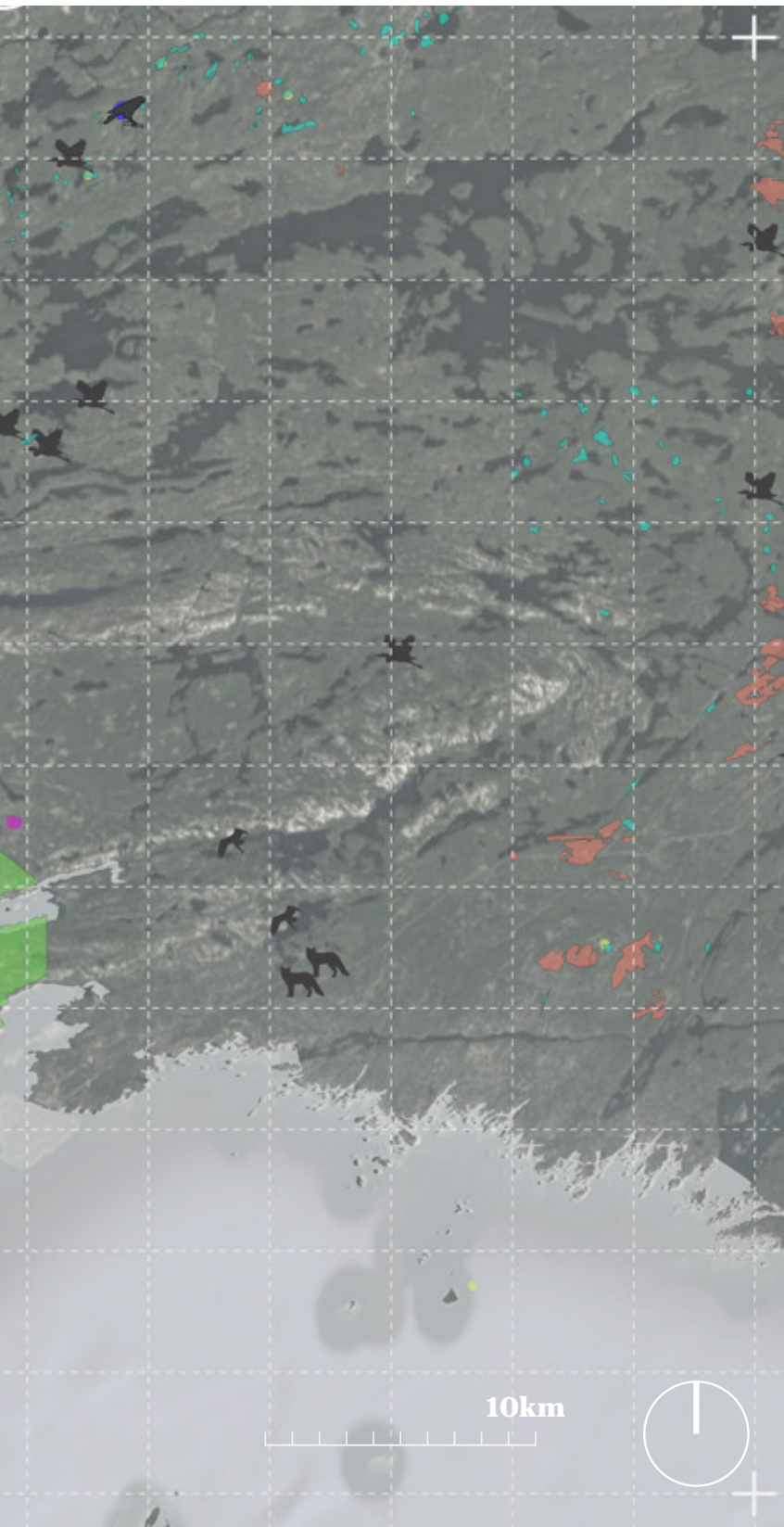




-  Hotels
-  Highway
-  Transmission lines
-  Hydro lines

7.4
Map of important utilities and amenities around the building site.
1:25,000 scale





Wildlife Regions

- Moose wintering area
- Moose aquatic feeding area
- Moose early wintering area
- Double-crested Cormorant nesting colony
- White-tailed Deer migration route
- White-tailed Deer yard
- White-tailed Deer wintering area

Wildlife Sites

- Great Blue Heron nesting site
- Red-shouldered Hawk nesting site
- Red Fox den
- Raptor nesting site
- Sandhill Crane nesting site
- Osprey nesting site

Wildlife species whose native range encompasses the extents of the map

- Monarch Butterfly
- White Admiral Butterfly
- Downy Woodpecker
- Black-capped Chickadee

7.5

Map of wildlife distributions around Lawson Quarry. 1:25,000 scale

7.6

Illustrations of wildlife one may encounter at the quarry.

Black-capped Chickadee



Diet:
Birdfeed



Favoured Habitat:
Forest

Downy Woodpecker



White Admiral



Diet:
Wildflowers



Favoured Habitat:
Forest edges and clearings

Monarch



Double-crested Cormorant



Diet:
Aquatic animals

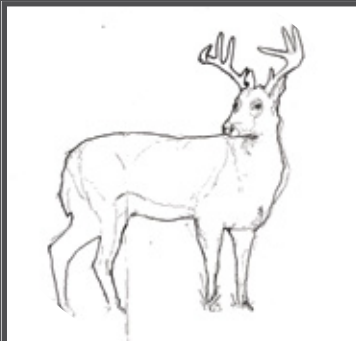


Favoured Habitat:
Wetlands and water bodies

Great Blue Heron



White-tailed Deer

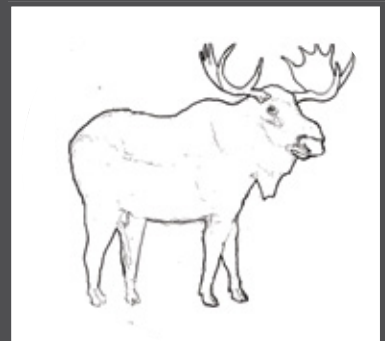


Diet:
Leafy and woody plants



Favoured Habitat:
Forests

Eastern Canada Moose





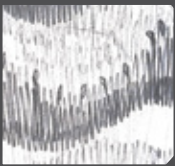
Diet:
Birdfeed



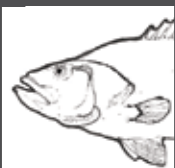
Favoured Habitat:
Forest



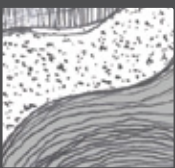
Diet:
Milkweed



Favoured Habitat:
Grasslands and meadows



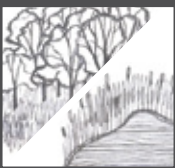
Diet:
Aquatic animals



Favoured Habitat:
Shorelines, wetlands and water bodies



Diet:
Aquatic plants, birch and aspen leaves



Favoured Habitat:
Forests and water bodies

Wildlife Species

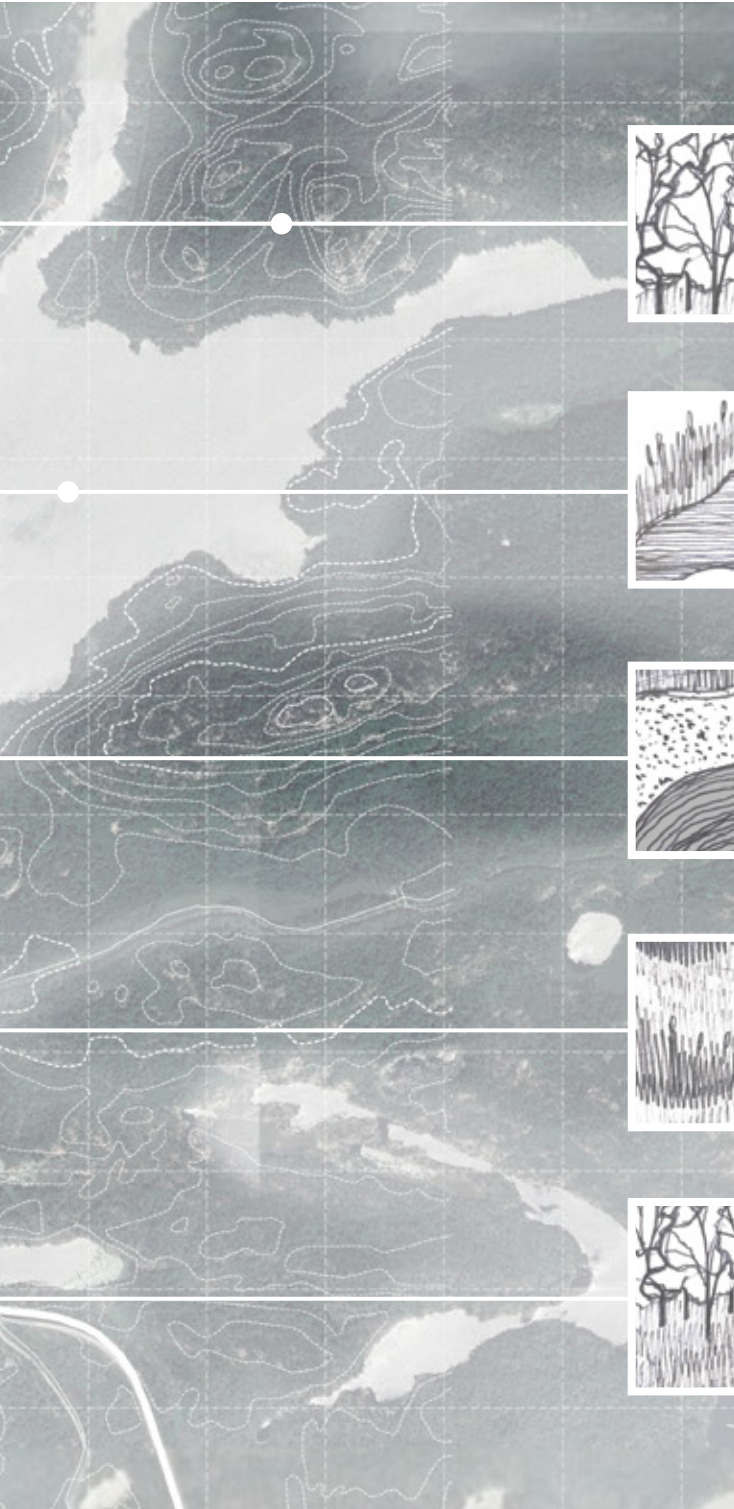
In the context of sensuous environments as mediators of the psychedelic state, the sensuous outdoors too deserve investigation. As much as - and perhaps more than - any building, human-wildlife interactions in nature can grasp one's attention, thrusting it upon external phenomena and away from states of mental passivity. In other words, the very states described in Chapter 2 as being tied to DMN hyperactivity and the adverse mental health consequences that may follow. Such interactions present an opportunity for profound, multi-sensory engagement of the type to further suppress DMN functions, deconstruct Leary's reality tunnels, and strengthen a sense of connection with the environment. Borrowing verbiage from Chapter 4: Phenomenology, wildlife encounters are both 'present and proximal', or 'immediate and spontaneous' occurrences that take place before any chance of rational analysis. Local time and place are intimately linked with these experiences. To encounter a monarch butterfly is not only a sign that springtime is approaching, but that you are occupying a specific place in the world that this species inhabits. Encountering multiple species listed in Figure 7.6 throughout the day, you are reminded, more specifically, of your place in Northern Ontario - the one location where this unique mosaic of lifeforms come together.

With the building being sited in a rural location, these wildlife encounters are possible regardless of any design intervention and may predominately occur while walking the trails surrounding the quarry. As for species which may reliably be attracted into the quarry, milkweed and other wildflowers will be incorporated to attract the butterflies, and birdfeeders for the chickadee and woodpecker. Figure 7.5 maps locations frequented by many wildlife species common to the region. From there, Figure 7.6 illustrates a select number of species a guest may encounter, alongside food sources and habitat features which can be incorporated around the site to attract each. Finally, Figure 7.7 shows habitats adjacent to the quarry that are favoured by each species. Though not currently present, the grassland indicated within the quarry is part of the planned landscape strategy to be explored in Chapter 8.

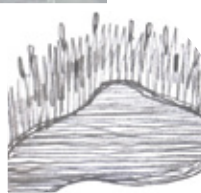
7.7

Map of wildlife habitats.
1:20,000 scale

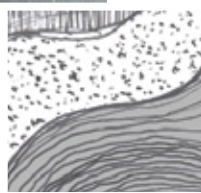




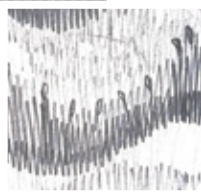
Forest



Wetlands & water bodies



Shorelines

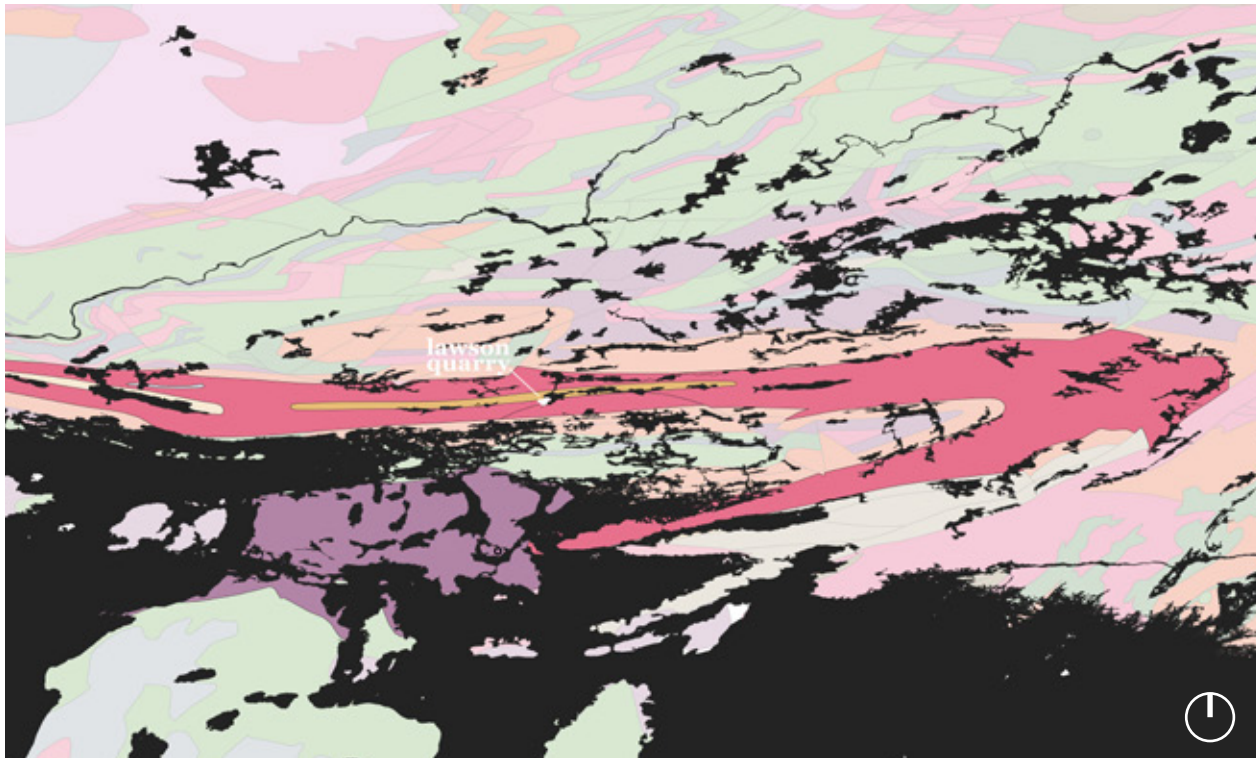


Grassland



Forest edge or clearing

7.8 Map of bedrock geology. 1:50,000 scale



- | | |
|--|---|
| Quartzite, minor conglomerate, siltstone | Limestone, dolostone, arkose, sandstone |
| Siltstone, argillite, sandstone | Water |

Bedrock Geology

Bedrock geology analysis revealed the primary type of mineral forming the La Cloche mountain range, and the one extracted at Lawson Quarry: Lorrain quartzite. Specifically, the rock is classified as an orthoquartzite, a pure type of sandstone containing a quartz content of more than ninety-five per cent.¹² This classification also distinguishes orthoquartzite, a sedimentary variant formed by the deposition of mineral or organic particles, from metamorphic variants of quartzite which are formed under immense heat and pressure.¹³ The purity of the stone is the reason for its stark white colour, and renders it an effective smelting flux. Currently, Sudbury’s Inco mine uses the mineral for this purpose.¹⁴

Whereas quartzite generally constitutes

a viable rubble masonry material on account of its exceptional hardness and weather resistance, determining whether Lorrain quartzite is suitable for construction purposes would require extensive testing that exceeds the scope of the present thesis. Further testing (typically carried out by organizations such as the Canadian Standards Association) would be required to test metrics such as: bulk density, water absorption, durability index, and point load strength.¹⁵ Therefore, it can not be stated with certainty that the specific form of quartzite mined at Lawson Quarry is suitable as a masonry material. The retreat centre will therefore propose a rubble masonry application of the material on the basis that similar minerals have been implemented as such. For example, “Piedra Mar del Plata” is

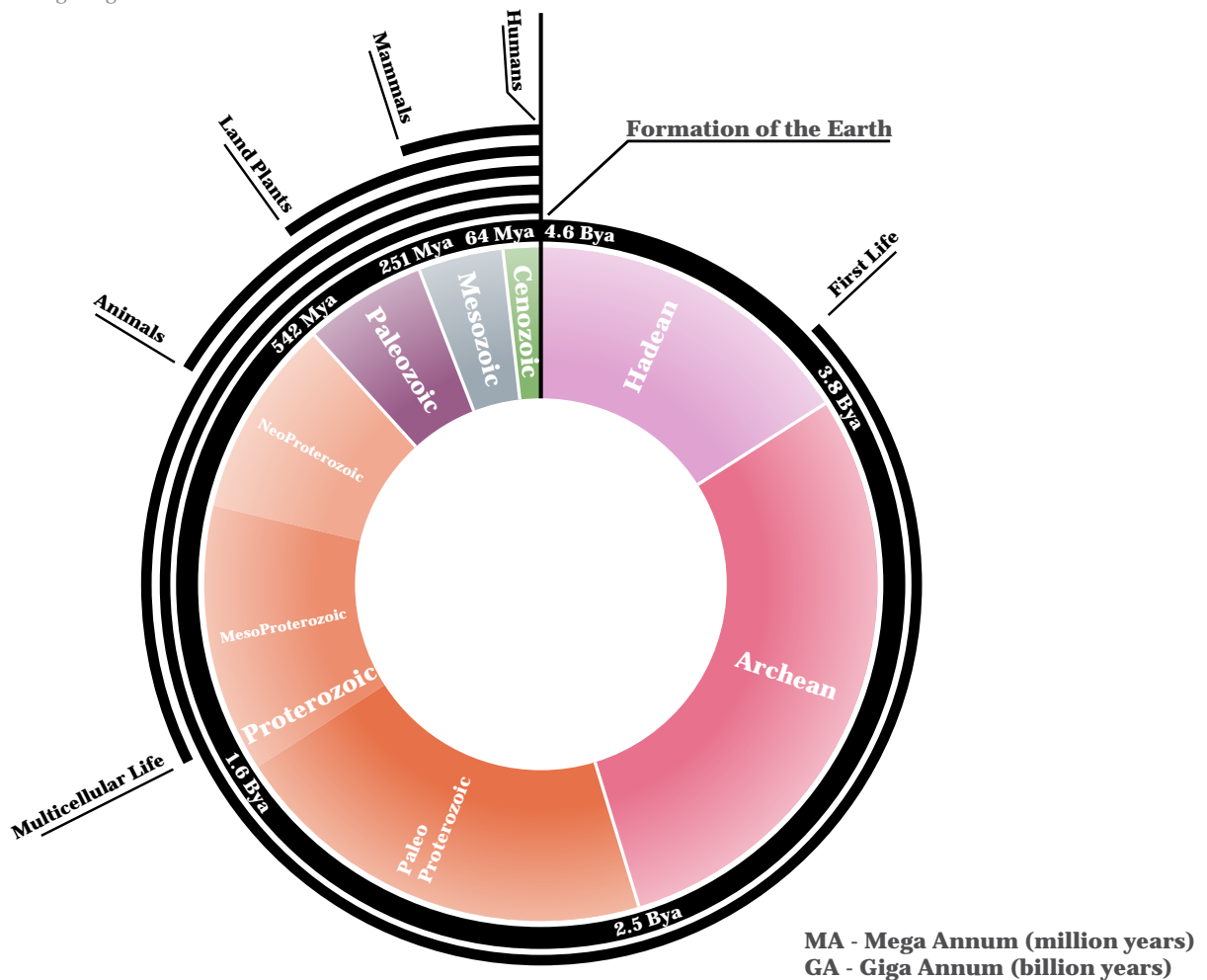
an orthoquartzite that has been used heavily for house construction in the Argentinian city of Mar del Plata.¹⁶ Its application rapidly spread throughout Argentina - where its use was extended to the construction of sculptures and monuments on account of its durability and availability.¹⁷

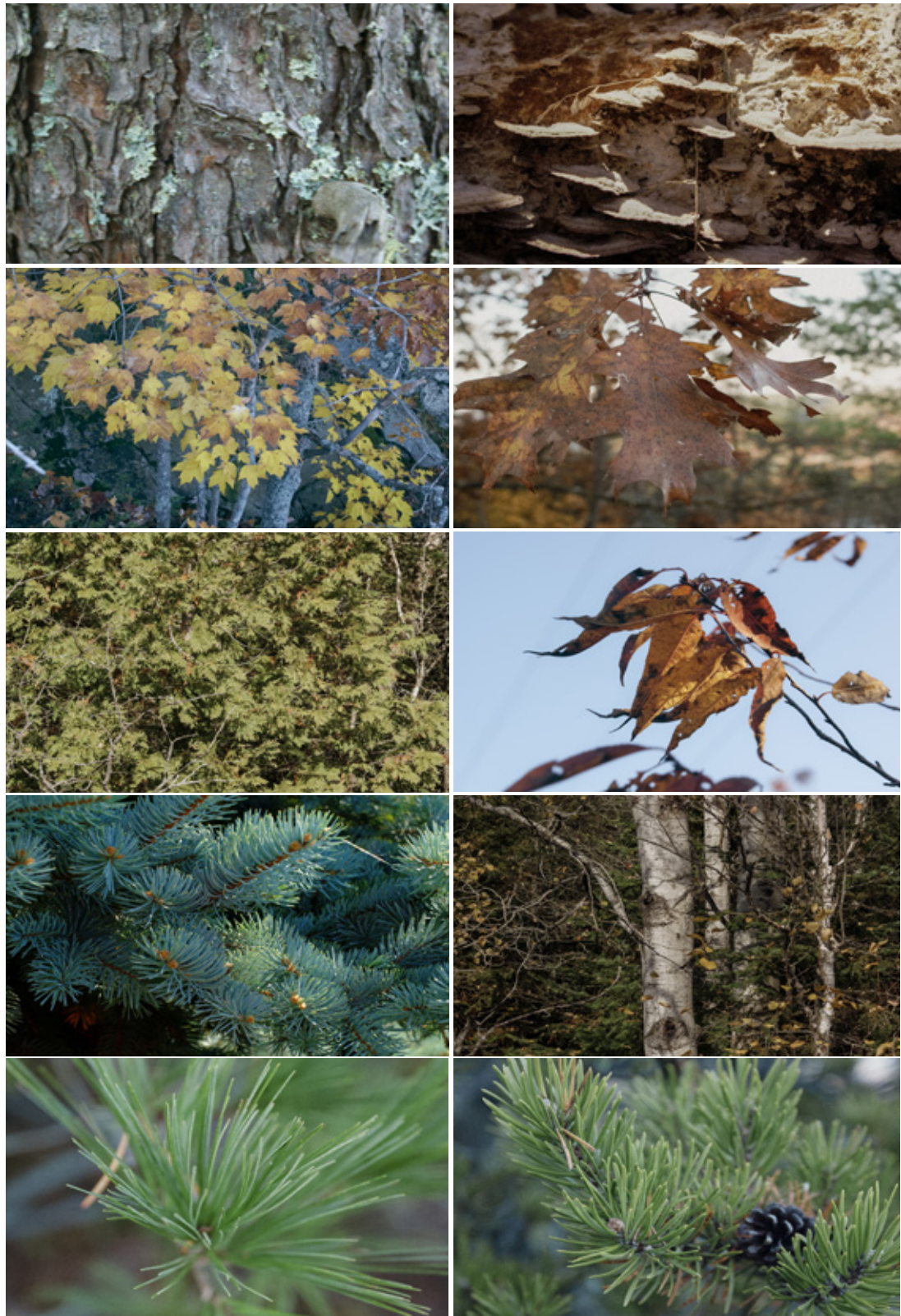
Finally, Figure 7.9 highlights the bedrock geology of La Cloche Island south of the quarry. Being the location of the Bell Rocks, this points to their material composition as likely being that of limestone - one of the rock types suggested by Bednarik to be capable of acquiring lithophonic properties.¹⁸

Legible in the map of bedrock geology

is the close relationship between rock and water. Water, shown in black, follows along the ridges between bedrock regions. These are two vital components of the retreat centre design, and nearly all that existed on Earth some two billion years ago when the La Cloche mountains formed during the Paleoproterozoic Era (Figure 7.9).¹⁹ Since multicellular life had yet to develop, neither plants nor animals yet shared the Earth with these primordial elements of rock and water. On that note, the bathhouse at the Lawson Quarry Retreat Centre will celebrate these defining aspects of the site's history.

7.9 Earth's geological timescale.





7.10

Photographs of the multi-sensory landscape.

Setting out to explore this biodiverse, multi-sensory landscape, I photographed both the diverse range of plant life (right) and textures & colours (far right). Where these explore the fine details of the site, the following pages provide a macroscopic qualitative analysis.



In keeping with the theme of exploring environments and sensory experiences which are fresh and unfamiliar, the following maps indicate where those experiences may be found within and around the site. The retreat centre will spread out to physically occupy these different ecosystems, and use its buildings and landscaping to frame each of them in a fashion similar to Zumthor's framing of particular views at Therme Vals. In addition to a general layout of neighbouring townships and key features, Figure 7.11 maps the unique environments offered by different combinations of flora and fauna in each type of forest.

The presence of birch and poplar trees provides a favoured food source and habitat of several species from figure 7.6. The Eastern Canada Moose feeds from them, and the Black-capped Chickadee and Downy Woodpecker call such shady, broad-leafed trees home.^{20 21}

Map of tree species, each offering a different environment and sensory experience brought by unique combinations of flora and fauna. **7.11**
1:20,000 scale.



Tree species



Upland conifers



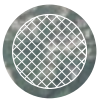
White birch



Poplar



Tolerant hardwoods



Red & white pine



Buildings



Water bodies

Site Analysis

7.11 Map of surrounding ecosystems, each offering a different environment and sensory experience. 1:20,000 scale



High lands



Wet lands



Green lands



Big water



Fast water



Small water



Thin water

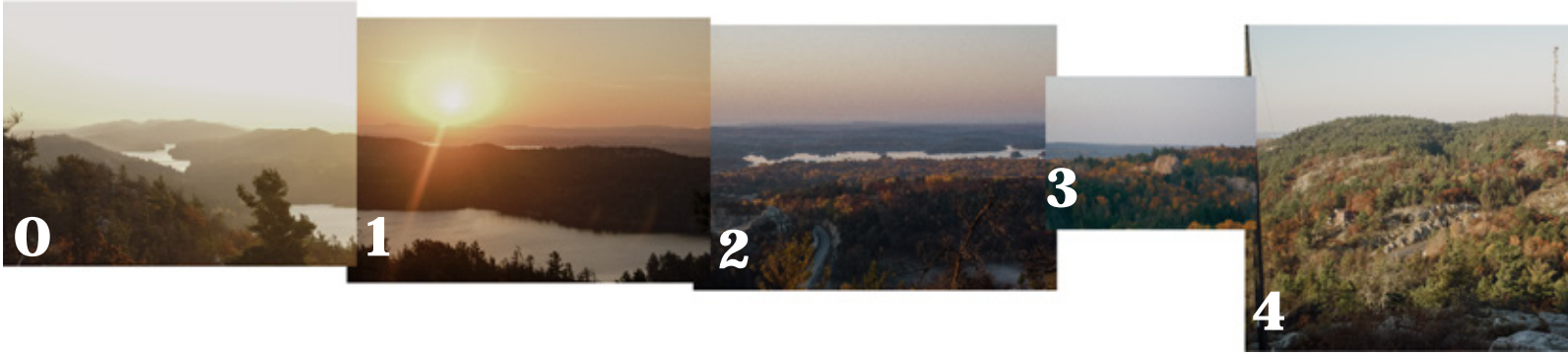
7.12 Map of vistas around the quarry. 1:20,000 scale



Figures 7.12 and 7.13 paint a picture of some of those experiences plotted by previous maps. Each number on the map corresponds to an image on Figure 7.13, with arrows indicating the direction the image was taken. Time is represented here as much as place, with the images being captured over the course of two

visits, one beginning early on an autumn morning, the other in the middle of winter. Provided ample time to explore during the first, third, and fifth day of the retreat, the journey on the following page may be said to capture some of the experiences available to an aspiring guest.

Site Analysis





7.13 Photographs of vistas around the quarry. Provided ample time to explore during the first, third, and fifth day of the retreat, the journey above may be said to capture some of the experiences available to an aspiring guest.

Endnotes

- 1 “Rural and Northern Community Issues in Mental Health,” accessed December 22, 2022, <https://ontario.cmha.ca/documents/rural-and-northern-community-issues-in-mental-health/>.
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- 3 Darrel Manitowabi, “Sinmedwe’ek: The Other-than-Human Grandfathers of North-Central Ontario,” University of Western Ontario, Papers of the 39th Algonquian Conference, 39 (2008): 444.
- 4 Ibid.
- 5 Ibid.
- 6 K. Paddayya, “Cup-Marks in the Shorapur Doab,” *Man* 2 (1976): 35–38.
- 7 Ibid.
- 8 Jeremy Montagu, *Origins and Development of Musical Instruments* (Scarecrow Press, 2007), 8.
- 9 Robert G. Bednarik, “About Lithophones,” *Mysterious Cup Marks: Proceedings of the First International Cupule Conference*, BAR International Series 2073, 2010, 115–18.
- 10 N. Scott Momaday, “Native American Attitudes to the Environment,” in *Stars Above, Earth Below : American Indians and Nature*, ed. Marsha Bol (Niwt, Colo: Roberts Rinehart Publishers for Carnegie Museum of Natural History, 1998), 3–11.
- 11 Ibid.
- 12 K. D. Card, *Geology of the Espanola-Whitefish Falls Area*, Ontario Geological Survey, Report 131 (Ontario Ministry of Natural Resources, 1984), 6.
- 13 Richard B. Wells, “Orthoquartzites of the Oquirrh Formations” (Provo, Utah, Brigham Young University, 1963), 55.
- 14 Card, 47
- 15 Busuyi Afeni, Moshood Onifade, and Omotayo Raphael, “Evaluation of Suitability of Some Selected Rocks for Dimension Stone Quarry in Akure, Ondo State, Nigeria,” *Journal of Mining World Express* 4 (January 2015): 27, <https://doi.org/10.14355/mwe.2015.04.003>.
- 16 F. Cravero et al., “Piedra Mar Del Plata’: An Argentine Orthoquartzite Worthy of Being Considered as a ‘Global Heritage Stone Resource,’” *Geological Society, London, Special Publications* 407, no. 1 (2015): 263, <https://doi.org/10.1144/SP407.9>

17 *Ibid.*

18 Bednarik, 115

19 John M. Sirianus, "Report on the McKinnon Township Property District of Sudbury Ontario," geoscience assessment (Milton, Ontario: Elgin Lake Mines Limited, June 24, 2005), <http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/afri/data/imaging/20000000519//20001351.pdf>.

20 "Black-Capped Chickadee," Audubon, accessed March 23, 2023, <https://www.audubon.org/field-guide/bird/black-capped-chickadee>.

21 "Moose," National Wildlife Federation, accessed March 23, 2023, <https://www.nwf.org/Home/Educational-Resources/Wildlife-Guide/Mammals/Moose>.

8 Design Proposal

8.1 Bird's-eye-view rendering of the site, featuring Highway 6 and Willisville Mountain in the background.





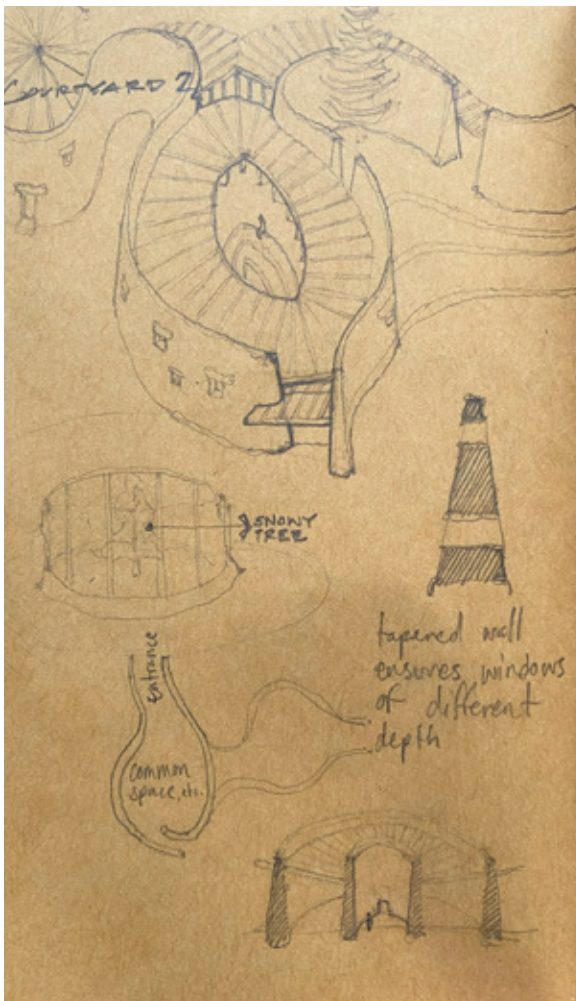
Design Proposal

8.1 Design concept

8.2 Drone images of Lawson Quarry, capturing the immensity of the site.



8.3 Sketches of building forms inspired by a woodland trailway.



For most people in the contemporary world, the typical rooms they inhabit in their daily life are defined by (or rather ‘confined to’) right angled corners, levelled floor plates, and walls that are plumb. Having acquired these properties, the space is thusly rendered ‘true’, in the words of the carpenter. A driving motive for the design of the Lawson Quarry Retreat Centre is to imagine a different, unfamiliar kind of terrain where corners are rounded, floor plates are varied or sloped, and walls are not straight, but tapered.

Working with a site of this scale and with so much to explore within and around it (Figure 8.2), a decision was made early on to design a pathway for traversing the area. Very quickly, the idea of the path came to symbolize a core aspect of the research done up to that point: the reconnection of the individual

to the wider, sensuous world.

From there, the same language that was developing was explored for how it might extend to building morphology (Figure 8.3). Following this premise, early experiments began to evoke the form of a woodland trail, human made or otherwise (like the deer tracks that were discovered during my visit to the site). Seldom linear or right angled, these trails smoothly meander around the existing features along the path of least resistance, like water in a stream. What, after all, is more ‘true’ than this fact of nature?

On the way to the sinuous and sensuous design that would follow, key elements of the prior body of research and site analysis were called forth at each step. Drawing from the topics of the sacred, set & setting, and the notions of time and place, each will be explored in the following pages.

Architecture of the Sacred

Being a daily routine, the act of drinking water is a mundane and familiar one. It is enacted in an indiscriminate fashion – at no particular time of day or in any particular quantity. As a result, within the grand scheme of life, it is an action which likely fades unnoticed and forgotten into the background of the conscious experience. In an NAC peyote ceremony, the act of drinking water instead becomes sacred and memorable. By observing the ways in which it acquires this new status, and how these align with other elements that are sanctified for the duration of the ceremony, a method for elevating elements of my own design to the sacred

may be uncovered.

First, the act of drinking water acquires a specific and significant role at the ceremony: that of hydrating peyote members after long bouts of dancing.¹ Second, it becomes a symbol, imbued with a greater meaning through its association with the peyote road, that being a representation of the cycle of one’s lifetime.² Like the path of life, water is passed around the circle in a particular direction, starting and ending in the east. Doing so, it might be said to signify a life-giving water. Third, drinking water takes place at a particular time and place within the infinite universe: precisely at

midnight,³ and around the peyote, the fire, and the central vertical axis of the tipi. According to historian of religions, Mircea Eliade, many indigenous beliefs regard this central axis or 'axis mundi' as the centre of the revolving cosmos, connecting earth, sky, and subsequently, the mortals and divinities occupying each respectively.⁴ It is worth mentioning that these are the same elements of Heidegger's fourfold that are gathered by all *things* (as opposed to Cartesian *objects*).

Equally mundane and spread across the whole of the Earth, earth itself undergoes the same sanctification. Formed into a small, crescent-shaped mound around the fire, it acquires the new role of forming the altar where peyote is placed.⁵ As a representation of the peyote road itself, the mound of earth is granted a new, more significant meaning. Finally, it takes on this form within a specific time and place: solely for the duration of the ceremony and next to the central fire.

Finally, the mundane, daily act of walking, or 'ambulation' too becomes sacred. During the ceremony, its role is to lead one, after revolving around the circle, toward the central, sacred heart of the ceremony: peyote. As before, its meaning comes from its representation of the journey through life, beginning and ending in the east. Lastly, this circumambulation is assigned to specific times and places throughout the ceremony and, once again, around the central fire, peyote, and the axis mundi.

By drawing on these three components: acquiring a specific role, a greater meaning, and occurring in a specific time and place; substances (earth and water) and activities (ambulation) that are typically spread apart across a normal day are gathered or concentrated together, and thus brought to the foreground of

consciousness and rendered noticeable and memorable at last. This gathering will be considered as a fourth component in the sanctification of a given element.

Before describing how these concepts were applied in the design of the proposed retreat centre, a passage from Juhani Pallasmaa's *Eyes of the Skin* will help to illustrate their connection with architecture. Pallasmaa says the following of light and shadow:

"How much more mysterious and inviting is the street of an old town with its alternating realms of darkness and light than are the brightly lit streets of today! The imagination and daydreaming are stimulated by dim light and shadow. In order to think clearly, the sharpness of vision has to be suppressed, for thoughts travel with an absent-minded and unfocused gaze. Homogeneous bright light paralyzes the imagination in the same way the homogenization of space weakens the experience of being, and wipes away the sense of place."⁶

Indeed, how often does one consciously recognize light, much less appreciate it, in the brightly lit commercial buildings of today: shopping malls, supermarkets, or office buildings? Here, light seems a formless, boundless, monochrome, and directionless substance ready to be forgotten as it fades into the background of the conscious experience. Being the inspiration for the gabion screens used throughout the Lawson Quarry Retreat Centre, Herzog and De Meurons Dominus Winery in California, United States is a prominent example of the transformation of light into something sacred and memorable (Figure 8.16). In contrast to

the modern office building example, light at Dominus Winery becomes something with a defined form and a near tangible presence in the room through deliberate and careful planning.

By fulfilling a specific role, acquiring new meaning as a symbol, emerging in a specific time and place, and gathering or concentrating an otherwise mundane and ubiquitous substance, light can become as sacred as water, earth, or ambulation are at an NAC peyote ceremony. This represents the primary method by which a sense of the sacred was imbued into the proposed retreat centre. In the entrance stairwell, for instance, light's role is to show the way not only to the facilities, but to an elevated precipice where guests receive an introductory overview of the expansive quarry; its dappled form symbolizes passage into an otherworldly environment, foretelling the journey through space and time that awaits; it makes its most spectacular display in a specific time and place, that being the passage of the winter solstice and in a space which is specifically designed to

maximize its effect; and it concentrates or gathers light across a range of hues and intensities rather than omnidirectionally (Figure 8.17).

Light was not the only consideration when designing for the sacred. A similar approach to ambulation at the NAC ceremony was also employed in the design, particularly in the communal building. Fundamentally, the design forms a conjunction of two circles, each hosting a sacred activity while guests are gathered around its centre. In the dining hall, that activity is eating together; in the lounge, relaxing and socializing together. Rather than reaching these activities directly or indiscriminately from any direction, they are reached at the culmination of a drawn-out, circumambulatory kind of pilgrimage to the core that follows a certain direction. The significance of the fireplace in the lounge and the roundtables in the dining hall as points of gathering are emphasized by their placement at the centre of their elliptical floor plans (Figure 8.30). At every location within, one is oriented back to this focal point.

Architecture of Set & Setting

The design incorporates each of the set and setting conditions outlined by Timothy Leary as discussed in Chapter 5: choice of environment, walking in nature, bathing, room arrangement, reading psychedelic literature, preparation and integration time, and meditation.



Choice of environment was paramount to the siting and layout of the accommodations and ceremony rooms in particular. Lying on the threshold between quarry and woodland, guests are afforded a choice between accommodations that face one or the other condition. Taking

inspiration from Therme Vals, a series of micro-climates are then established: quiet and enclosed outdoor experiences in the walled gardens that flank each accommodation, semi-enclosed and airy outdoor experiences within the courtyard, and that of the wide open landscape; accommodation rooms that constantly transform under warm, direct sunlight throughout the day and the dimly lit, cave-like experience of the bathhouse; and finally, the experience of a green roof which hosts less shade-tolerant plants than the walled gardens or courtyard. As for the three ceremony rooms, each is situated in a different environment: the

small ceremony building in the quarry, the open-air fire pavilion in a wooded area, and the large ceremony building on the threshold between these two worlds.



Walking the landscape is made accessible by way of the proposed path system. As with the above example, this path system (and by extension, the act of walking itself) informed the design. The building forms weave through the trees like a trail in the woods.



Bathing in the bathhouse is at the physical and experiential core of the accommodations, accessed by two stairways at the eastern and western ends of the courtyard. Placed below grade to minimize incoming noise, the bathhouse remains directly accessible to guests without sacrificing an atmosphere of quiet relaxation.



Room arrangement determines the fundamental types of experiences in each space.

From the first, guests awaken each morning facing a landscape that calls to them from their beds. The shape of the room furthers this condition, pointing outward along the long dimensions of these rectangular forms. As observed in the Santani Resort

case study, such strategies express that the essential experience of the retreat is to be had out-of-doors or in the company of others at the various gathering spaces. In the bathhouse, the elliptical form of the bath calls for a gathering around. Circular forms are evoked for this purpose throughout the design, as is detailed in sections dedicated to the design of each building to follow.



Psychedelic literature is provided in the communal building, along with a plethora of spaces throughout the site to where guests may escape and read in quiet. Examples include the reading rooms that adjoin the lounge area where books are kept, their accommodation rooms, the walled gardens, or a quiet location outdoors.



Preparation & integration time, and meditation are all afforded in the various private areas where guests can relax, reflect on a ceremony, or meditate in a state of quietude. This may be their rooms, the walled gardens, or a quiet location outdoors. The large ceremony room and fire pavilion both double as meditation or yoga spaces.

Architecture of Time

Figure 8.4 diagrams multiple temporal considerations for the project. Starting from the outermost ring, the north arrow marks the beginning of the six day retreat. The activity schedule that follows is a derivation of the one provided at Beckley Retreats.⁷ Some of the activities deserve further explanation.

On the first day, guests and clinicians

partake in an opening circle in the large ceremony building. Everyone is introduced to each other and may share their hopes and expectations for the retreat before receiving an orientation session. Next, guests break out into smaller groups to establish a relationship with a clinician through face-to-face dialogue. After dinner in the communal

building, guests are free to explore the site.

Days two through five begin with mind-body exercises like yoga and meditation in the ceremony rooms.

One-on-one checkins on ceremony days allow guests another chance to discuss the upcoming ceremony with a clinician. The rest periods prior to a ceremony recall statements by Charles Baudelaire and Timothy Leary denoting the importance of a state of calmness and relaxation in preparation for psychedelics use, all in an attempt to eliminate anxieties liable to spoil a session. Ceremonies themselves last 6 hours, the approximate duration of a psilocybin trip. On the days after a ceremony, guests gather with clinicians for an integration circle. Insights from the ceremony are discussed to determine how they might be integrated into their lives after guests return home.

The middle and inner ring of the temporal diagram work in tandem to portray when important, cyclical occurrences take place over the twelve months of the year and twenty-four hours of the day. These ephemeral events represent latent phenomenological experiences present around the site, and are divided into instances that take place within the building and out amongst the

landscape.

In the building:

Featuring a skylight that faces east, direct sunlight washes over the western wall of the accommodations each morning.

The entrance stairwell displays filtered light streaming deep into the space and dappling most of its surfaces, but only with the passing of the winter solstice when sunlight can enter from a shallow enough angle.

During dinner, evening sunlight filters into the dining hall through a gabion screen, similarly to the entrance stairwell.

Around seven o'clock to midnight, the bonfire at the fire pavilion is lit, as well as the bell-tower at the centre of the quarry floor; both becoming beacons in the night.

In the landscape:

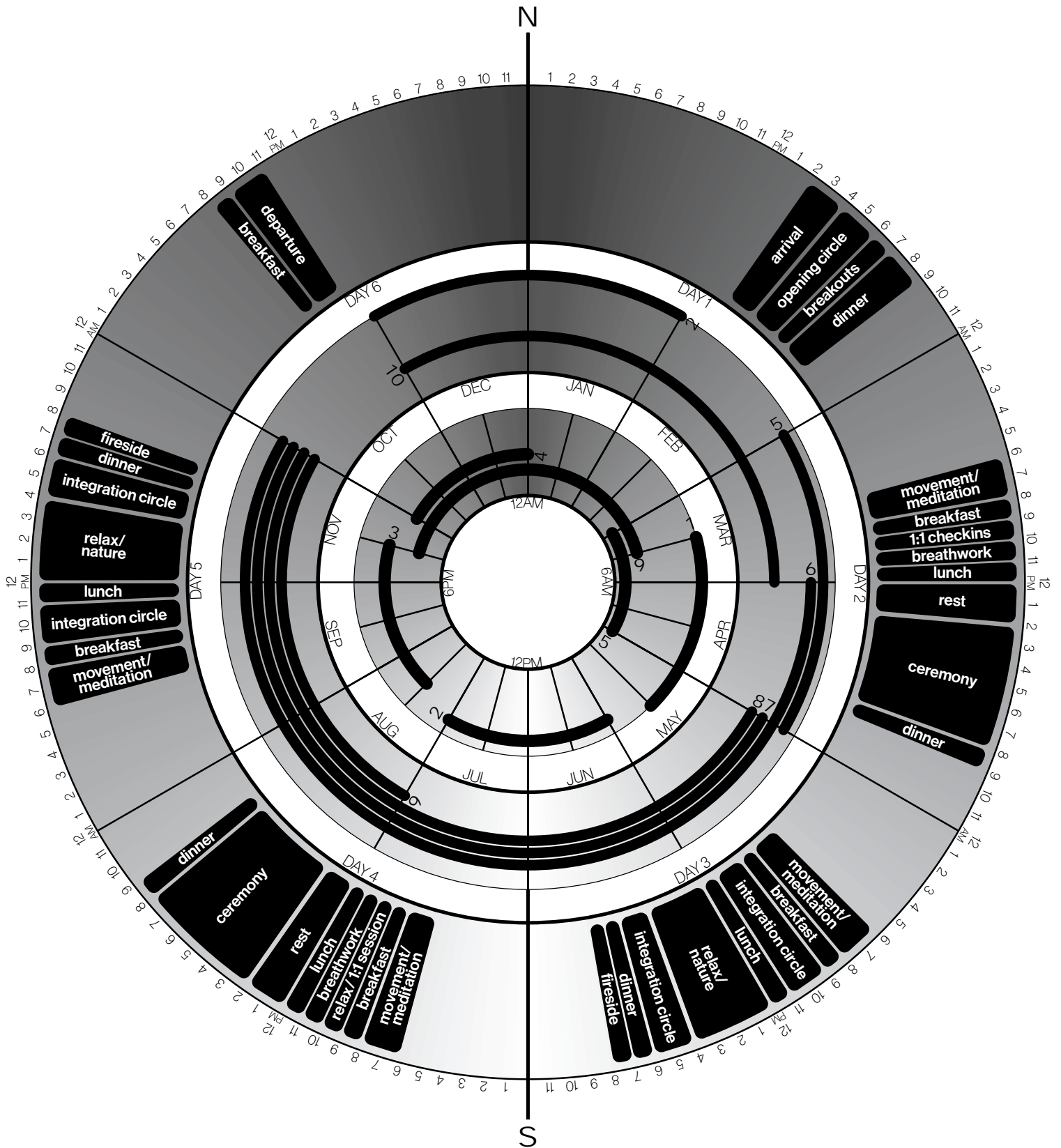
During the warmer months, the audible sensation of birdsong, tapping of woodpeckers and chirping of crickets reaches their peak, the aroma of wildflowers emerges, and the visual delight of the fluttering butterfly comes about. During winter, the colourful birds of Ontario stand out against a sparkling white backdrop of snow.

Architecture of Place

Figure 8.6 illustrates one of the possible outcomes for the quarry as it develops over time and undergoes the process of ecosystem succession. The process describes a natural pattern of ecosystem development that takes place in phases across time.⁸ Given the conditions diagrammed alongside the first stage of the succession: acidic, gravelly, well-drained soil; high sun exposure due to the absence of tall trees; wind protection

from the walls of the quarry; and little to no competition from established plant species, stages two through nine indicate what is likely to transpire across time.⁹ First, grasses that favour acidic soils would take hold naturally, as is already seen taking place across the eastern half of the quarry (Figure 8.8), but can be accelerated through manual seeding and planting.¹⁰ Seeding would only take place in select number of small areas on site.

Design Proposal



8.4 Temporal Diagram of the six day retreat schedule and various ephemeral events around the quarry.

In the Building

1. Morning sun lights the accommodations
2. Winter solstice lights the entrance
3. Evening sun lights the dining hall
4. Lighting of bonfire and bell-tower

In the Landscape

5. Birdsong in spring and morning
6. Wildflowers bloom in warmer months
7. Butterflies emerge in warmer months
8. woodpecker taps in warmer months
9. crickets chirp at night and in summer
10. Colourful birds like blue-jays and cardinals stand out against the snow in winter



8.5 Photographs of wildflower species proposed for the site.

Asclepias syriaca ***Verbana simplex***
Common Milkweed *Narrow-leaved Vervain*

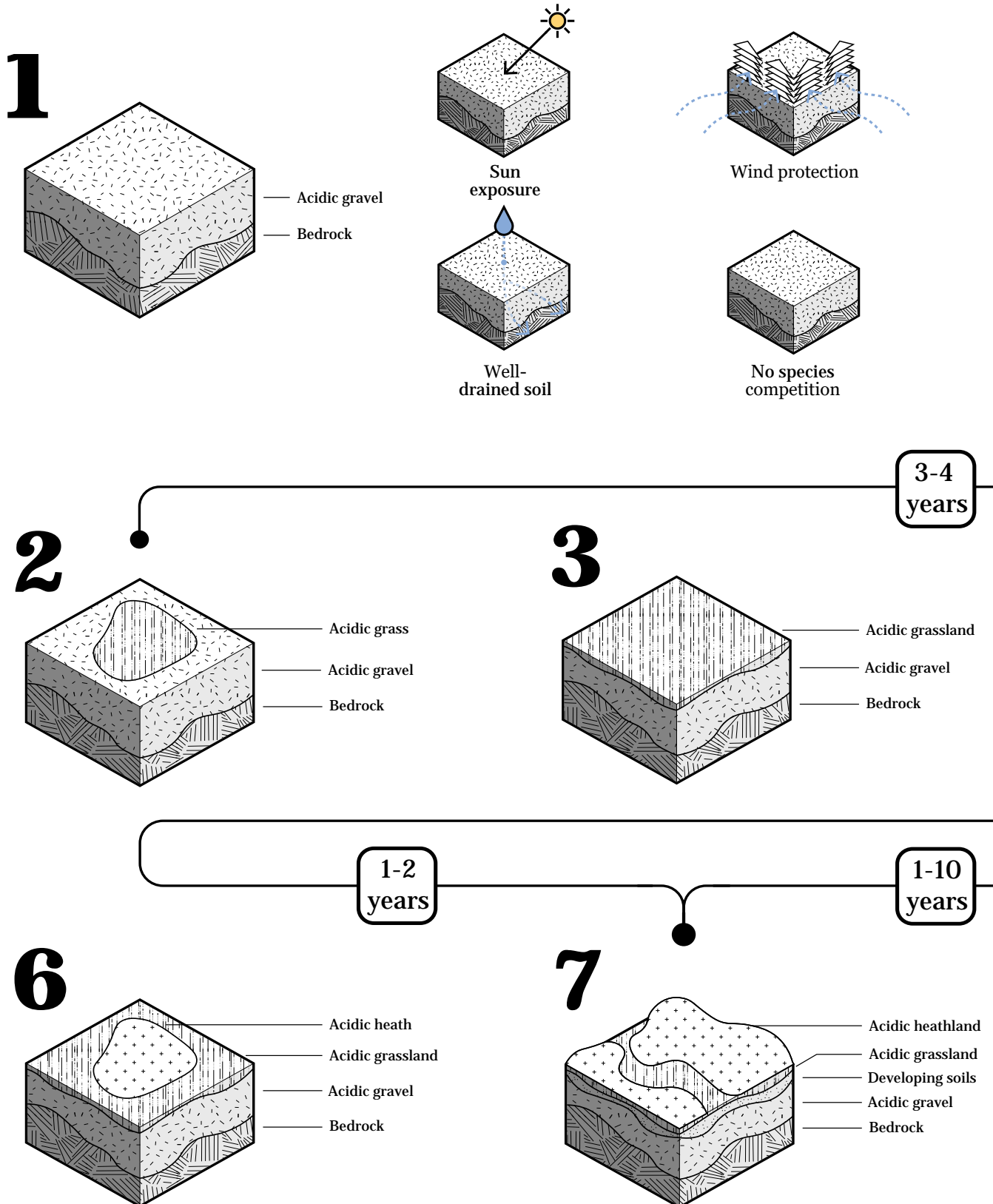


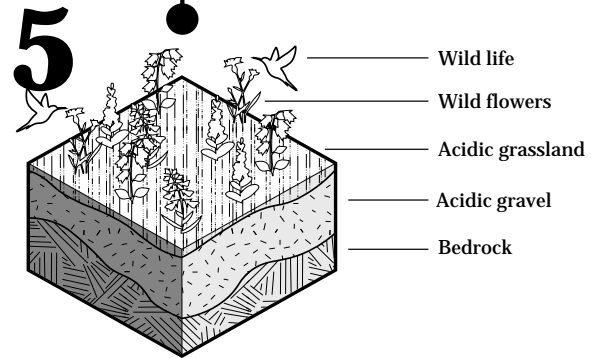
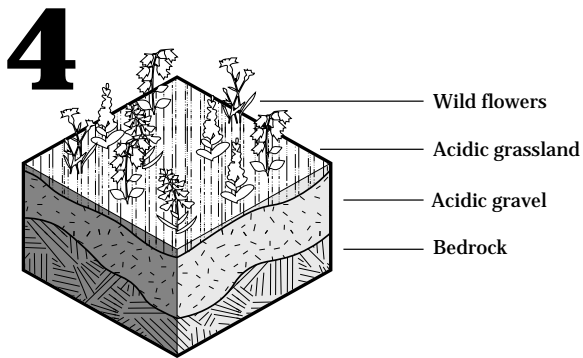
Having chosen self-seeding grass species, the grasses would spread outward on their own over time. Those species are Canada Rye and Prairie Dropseed (Figure 8.7). In one location, a larger area would be planted with a species which does not self-propagate as rapidly,¹¹ that being the Big Bluestem grass. Capable of growing up to two metres tall, it would surround the small ceremony room in the valley of the quarry to create a sense of discovery and surprise as guests emerge from the thicket, echoing the process of turning around a bend in Highway 6 that reveals the valley before Willisville Mountain.

With the grasses come local wildflowers, and with that, local wildlife - all possible within the first three to four years.¹² Two wildflower species that would be planted are Common Milkweed and Narrow-leaved Vervain, both endemic to the area.^{13 14} The former attracts the endangered Monarch butterfly along with a host of other insect and animal species,¹⁵ and the latter, also attractive to local species,¹⁶ provides an exceptionally aromatic subspecies of lavender to be used for incense at a ceremony. In another two years, the next phase could be a heathland populated by low shrubs like blueberries, which prefer infertile, acidic soil.¹⁷ Unless they're well-maintained, heathlands are quickly overrun by encroaching brushwood.¹⁸ My design will embrace this short-lived condition, as well as the slowly developing forest that would follow. With subsequent visits, guests may experience an ever-changing landscape that grows, and heals, alongside them. Imagery to follow will focus on the grassland phase of this ecological succession, where milkweed and vervain are seen amongst the grass, as in Figure 8.10.

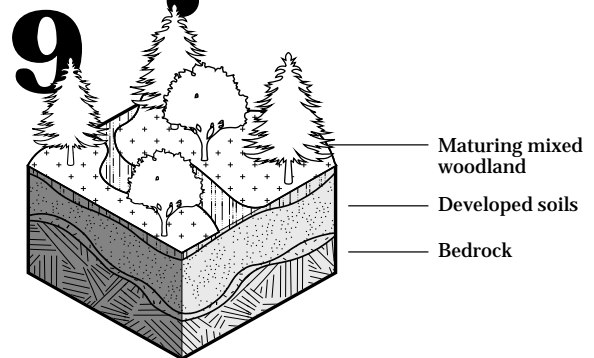
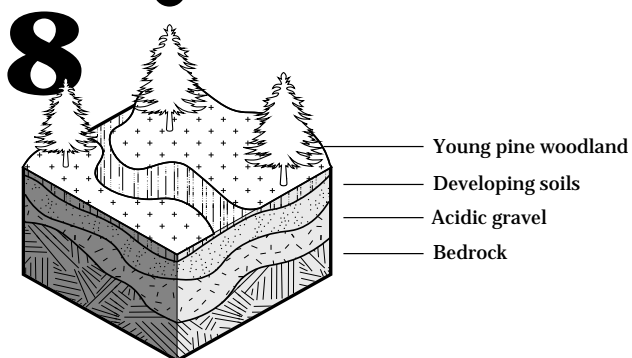
Design Proposal

8.6 Ecological succession diagram, outlining how the quarry rehabilitation may unfold across time given the existing site and soil conditions.



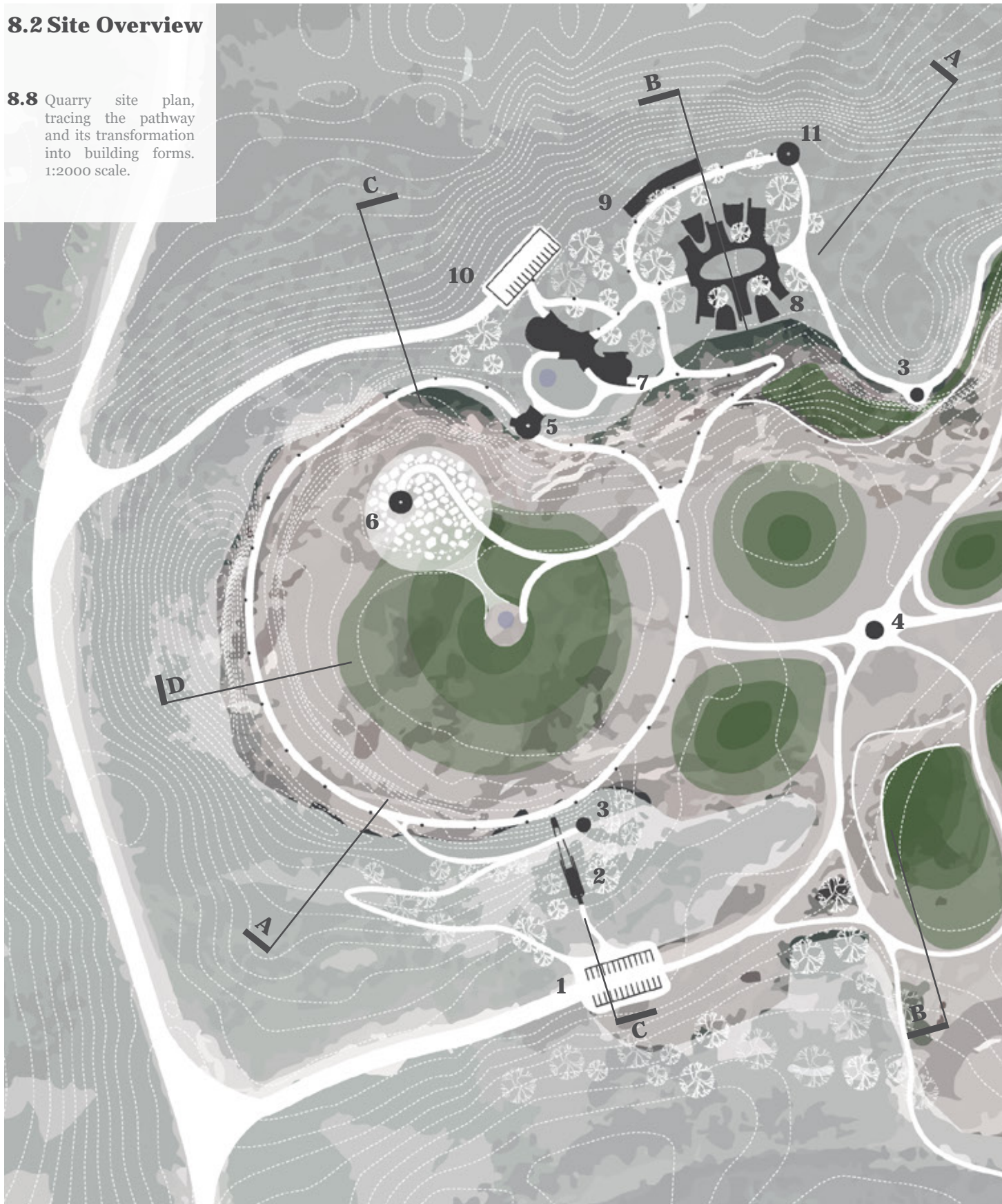


1+
years

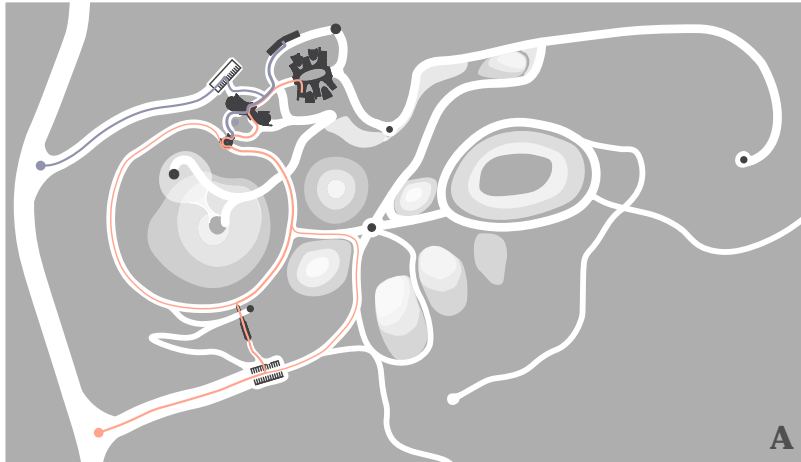


8.2 Site Overview

8.8 Quarry site plan, tracing the pathway and its transformation into building forms. 1:2000 scale.





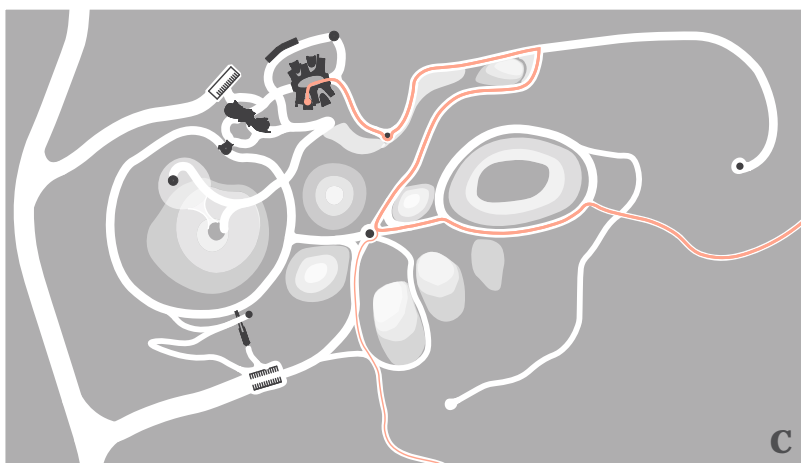
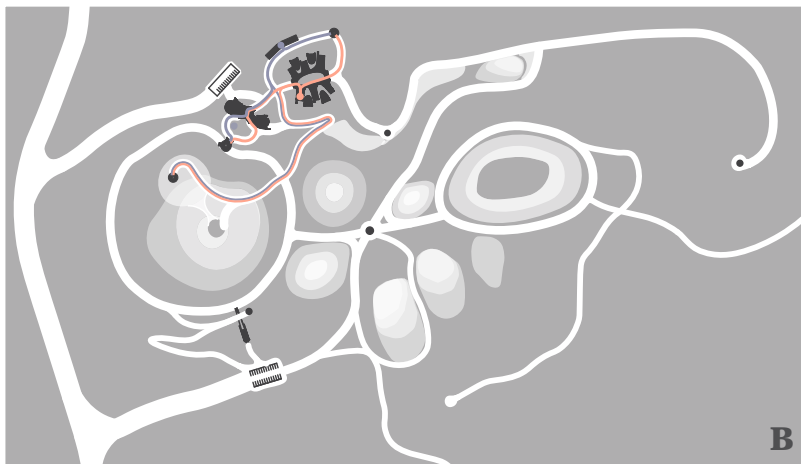


8.9 Circulation routes through the quarry showing guests (red) and staff (blue), along with possible secondary routes:

(A) Arriving on the first day, checking in at the lobby, then heading to their respective accommodations.

(B) Paths from accommodations to the three ceremony rooms.

(C) Path of a guest undertaking a hike beyond the quarry.





8.10 Quarry rendering captured from the western perimeter of the site, along with three other conditions that are possible across time or in varying weather conditions.

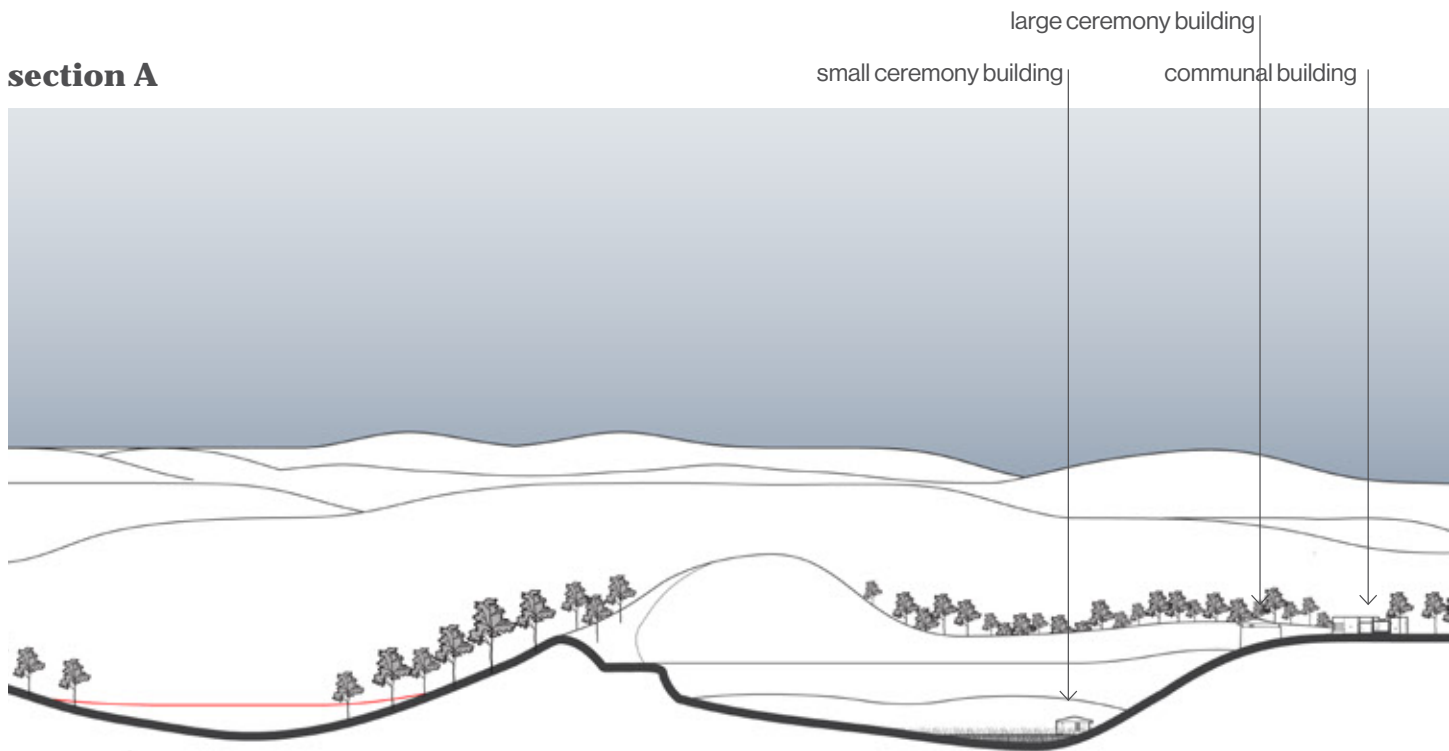
The site plan (Figure 8.8) demonstrates the incorporation of existing features into the landscaping strategy. First, the paths follow existing roads and features such as the ‘benches’ or terraces characteristic of many quarries and open-pit mines. On the eastern half, a large drainage ditch and pool of water are maintained along with two large heaps of gravel that guests may climb.

Covered previously in this chapter was the incorporation of self-seeding grass species. The darkest, central green circle in each of the green regions on the site plan mark areas where those grasses would be planted, while concentric circles represent where the grass could spread out over time. With grass being densely planted in the centre but growing more slowly and sporadically in outer regions, one is able to read the passage of time starting from the middle and moving outward across the land (Figure 8.10).

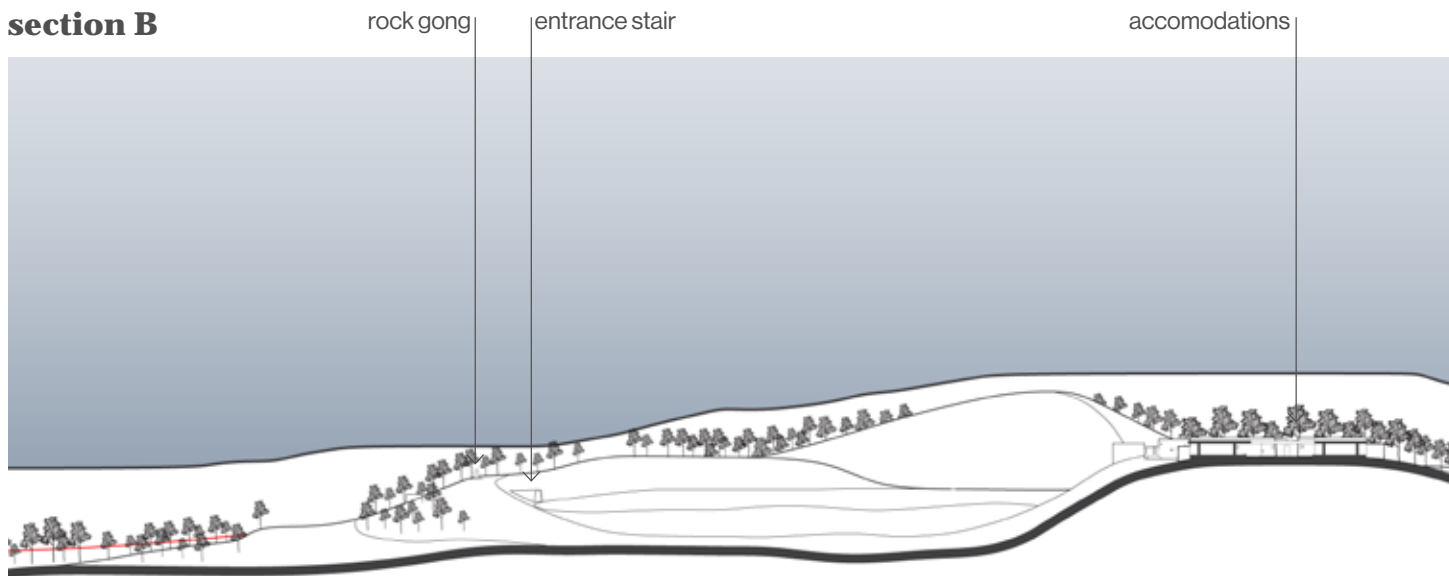
The site sections effectively illustrate the plateau condition on the north-west corner of the quarry (Figure 8.11, 8.12). Most development is concentrated here because of the crucial importance of the threshold condition to the design. Located at the boundary between the quarry landscape and the woodland to the north, guests are provided the choice between accommodations that face one extreme or the other. Site section D reveals a quarry floor consisting of a series of large flat plains that step down towards the lake to the south. Each plain would contain its own patch of grass.

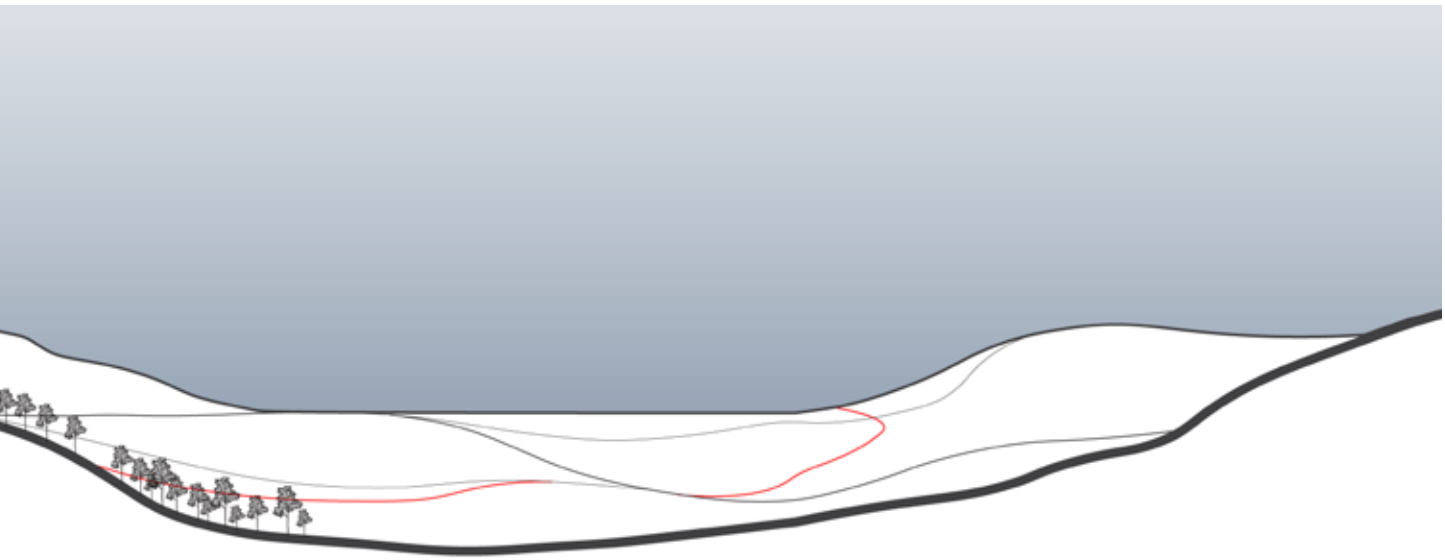
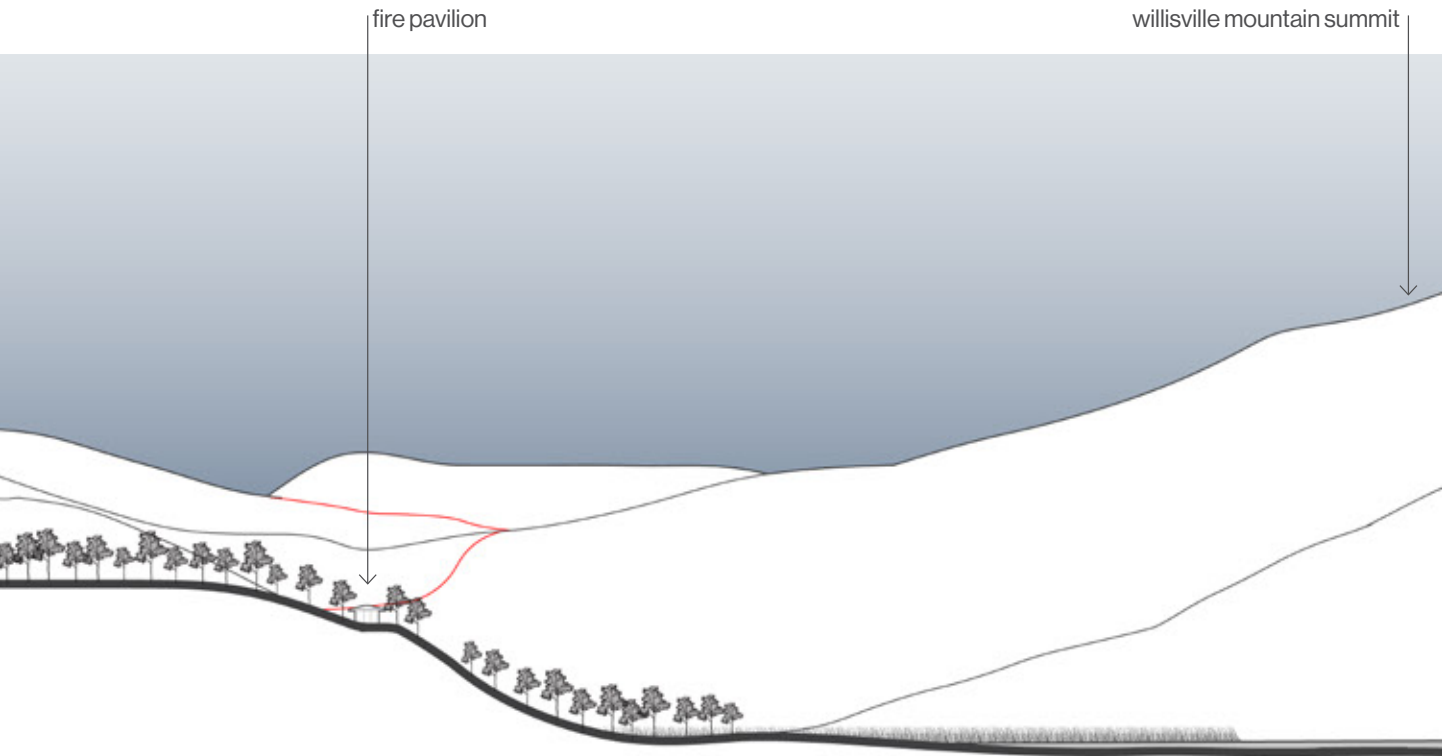
Finally, Figure 8.13 provides an isometric overview of most of the buildings on site. From left to right: large ceremony & lobby building, communal building, staff parking and accommodations, guest accommodations, and fire pavilion.

section A



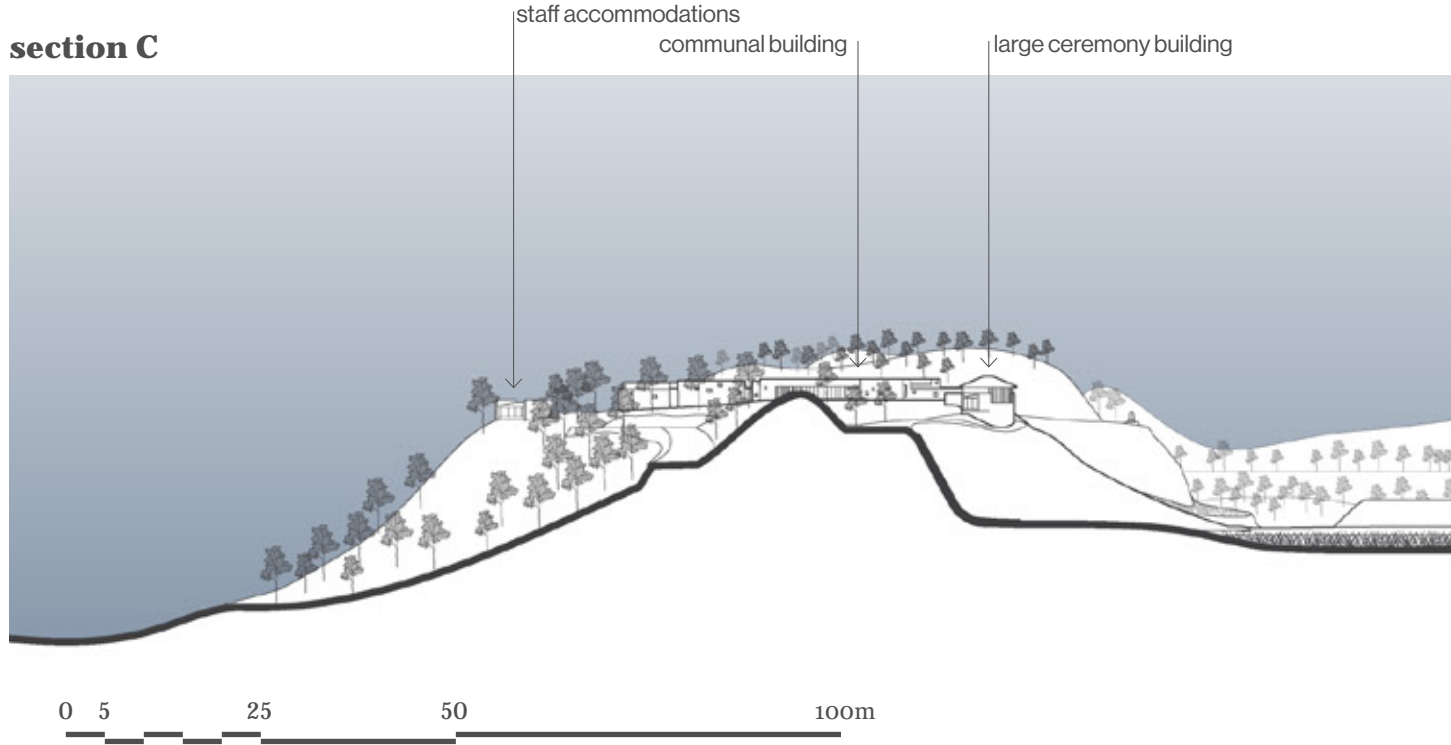
section B



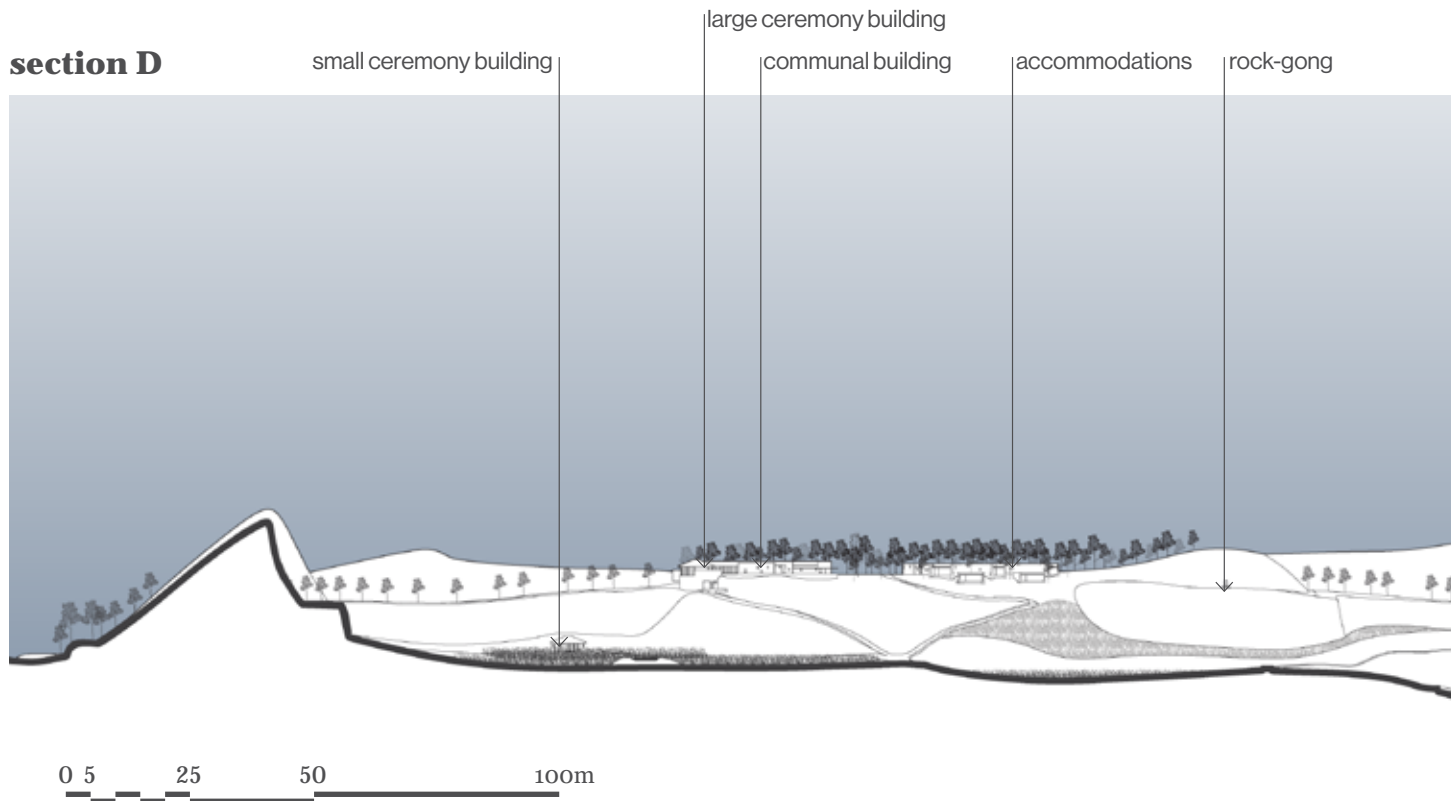


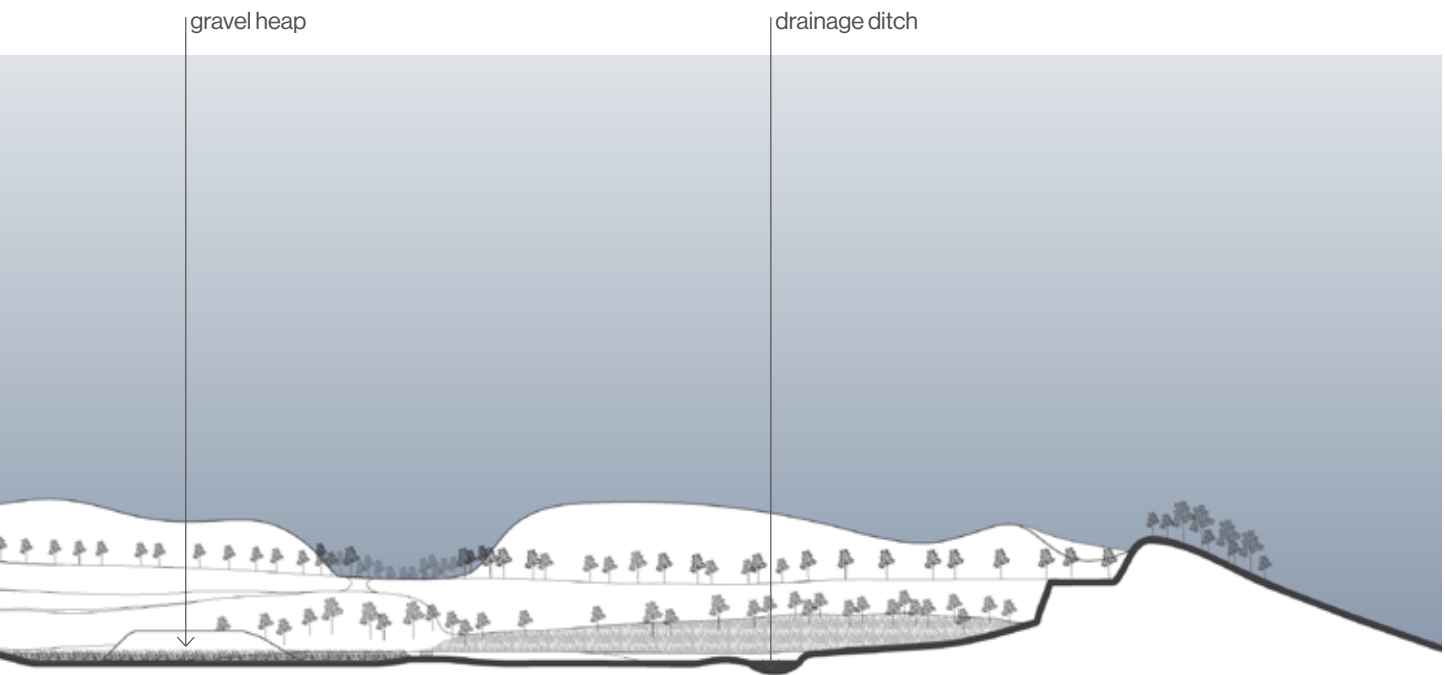
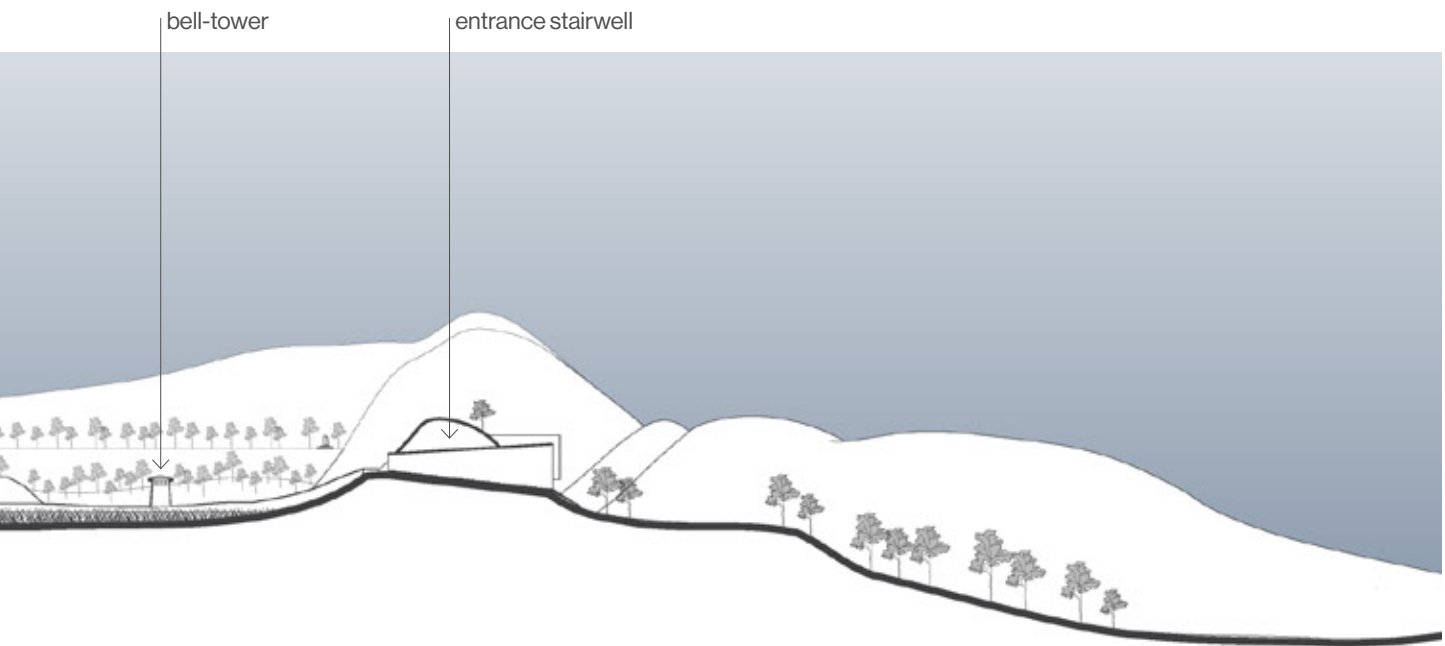
8.11 Site Sections A and B.
1:1500 scale.

section C



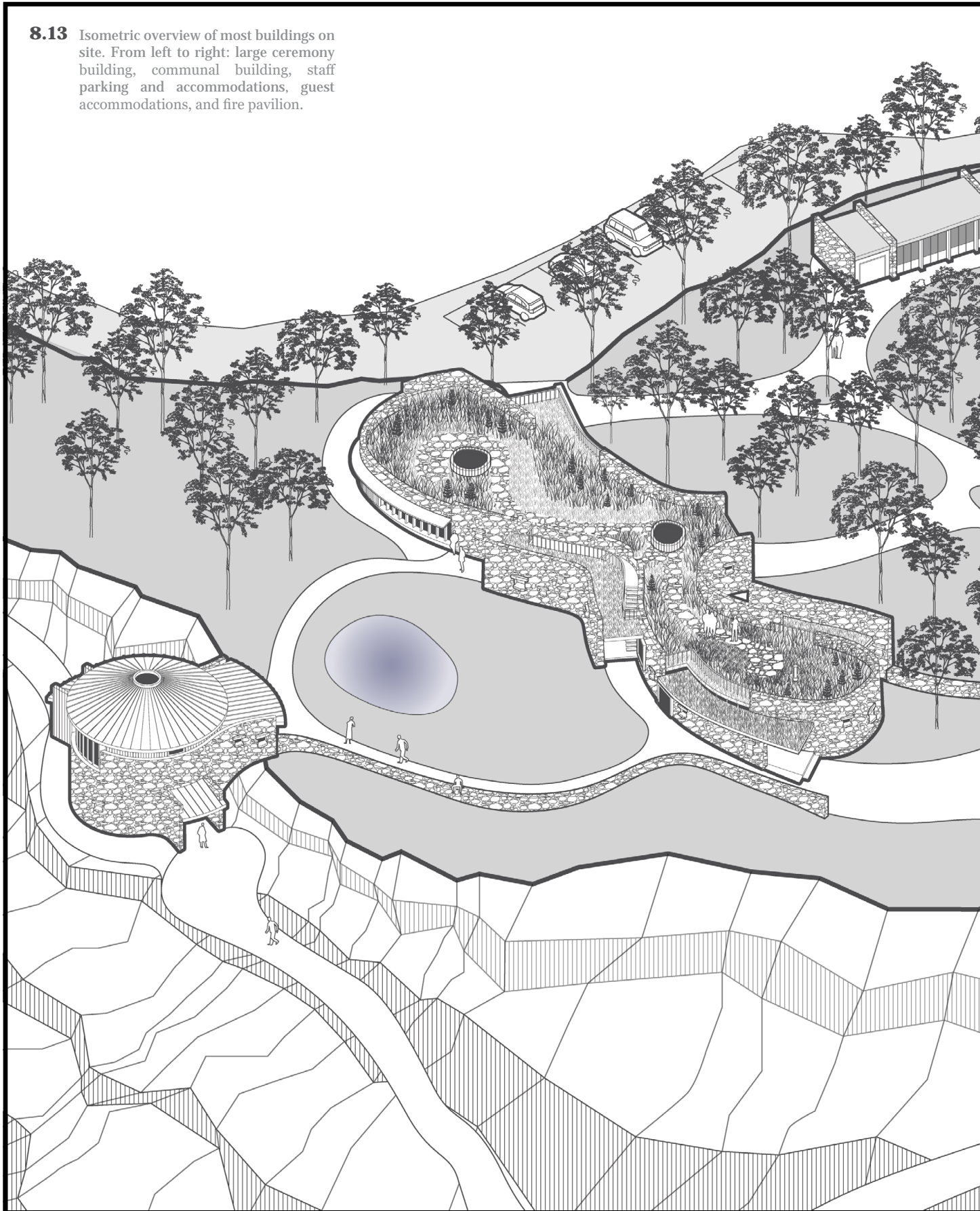
section D





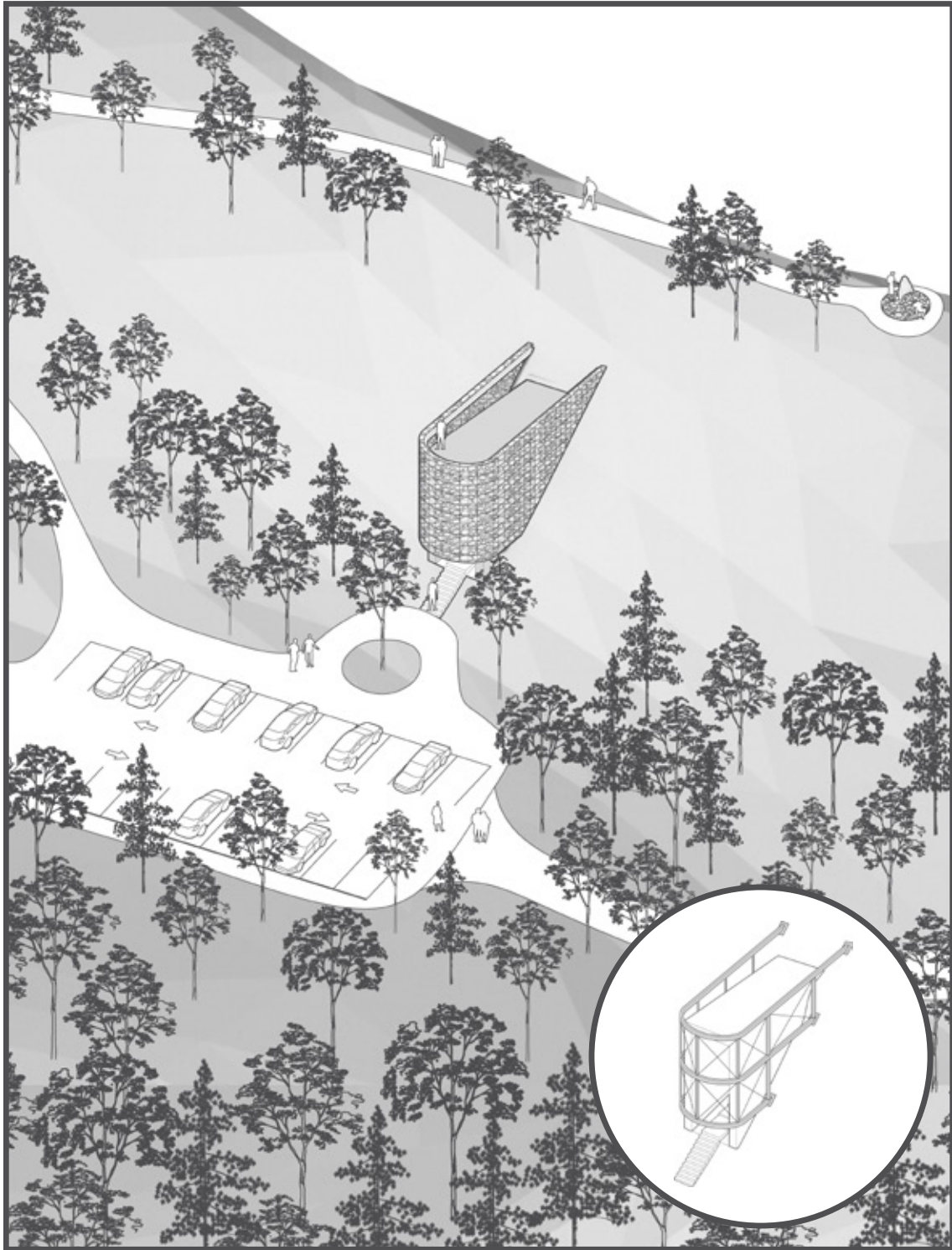
8.12 Site section C, 1:1000 scale and site section D, 1:1500 scale.

8.13 Isometric overview of most buildings on site. From left to right: large ceremony building, communal building, staff parking and accommodations, guest accommodations, and fire pavilion.





8.3 Entrance Stairwell



8.14 Guest parking, entrance stair, and lithophonic stone isometric drawing. Bottom right diagram reveals the steel framework that supports the gabion screen.



8.15 Entrance stair interior during the winter solstice when light reaches furthest into the space, along with three other conditions that are possible at different times in the day, year, or in varying weather conditions.

In light of the need for large quantities of stone in the construction of the retreat centre, the entrance stairwell became an opportunity to extract some of that stone while simultaneously opening up inhabitable space. After parking their car, guests make their way through this excavated cavity in the hill before walking to the reception building to the north. Located on the summit of the same hill is one of the lithophonic stones along the path system (Figure 8.14). The stair structure utilizes concrete stairs and walls, a steel framework anchored into the outcrop, and a screen made out of

gabion baskets supported by the frame. The use of gabions is inspired by the aforementioned Dominus Winery by Herzog and De Meuron. Clad in a narrow gabion wall, only a single layer of rocks fit between its metal wire enclosure, allowing light to penetrate through gaps in the rocks. On the interior, a speckled light effect is achieved that echoes something of a starry night display (Figure 8.16). The large rendering above depicts the space during the winter solstice when sunlight reaches furthest into the stairwell, along with three other conditions that are possible at different times in the day, year,



8.16 Dominus Winery by Herzog & de Meuron, showing a speckled lighting effect achieved with a gabion screen. Photographed by Yuequi Li.

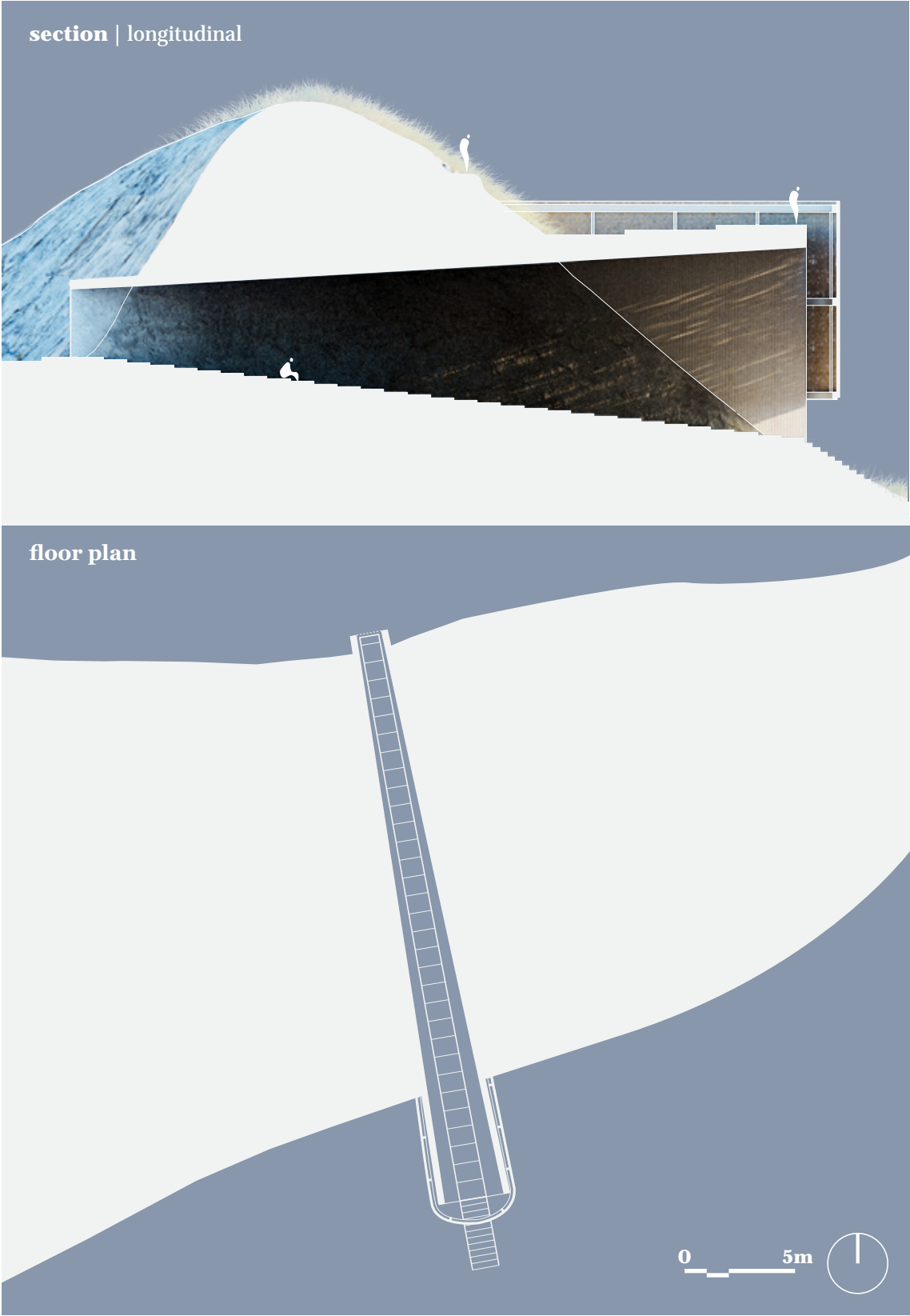


8.17 Proposed retreat entrance structure rendering, enveloped by a gabion screen.

in varying weather conditions, or when different lights are turned on in the space. Henceforth, one rendered perspective from each building will also be depicted alongside varying possible conditions to demonstrate how the design incorporates and facilitates transience.

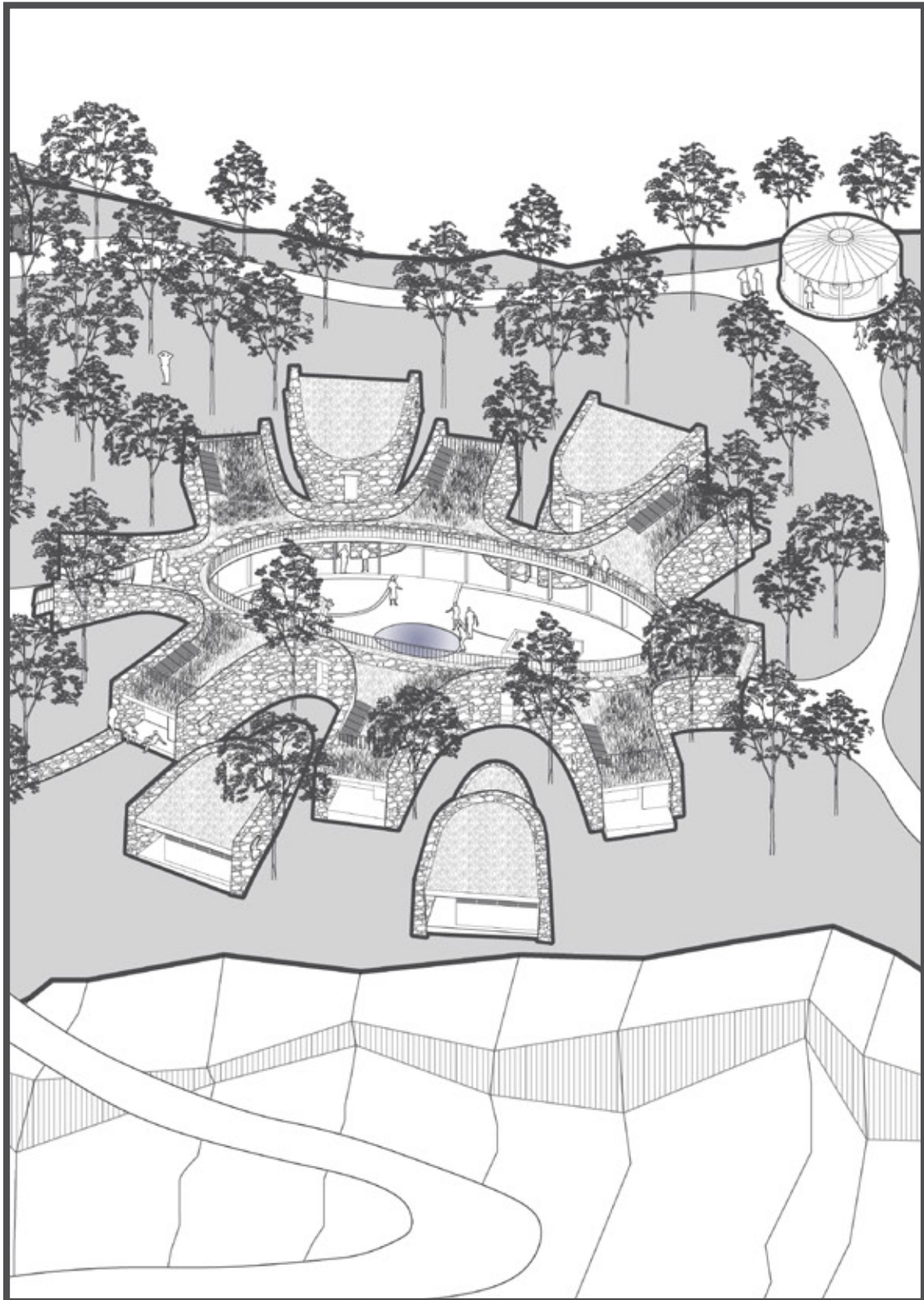
In the longitudinal section in Figure 8.18, warm sunlight is seen passing through the gabions and into the space,

while cool indirect light illuminates the exit and beckons guests toward a precipice that finally reveals the quarry. The floor plan demonstrates how the walls were tapered inwards from South to North. This allows light to hit both walls in addition to the ground surface as the sun aligns with the long axis of the space around midday.



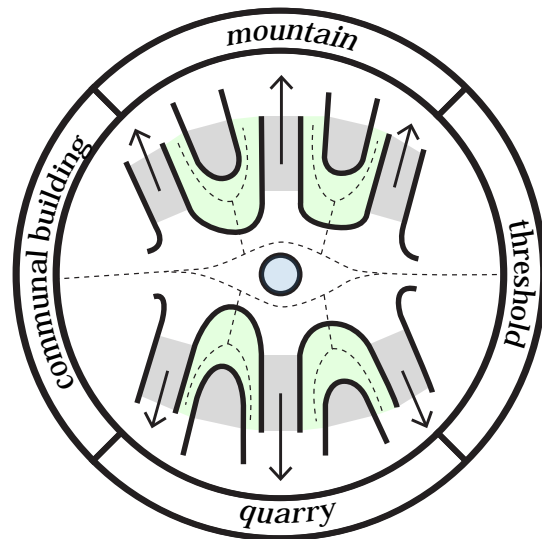
8.18 Entrance structure longitudinal section and floor plan.

8.4 Accommodations & Bathhouse



8.19 Guest Accommodations and fire pavilion isometric drawing.

8.20 Diagram of guest accommodations indicating the different possible experiences whether staying north or south of the “threshold”.

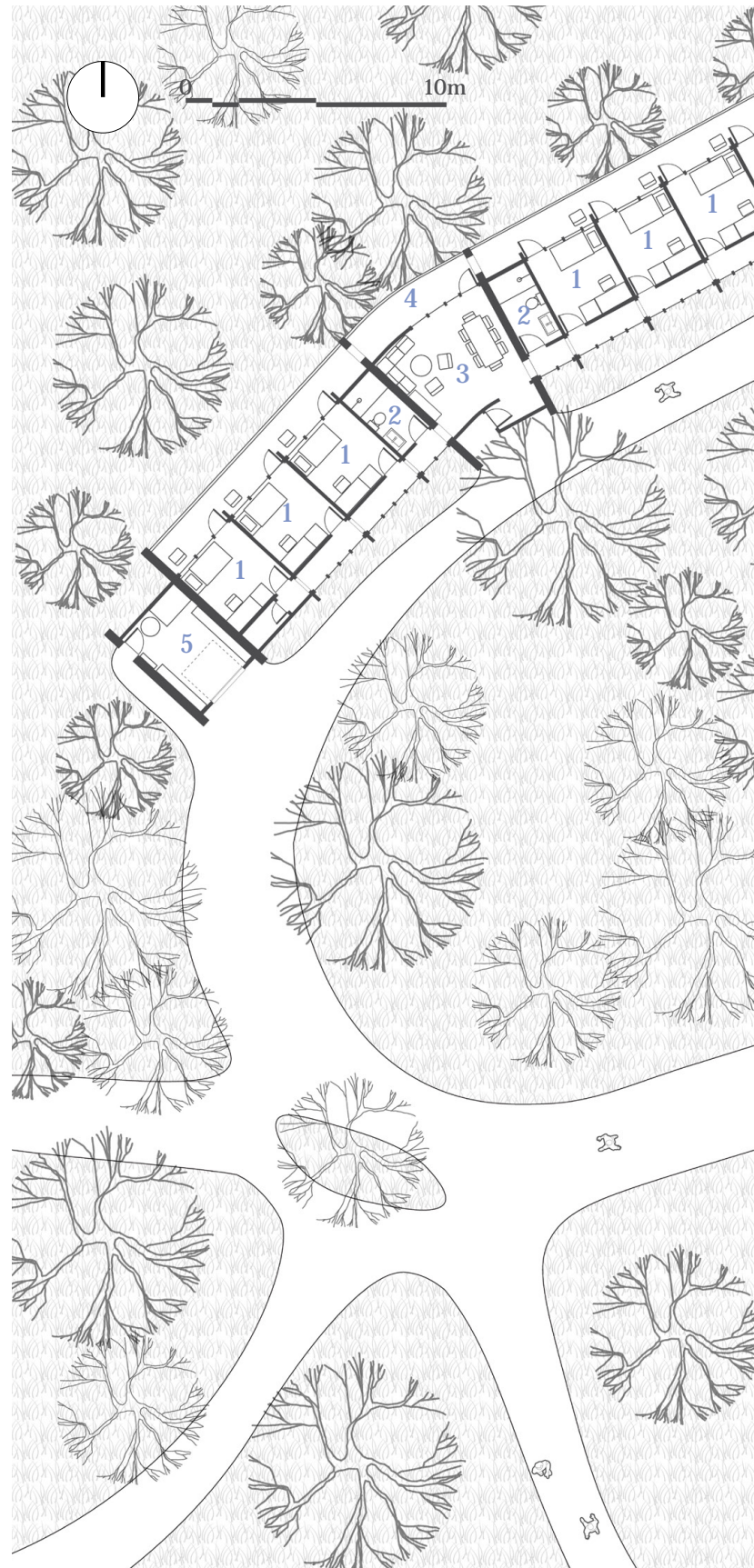


With the guest accommodations, the diagrammatic floor plan above helps to portray the design rationale. Grey regions represent accommodation units, separated by thick stone walls shown as black lines that direct one’s gaze outward toward either Willisville Mountain to the north or the quarry to the south. Green regions in-between represent outdoor, landscaped areas that weave in and out of the forms to create a series of walled gardens. Dotted lines indicate paths of travel, and a pond lies at the centre of a courtyard separating the units. Altogether, the units accommodate a maximum of twenty-eight guests.

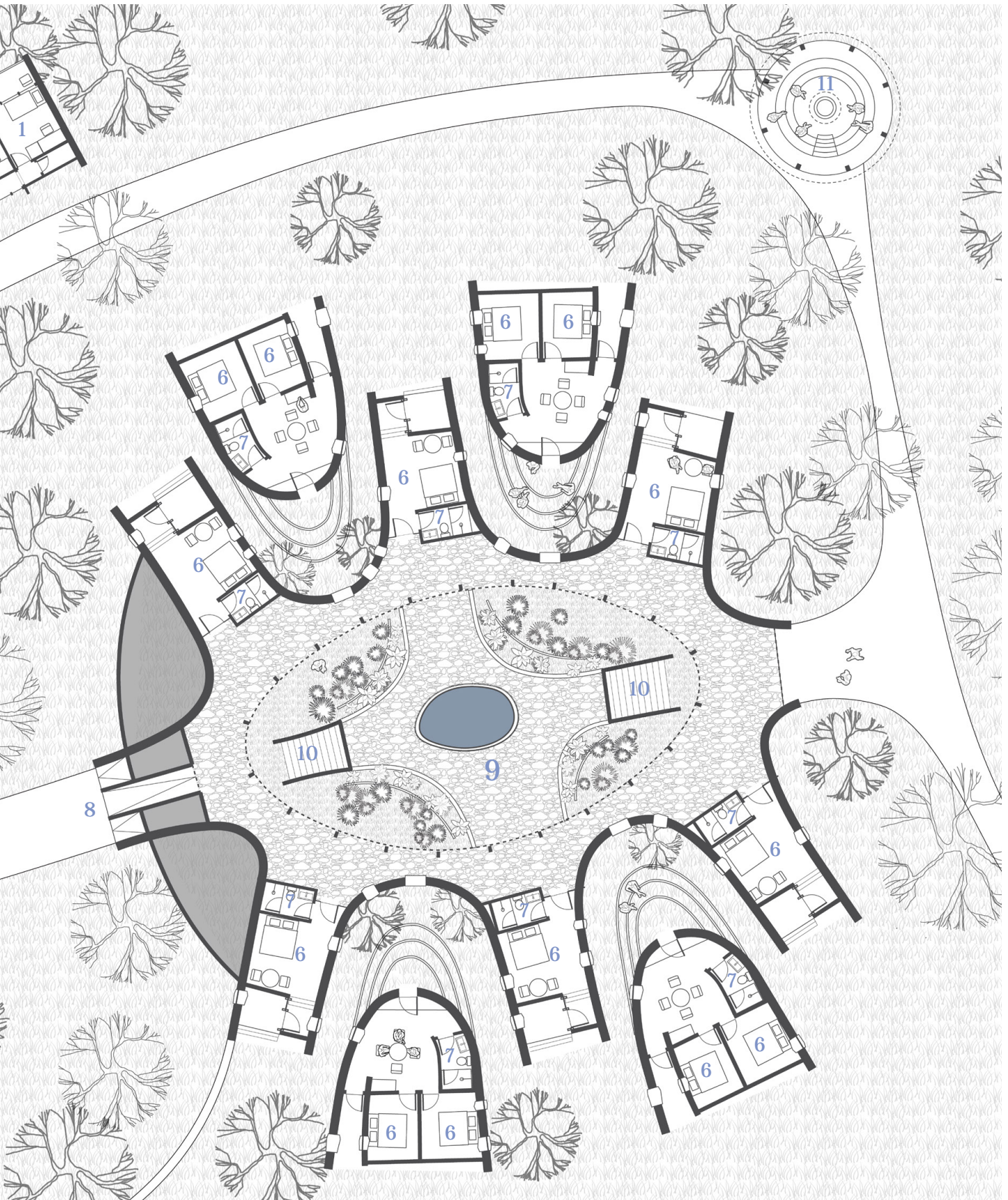
The floor plans in Figure 8.21 show how those accommodations are accessed beneath a berm to the west, built up using earth excavated for the buildings. Slopes of the berm that flank the tunnel lead to a green roof. The staff housing accommodates up to seven clinicians to ensure a clinician to guest ratio of at least one to four, as recommended by the Beckley Foundation.¹⁹ Each room receives an outdoor terrace, and a shared common room lies at the centre. Adjoining the

floor plan
accommodations & fire pavilion

1. Staff bedroom
2. Staff washroom
3. Staff common room
4. Staff terraces
5. Garage & boiler room
6. Guest bedroom
7. Guest washroom
8. Accommodations & green roof entrance
9. Courtyard
10. Bathhouse entrance
11. Fire pavilion



8.21 Floor plan of guest & staff accommodations and fire pavilion.



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western edge of the building is a garage for landscaping machinery, storage, and a boiler that provides hydronic in-floor heating throughout the facility. The top right corner features the fire pavilion. The south elevation and cross section A demonstrate the transition from housing unit, to interstitial green space, to housing unit. Cross sections B and C cut through the courtyard and bathhouse below from different directions. Notably, a skylight is shown beneath the pond at the centre of the courtyard. This provides an important caustic optical effect as light passes through the rippled water into the space below (Figure 8.27). With more wind on a given day, the frequency and amplitude of ripples in the water increases and the caustic effect intensifies. Once again, transience on display.

In the bedrooms, pictured in Figure 8.24, plaster on stone allows for a softening of sharp edges, creating a very different space than those of the modern city and the setting of the very social roles

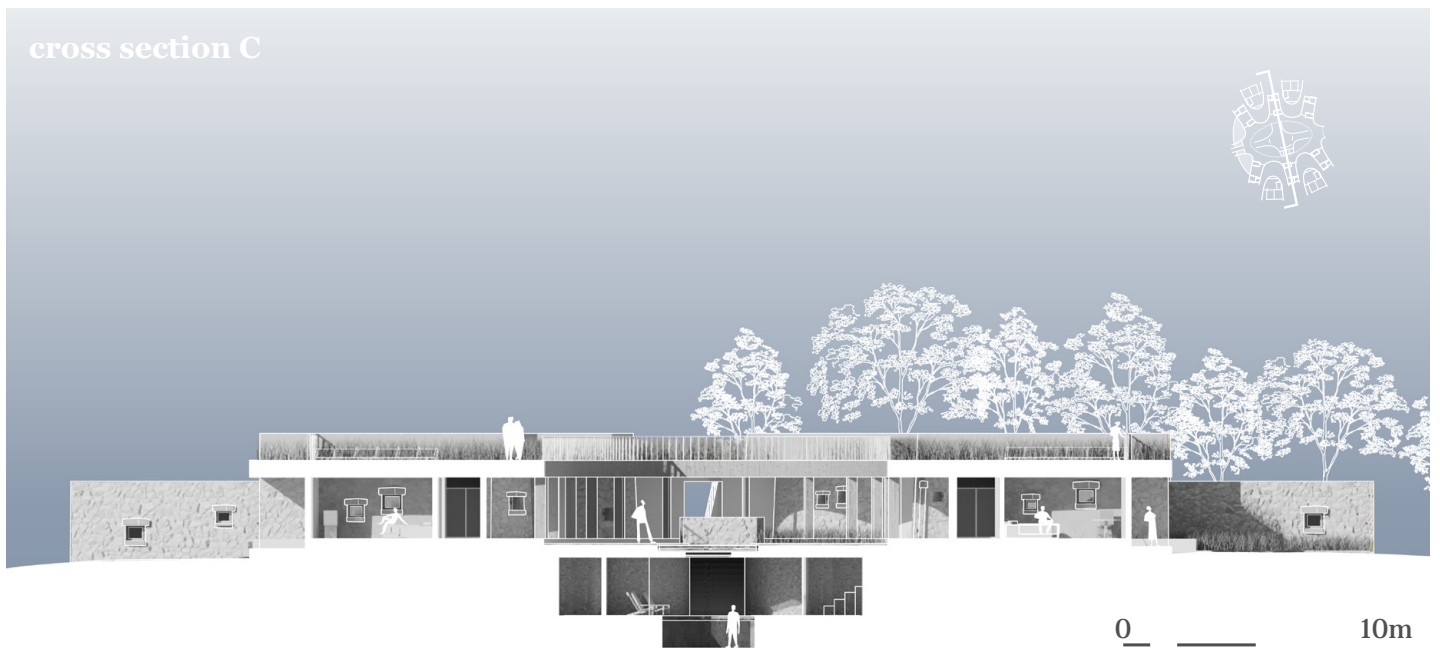
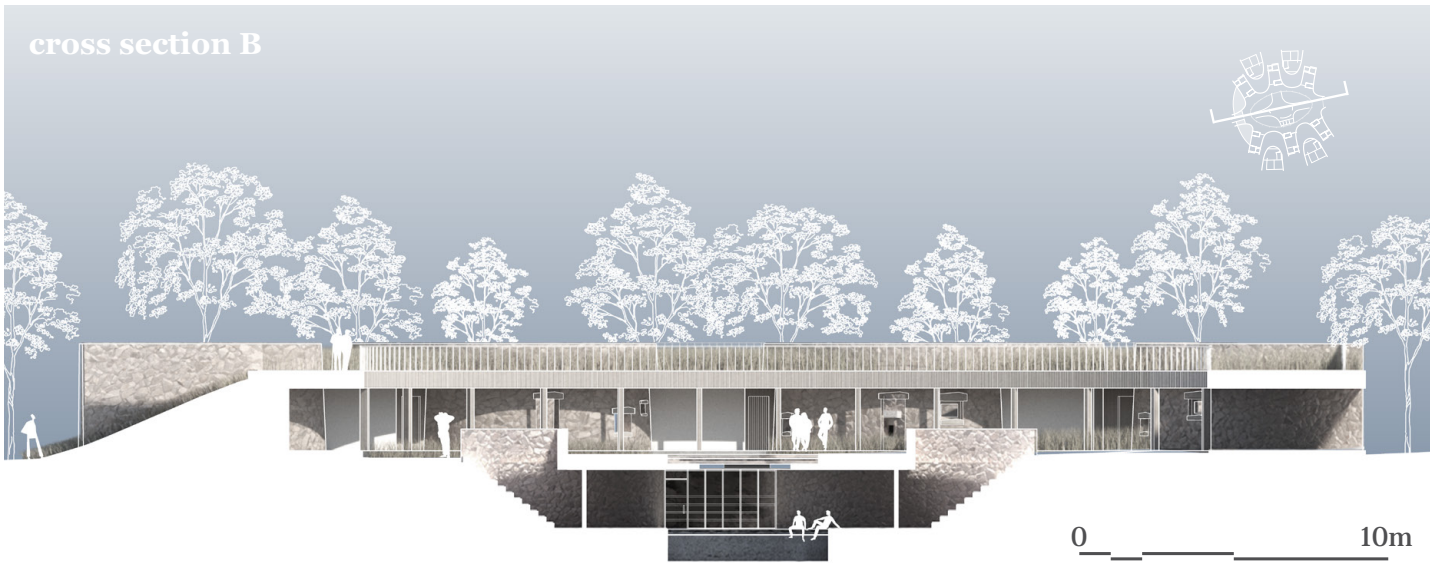
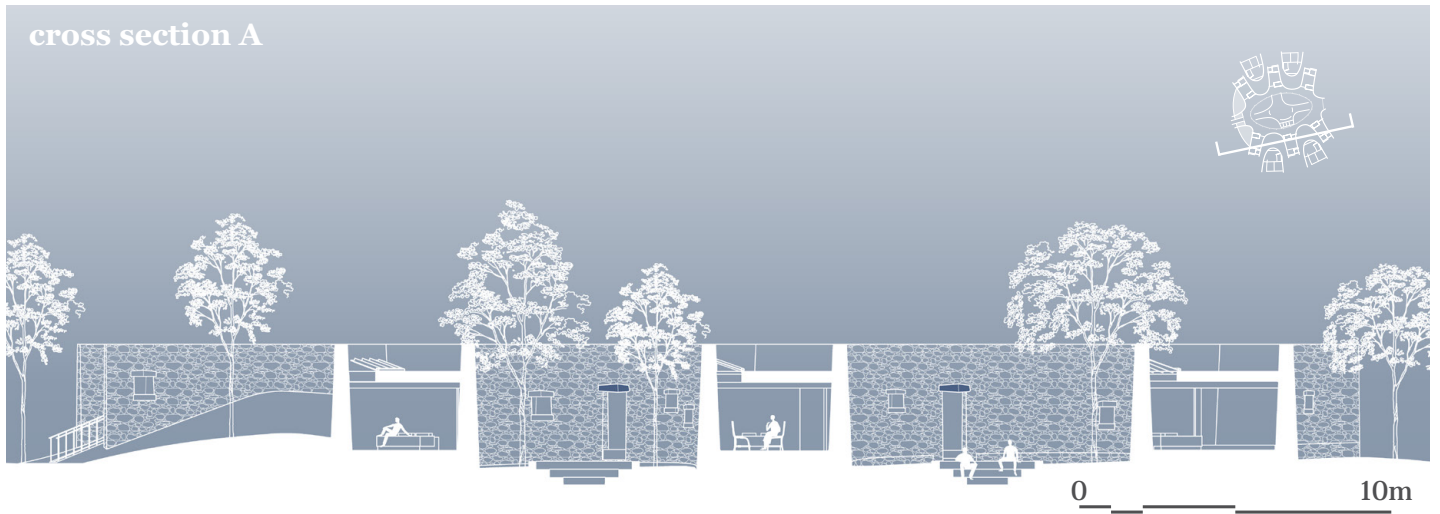
guests are trying to withdraw from at the retreat. From the main room, the only direct views to the outdoors are through small windows in the stone wall that face the interstitial walled gardens. The main spectacle, that of the expansive quarry for South-facing units, or Willisville Mountain for North-facing units, can not be glimpsed while in the comfort of a bed or sitting in a chair. From this static position, connection to the outdoors remains merely visual, and wholly disembodied. Instead, light spilling forth from the cavity that intermediates indoors from outdoors (seen beyond the back wall in Figure 8.24) beckons guests to round the corner, step through the door, and engage the wider world at last.

The bathhouse consists of a pool and seating area, sauna, change rooms (CR), and a washroom (Figure 8.26). Light, water, and stone are essential elements of the design, and their interactions are on display in the bathhouse rendering (Figure 8.27).

8.22 Guest accommodations south elevation.



8.23 Guest accommodations cross section A, B, and C.



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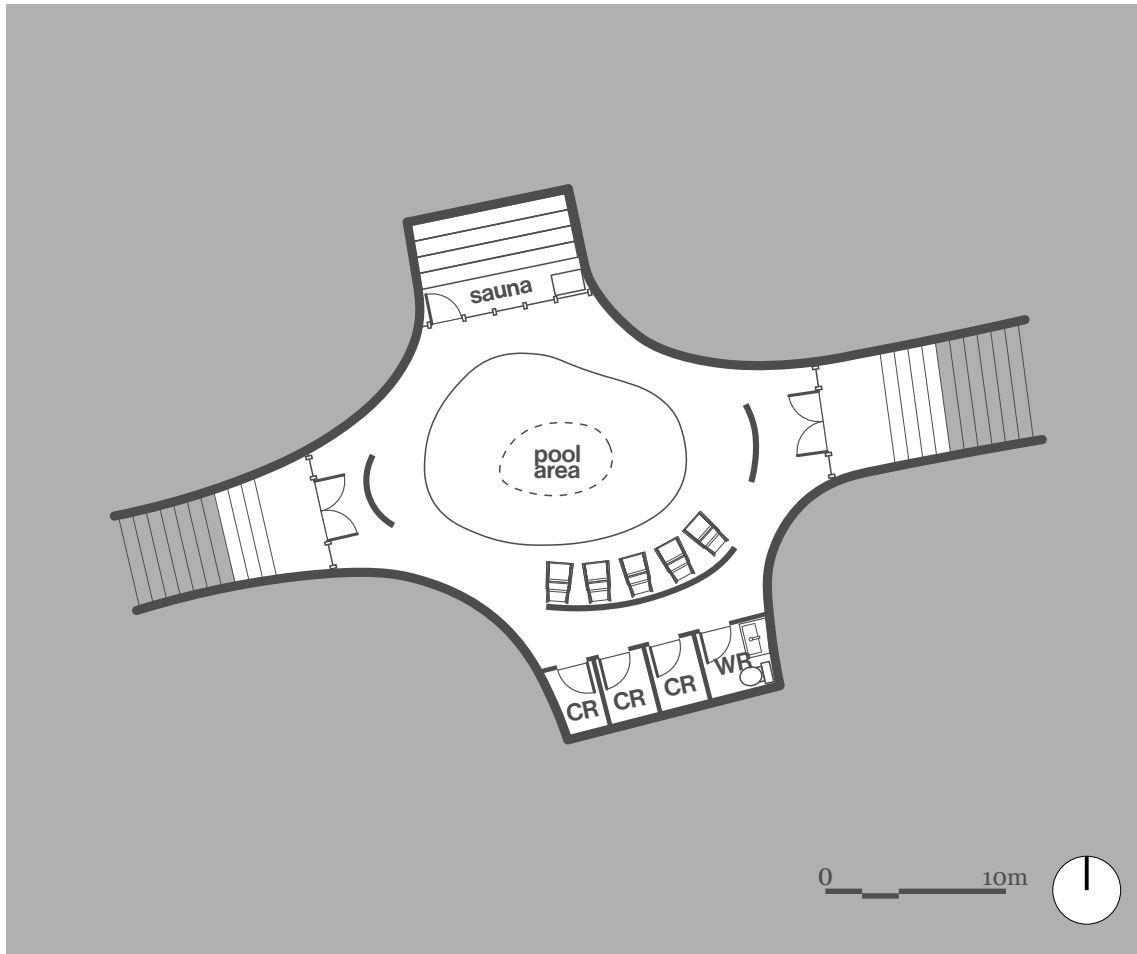
8.24 One bedroom accommodation rendering in the morning.



8.25 Guest accommodations exterior rendering in foggy weather, along with three other conditions that are possible at different times in the day, year, or in varying weather conditions.



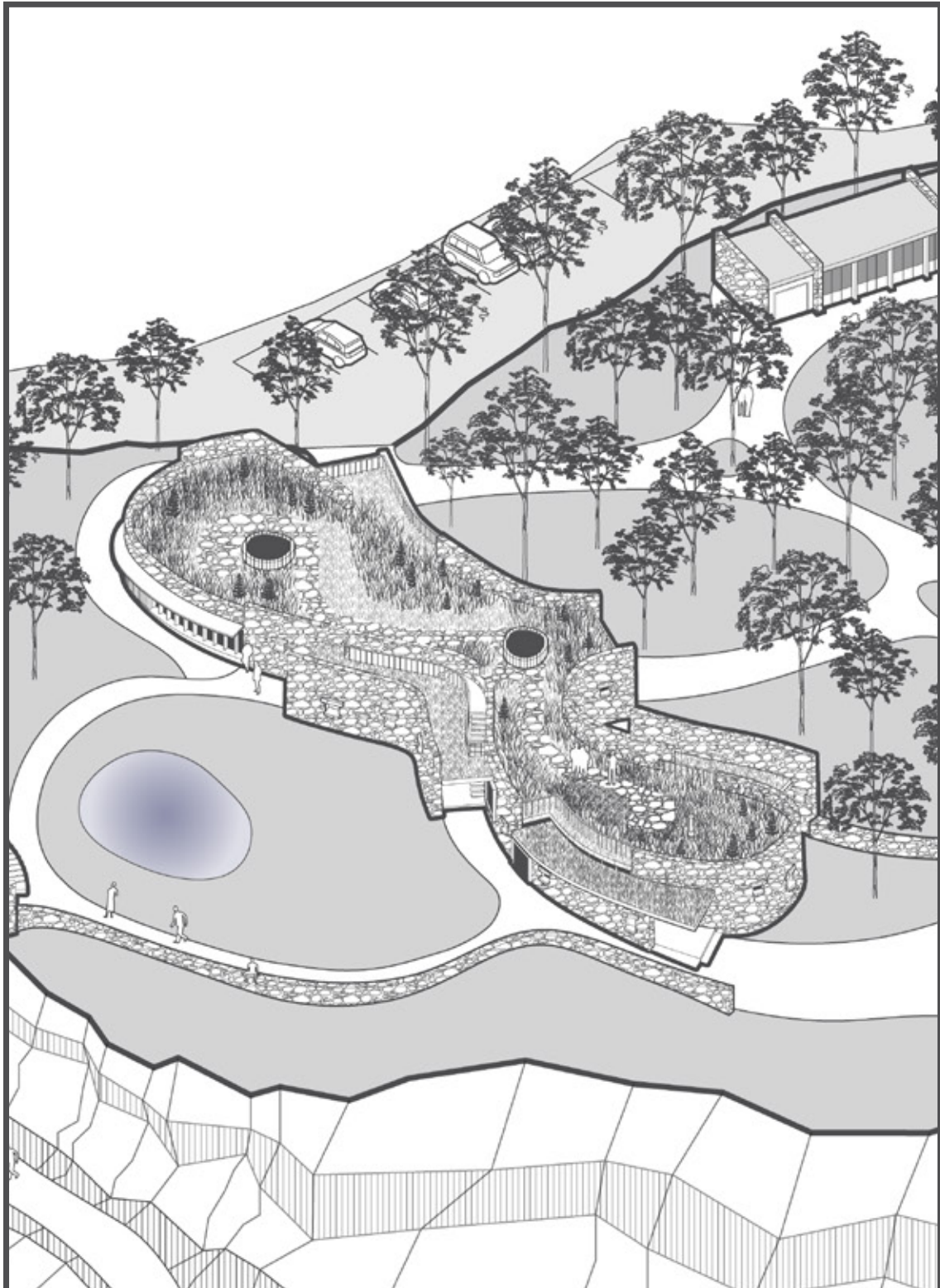
8.26 Bathhouse floor plan.



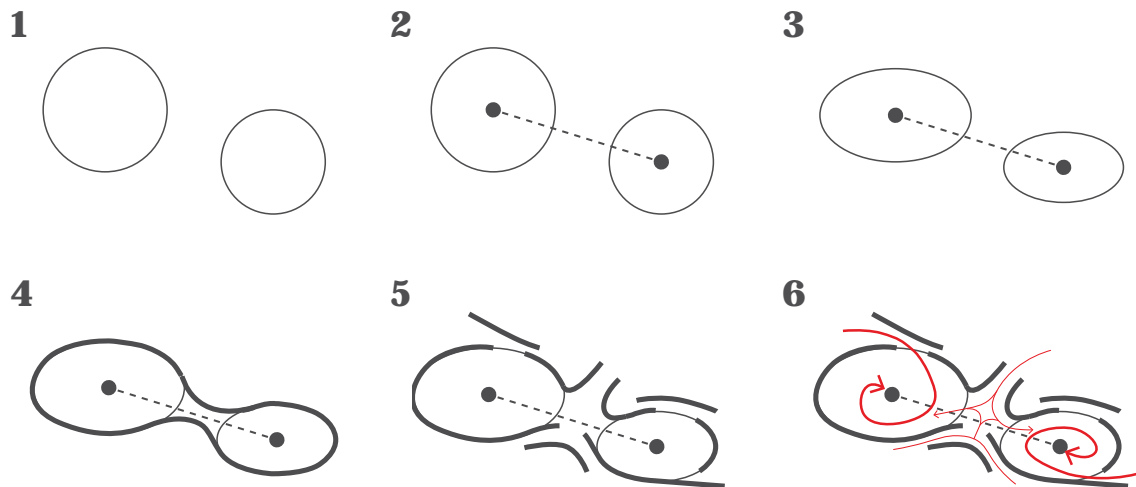
8.27 Bathhouse interior rendering in the morning.



8.5 Communal Building



8.28 Communal building isometric drawing.



8.29 Communal building design process: beginning with two circles, interconnecting them, stretching, enveloping in stone, peeling and offsetting openings, and establishing circular paths of travel.

The communal building contains the dining hall, kitchen, various back of house rooms and a staff and shipping entrance in the western wing. The eastern wing contains a lounge with a fireplace and seating, bookshelves along the ramp to the fireplace, two reading rooms, a washroom, and an entrance for guests. Between the two wings is a main entrance, and two stair cases outside of it lead to the green roof.

Whereas the formal language of the accommodations implicitly guides guests outward into the landscape or toward social spaces, the communal building takes on circular forms to denote a destination to gather around.

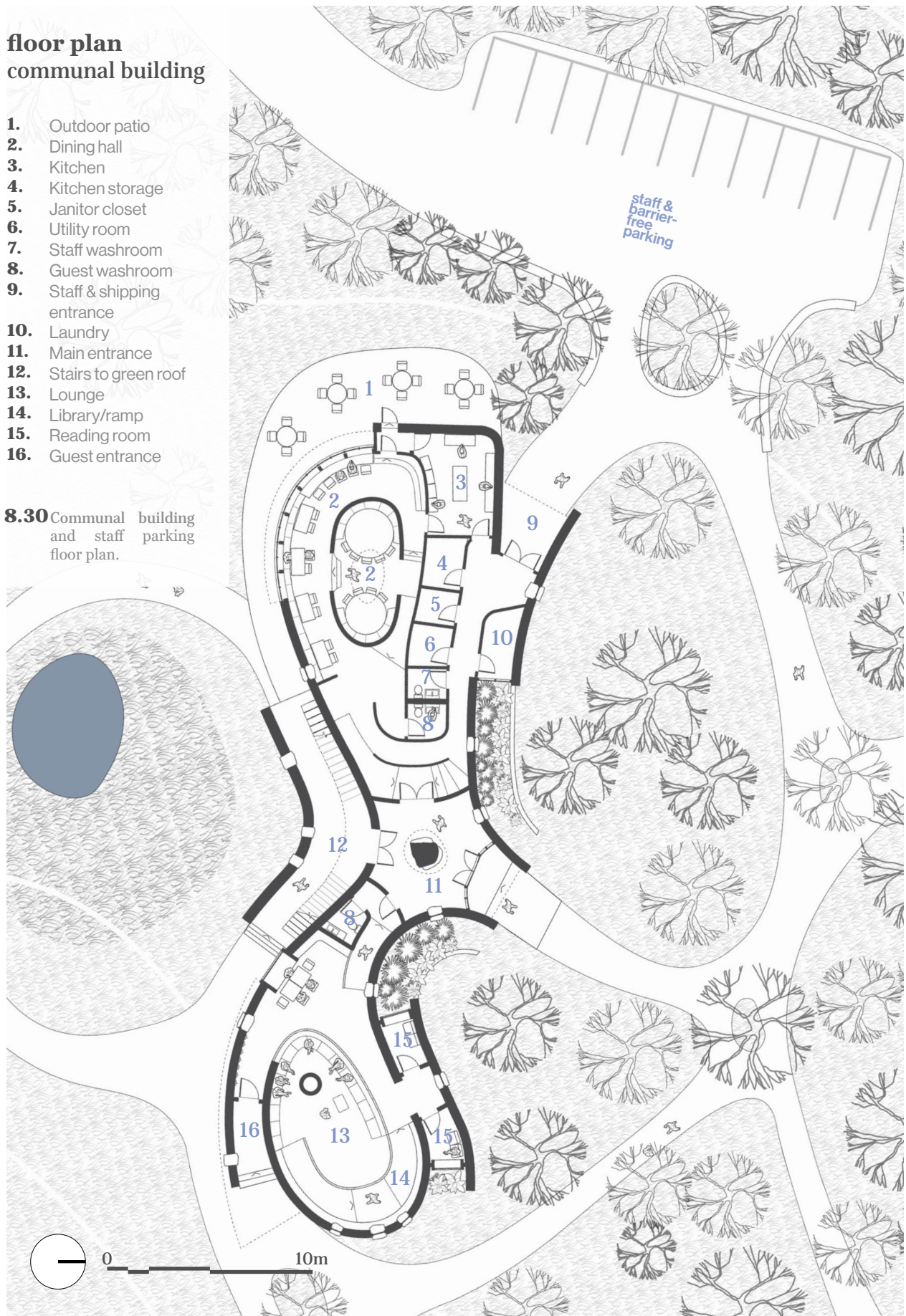
Figure 8.29 diagrams the phases of

the design process, beginning as a pair of circles that each house their own sacred activity, as described in section 8.1: *Architecture of the Sacred*. In the second phase, the circles were connected, then stretched to accommodate additional programs and to distinguish the building from the circular ceremony buildings. After conjoining the circles with the quartzite stone walls, openings were formed by offsetting or peeling it back in sections. Phase six demonstrates the rationale for the form and locations of those openings. Funneling visitors along tangents of the circle, they are guided along a spiraling path of movement that culminates at their respective 'sacred core'.

floor plan communal building

1. Outdoor patio
2. Dining hall
3. Kitchen
4. Kitchen storage
5. Janitor closet
6. Utility room
7. Staff washroom
8. Guest washroom
9. Staff & shipping entrance
10. Laundry
11. Main entrance
12. Stairs to green roof
13. Lounge
14. Library/ramp
15. Reading room
16. Guest entrance

8.30 Communal building and staff parking floor plan.



8.31 Communal building exterior rendering of south facade.



8.32 Communal building dining hall rendering at midday in winter, along with three other conditions that are possible at different times in the day, year, in varying weather conditions, or under different artificial lighting.

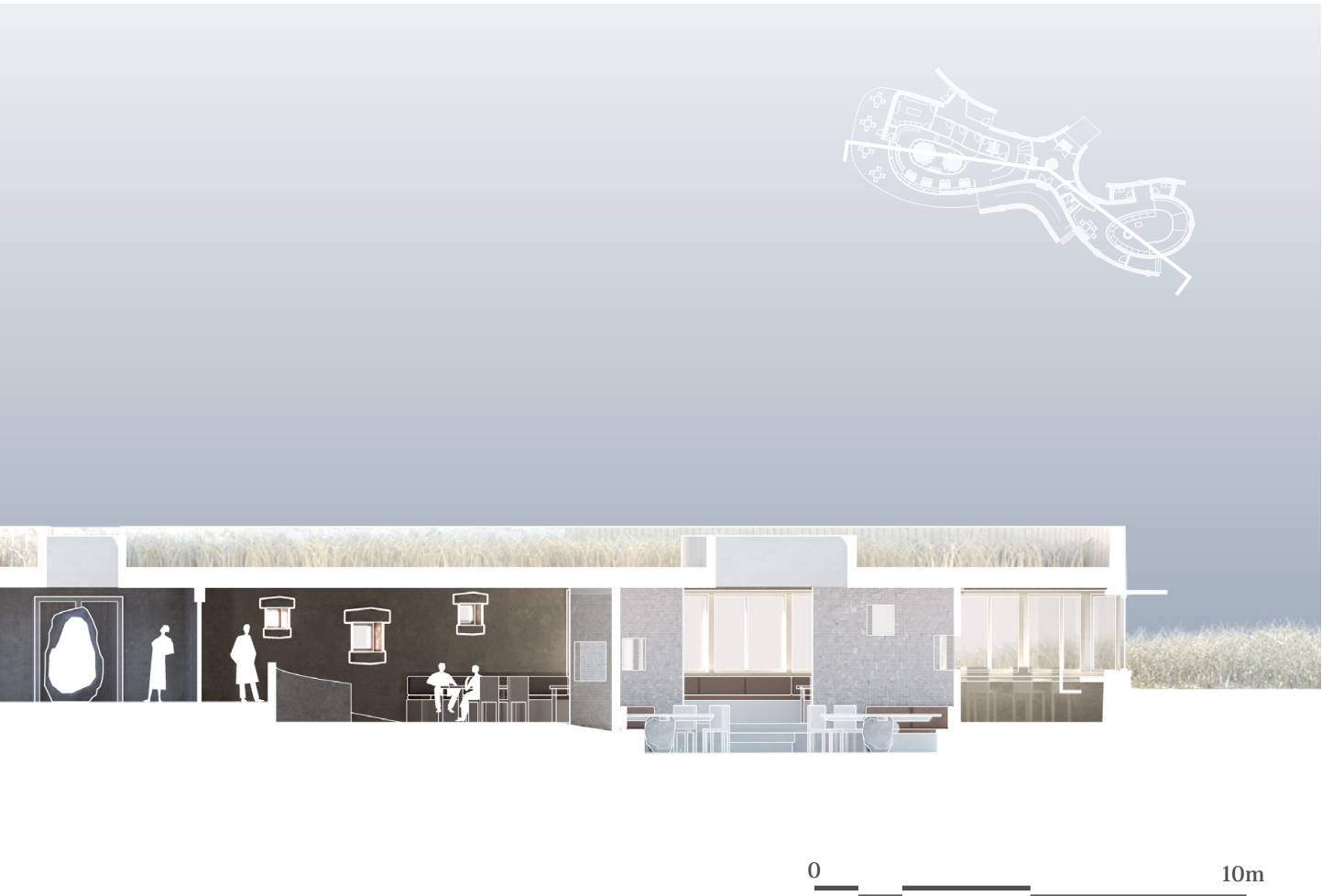


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- 8.33** Communal building longitudinal section displaying changes of light and atmosphere from one end of the building to the other.



section | longitudinal



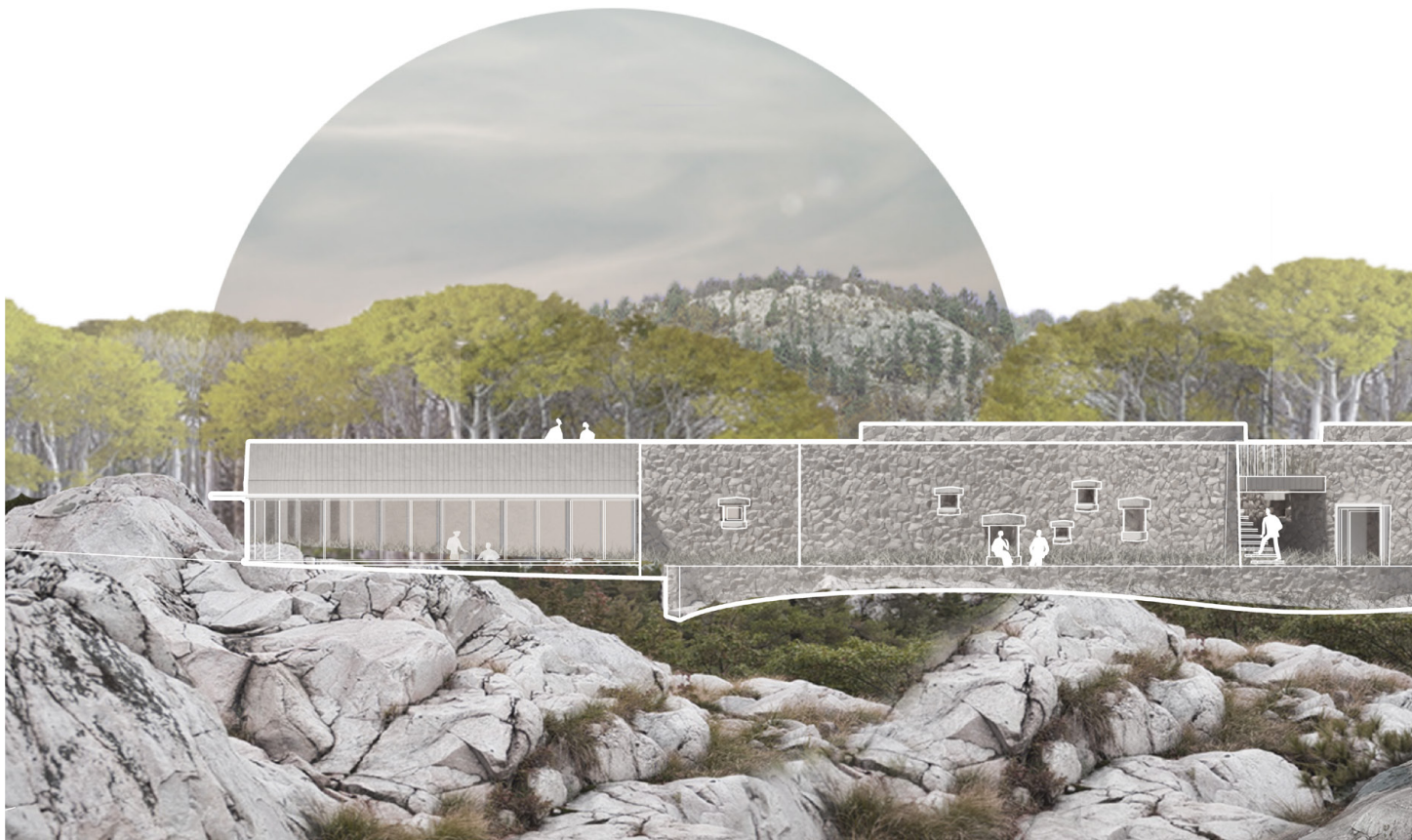
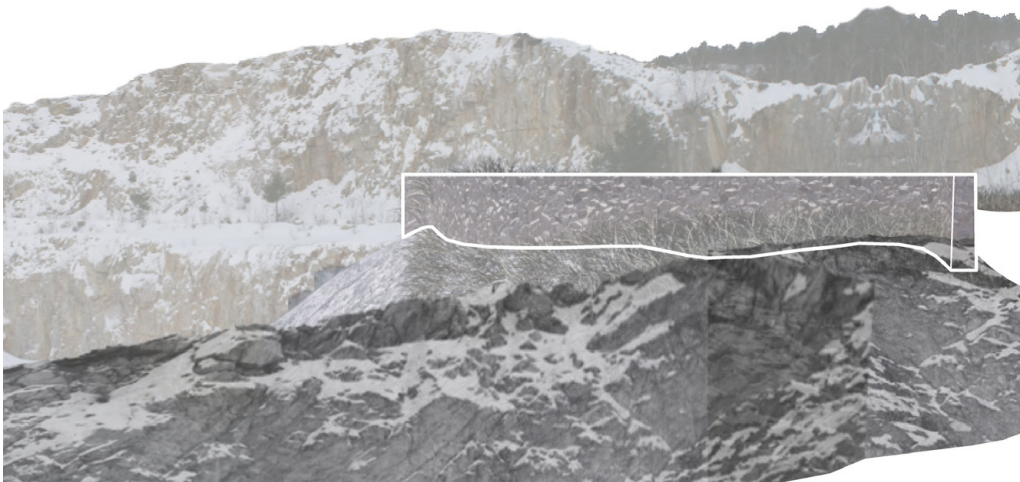
In the Lawson Quarry Retreat Centre, light and materiality were important to express through the section and elevation drawings. Inspired by strategies employed by Zumthor at Therme Vals, it is light which flavours this otherwise homogenous use of plaster on stone while moving from warm artificial lighting in the lounge, cool indirect sunlight in the central entrance space, to a neutral direct sunlight in the dining hall (Figure 8.33). In the east elevation, curving, textured walls

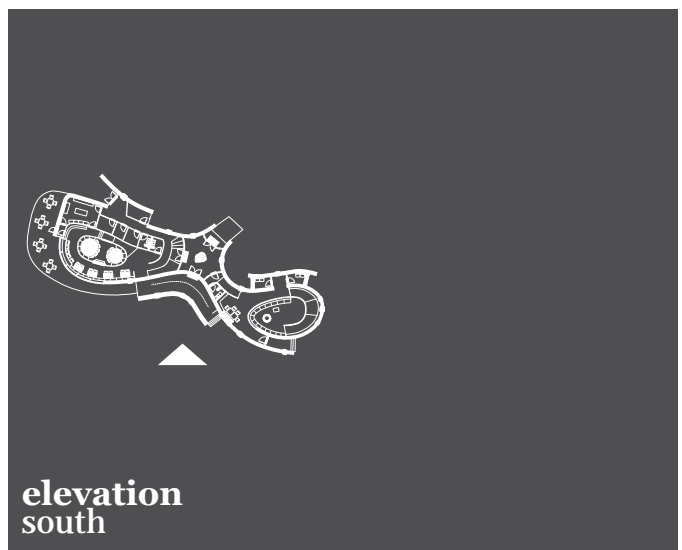
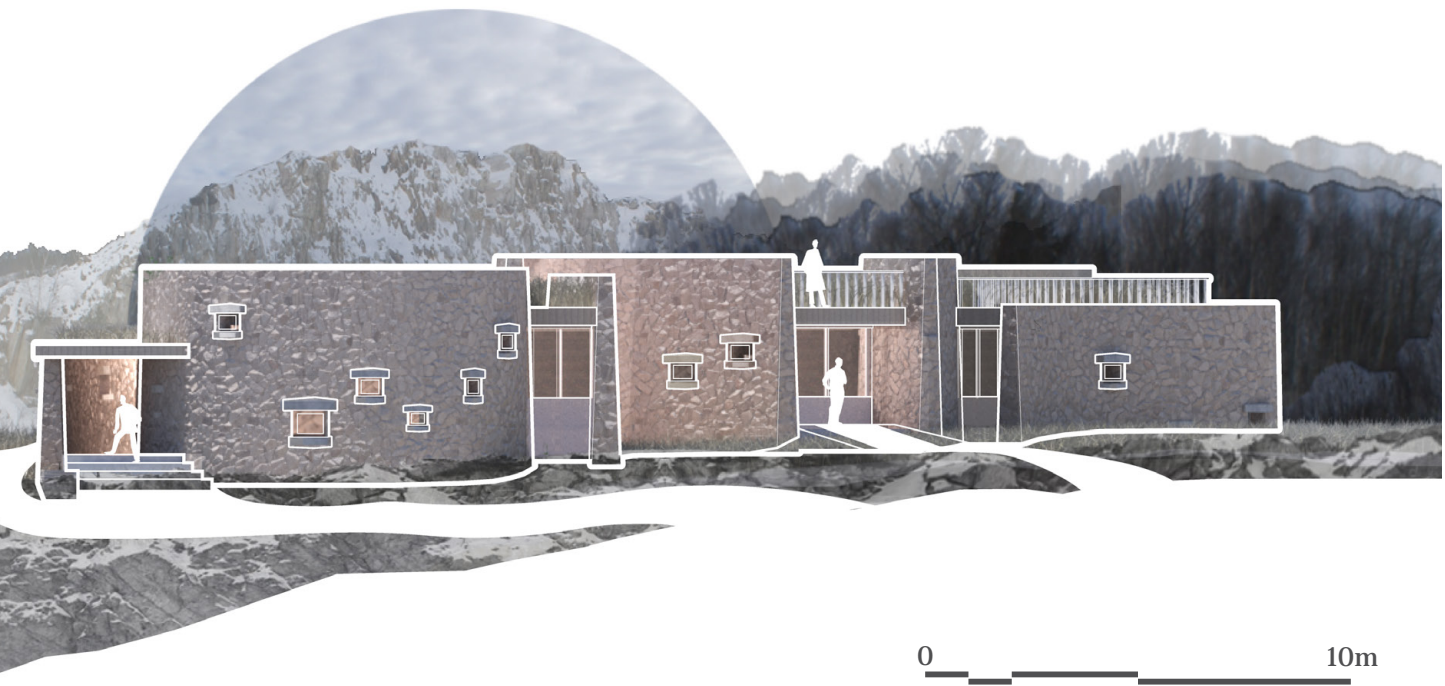
create a gradient of hues and intensities of light and shadow that help to break up a monochrome facade (Figure 8.34).

Finally, in an effort to minimize the impression of the building as a foreign artifact dropped on top of the landscape from above, the south elevation demonstrates the use of multiple tiered forms. With green roofs at varying levels and materials which match their surroundings, it is as though the building rose up from the earth itself.

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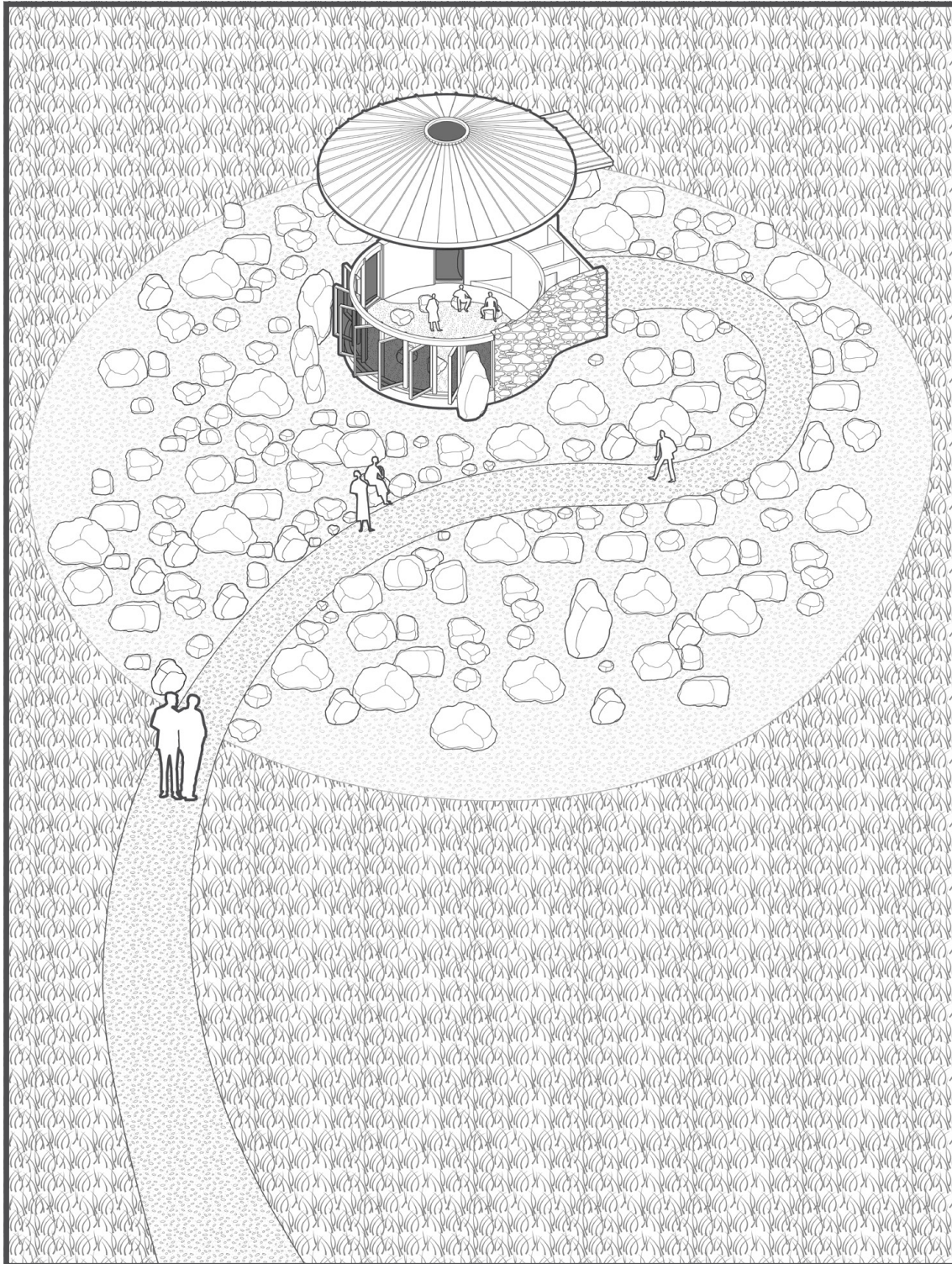
8.34 Communal building
east and south
elevations.



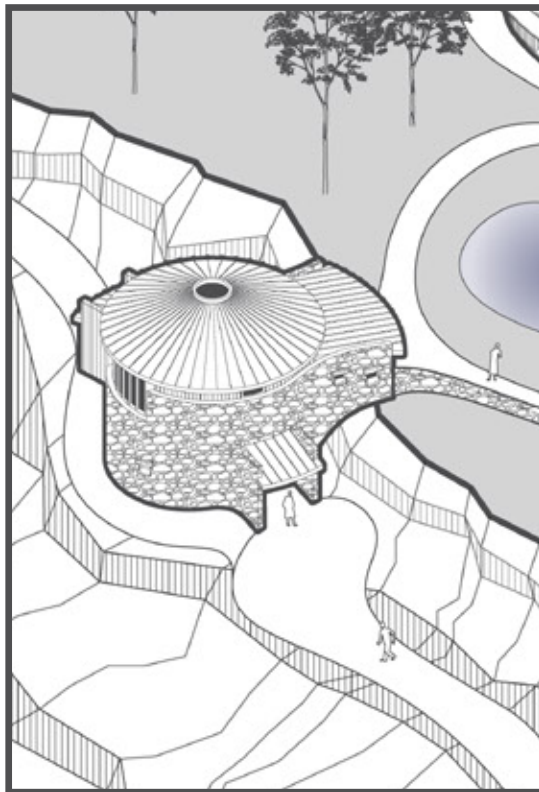
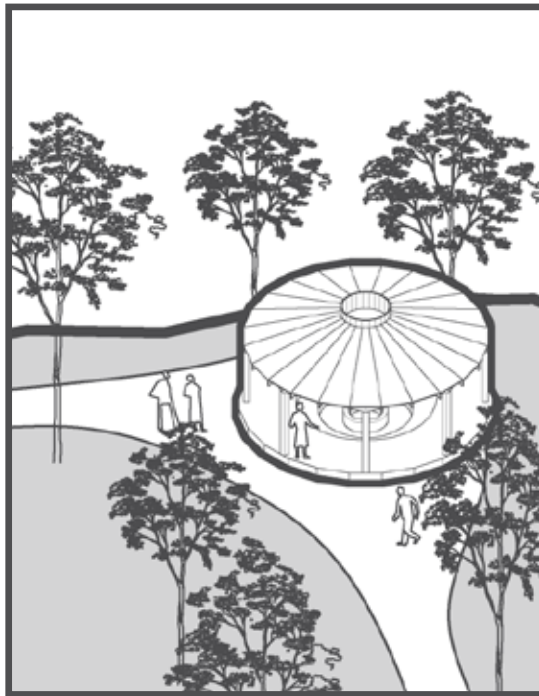


8.6 Ceremony Buildings

8.35 Small ceremony building isometric drawing. Spreading out boulders and gravel from an existing nearby pile around the building, the characteristic barren, rocky quarry landscape could be maintained while the remainder of the site is slowly renaturalised.



8.36 Fire pavilion and large ceremony building isometric drawings.



With the ceremony spaces where therapy takes place, each provides a distinct atmosphere. There's the 'forest experience' in a fire pavilion surrounded by trees, the 'quarry experience' in a small ceremony room surrounded by boulders, and a large ceremony room occupying the threshold between these two worlds. After ascending the lobby on the first floor, the large ceremony building also contains the domed ceremony space, a washroom, and two breakout spaces that guests may escape to during a session if they feel a need for privacy (Figure 8.39). The small ceremony building features a similar layout, with a breakout room and washroom. Used primarily as a place to gather around the fire at night, the fire pavilion (Figure 8.36) doubles as a ceremony space during the warmer months.

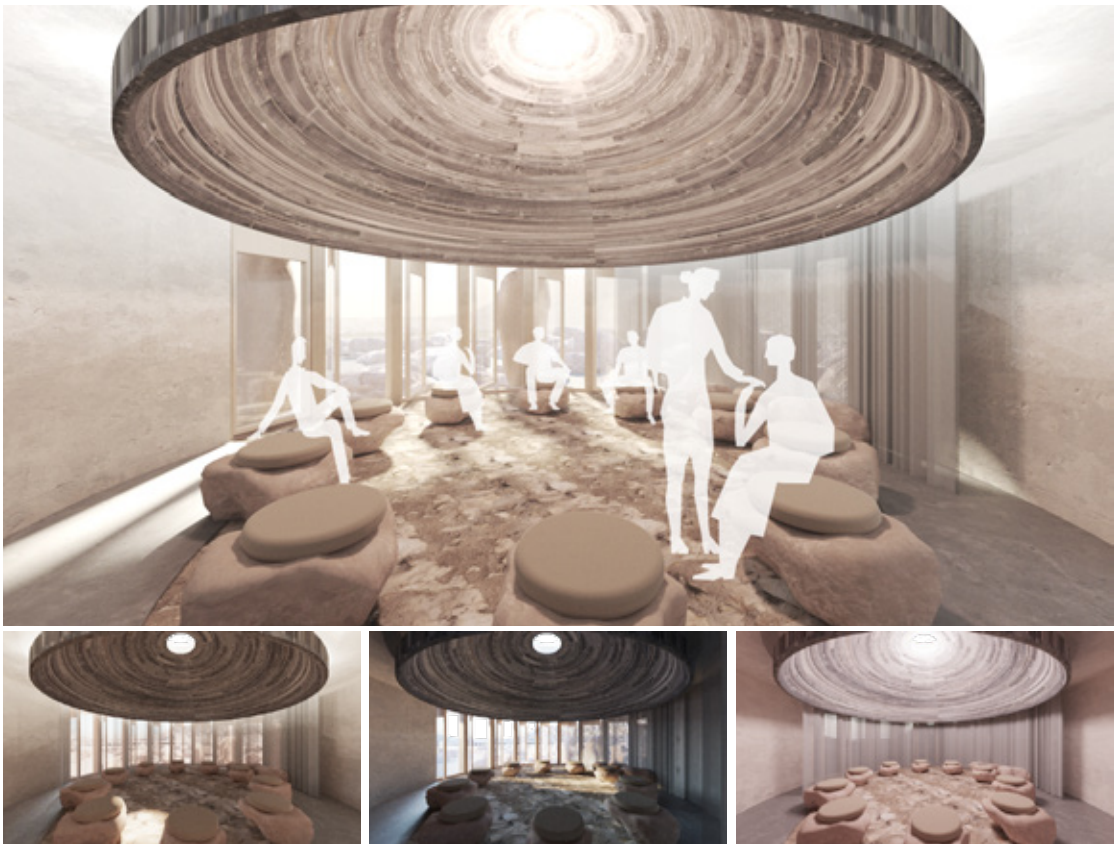
The ceremony spaces take inspiration from aspects of the NAC ceremony. Whether it's Hoichol NAC members practicing in a tuki, Diné members in a hogan, or Kiowa members in a tipi, all not only focus everyone towards a central fire using a circular plan, but three dimensionally, they're also focused towards a point or opening above that establishes the axis mundi. This suggests that the centre of everyone's activities in this moment may as well be the centre of the universe, and places a certain weight and sacred significance onto the contents and activities in the room. Another feature shared by the tuki, hogan, and tipi is exposed earth beneath your feet providing a sense of grounding. By sitting on a rock (Figure 8.38), one is constantly grounded throughout this session as well.

Renderings show the Big Bluestem grass surrounding the small ceremony building at different stages of growth and colouration throughout the year.

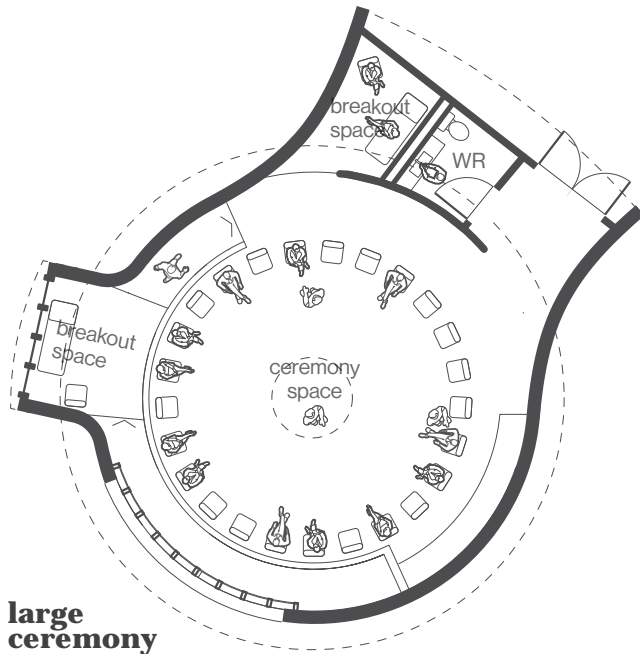
8.37 Small ceremony room rendering at midday in autumn, along with three other conditions that are possible at different times in the day, year, in varying weather conditions, or under different artificial lighting.



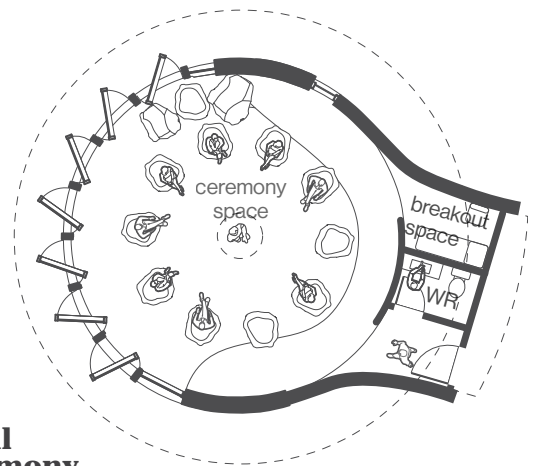
8.38 Small ceremony room interior rendering at midday in autumn, along with three other conditions.



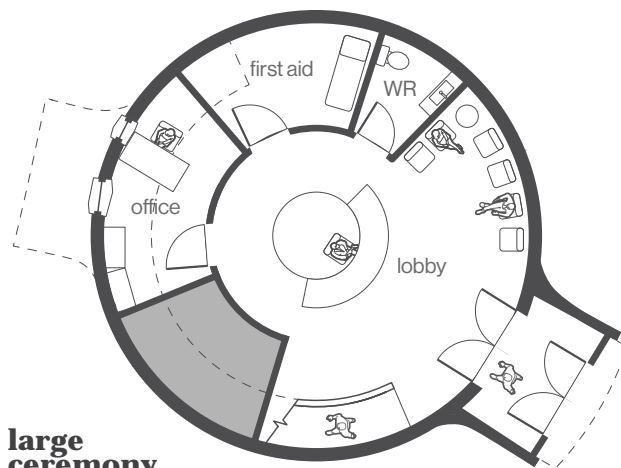
8.39 Large and small ceremony building floor plans.



large ceremony room
F2



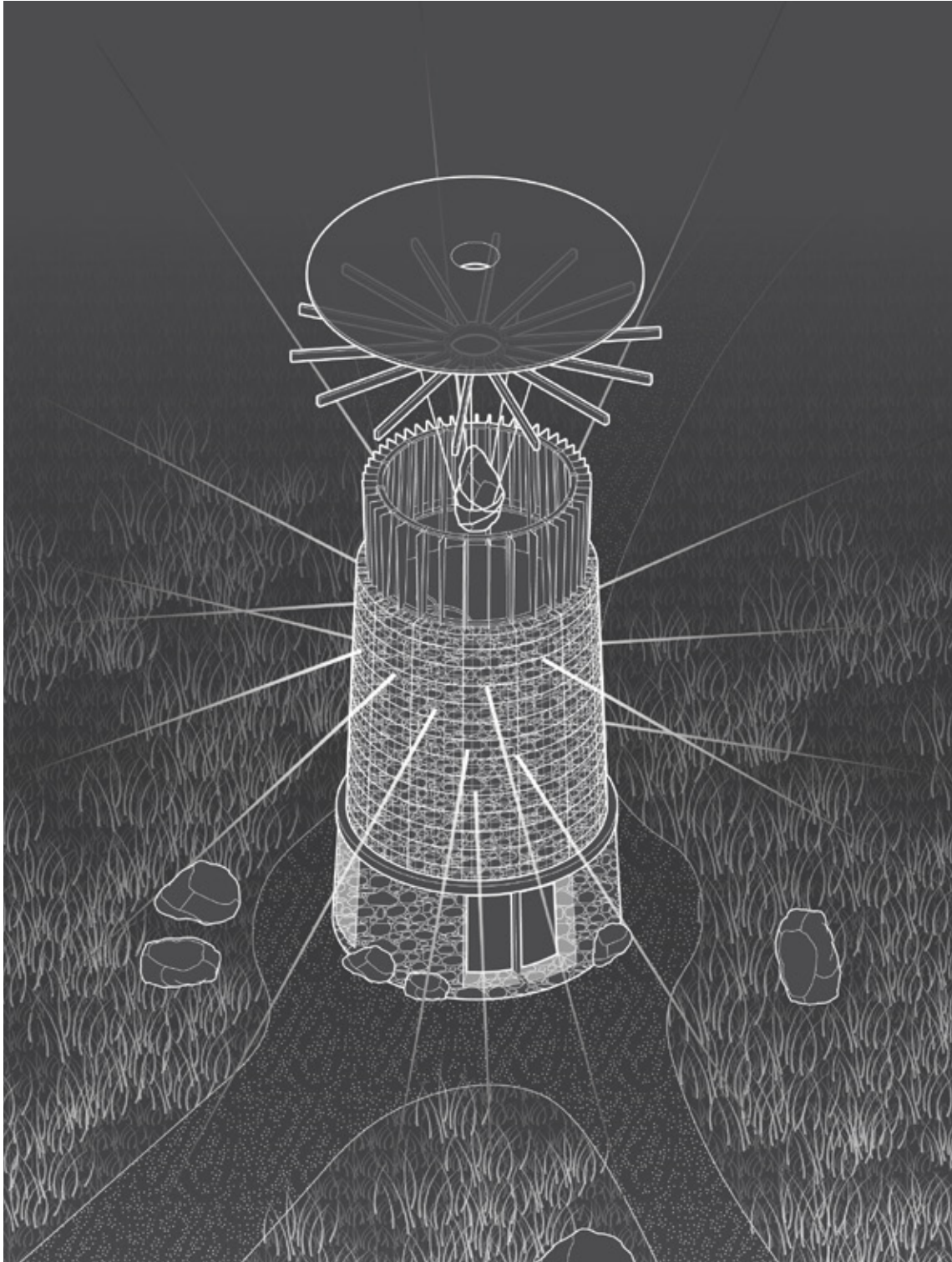
small ceremony room



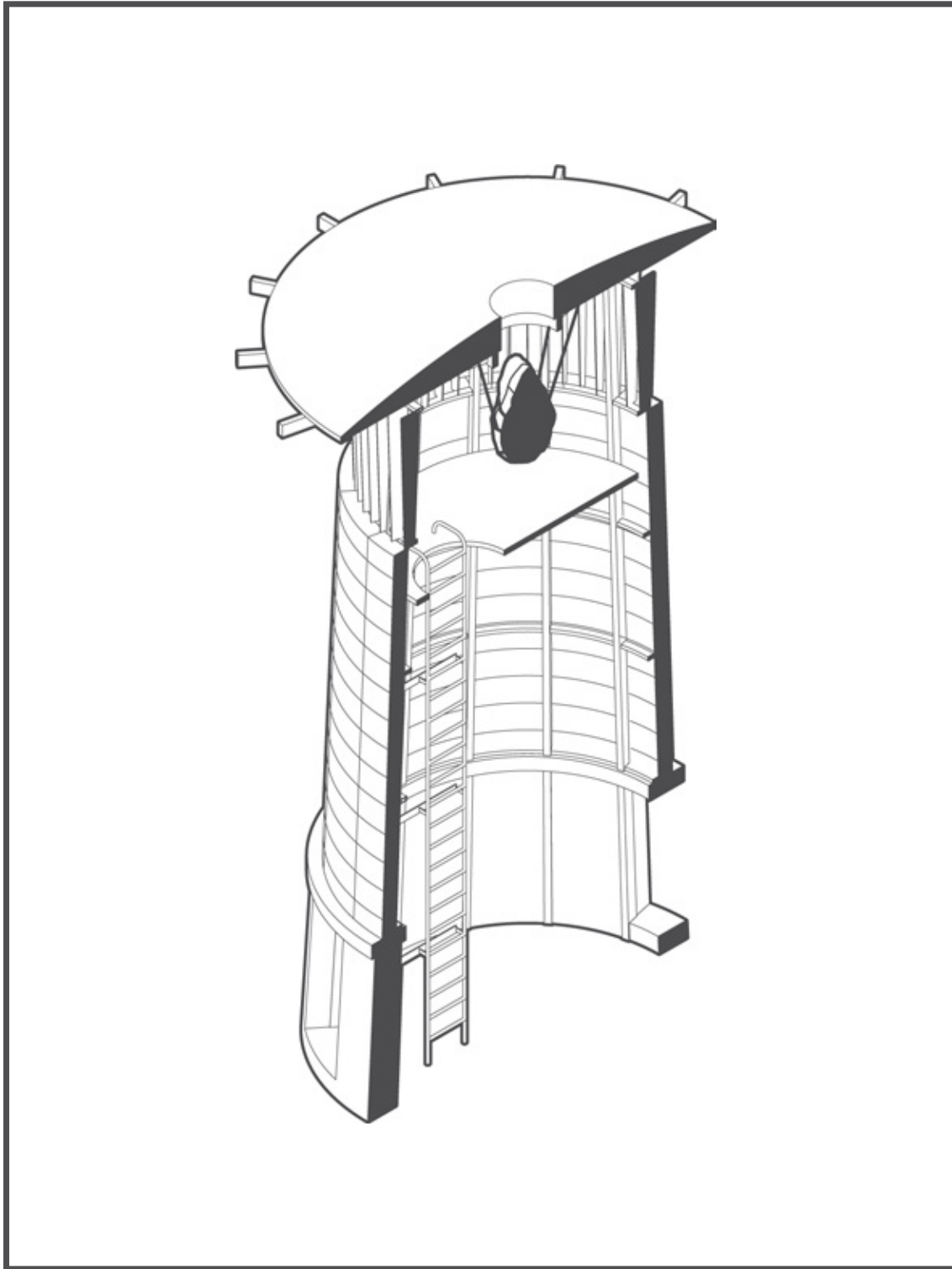
large ceremony room
F1



8.7 Bell Tower



8.40 Bell tower isometric drawing at night, depicting light rays piercing through the gabion enclosure.



8.41 Bell tower isometric cross section drawing, revealing a steel framework that supports the gabions.

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- 8.42** Bell tower rendering on a winter night, along with three other conditions that are possible at different times in the day, year, or in varying weather conditions.



- 8.43** Bell tower interior rendering as viewed while looking up from the bottom of the tower. Set in the evening, the sun hangs low in the sky and penetrates the gabions most dramatically.



The final structure on the site is the bell tower. The gabion screen is not only incorporated once again, but as with the entrance stairwell, the entire space is designed to celebrate and maximise the sensory phenomena it produces. Rather than dappled light pointing the way to their destination, guests become completely enveloped in it, and an otherworldly atmosphere, while climbing the ladder to the lookout platform. Having ascended, they will find a lithophonic stone hanging from the ceiling, directly below an oculus

open to the sky above. Provided with a pounding stone, they may strike the rock gong to produce a loud metallic sound that echoes through the hills. While taking a walk on a foggy or snow-filled winter's day, artificial light penetrating the gabion screen from within the tower would appear frozen in the air as it reflects off of the particulates in the atmosphere that day (Figure 8.42). These represent more ephemeral, sensory events that a guest may encounter like those mapped in the temporal diagram in Figure 8.4.

Endnotes

- 1 Mike Jay, *Mescaline: A Global History of the World's First Psychedelic* (Yale University Press, 2019): 254
- 2 Joseph Calabrese, "The Therapeutic Use of Peyote in the Native American Church," in *Psychedelic Medicine* (Praeger, 2007): 35, https://www.researchgate.net/publication/343290283_The_Therapeutic_Use_of_Peyote_in_the_Native_American_Church
- 3 Jay, 254
- 4 Frank J. Korom, "Of Navels and Mountains: A Further Inquiry into the History of an Idea," *Asian Folklore Studies* 51, no. 1 (1992): 107, <https://doi.org/10.2307/1178424>.
- 5 Calabrese, 35.
- 6 Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* (West Sussex, United Kingdom: John Wiley and Sons Ltd, 2012): 50.
- 7 "Beckley Retreats Wellbeing Programs - Jamaica" (Beckley Foundation, 2023), <https://www.beckleyretreats.com/wp-content/uploads/2023/01/Beckley-Retreats-Wellbeing-Programs-Jamaica.pdf>.
- 8 Office of the Duke Forest, "Forest Succession," 2023, <https://dukeforest.duke.edu/forest-environment/forest-succession/>.
- 9 Institut für Naturschutz und Landschaftsanalyse, "Biodiversity Management in Quarries and Gravel Pits: Putting Nature Back Together," ed. Michael Rademacher (Heidelberg Cement, 2015), 58, https://www.quarrylifeaward.cz/sites/default/files/media/web_hc_biodiv_im_steinbruch_buch_englisch.pdf.
- 10 Ibid.
- 11 USDA NRCS Plant Materials Program, "Plant Fact Sheet: Big Bluestem" (USDA, 2006), https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_ange.pdf.
- 12 Office of the Duke Forest
- 13 Lady Bird Johnson Wildflower Center, "Verbena Simplex (Narrowleaf Vervain) | Native Plants of North America," [wildflower.org](https://www.wildflower.org/plants/result.php?id_plant=VESI), https://www.wildflower.org/plants/result.php?id_plant=VESI.
- 14 USDA, "Common Milkweed," accessed April 26, 2023, https://www.fs.usda.gov/wildflowers/plant-of-the-week/asclepias_syriaca.shtml.

15 Ibid.

16 Lady Bird Johnson Wildflower Center

17 Institut für Naturschutz und Landschaftsanalyse, 58.

18 Ibid., 60.

19 “Beckley Retreats Wellbeing Programs - Jamaica”

9 Conclusion

Although a sensuous and spiritually sensitive design has here been applied within the local context of Northern Ontario, the hope is that by following a similar blueprint, spaces for psychedelic-assisted therapy could benefit any locality in which they are established. That is not to say that each manifestation should look or feel the same - quite the contrary. Such a blueprint calls for designers to implement locally available materials (as in the use of quartzite from Lawson Quarry), local cultural symbols (as in the lithophonic rocks reminiscent of the Bell Rocks), or local flora and fauna (as in the implementation of native plant species). As explored in Chapter 4, local time and place are central to a phenomenological worldview that reconnects the individual to the sensuous world, and should be reflected in elements of the design. Similarly, there is no singular method for engaging the senses to satisfy set and setting conditions or silence the default-mode network. The sole requirement is calling attention to whatever phenomena are at hand: how sunlight embraces the nearby topography, how to attract the local birds and their songs, the vibrancy of indigenous butterflies, and aroma of wildflowers.

In line with historical indigenous communities or the contemporary Native American Church, here is a blueprint which calls for a certain reverence for the

medicine, for the plant that bore its fruit, for the soils that nourished the plant, and the land that provided the soil - however these may take shape within the present and proximal landscape. It requires a structured, ritual application where each component fulfills its own sacred role, reifying the most cherished symbols of the community.

Last but not least, it is this highly malleable blueprint which makes it possible to draw upon case studies from around the world. From Therme Vals in Switzerland, the design of distinctly engaging atmospheres was informative, from Santani Resort in Sri Lanka, a strategy of spreading out the buildings to embrace varying landscape conditions and encourage exploration.

Though exemptions for psychedelic-assisted therapy in Canada are possible through Section 56.1 of the Controlled Drugs and Substances Act, further action is required before it is made widely accessible to all of those in need. Based on trends in the latest research on the topic, this thesis envisions a future where psychedelic-assisted therapy is added to the list of therapy options currently available to underserved Canadians through their government-subsidized health insurance plan. Hopefully, here is a strategy that will one day be adopted by nations across the world.



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