sensory bath
thrilling and calm encountering in a vertical bath experience
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abstract

This project is about how architecture can be used to achieve a spiritual sensation through thrilling and calm experiences. The combination between these has been investigated and applied in a bath house on the cliffs of Fredhäll at Kungsholmen in Stockholm. The main part of the project is about finding a conceptual idea of how to use light, shape and contact with the water to create spiritual sensations and the resulting building proposal is therefore a conceptual idea rather than a buildable product.

Mainly, three tools has been used in the exploration of thrill and calm; daylight, shape of the room and connection to the water. The thrilling and calm experiences has been categorized into different sub-feelings; captured, falling, fear of the unknown, embraced, sacred and free, among others. This was done to be able to evaluate and describe the experiences.

The project has been designed in an explorative model based way, where each room has been created separately. The rooms have then been combined into clusters, starting with one room adding the next, finally resulting in a maze-like structure with new experiences around every corner.
discourse

In the stressful life we are living today, we are more stuck in the past and planning for the future than we are embracing the present, and we are often caught up in daily routines that are not stimulating our senses. Not being present creates a feeling of losing control and of not having contact with ourselves. Many of us therefore search for spiritual sensations to get a conscious recognition of being alive. Some people seek the thrill by exposing themselves to fearful or exiting activities, others seek their inner calm.

In this project I have investigated how architecture can contribute to spiritual sensations by focusing on the calm and thrilling experiences and the combination between these.
emotion wheel

In the emotion wheel below it can be seen which emotions that is included in my definition of calm and thrilling experiences. The calm experience can be achieved by feeling free but also by feeling embraced while the thrilling experience can be achieved by a combination of excitement and fear. There are several different features that can trigger this thrilling sensation, feeling captured, not knowing what is coming ahead, being high above the ground or feeling that you are controlled by something.
emotion categories

To be able to compare and describe the different spaces and sensations the emotions have been categorized and different tools for achieving the experiences has been created. For example the sense of being captured can be achieved both by being below something or by not having any way back as can be seen in the table on the next page.
**thrill**

**CAPTURED**
- Below
- No way back
- Only one way to go
- Squeezed

**FALLING**
- High above
- Steep slope
- Slippery/unsafe ground

**FEAR OF THE UNKNOWN**
- Not seeing ahead
- Dark
- Lost

**EXPOSED WOUNERABLE**
- Cold
- View

**POWERED**
- Not in control over body
- No choice
- Controlled by the room

**calm**

**FREE**
- View/Overview
- Power
- No boundaries

**SACRED**
- Watched over
- Enlightened
- Blessed

**EMBRACED**
- Taken care of
- Protected/Sheltered
- Peaceful

**SAFE**
existing examples

On the next side some existing examples of how to use architecture to create different emotional experiences can be seen. In these projects the purpose of creating the spiritual sensations is often to emphasise the story that is to be told. In many churches the light and room shape has been used to create a feeling of awe, emphasizing the power of god, and in the Jewish museum the feeling of fear has been used to make you understand the horror of the holocaust. In this project the spiritual sensations have instead been used to create a focus on yourself and to create a feeling of being present.
FEAR - Jewish museum, Berlin

CALM - Can Lis, Portopetro

AWE - Pantheon, Rome

THRILL - National tourist route Norway
site

The site is located at the cliffs of Fredhäll at the western end of Kungsholmen in Stockholm. Stockholm has a unique combination of city vibe and closeness to nature and the site in Fredhäll is a good example of untouched nature in the city center that should be enhanced.

The location in Fredhäll connects to the large park streak going through Kungsholmen and also to the shore walk around the island and is therefore a good location strengthening the existing park areas. There are two large roads surrounding the area; Essingeleden and Drottningholmsvägen which is passing over Traneberg Bridge, these are both affecting the environment on the site.
site investigations

To understand the properties and limitations of the site and to be able to choose the specific location, the surrounding area was investigated carefully. The investigations included the style and buildings in the surrounding area, the properties of the cliffs, the sightlines and views. Also more theoretical information about the site was collected, like wind data over the year and variation in water levels.
a walk along the cliffs

Along the cliffs you encounter a lot of different spaces. The contrasts between the very closed rooms and the rooms that are free and open towards the sea is thrilling. At one moment you are on steep cliff with a view totally open towards the sea and you feel both fear and excitement, in the next moment you are in a crevice in the rock glimpsing the water far ahead feeling calm and safe.

The walk goes from high above the sea to really close by. On the cliffs high above the sea you feel power, like you own the world, close the water you feel more insecure like the water has the power over you, especially a windy day. The relation to the water has a strong influence on the feelings along the cliffs.

Comparing the map with the topography perception, we can see that parts of the walk seems much shorter than it is, which is caused by the variety of dramatic and exciting rooms.

The texture of the ground is varying a lot making you aware of the change of the landscape, it goes from large rocks you have to climb over to smooth soil paths, from rough gravel patches to smooth and flat cliffs. Variation in the texture is maybe not as evident as the topography and the change in space but it gives another dimension to the journey.
choice of site

The most important criteria has been to find a place with difference in contact with the water, a place where the cliffs softly goes into the water and close by are very steep.

Regarding the sun, there is good conditions all along the site, but the best condition is achieved at the cape.

It is interesting that you do not hear much of the traffic from the Traneberg Bridge even though it is close by and that the sound of the airplanes is decreasing a lot when you just get around the corner of the cliffs. The traffic from Essingeleden is though present all the time, but the sound is increasing when you come closer. With regard to disturbing noise the best location for the building is as close to Traneberg Bridge as possible but still being around the corner sheltered from the airplane noise.

In the map on the next page it can be seen how the conditions have affected the choice of location on the site.

criteria
for the choice of location on the site

- Difference in contact with the water
  - flat cliffs
  - steep cliffs
- Good light conditions and sun during most of the day
- Disturbing noise
- Vegetation
- Spaces along the cliff, giving different feelings, calm/protected, fear/excitement
building style

Fredhäll is built in the 1930’s and almost all buildings are from that era. Closest to site there are buildings with three to five floors but in the area most buildings are five to seven floors high. The colours and materials on the buildings is mainly light coloured plaster, mostly white but also pale yellow or orange, combined with white, dark pale green or dark red windows. Many buildings has corrugated iron balconies in white, soft pale green or dark pale rust red or steel bar balconies in dark green or black. The roofs are painted in pale green or red.

Some buildings close to the site.

Colors on the buildings in the area.
wind

You are quite exposed to the wind at the cliffs which is pleasant when the sun is very hot, but in colder weather the wind makes you shiver. As can be seen below the wind is mostly blowing from west but in bad weather its main direction is from the south.

![Wind direction charts](image)

Wind during the year and wind during the year when there is precipitation, based on data from 1951-2009 at Bromma airport (SMHI, 2013).

waterlevels

Mälaren is regulated by locks at Slussen and the risk of flooding is therefore very small. Today the capacity of letting water pass at the locks are not sufficient, and the water levels of Mälaren is therefore varying between 0.41 m and 1.42 m above sea level with a mean value of 0.86 m. But when Slussen is rebuilt the discharge capacity will be five times larger and therefore flooding will not be taken into consideration in this project.
sightlines / important views

Important sightlines and monuments viewed from the site is among others the new tower in Alvik, the view through the two bridges and a green area on Stora Essingen. The Alvik tower is important since it is a natural eye catcher and it also gives a feeling of being in the city atmosphere.
design investigations

To find features that gives a feeling of calm and thrill several investigations and experiments were conducted. To get a good idea of how light and shape could be used it was necessary to build models and check the behavior of the shape with real light. Also in the other investigations physical models were beneficial since I find it the best way to keep the mind free and makes it easy to change and adjust, and to find interesting results from spare pieces laying around.
movement experiments

The movement experiments were conducted to find the relation between the spaces and how the circulation of the building would work. The models were made from Styrofoam, steel wire and wooden beads.

linear

linear winding
Even if the linear path is winding, you know it when you have walked it once. Not having different paths to choose gets less exciting.

parallel separated
Parallel paths with separated experiences, calm in one path and fear in the other. The different experiences is not emphasising each other when they are separated.

parallel intertwined
Parallel paths with mixed experiences. There are different choices of paths but they are not intersecting during the way. Interesting with the vertical movement.

diverging
Paths emerging in the same point but going in different directions not meeting again. You have to go the same way back.

corridor
Paths separating out from a main path. Easy to orientate but less exciting.

loop
Paths separating out from the same point, intersecting later on. There is a possibility to suddenly return to a point where you have been before.

simple intersection
Paths separating out from the same point and intersecting later on, you can meet along the way even if you take different paths. There is a possibility to suddenly return to a point where you have been before.

labyrinth
The paths are starting from different points and are intersecting in various places. You can get lost like in a labyrinth and then suddenly be back to a point you have been before.
connection between room experiments

This investigation was made to explore how different entering situations effect the perception of a room. The investigation was made by cardboard models.

glimpsing something
Excitement, want to find the way there.

wide path leaning upwards
Increasing expectation.

small opening
Anticipating small room. Have to bow or crawl to get in, makes you feel vulnerable.

large opening
Anticipating large room. Expecting something exceptional. Making two rooms feel like one. Giving overview of the layout.

deep opening
Sense of massiveness, have time to anticipate what is coming. Do not immediately see what is ahead, can just glimpse it.

going down in a hole
Anticipating dark and cold room below ground.

opening up towards something
Embracing the outside. Anticipating large room.
climbing up into Curiosity, discovering something.

from light to dark Blinded by light or dark, feeling vulnerable.

slide down gentle slope Feeling taken care of.

sliding into the unknown No way back, do not know what comes ahead.

jumping into Captured can not go back up.

narrow passage Feeling squeezed, captured, not seeing what is coming ahead.

walking through fog Not seeing ahead.
light and shape experiments

The focus of the study was on light, including amount and size of openings and on shape of the room including angle of ground surface. Some of the models were deliberately cut into certain shapes, others were put together from spare pieces. The models were made from EPS.

impression of room shape

angled room

Discovered place ➔ Excitement, Curiousness ➔ Thrill

edgy room

Discovered place ➔ Excitement, Curiousness ➔ Thrill

rectangular room

Fixed, manmade, impossible to adapt ➔ Controlled by the space ➔ Thrill

curved room

Unfixed place, possible to adapt ➔ In power of the space ➔ Calm

size of openings

large opening

Focus on outside even if the opening is just translucent ➔ Free, Exposed

medium opening

Focus in the direction of the opening, on the light source ➔ Embraced, Captured

small opening

Focus on the room itself ➔
effect of adding opening in eyelevel

opening above
- Captured below
  - Adding view

opening above and in eyelevel
- Embraced

light effect from angled openings

Diverging opening
- Diffuse light

Converging opening
- Clear light

relation between the opening direction

openings in same direction
- Being under something

openings in opposite direction
- Flow through the room

openings in multiple direction
- Dynamic but room in rest
impression of room shapes

leaning outwards

concave room

opening up sideways

leaning inwards
relation to the water experiments

The experiment was made to investigate how the relation to the water affect the experience. The models were made from EPS and plastic sheets.

under the water

- Being below the water surface/
  Being swimming high above
  the ground.

- Being below the water surface, have to dive down to
  find the “diving bell”

captured

- The opening out is under water
  and is not immediately found.

- The whole room is filled with
  water and you cannot get out of
  the water.

ways of entering the water

- Have to jump or fall to reach the water.

- Stroll gently into
  the water.

- Cannot walk nor
  jump into the water, have to slide into.
**feet in water**

- Strolling in the water along the path.
- Dipping your feet into warm water.

**ground surface**

- Path leaning towards the water on both sides.
- Have to jump on poles to get to the other side.
- Floating ground, unstable to walk on.

**fog**

- Fog makes you insecure, you can not see what is ahead.
from investigations to design

From the investigations I found some features that were extra interesting and I continued to develop these in the project.

movement experiment

I found the labyrinth movement the most interesting since it gives you a lot of different choices and possibilities to move and you can meet along the way even if you take different paths. You can get lost and then suddenly be back to a point you have been before and around every corner you discover something new.

I also found the verticality in the parallel intertwined movement very interesting even if the other properties with the paralell paths is not so attractive.
connection between room

Regarding the connection between the different rooms and spaces I found that the way you enter a room affect the feeling you get from the space. A small opening makes you bow to get in, creating a vulnerable feeling, and this could both emphasize the thrilling experiences or contrast to the calm experience making you more aware of the contrast.

small opening

The vertical movement is also something that I found interesting, since it brings out a curiousness and will to discover what is above or below, and this I found both in the climbing up and sliding down.

climbing up into

sliding down into the unknown/steep slope

Another interesting thing regarding the movement is the thick openings giving a sense of massiveness. It also gives you time to get an expectation of the coming space and you do just glimpse what is coming next and not immediately see.

deep opening
effect of adding opening in eyelevel

This phenomena was something that I found very interesting and useful in how the view and lighting direction can be used to give completely different impressions. For example with light coming from above, an opening in eyelevel immediately changes the impression of being captured below ground to a embracing feeling.
light effect from angled openings

The light effect from the angled openings is also something that I found interesting. Giving a different sense in the room depending on the angle of the opening. A diverging opening gives a diffuse light while a converging opening gives a clear light.
impression of room shapes

Regarding the shape of the room I found the angled and edgy rooms most interesting since these gives a feeling of the space being created by nature and discovered by the visitor rather than man-made as the rectangular rooms.
relation to the water experiments

In the investigation of the relation to the water I found some usable features, below I present some of them creating thrilling experiences. For example a diving bell under the water gives a feeling of being captured, a floor surface that is slippery and leaning creates fear of falling and a room where you do not find a way out creates a captured feeling.

under the water / diving bell

ground surface

captured
sub-investigation: opening in eyelevel

This investigation was a continuation of what I discovered regarding the opening in eyelevel and the angled openings. The purpose was to find a way to make an opening in eyelevel large enough to not feel captured but small enough to not destroy the light effect from above in rooms with opening in the roof.
process

The process has been model based and the sketching has been done only in physical models. The advantage with sketching in models instead of sketching on paper is that it is so much easier to understand how the spaces relate to each other. To actually have to construct a model of the building while designing it make you aware of things that you would not have realized otherwise and this results in new solutions. The process can be divided into four steps.

In the first step separate room sketches were made to come up with the design of the experiences. The tools used in creating the separate rooms was light, shape and the connection to the water.

The second step was about finding the relation between the rooms and the experiences. This was done both by conceptual movement sketch models but also by attaching the separate room models to each other. Several clusters were then created based on the models of the attached rooms. The rooms were clustered together on the basis that they should give each other something interesting or relate to each other in a good way. For example rooms with focus on temperature or underwater experiences. When doing this the interest for the vertical layout emerged as a cause of the interest in vertical movement.

In the third step the relation between the clusters was found and a core model was made based on the clusters. This was done by forming the mid of the building first and then adding experiences above and below until a tower was shaped.

In the fourth step additional experiences was added to the structure to fill up between the clusters. One room was added at a time, starting with the existing room figuring what experience should come next. Rooms and experiences was added, removed, changed and put back until the experiences, connection between the rooms and the order felt complete.
SEPARATE EXPERIENCES

COMBINING CLUSTERS

ADDING EXPERIENCES
the bath

The results from the investigations were applied on a bath house at the cliffs of Fredhäll. The purpose with the bath house was to give the space, light and water experiences a relation and a function, to investigate how their relation to each other could strengthen the experience and create a story when moving through the structure. The purpose has not been to create a proper building proposal but rather to display a concept for how light, shape and connection to the water can be used in architecture to create sensory experiences and a sense of presence.
main concepts

In the project some main concepts has been important apart from the main topic of the spiritual sensations.

vertical movement and layout

The first main concept is the vertical movement and layout. From the movement experiments and connection experiments I discovered that there is something interesting in climbing into a room or sliding down into something instead of moving on the same level. The different levels brings out a playfulness and urge to discover what is above and below you.

maze / winding path

The second main concept also emerged from the movement studies and is about the maze-like building layout. Several paths meets in different places creating different possibilities of how to move, you begin to feel lost and then suddenly you are back where you have been before. There are new experiences around every corner and you feel like being on an adventure, discovering new spaces. You do not immediately see where you are going, glimpsing something, without knowing exactly how to get there.
massiveness

The third concept is about the massiveness. There is something exciting with the feeling that a place is cut out, instead of built up. Like a cave. That mass is subtracted to create a space and that the room is so important that the surrounding spaces have to adapt to it.

contrast between narrow and open spaces

The final main concept is about the contrast between closed and open spaces. This has emerged from the walk along the cliffs, where you find this contrast between a very narrow crevice in the rock and the openness towards the sea at a ledge on the steep cliffs. The contrasting spaces and the unexpected shapes creates a feeling of being in nature.
design concepts

Below some design concepts that has been important in the creation of the building are shown.

layering of the building

To get free space for the bath experiences the vertical transportation like stairs and ramps and the technical spaces for ventilation and rainwater runoff are placed as layers on the outside enhancing the double wall concept.

double wall concept

As a way to achieve a feeling of massiveness the outer wall is built as a double wall, also making it possible to direct the view and hide installations.
coloration concept

The colours of the concrete inside the building consists of earthy nuances of dusky blue, grey brown and orange ochra.
the way to the building

You get to the building by the road passing Kristineberg Boat Club, at the end of the road you meet a bridge. The bridge is zig-zagging along the cliffs directing the view towards important features and view lines along the way. The sight towards the building is blocked by vegetation and you can only glimpse the structure until you are close by.
meeting the water

The building is located where the cliffs are varying between very steep and flat towards the water. This gives the opportunity to meet the water in different ways also outside the building.
movement

To get the most out of the different sensations the experiences should emphasize each other. This is done by mixing calm and thrilling experiences and by using the entering situations into the rooms in a way to accentuate the feeling of the space.

There are two different routes to choose between through the building, the light experience and the advanced experience. The light experience apply for people with movement disabilities, kids, people that are not skilled swimmers or just people that do not want the most extreme sensations. The advanced experience fit people that want to challenge themselves, people that are used to water and have good physics.

The building consist of eight floors, you enter two floors above water level and there is a possibility to go to the bottom floor to swim in the lake water or to go upwards in the building for indoor experiences.
LIGHT EXPERIENCE

- ⚽

ADVANCED EXPERIENCE

- 🏊‍♂️
THE VIEW
A top floor pool with a view over Mälaren. Here you can feel calm while watching the scenery.

THE SLIPPERY ROAD
To get through this passage you have to walk on wet leaning ground. It is a thrilling experience, you are scared of slipping and you feel very insecure of the ground conditions.

THE FOGL TUNNEL

THE WELL
The well is a deep and narrow pool where you can see the depth by the light coming from The Sauna below. You cannot see outside but light is indirectly reflected in, lighting up the leaning roof.

DIVING TOWER
Behind the well there is a diving spot from which you can jump out in the water.

THE FLOOD
In this room you are under the water level and you feel the power of the nature when waves hit the window.

THE SAUNA

BASEMENT FOR TECHNICAL INSTALLATIONS
The Fog Tunnel is leading to The Hot Bath. It is filled with fog and you feel thrilled not seeing what is coming ahead.

The Well
On the bottom floor there is a Sauna which can be used both in summer and winter time. During the winter you can go ice skating and then heat up in The Sauna. You have to crawl in to this dark and cozy room through a small opening.

The Hot Bath
The water is hot and steam is rising from the bath, the only light comes from above and there is a dark and cozy atmosphere.

The Changing Room Sauna
In the sauna you can sit or lie in a warm space watching the light coming in from above.

The Rain Shower
The water falls evenly like a soft summer rain.

The Slippery Road
You reach The Pot by The Slippery Road. In the pot water is pouring down like rain and the only opening is found in the roof. Here you can sit and watch the sky through the rain.

The Secret Hiding Place
You reach The Secret Hiding Place from The Diving Bell, here you can be calm and sit with your feet in the water and the only light comes from below.

The Diving Bell
You have to dive down under the water through a small passage to find The Diving Bell, the light from the windows below guides you forward.

The Main Pool
Here you can swim while watching the view outside.

The Pot
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SIGHTLINES
On this floor you are mainly in water level and can look out over the lake through the large openings directing the view towards the straits between the islands.

This floor contains technical space for water purification systems, ventilation system and other technical equipment.

From the stair passing this floor you can see out over Alvik with focus on the city atmosphere created by the new Towers of Alvik shining in the night.

This is the lowest level of the building, and it is open to the outdoors. Water from Mälaren flows directly into the building and through the openings you can swim straight out in the lake.

THE CURRENT
- Calm
- Sheltered / Protected
- Dry heat at 100 °C

THE FLOOD
- Calm
- Safe
- Protected
- Hot dry air 100 °C

PLACE FOR CONTemplATION
- Small opening, have to crawl inside

FLOOR PLAN -1
SCALE 1:200
FLOOR PLAN 0
You enter the building on the ground floor. On this floor you have reception and changing rooms. From this level you can go down to the outdoor swimming area or up to the pools. There is also a possibility to dive straight out into the water.

SIGHTLINES
On this floor there are not so many openings in the facade. From the lobby you see the strait between Lilla Essingen and Stora Essingen and from the bench outside the changing rooms you can look out over Alvik.

FLOOR PLAN 1
This floor contains the main pool and The Well where you can swim in very deep water glimpsing a light from far below.

SIGHTLINES
From the main pool you can watch out over the Essinge islands and the straight between. From the place for contemplation you can see the city lights of Alvik Strand.
FLOOR PLAN 2
On this floor hot meets cold. By The Ice Tunnel where you need to swim through cold water you reach The Chapel Sauna.

SIGHTLINES
In The Chapel Sauna you have light coming in from above, you can also glimpse the cliffs outside. Through the small opening next to The Chapel Sauna you can glimpse the towers of the Church of Högalid.

FLOOR PLAN 3
On this floor there is a focus on fog and steam. The Hot Bath is reached through The Fog Tunnel where you feel insecure not seeing what is coming next. On this floor is also The Diving Bell which is reached from the fourth floor.

SIGHTLINES
On this floor hot meets cold. By The Ice Tunnel where you need to swim through cold water you reach The Chapel Sauna.
**The Secret Hiding Place**

- **Peaceful**
- **Embraced**

**Thrill**

- Hot dry air 100°C

**Calm**

- Air temp. 25°C

**The Church of Light**

- Enlightened
- Watched over
- Contrast between direct and indirect light

**Thrill**

- Narrow path

**Calm**

- Pool water 25°C

**The Crack**

- Captured below
- Dark
- Pool water 25°C

**Thrill**

- Below water

**Calm**

- Pool water 25°C

**The Slippery Road**

- Slippery ground
- Steep ground

**Thrill**

- Narrow path

**Calm**

- Pool water 25°C

**The View**

- Free
- View Overview
- Power

**Thrill**

- Narrow path

**Calm**

- Pool water 25°C

**The Pot**

- Soft warm water raining from above

**Thrill**

- Narrow opening

**Calm**

- Pool water 25°C

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**FLOOR PLAN 1**

**Scale 1:200**

**FLOOR PLAN 4**

On this floor there is the underwater experience from where you reach The Secret Hiding Place. On this floor you also find The Church of Light where you can stroll in the water with direct and diffuse light coming from above.

**FLOOR PLAN 5**

On the top floor you can either watch the view over Mälaren or take The Slippery Road where you will challenge your balance. You can then end up in The Pot where water are falling like rain and the only outlook is the sky.

**SIGHTLINES**

In the deep windows you can sit and relax watching the Traneberg Bridge and Alvik on one side and the strait between Stora Essingen and Alvik, and the Church of Högalid on the other side of the building.

On the fifth floor you are high above the ground, and in the top pool you have outstanding outlook over Mälaren.

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**FLOOR PLAN 0**

**Scale 1:200**

- Properties of the rooms
- Entrance situation
SOUTH FACADE
SCALE 1:200
facade color concept

The coloration of the facade is based on the rooms behind which makes a subtle hint of what is going on inside.

The concrete facade is precasted with plywood boards of different colours as framework. The plywood formwork creates different nuances in the facade since the concrete absorbs some pigment from the different coloured plywood boards. This can be seen in the pictures of the reference project NDA Planter on the next page.
EXPERIENCES

Express massiveness
Direct the view
Incorporate gutters
Incorporate ventilation ducts

To get free space for the bath experiences the vertical transportation like stairs and ramps and the technical spaces for ventilation and rainwater runoff are placed as layers on the outside enhancing the double wall concept.

As a way to achieve a feeling of massiveness the outer wall is built as a double wall, also making it possible to direct the view and hide installations.

Coloration based on the room behind, one room one color. Makes a subtle hint of what’s going on inside. Warm brownish color shows a calm room while a cold grey nuance represents a thrilling space.

The concrete wall inside is colored by...

The colors range from soft warm orangeto grey blue.

The concrete facade is casted with plywood board of different colors which creates these different nuances in the facade when the concrete takes up some pigment of the plywood boards.

Left: Reference project NDA Planter by no.555 Architects

Below: Different nuances of plywood used during construction

structural system concept

The exterior wall and the elevator shaft is load bearing. The exterior concrete wall is reinforced in some points where the main beams are attaching. In these positions the system lines are going straight down to the foundation without any disruptions from windows. The main beam height is 400 mm.

stabilization

The exterior walls are acting as plates and stabilises the building against rotation and horizontal forces.
conclusion

In this project I have investigated how light, shape and the relation to the water can be used to create a spiritual sensation. It has been very interesting and it has increased my understanding of how light and shape affect the space.

I have been using a very model based process, which I found essential for this project, both because that the ambience created by light really cannot be simulated in computers or understood by drawing sketches. But also because the intricate movement and layout could not possible been created or understood without building it by hand in 3D.

I would have liked to continue to develop the final layout further by making a final sketch model iteration of the whole structure. I also would have liked to work more on how the final project is presented both in drawings and illustrations and to continue develop the concept regarding water to make it more present in the project.

The fact that the focus of this project has been the light and space rather than a finished building proposal means that there are issues that would have to be solved if the building would be constructed. I think that it is not so much about applying to the building regulations as to solve the issues behind the rules. For example, putting up railings would not be an option in this project but instead the “quay principle” could be used making the edges so visible that no one will accidentally step over it. The water is also a way to make the building safe, there is no danger of tripping if the water catches you, for example if the slippery road is made below water, the water will save you from hitting the concrete when falling.