THE ARCHITECTURAL INTERMEZZO

How the liminal place changes the architectural approach of a public building and provides a rite of passage.

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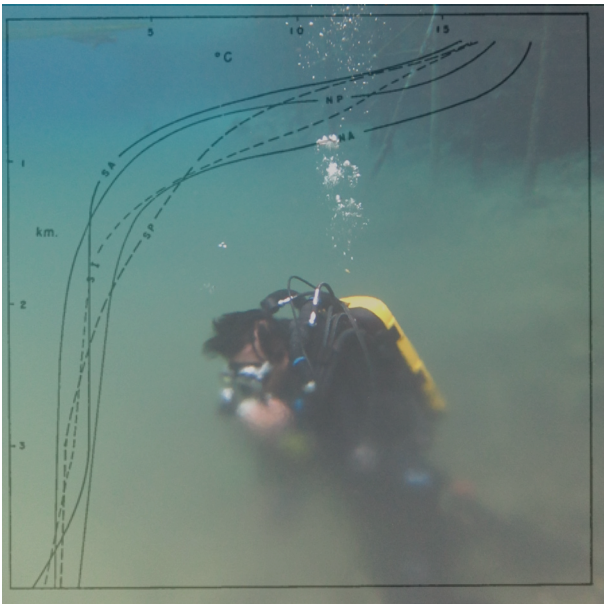
"A place that is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to the next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics."

CONTENT

PRELIMINARY RESEARCH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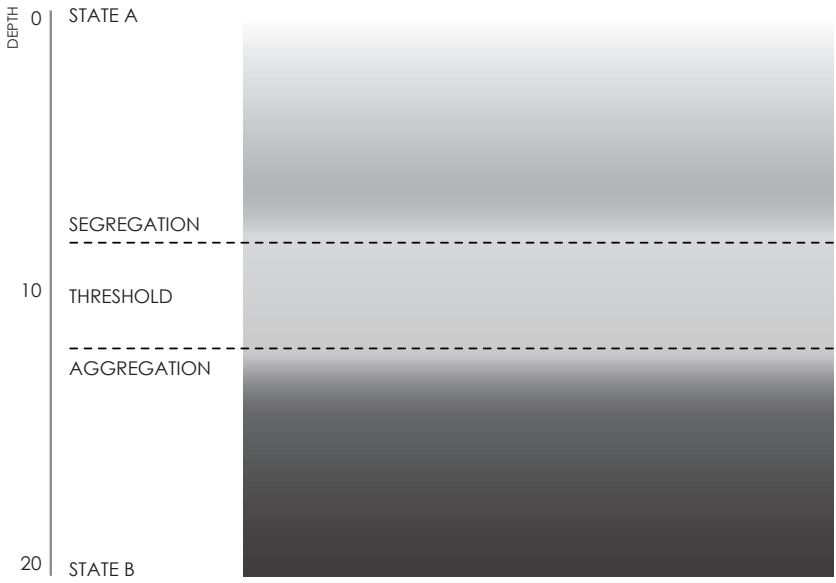
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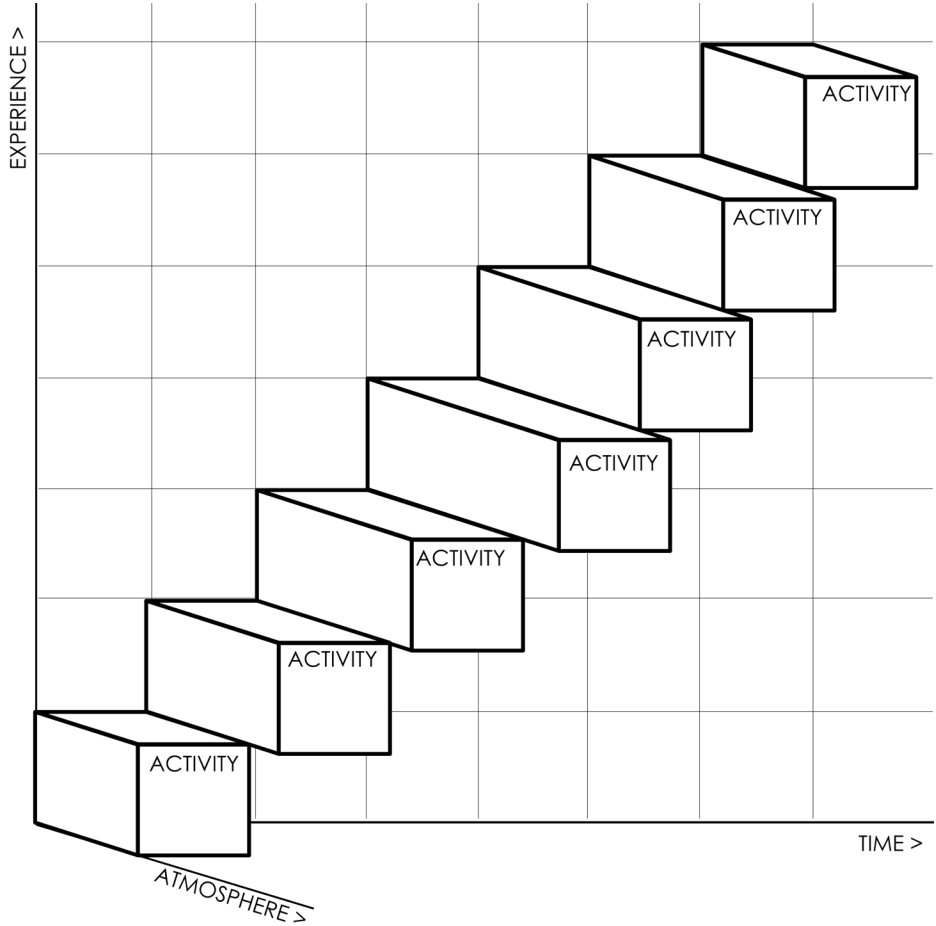
INSPIRATION

One of my personal passions is scuba diving. I remember that during my first boat dive, when I went down holding the anchor line tight, around ten meters depth I saw something rather strange. There was a vagueness in the water and when I went through it I felt cold, the colours where even more blue and the sounds of boats I could hear before disappeared.

This vagueness in the water is also known as the thermocline. This rapid shift of temperature comes from different water currents clashing together, creating a kind of film that separates the two currents from each other. This transition however, was in my experience, like an initiation. I first segregated from my first reality of warm water with the sound of the boats and clicking of the anchor line against the boat. Then I came in the threshold where there was this vagueness of mixed temperatures, sounds and colours and finally I had to adapt to the much colder temperature and the new atmosphere, but when I did, it gave me calmness.

This form of transition is in the anthropology called a liminal transition. When I dove deeper into this topic, it really fascinated me, hence why this also is the main theme of my design project.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LIMINALITY

The most important thing to start with is what liminality actually means. Liminal comes from the Latin Limen that means threshold. And that makes sense, while as I described the thermocline, there is a separating element between the warm and cold water current. But the theme liminal in anthropology finds its origin in the rite of passage, most common in initiation rites. Arnold van Gennep already wrote in 1901 about rituals consisting of three stages, the segregation, the margin and the aggregation. It took until 1967 when Victor Turner redefined the margin phase as the liminal. He wrote that important parts of this liminal phase were to get rid of the structure of society and to be sort of reborn from the ambiguity.
Also an important part of liminality is communitas. Victor Turner saw in the rites of passage that during liminal process, people were bonding and especially in this phase where there was no structure. He said:

"The first is of society as a structured, differentiated, and often hierarchical system of politico-legal-economic positions with many types of evaluation, separating men in terms of "more" or "less". The second, which emerges recognizably in the liminal period, is of society as an unstructured or rudimentarily structured and relatively undifferentiated comitatus, community, or even communion of equal individuals who submit together to the general authority of the ritual elders." (Turner, 1969)

A recent example where communitas can be seen is when the first monolith in Utah appeared. There was no structure to this, it just happened. But what followed was a worldwide phenomenon where different monoliths appeared and disappeared without further explanation. This created a communitas feeling around the whole world and created a bonding in a pandemic period. This is an rather interesting fact that separation can be overcome by entering a liminal period.

4 main elements that help with making the liminal period more tangible are:
- Time;
- Experience;
- Atmosphere;
- Activity.

I made this graph to portray the relation of these four elements to each other. On the x-axis is time, because of the temporal nature of liminality, everything needs to happen within a certain period. During this time, you build up experience of the new phase. You start with a zero point and from there you gradually built it up. Another important factor is atmosphere, here portrayed on the z-axis. In rituals there is a lot of symbolism that convey a certain atmosphere. These are done during a variety of activities. The more atmospheric the activity is, the greater the activity is during the liminal period.

Peters, S. (2018). Non-places [Photo]. Sarah Peters Photography. http://www.sarahpetersphotography.com/non-places#0

LIMINAL SPACE

This is however, how interesting it may be, a rather psychological approach. Only the individual or group that goes through the ritual has this experience. But what place evokes this kind of liminality? You could say a place with a lot of symbolism and a certain threshold might be this kind of place. A good example for this are the Torii's in Japan. These Torii's are functioning as the gateway from the mundane to the sacred. But this is just a symbolic and religion bound 'element' that functions as a portrayal of a threshold, rather than a place that is a threshold.
I therefore looked, besides the liminal space, also to the non-place from Marc Augé. The non-place is an anonymous place to people where they do not intent to stay for too long and functions as a kind of pit-stop. Examples of these non-places are hotels, gas stations, airports etcetera. He describes the experience of being in a non-place as follows:
"A person entering the space of non-place is relieved of his usual determinants. He becomes no more than what he does or experiences in the role of passenger, customer or driver"

This ties well in with the liminal space I mentioned before. Combining the two therefore gives a place that finds itself in a liminal state, or:

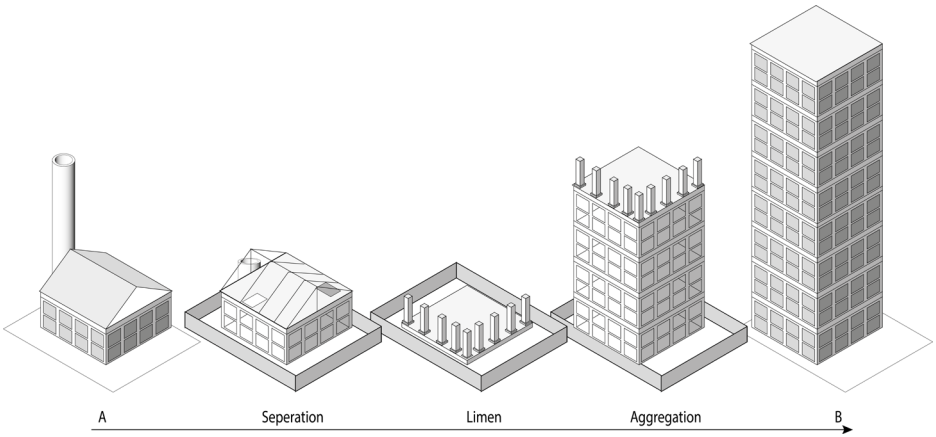
"A place that is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to the next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics."

This definition I created myself to get a grasp on the find for places that are fitting to these qualities. But in my personal research this was also the greatest challenge.

Passage from Boris Ryzhy's:

HOW THE GRANITE IS COVERED IN ICE

How the granite is covered in ice,
and a frost lies on the ground
This town, frosted with memories,
I want to leave it for ever.
There'll be warm station beer,
there'll be a cloud overhead,
there'll be melancholy music –
I'm saying farewell for good.
More than sky, warmth, humanity,
more than dark sorrow, the poet.
Pointless discussing the eternal,
or anything that simply isn't.



PERSONAL RESEARCH

The city where I am doing my research is Yekaterinburg in Russia. This city lies against the Ural mountains that are rich of many natural resources. This, and it has always been the biggest contribution to the economy of the city. The city started as a fortified mining plant and that same industrial core is still very present. During the Soviet era this was even strengthened and with soviet housing blocks and many extra industrial factories, it became one of Russia's biggest industrial cities. However, now the city is transitioning. It is slowly transforming from an industrial (post-soviet) city to a free market service oriented city where skyscrapers are being built and old factories and mines are being closed. The current industrial culture will and is changing from a city for work and living and outside the city for recreation, to a city to work and recreate and outside the city for living.

This transition got me to the search for liminal places within or just outside Yekaterinburg. I started with the construction process, you find a liminal phase where the factory transforms into an office building. In this case there is a phase normally high fences are the trace of the liminality, blocking the pedestrians from hazard, but in another way also make the people adapt to the new situation that is temporarily created because they have to go around or through a new route that will disorientate them. However, the trivial nature of construction sites made it unfitting for further research, also because of the short span of this phase.

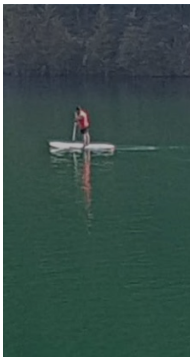
STARAYA LINZA

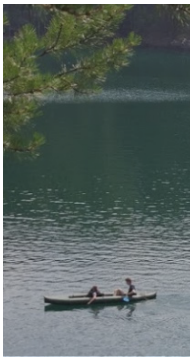
But then I found a place that was the perfect example of a liminal place. A deserted mine called Staraya Linza. This once functioned as a talc quarry but after finding a better spot, the miners abandoned the mine and only the pumping house stayed functional in case they would re-activate the mine in the future. However, did this not happen and the pumping house stopped pumping. From here the liminal place was really born. Slowly the mine filled up with water and within 5 years the whole mine was turned into a lake in the middle of a forest.

The filling up of the mine created something special, while the people that visited the mine had to adopt their activities to its current state, which you can see in the activities. This reminds me a lot of the amphitheatres where they would fill up the theatre with water to hold naumachia's. This brought many people together while it was a sight to behold.

I started to analyse this mine from the principles of the screenplay series of Bernard Tschumi, where he used stills from a variety of movies and tracked the movement by the principles of Mark

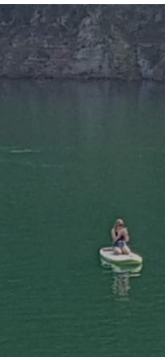


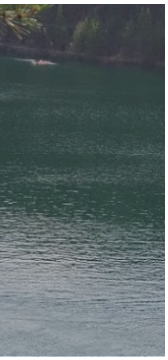


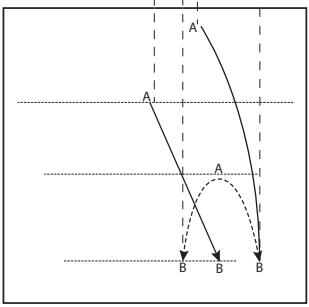



Johnson and translated that into a space.
This began with the overall transition of the mine where the accessibility and containment were important guiding themes. Followed up where the activity that was first controlling the water but eventually was pushed away by it. This need of adaptation is quite interesting.
This followed up by the staircase. This trivial element, to go up or down, changed its function throughout the transition from a transportation for going up and down to a containment, to a pier element, to a peninsula ending to be a floating island.

I ended with some atmospheric shots of the mine to see the find qualities like wetness and fog, perspective and reflection, entropy and transgression that gave the tools to make the liminal place more tangible.

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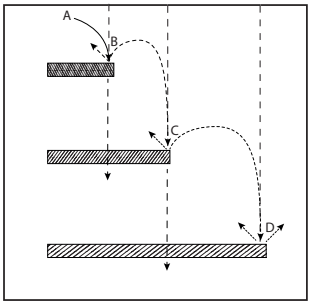
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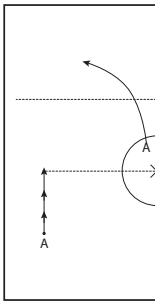
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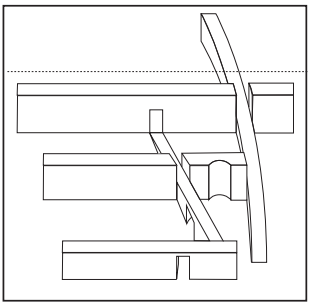

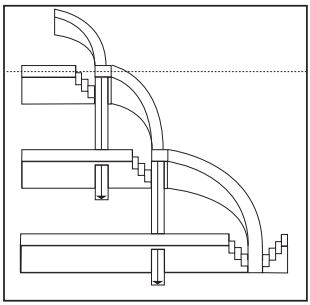

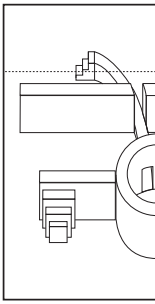

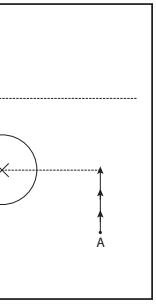
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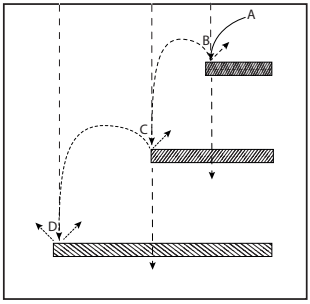
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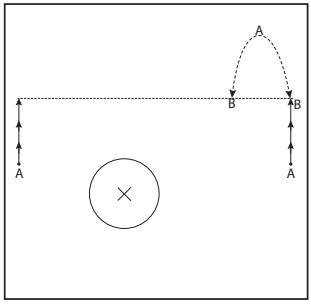
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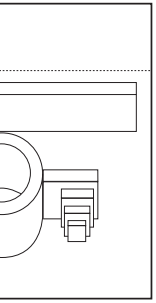

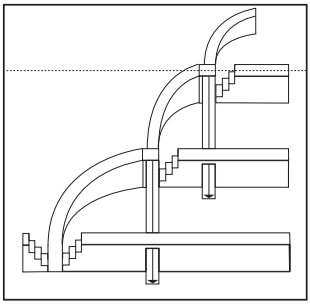

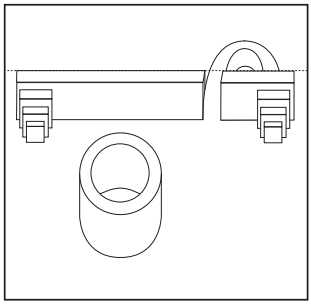

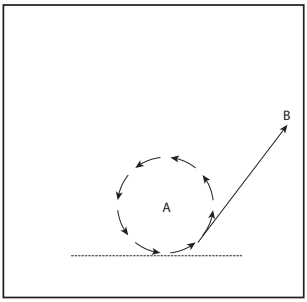
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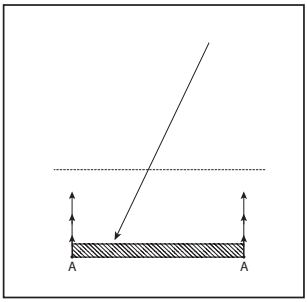
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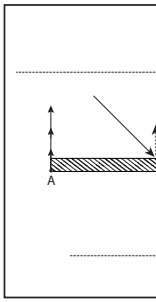
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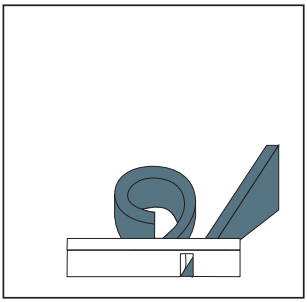

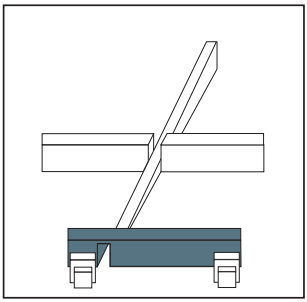

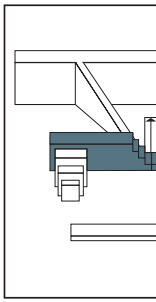

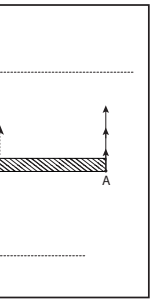
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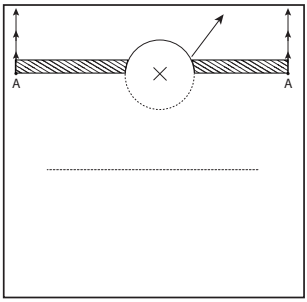
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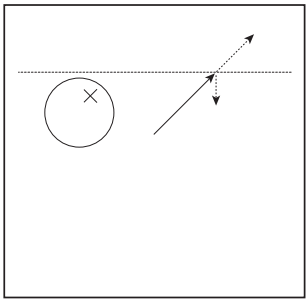
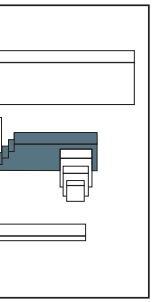
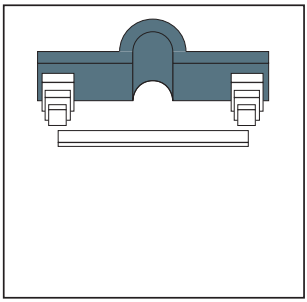
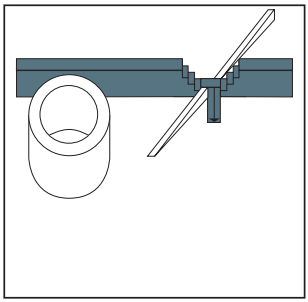
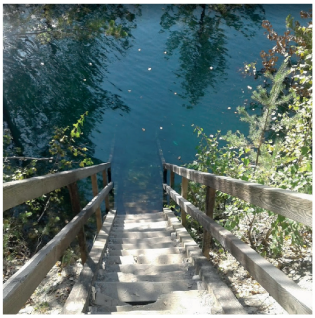
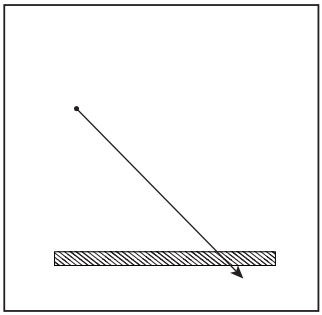


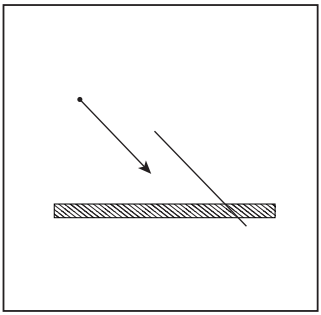


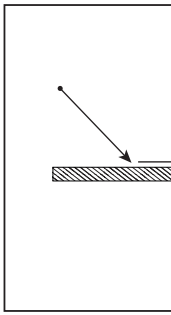


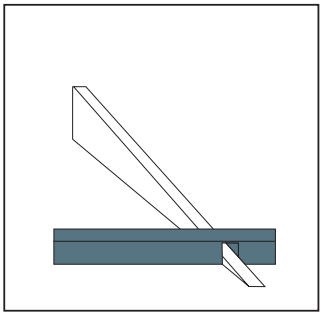


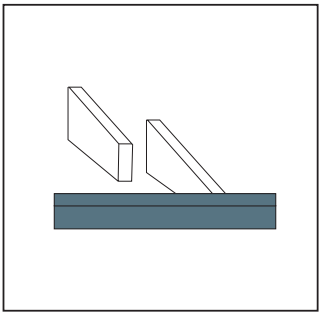


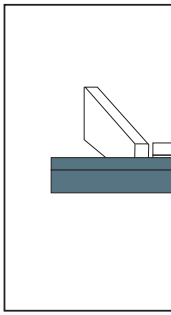


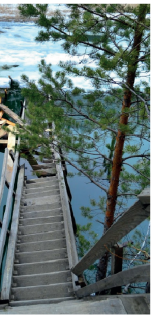


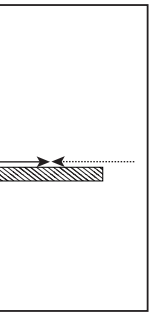


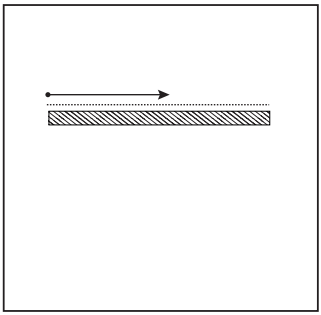


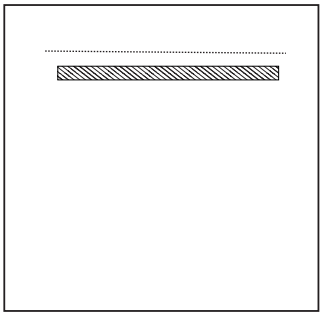


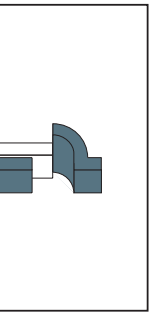


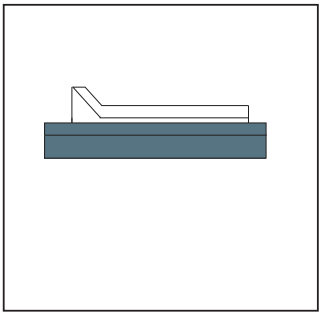


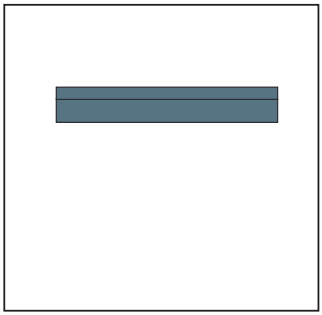


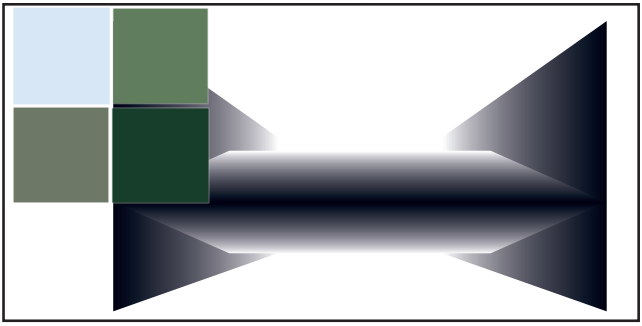


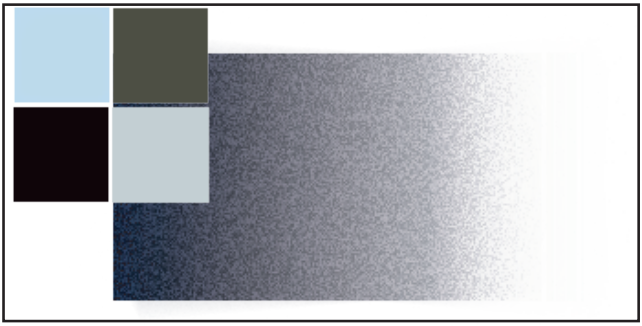


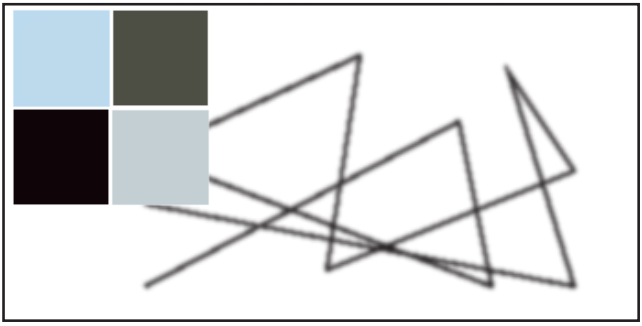


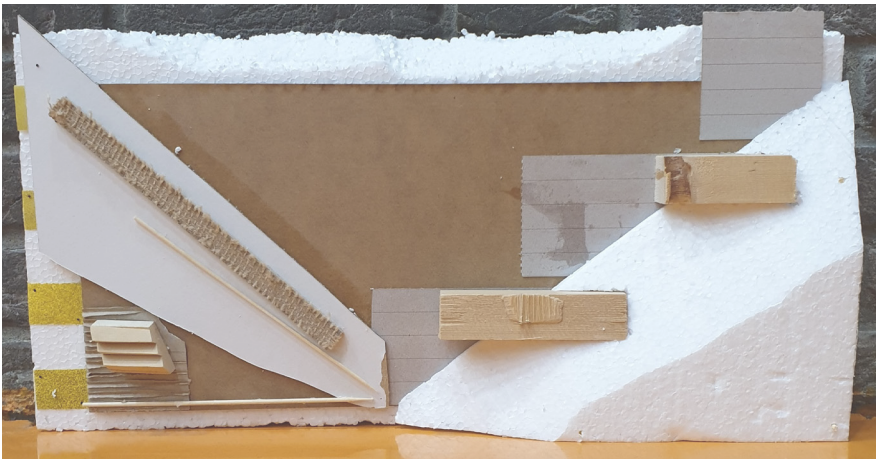








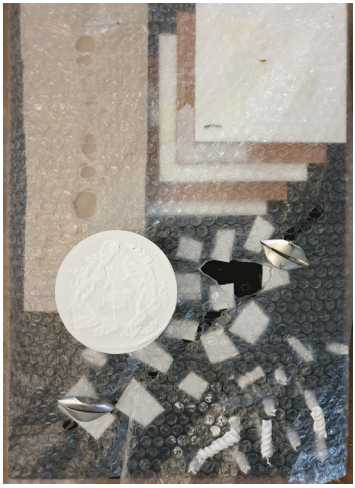




MODUS OPERANDI 1

The Modus operandi worked for me for answering the question how to physicalize the liminal place.
For my 2.5 dimension I worked with a collage that I casted in concrete to get the negative out of it. It partly broke but this helped me with the entropic nature of the liminal place. The pieces that are stuck can be compared with the staircase that got a new function in its new state. The overall style however, has some similarities to the continuous monument by Superstudio.

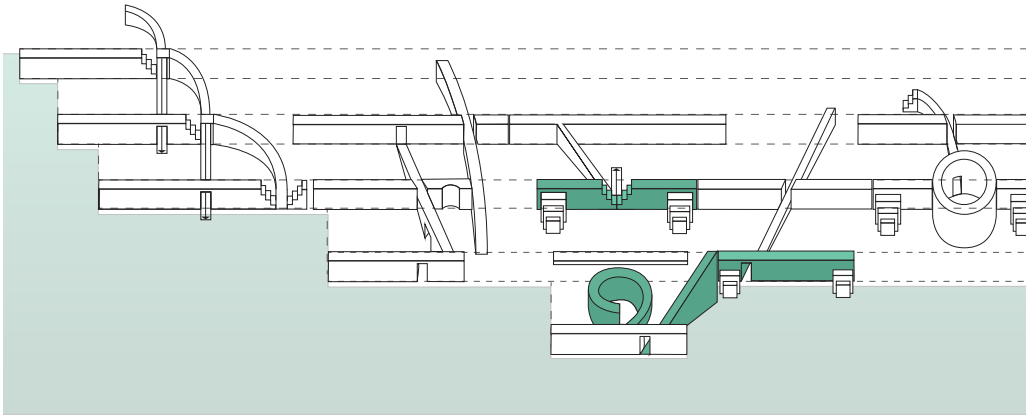
But where the blocky element of Superstudio overrules the landscape, with my model it is the other way around.
The assembly got me into the wetness part where I worked with a variety of fluids and made a model out of it that blurred the more ordered nature of the background, portraying the liminal by referencing to the thermocline.

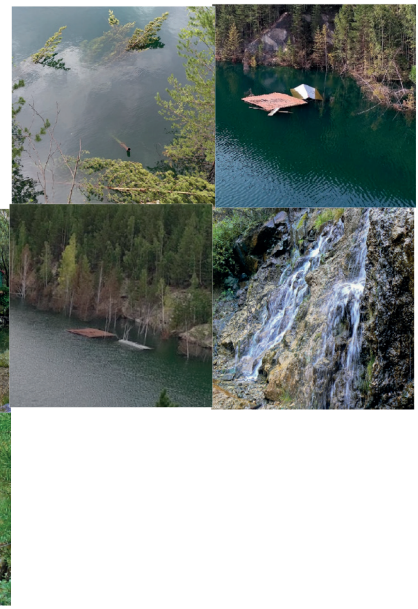



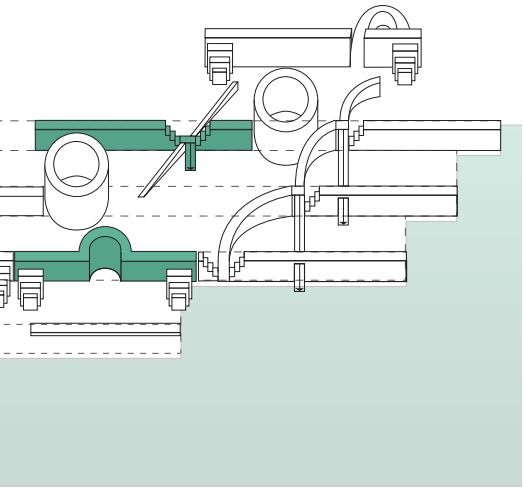

MODUS OPERANDI 2

The last model had to do with atmosphere and by using two different types of concrete, one structured and one unstructured, I wanted to physicalize the threshold between the two states as a long way working with perspective. The model shares resemblance with the water temple by Tadao Ando where it works the other way around. From a lily pond with an overview of the mundane world you descend through the water to enter the temple or the sacred.

The modus operandi taught me that the atmospheric qualities of the liminal place as I found them in Staraya Linza can be portrayed in many ways, but again, the themes of wetness, perspective, reflection and entropy are key in the anti-structural nature of the liminal.





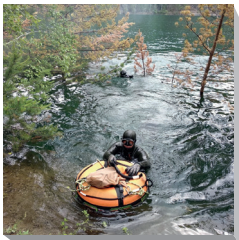


GRADUATION PLAN

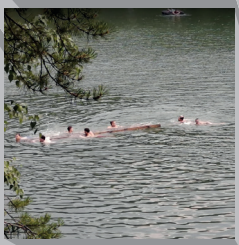
For the graduation plan I revisit Staraya Linza. This place gave me a lot of inspiration and brings together all elements of the liminal place. I started by combining the drawings I made for my personal research into a section of the mine. This overview shows the different activities the mine during its transition created. I followed this up by translating this section into the graph of the liminal where time, experience and atmosphere are on the axis.

The liminal place is also defined by the different water levels that create different usage, this is shown in the isometric view and section of the mine where the staircase works as a reference.

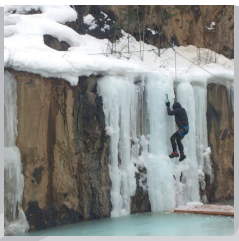
This combined gives a drawing giving all the elements of the liminal place and makes Staraya Linza THE perfect example and it would therefore be a good place for my design.

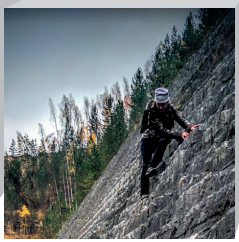
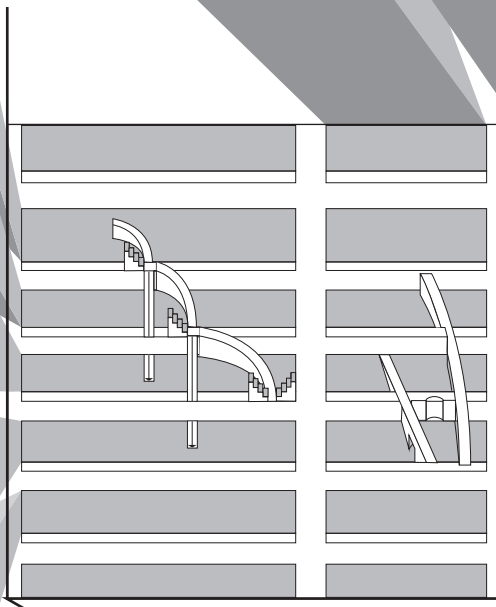






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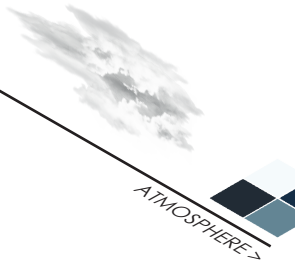
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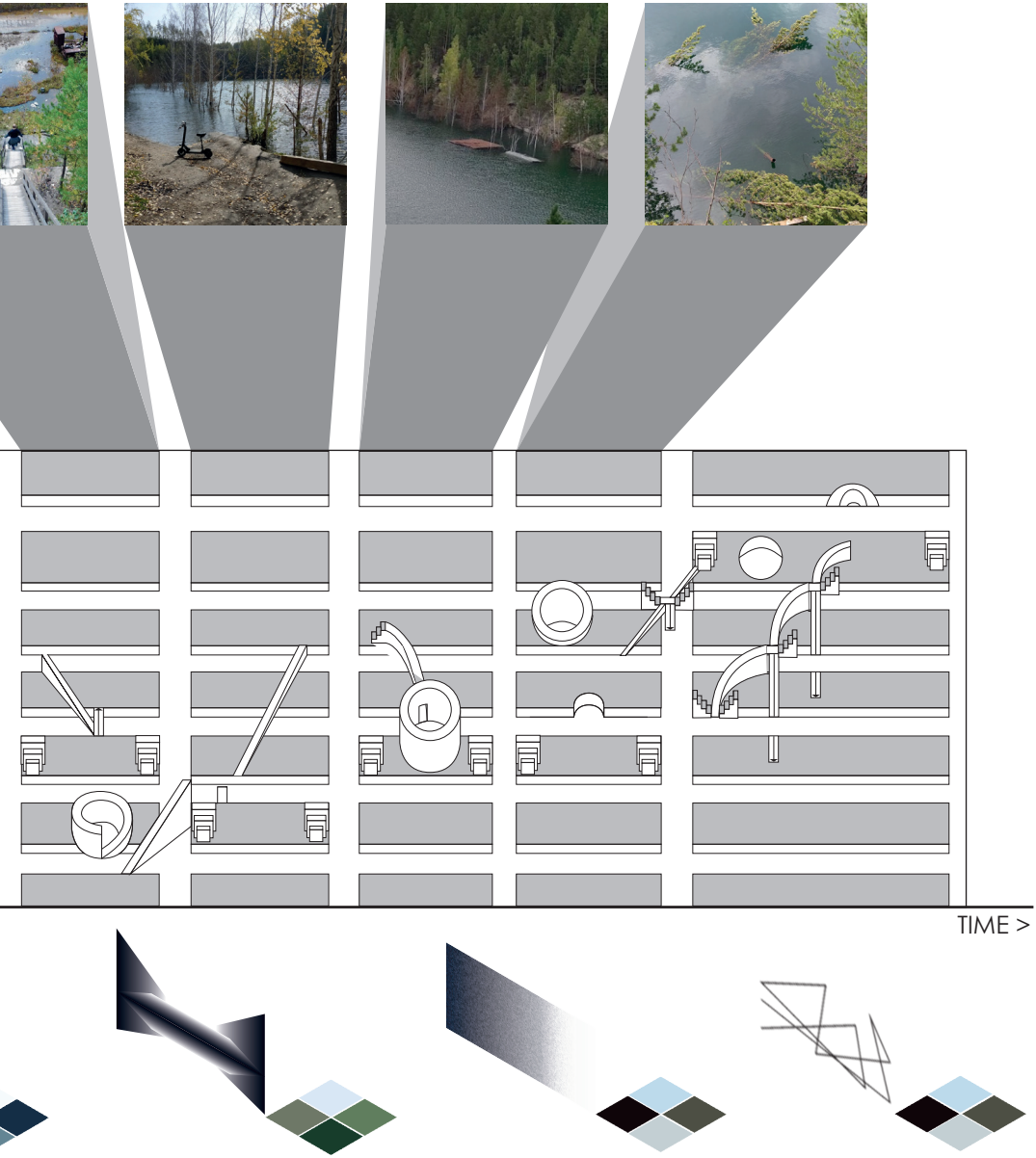
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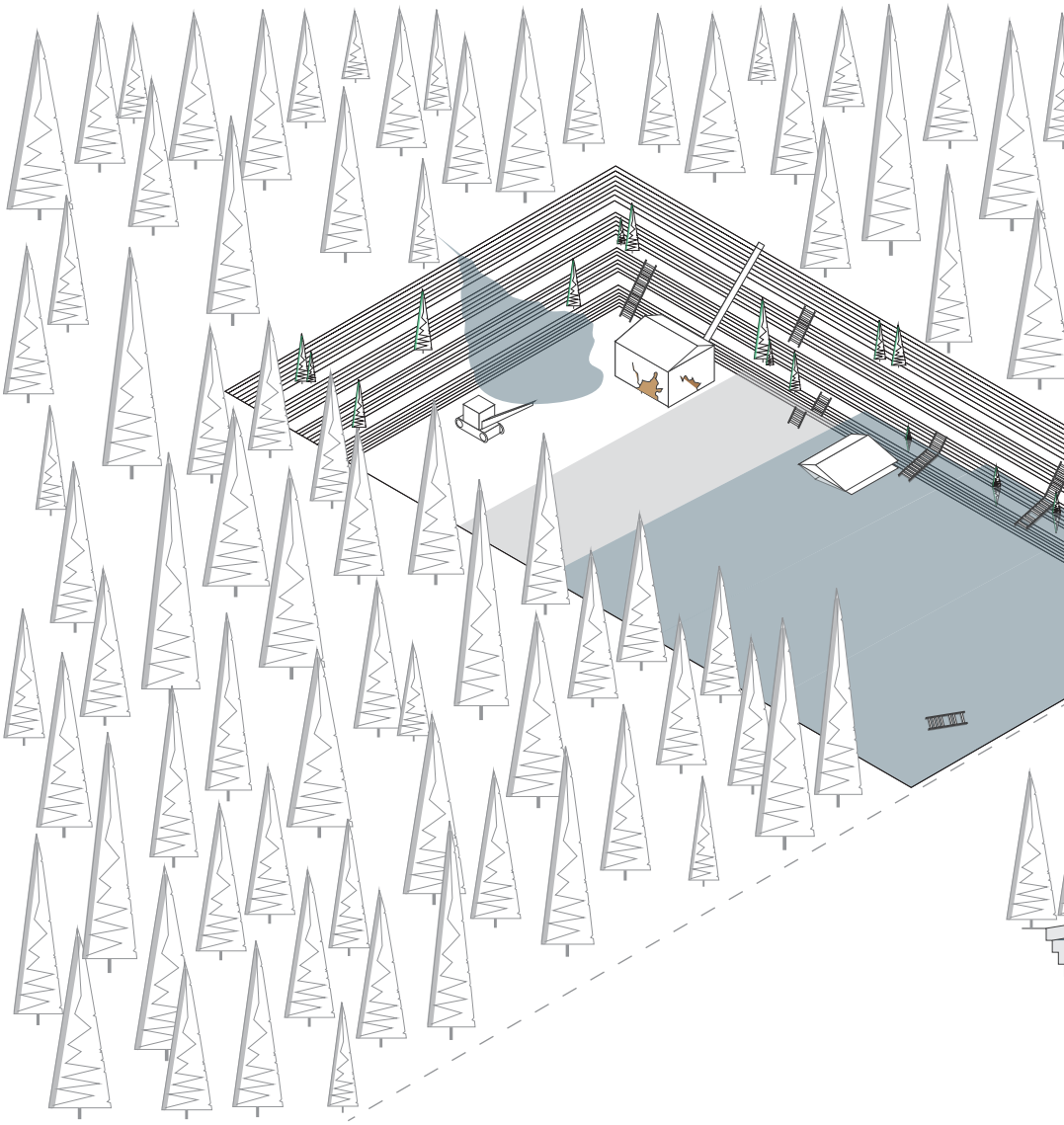
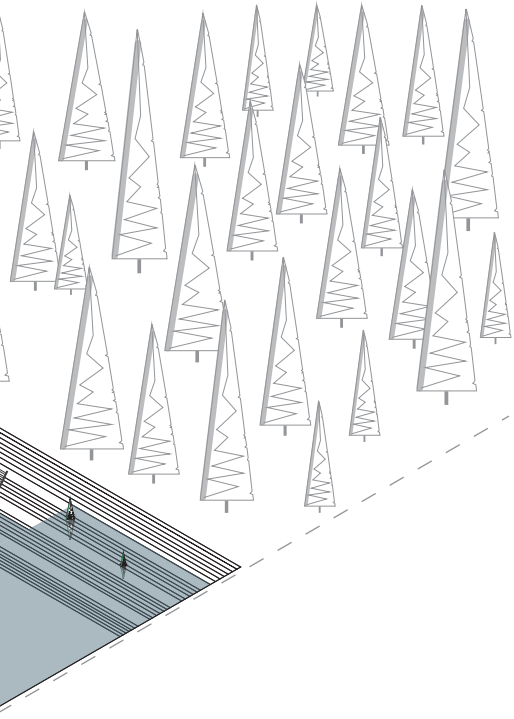
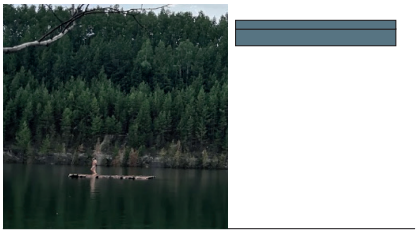
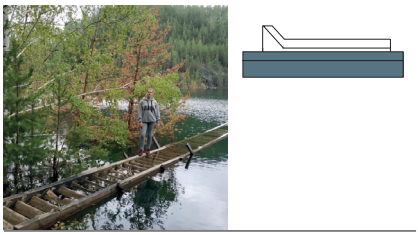
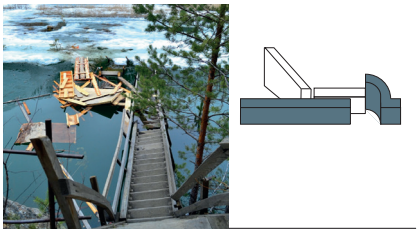
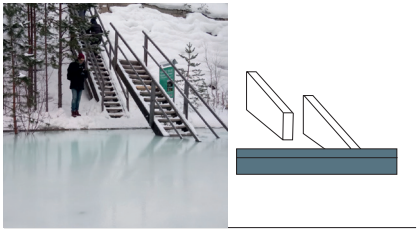


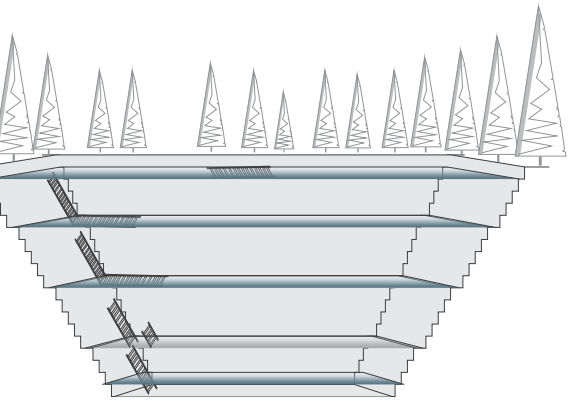


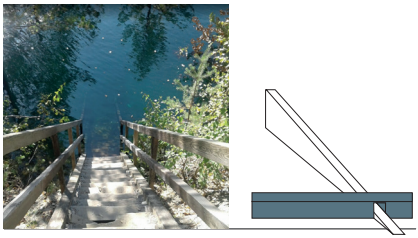








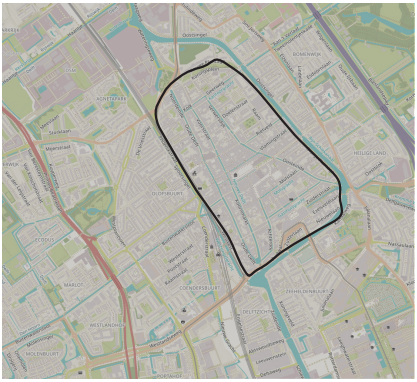




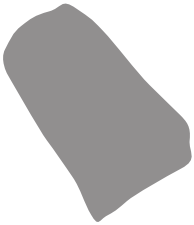
LOCATION

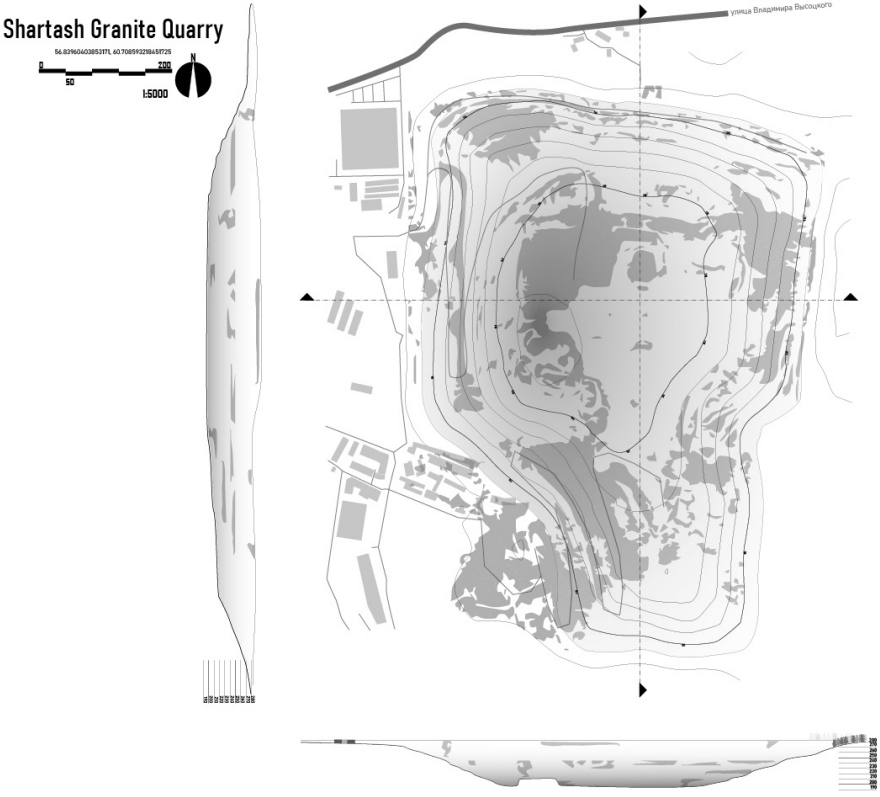
My potential location became the Shartash granite quarry in Yekaterinburg. This mine is still in function, but as a hypothetical statement you could argue that in the transition of Yekaterinburg will force the mining activities to stop and desert the quarry. If they would then stop pumping out the water, the same fate will happen to this mine as did for Staraya Linza, it will become a big lake.
The urban setting is on the east side of the city and lies near some important roads making its connectivity to the city and its surroundings perfect to integrate recreation into the city. Because it is a granite mine, there is a lot of building material available as well. The scale is comparable to the old city center of Delft and with its depth of around 100 meters the Nieuwe Kerk of Delft would completely fit inside it.
The design will be guided by the characteristics of the liminal place, Time, Experience, Atmosphere and Activity. Important will also be the study of multi-functionality of trivial elements. I will also look into other post-soviet cities that already went through the threshold from industrial to free-market oriented (Tbilisi, Georgia/Moscow, Russia). These findings will then be placed in a temporal space where the constant change of the place evokes a constant re-qualification of the usable space.

Shartash granite quarry



Old city center of Delft





CONCLUSION OF RESEARCH

To conclude, The project places itself in a rather undiscovered topic in architecture, liminality. The liminal transition is something that happens a lot, but is mostly only analysed in a retrospective manner. By creating a physical liminal design you evoke a more prospective view on how we experience liminality. I hope that my design can create a change for the architecture profession to re-evaluate the way we build. Where we almost always create a temporary design that is static throughout time instead of being able and encouraging in re-qualify it.

The design will put great emphasis on communitas as well while it should reform the social relations that are now often clashing in a transforming place to let them come together. By the usage of wetness, reflectivity, perspective, entropy and transgression, it will strengthen the liminal motive mentioned before and can in its place redirect the current retrospective view on liminal transitions to a more prospective view. This will increase the knowledge of what qualitative nature lies within introducing liminality into the architectural profession. By building upon theories that were often only viewed from an anthropological eye, a more physical approach might give many new insights on how we as humans interact with architecture and transitions.

THEORY PAPER: LIMINALITY

THE ARCHITECTURAL INTERMEZZO

Sander van Rijn

ABSTRACT

This theoretical thesis will dive into the ambiguous nature of a place transitioning from one way into the other. This transition can happen in many ways. It can come by radical shifts, by splits, as a smooth transition, by co-existence of two opposing elements, as a fusion, an ephemeral occurrence or as a transition with a liminal experience. The latter comes forth from the passage from the one into the other which creates a new anti-structural (Turner, 1967) type of condition with a set of specific characteristics.
While liminality is often described from the anthropological realm, we should be able to trace it back to architecture as well. Therefore we should look at liminality from a psychological as well as a physical point of view. To create a better understanding of the matter, the thesis will first explore the psychological side of liminality. The ideas of Victor Turner and Arnold van Gennep about the special phase in the 'rite of passage'. Physical examples can be found in the non-place proposed by Marc Augé. In these non-places we find generative elements that evoke the same ambiguous feelings people experience during the liminal phase. From this the definition of the Liminal place comes in, or, a physical place where the liminal experience is created by the generative elements of the non-place. This liminal place is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to its next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics.
To find the non-place elements that create a liminal experience, James Turrell comes to mind. His work with experiencing light is, especially with Roden Crater a good example of the psychological experience of liminality. A physical example can be found in the deserted mine 'Staraya Linza' close to Yekaterinburg, Russia. This mine became deserted and since the pumping house stopped working, filled up with water, with the industrial mine transitioning into a recreative lake. The in-between period shows examples of different movements and by tracing this in the same manner as Bernard Tschumi has done with the Manhattan transcripts, the non-place elements can be easier spotted.
The case study city for the project will be Yekaterinburg. The city of Yekaterinburg is still in the phase of transitioning from a post-industrial city into a service oriented city. This has created some liminal places where there has emerged a specific type of urbanism.
At these specific places a intervention could emphasize or make the liminal experience more visible.

KEY-WORDS

Anti-structural
Co-existence
Liminality
Liminal place
Mine
Non-place
Roden Crater
Transitions
Treshold
Yekaterinburg

OPENING

INTRODUCING THE LIMINAL

One of my big passions is scuba-diving. My father was already doing scuba-diving and because of my mom's claustrophobia he always missed a diving buddy. That buddy became me and I remember the first boat-dive in the south of France. From the boat I saw the red rocks of the coastline of Théoule sur Mer and the sun reflecting on the waves. Because it was just a small boat, you had to sit on the edge and let yourself fall backwards, just like a trust fall. Before I knew it we were descending holding the anchor line tight, me even tighter. Here something strange happened, because around 10 meters before we were at the reefs, I saw a wrinkle in the water, like there was another layer of the sea. Later I found out that this is called the thermocline, or, a rapid shift in temperature because of different currents. This simply explained natural phenomena caused me to feel colder, but also mentally it felt I was in a phase of disorientation. This ambiguous experience gave a new dimension to how I perceived the quality of transitioning from one place to another, being more conscious of the effects it creates.
In the architectural profession the threshold is often viewed from the notion and characteristics of the differences from your starting point A to your destination point B, however, the characteristics of the in-between are not often that well pointed out. What this creates is a space focussed especially on the qualities of A and B, but, as I pointed out with the thermocline, it is well possible that the highest quality is in that threshold phase itself.
The transition of the thermocline can be seen as an liminal experience. Liminality often stays in the realm of the anthropology because it is, most of the time, a phycological occurrence that Victor Turner (1964) described as the subject of passage ritual is, in the liminal phase, structurally, therefore not physically, "invisible"."
However, if we would take the notion of the liminal to the more "visible" or "physical" (image 1), what kind of examples then show up? While 'Limen' is Latin for threshold or margin, it should be seen as a place on a threshold or as a place on the margin. The latter is described by Rob Shields (1991, p.3) as follows: "Marginal places … are not necessarily on geographical peripheries but, …, they have been placed on the periphery of cultural systems of space in which places are ranked relative to each other."
Besides the liminal transition, there is a variety of other types that are sometimes seen as liminal experiences, but are quite different in nature, because the liminal moment or the outcomes are different. However, these are rather interesting phenomena to compare with the liminal transition, especially to make clear how particular the liminal transition with all of its qualities is.
This theoretical thesis will therefore dive into the ambiguous nature of a place transitioning from one status into another, with the liminal transition is most valuable, because of the special characteristics and qualities it has.
Then by looking at a city that is in a transitioning phase, I want to ask the following: "How can liminality be used in architecture to form a qualitative new phase in a transitioning space?"

By looking at a city that is in a transitioning phase, I want to ask the following: "How can liminality be used in architecture to form a qualitative new phase in a transitioning space?"

Image 1:"Thermocline: the liminal gate into the deep sea" Own work (2020)

CHAPTER 1 (SEGREGATION):

CATEGORIZATION OF TYPES OF TRANSITIONS

In our lives we are accustomed to many changes. Sometimes these changes are radical, sometimes you only find out later that you made a change. This change from one state, style, form or place to another is called 'transition' from the Latin 'trans' meaning: on the other side of; and 'itiō' meaning: go, proceed; therefore "to go to the other side". But in that regard, there is a number of transitions. All these transitions have different characteristics and examples that needs to be categorized for better understanding to how liminal transition differs from the other mentioned transition types. As can be seen in table 1, these categories can be represented by a mathematical equation and by a simplified line drawing.

Transition type:	**Formula:**	**Graphic representation:**
Hard	A = B	
Smooth	A = B	
Split	A = A1+B2	
Coexistence	A+B = AB	
Fusing	A+B = C	
Ephemeral	A = B = A	
Liminal	A = AB = B A = C = B	

1.1 TRANSITIONS (HARD, SMOOTH, SPLIT, CO-EXISTENCE, FUSING AND EPHEMERAL)

To start its best to begin with the hard shift. This type of transition happens during a radical shift between A to B. Physical elements are from putting on the light to the dry and rain season around the equator. This shift might disorientate you for a short amount of time because of the contrasting characteristics between A and B, like going from dark to light and from dry to wet in the brought up examples. As a psychological example, a epiphanic moment can well be regarded as a hard shift, because it is a sudden transition from being unknowing to being enlightened. The liminal period here is however, little to non-existent because it is the moment you need to get accustomed to the new reality that might feel disorientating. The smooth transition is where you go from A to B without rapid or radical shifts. The passage of time is normally, with no special occurrences a relatively smooth transition. The seasons in the northern and southern hemisphere are having smooth transitions between winter, spring, summer and autumn. Psychologically dementia and Parkinson disease are an example of a slow deuterating mind and slowly losing the grip on life. There is as well a short accumulation phase that might feel a bit ambiguous as well.

A split can be seen that point A divides in B1 and B2. Especially phycological examples can be given for this transition type. For example, a divorce causes a split between two people, but in its place also between minds; people who develop schizophrenia are losing their own reality with many contrasting 'voices' within their head (Picchioni & Murray, 2007). Physical examples can be found in geographic occurrences where through time rivers can divide land that causes originally the same nature and species to change from each other over time.

Co-existence is a transition type that comes close to forming a bond where A and B forms AB. A coalition between two political parties but also the Cold War are good examples of political co-existences. If there happens to form a new state from A and B, say C, then we talk about fusing. Fusing happens in a broad variety of ways. This type of transition is seen in science, cuisine, mythology, etc.. Scientific fusions can create new elements from two other elements, in cuisine where different cultural cuisines might create a new type of food, like in the Netherlands, where the Dutch/Belgian fries and cheese are mixed with the Turkish doner kebab creating the so-called kapsalon. In mythology fusion can be seen in entities fused together creating hybrids. These so-called liminal beings are for example the centaur (half man half bull), harpies (half man half bird) and sphynx (half man half lion). That the word liminal is used here is because of the derivation of līmen, or, threshold, because the liminal beings are on a threshold of two different entities.

The ephemeral transition is a transition that only lasts a certain amount of time before it goes back to its former state. Especially events like festivals and concerts, but also movies or reading a book might give an ephemeral feeling. You become detached from the 'normal' state and feel if you are in a different state. Most of the time you can choose for this to happen and in this case the ephemeral transition is called a liminoid experience (Huang, 2018).

1.2 LIMINAL TRANSITIONS

The liminal transition is harder to physically define while it is mostly described as an event or experience by an individual or a group (then called 'communitas'). The most known examples of liminality are when someone enters a cult or becomes a member by a rite. The letting go of the past state but not being in the next state creates a new in-between state where neither state is fully present. While this is somewhat like a fusion, the liminality does not form from two already present states or elements, but rather between the two states (image 2). To give an example, fusing would be a man and a horse together becoming a centaur and liminality would be a man transforming into a horse but being a centaur in the middle of the transformation. The liminal transition therefore contains a special element that, besides from the liminoid experience, creates a 'temporary' moment of something new. Besides the thermocline as mentioned in the preface, brackish water at river mounds is another example of a liminal condition. Being a mix of sweet and salt water, it evoked some specific ecosystems around this place, with their own characteristics to thrive.

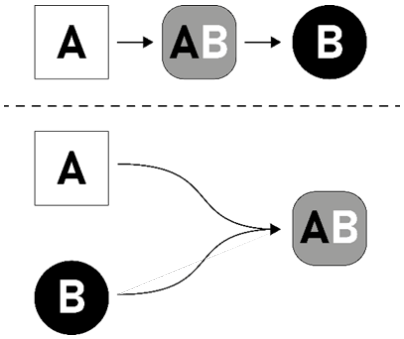


Image 2: This image shows the difference between the two notions of hybrids. The top being the liminal transition where the hybrid is halfway through the transition and down the fusing transition where the hybrid is the result of the transition.
Own work (2020)

CHAPTER 2 (LIMEN):

LIMINAL SPACE & NON-PLACE

AS LIMINAL PLACE

From the previous chapter we know that the liminal transition is characterized by the new and distinct state it causes. However, how this can be 'mastered' in a way that you can have certain elements that put a liminal transition in motion is not easily done. Therefore a good definition of how liminality can be implemented within architecture might help with this.

2.1 LIMINALITY & LIMINAL SPACE

Liminality is defined as "The transitional period or phase of a rite of passage, during which the participant lacks social status or rank, remains anonymous, shows obedience and humility, and follows prescribed forms of conduct, dress, etc." (Dictionary.com, 2021). This definition shows it is not directly well-suited for architecture because the original

'founders' of liminality, Arnold van Gennep and Victor Turner are talking on the cultural rites (Gennep et al., 1961)(Turner, 1964). The only direct link that can be made to architecture is that there are buildings made for these rites like temples or freemason lodges. However, these buildings are not guiding in the experience of liminality but rather the other way around. By looking at the characteristics of liminality, it might give some hints to what really makes this experience so enriching. This brings me to a the liminal space, mostly used in religious thematics because it leans still to the experience of rites. Richard Rohr, author and Franciscan friar, noted it as follows:

"Where we are betwixt and between the familiar and the completely unknown. There alone is our old world left behind, while we are not yet sure of the new existence. That's a good space where genuine newness can begin. Get there often and stay as long as you can by whatever means possible…This is the sacred space where the old world is able to fall apart, and a bigger world is revealed. If we don't encounter liminal space in our lives, we start idealizing normalcy." (Rohr, 1999, p. 155-156)

This notation of the Liminal space is notably influenced by Turner, because the phrase betwixt and between is the title of his book about liminality. It is nonetheless the right way to describe the atmospheric quality, while you are in an in-between phase where you find an ambiguous notion of reality, or betwixt (image 3). But again, also the liminal space fails to note some physical elements or relics that defines the space in itself, keeping it a rather personal psychological experience.

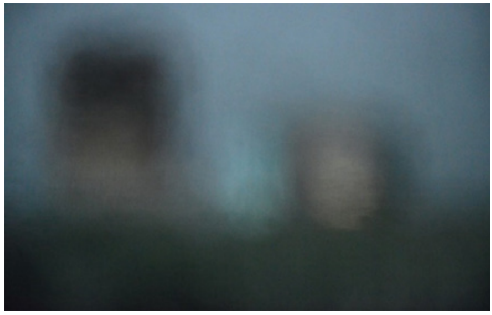


Image 3: Liminal Space, Jurek Wajdowicz (2013)

2.2 NON-PLACE

From another point of view we can look into the non-place that was proposed by Marc Augé in 1995. The non-place is a place also on the threshold between starting point and destination, or rather, the place without personal affiliation to it. Examples of these non-places are hotels, gas stations, airports or other public transport places. As Marc Augé states it:

"A person entering the space of non-place is relieved of his usual determinants. He becomes no more than what he does or experiences in the role of passenger, customer or driver" (Augé, 1995, p. 103).

This is almost the same as Turner described how a person that goes through a rite feels during the liminal period, not in control and feeling more as a passenger being guided through the phase of transition. But there is some subjectivity to the non-place as well. For example, the people, like hotel-employees, that go to a non-place every day, will not experience it as an anonymous place anymore and it is therefore again not particularly bound to the place itself but more to the reception of its user.

Image 4: non-places, Sarah Peters Photography (2018)

2.3 LIMINAL PLACE

If we combine the terms of liminal space and non-place, we get a place that is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to the next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics. What is most important is that all these terms, liminality, liminal space and non-place find their core in the in-between moment where the previous state and future state could be seen as normal.

To find the liminal place in a physical manner, you almost need to be able to look into the future because it demands you to know what the next phase will be. In the built environment this is not easy to find. However, if you would be able to control the experience of the transition and/or see examples where liminality has happened which could happen again, there might be some valuable elements that can be used to (re-)create liminal places.

2.4 RODEN CRATER, JAMES TURRELL

One example that plays with the idea to create new insights by experiencing the building is James Turrell's Roden Crater (image 5a). This large-scale art project in the Painted Desert region of Northern Arizona situated within a volcanic cinder cone (image 5b) goes about the experience of the perception and contemplation of light, time and landscape. Whilst it is not completed yet, one part of it already portrays the vision of Turrell.

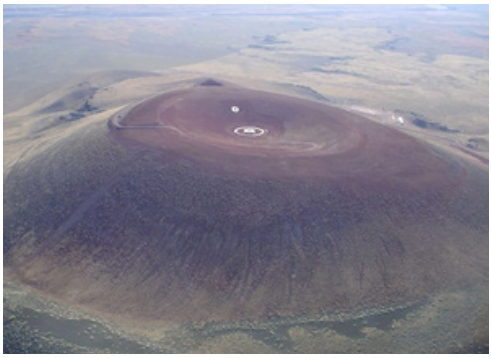


Image 5a: Aerial view of Roden Crater. (2015) Patowary

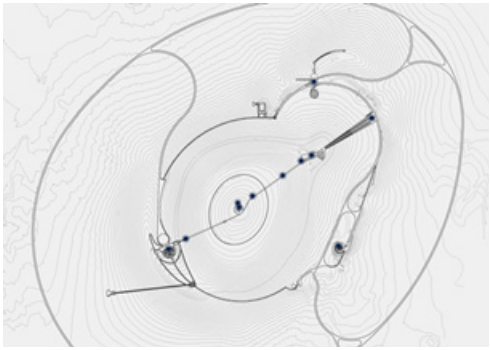


Image 5b: Map of Roden Crater. (N.D) Rodencrater.com

Image 6a,b,c: Alpha east tunnel. (Holzherr, n.d.-6a)(Krupp, n.d.-6b,c)

This part follows, starting from outside of the crater to the crater's eye a straight path called the alpha (east) route (image 7). Two special experiences are found here. One being the sun and moon stone, a black square stone with white marble in the middle showing the different eclipses like the native American Fajada Butte in New Mexico (Corner & McLean, 1996, pp. 165–167). The other being the tunnel where you see a circle in the distance (image 6a), a white light that becomes brighter the closer you get to it (image 6b). But suddenly you realize that the circle you have been looking at actually is an eclipse on a steep angle (image 6c).

Here is where the liminal experience takes place. On this point you are separated from the knowledge you looked to a circle, but slowly gets aggregated to the new reality, that it has become an eclipse (image 8). From there you continue to the crater's eye where the famous skybox from Turrell is shown.

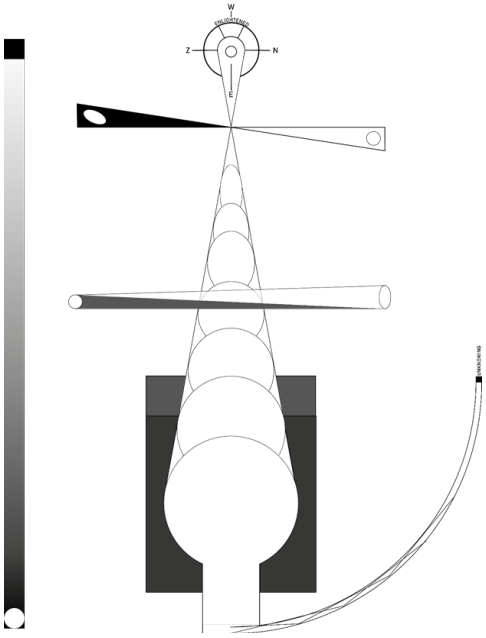


Image 7: mapping of the Roden Crater from the curved tunnel to the alpha route that guides you from the sun/moon room to the center of the crater crossing the eclipse. Own work.

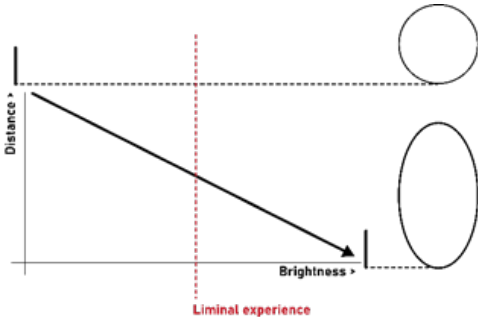


Image 8: Diagram of the liminal experience at Roden Crater. Own work.

2.5 STARAYA LINZA, RUSSIA

A second example of a liminal place is Staraya Linza, situated twenty five kilometers from the center of Yekaterinburg, Russia. Staraya Linza is a former talc mine that became deserted. This created a rip in the landscapes of tens to a hundred meters deep that became neglected over time. Because of groundwater levels mostly being higher than the depth of a mine, a pumping installation is used to pump away the water that flows into the mine through aquifers. When this pumping stopped the lake slowly filled up, to its current lake status.

Nowadays it is a place where recreation can take place like swimming, supping and scuba diving (image 9).

What is most interesting is that in the phase between mining and being a lake, Staraya Linza was used as well. In its derelict and transgressive state people found the place for recreational purposes as well. Putting camp fires and using the pupming house as shelter gave it a new destination which eventually would end up dissapearing under the water surface. This fate is an interesting fact that a place in transition can have a phase where the future is already set, but gives place for new activities, or, a qualitative liminal place in a transitioning space. The tools that offered this liminality are for example the pumping house as mentioned before, but also the stairs leading down, becoming a pier when the water rose and the roof of the shed becoming a platform to dive from. These rather trivial and anonymous elements trace back to the elements that can be seen in non-places and with that, it physicalizes the liminal space as well.

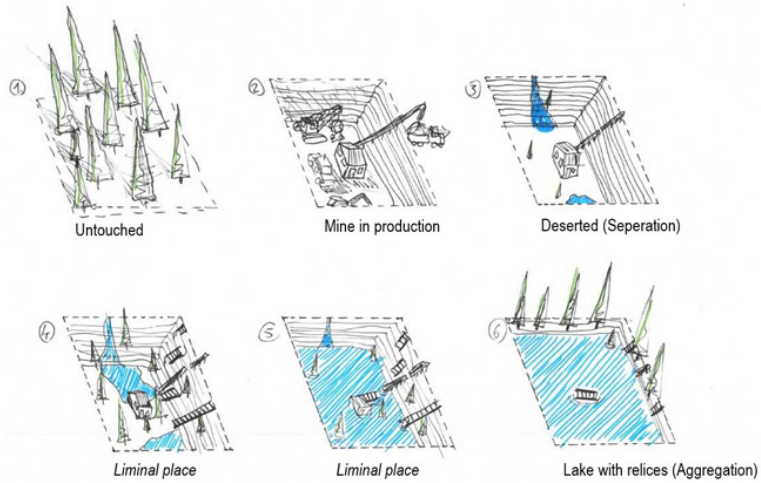


Image 9: Different phases Staraya Linza went through. Own work.

CHAPTER 3 (AGGREGATION):

LIMINAL PLACES IN

YEKATERINBURG

The Staraya Linza mine from the previous chapter is as said near to Yekaterinburg. Yekaterinburg itself is a city in transition from being a fully industrial city into a service city. This is causing a co-existence of heavy industry still in function, office blocks being built and free-time (recreation) slowly being built into the culture happening all at the same time.
A rather special phenomenon visible in the city is that the skyscraper offices that are being built, are all built in a cylindrical shape, which could be argued are a reminiscent of the factory pipes once (and still visible) ruling the skyline of Yekaterinburg. The architecture itself is a fusing hybrid transition while the general square office building and the industry pipe already exist. For the bigger urban scale these buildings contribute to a more liminal hybrid transition, while the city contains buildings now that are accustomed to the 'previous' industrial state to the 'next' economic city, making Yekaterinburg a liminal place itself (image 10).

But if you scale down again to the process of the building, the transformation again finds itself in a liminal state, where the factory transforms into an office building. In this, and any other urban renewals, there is a phase where the past context is left but there is no sign of the renewal yet. In this phase (image 11), normally high fences are the trace of this moment, blocking the pedestrians from hazard, but in another way also make the people adapt to the new situation that is temporarily created. People have to go around or through a new route that will disorientate them, also making this a liminal place.
Interesting in these examples is the variety of elements contributing to the liminal place. These elements are characteristic for having a liminal character. These are normally trivial but become to special use in the liminal place as mentioned in the previous chapter.

Image 10: The hybrid in-between design of a skyscraper in Yekaterinburg fusing the appearance of the industrial past with the function of an office building.

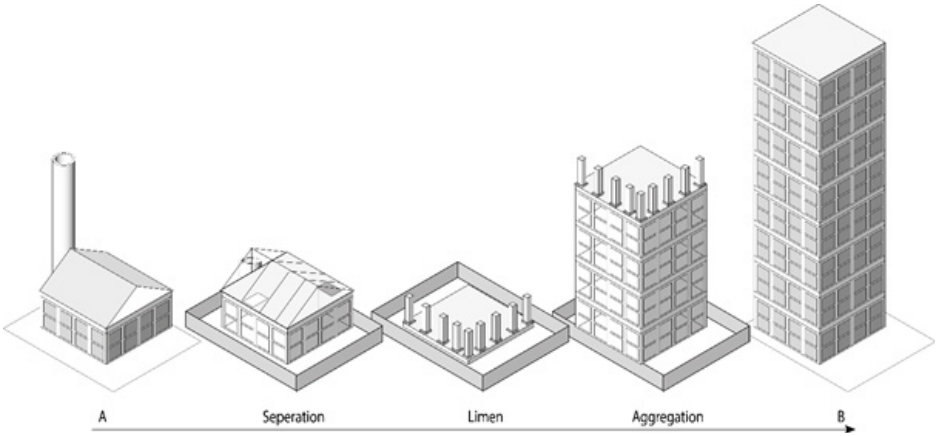


Image 11: The transformation of a factory into a high rise office with the construction site as the liminal phase. Own work.

CLOSING

If we look back to the preface of this essay, it started with the scuba diving experience where I found myself in a place where I could not really place what I felt but where I knew that I was in a phase between two other states. This evoked the question if this liminal experience could be used in architecture to form a qualitative new phase in a transitioning space.

It is hard to really find clear examples of places in the built environment that gives the same experience as the thermocline, in one way because it is many times a rather subjective experience, but on the other hand it is always a temporary event as well. A liminal place is therefore always guided by the notion of the experience and time (you could even say temporality). There are indeed examples of places that deliver this feeling of liminality and have specific qualities to them. In architecture important parts to look at are therefore places where transformation will take place, but instead of it being a rather one-time psychological experience like at the non-place, the place should be able to re-activate this liminal experience every time you visit it again.

Therefore, the next time when my father and I will go scuba diving, I will ask him to follow me, slowly descending to ten meters and just hang there, in the middle of our journey, the surface above, the reef below, to contemplate on the change we feel when we experience the qualities of the liminal place called the thermocline.

BIBLIOGRAPHY

Andrews, H., & Roberts, L. (2012). Liminal Landscapes: Travel, Experience and Spaces In-between (Contemporary Geographies of Leisure, Tourism and Mobility) (1st ed.). Routledge.

Augé, M. (1995). Non-Places: Introduction to an Anthropology of Supermodernity (3rd ed.). Verso.

Corner, J. M., & MacLean, A. S. (1996). Taking Measures Across the American Landscape. Amsterdam University Press.

Dictionary.com. (2021). Liminality. In Dictionary. https://www.dictionary.com/browse/liminality

Gennep, A., Vizedom, M. B., & Caffee, G. L. (1961). The Rites of Passage. Amsterdam University Press.

Holzherr, F. (n.d.). Alpha (East) Tunnel [Photo]. Roden Crater. https://rodencrater.com/spaces/alpha-east-tunnel/

Huang, S.-M. (2018). Liminoid space and place-fixing in urban activism. Inter-Asia Cultural Studies, 19(3), 359–371. https://doi.org/10.1080/14649373.2018.1497894

Krupp, E. C. (n.d.). Alpha (East) Tunnel [Photo]. Roden Crater. https://rodencrater.com/spaces/alpha-east-tunnel/

Nissen, M., & Sørensen, K. S. (2017). The emergence of motives in liminal hotspots. Theory & Psychology, 27(2), 249–269. https://doi.org/10.1177/0959354317698251

Patowary, K. (2018, February 4). James Turrell's Roden Crater. Amusing Planet. https://www.amusingplanet.com/2015/07/james-turrells-roden-crater.html

Peters, S. (2018). Non-places [Photo]. Sarah Peters Photography. http://www.sarahpeters-photography.com/non-places#0

Picchioni, M. M., & Murray, R. M. (2007). Schizophrenia. BMJ, 335(7610), 91–95. https://doi.org/10.1136/bmj.39227.616447.be

Rohr, R. (1999). Everything Belongs: The Gift of Contemplative Prayer. The Crossroad Publishing Company, p. 155-156

Schulman, M. (2015, November 19). The Psychology of Transgender. American Psychological Association. https://www.apa.org/news/press/releases/2015/11/psychology-transgender

Shields, R. (1991). Places on the Margin. Routledge.

Stenner, P. (2018). Liminality and Experience. Palgrave Macmillan. https://doi.org/10.1057/978-1-137-27211-9

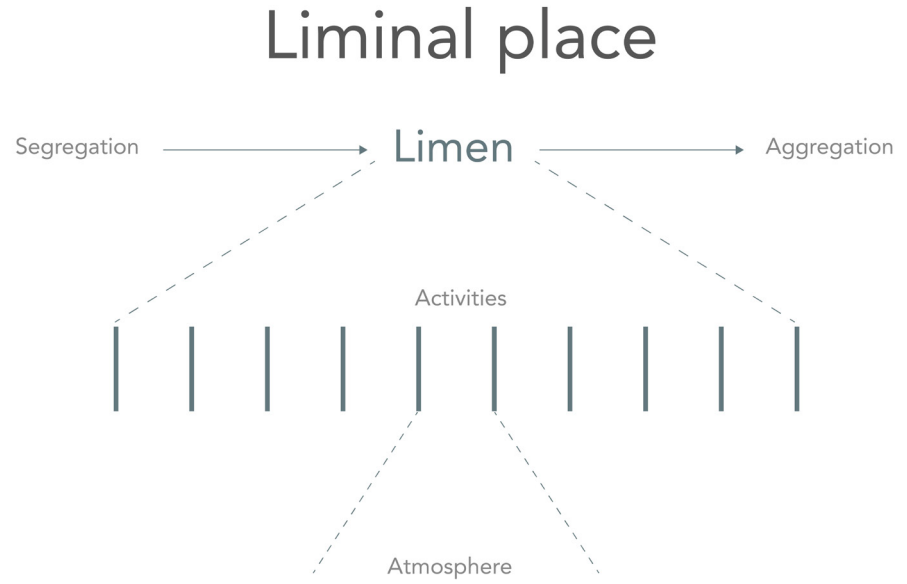
Turner, V. (2012). Liminal to liminoid:in play, flow, and ritual: an essay in comparative symbology. Mediações - Revista de Ciências Sociais, 17(2), 214–257. https://doi.org/10.5433/2176-6665.2012v17n2p214

Wajdowicz, J. (2015). Liminal Spaces. Lars Müller Publishers. https://www.graphis.com/entry/fce249ad-fa3a-4725-9197-226fbbf64f-bc/

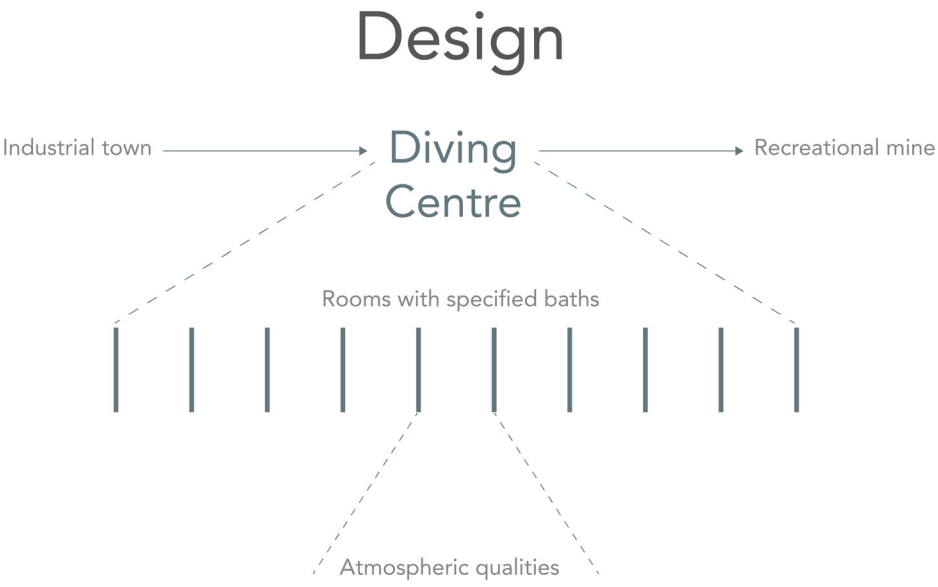
DESIGNING THE LIMINAL PLACE

Introduction - Design aerial overview

Background - Liminal transition schedule



Background - Design schedule



THEORETICAL BACKGROUND TO DESIGN STRATEGY

The project started with a phenomena I experienced during one of my hobbies, Scuba diving. Together with my father I went scuba diving in the South of France where around ten meters depth there was this weird cloudy layer in the water. When we went through it, the water suddenly was much colder and the colours and sounds changed as well. This phenomena is also known as the thermocline. This transition we experienced was different from others, while this cloudy layer was a place on its own. In the anthropology this transition is called a liminal transition. First proposed by Arnold van Gennep and later further worked out by Victor Turner, they spoke of three parts of this transition. The first one being the segregation, or, letting go of the current/normal state, then the Limen, or, threshold phase and the third one being aggregation, or, adaption state. In my preliminary research I looked for a place that could be described as a liminal place, or, a place on a threshold. The non-place described by Marc Augé was the most striking example of a place that is in a in between state. Examples for these non-place structures are subway stations, hotels and airports.

To make the intention of my design more clear, I eventually came up with the following definition: "A place that is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to the next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics." It clearly shows that the design would not be the end destination, but rather a place in between. Therefore some choices become important. First of the qualities the design should implement, giving it a rather particular spatial environment placed in-between the second important choice, namely the location. It should be placed between an old and new state.

Magic of the Real

The Body of Architecture

Material Compatibility

The Sound of a Space

The Temperature of a Space

Surrounding Objects

Between Composure and Seduction

Tension between Interior and Exterior

Levels of Intimacy

The Light on Things

The General Atmosphere

TheBody and structure

Compatibility to water

Sounds in a Space

Temperature varieties

Surrounding objects

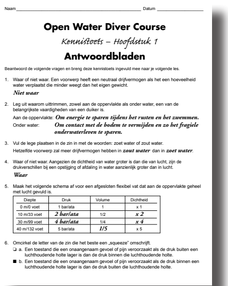
Movement through the Space

Interior and Exterior Tension

Levels of Communitas

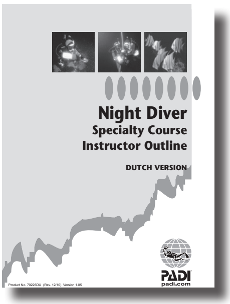
Lighting of a Space

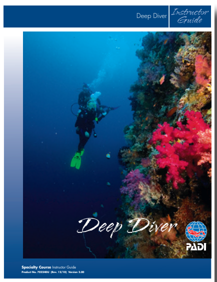
+

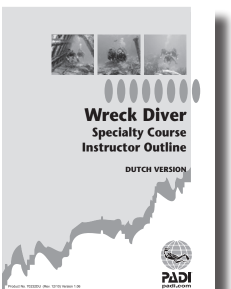

Open Water Diver Course

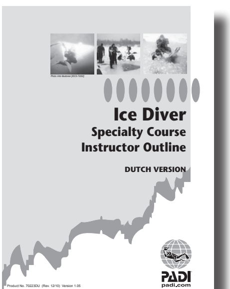
Kennistoets – Hoofdstuk 1

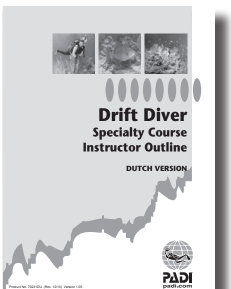
Antwoordbladen

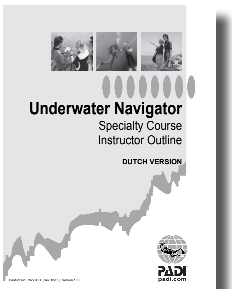












BACKGROUND

To distinct the rooms from each other, I read the book atmospheres by Peter Zumthor, where he described the ten main characteristics to evoke a feeling of atmosphere. While this is somewhat subjective, there are some elements we as humans all experience the same. Cold feels sharp and warm feels soft; dark may feel suspenseful while overly bright will feel irritating. However, the ten characteristics Zumthor named were all focussed on a so to say normal building, not particularly a diving centre. For this, I redefined these ten characteristics to fit the design.

Translating this to a design strategy, I combined the artificial part of the industry with the natural of the now submerged quarry. This manifested, together with my personal interest, in designing a diving centre. By giving the people the change of learning how to scuba dive, they could experience the quarry all again and see what people left behind in the mine when it was still empty.

However, to learn how to dive is not that easy. Therefore the diving centre will consist of a variety of rooms with different specified baths. To train for example for a night dive, you need different attributes then for example for a ice dive.

Then by putting the specified rooms (needed to fulfil a complete diving training) and the atmospheres (for the design) in one scheme. I was able to make a rather subjective sense of atmosphere more tangible and in its place gave me the tools to design the specific rooms.

Background - Atmospheres in Design

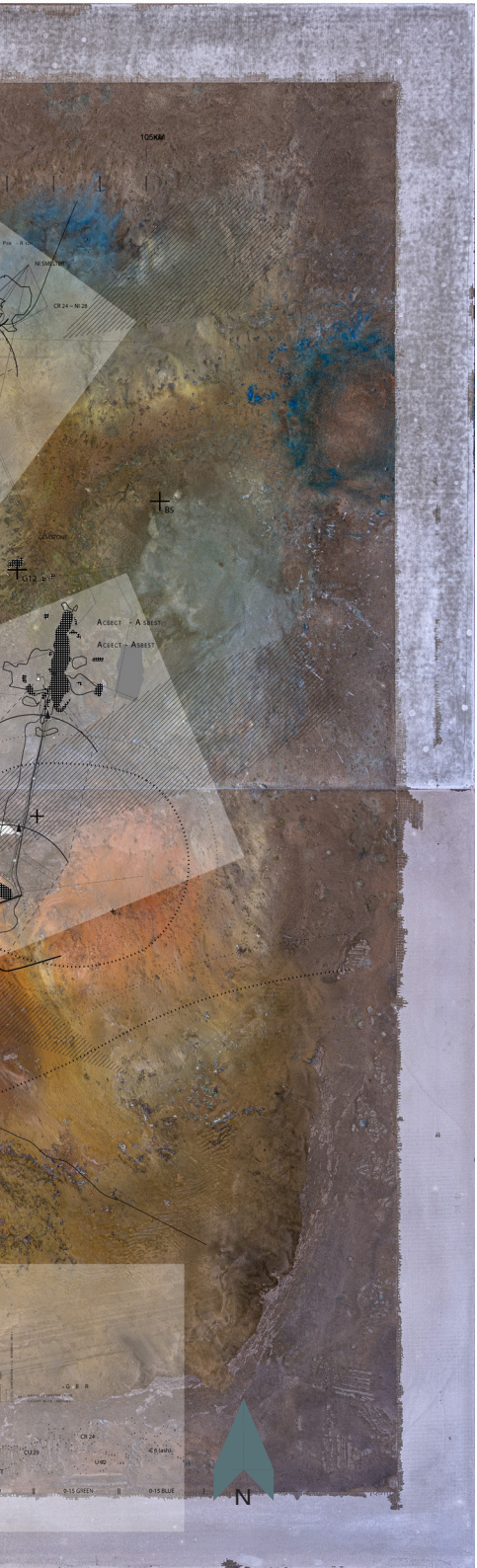
Room	General atmosphere	Body	Compatibility (to water)	Sound	Temperature Varieties	Surro objec
Entrance	Welcoming	Strong structure	/	Full of voices, echoing	Warm in winter Cold in summer	Tidy, inforn
Changing rooms	Sterile	Worked away structure, rounded edges	/	Echoing, hollow	Slowly dropping just below body temperature	Minir regu
Initiation bath	Silent	Heavy structure	Soft materials	Completely silent	Water much warmer than surrounding	Empt
Beginners bath	Comfortable	Light structure	Naked structures, visible concrete	Full of voices, echoing	Warm water	Facili ty we aid, l
Night dive bath	Uncanny	Mix of structures	Old elements submerged in water	Silent with metal sounds	Cold water	Mach old fa ting s
Deep sea bath	Tense	Overhanging slabs	Overhanging slabs	Echoing	Body temperature	Existi
Cave dive tunnes	Desorientating	Mix of structures	Natural stones	Silent	Below body temperature	Natu
Wreckage bath	Opressive	Heavy structures	Corroding in the water	Clicking sounds	Body temperature	Wrec
Cold water bath	Stinging	Open structures	White colors	Silent	Freezing temperature	Sharp
Current (drift dive) bath	Exhaustion	Heavy structures	Natural stones	Heavy structures	Slowly rising until quarry temperature	Empt
Examination room	Tension	Worked away structure	/	Sounds absorbed	Just below body temperature	Minir
Restaurant	Relaxation	Wooden beams visible	/	Full of voices, echoing	Warm room	Big r natur plant
Trench	Exitement	Natural structures	/	Silent	Cold in winter Warm in summer	Natu
Quarry reservoir	Relieve	/	/	Natural sounds	Cold in winter Warm in summer	/
Pavillion	Reflective	Naked structures	subordinate to the water	Echoing	Warm room	Smal stron
Parc	Recreative	/	/	Natural sounds	Warm in winter Cold in summer	Corro trial r

unding cts	Movement	Interior/exterior tension	Intimacy /Communitas	Light	
well shown mation	Multi-directional, guided by signs	Chaotic surroundings to strengthen the order	Gathering spaces for groups	Natural light or warm tones	
malistic and rlary cleaned	One-directional, guided by perspective	Complete seclusion	No intimacy, individualistic	Artificial bright lights	
ty	One-directional, guided by light	Complete seclusion	Individual going into the water, first communitas	Dark surrounding with only the water illuminating	
ties for safe- ll visible: first ifelines, etc.	Multi-directional, guided by activity	Inside/outside relation tangible	Together with buddy and instructor	Natural light with clear water for activities	
nines from actory + exis- structures	Multi-directional, guided by compass	Complete seclusion	Together with buddy and instructor	Total darkness	
ing structures	One-directional, guided by light	Windows giving overview	Together with small group	Natural light + light coming from above the tube	
ral materials	One-directional, guided by light	Complete seclusion	Together with small group	Dark with some faint light coming from the distance	
k	Multi-directional, guided by shapes	Exterior shapes interior	Together with group	Pool being light, wreckage being dark	
o edges	Multi-directional, guided by activity	Inside/outside relation tangible	Together with group	Artificial bright lights	
cy	One-directional, guided by light	Complete seclusion	Together with group	Dark with some faint light coming from the distance	
malistic,	One-directional, guided by signs	Complete seclusion	Individual and group exam	Light room, natural lighted	
ound tables, ral materials, s	Multi-directional, guided by signs	Inside/outside relation tangible	Reflection on personal examination with group	Natural light or warm tones	
ral materials	One-directional, guided by perspective	Complete seclusion	Together with group that had examination	Depending on daytime	
	Multi-directional, guided by compass	/	Group dives	Depending on daytime	
l tables, g drinks	One-directional, guided by light	Lighted from the reservoir, clear tension	Reflection with group	Lighted from the reservoir, warm lights at night	
oding indus- elics	Multi-directional, guided by signs	/	Group based walks	Depending on daytime	

- BORDERS MAP -
- TERRITORIES MAP -

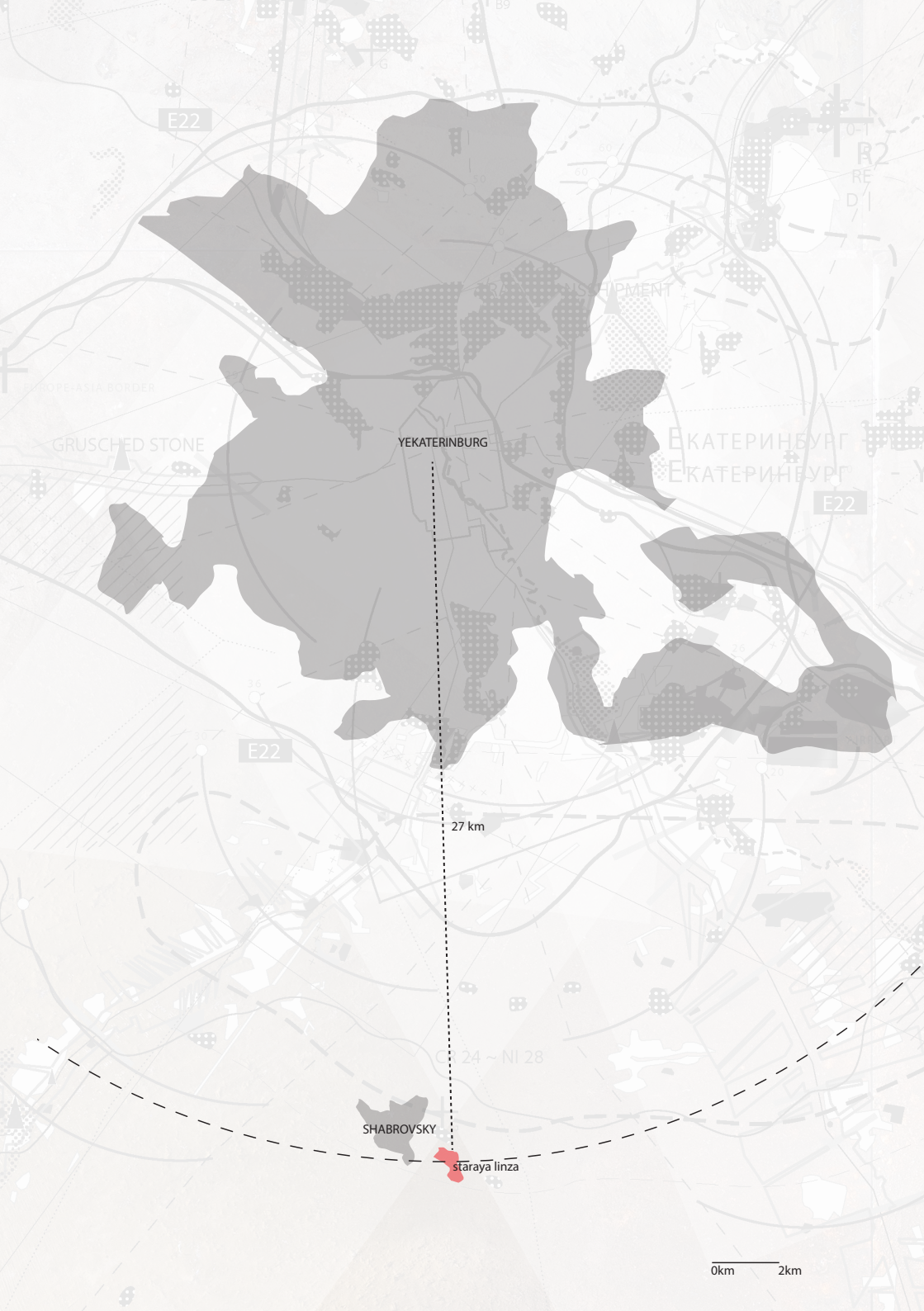
THE BORDERS OF THE UNCANNY, AN EPHEMERAL AND PIXELATED REPRESENTATION OF
THE INVISIBLE BORDER BETWEEN THE ORDERED AND ENTROPIC LANDSCAPE
THE TERRITORY OF THE UNCANNY, A SYNESTHETIC PERCEPTION OF INFRASTRUCTURE AND TECHNOLOGICAL PLANTS

BOUNDARIES, YEKATERINBURG, RUSSIA



YEKATERINBURG

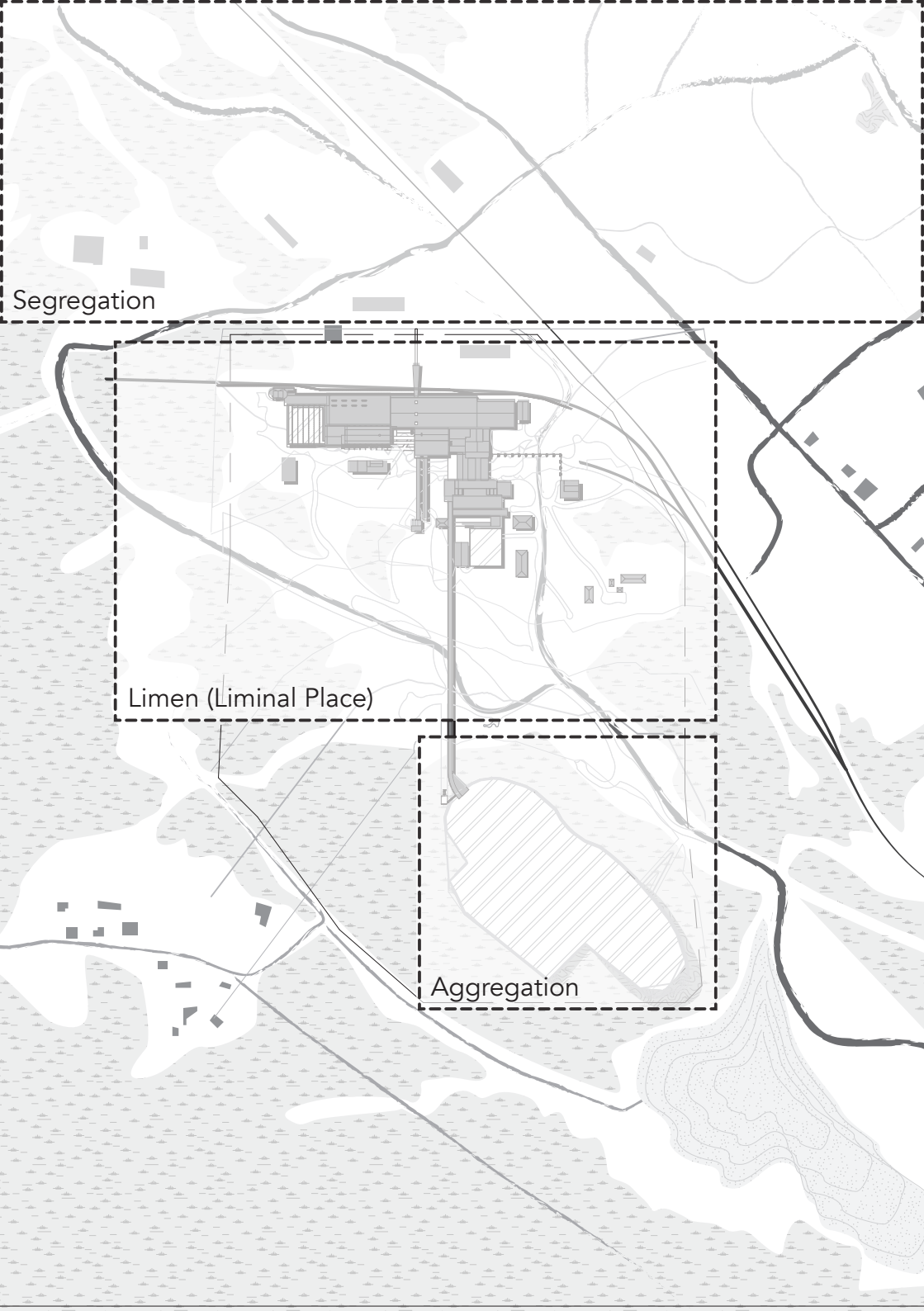
One important factor is, as said, the location. For this, we need to start in the Russian city of Yekaterinburg. Yekaterinburg is a city located in the Ural mountains and once started off as a fortified factory, but is now slowly transforming into a service oriented/white collar city where industrial plants make way for skyscrapers.


YEKATERINBURG
27 km
SHABROVSKY
staraya linza
0km
2km

SJABROVSKI

In towns around Yekaterinburg the industrial plants are not replaced but rather abandoned, leaving these towns with a emptiness that is not easy to overcome. With residents of these towns commuting to the city of Yekaterinburg, these towns transition into commuter towns.

One of these towns is the old mining town Sjabrovski, located 27 kilometers from the city centre of Yekaterinburg. This town was once a booming town built around a talc quarry with associated talc factory.


Segregation
Limen (Liminal Place)
Aggregation

STARAYA LINZA

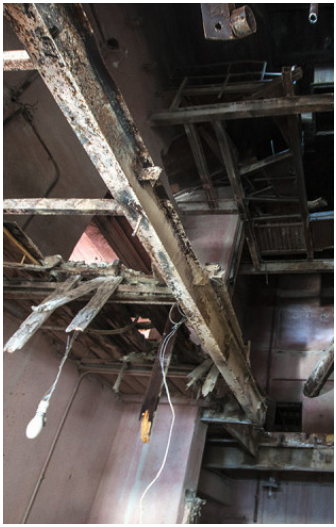
This quarry, Staraya Linza, was for a long time the biggest talc deposit in the world. However, it became deserted around the 70s of the last century.

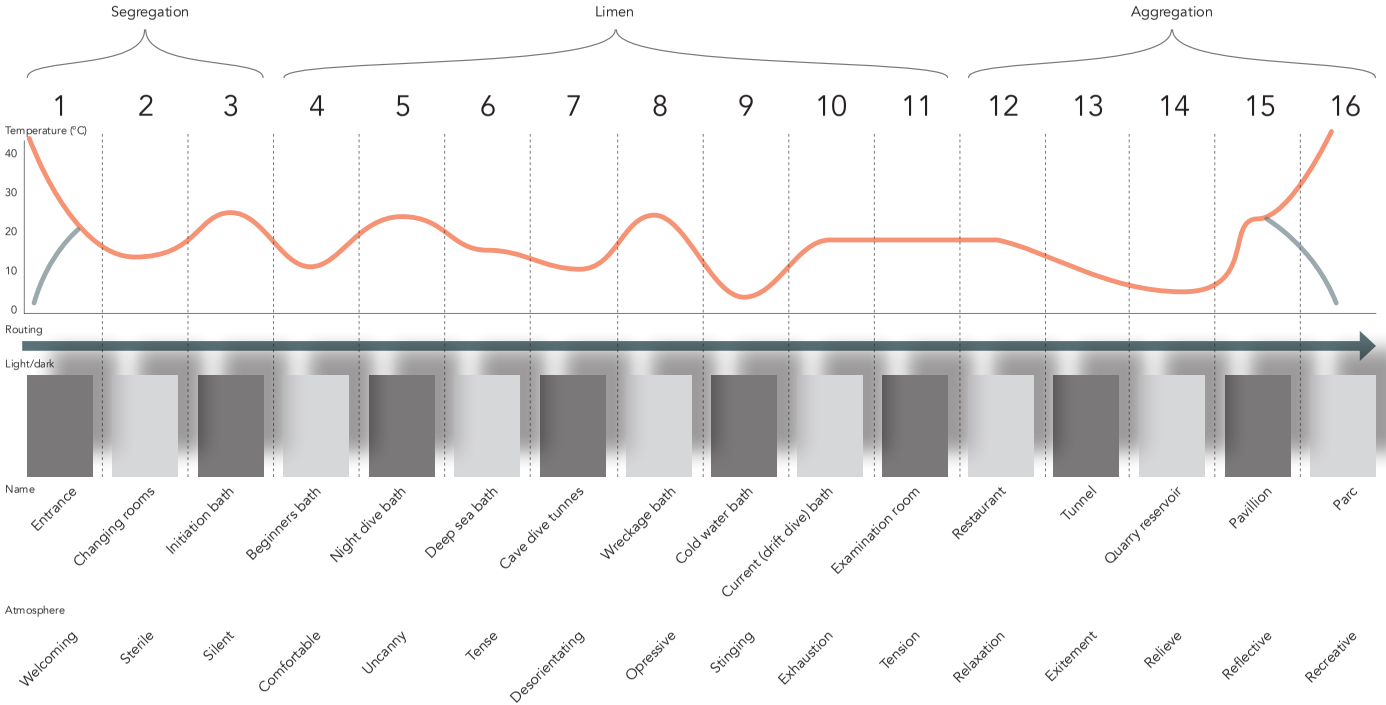
Until 2017 the mine was still getting pumped out, creating a special place for people to visit, but since 2017 it rapidly filled up with water, taking away the special destination Staraya Linza was for a long time. But what I found out in my preliminary research, is that this mine still has a lot of potential and can be activated in a way that it could so to say stitch up the scar that the closing of the factory and quarry caused.

By dividing the site, where the town of Sjabrovski is the segregation part and the quarry the aggregation part, or, the destination, the factory in between could function as the liminal place.

The factory itself is now in a state of decay, but because of its enormous size it also has lots of potential.


ДИСК В/Ф




Segregation
Limen
Aggregation
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Temperature (°C)
40
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Routing
Light/dark
Name
Entrance
Changing rooms
Initiation bath
Beginners bath
Night dive bath
Deep sea bath
Cave dive tunnes
Wreckage bath
Cold water bath
Current (drift dive) bath
Examination room
Restaurant
Tunnel
Quarry reservoir
Pavillion
Parc
Atmosphere
Welcoming
Sterile
Silent
Comfortable
Uncanny
Tense
Desorientating
Opressive
Stinging
Exhaustion
Tension
Relaxation
Exitement
Relieve
Reflective
Recreative

WALK THROUGH THE BUILDING AND ROUTING

We start by entering the building. Here we will experience a contrast with the outside with the usage of straight organized shapes. The emptiness contrasts with the more chaotic environment in front of the building.

As you can see the routing can not go straight through the building because of its layout. Therefore I traced back how the talc would be transported through the building from the quarry to the train tracks in front of the building

Here you see the routing, still somewhat chaotic, but the one way routing gives the feeling of isolation, something that is a common factor in liminal periods.

Speaking about the chaotic routing, that comes from the fact that it is an existing building and, as we saw before, it is not in the best condition. Therefore there are 3 intervention strategies that should be used in the building to 1. Remain the industrial look and 2. To make the building as climate neutral as possible. The three strategies I used are renovating to the old state, reusing the structural parts and to build new structures inside

As can be seen in the plan of the first floor, the strategies are spread over the building, where the red parts are only plated with corrugated steel, the blue parts have a lot of historical value to them and the green parts were structurally set, but because of their vertical layout, could use extra space inside.

The facades show in blue where there are visible changes to the building. These changes are kept as little as possible to remain the overall look of the building, making the contrast going from outside to the inside even greater.

The south and west façade are characterized by the glass house that is added for the filtration system, catching as much sunlight as possible, but away from the view of the visitors.

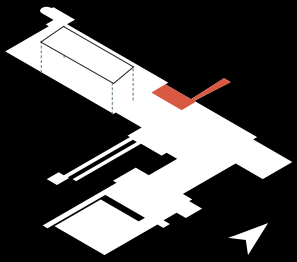
1._ ENTRANCE

Data:

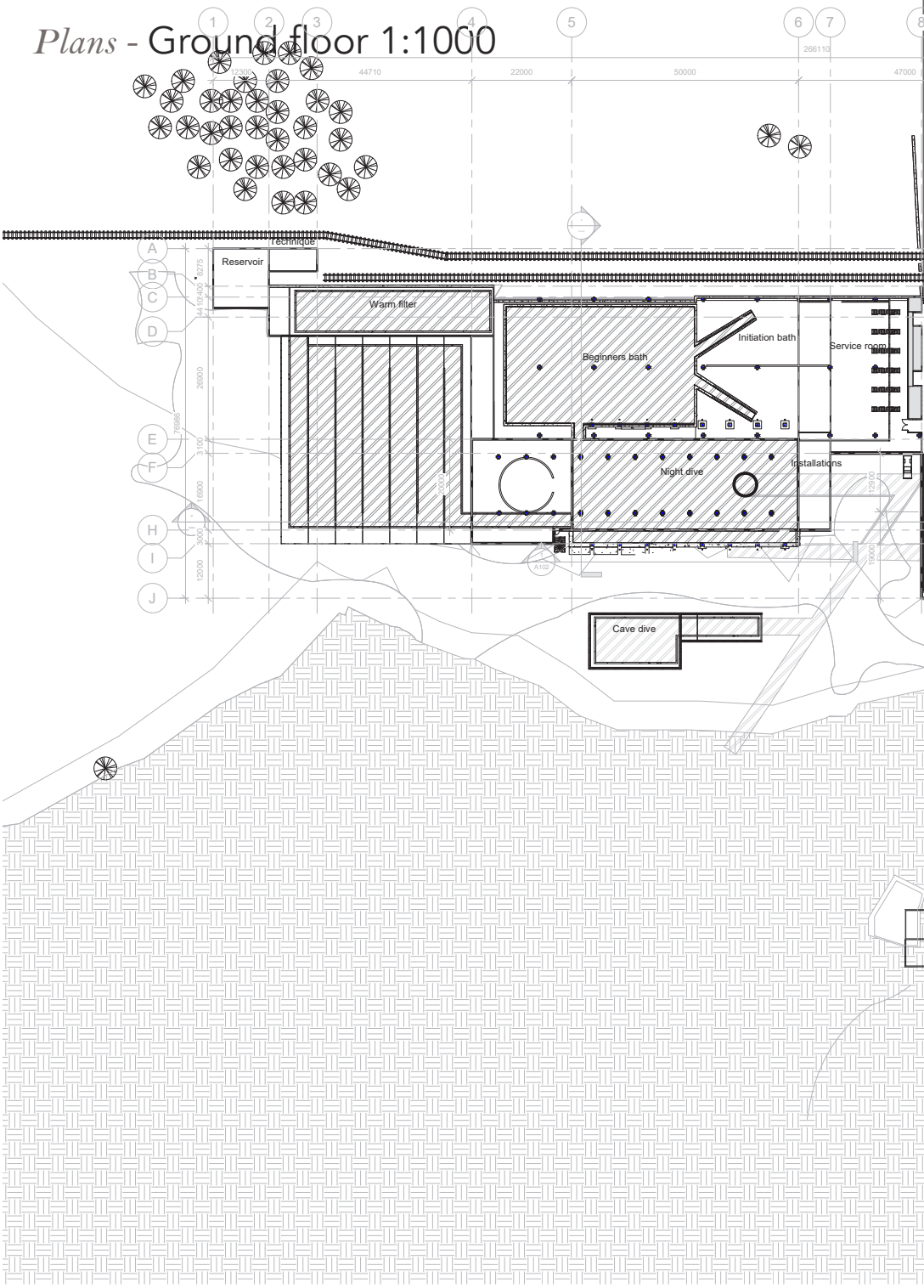
Atmosphere:	Welcoming
Structure:	Strong Structures
Water compatibility:	N/A
Sound:	Full of Voices
Temperature:	18°C [SUMMER] 23°C [WINTER]
Natural ventilation:	
Materials:	

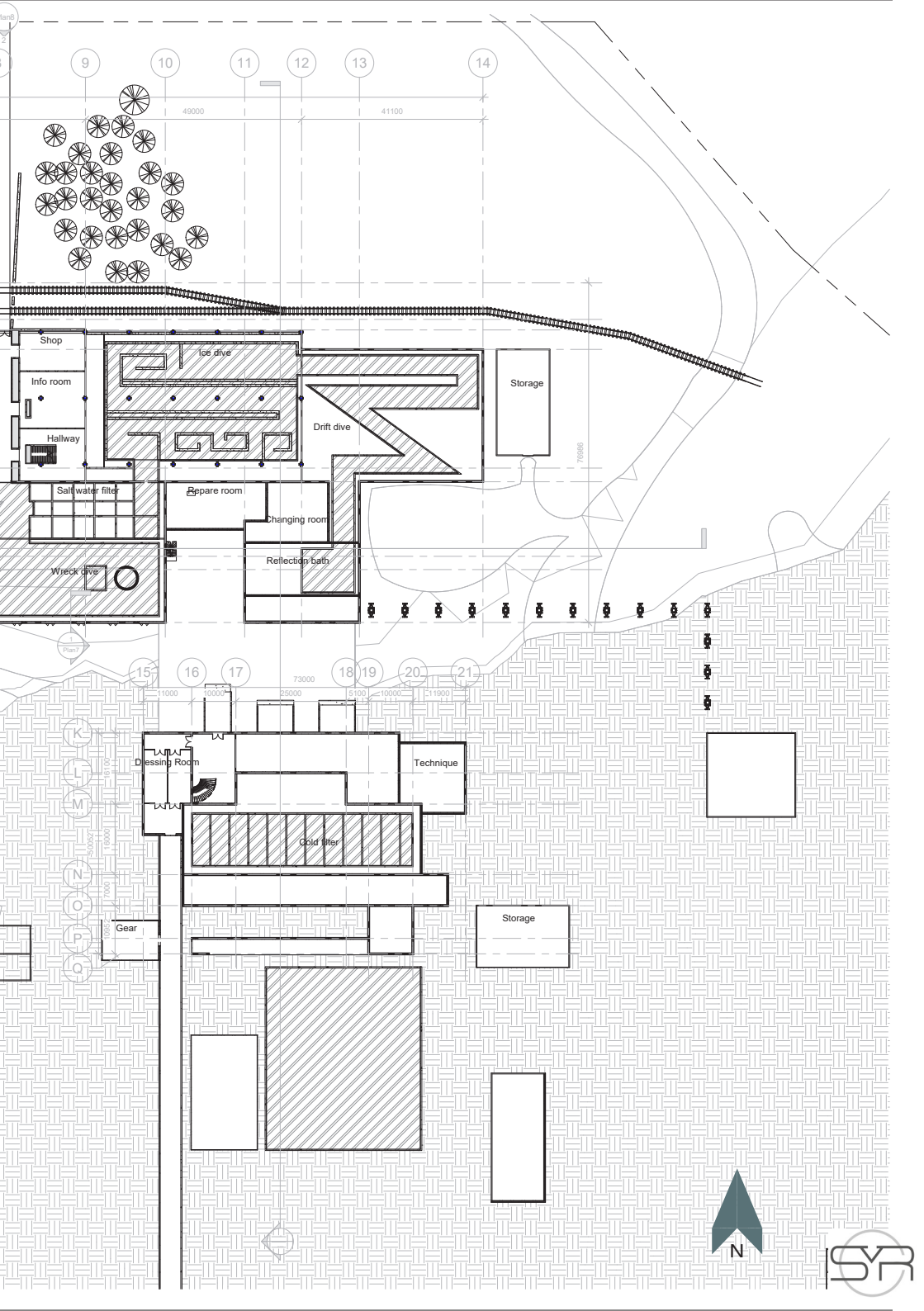
Movement:	Multi-directional
Interior/exterior tension:	From Chaos to Order
Communitas:	Gathering spaces for groups
Light:	Natural Light + Warm Tones

Place in building:



Plans - Ground floor 1:1000




9
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41100
Shop
Info room
Hallway
Ice dive
Drift dive
Storage
Salt water filter
Repare room
Changing room
Wreck dive
Reflection bath
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16
17
18
19
20
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73000
11000
10000
26000
15100
10000
11900
K
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M
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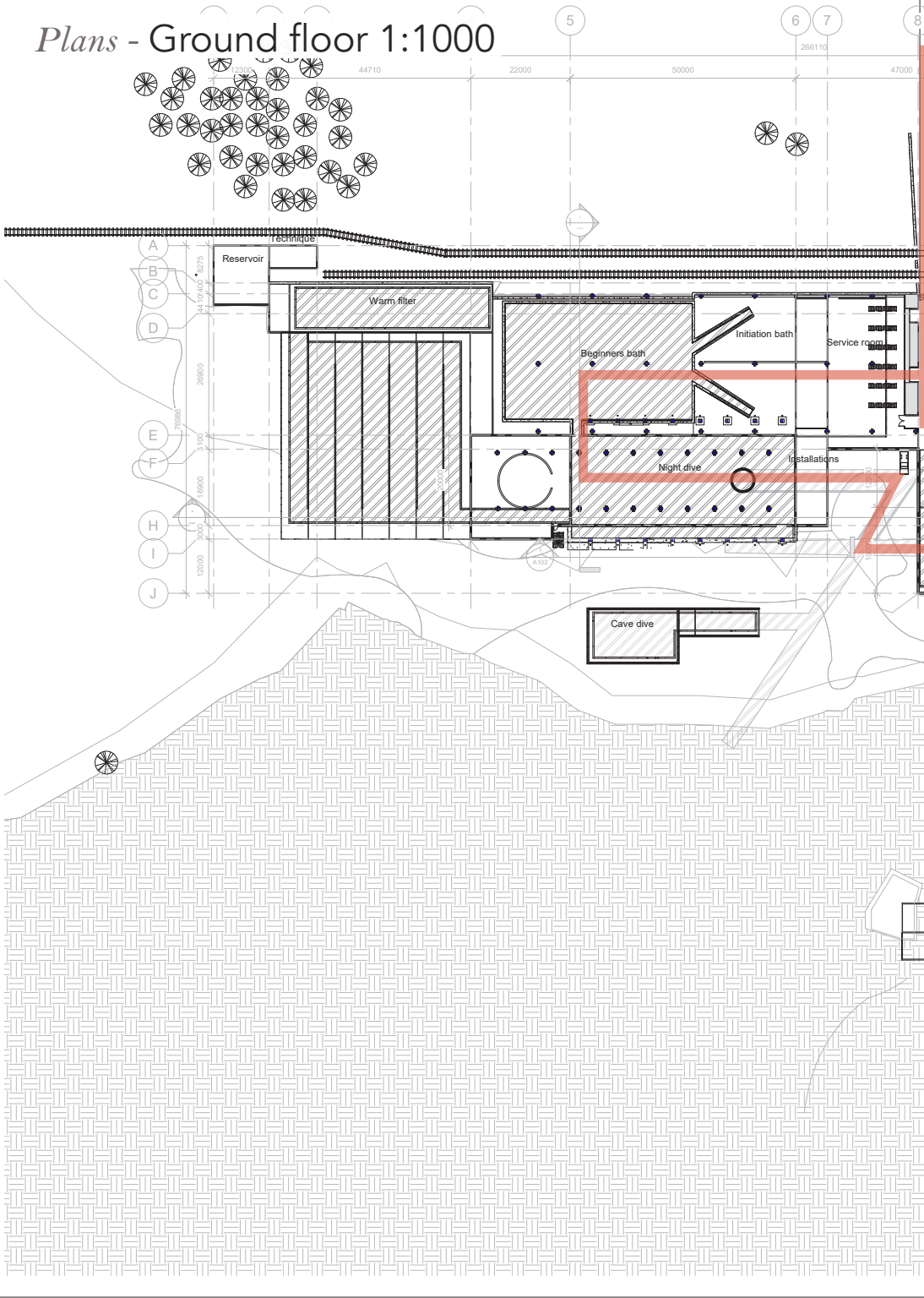
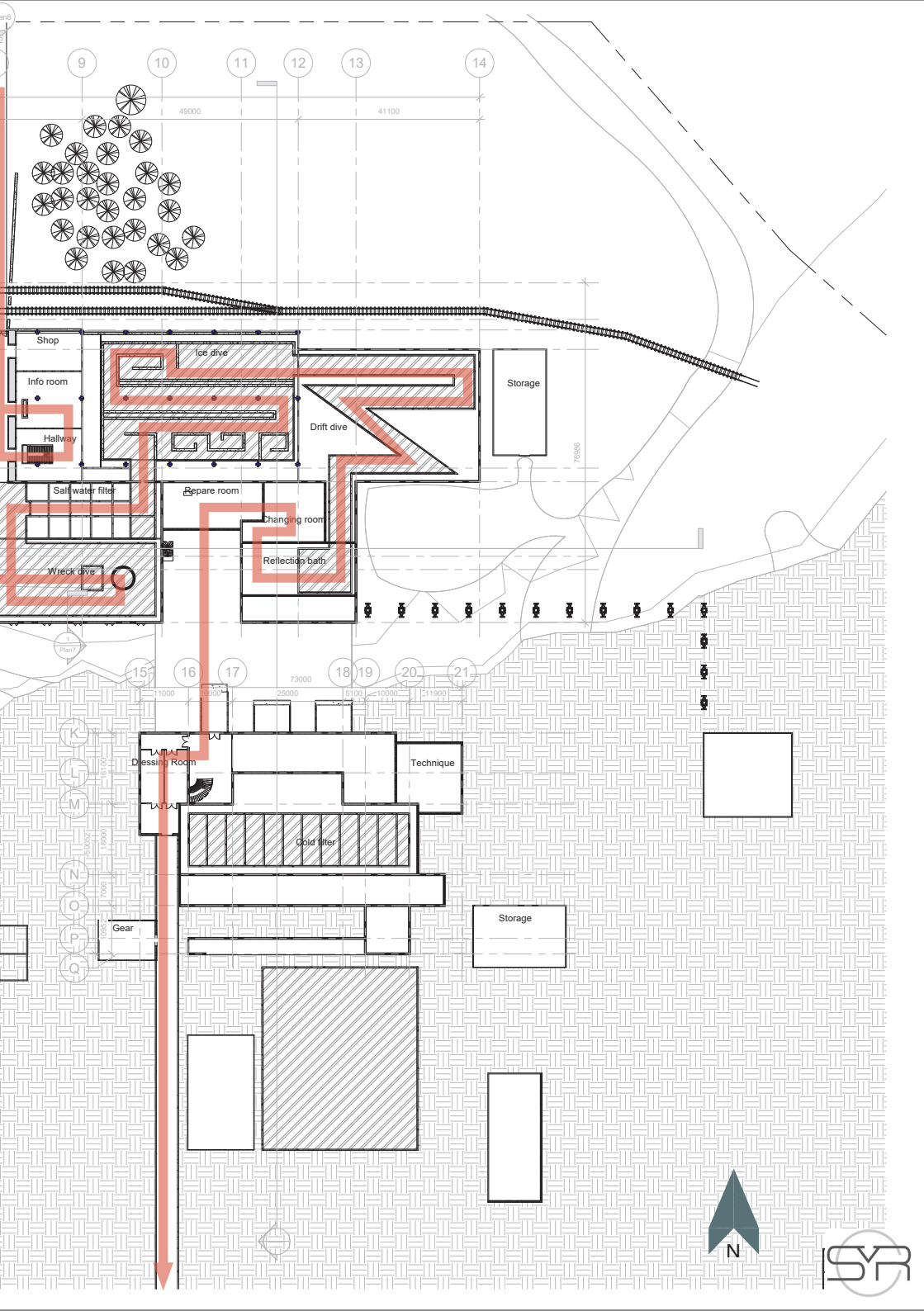
Q
Dressing Room
Technique
Cold filter
Gear
Storage
N

Plans - Ground floor 1:1000

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Hallway
Ice dive
Drift dive
Storage
Salt water filter
Repare room
Changing room
Reflection bath
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Dressing Room
Technique
Cold filter
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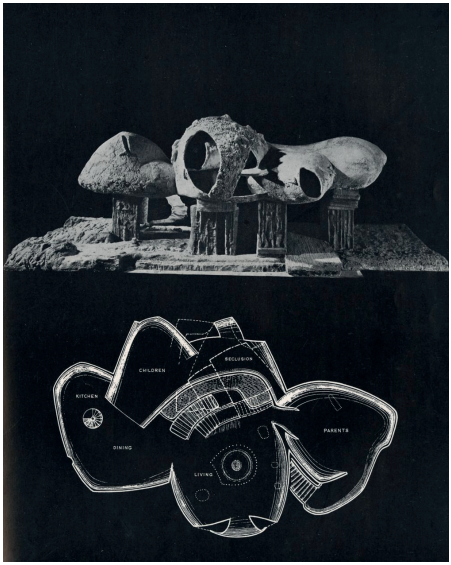
A]

B]

C]



Building Technology - Intervention Strategies

The factory is in a state of decay.
By revitalizing it, there is a possibility to look to its present qualities and use this in an advantage.

3 WAYS OF REVITALIZING THE FACTORY

A] Renovating to the old state

Needs: strong foundation, intact structural elements and most of the facade

Pros: * Old industrial look
* Lesser new materials needed
* Using the buildings qualities

Cons: *'Stuck' with current layout
* Lack of the old building materials
* Climate and isolation values might lack

B] Reusing the structural parts

Needs: strong foundation, intact structural elements, new design

Pros: * Re-usage of the already available structure
* No need for new foundation
* New design according to program

Cons: * New materials needed
* 'Stuck' to the old grid

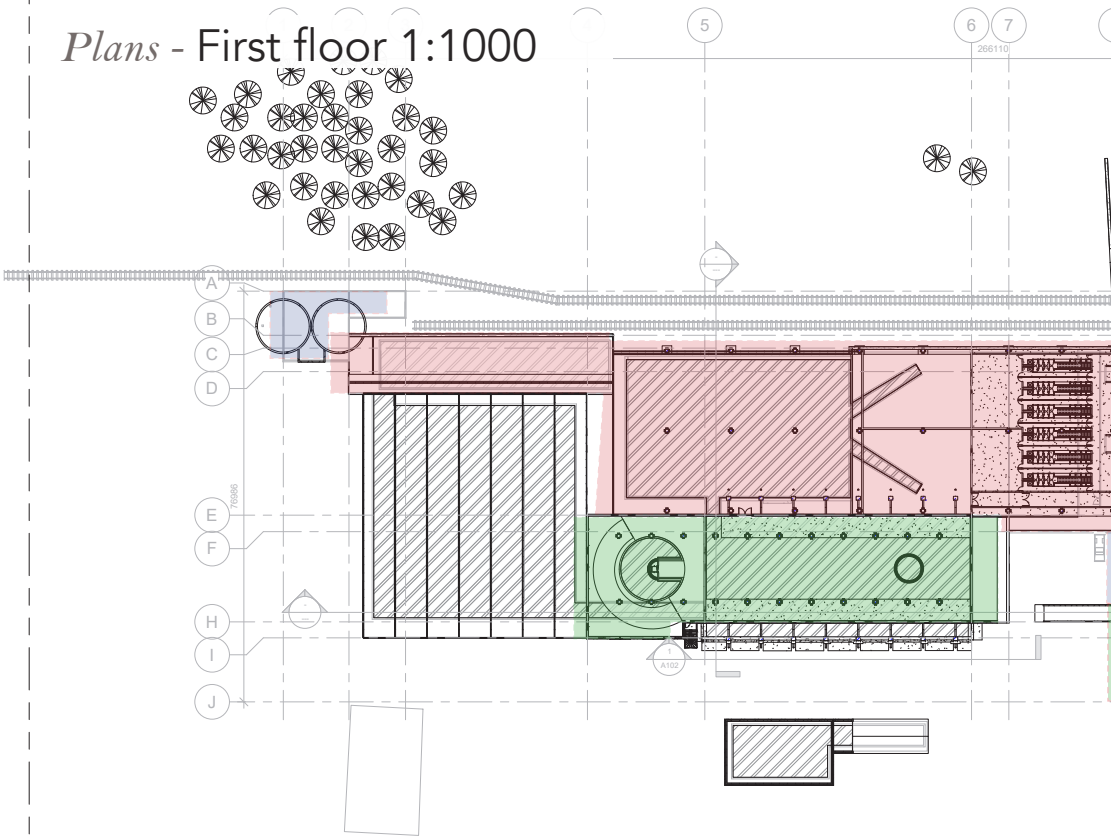
C] Build new structures inside

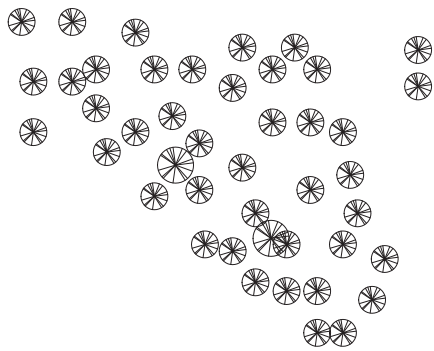
Needs: Intact building, new design

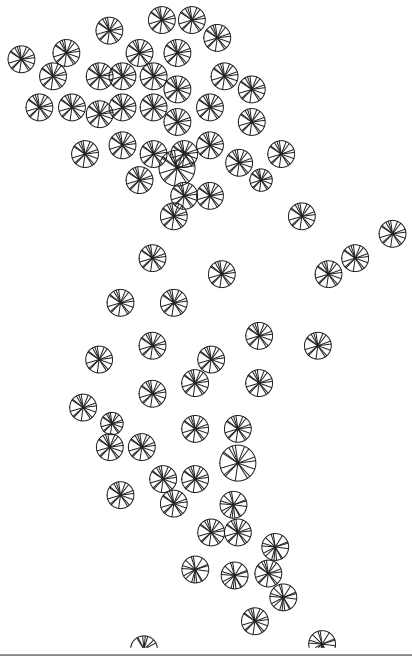
Pros: * Re-usage of the already available building
* 'Climate' shell > inner structure does not need that much isolation
* New design according to program

Cons: * Building needs to be water tight
* Stucture of the factory might get in the way

Plans - First floor 1:1000



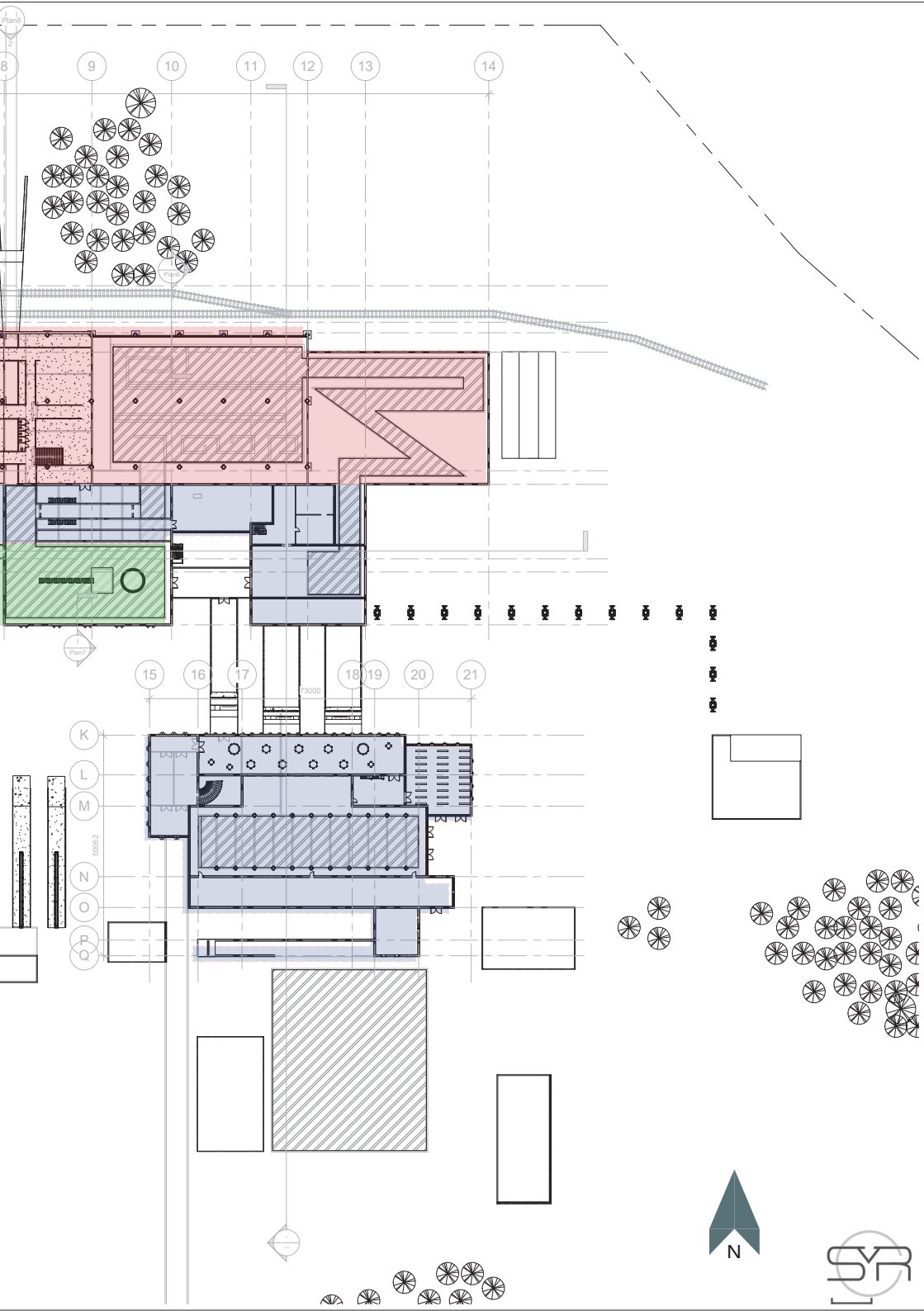




A] Renovating to the old state [BLUE]

B] Reusing the structural parts [RED]

C] Build new structures inside [GREEN]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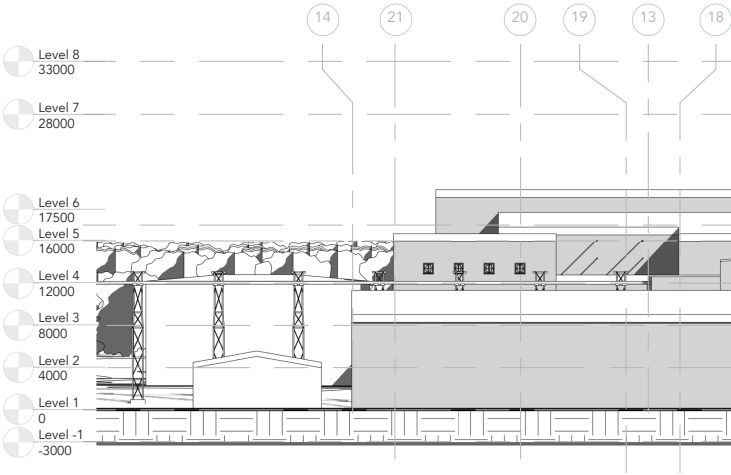
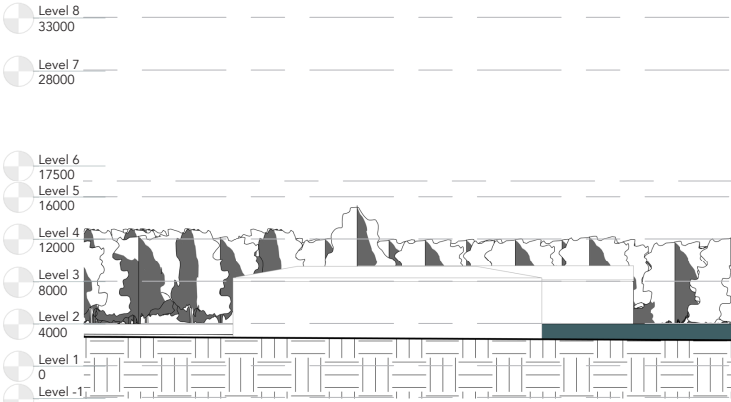
73000
60002
N

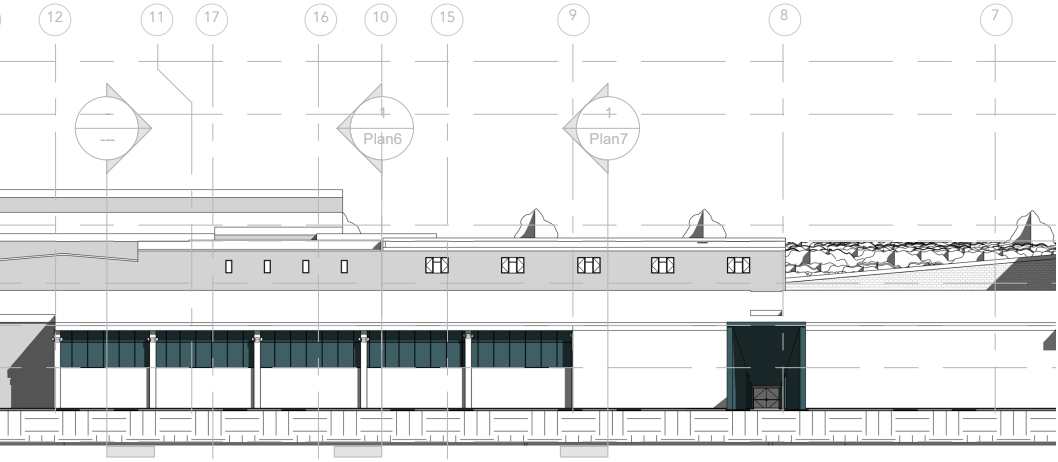
Plans - Facades 1:500



North



East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16
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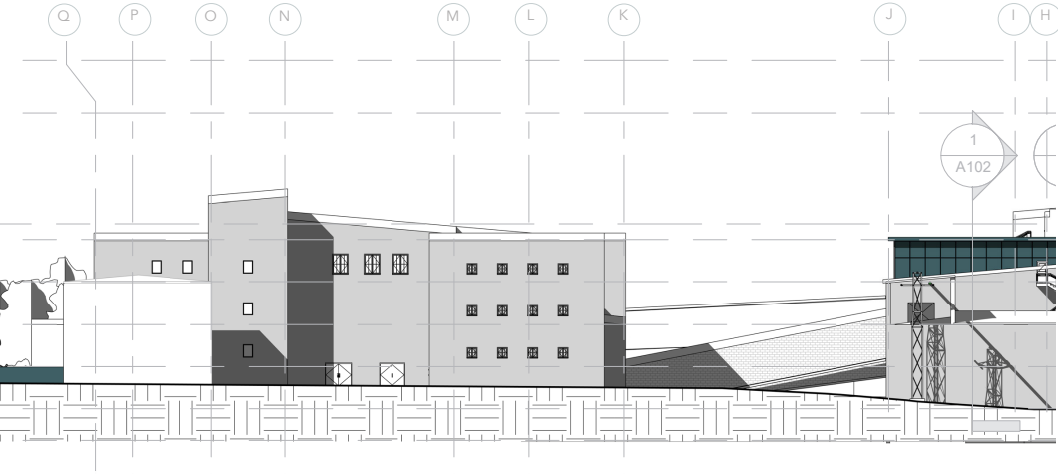
8
7
1
Plan6
1
Plan7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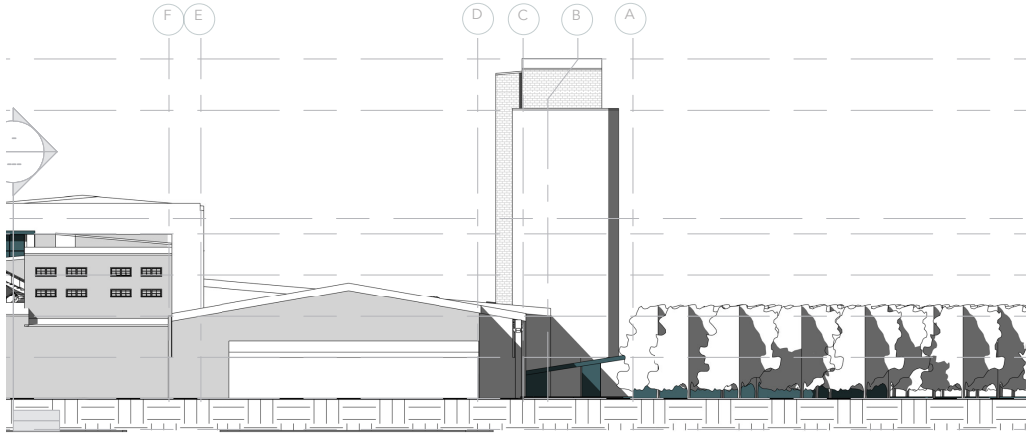
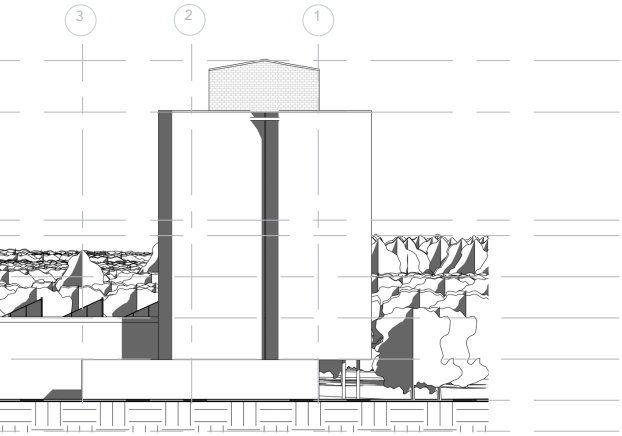
1
A102

Plans - Facades 1:500

North



East


3
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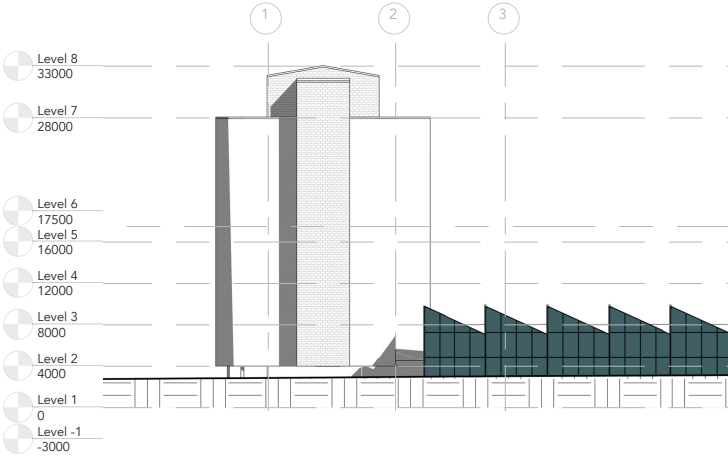
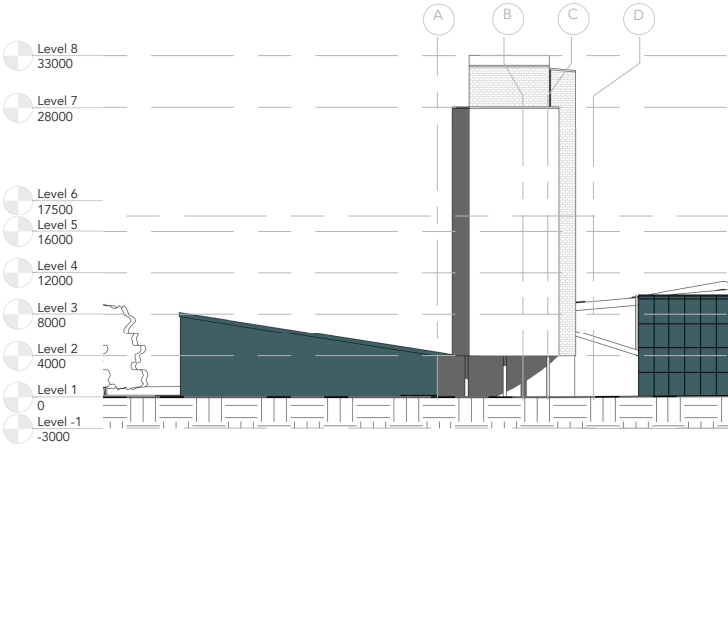
1

Plans - Facades 1:500

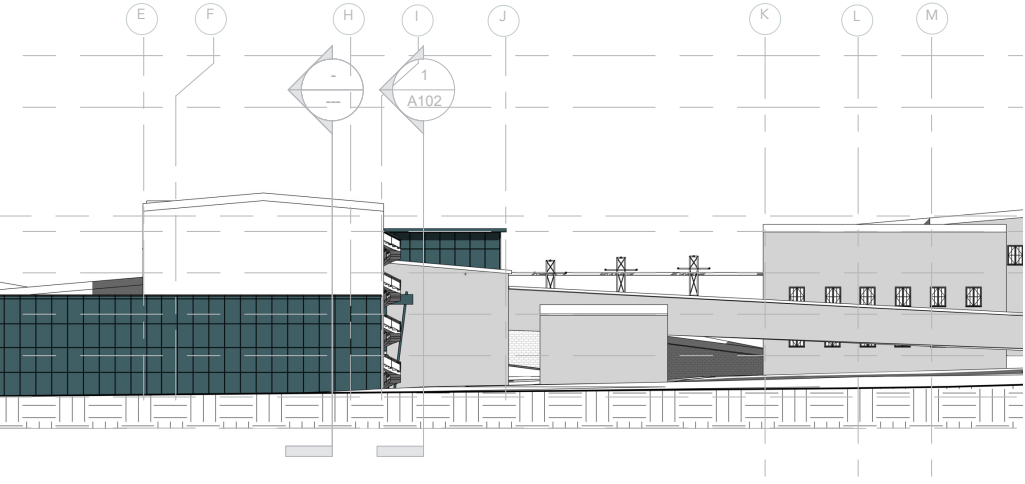


South



West


4
5
6
7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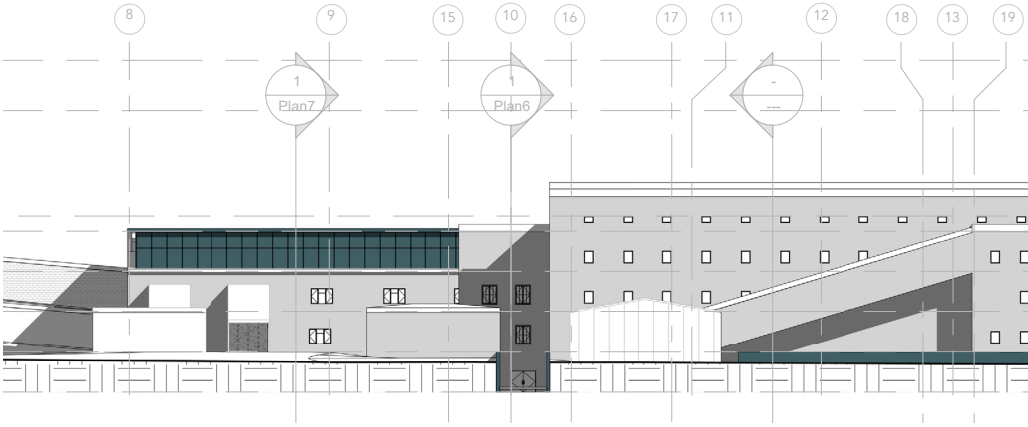
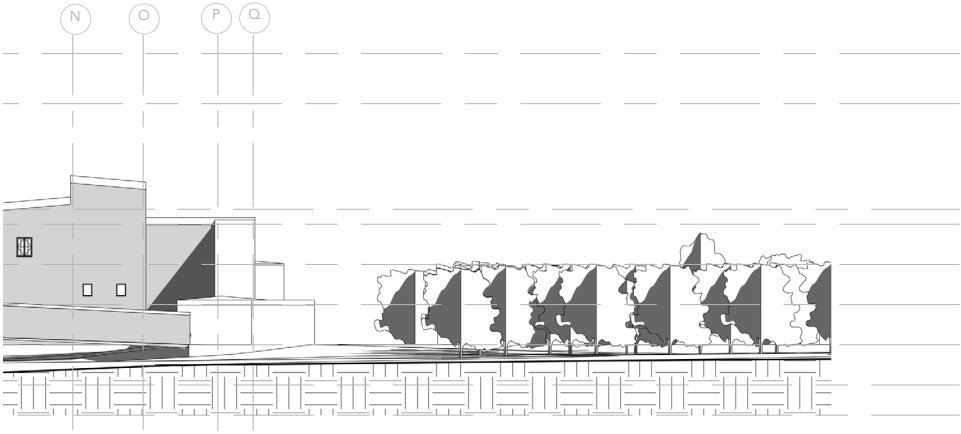
A102

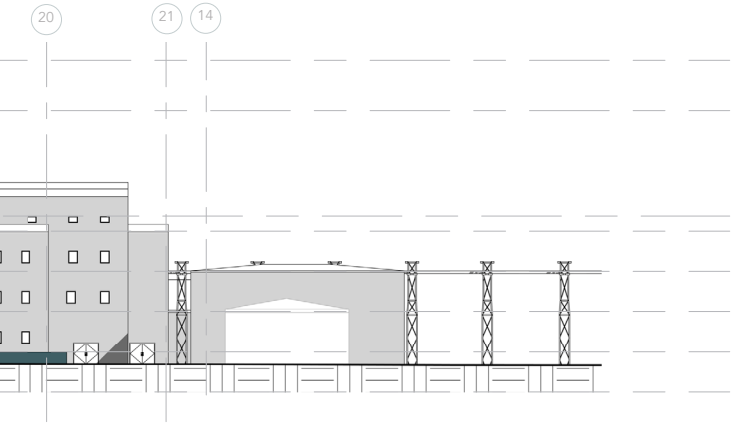
Plans - Facades 1:500



South



West


20
21
14

2._ INITIATION BATH

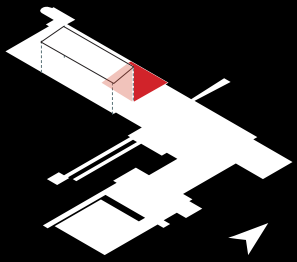
Data:

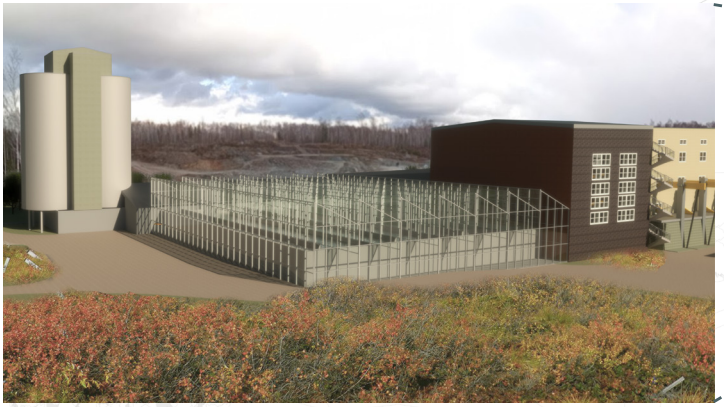
Atmosphere:	Silent
Structure:	Heavy Structures
Water compatibility:	Soft Materials
Sound:	Completely Silent
Temperature:	18°C [AIR] 34°C [WATER]
Natural ventilation:	July and August

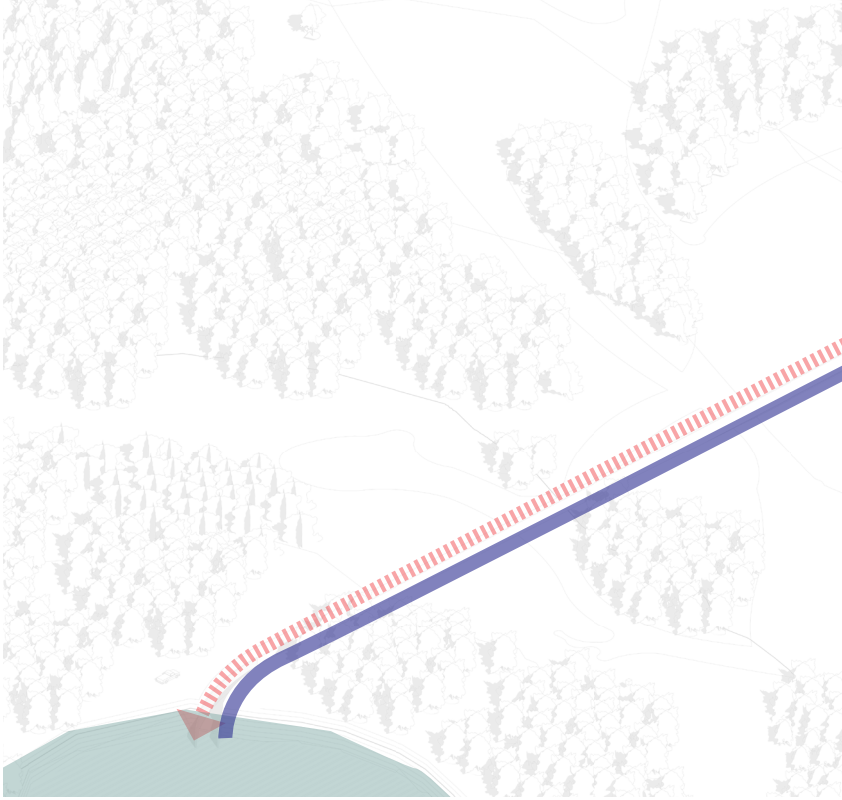
Materials:

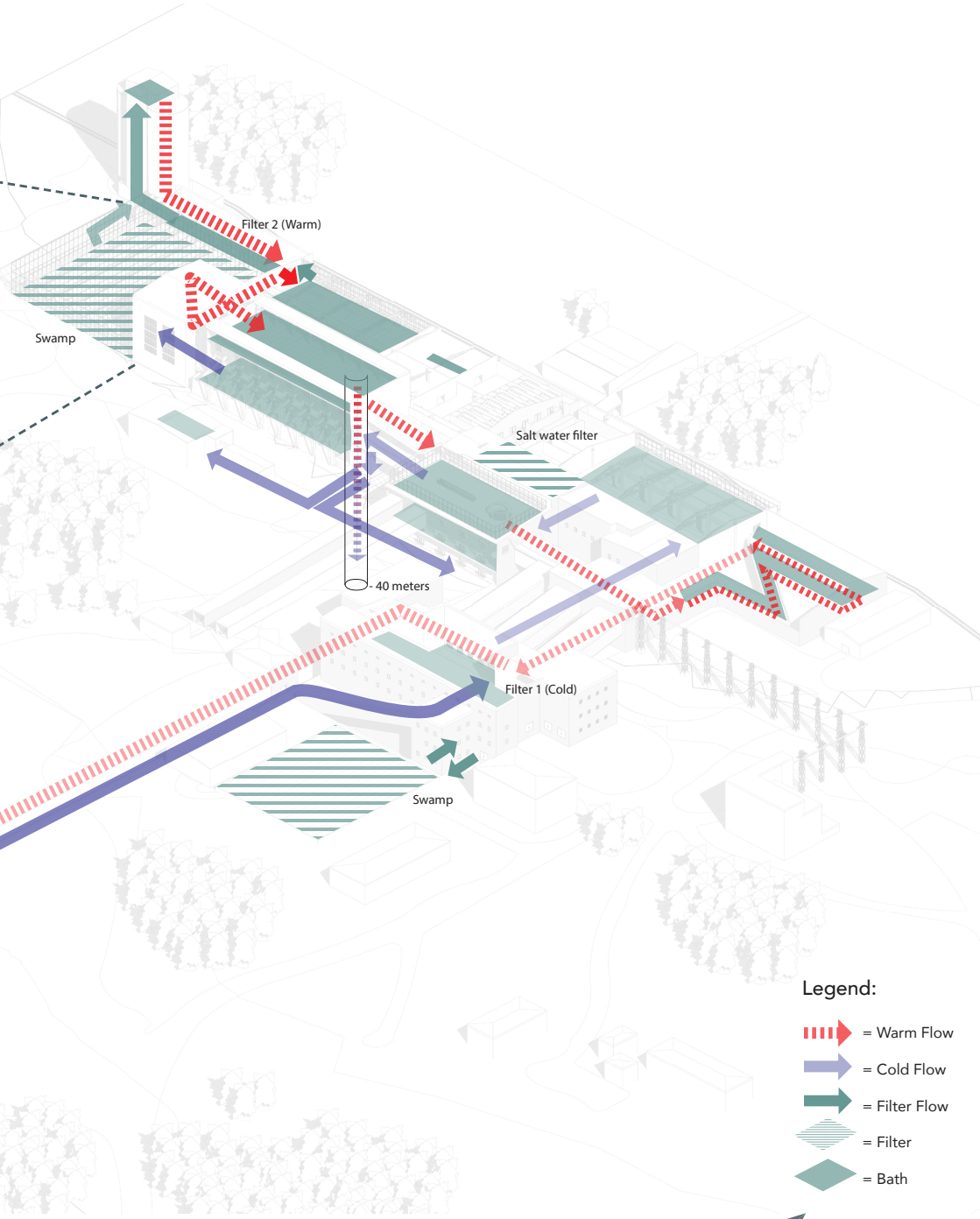
Movement:	Multi-Directional
Interior/exterior tension:	Complete Seclusion
Communitas:	Individually going into the Water
Light:	From the Water only

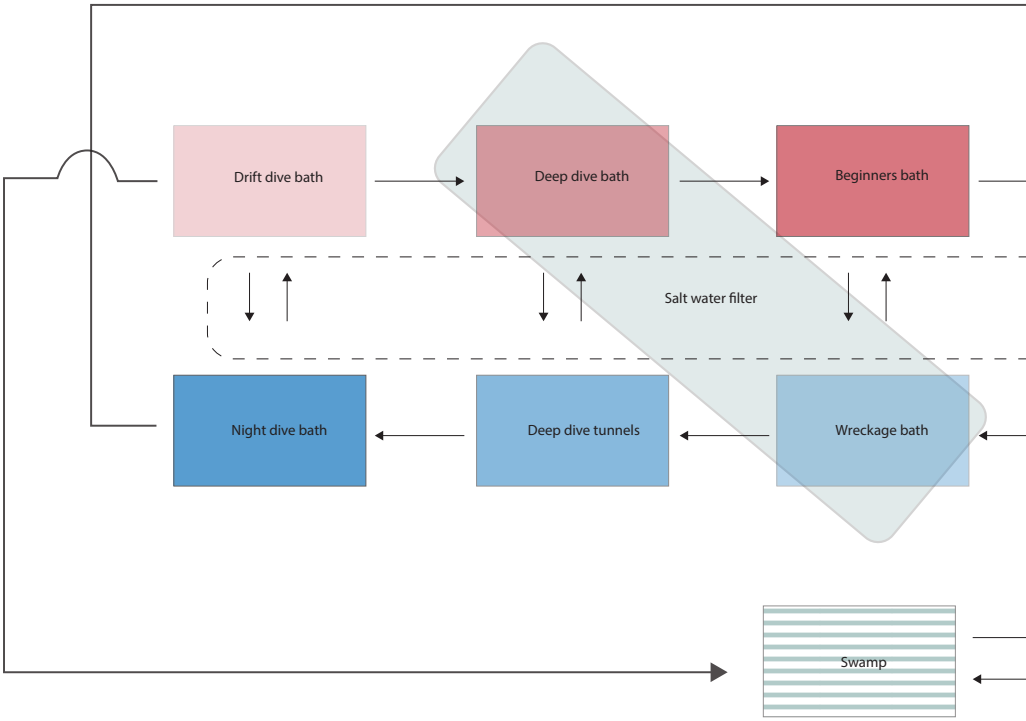
Place in building:

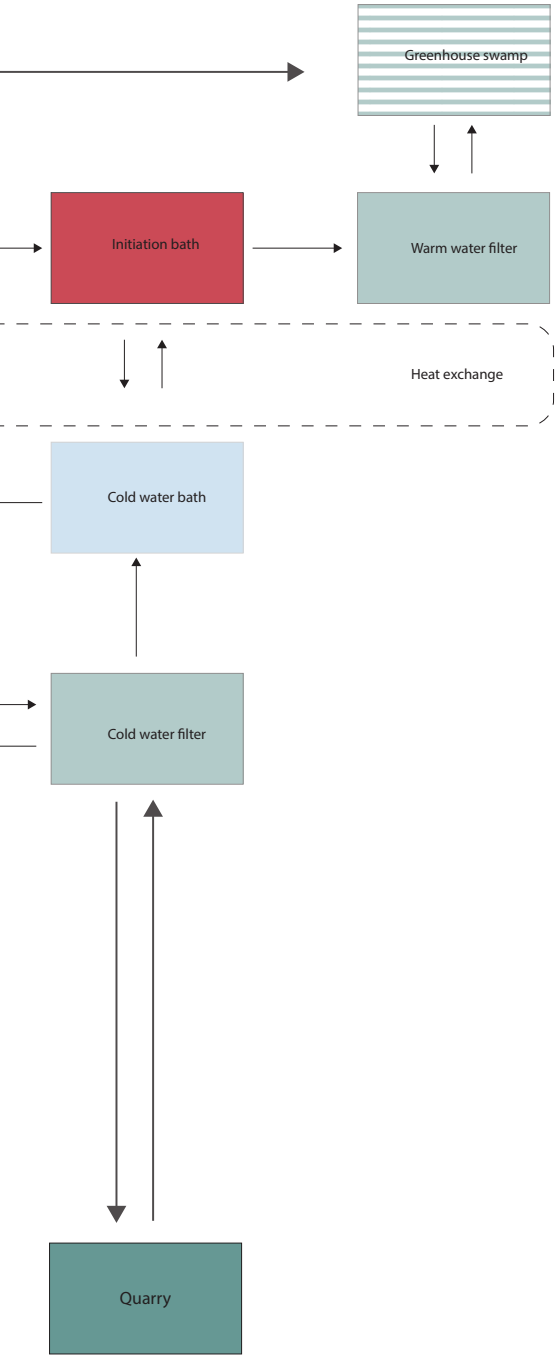







Filter 2 (Warm)
Swamp
Salt water filter
40 meters
Filter 1 (Cold)
Swamp
Legend:
= Warm Flow
= Cold Flow
= Filter Flow
= Filter
= Bath


Drift dive bath
Deep dive bath
Beginners bath
Salt water filter
Night dive bath
Deep dive tunnels
Wreckage bath
Swamp



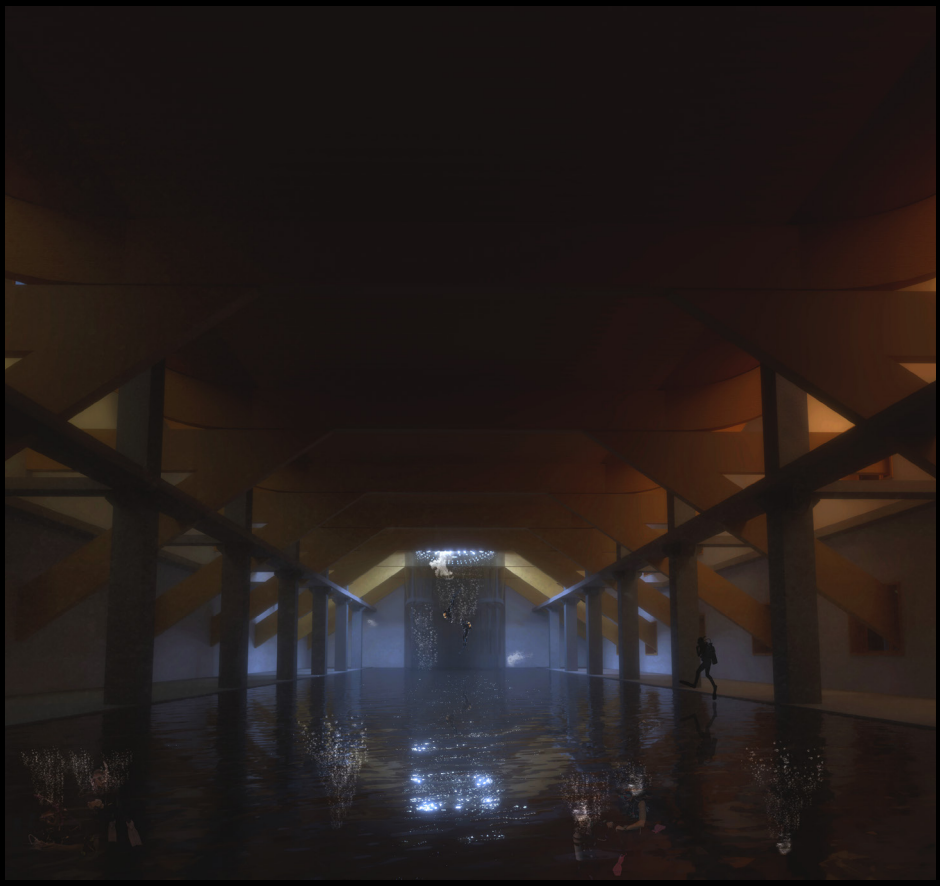
CLIMATE DESIGN- WATER FLOW

Then we come to the initiation bath. Here starts the liminal journey through the building, guided by the light that is emitted from the water.

From this it is an easy to make a bridge to the water flow of the building. As was visible in the floor plans, and the list of rooms, there is a lot of water within the building. This water comes from the quarry reservoir, because there is such a big amount of it to be used. The average temperature of this water is around 8 degrees Celsius. Therefore, this cold water needs to be warmed up.

This happens slowly throughout a variety of baths, and are heated by means of a heat exchange between the baths of the opposite temperature that, on their way back, need to cool down. To keep the water clean there is a triple filtration throughout the building. Important is that the water quality should enter end leave the building in the same water condition, this had to be done to keep the flora and fauna of the quarry reservoir intact.

This image shows the previously mentioned green house. Within the greenhouse, there is the warm water filtration system, by the heat of the sun, this water will become extra heated naturally.



3._ NIGHT DIVE BATH

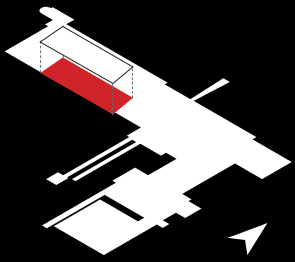
Data:

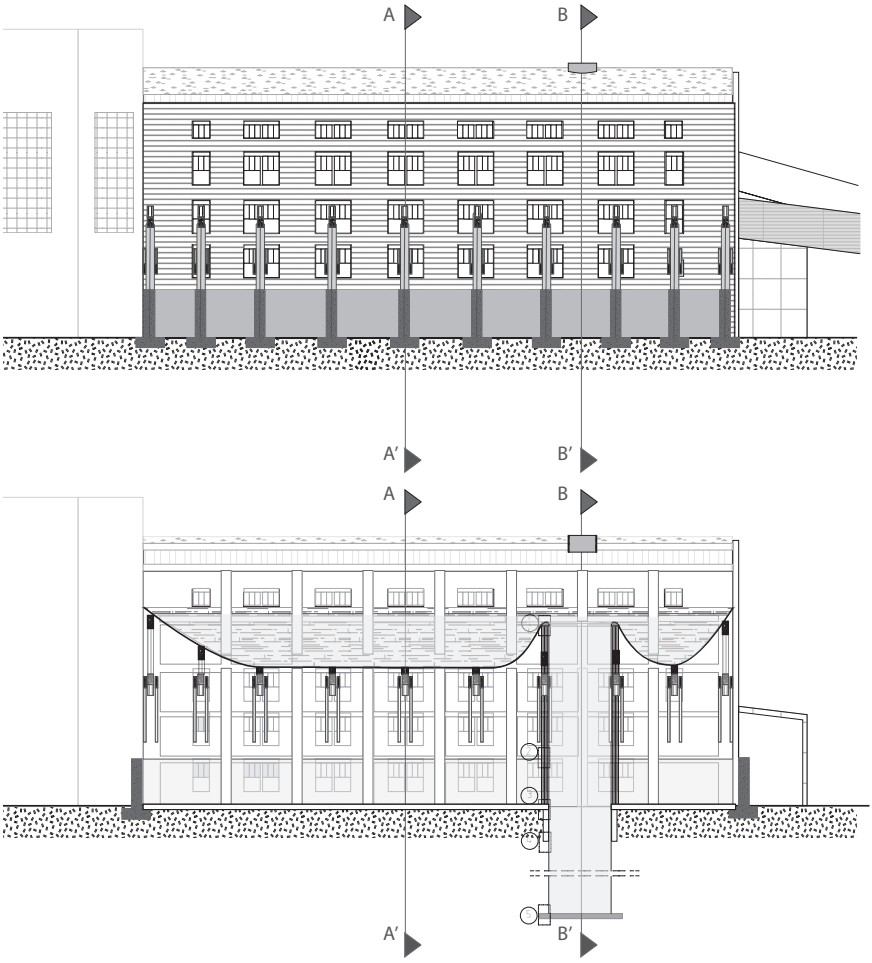
Atmosphere:	Uncanny
Structure:	Heavy Structures
Water compatibility:	Old elements Submerged in Water
Sound:	Echoing
Temperature:	18°C [AIR] 15°C [WATER]
Natural ventilation:	April and October

Materials:

Movement:	Multi-Directional, Guided by Compass
Interior/exterior tension:	Complete Seclusion
Communitas:	Together with Buddy and Instructor
Light:	From the Dive Tube only

Place in building:





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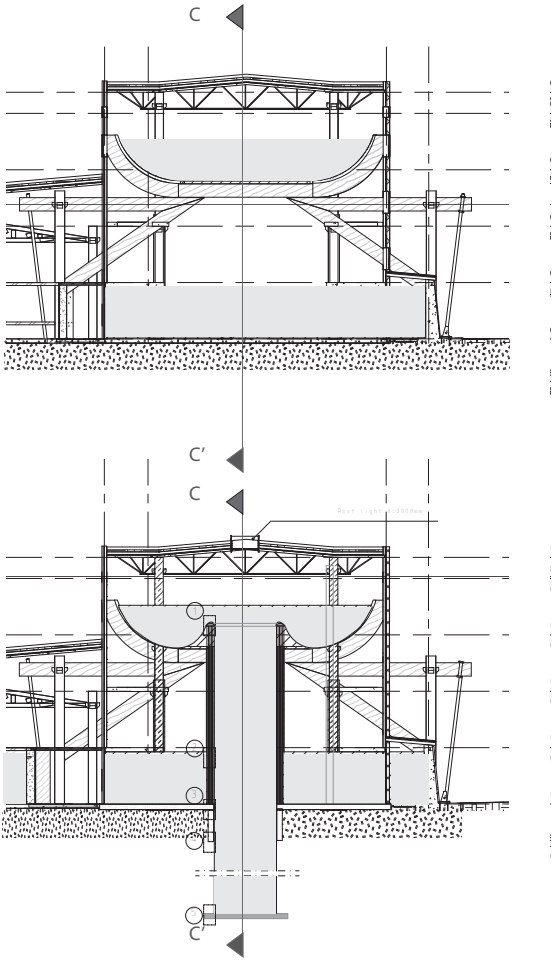
BB′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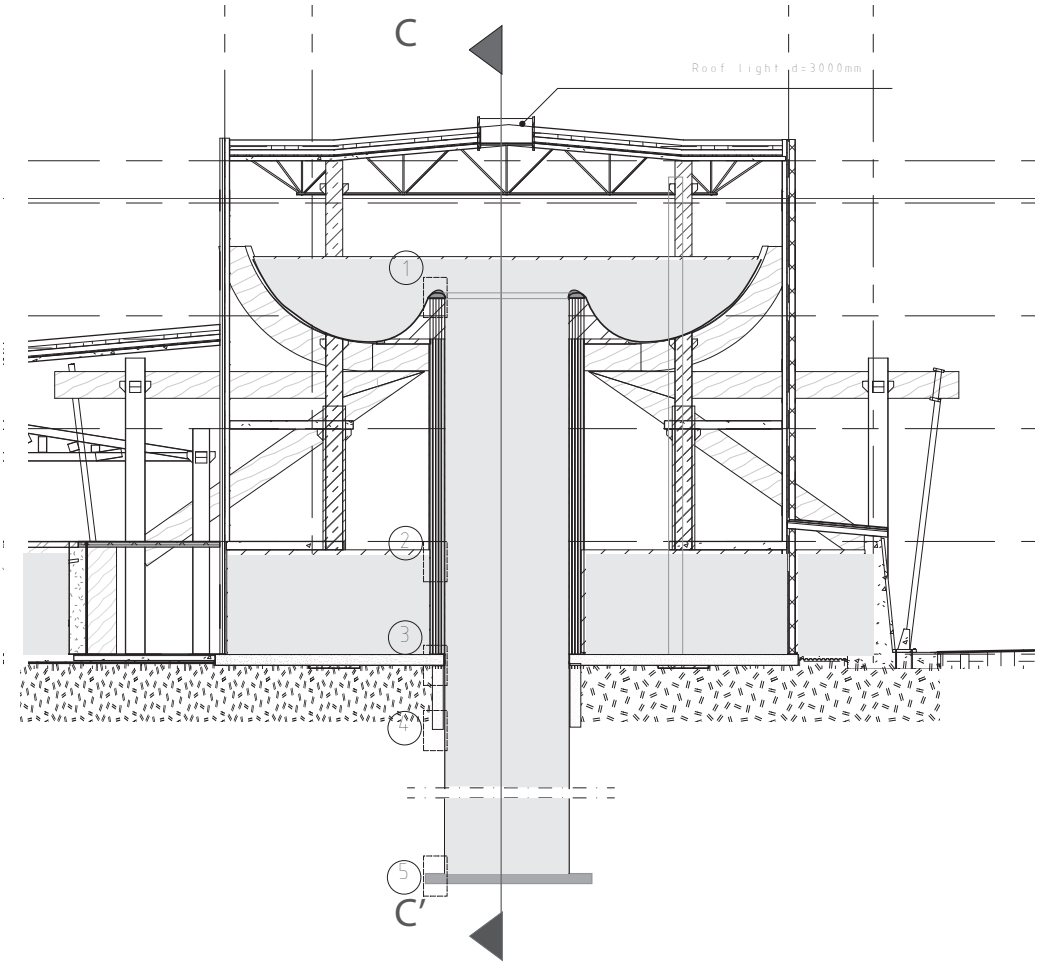
C'
C
C'


C
Roof light d=3000mm
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NIGHT DIVE BATH AND DETAILS

Next up is probably the most interesting room the night dive bath. This dark room is only luminated by small windows around a huge wooden construction and a glass tube penetrating through this same wooden construction. The mix of the old factory setting with this big wooden structure gives it an Uncanny feeling.

The structure is built up as followed: The existing structure is kept intact, but through the window openings, a wooden structure is inserted holding up a wooden frame. On top of this frame there is a curved swimming pool situated.

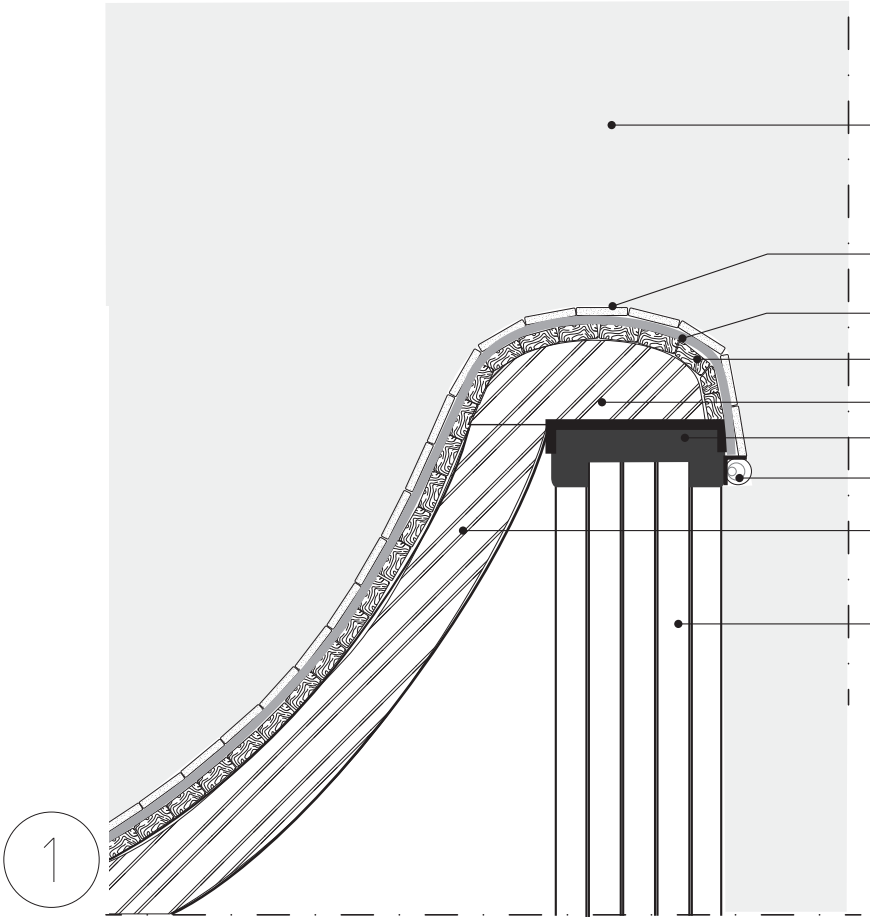
A central tube glass tube connects the two rooms with each other. Divers from the top bath can then go down to minus 40 meters. The use of glass makes it possible to see the divers of the night dive bath and vice versa.

The details of this tube show how it is connected to the wooden pool where the edge is just big enough to stand on. Going down you will experience the thermocline. At the base of the glass tube, geothermal energy installations will go down as well, for natural heating. To make sure the walls don't collapse the retaining walls are anchored into the hard underground. The rest of the natural stone is cladded with a protective waterproof layer as is used in tunnels, but it is not necessary to retain it due to the pressure of the water.

The bottom of the pool is then tiled to make training possible.

If we look to the construction more in depth, we see that it is quite a complex intervention. At the base is a retaining wall that is wedged between the pool water and a 45 degree hill. There are some concrete fins on which the diagonal beam rests. A steel column goes to the third floor in which another CLT beam is attached with a hinge connection. To balance the tension, a cable between the retaining wall and the CLT beam is attached. Where the CLT beams penetrate the structure, soundproof panels are made to reduce the echoing in the room. The walls of the existing structure are wrapped in reused materials such as algae, soapstone and plastic. The roof is covered with tundra mosses, that are native to this area, improving the insulation values. As a more aesthetical element, flag poles are installed, waving the different flags that are used for diving.

The horizontal detail shows the connection of the steel column with the triple glazing and the braces, it also shows that on the place where the beam goes through the existing structure, the soundproof panels are constructed in a way, that there is no friction.


1

Natural filtered pool water 25°C

Black soapstone tiles 150x150x10mm

Talc enriched cement 20mm

Recycled wooden planks 2000x100x50mm

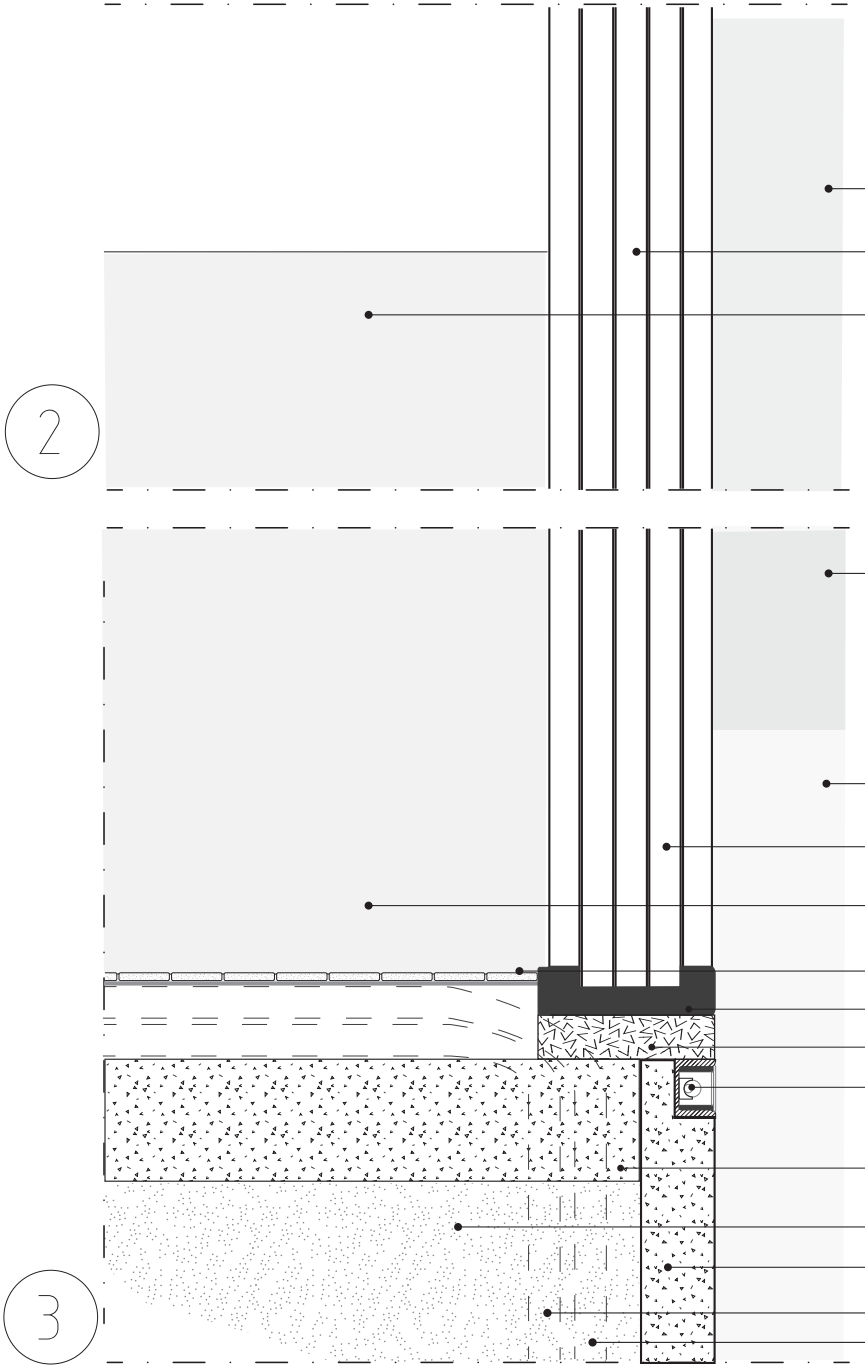
Hardboard ring: diameter=4200mm

Putty 100mm

Led strip

Curved CLT construction: 800x200mm

5 layered laminated bulletproof glass


2
3

Natural filtered pool water 25°C

5 layered laminated bulletproof glass

Natural filtered pool water 10°C

Natural filtered pool water 25°C

Natural filtered pool water 15°C

5 layered laminated bulletproof glass

Natural filtered pool water 10°C

Marble tiles 150x150x10

Putty 100mm

Cast talcum enriched concrete

Lighting element LED

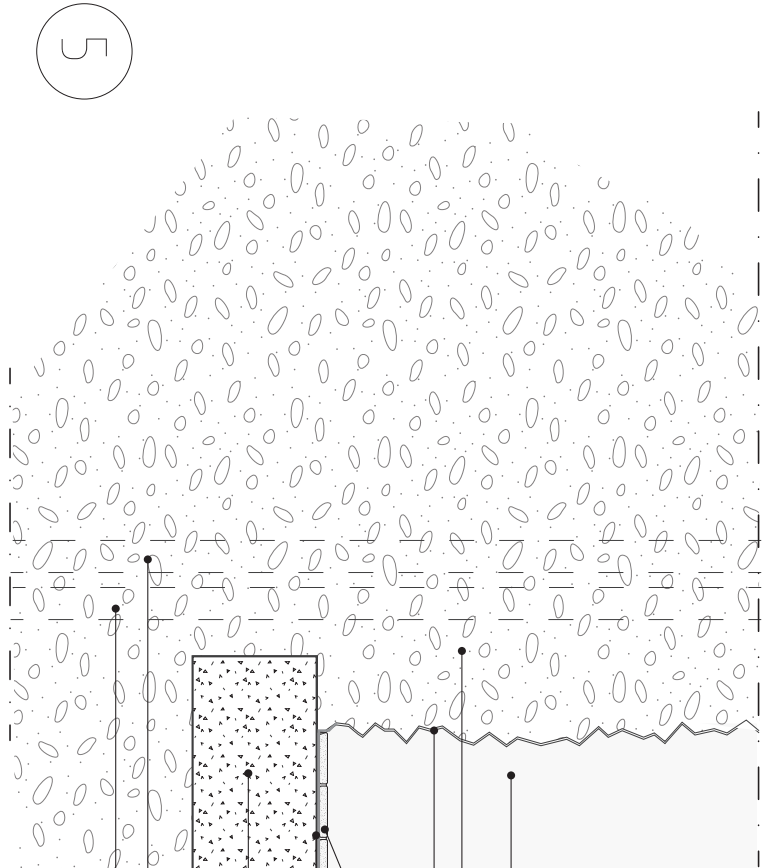
Existing concrete floor 300mm

Sand underground

Concrete retaining wall

Geothermic heating IN

Geothermic heating OUT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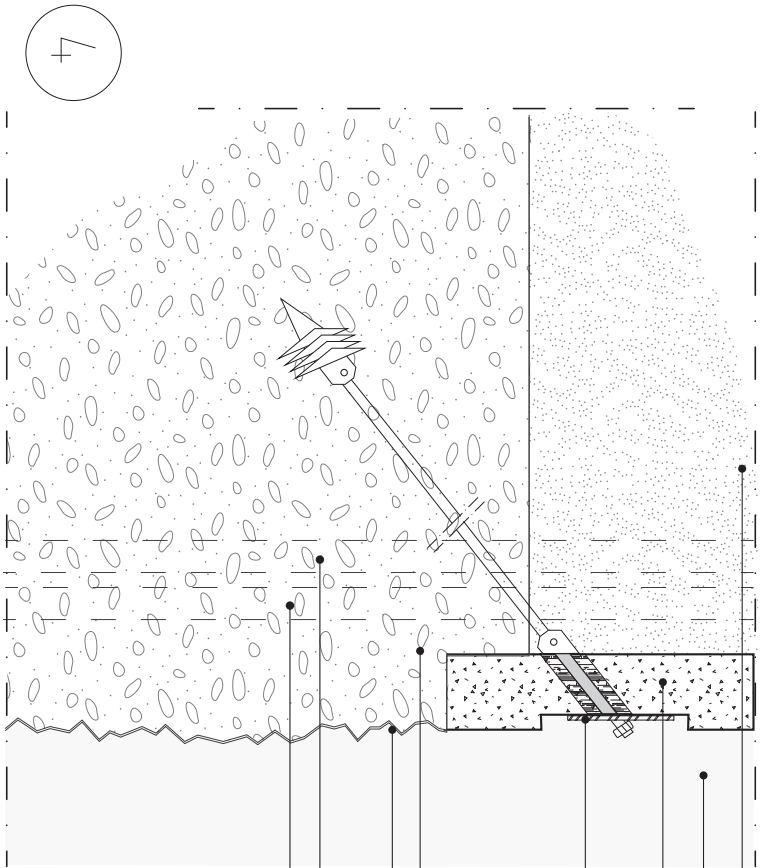
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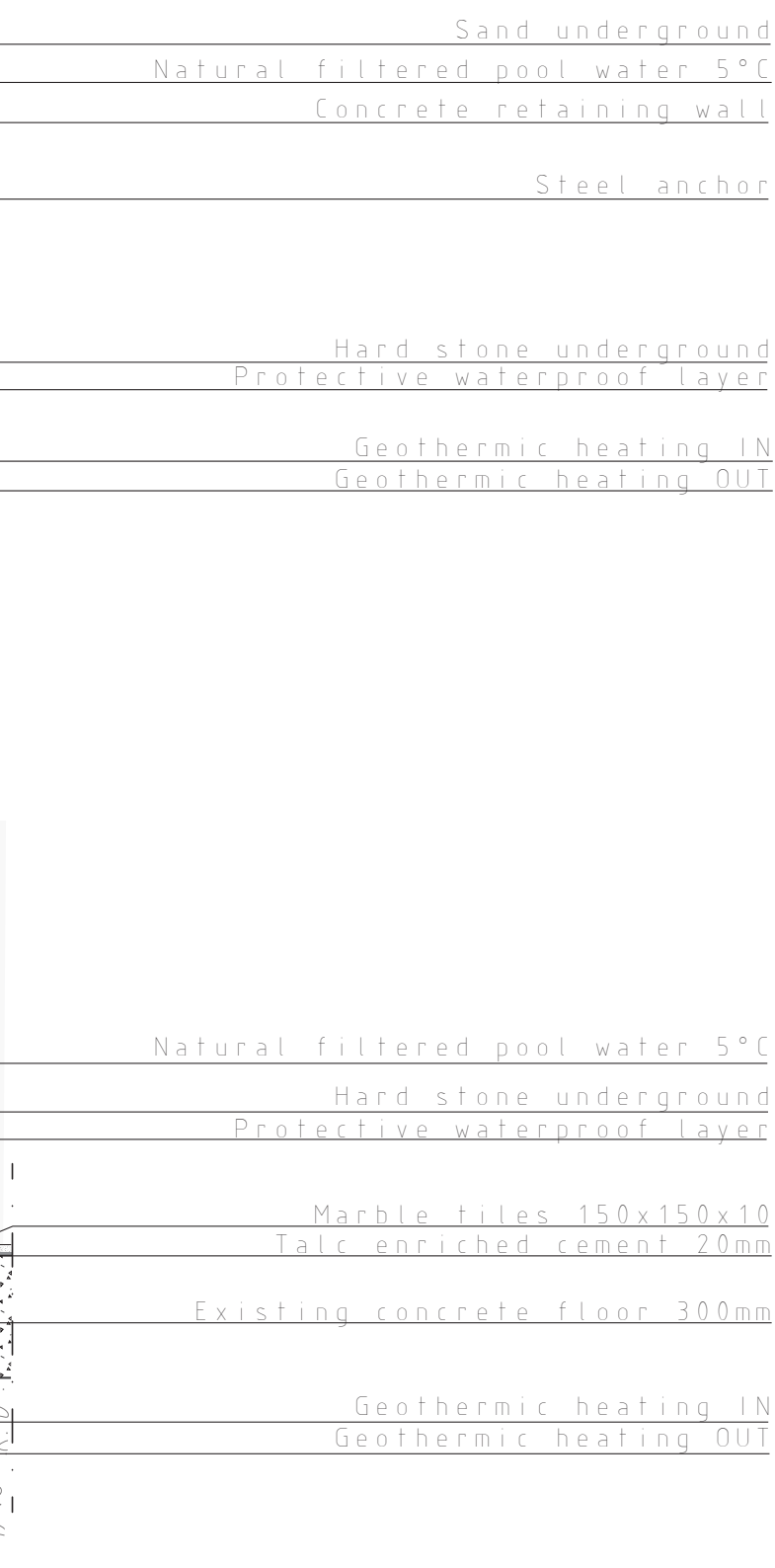
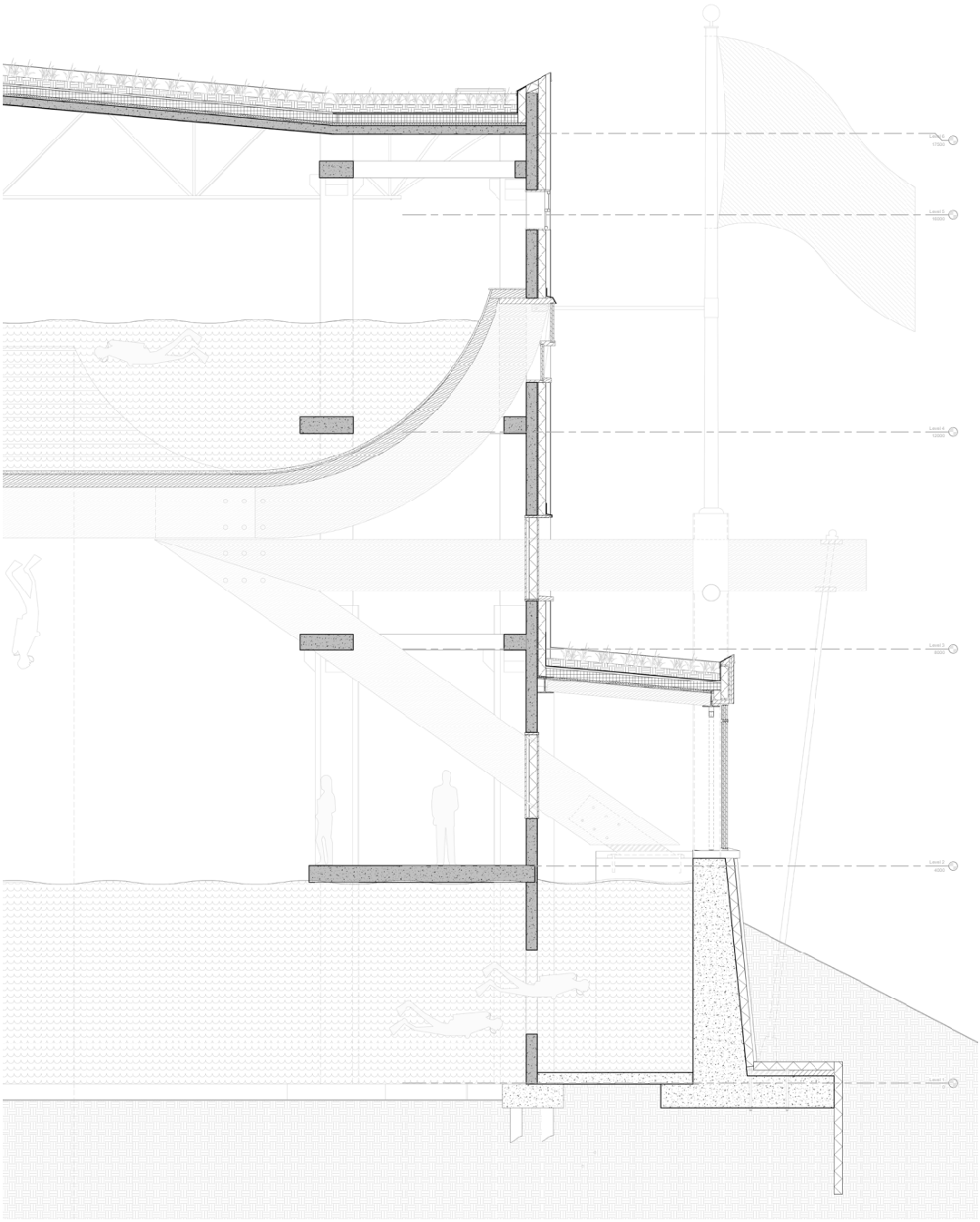
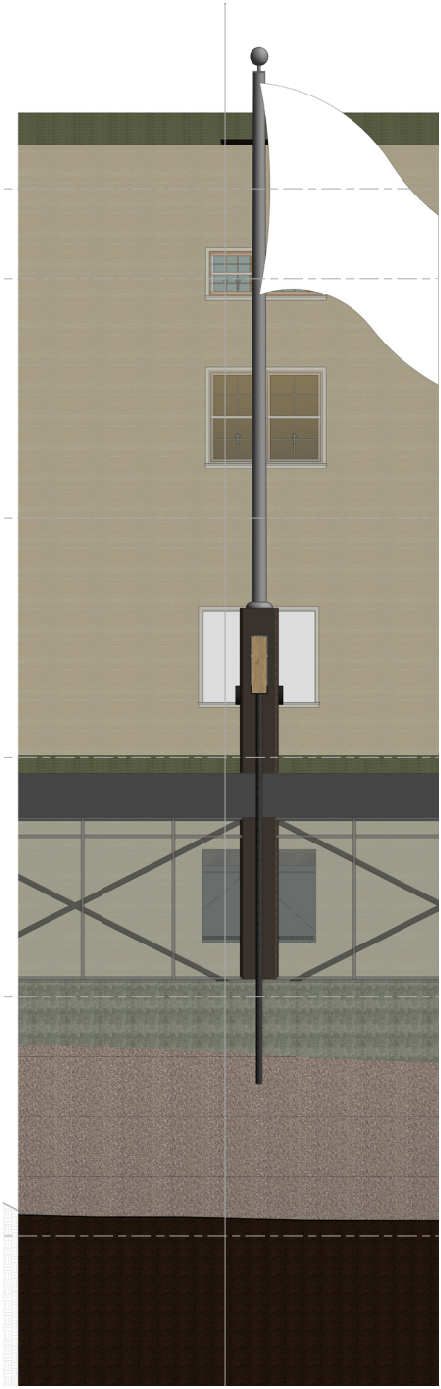
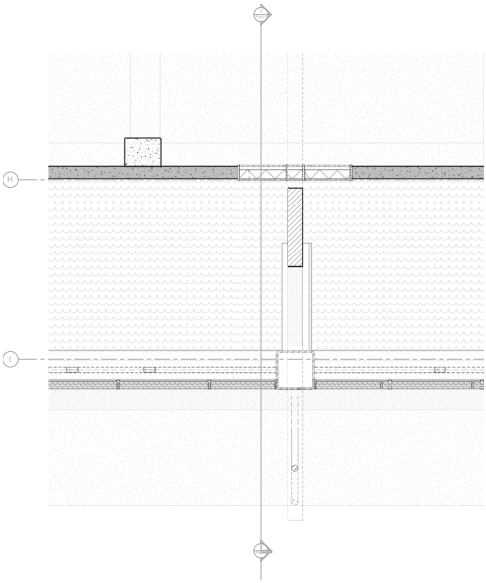
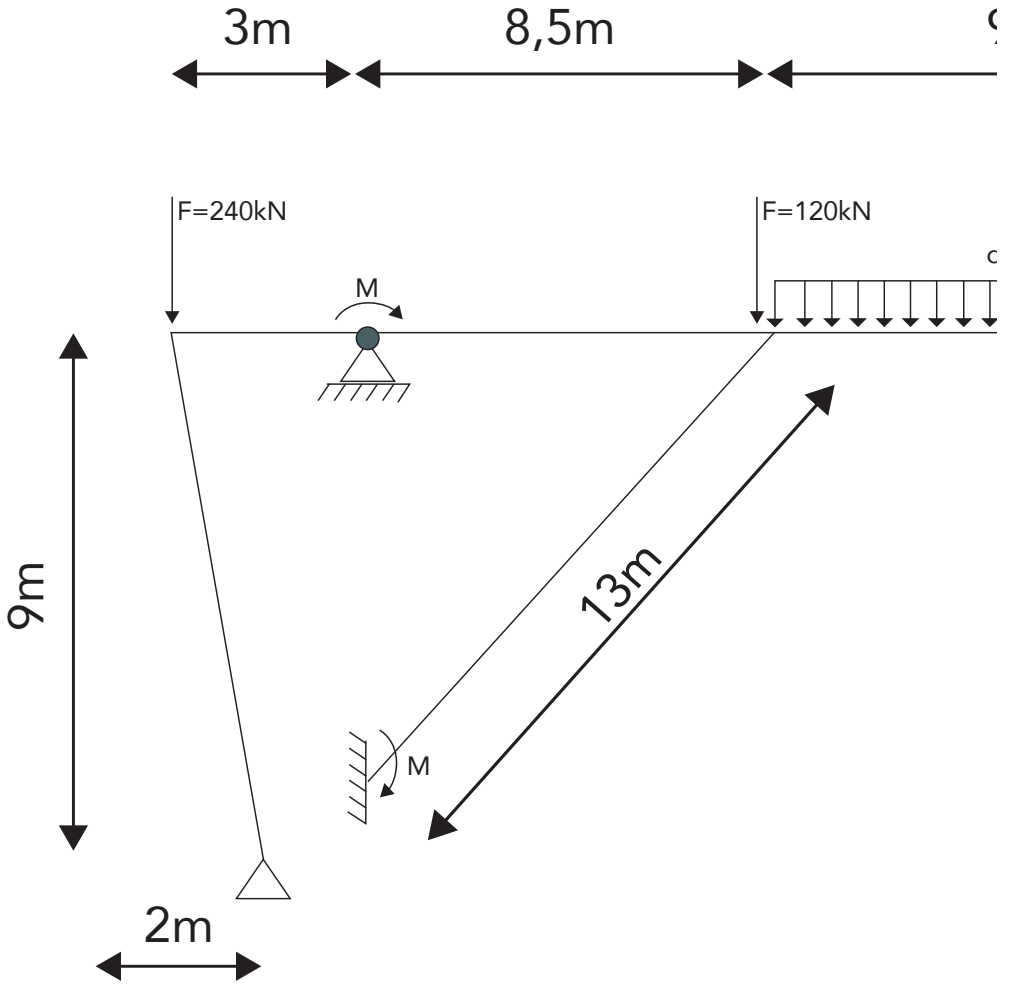
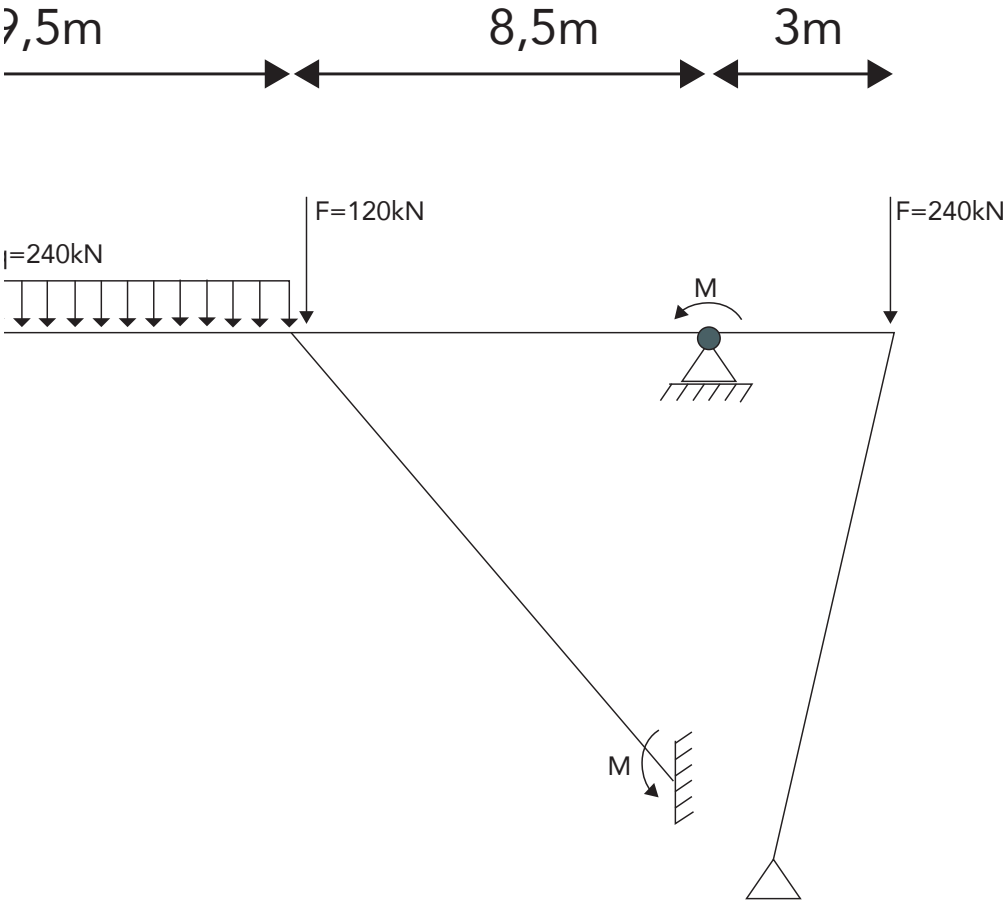

Sand underground
Natural filtered pool water 5°C
Concrete retaining wall
Steel anchor
Hard stone underground
Protective waterproof layer
Geothermic heating IN
Geothermic heating OUT
Natural filtered pool water 5°C
Hard stone underground
Protective waterproof layer
Marble tiles 150x150x10
Talc enriched cement 20mm
Existing concrete floor 300mm
Geothermic heating IN
Geothermic heating OUT

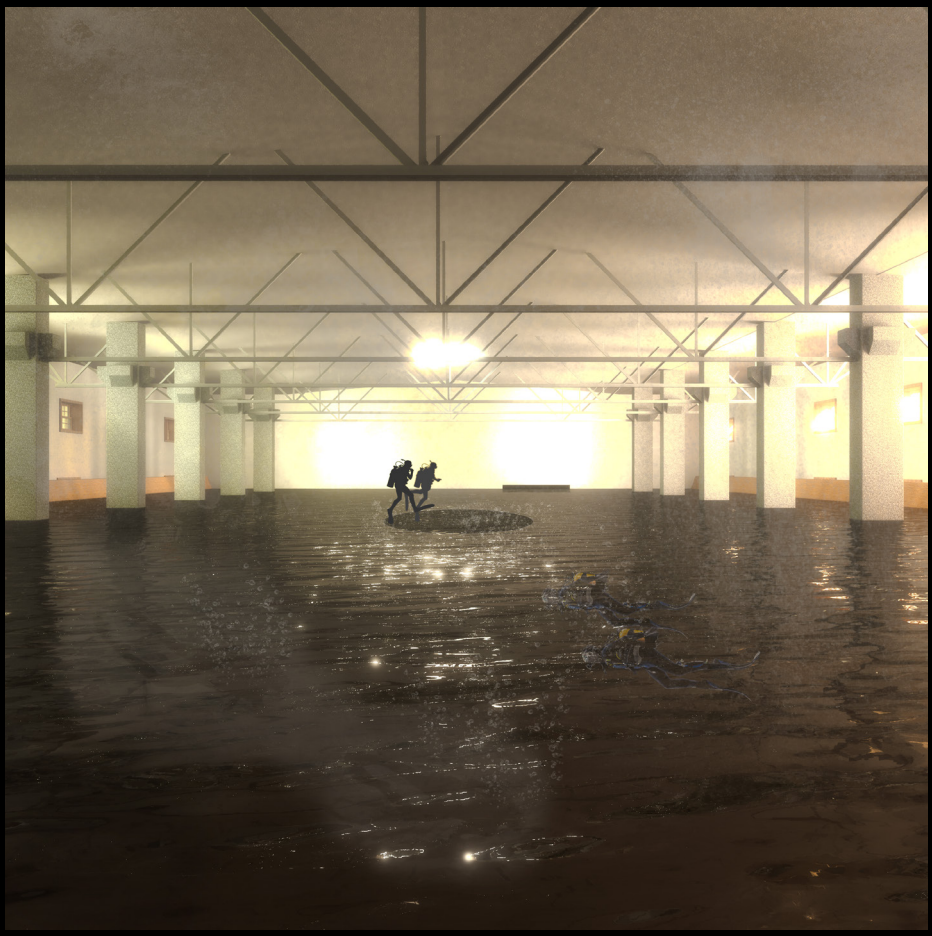

Level 5
17500
Level 5
16000
Level 4
12000
Level 3
8000
Level 2
4000
Level 1
0






3m
8,5m
F=240kN
F=120kN
M
9m
13m
M
2m


,5m
8,5m
3m
F=120kN
F=240kN
=240kN
M
M

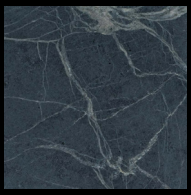


4._ DEEP SEA BATH

Data:

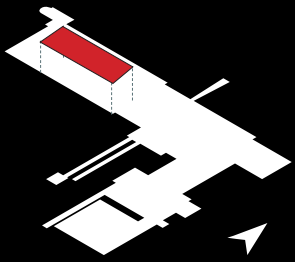
Atmosphere:	Tense
Structure:	Heavy Structures
Water compatibility:	Old elements Submerged in Water
Sound:	Echoing
Temperature:	18°C [AIR] 22°C [WATER]
Natural ventilation:	June and August

Materials:

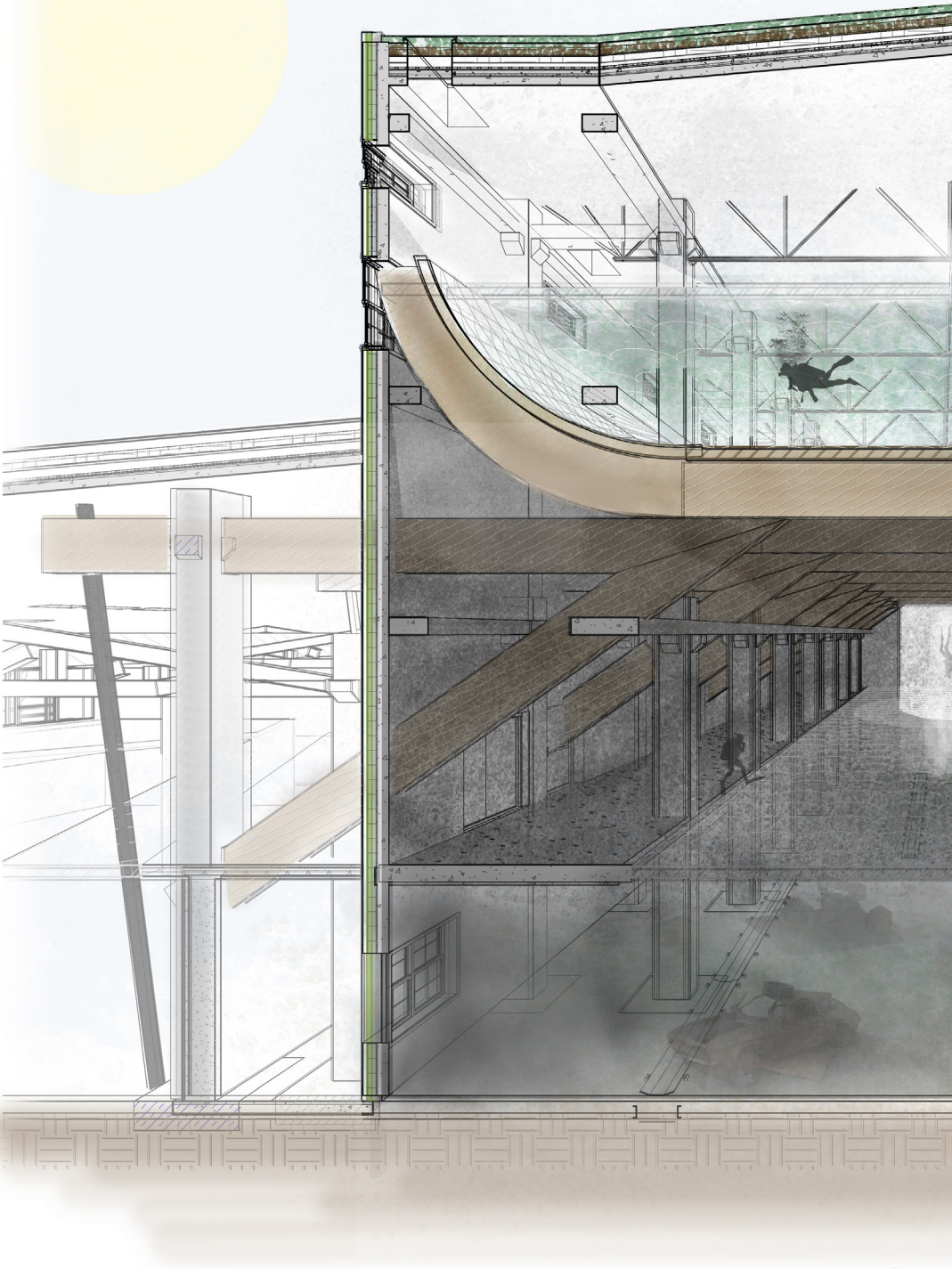


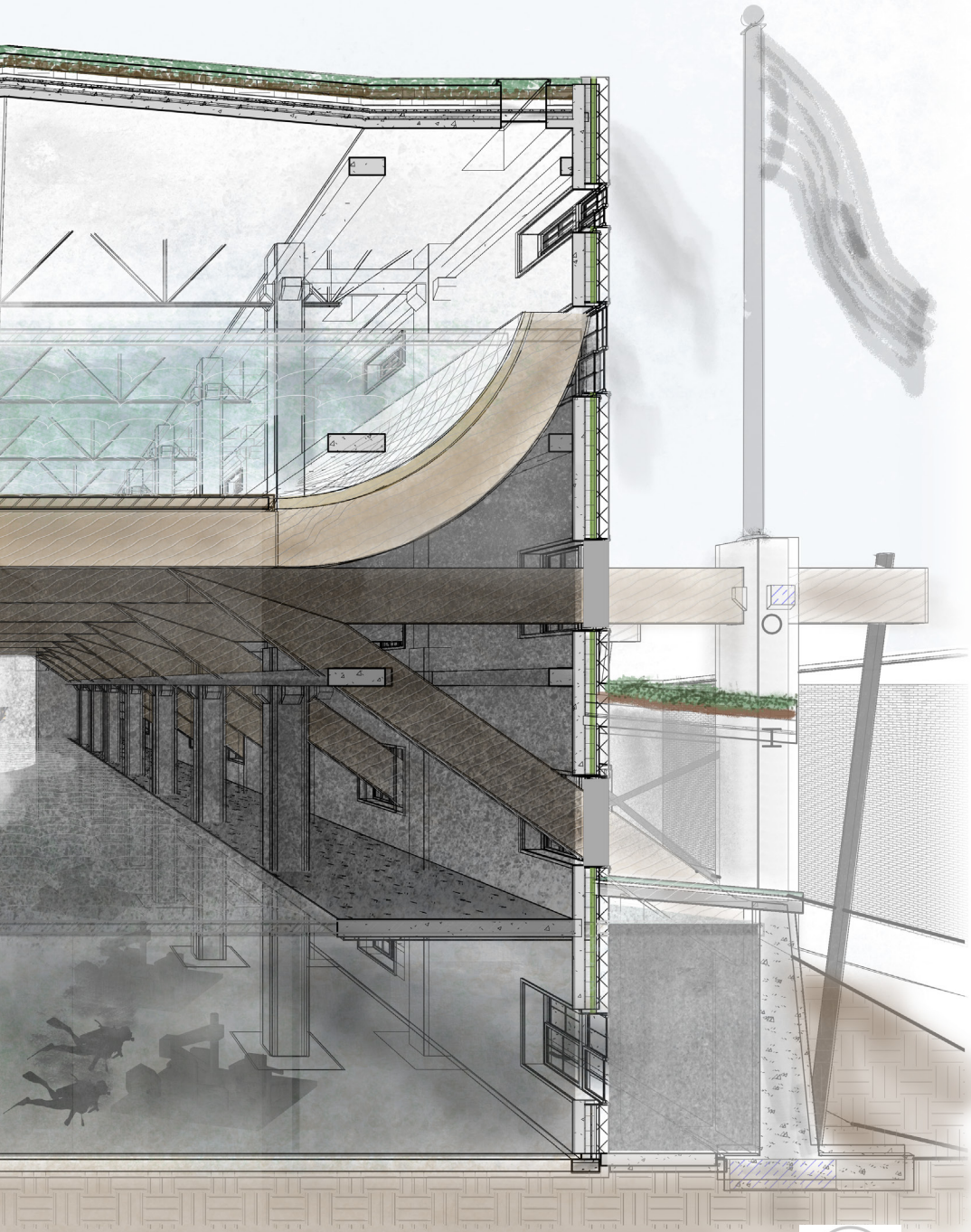
Movement:	One-Directional, Guided by Light
Interior/exterior tension:	Windows giving overview
Communitas:	Small Group
Light:	Natural Light only

Place in building:

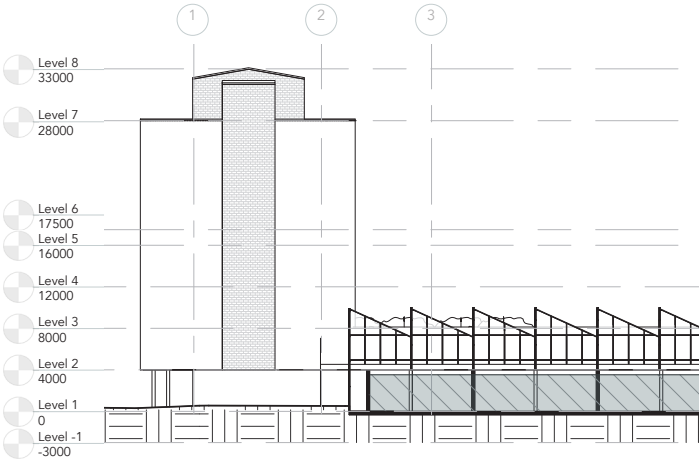


Section- Impression of relation between up and down

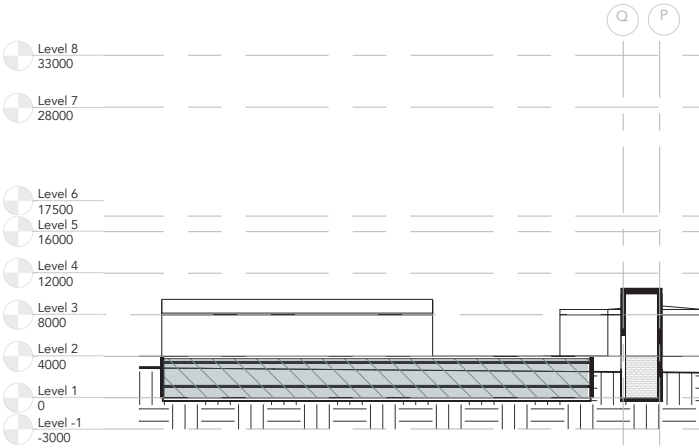




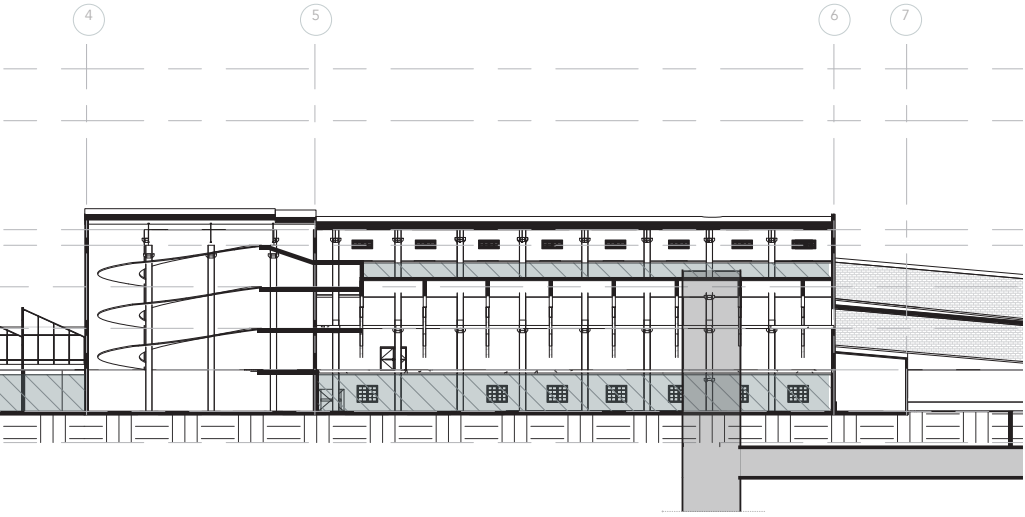
Plans - Sections 1:500

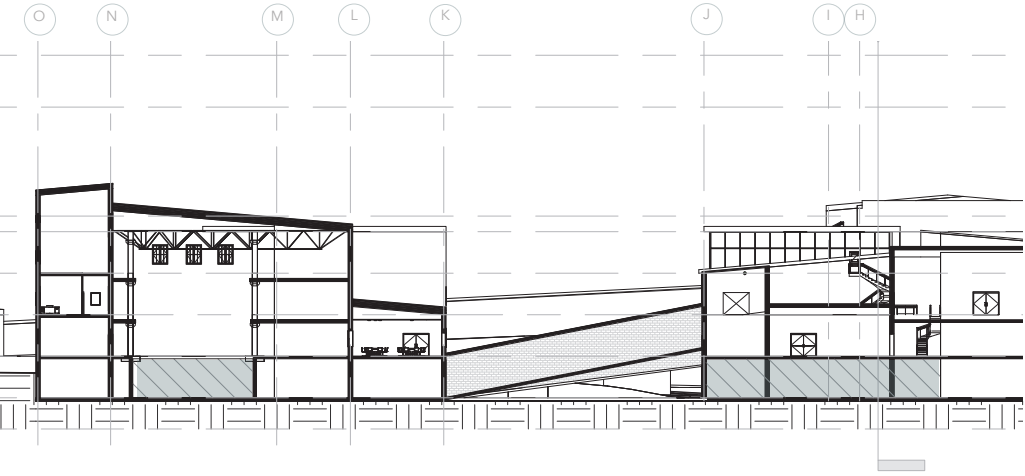


West-East section

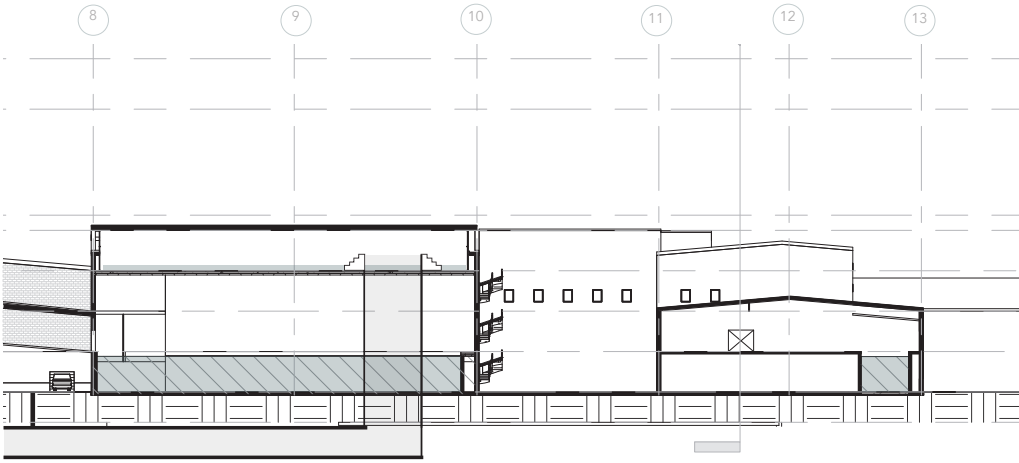


South-North section

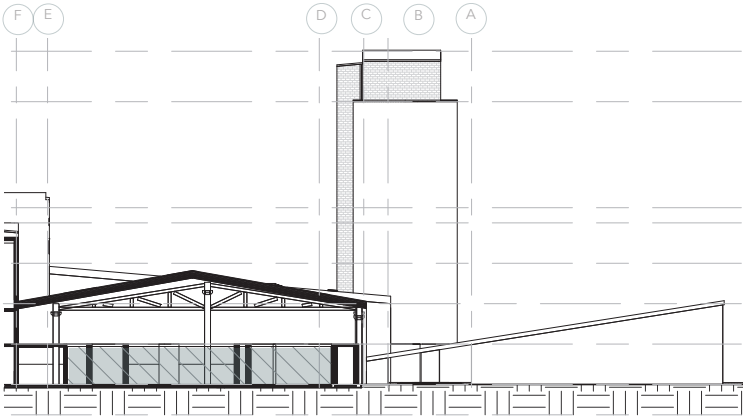

4
5
6
7


O
N
M
L
K
J
I
H

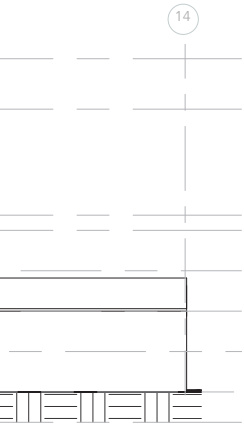
Plans - Sections 1:500



West-East section



South-North section



DEEP DIVE BATH AND SECTIONS

The next bath, the deep dive bath, is the one on top of the night dive bath. The deep dive bath uses dark tiles to emphasize the deep feeling of the water and to increase the reflectivity of the water. This contributes to the more tense atmosphere of the room.

Looking at the impression showing both of the baths, the contrast between the baths is directly visible, but also the relation between the two baths by the diving tube makes a nice connection where the baths as shows this contrast

In the section drawing you see that from the deep dive bath, you can go by tunnel to the next building. Section shows the connections of the two baths by the tunnel

Also well visible is that the first floor of the building is reserved for the installations around the baths.

5._ WRECKAGE BATH

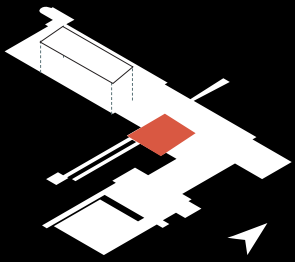
Data:

Atmosphere:	Opressive
Structure:	Heavy Structures
Water compatibility:	Corroding in the water
Sound:	Clicking sounds
Temperature:	18°C [AIR] 20°C [WATER]
Natural ventilation:	May and October

Materials:

Movement:	Multi-Directional, Guided by Shapes
Interior/exterior tension:	Exterior shapes Interior
Communitas:	Together with Group
Light:	Pool being Light, Wreckage being Dark

Place in building:

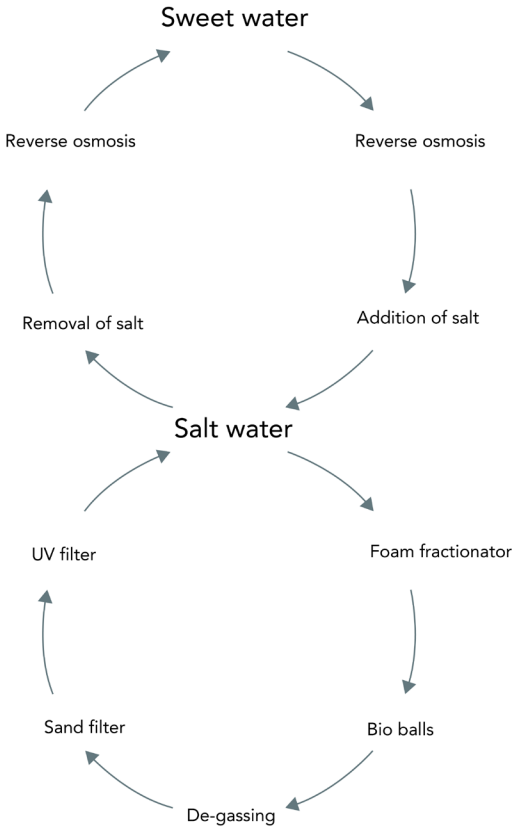


CLIMATE DESIGN- SALT WATER FILTRATION SYSTEM DIAGRAM

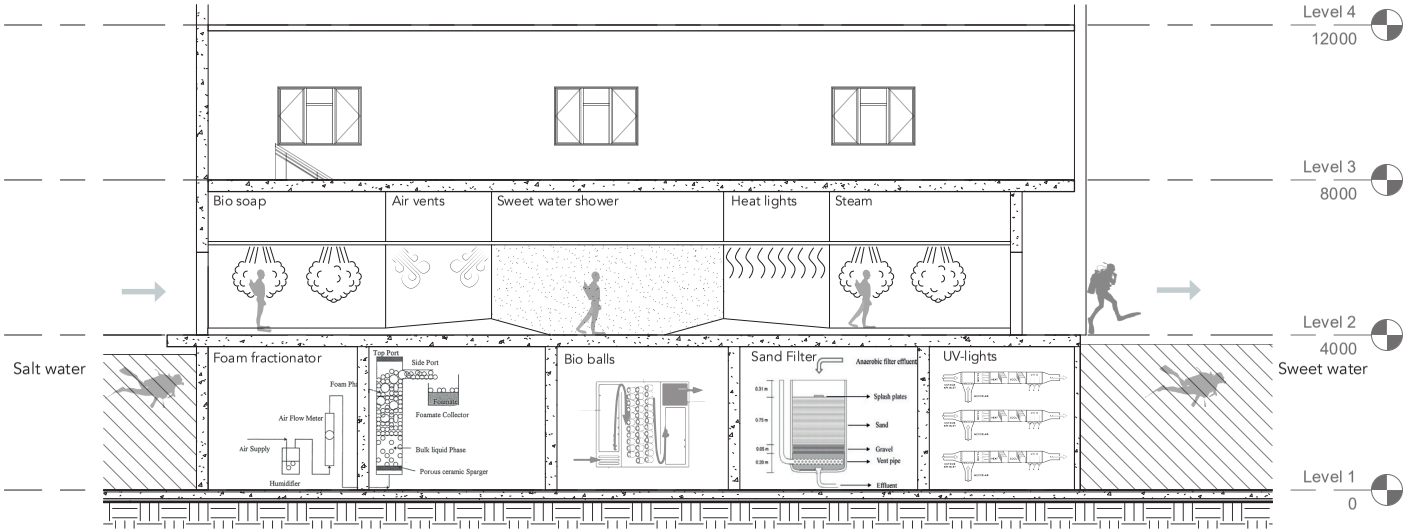
Now we arrive at the wreckage bath. This consists of salt water. Besides the salt water changing the atmosphere by having a different colour and different materials, it also gives a new experience in floatation. In salt water, you have a higher buoyancy, giving the divers an extra challenge.

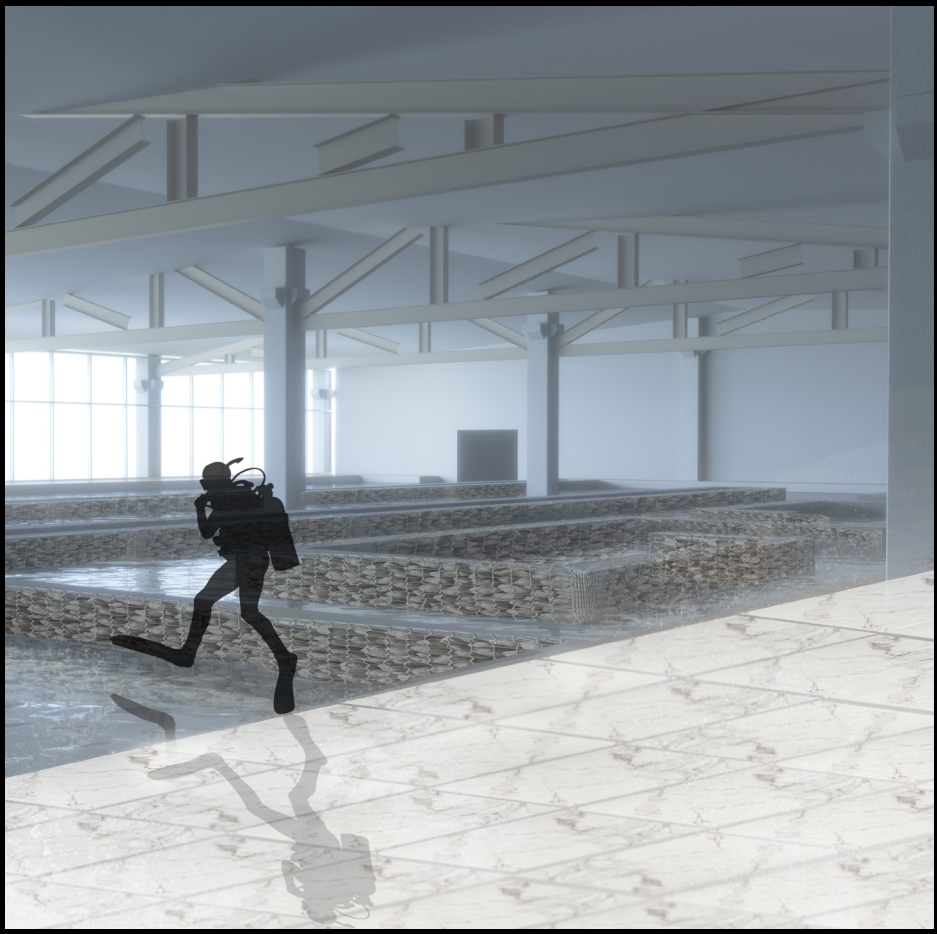
To make the water salt, there is a so-called life support system. This support system is the same as is being used at The Deep, in the UK. This sea life center uses tap water and salinize the water. When the water is salt, there is a filtration system that controls the water quality. By implementing this half way through the building, it works as an extra filter.

However, as I mentioned before, the water quality is very important. Therefore, when the water goes from from the wreckage bath to the next bath, it should be desalinized to prevent salt contamination. The same goes for the divers that went go from the wreckage bath into the next bath. After this bath they themselves, but also their equipment, will contain salt water and to make sure the people won't contaminate the next bath, there is a shower installation where they will walk through.



Life support system in The Deep, Hull, United Kingdom


Level 4
12000
Level 3
8000
Level 2
4000
Level 1
0
Bio soap
Air vents
Sweet water shower
Heat lights
Steam
Salt water
Sweet water
Foam fractionator
Foam Pot
Air Flow Meter
Air Supply
Humidifier
Top Port
Side Port
Foamate
Foamate Collector
Bulk liquid Phase
Porous ceramic Sparger
Bio balls
Sand Filter
Anaerobic filter effluent
Splash plates
Sand
Gravel
Vent pipe
Effluent
UV-lights



6._ COLD WATER BATH

Data:

Atmosphere: Stinging

Structure: Open structures

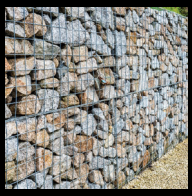
Water compatibility: Old elements Submerged in Water

Sound: Sizzing Sounds

Temperature: 7°C [AIR]
4°C [WATER]

Natural ventilation: November till March

Materials:



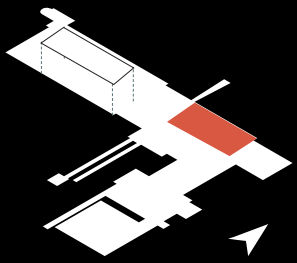
Movement: Multi-Directional, Guided by Activity

Interior/exterior tension: Inside/outside relation tangible

Communitas: Together with group

Light: Artificial bright Lights

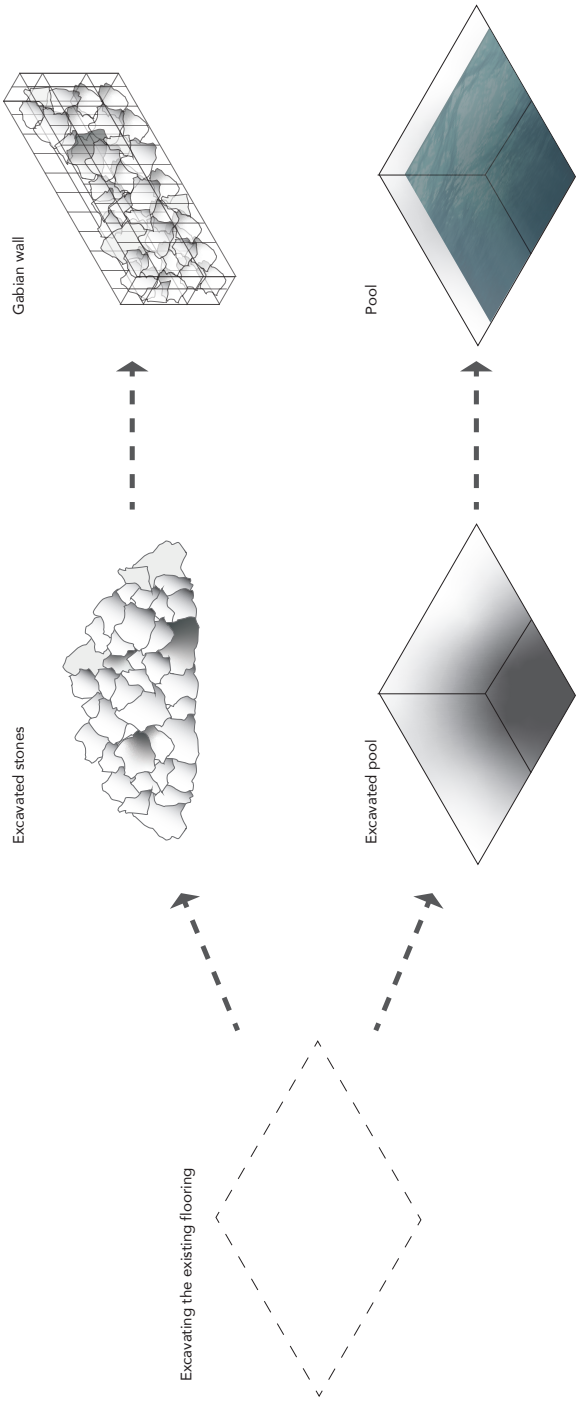
Place in building:



COLD WATER BATH

After this shower, the divers arrive in the cold water bath. The temperature of this water is evidently colder than the previous baths, which will again give the divers a new experience and make them ready for their first practice dive outside, where water temperatures are often much colder than is the case in pools. Cold water feels sharper, hence the usage of white and sharper materials like marble and gabion walls.

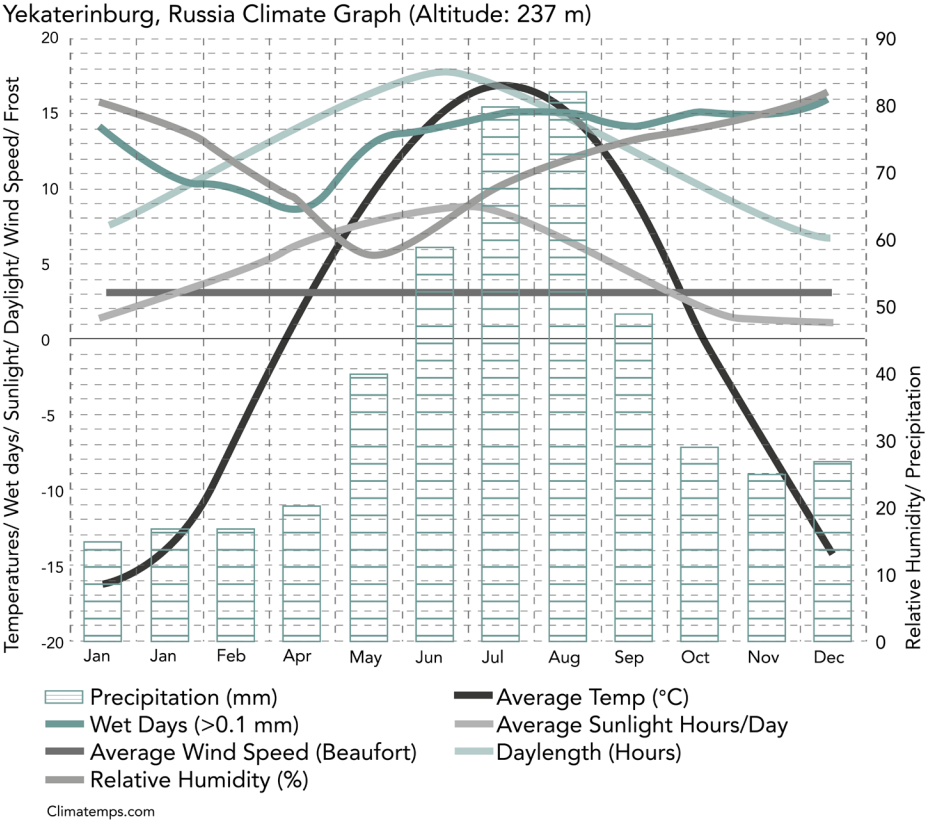
The gabion walls are retrieved from excavation within the building. To re-use the rocks you get from this excavation, transport costs are narrowed down and you can create new structures almost for free. The gabion walls in the cold water bath are made in a maze like way to increase the exposure of the cold water and to create an atmosphere of disorientation to have the divers cope with eventual stress.



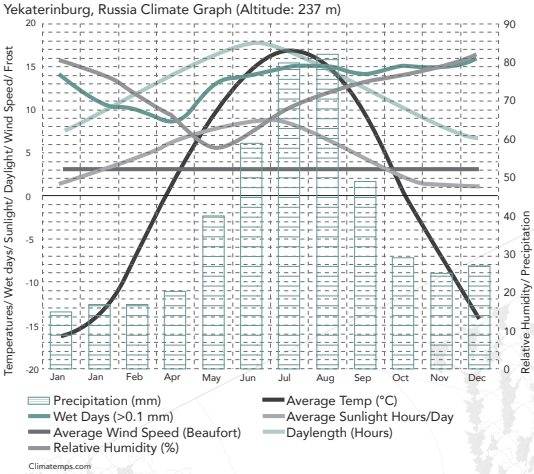
TEMPERATURE AND VENTILATION

The cold water brings me to the temperature within the building. The temperature in Sjabrovski varies a lot throughout the year and while this might be a challenge if your building needs to stay one temperature throughout the year, for this building it can be used as an advantage.

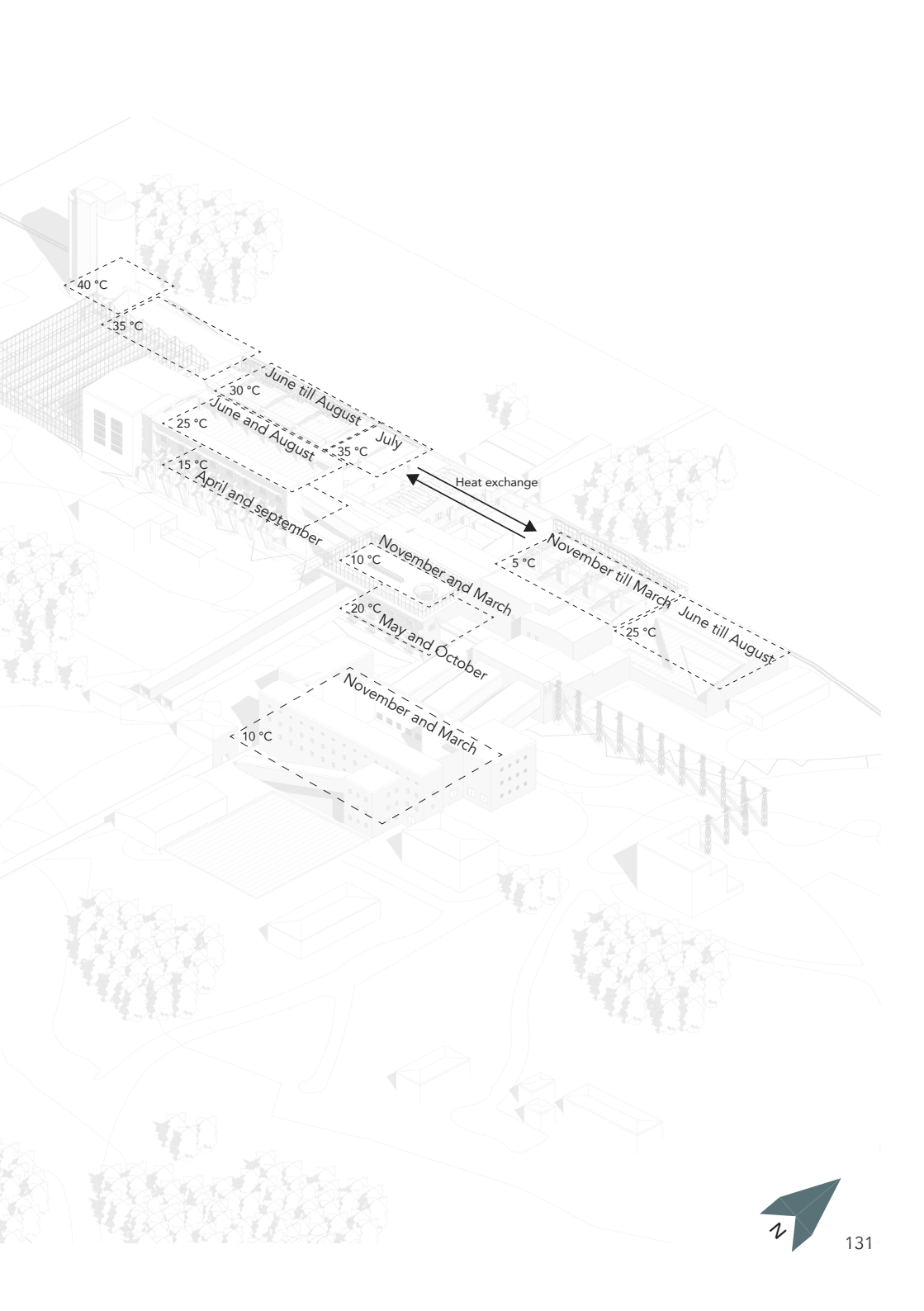
As shown with the water flow diagram, the water temperature varies per room. By using a mix of natural and mechanical ventilation, all year round one or two rooms can be naturally ventilated which reduces the heat usage and lowers the energy input of the building.



Climate design- Temperatures of rooms and the possibility of natural ventilation



approx. 10 °C


40 °C
35 °C
June till August
30 °C
June and August
25 °C
July
35 °C
15 °C
April and september
Heat exchange
November and March
10 °C
20 °C May and October
November till March
5 °C
June till August
25 °C
November and March
10 °C

7._ RESTAURANT+FILTER

Data:

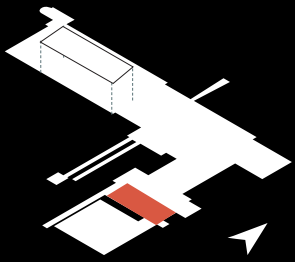
Atmosphere:	Relaxation
Structure:	Rustic look
Water compatibility:	View upon filtration system
Sound:	Full of voices, echoing
Temperature:	22°C
Natural ventilation:	June to August

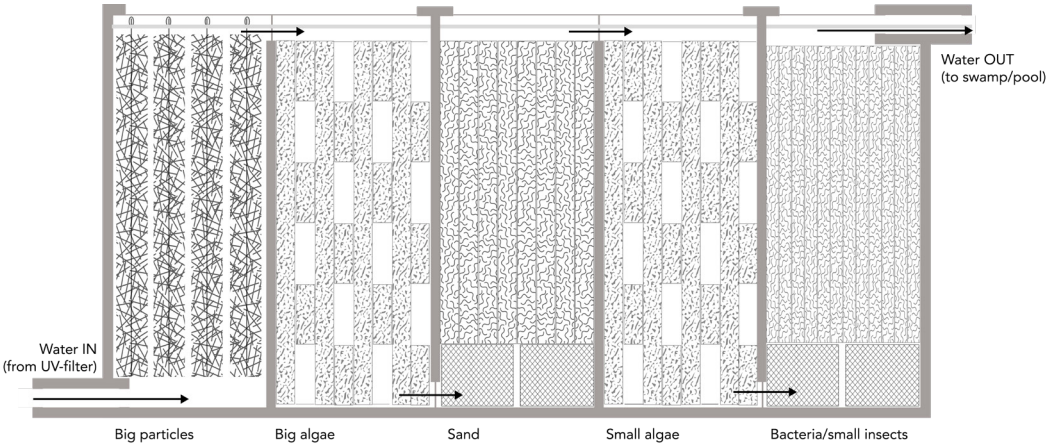
Materials:



Movement:	Multy-Directional, guided by signs
Interior/exterior tension:	Inside/outside relation tangible
Communitas:	Reflection on examination with group
Light:	Natural light with warm tones

Place in building:




Water OUT
(to swamp/pool)
Water IN
(from UV-filter)
Big particles
Big algae
Sand
Small algae
Bacteria/small insects

FILTRATION SYSTEM

After the current dive bath and examination, the divers will have passed their training. To celebrate this and to take a breath after this training, they will have a meal together in the restaurant to reflect on what they have achieved. This group bonding is an important step within the liminal transition, or as Victor Turner called it, communitas. Communitas is something that naturally occurs when a group of people are put through a test. As can be seen by initiations of fret houses and in the army, where beginners are put through a similar liminal ritual but what is mostly done to evoke a group bonding. The atmosphere here is therefore very warm and cosy to let the people come to ease and willing to talk with others.

Next to the restaurant is the cold water filtration system. To have it visible from the restaurant, it increases the awareness of the use of natural resources. Because one of the by-products of this natural filtration system is algae.

In my research I went to my parents where they have a natural filtered koi pond. By analyzing how it works and by seeing how much algae comes out of the filtration system, I was able to make a calculation of how much Algae will be produced throughout the year. This came out to be around 21.000 liters of algae per year, which can be divided by two to have the dry weight without water which comes out at 10.500 kg of algae per year. With this amount of production per year, it is good to use this in the building.

CALCULATION OF THE POND

POND:	4m x 7m x 1,5m	=	42 m^3
FILTER:	4m x 1m x 1,5m	=	6 m^3
additional swamp		=	1 m^3
			---
			7 m^3

7/42 = 1/6 filter to pond

EXAMPLE

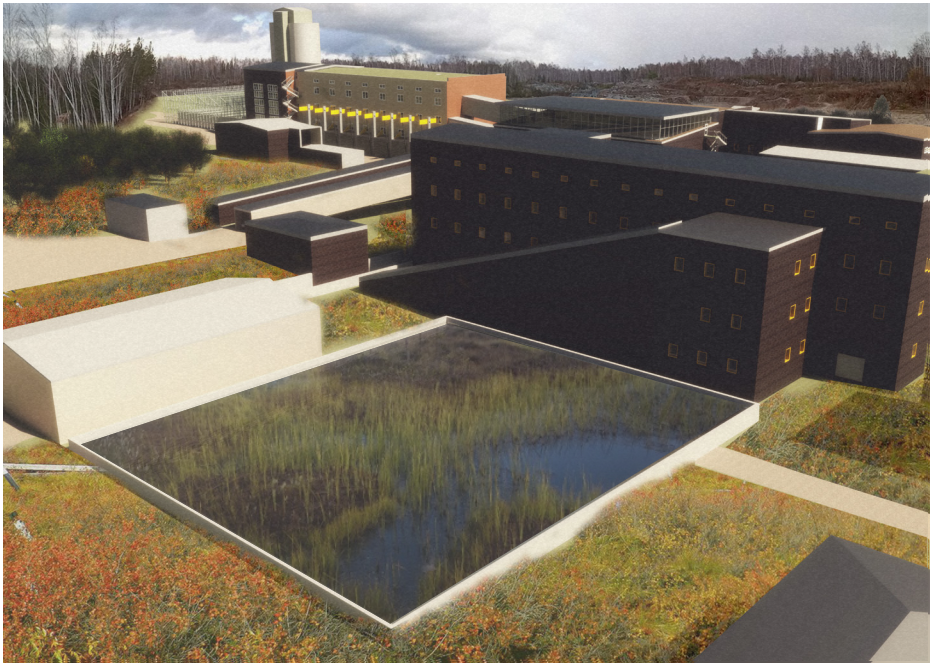
SWIMMING POOL:	50m x 25m x 5m	=	6.250 m^3
FILTER:	6.250m^3/6	=	1.042 m^3
1/7th is outside swamp		=	149 m^3
FILTER SIZE INSIDE:		=	893 m^3\

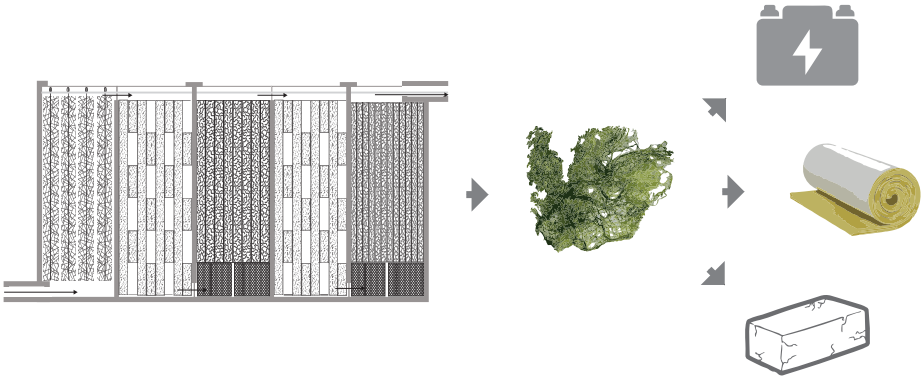
ALGAE 'PRODUCTION'/YEAR

POND:	7 m^3	=	20 L algae/year
SWIMMING POOL:	1.042 m^3	=	2.977 L algae/year

ROUGH AVERAGE OF FILTER

SWIMMING POOL:	6.250 m^3	=	1.042 m^3 filter
QUANTITY POOLS:	7	=	7.294 m^3 filter
ALGAE/YEAR:	7.294 m^3 filter	=	20.839L algae/year



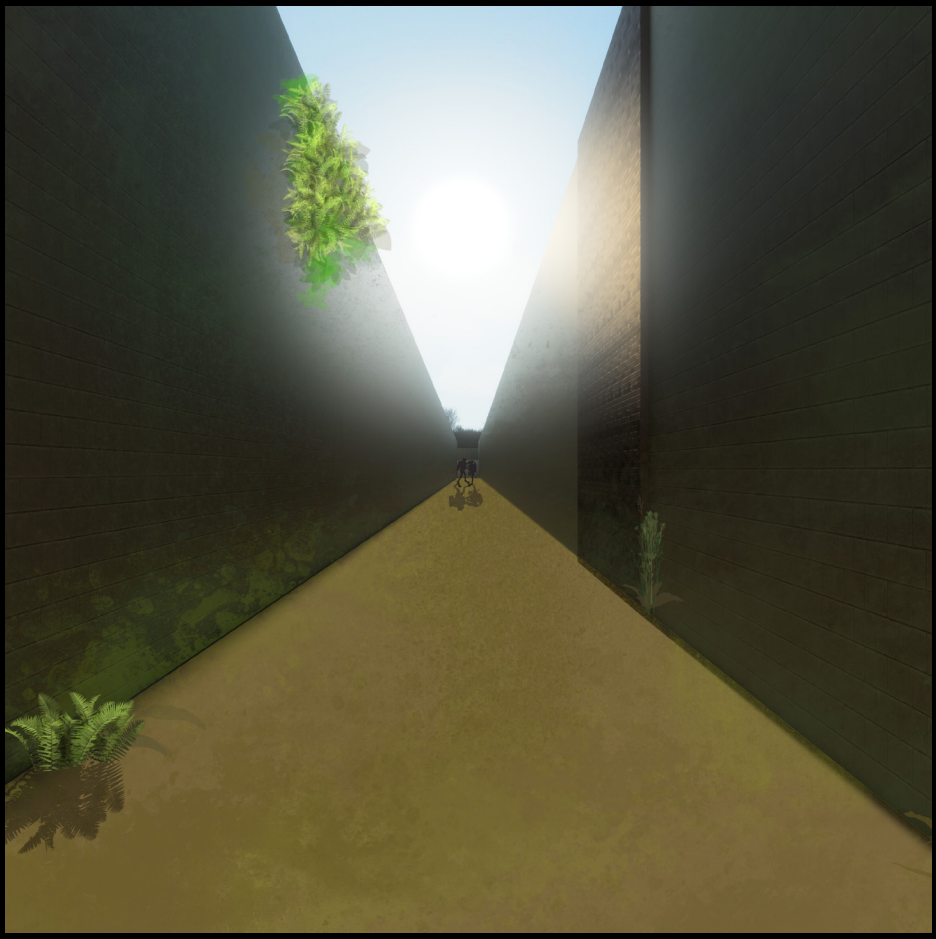


ALGAE USAGE AND TRENCH

The algae has the possibility to be used for three different causes. You could make building blocks out of it, this could be used in the first stage of the making of the building, that when the pools are already in use, the building could slowly be formed around it. The second stage is to use it as insulation. Algae had a fibre structure and when it is dry can be used to insulate the building. The usage of algae as insulation material is very limited, but the current research that is done is promising. The third and final use of the algae is as an energy source. Because the algae contains a lot of energy, and the CO2 output is much lower than natural resources like oil or gas, it can be used to warm up the water in the warm water filter. Before we go to the last part of the building, here is also an overview of the swamp outside. This swamp is put there to filter the toxic blue algae, making the water quality for the building as well as for the quarry reservoir safe to swim around throughout the year.

The last part of the building is the trench that leads towards the quarry reservoir. The trench will be constructed out of natural resources but with straight lines to be a ambiguity between the natural and the artificial

The trench was inspired by the Modi Operandi workshop we did during the preliminary research where I worked with natural and artificial shapes and the elements contrast and perspective.



8._ TRENCH

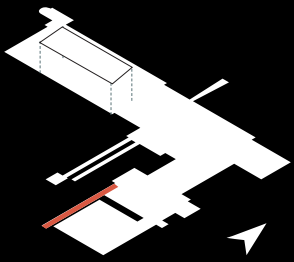
Data:

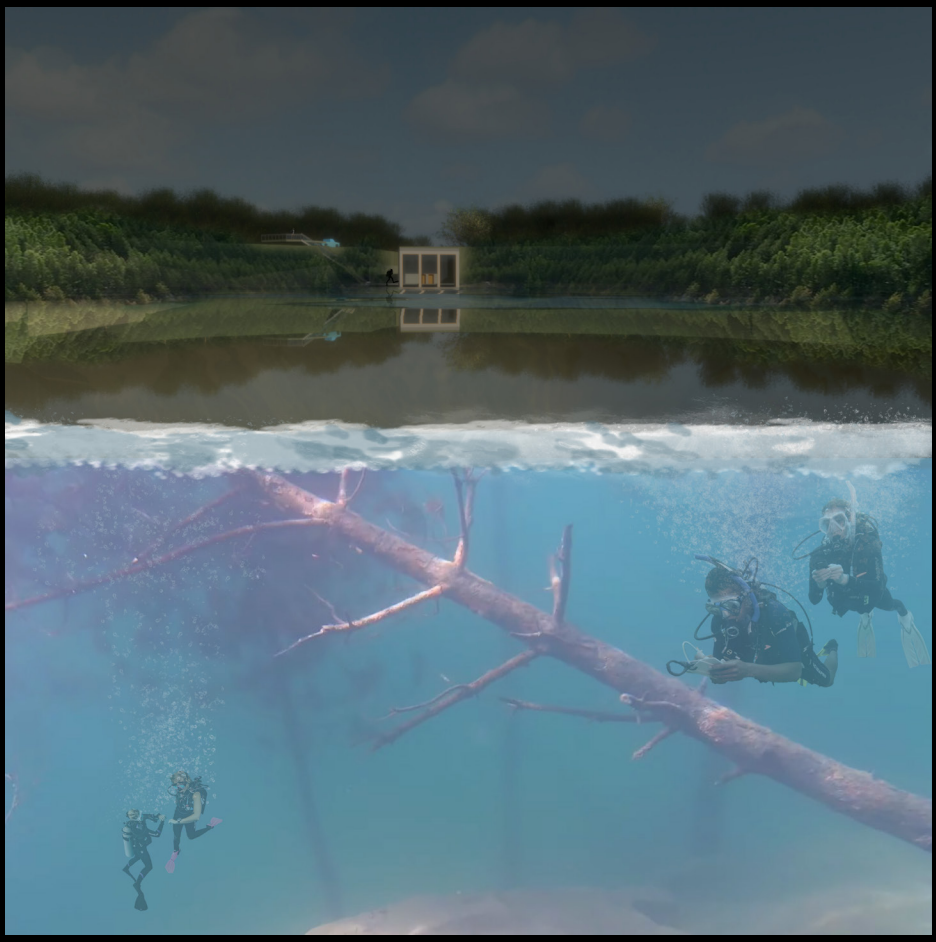
Atmosphere:	Exitement
Structure:	Natural structures
Water compatibility:	N/A
Sound:	Silent
Temperature:	Depending on season
Natural ventilation:	N/A

Materials:

Movement:	One-Directional, Guided by Perspective
Interior/exterior tension:	Nature slowly taking over artificial structure
Communitas:	Together with graduated group
Light:	Depending on time of day

Place in building:





9._ Quarry and Pavillion

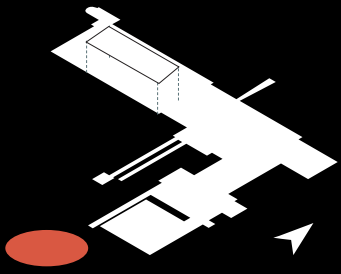
Data:

Atmosphere:	Relieve/Reflective
Structure:	Naked structures
Water compatibility:	Subordinate to the water
Sound:	Echoing
Temperature:	Depending on season [OUTSIDE] 21°C [INSIDE]
Natural ventilation:	June to August

Materials:

Movement:	Multi-Directional, Guided by Compass One-Directional, Guided by Light
Interior/exterior tension:	Pavillion Lighted from Quarry, clear tension
Communitas:	Group Dives and Reflection
Light:	Depends on Day time

Place in building:








QUARRY AND THE CONCLUSION OF RESEARCH

The trench will lead to the quarry reservoir with accompanying pavilion. Here the group of divers will have their first practice dive, or, speaking in the terms of the liminal transition, where the aggregational face is started. Within the quarry the people can dive to the bottom and experience all the relics of the bottom and afterwards they can have a drink in the pavilion overlooking the quarry reservoir.

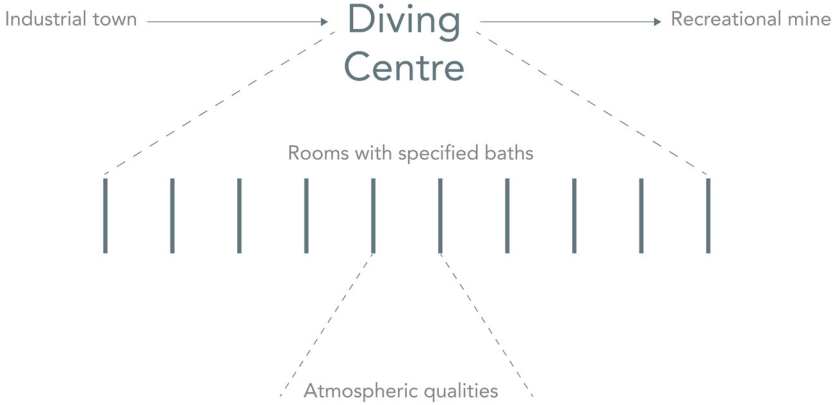
The reservoir houses a lot of different interesting relics that have been submerged like the old pumphouse, staircases, trees, old machines but also some graffiti art on the walls. Because of the way the quarry has been created, there are some steps at around 10, 20 and 30 meters depth.

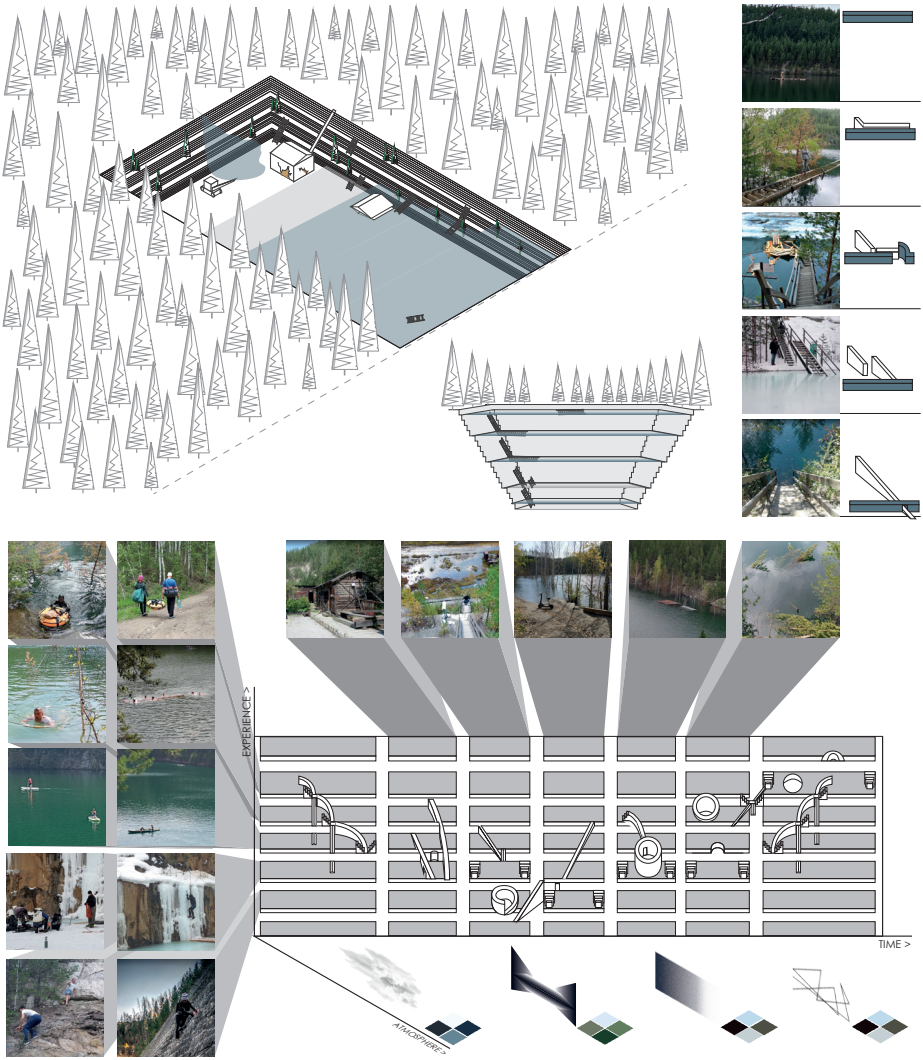
Looking back to my research, where I analysed the period in which the quarry filled up, it shows even better what makes it such an interesting place to go scuba diving, because it is like a time capsule ready to be explored. But it also brings my research to a full circle, whereas where the research started with a phenomena I experienced during scuba diving and where I analysed the Staraya Talc quarry, my design ends with the talc quarry reservoir being a new scuba diving spot.

To conclude, I think the design works as not being a final destination, but rather an in-between qualitative space not made as a non-place to just go through, but rather as a liminal place. The different rooms all have their own identity and atmosphere and built up experience needed for the final destination, the Staraya Linza Talc Quarry. The usage of materials found on site, but also the algae that is produced naturally within the building made it a fun challenge to see how far I could go to integrate the existing with the new. Furthermore, I do think that, how expensive a swimming pool normally is in maintenance, the use of geothermal energy, algae power and heat exchange between pools makes it much more efficient. The impact of my intervention will have a great influence on the town of Sjabrovski, which will have an influx of visitors, needing sleeping accommodation and will need to eat. Therefore it brings back productivity to the town that is now transgressing into a commuter town. I want to end my presentation by thanking my teachers for their guidance, but also I would like to thank my father, because without him I would have never experienced scuba diving and this design would not exist.

Conclusion – Overview of the building

Design




EXPERIENCE >
TIME >
ATMOSPHERE >

REFLECTION ON THE PROJECT/PROCESS

Table of Content

Introduction

My research started from my personal experience I had during my hobby scuba diving. During my first boat dive in the south of France, when I went down holding the anchor line tight, around ten meters depth I saw something rather strange. There was a vagueness in the water and when I went through it I felt cold, the colours where even more blue and the sounds of boats I could hear before disappeared.

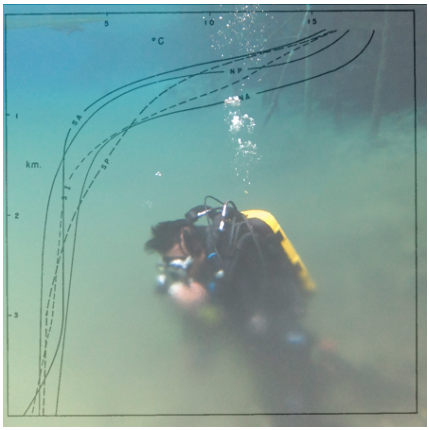
This vagueness in the water is also known as the thermocline. This rapid shift of temperature comes from different water currents clashing together, creating a kind of film that separates the two currents from each other.

This transition however, was in my experience, like an initiation. I first segregated from my first reality of warm water with the sound of the boats and clicking of the anchor line against the boat. Then I came in the threshold where there was this vagueness of mixed temperatures, sounds and colours and finally I had to adapt to the much colder temperature and the new atmosphere, but when I did, it gave me calmness.

This form of transition is in the anthropology called a liminal transition. When I dove deeper into this topic, it really fascinated me, hence why this became the main theme of my design project.

Liminal comes from the Latin Limen that means threshold. And that makes sense, while as I described the thermocline, there is a separating element between the warm and cold water current. But the theme liminal in anthropology finds its origin in the rite of passage, most common in initiation rites. Arnold van Gennep already wrote in 1901 about rituals consisting of three stages, the segregation, the margin and the aggregation. It took until 1967 when Victor Turner redefined the margin phase as the liminal. He wrote that important parts of this liminal phase were to get rid of the structure of society and to be sort of reborn from the ambiguity.

Also an important part of liminality is communitas. Victor Turner saw in the rite of passage that during the liminal process, people were bonding and especially in this phase where there was no structure.



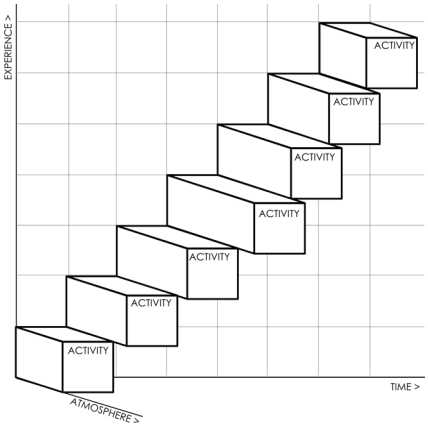
4 main elements that help with making the liminal period more tangible are:

- Time;
- Experience;
- Atmosphere;
- Activity.

The graph on the bottom portrays the relation of these four elements to each other. On the x-axis is time, because of the temporal nature of liminality. Everything needs to happen within a certain period. During this time, you build up experience of the new phase. You start with a zero point and from there you gradually built it up. Another important factor is atmosphere, here portrayed on the z-axis. In rituals, there is a lot of symbolism that conveys a certain atmosphere which are done during the variety of activities. The more atmospheric the activity there is, the greater the activity is during the liminal period. This graph became a tool for me to visualize how I intent the building to function.

One key feature of my research was the border condition Yekaterinburg finds itself in, namely the transition of going from an highly industrial city to a free-market oriented city. Its global position on the new silk road makes the city interesting for big multinational companies that have located in the city. However, this transition is somewhat faltering and there is not much room between the two identities of the city. Where it on one hand tries to have a western mindset in its economics the social aspects tends to be problematic with a shame culture towards disabled people and a poor female empowerment with one hundred professions still prohibited to be practiced by women. To emphasize on this tension between identities, I wanted to have the organization of my building adapted to this, using my definition of the 'Liminal Place':

"A place that is in a transitional phase where it has passed the point of no return and has segregated from its previous state but is not yet aggregated to the next state. This place does still have elements from its former status and begins to show signs of its future status, but in its place becomes something particular with its own characteristics."



Segregation

My approach starting from P2 was to find a suitable location for a liminal place within or close to Yekaterinburg. Before P2 I was planning to design a landscape park within a mine that is now still in work, but I was rightly corrected when the mentors told me to find a better site with a smaller perimeter. From here I spent the first two weeks after the P2 on finding out how my definition of the 'Liminal Place' should be physicalized into a design strategy and what location should be fitting for the implementation of the 'Liminal Place'. The mentors pushed me in the fact that liminality should remain the main theme of my design and that I should not compromise it to better fit a certain narrative, while I tended to make some concessions in just finding a location.

From my personal interest in scuba diving and the thermocline I experienced during scuba diving together with the liminal transition Yekaterinburg is going through. I made a list of requirements the potential site should comply too, to make the liminal place work. What came out of it, was that it should become a diving centre within an old factory near a water body, so that the old factory could help with the liminal transition going from an industrial mindset to the modern more recreative mindset where derelict industrial places find a new qualities. Within Yekaterinburg it was not easy to find a place like this, while in the city abanoned places are already getting destroyed and replaced where this does not happen outside of the city.

I think everything fell in place when I revisited the case study site from my theoretical studies and analyzed it for being a potential site for the design. The former talc quarry that turned into a lake gave me a lot of inspiration for my research into the liminal transitions, and it would therefore be a great opportunity to further explore it with my design.

The site offered me the space to implement my program. But where my program came out with certain dimensions, the intended layout turned out to be fifty times to big. Rightfully my mentors mentioned the factory might be big enough to situate the complete program within. Therefore I started analyzing the talc combine itself and estimated how the talc streams would have moved through the building. By mapping these material flows, I was able to understand how the routing could be made possible inside of the combine.

To overcome the 350 meter distance between the factory and the mine, I analyzed the best solution to overcome it. Looking at the technique they used to carve out the mine itself I used the dimensions needed to create a trench that could be formed from the same technique. To improvise, adapt and overcome these kind of challenges by looking at what is already available has brought me some great solutions.

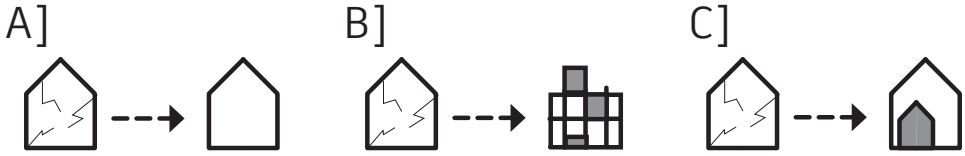


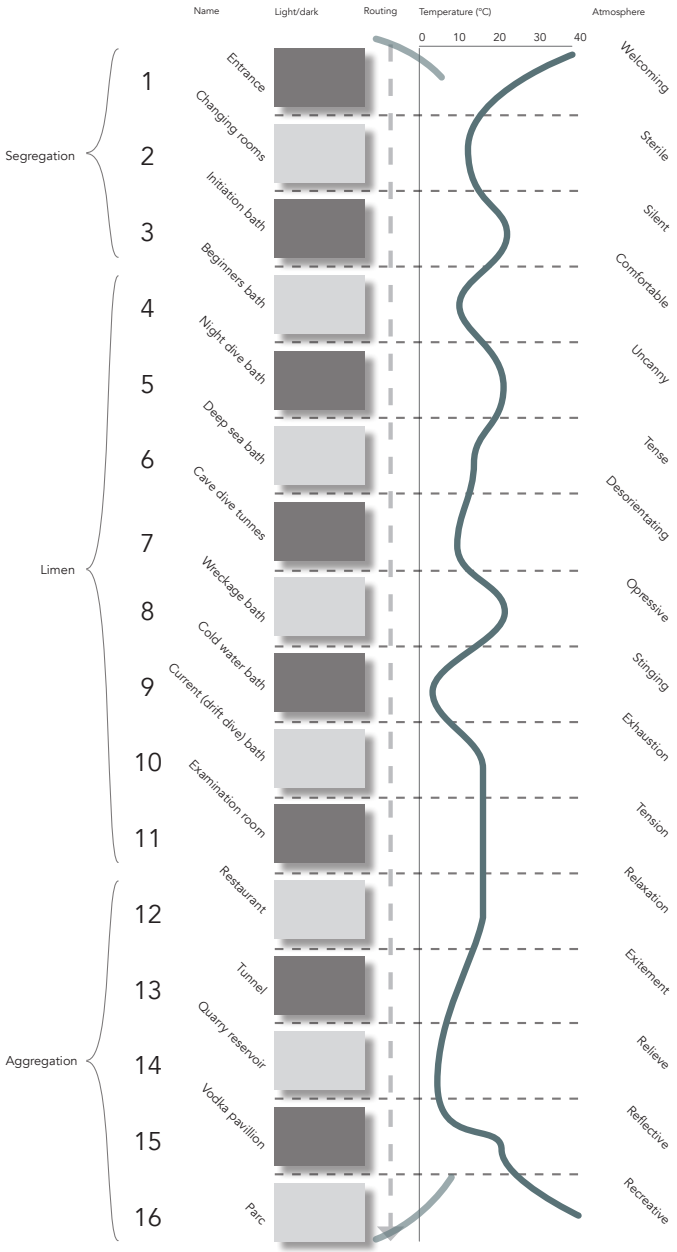


From the material flow of the factory analyzed, the next steps followed. One of the challenges I faced was the fact that the factory contains sometimes up to 5 levels and because of the way the machines worked, the flow of some parts of the building were vertically orientated. With the horizontal character of swimming pools, there would be a lot of unused space within the building. While this should not be that big of a problem, I wanted to see if it was possible to verticalize the layout by stacking some pools on top of each other. Constructionwise this became a big challenge because of the current way of constructing pools. The easiest way was to go for concrete, but because of the unsustainable nature of the material, I wanted to go for a different approach. In the meeting with my construction teacher we came to the conclusion that I should look for a way to make the stacked pool out of wood within the existing structure and see how to make it water proof. This ended up being further worked out in the corner workshop.

Another challenge was how to handle the building. Here I proposed three intervention strategies to have the building used to its fullest extent. The three strategies were: renovating to the old state (A), reusing the structural parts (B) and build new structures inside (C). Most parts of the building are very poorly insulated because as a factory, comfort had little to no priority. This makes the first strategy to renovate the building to its former state harder if you want to remain the outside aesthetic. Therefore by combining strategy A and C, you improve the current structure but dont have to insulate that much because of the double layers. This combination became the main challenge during the Corner workshop, where, as mentioned before, I created a external structure that penetrates the existing building where a curved wooden pool is situated, creating a mix of the existing structure with a new sustainable structure within. This part became the core of showing how the liminal place takes shape.

Because of its function as diving centre with a variety of different baths, water started to play an increasing important role within the design. To get deeper into the understanding of water filtration I met with my parents who have a natural filtered koi pond at home. Luckily my father had to clean it when I visited them so that I could analyze and make photos of the filtration system. By seeing what the size was compared to the koi pond, I could then make a calculation for the size needed for my building. However, I found out that during the cleaning a by-product that was extracted from the filtration system was algae. This algae has a fiber structure and when it dries it gets a certain strenght. I saw this as an opportunity fo see if this naturally created material could have a function within the building, maybe as building material, or as insulation. By doing research I found out that there has not been an extended research to this material in the way I intend to use it, which makes it harder to prove if it would be succesful. My mentors supported me to elaborate on this but to be cautious not to go to deep into it.




Name
Light/dark
Routing
Temperature (°C)
0
10
20
30
40
Atmosphere
Segregation
Limen
Aggregation
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Entrance
Changing rooms
Initiation bath
Beginners bath
Night dive bath
Deep sea bath
Cave dive tunnes
Wreckage bath
Cold water bath
Current (drift dive) bath
Examination room
Restaurant
Tunnel
Quarry reservoir
Vodka pavillion
Parc
Welcoming
Sterile
Silent
Comfortable
Uncanny
Tense
Desorientating
Opressive
Stinging
Exhaustion
Tension
Relaxation
Exitement
Relieve
Reflective
Recreative

In the end, the most important part for my climate design is how I can integrate a interconnected water flow with different temperatures flowing through the building. By combining it with the liminal design, some materialization and layouts can be beneficial to have an optimized water flow. Another fact was that there is a big water body close to the factory that could have a symbiotic relation to the building. Therefore I tried to find information about water with high amounts of talc in it and I found out that talc is a natural filtration material that binds bacteria to it. This fact enhanced the idea to create this symbiotic relation between the quarry and the factory. By discussing this idea with the climate consultant, I was able to improve the idea even more by making a variety in water temperatures and to add a filter that salinates the water to create two salt baths, but also to create an extra filtration.

All these technical elements aside, liminality kept being a big part of my design where the routing through the building should still be guided by atmosphere, activity, time and experience. Therefore I made a diagram of the program to see what rooms/baths should follow what rooms/baths. (left)

With the help of the talc material flow I analyzed before, I was able to make a clear routing through the building leading up to the quarry. This however created a new challenge, how to have a flux in water temperature between baths, but keeping interconnectivity present. For this I had to draw out how the water should flow through my building, but I found out this to be more challenging than I expected because of my underdeveloped back of house. By designing the back of house, the routing through the building became even clearer. Furthermore, it gave me the chance to integrate the water flow even better to enhance the atmospheric experiences.

With the water flow all ready I worked further on my vision for the different rooms. Because of the many different baths that are part of the building, the visions remained in a sketchy and referential level of execution at the P3. This was also rightfully mentioned by my mentors who said this needs more work. I intended on using the instructional videos and exercises that will be used for specific specialties and like the manhattan transcripts but also Tschumi's screenplay series that I also used in my preliminary research before the P2. This however turned into reading the book about Atmospheres by Peter Zumthor. By listing the nine categories of creating atmosphere and translating it towards my design I was able to make a table where every room was (see table on page 10). This list turned out to be quiet helpfull in defining the folowing parts:

- Atmosphere;
- Temperature;
- Ventilation;
- Structure;
- Materials.

By creating atmospheric renders of the different rooms, I was able to create a walk through the building, further elaborating the theme of the Liminal Place where different activities will have their corresponding atmosphere that are in their place contrasting with each other to create tresholds between the rooms (graphs on page 11).

This brings the building to a full circle, where the structural elements and climate strategy enriches the building. I can therefore say that I am convinced that the building delivers in being a Liminal Place, where it teaches you something new, by going through different activities supported by an atmospheric quality.

Aggregation

During the P3, I had set up the overal setup and direction of my building and wanted to work to the P4 on strenghtening everything I already had. Where I got to hear at P3 that my ambitions might be a bit too high, I can say I fulfilled my ambitions to a point where the main elements of my ambition are worked out.

In line with the studio, I properly worked out the intention of the design within its wider context. The situation of the transformation of Yekaterinburg does not only affect the built environment, but also impacts social and ethical elements. The design comes directly from these aspects and within the liminal transition Yekaterinburg is going through, my design can contribute with not overcoming this transition, but find qualities within the transition.

Furthermore the climate design and structural design have over the period between the P2 and P4 been lifted to an, in my opinion, sufficient level as well. Where my design started as seperate researches that only touch on small elements, in the end it has created ONE design where climate design and and structural design are not only integrated, but also improving the narrative.

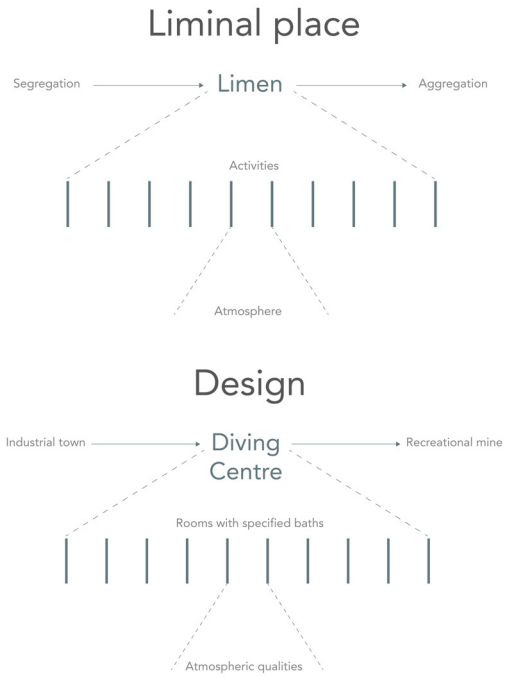
The only two things I wanted to do, but because of time restraint was unable to do, was to elaborate on one more room contrasting to the one I already did and to further workout the site around the building to make the rite of passage really come to a full circle. But I think within the time between P4 and P5, this will be doable.

Atmospheres

Room	General atmosphere	Body	Compatibility (to water)	Sound	Temperature Varieties	Surrounding objects	Movement	Interior/exterior tension	Intimacy /Communitas	Light
Entrance	Welcoming	Strong structure	/	Full of voices, echoing	Warm in winter Cold in summer	Tidy, well shown information	Multi-directional, guided by signs	Chaotic surroundings to strengthen the order	Gathering spaces for groups	Natural light or warm tones
Changing rooms	Sterile	Worked away structure, rounded edges	/	Echoing, hollow	Slowly dropping just below body temperature	Minimalistic and regurlary cleaned	One-directional, guided by perspective	Complete seclusion	No intimacy, individualistic	Artificial bright lights
Initiation bath	Silent	Heavy structure	Soft materials	Completely silent	Water much warmer than surrounding	Empty	One-directional, guided by light	Complete seclusion	Individual going into the water, first communitas	Dark surrounding with only the water illuminating
Beginners bath	Comfortable	Light structure	Naked structures, visible concrete	Full of voices, echoing	Warm water	Facilities for safety well visible: first aid, lifelines, etc.	Multi-directional, guided by activity	Inside/outside relation tangible	Together with buddy and instructor	Natural light with clear water for activities
Night dive bath	Uncanny	Mix of structures	Old elements submerged in water	Silent with metal sounds	Cold water	Machines from old factory + existing structures	Multi-directional, guided by compass	Complete seclusion	Together with buddy and instructor	Total darkness
Deep sea bath	Tense	Overhanging slabs	Overhanging slabs	Echoing	Body temperature	Existing structures	One-directional, guided by light	Windows giving overview	Together with small group	Natural light + light coming from above the tube
Cave dive tunnes	Desorientating	Mix of structures	Natural stones	Silent	Below body temperature	Natural materials	One-directional, guided by light	Complete seclusion	Together with small group	Dark with some faint light coming from the distance
Wreckage bath	Opressive	Heavy structures	Corroding in the water	Clicking sounds	Body temperature	Wreck	Multi-directional, guided by shapes	Exterior shapes interior	Together with group	Pool being light, wreckage being dark
Cold water bath	Stinging	Low hanging ceiling, cramped	White colors	Silent	Freezing temperature	Sharp edges	Multi-directional, guided by activity	Inside/outside relation tangible	Together with group	Artificial bright lights
Current (drift dive) bath	Exhaustion	Heavy structures	Natural stones	Heavy structures	Slowly rising until quarry temperature	Empty	One-directional, guided by light	Complete seclusion	Together with group	Dark with some faint light coming from the distance
Examination room	Tension	Worked away structure	/	Sounds absorbed	Just below body temperature	Minimalistic,	One-directional, guided by signs	Complete seclusion	Individual and group exam	Light room, natural lighted
Restaurant	Relaxation	Wooden beams visible	/	Full of voices, echoing	Warm room	Big round tables, natural materials, plants	Multi-directional, guided by signs	Inside/outside relation tangible	Reflection on personal examination with group	Natural light or warm tones
Tunnel	Exitement	Natural structures	/	Silent	Warm in winter Cold in summer	Empty	One-directional, guided by light	Complete seclusion	Together with group that had examination	Dark with light at the end
Quarry reservoir	Relieve	/	/	Natural sounds	Cold in winter Warm in summer	/	Multi-directional, guided by compass	/	Group dives	Depending on daytime
Pavillion	Reflective	Naked structures	subordinate to the water	Echoing	Warm room	Small tables, strong drinks	One-directional, guided by light	Lighted from the reservoir, clear tension	Reflection with group	Lighted from the reservoir, warm lights at night
Parc	Recreative	/	/	Natural sounds	Warm in winter Cold in summer	Corroding industrial relics	Multi-directional, guided by signs	/	Group based walks	Depending on daytime

My passion for this project has increases significantly over the period between P2 and P4 and now that I dove deeper into how everything comes together, the passion grew and grew. My mentors really helped me shape the building in the direction that I intended it should go and where I sometimes tried to little they encouraged me to work on it more and where I went to detailed or to wide focussed they made me realize I should focus on other parts.

Overal, the last period has been very fruitful and I have done everything within my reach to present a building that can convey on how the liminal place can help with social and ethical issues in a city that is on a temporal border in transforming from one state into the other. And I think the design delivers that.



FINAL WORDS

To conclude, The project places itself in a rather undiscovered topic in architecture, liminality. The liminal transition is something that happens a lot, but is mostly only analysed in a retrospective manner. By creating a physical liminal design you evoke a more prospective view on how we experience liminality. I hope that my design can create a change for the architecture profession to re-evaluate the way we build. Where we almost always create a temporary design that is static throughout time instead of being able and encouraging in re-qualify it.

The design will put great emphasis on communitas as well while it should reform the social relations that are now often clashing in a transforming place to let them come together. By the usage of wetness, reflectivity, perspective, entropy and transgression, it will strengthen the liminal motive mentioned before and can in its place redirect the current retrospective view on liminal transitions to a more prospective view. This will increase the knowledge of what qualitative nature lies within introducing liminality into the architectural profession. By building upon theories that were often only viewed from an anthropological eye, a more physical approach might give many new insights on how we as humans interact with architecture and transitions.