



**Wellness Retreat**

Oulu School of Architecture,  
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Diploma Thesis

**Wellness Retreat**  
**Restorative environment for all senses**

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# Abstract

Recent times of pandemic have brought to light growing concern for human well-being and showed the complexity of this issue. In an architectural context, spaces where we spend most of our time and their quality need to be re-evaluated. This thesis looks into environments that support well-being. Several aspects are considered: the role of human senses and perception of spaces, understanding the impact of nature on our well-being and principles of the restorative environments. With the gained knowledge, the aim is to create a concept design of the Wellness Retreat that is restorative and accounts for human senses.

The thesis is divided into two parts. Firstly, the theoretical base aims to highlight how our surroundings affect our well-being. To begin with, a better understanding of how human senses work in terms of spatial experience shows that sensory-rich environments strengthen the experience and induce emotions, which may contribute to our wellness. Commonly observed lack of nature within urban environments triggered the investigation of the relationship between humans and nature. It implies that the awareness of our meaningful bond with the natural environment is crucial, and the presence of nature is essential to our well-being. Within a

built environment, thoughtfully designed spaces can support healing and well-being. Principles and solutions of the design for achieving restorative environments often derive from nature.

In the end of the first part, two case studies are investigated for solutions of supportive design and how human senses are engaged to architectural design. Finally, the conclusions section sums up the theoretical knowledge for the design phase.

Lastly, the second part of the thesis introduces a concept design of the Wellness Retreat based on the principles of a restorative environment, which creates an interaction between users and the building using all senses. It is located in the Swiss Alps by Lake St. Moritz, and serves as a place for slowing down and finding balance. Meaningfully integrated nature, proposed program and created atmosphere support the well-being of body and mind.

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# INTRODUCTION



# Primary objectives

## Life in a rush

A busy lifestyle, especially among people living in big cities, may be overwhelming. At the same time, virtual communication replaced physical interactions. Constantly connected to the internet, processing thousands of meaningless information, aspiring to earn more, look better and be more successful. In modern society, success is often measured by someone's busyness instead of holistically considering other aspects of life. More commitments bring about less time to share with relatives or focus on our physical and mental state. All this disconnects us from the surrounding reality and is a burden to our well-being.

Modern western lifestyle makes society more vulnerable to anxiety disorder, chronic stress, and depression (Egger and Dixon 2014). The most common solution for those who need help is these days symptomatic treatment. In opposition to this short-sighted method, long term solutions require a more holistic approach. That is to find balance and harmony on many levels, which result in healthier and happier life (Switch Competition 2021).

## Built environment

Lifestyle is a major factor influencing our well-being. Aside from this obvious consequence of how we live, it is where we live. Because we spend most of our lives indoors, the built environment can have a significant impact on us (Robinson 2015, 4). The majority of spaces aren't intended to interact with their user but to be functional. (Nousiainen et al., 2016, 15) Office spaces, hotels, and some residential apartments are focused on bringing maximum profit rather than being profitable to their users. It has psychological side effects which affect our mood and behaviour.

Since the Covid-19 pandemic, many started struggling with the psychological effects it brought, besides the physical disease. Unusual circumstances – locked down in a small apartment with poor daylight, working remotely, without the possibility to meet relatives – made it clear how sensitive our mental state can be depending on spatial experience. This shed light on the impact of the built environment on our well-being. Raising awareness already triggered the creation of healthier workspaces with restorative environments within, such as meditation rooms. Spaces can be naturally

beneficial for users well-being if their designs account for it, regardless of their primary function. (Ingram 2021)

## Stimulating senses

Juhani Pallasmaa (2012), author of the inspiring book "The Eyes of the Skin", expressed his concerns about the digitalized world in the architectural context. Sight favoured above other senses like never before caused us to disconnect ourselves from the more thorough experience of life. Among other things, experiencing architecture is closely linked to fundamental mechanisms derived from human nature. Conscious and subconscious perception involves all senses. Our body experiences and memorizes elements of the space, which years later can be recalled from the memory. When spaces bring up memories, their atmosphere trigger emotions. (Pallasmaa 2012)

Some places can make us feel uncomfortable or anxious. On the other hand, positive feelings can be induced using the same logic. Increasing interaction through senses can contribute to the stimulation of positive emotions and may create a calming atmosphere. In an architectural context, engaging senses of touch, hearing, and

smell besides sight, intensify these experiences and, therefore, our mood.

## Content & structure

This thesis aims to come across mentioned issues and reflect how design involving all human senses may support well-being and create a restorative environment within the wellness retreat design.

Decision to choose this particular theme was due to the Research of Architecture course, where I was acquainted with the topic of experiencing architecture through all senses. The aim is to take this knowledge further and apply it in the context of environments that improve well-being. A few fragments of the text introducing Pallasmaa and senses have been drawn from the Research of Architecture course paper.

In the theoretical part of this thesis, few aspects are studied: the role of human senses in architecture is developed further, following Pallasmaa's phenomenological approach of perception; impact of nature on well-being and architectural elements of restorative environments. Further, two case studies: Therme Vals and Maggie's Center,

are investigated regarding supportive design solutions and engagement of all senses. Finally, the conclusions section sums up the theoretical part with observations and arising from those suggestions for further design.

In addition to the strong emphasis on the theoretical part, the intension of this thesis is to reflect the learned theoretical knowledge in the conceptual design. The design part presents the concept of the Wellness Retreat located by the scenic Lake St. Moritz in the Swiss Alps. The proposed architectural environment has a functional program that supports relaxation of both body and mind.

The idea to design a building located in the Swiss Alps comes from the international competition Alps Wellness Retreat which took place at the beginning of 2021. The competition brief and 3d cad file were used, however, I did not participate in the competition. For this reason, the proposed concept is located at the specified site. The functional program was undefined, giving more freedom for interpretation and functioning of the space. The brief suggested involving human senses in the design as part of the holistic solution to retrieve well-being.

## Wellness retreat: definitions and approaches

Wellness can be defined as *the quality or state of being in good health, especially as an actively sought goal* (wellness n.d.). Global Wellness Institute underlines active pursuit in this definition. Moreover, wellness is multidimensional, which means that beyond physical health, it applies to mental, emotional, spiritual, social and environmental aspects. ("What is wellness?" 2021)

Origins of wellness are rooted in ancient times, but the modern concept we know today boosted in the past century. Well-being can be defined as *the state of being happy, healthy, or prosperous* (well-being n.d.). The complexity of the wellness concept is reflected by multiple aspects that can improve one's well-being; holistic medicine, fitness, nutrition or beauty are just a few of them. Offered experiences are different depending on the location because each part of the world has its native traditions e.g. ayurvedic practices or geographical features like hot springs. The industry is constantly adapting to the changing needs of society, with a recently increasing focus on environmentally safe practices and the use of non-chemical or organic ingredients (Wiedemann 2012, 59).

In addition to well-being, another important

concept is *retreat*. Noun retreat can define *A place providing privacy or seclusion for the purposes of prayer, study, or meditation, or for rest and relaxation*; (Merriam-Webster retreat n.d.). On the other hand, it also can be *a period of group withdrawal for prayer, meditation, study, or instruction under a director* (OED retreat n.d.).

Following dictionary definitions, verb to retreat is *to withdraw mentally or emotionally* (retreat n.d.), while retreat as a noun can mean a place or a period.

Wellness retreats focus on improving physical, emotional and spiritual conditions. In the case of organized group retreats, they often have a specific theme and a prepared program. In addition, they're taking place in serene and spectacular locations.

In this thesis, a retreat is considered both the place to seek wellness as an active pursuit and the period of group withdrawal. The approach that encapsulates those definitions of wellness and retreat is applied for the proposed concept design; several group activities are planned throughout the day within a small number of participants to sustain an intimate and friendly atmosphere.



# THEORETICAL PART

# Human senses in architecture

Sensory-rich environments activate interrelated senses and make the design more meaningful and memorable. (Pallasmaa 2012) Experiencing architecture shares the same grounds with experiencing countless moments throughout life, some of which we keep in memory for longer, and some we forget after a while. Thinking, perceiving, and observing are a constant part of conscious living.

Neuroscience investigates *relationship between brain and behaviour*. There are multiple internal processes that underline that relationship including sensation, perception, cognition, memory and emotion (Albright 2015, 198). It is currently revolutionising knowledge across disciplines, including architecture. With this input, the role of architecture in our existence is strengthening, as it extends beyond aesthetic, functional and symbolic values. The mental dimension of the built environment and the theory of embodied architecture are now supported by more neuroscientific research (Robinson 2015, 5).

The mental level of architecture can be encountered through the multisensory perception of the body in the physical space. That body in the center of the experience becomes a part of it, and the boundary between

person and the surrounding world fades away. Happening processes in our bodies are not that obvious, and the complexity of the sensory topic may not be so evident. (Pallasmaa 2015)

To start with, according to Aristotle (Pallasmaa 2015, 61), perceiving spaces or objects is possible by five basic senses: sight, touch, smell, hearing, and taste. These senses are tools for our brain, so information precepted by these tools is processed into cognition. The more tools are engaged, the stronger cognition is. Thus, complex cognition has a direct influence on a profound experience. In the process, there is almost always more than one sense involved, transferring information between each other.

Pallasmaa (2012) in his book *The Eyes of The Skin* has been discussing role of all senses. Tactile perception is responsible for recognition through touch. Touching sensors are located in our skin, which reads texture, temperature, density. It is the biggest organ in our body and the most central point. Nonetheless, sight seems to be the main sense that we rely on the most. It is given most credibility; however, vision traits are limited, and perception from other senses is necessary for full recognition. With eyes closed in space, when vision and touch are cut

out for a moment, hearing and smell intensify. The acoustics of each space is unique, and the returning sound allows to perceive a closed space. At the same time, we smell the space, it may seem irrelevant, but regarding experiential phenomena, it is the smell that remains unblurred in our memory after many years. In experiencing spaces or objects, the taste sense is the least tangible compare to other senses. The taste is connected to what is smelled by the nose. Our imagination can visualise objects and activate our smell and taste senses related to them. With the eyes open, hearing intensifies visual perception to create a full view of the space. What your eyes cannot see, ears will hear, and skin will feel. Pallasmaa (2012) emphasizes that all senses are in a way extensions of the skin, as they're part of the skin tissue. Throughout life, the body collects memories, learns from the past, feels, knows, and remembers.

Relating this knowledge to spatial experience, our ability to encounter atmosphere, means to create an emotional impression, could be named our sixth sense (Pallasmaa 2013, 55; Pallasmaa 2015, 61; Böhme 2013, 97). Ongoing research proves the presence of other senses besides the commonly known five senses.

Elements of architecture such as material, shadows or scale are the subject of experience. They form the space, and as a result, a powerful atmosphere may affect mood and trigger visitors' emotions. The complexity of our multisensory abilities suggests that we have the capacity to grasp the essence of space before we conceive individual elements of that space (Pallasmaa 2015, 60). That implies that cohesiveness and integrity of the design are crucial for architecture. In terms of creating restorative environments to improve well-being through inducing positive emotions, it's required to account for all senses.

*"Architecture is constructed mental space,"  
Finnish professor Keijo Petäjä used to say.*

*In the Finnish language, this formulation  
projects two meanings simultaneously: architecture  
is a materialised expression of human  
mental space; and our mental space is itself  
structured and extended by architecture.  
(Pallasmaa 2015, 54)*



# Nature and well-being

As human beings we used to live in the nature and we were connected with it much more than we are now. Inherent affiliation of human with nature and other life forms is known as biophilia. It is based on the evolution and human biology that is developed to response to natural factors which has been the case for hundreds of thousands year, while electronic technologies have been around for just a fraction of that period – barely two hundred years. (Kellert and Calabrese 2015, 3) Kellert and Wilson (1993) in book Biophilia Hypothesis brought together research from across disciplines that enforced and highlighted presence of biophilia in historical, biological, psychological, empirical and aesthetical contexts. It implies that technology that propels our daily lives is disruptive if it cuts us off from natural world or replaces natural experiences. (Kellert and Wilson 1993) The connection with nature builds the basis for the cognitive development especially among children, and is essential to the well-being (Wallin 2017).

Sadly, industrialization and urbanization all over the world are just few causes of the environmental degradation. Deteriorating mental and physical state among urban societies is a common issue, and it is closely related to the limited access

to nature. There is a hope that humanity will react on time and stop the destructive activities. Edward Wilson, who is one of co-authors of the groundbreaking Biophilia Hypothesis remarked that rational thinking to save the natural world is becoming now part of the culture, especially in industrialized countries (PBS 2008). This means among others increasing inclusiveness of nature on different scales.

Multiple scientific research has proven that the natural surroundings positively affect our well-being (Ulrich 2016, 148). Walks in the forest engage most of our senses, from sounds of leaves and birds, natural sunlight, smell of earth, to the complexity of trees we observe. Spending time outdoors and engaging in physical activities can be a form of treatment for those who struggle with stress and anxiety, because it is calming and helps to relieve stress. There is many concepts that encompass idea of healing through nature, e.g. forest bathing – a mindful way that leads to the deep connection of body with nature.

Concept of forest bathing (Abrookire 2020) is now growing in popularity outside Japan where it originated in 1980s. It was one of the responses to the national health crisis with high increase in stress-related illnesses observed

among industrial and technology workers. Idea of *Shinrin-Yoku*, which is the original Japanese name, is about walking aimlessly or standing in a forest and having all senses involved. This *bath* is therapeutic to the body and mind, because it strengthens feeling of presence and one's connection with the surrounding. Repeated baths contribute to more long-term improvements on well-being, stress reduction, immunity boost and better attention. (Abrookire 2020) Currently across the globe professionally guided forest bathing sessions are in offer to get acquainted with the idea and put it into practice. Guide helps person with engaging all senses and deepening the connection. Group sessions bring an opportunity to share thoughts and observations. (Forest Bathing Circle 2021)

Humanity has undeniable bond with nature. It is calming and gives a feeling that we are part of something bigger. Awareness that it is our foundation which provides us with stability, and that we couldn't exist without nature is vital. Spending time outdoors in natural environment is not only pleasant but also beneficial to our health and well-being and can help us to thrive. Presence of nature is especially important in urbanized areas where mental and physical well-being is in decline. Accounting for biophilia

and principles of biophilic design within built environment, including experiential quality translates to preserving our inseparable relation with nature, making it thrive around us.

# Restorative environments

We are spending about 90% of our life indoors, and most of those spaces are designed following mainly functional and economical needs, while the impact of those spaces on our physical or mental condition is usually not considered (Nousiainen et al. 2016, 15). Whether they are natural or built, environments resonate with our health and well-being on a daily basis (Sternberg 2009, 10). Even though neuroscientific research continuously provides more evidence for this relationship, it isn't common to account for these aspects through design. Hospitals and care facilities are spaces that could benefit from such an approach the most.

The design of the restorative environment can be translated as a *quality of an indoor space, where we spend time, work and live, that has the ability to restore health, strength, or well-being* (restorative n.d.). Besides improving the human state, it also includes responsibility for the environment through sustainable development. (Nousiainen et al. 2016, 16)

Solutions for improving physical and mental well-being within the built environment are deeply connected to how it takes place when we are in nature. Most of our senses are simultaneously engaged, and our attention

is gently grasped on many elements, in opposition to the intense and continuous focus in a work environment. Kellert and Wilson (1993) state that our strong bond with nature and seek connection with nature is called the Biophilia Hypothesis, while biophilic design in architecture strengthens this connection.

Purpose of the building and users' needs influence factors taken into account to achieve the most satisfactory outcomes. For instance, elementary schools focus on development, while nursing homes with elderly residents target support and safety. Nousiainen et al (2016) emphasizes that in any case presence of nature is essential for health and well-being. On an urban scale, including greenery is not only needed but is indispensable for inhabitants. Whole buildings can allow for nature inclusiveness or proximity. Within the interior, components of the space can derive properties from the natural world – our source of well-being – and provide an indirect experience of nature.

Nousiainen et al. (2016) states, that spaces become richer in experience when multiple senses are engaged in perception. Thinking of form and scale, aside from pleasing our eye and providing us with a feeling of comfort and

safety, they both affect acoustics and depend on the light and materials. Too narrow or too big rooms – relatively to their purpose – may cause distress or reduce a sense of security. Patterns, rhythms and shapes that form the interior can be borrowed from nature; emphasized three-dimensionality of space with rhythmic repetitions broken with some irregularities and presence of softer curving lines. Overall should not be overwhelming but balanced in expression. Harmonic colours can be easily derived from nature, with green being the most soothing and restful. Whites and black shades can create atmosphere in ways they respectively reflect or absorb light. Sufficient natural light is probably the most crucial factor of the restorative environment because it is natural and connects us with the unbuilt world. Sunlight helps decrease stress levels and is needed to produce vitamin D, essential to our health. Artificial lighting can support it with suitable colour temperature and intensity; for example, soft lighting coming from many angles will be relaxing unlike a dazzling light. The role of materials is important in shaping the atmosphere. Natural ones intensify the experience of the space because they reflect nature, and we are familiar with their characteristics. Apart from the visual aspect, they may have a specific scent, texture or

give a pleasing feeling. (Nousiainen et al. 2016) For instance, studies show that exposed wood in interiors can improve physical and mental health. Improved concentration, reduced heart rate, blood pressure and stress levels are main benefits that are associated with exposed wood used indoors (Ulrich 2016, 148). Nousiainen et al (2016) continues that for a healthy atmosphere, optimal temperature, humidity, and indoor air quality should be considered. We can benefit from plants indoors and their ability to filter the air and balance the humidity.

The form and scale of space, lighting, colours, materials and other elements define the architectural atmosphere. Understanding the role that each of them can play and the harmony they may create together leads to more thoughtful and considerable designs beneficial for the users of the built environment. If we acknowledge a human relationship with the natural environment, results may become as beneficial to nature as we make it for ourselves.



## C a s e S t u d i e s

Before proceeding with the design part, two buildings are introduced as the case studies: Therme Vals Spa and Maggie's Oldham. Investigation is intended to highlight what makes them restorative environments and bring out solutions for involving senses to support the intended spatial experience. Even though chosen projects differ in function and location, they both improve well-being of body or mind, which is the key aspect of this thesis.

# Therme Vals Spa

Swiss architect Peter Zumthor in his design process focuses on certain elements that give an architecture the special aura or as he defines it - atmosphere. It is closely related to the way we perceive architecture, not only visually but with all senses. According to Zumthor, there are several elements that build up the atmosphere, like sound and temperature of a space, materiality, lighting or tension between interior and exterior (Zumthor 2006b, 17). Designed by him Therme Vals Spa is a fine example of a strong non-visual sensitivity achieved in the space.

Concept for this building is derived from the surrounding landscape of Vals area in Swiss Alps. Analogically to the hot springs born of the mountains, this architecture is built into the sloping landscape, and merged invisibly with its natural surrounding mimicking an opened up quarry, with blocks of stones remaining. (Ni Co 2014) There are two main pools, one of which is on the open air. High stone walls makes the outdoor pool look like carved out of the mountain. Visitors bathing in the thermal waters can relax and reconnect with their body and mind, because of the created atmosphere.

Strong materiality of locally quarried quartzite

stone and water, supported with shadow and changing daylight creates changing ambience throughout the day. Stripes of stone are covering exterior and most of interior walls. Thoughtful use of artificial lighting, together with contrasting terrazzo floor in the several smaller pools indicate temperature of water and associated sensation. (Ni Co 2014) The aura makes the immersion in thermal waters a ritual for body, and has therapeutic effect for the spirit. Interaction of the visitor with the space is not limited to the visual aspects, but engages all senses.

Sounds of water in movement resonate within the walls of the space. Visitors discover main space of spa through meandering circulation around solid blocks which hide ritual pools inside. This free movement imitates walking freely in the woods (Zumthor, Hauser and Binet 2007, 73).

Therme Vals is restorative environment, not only because of its spa function. Peter Zumthor strengthened connection with nature through making an impression of a cave: limited light, water acoustics and natural stone. Darkness gives a rest to eyes and intensifies other senses. Contact of body with natural stone, different

temperatures of water, ritual baths with flower petals, tap with drinking water- all those elements make multisensory architectural experience. Finally, exposed to sunlight sunbeds are facing the breathtaking view of the mountains. Recreated deep connection to nature calms mind and body and has restorative effect.

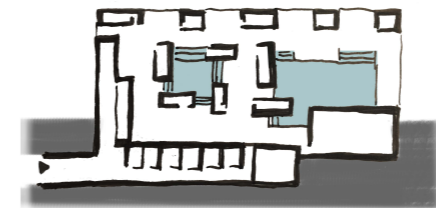


Fig. 1. Atmosphere of the Therme Vals Spa

# Maggie's Oldham

Concept of Maggie's Centers originated in United Kingdom in 1996, as a new type of cancer care center. Maggie Keswick Jencks initiated the design of a supportive environment, having experienced cancer herself. She felt that there is a need for it and that the design and environment have impact on person whose life is affected by cancer. (Maggie's 2021)

Maggie's Centers (2021) offer free professional support, both practical and psychological. They are located beside hospitals. Currently there is over 20 centers across UK, with many of its unique buildings designed by greatest architects like Rem Koolhaas, Zaha Hadid or Norman Foster.

General idea is to have thoughtful architecture, surrounded by nature, where most powerful piece of the puzzle is garden with restorative effect. Maggie's Center in Oldham designed by dRMM architects is one of the finest examples of incorporating these ideas.

Patient is put on the first place with surrounding built around it to support patient's well-being. This particular one-story building is a built with CLT, and sits on slim columns with a garden underneath. (dRMM Architects, 2021)

Design evokes positive emotions. Predominant amount of wood in natural warm color covers facade, interior walls, ceilings and furniture. Floor is yellow and complements the wooden surfaces around. Glassed void in the building allows tree to grow through it from the garden beneath. As a result, there is constant eye-contact with nature. Lots of natural light enters the space, through the void and large windows on two opposite sides. Light complements warm interior. Lighting, materiality and color isn't everything that helps oncology patients to feel optimistic and hopeful at Maggie's community.

Functionality and organization of the floor plan provides feeling of comfort and safety. Majority is an open space with garden and prominent tree at the heart, with kitchen, round tables, armchairs. Smaller space can be separated with the curtain. Few meeting rooms are located along same side of the building.

Forms within the space are organic and rounded, what gives an impression of softness. Care for user is visible in small details. Wood has been used even for the door handles and railings for the sake of chemotherapy patients who may feel pain when touching cold objects such as metal handle. Small scale of the building makes this

public building more intimate and informal, fully supporting key ideas of Maggie's Centers. (dRMM Architects, 2021)

Patients fighting cancer or their families visit Maggie's in search for help on how to live with the cancer or how to overcome it. While hospitals aim to fight the disease, Maggie's focus is on important aspect: how to handle this on a mental level. Invaluable cancer support groups take place in equally restorative environment. Architectural language of this particular space translates into invisible help that visitors receive.

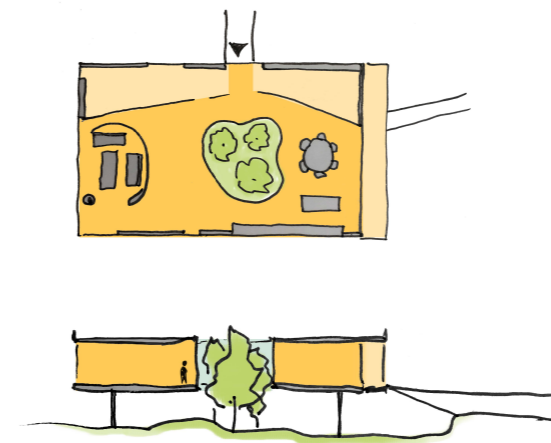


Figure 3: Atmosphere of the Maggie's Oldham

# C o n c l u s i o n s



This chapter summarises previous information from the theoretical part and case studies, and concludes the approach for the design part. The emerging decline in well-being is mainly caused by the way we live and the quality of urban environments we live in. In order to highlight the importance of creating architectural spaces that support well-being, three main topics were discussed, i.e. involvement of human senses in spatial perception, the relation of nature to well-being and creating restorative environments in architecture. The line between these aspects is clearly thin.

Perception is partly unconscious and engages all our senses. Spaces designed to account for all senses are richer in perception, and they interact with users by inducing emotions. Emotions can be negative or positive. In the case of the restorative effect, the goal is to prompt positive feelings. Similarly, when we are in nature, connecting with surroundings is engaging all senses gently. Multiple studies have shown a positive impact of nature on our well-being and health, which may be closely related to biophilia – the innate connection of humans with nature. Concerning the built environment, supportive or restorative outcomes may be achieved by implementing qualities existing in nature.

Both of the investigated case studies accented connection with nature within the space. In Therme Vals Spa atmosphere was built through the cave-like experience, using natural stone and water supported with the play of natural light. Through the materiality and program of the spa, all senses were intensely engaged what intensified the experience supporting relaxation of body and mind.

In the case of Maggie's Oldham, the intention was to create a supportive environment on a mental level. Flexible floor plan accounted for comforting group gatherings as well as for the need for seclusion and privacy. Architectural elements – warm colours, soft curves, sufficient light, and the use of textiles – impacted the cosy atmosphere. Soft and pleasant in touch materials and garden at the entrance to the building stimulated several senses. The abundant presence of wood inside and a tree at the building's heart brought nature into that space.

Therme Vals Spa and Maggie's Oldham represent restorative environments. They target users, predetermine their spatial experience and define ways to increase well-being through the functional program, space distribution, and

architectural elements. Nature acts as a tool that is used indirectly and directly, while thoughtful multi-sensory design strengthens the intended experience. Aspects discussed in the theoretical part of this thesis are reflected in the studied examples. It is essential to realize that different paths, i.e. in materiality or lighting, may lead to achieving the same goal, which is an environment that supports well-being. The two case study examples approached the challenge in contrasting ways, yet appropriate to the circumstances, e.g. minimal daylight in Therme Vals versus the decent amount in Maggie's Centre or strong presence of stone with rough texture compared to the smooth wooden surfaces. Mentioned aspects will be taken into account for the design part of this thesis and considered accordingly to the purpose of the wellness retreat.

# DESIGN PART

# Background information

Context of my design project is based on the international competition *Wellness Retreat in Alps*, which has provided with the brief and the 3D cad file of the site area. It is a design-based competition, organized by Switch Competitions. Brief describes the overall idea of the wellness retreat as the answer for the today's fast-paced life which in a holistic way would help to unwind both body and mind. It also strongly suggests sensibility for all senses when designing, in order to achieve the design goals. Program of the wellness retreat wasn't specified, but it was up to the participant. I haven't participated in the competition, but only used the brief and 3D cad site file which were publicly accessible when competition was open.

# Healing Alps

Looking back to history, the meaning and role of the Alps were changing across centuries. High mountains, with their natural surrounding, were a subject of spiritual experience and remedy for the body. Initially referred to as wild nature, the Alps were later named a therapeutic landscape and became one of the world's top tourist destinations. The development of the Alps in its historical and cultural context is reflected in specific architecture, which can be defined as sublime (Stacher 2018, 9-12)

The Alps got their popularity in the 19th century for therapeutic powers and were a destination primarily for people living in polluted cities. Mainly patients with tuberculosis – respiratory disease – were sent to the higher altitudes to regain their vital energy and health. Alpine regions have been famous for mountainous nature, fresh air and intense sunlight, which allegedly had healing properties. Taking advantage of the sun, heliotherapy - prolonged exposure to sunlight to help with curing the disease - was practised together with benefits of high altitude climate and regular resting. That was the time of sanatoria, where patients were coming to spend months or even years with a nutritious diet, daily walks, resting long hours on the sun, which ultimately was to

help them recover from tuberculosis. (Stacher 2018)

In the Swiss Alps, spas have a significantly longer history than sanatorium resorts. Spa is an acronym from Latin words *sanitas per aquas* which means *health through water* (Croutier 1992). There is about hundreds of mineral springs (Barton 2013, 2), known for their relaxing and therapeutic effects. In St. Moritz in Engadin valley tradition of bathing in thermal waters reaches nearly 3500 years (Engadin n.d.). Spas gained popularity in the highest Alps in the 16th century and are an inseparable part of today's tourism in the Alps.

# St. Moritz

Site is located in St. Moritz, town located in the Engadin valley of the Alps, which is in the south-eastern part of Switzerland. Town as well as the site is located by the lake of the same name - Lake St. Moritz, at the high elevation of 1856m above sea level (My Switzerland n.d.). It has prominent history of bathing in the mineral springs discovered over 3000 years ago (Engadin n.d.). St. Moritz Guide (n.d.) points out that since town become popular as an international winter resort in the 19th century, it is known today as a luxury Alpine resort. There are many sport activities and events happening all year round, also on the lake. Winter Olympic Games were hosted there twice in the first half of the 20th century. (St. Moritz Guide. n.d.)

## Climate and natural surrounding

The town is surrounded by mountains that reach over 3000meters, with Piz Bernina – the highest peak of the Eastern Alps, 4049m a.s.l. – located only 15km away. St. Moritz has a specific climate with fresh summers and cold nights. The average temperature is +12°C in July and -8°C in January, while annual snowfalls are over 250cm (Meteo Swiss 2020). With even 320 days of sunshine (St. Moritz Guide n.d.) during a year, it is a popular destination



for summer and winter tourism. In addition to ski areas, there are many trekking and mountain trails around. Located nearby small Lake Staz is recommended for swimming because of its warm temperatures, unlike the cold Lake St. Moritz. (St. Moritz Guide. n.d.)

Engadin Magazine (2021), in a recent edition devoted to wood informs that the surrounding landscape is mainly covered by trees, where about half of them is Swiss stone pine, and approx. 30% larch. Swiss stone pine adapted to the climate and grew up to the alpine treeline. It is deeply rooted in the region's culture, and for

this reason, it is also highly valued as a material. The wood of the Swiss stone pine is used in construction and interiors. For centuries it has also found many other uses, i.a. fragrant pine oil is used to improve sleep and gain health, or pine needles are used as a spice. (Engadin Magazine 2021)

## Architecture

Engadin Valley has unique architecture characterising with thick stone walls with plastered facades finished with traditional decorative sgraffitti and funnel-shaped windows. Since the late 19th century, with the rise of popularity of St. Moritz, the architecture of grand hotels changed the character from the alpine village into an international tourist resort. Hence most of the buildings found in the town don't resemble typical Engadin architectural style houses, which still can be found in the nearby towns and villages. Instead, what can be seen is a wide variety of architectural styles: neo-baroque hotels, a classicist style spa, or a neogothic church. In addition, there are several modern buildings designed by known and respected architects like Lord Norman Foster or a villa of Oscar Niemeyer. (Graubünden n.d.)

## Conclusions for the design

Considering geographical location and natural surroundings, the design will make the use of rich sunshine and emphasise the best of nature – the lake, mountains and forests. Climate-related factors will affect the design in terms of suitability for the snowfalls and low temperatures. Also, long history of bathing in mineral springs will be taken into account for the proposed program. The building will respect the nature and use local materials. It is essential to make the place equally accessible and interesting all year round.



# Site analysis

The location of the site is on the east side of Lake St. Moritz. Unlike most buildings located on the north-west and south-west from the lake, the design area overlooks the town from the opposite side of the lake, with only several buildings in the vicinity.

On the north of the site, most buildings are private dwellings with simple rectangular forms and pitched roofs. One of them is The Mili We-

ber House – a Swiss artist's house that functions as a museum dedicated to its owner. It was built a century ago with thick stone walls at the base with funnel windows – typical for the Engadin region, while the upper floors are built with logs. On the south-eastern side of the site, there is a small hotel complex consisting of few buildings. All surrounding buildings, including the hotel, are mainly two-story high and have pitched roofs.

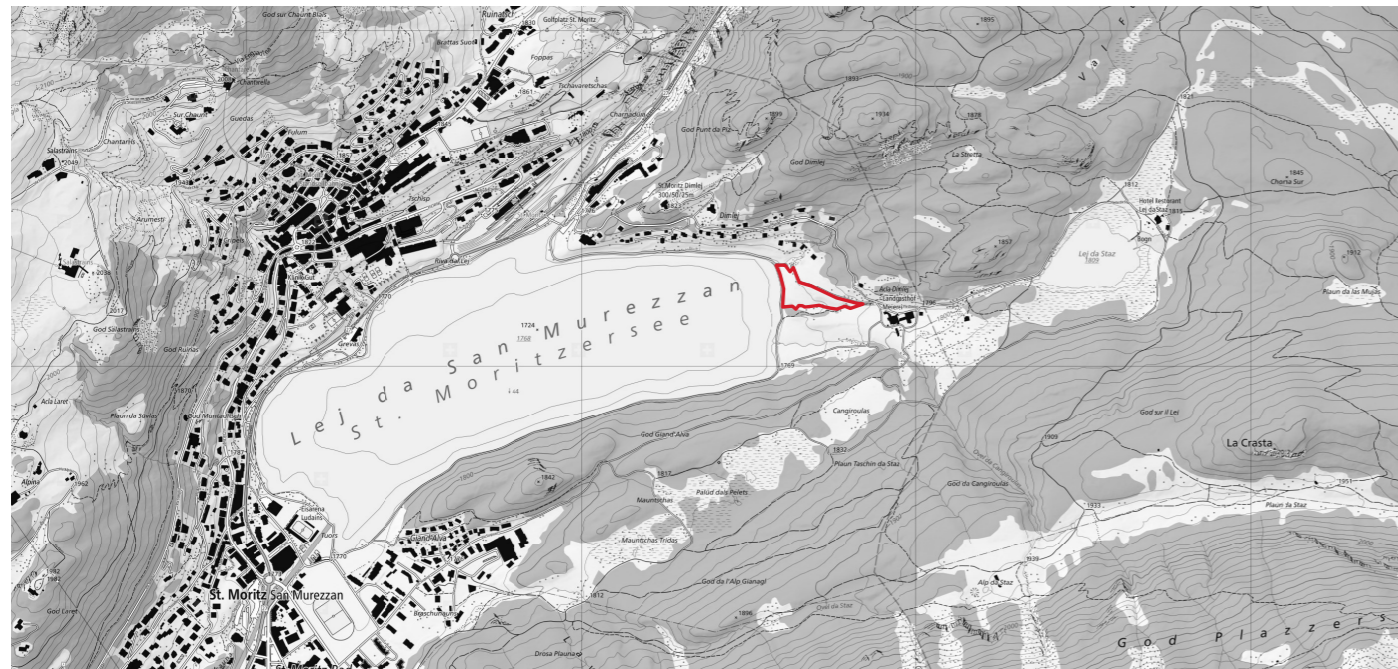


Figure 3: St. Moritz



Location

- forest
- grassland
- trails
- bus and train stations

The site itself has an irregular shape resembling a triangle, and its boundaries run along two pathways- one runs along the lake, the other from the town centre towards Lake Staz. The southern border is marked naturally by the stream connecting Lake Staz with the main Lake St. Moritz, and a cluster of Swiss stone pine trees. The site's landscape is sloping fairly regularly towards the lake, with an inclination of 20 meters over the whole length of the southern border

that overlaps with the stream. Few trees are located near the pathway at the north, directly on the site. The openness of the landscape provides good sun exposure, with trees bordering south casting pleasant shade to that part of the site.

# Concept

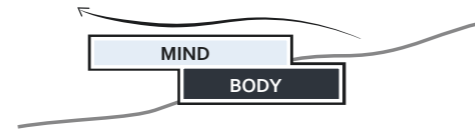
**ENSO** is *the circle of enlightenment*; in Zen Buddhism, it symbolizes simplicity and **harmony**. It represents the **present** moment, as the circle is created in one brushstroke during one exhalation.

In the Wellness Retreat in Alps, the focus is on finding harmony and balance between mind and body. Disconnecting from the chaotic state and slowing down are intermediate steps to the well-being of body, mind and spirit. Restorative architectural environment and closeness to nature support physical, spiritual, and psychological activities carried out in the building.

Architecture based on a circular plan with an open inner circle enforces the presence. Three distinctive curves break perfect circles; outer circle, inner one and an interior space. The ring-shaped volume partly hovers over the sloping landscape, merging seamlessly surrounding nature with the inner courtyard. Seen from the outside, the building remains dynamic and present in its expression. The reflective facade makes it camouflaged, mirroring the surrounding environment. Inside, the repeated structure creates the rhythm, curved shapes add softness while materiality engages the senses. Distribution of program reflects mind-body connection.



well-being: balance of **mind** and **body**

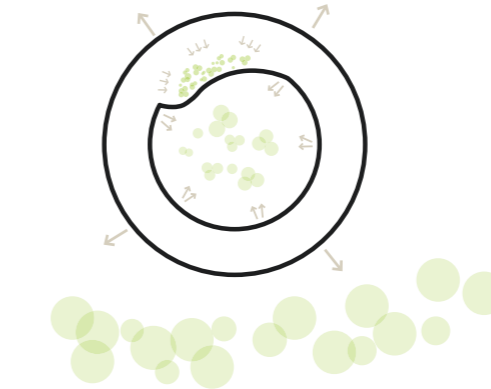


# Program

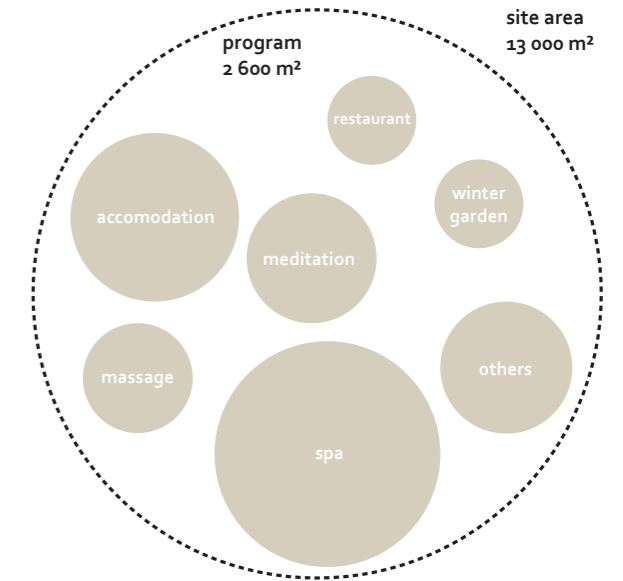
The proposed program reflects the relationship between body and mind. The body is the base for light and free mind; both depend on each other and create one whole together.

It translates into a clear division within the building: spaces intended for the mind-related activities are suspended in the air, while functions for the body's wellness are rooted in the ground.

Wellness Retreat is designed specifically for the small number of guests who value the intimate setting and atmosphere of this place. Therefore, guest rooms are modest to encourage interaction between each other.



connection to **nature** on many levels

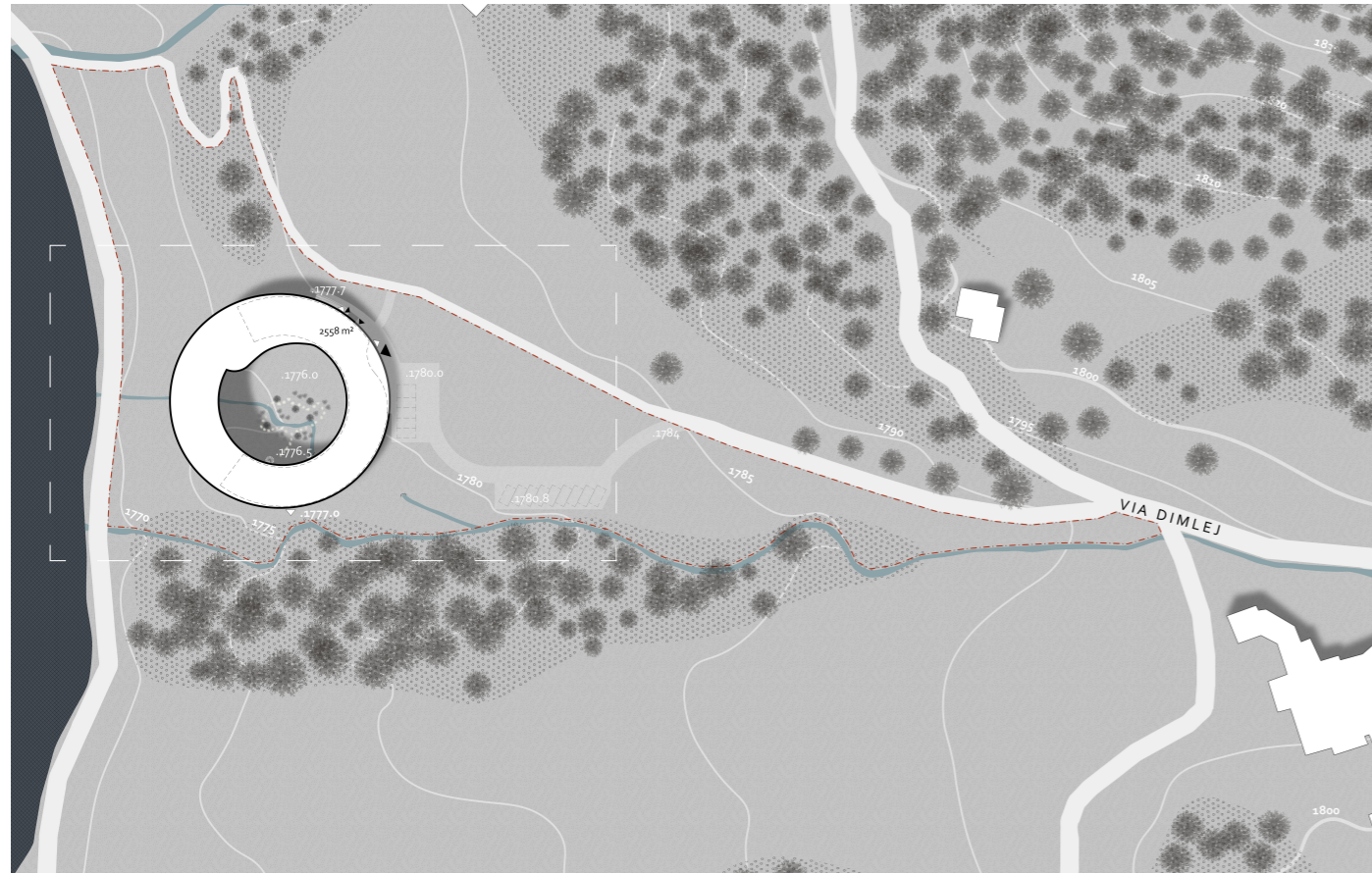


For the meaningful and restorative experience, the building engages all senses. Not only within the spa program but also with the winter garden, restaurant and natural materials used inside. Connection to nature is present in many levels to support guests' well-being.

The ground floor includes a meditation room or workshop space for yoga or mindfulness group activities. Rooms for guests, a restaurant and a winter garden are located here as well. The bottom floor – partly underground – has among others, saunas, massage rooms, and two swimming pools overlooking the lake.



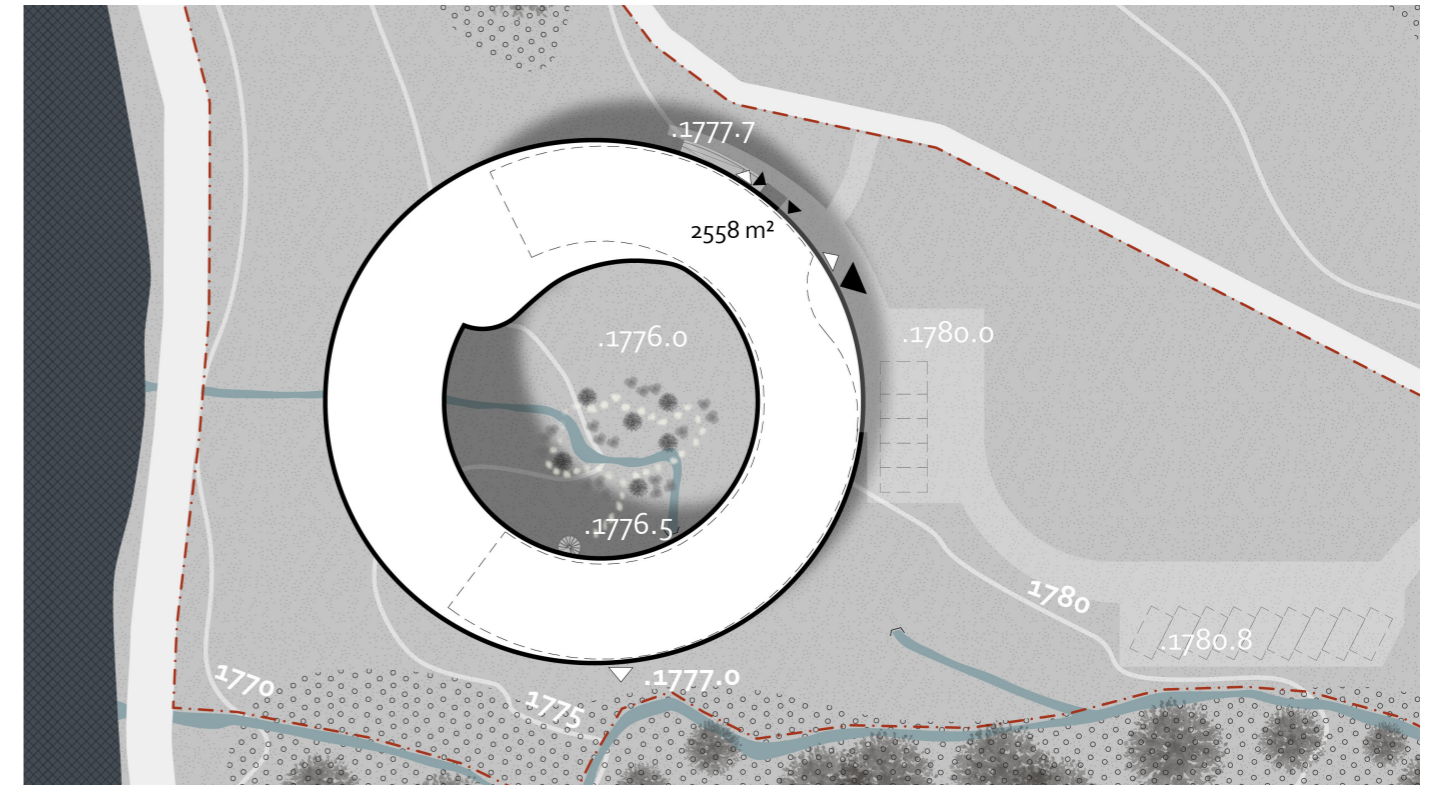
# Design



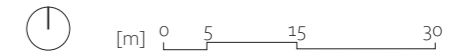
Site plan



Wellness retreat is situated near the lake shore, making use of the sloping landscape. Part of building facing Lake St. Moritz cantilevers over the ground. Continuous single sloped roof is flowing, changing its inclination and sloping direction.



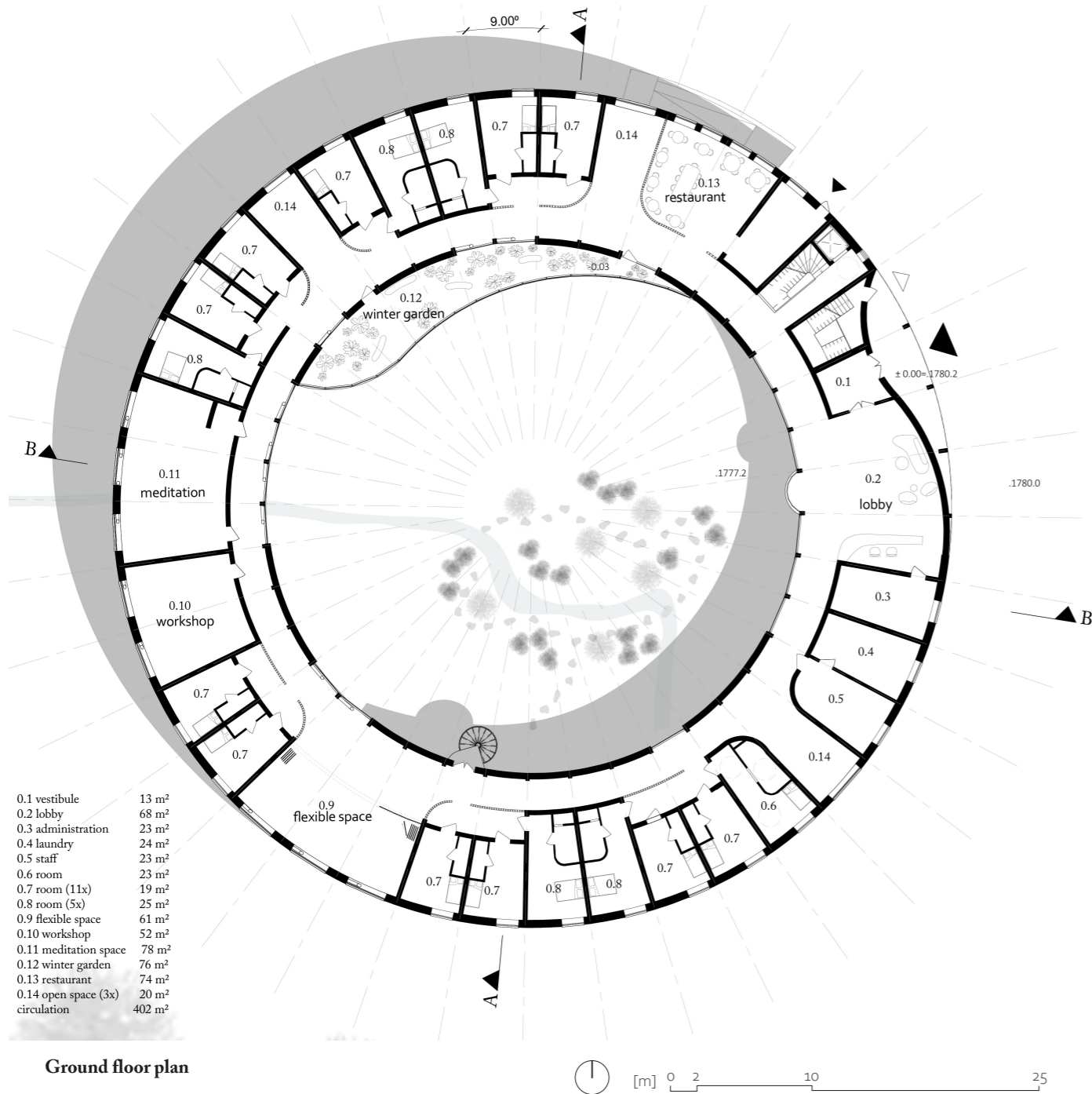
Site plan - fragment



- ▲ main entrance
- ▲ technical entrance
- ▽ emergency exit

Main entrance to the building is from the north-eastern side. It has one visible storey at that side, but as the landscape slopes down, two storeys are visible. Bottom storey is partly integrated into the landscape. There is a small evergreen garden in the courtyard with stream passing through the heart of the building.

Technical entrance and two final exit doors access bottom floor and are located at north, hidden behind the retaining wall and one at south. Vehicle access through Via Dimlej street connects site with the town centre; several car parking places are planned on the site.



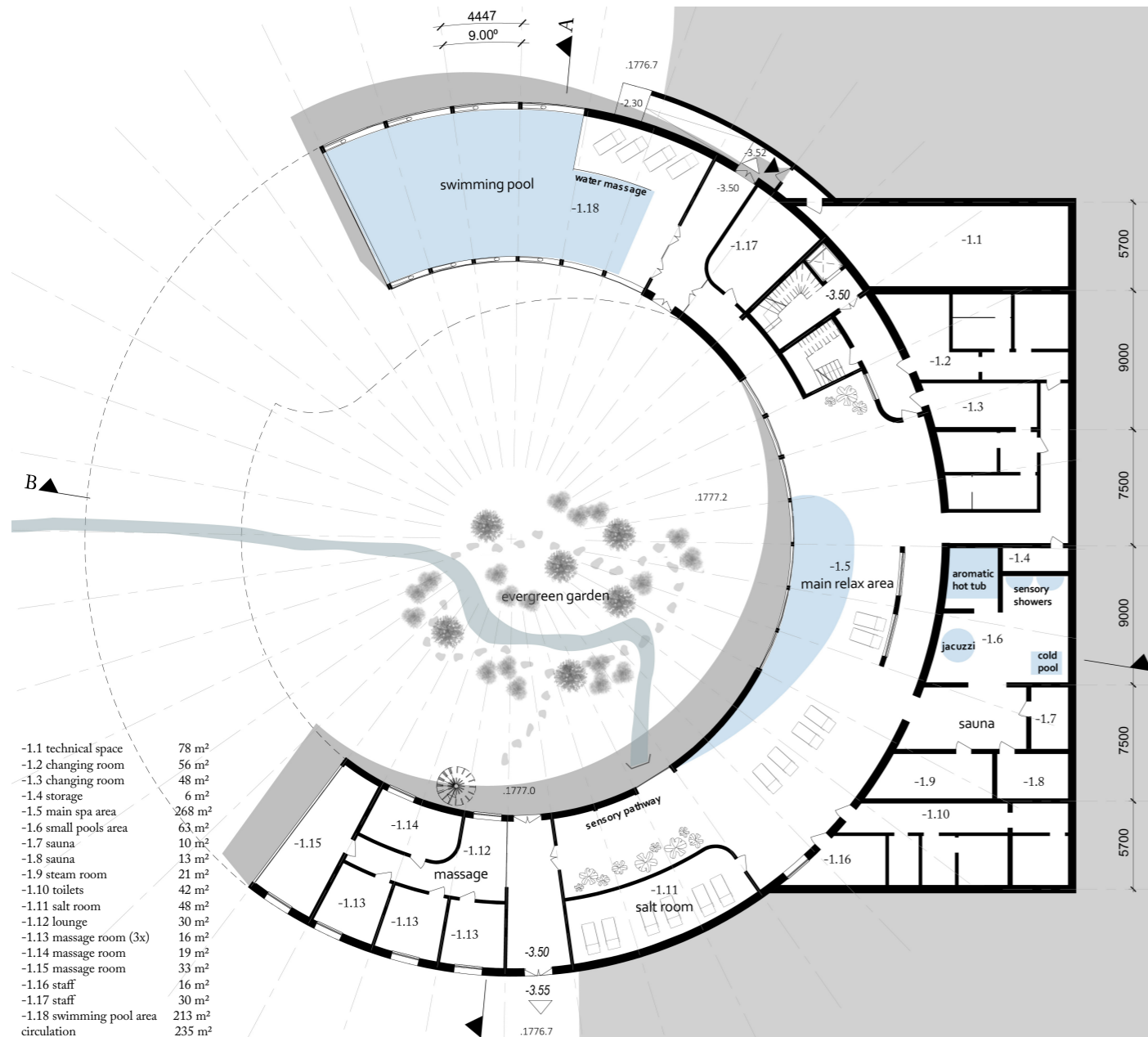
Ground floor plan

Right after entering the Wellness Retreat, the view of the mountains and Lake St. Moritz stretches in front of you in the lobby. Corridor runs on the inner side of the circle connecting all spaces located on this floor. Those spaces are mainly guest rooms and spaces for activities that support mind and spirit, like meditation or workshop rooms. An intermediate in-between spaces separate the corridor from the guest rooms. These separating see-through curved walls flow the corridor into smaller areas that frame views of the surrounding.

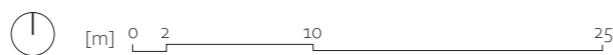
Meditation and workshop spaces are *suspended in the air*. They are both located in the part of the building which extends the most over the landscape. The flexible space nearby is spacious and has a view of the trees. It is used most of the time as an open common meeting place for guests. However, sliding wall panels can separate the room anytime for more privacy or better acoustics.

The curved shape that breaks the inner circle is a winter garden that brings nature inside. Diverse plants grow there all year round and supply the restaurant with fresh herbs. The winter garden is filled with scents and lots of sunlight; it has few seatings amongst plants to spend time in tranquillity. On the opposite side of the inner circle, an outdoor spiral staircase connects this floor with an evergreen garden below.





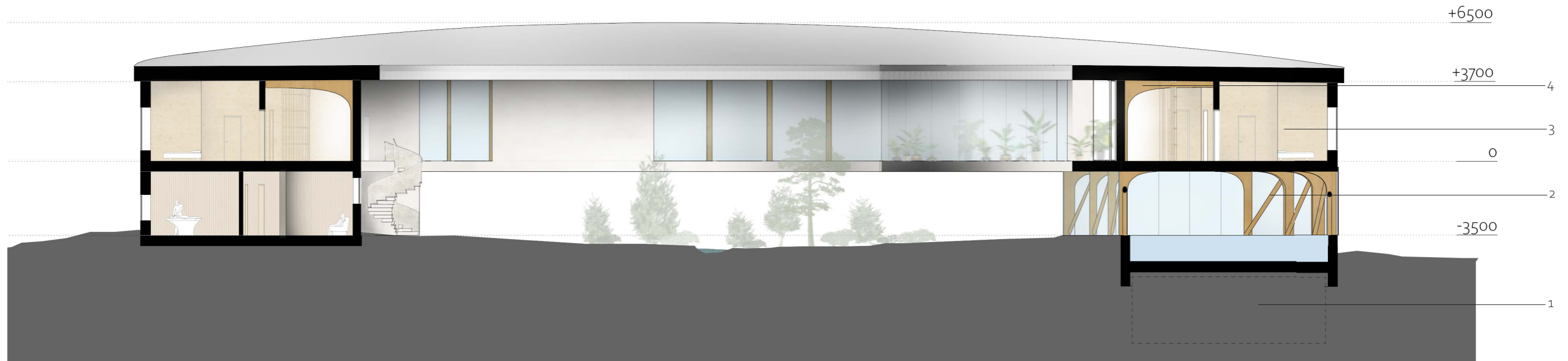
-1 floor plan



Body is the anchor and a support for our experience. Spa, located on this level, is therapeutic for both body and mind. The main open space follows the building's circular shape. The curved pool allows being at the height of the landscape and relaxation in this closeness to nature. From the main space, three other areas can be accessed. Openings in rounded walls lead to saunas, steam rooms and smaller pools. The left-wing of the main space has a salt room, sensory path, and rooms for massages and special treatments. Finally, the right side has a separated swimming pool that extends over the landscape, with a view of the lake and the mountains.

Baths in an aromatic hot tub, massages or a sensory path engage several senses. In each part of the spa, lighting and therefore atmosphere is different. Spaces behind the curved wall have minimal light, which helps to focus on the experienced sensations. Flickering sunlight filtering through the trees enters massage rooms on the south and their position provides privacy. Meanwhile the openness of the main swimming pool space and the unobstructed view towards the lake nearly blends it with the outside.

- 1. swimming pool's technical space
- 2. diagonal timber braces
- 3. swiss stone pine boards
- 4. glulam frame



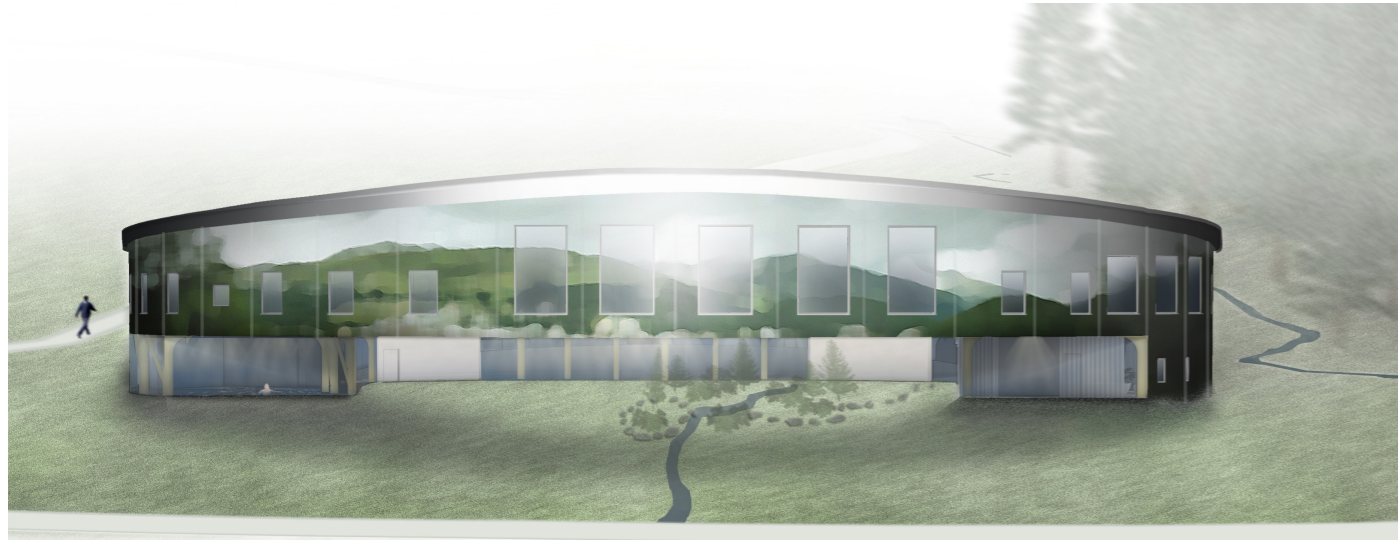
Section A-A



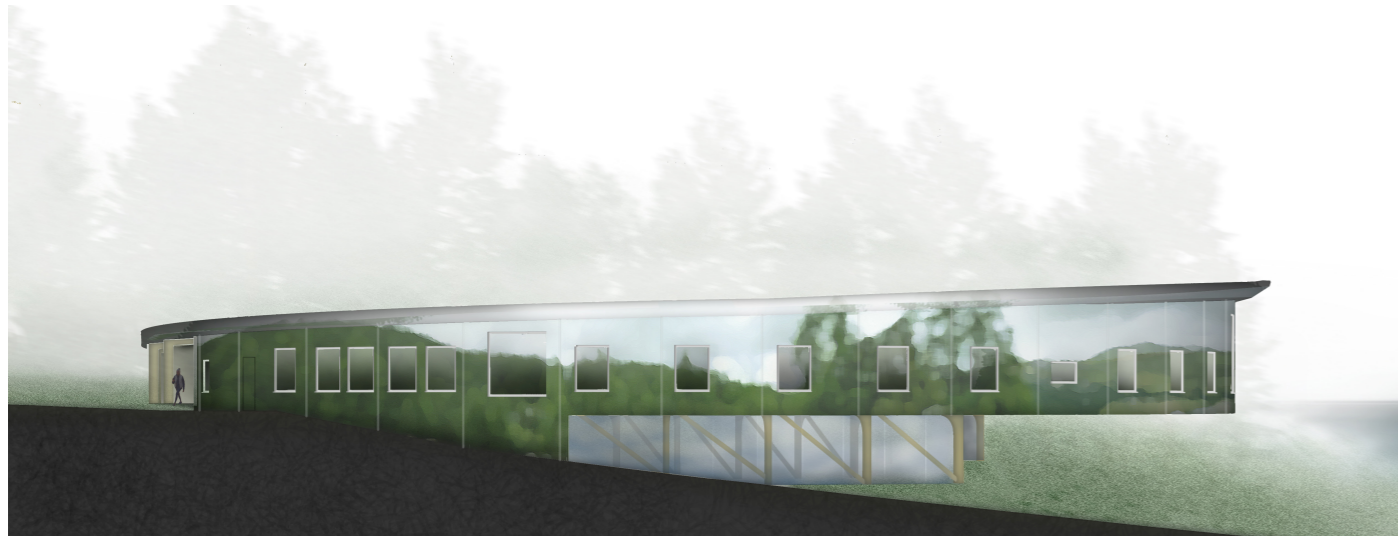
- 1. swimming pool's technical space
- 2. natural dark stone
- 3. rough limestone
- 4. glulam frame
- 5. grey aluminium roofing
- 6. smooth limestone

Section B-B

[m] 0 1 5 10



Elevation West



Elevation North

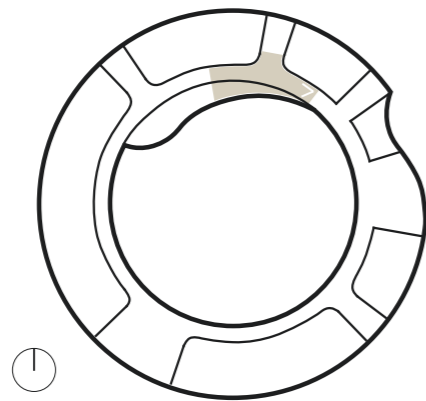
In order to improve well-being, it is essential to connect with oneself and strengthen the feeling of presence. The presence at the moment is represented by the facade of the Wellness Retreat. With every season of the year and different weather each day, the image of the building changes and it is what is present at the moment.

The location and form of the building, expose it to the views. It is not trying to stand out from the surroundings but connect with it in this dynamic way. Reflective aluminium panels used on the external facade distort the reflection and make the building blend with trees, mountains and the sky. Irregular windows in different sizes are present around the whole circumference.

In opposition to the shiny external facade, inner walls of the ring are covered with white limestone with smooth and matt texture, that softly reflects the sunlight within inner spaces.

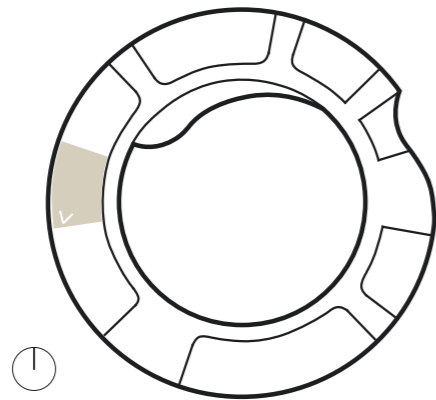


See-through wooden dividers filter the natural light to the in-between spaces when entering the guest rooms. Irregularly shaped dark and rough stones cover the floor of the corridor, contrasting with timber surfaces. The main exposed timber structure is curving at the top what resembles tree branches. All enclosed rooms have walls, floor and ceiling finished with wooden boards of the local swiss stone pine, which gives a warm feeling and a scent of timber on the whole ground level.



Interior

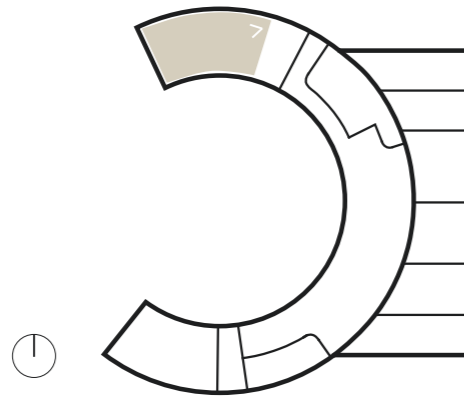
As the roof gradually rises, the ceiling of the meditation space is at its highest point. The room is located in the section of the building suspended in the air, overlooking the lake. Natural wood covers all surfaces, but the atmosphere is built around a feeling of lightness and softness. It is strengthened by airy, lightweight textiles suspended from the ceiling. They are hanging down up to the floor, covering windows so that the view out of the windows is filtered yet the entering daylight is sufficient and softened.



**Meditation space**



The swimming pool in the spa extends towards the lake, with its ceiling continuing further above the landscape. It is covered with reflective material so that the space visually continues. The timber structure is curving inside the suspended ceiling, referring to the tree branches reflected from the glossy ceiling as a water mirror. Glassed panels in the front and on both sides join the space seamlessly with the outside. Created peaceful atmosphere relaxes the body and allows the mind to wander.



Swimming pool

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