

Bring back the water

A phenomenological adaptation of an old water
plant into spa & café

Astrid Eriksson

2025

Chalmers School of Architecture

Department of Architecture & Civil Engineering

Architecture and Urban Design

Examiner: Mikael Ekegren

Supervisor: Isabella Eriksson

"I experience myself in the city, and the city exists through my embodied experience"

- Juhani Pallasmaa (2012, p. 430)

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ABSTRACT

We interact with architecture every day and experience it through our whole bodies. Hence, the human body cannot be neglected in the design of buildings if we want humane cities. In addition, there is a need for the construction sector to reduce its emissions of greenhouse gases. One solution to this is adaptive reuse of existing buildings. Adaptive reuse is beneficial in environmental, socio-cultural and financial aspects.

With this as a starting point, this master's thesis aims to investigate how phenomenology and atmospheres can be used in adaptive reuse and how cultural heritage could be preserved during an adaptation. To do so, the thesis is based on two research questions:

How can a design focus on atmospheres and phenomenology form a spa facility in an existing building?

How can the old water treatment on Visholmen be revitalized while preserving its cultural heritage?

To be able to answer the research questions, knowledge about phenomenology, atmospheres, and adaptive reuse was developed. Information about the topics was also gained from three reference projects, Therme Vals, Andrum, and Neues Museum.

In the process a variety of methods were used and can be divided into three phases. In the first phase knowledge about the site, existing building and new program were gained. Knowledge from the first phase was then implemented in the second phase, which was characterized by iterative design work. The project was then finalized during the third phase.

The project is an adaptation of an old water plant into a spa and café, located on a peninsula in central Strängnäs. The existing building is made of brick and was built in early 1900s. The condition of the building varies and the main strategy for the adaptation was to keep, restore or repair vital features from a cultural historical point of view and add new materials and functions suitable for the new purpose. To make the adaptation into spa and café successful, additional buildings were required.

Keywords: phenomenology; atmospheres; adaptive reuse; transformation

TABLE OF CONTENTS

ABSTRACT	3
PART I - INTRODUCTION	5
PURPOSE & AIM	6
THESIS QUESTIONS AND OBJECTIVES	6
METHOD	7
DELIMITATIONS	7
READING INSTRUCTIONS	7
PART II - BACKGROUND & THEORY	9
BACKGROUND	10
PHENOMENOLOGY & ATMOSPHERES	11
INTERVENTION STRATEGIES	13
THERME VALS - PETER ZUMTHOR	14
ANDRUM - JOHAN SUNDBERG ARKITEKTUR & BLASBERG ANDREASSON ARKITEKTER	16
NEUES MUSEUM - DAVID CHIPPERFIELD ARCHITECTS	18
PART III - PROJECT	21
CONTEXT	22
HISTORY	24
INVENTORY	26
ATMOSPHERES	41
DESIGN PROPOSAL	46
PART IV - CONCLUSION	64
DISCUSSION	65
REFERENCES	66
STUDENT BACKGROUND	68

PART I - INTRODUCTION

PURPOSE & AIM
THESIS QUESTIONS & OBJECTIVES
METHOD
DELIMITATIONS
READING INSTRUCTIONS

PURPOSE & AIM

We experience architecture everyday and interact with it almost everywhere, on our way to work, in school, at home. We are surrounded by it and, most of us, understand it through all our five senses. What we can see, hear, smell, feel and even taste, effect our perception of a space. Therefore there is a need to consider all senses within the built environment and integrate them in the building design.

In addition to this, we live in a world facing rising temperatures and an approaching climate crisis. The construction sector is a big emitter of greenhouse gases and one way to reduce its emissions is to cherish the already built a bit more (UN Environment Programme, 2024). By giving old buildings new purposes, the need for new construction is reduced and the amount of emissions lowered (Aigwi et al., 2023).

This master's thesis aims to investigate how phenomenology can be used in creating robust architecture and support the use and cultural values of an existing building. By focusing on atmospheres I hope to raise awareness of the importance all our senses have in our experience of architecture. The aim is also to give inspiration of how an existing building can be adapted and re-purposed.

THESIS QUESTIONS & OBJECTIVES

How can a design focus on atmospheres and phenomenology form a spa facility in an existing building?

How can the old water plant on Visholmen be revitalized while preserving its cultural heritage?

The questions are investigated through a project involving a transformation of an existing building and new supplementary buildings on Visholmen in Strängnäs and are expressed in drawings, images and physical models.

METHOD

During the master's thesis a variation of methods were used and the work can be divided into three different phases. In the first phase, focus was on developing a framework for the thesis. This included collecting knowledge about relevant theory and references as well as developing an understanding of the site and building.

The framework was then implemented in the second phase focusing on design. In this phase the project was developed in a iterative process were sketching and drawing along with both digital and physical 3D-models.

In the third phase, the result of the previous investigations was collected and finalized, ensuring that the material is clear, coherent and answer the research questions.

DELIMITATIONS

This thesis address how phenomenology can be used in architecture in the creation of atmospheres. It also contain issues regarding transformation and adaptive reuse as well as new additions. The focus lie in the design of a project, containing a spa and café, that will investigate these themes. The existing building does not fit the whole program presented in the thesis, and therefore two new additional buildings are added. Although the project contains both old and new building structures, the existing one is the thesis's focal point. Lastly, the thesis will not investigate other functions that the existing building or peninsula could have.

READING INSTRUCTIONS

This booklet is divided into four parts. In part I the scope of the master's thesis is presented and in part II the background and theoretical framework are introduced. Part III contains the design proposal and part IV concludes the master's thesis with a discussion.

PART II - BACKGROUND & THEORY

BACKGROUND

PHENOMENOLOGY & ATMOSPHERES

INTERVENTION STRATEGIES

THERME VALS - PETER ZUMTHOR

ANDRUM - JOHAN SUNDBERG ARKITEKTUR &

BLASBERG ANDREASSON ARKITEKTER

NEUES MUSEUM - DAVID CHIPPERFIELD ARCHITECTS

BACKGROUND

Architecture reaches beyond what we can see, but last decades, architecture and architectural education have become ocularcentric (Pallasmaa, 2012). Pallasmaa argues that contemporary architecture and cities have become inhumane due to the fact that the body and senses have been neglected. Since Swedes spend 90 % of their life indoors (Boverket, 2022), this inhumane approach is something architects should not accept and can do something about. Hence, there is a need to integrate all our senses in architecture. By having a phenomenological approach in the design we can find our way back to a more humane architecture.

In addition to this, there is a climate crisis waiting around the corner, to which the construction sector contributes by emitting 21 per cent of the global amount of greenhouse gases (UN Environment Programme, 2024). One way of reducing the emissions is reuse of the existing building stock (Aigwi et al., 2023). According to Aigwi et al. adaptive reuse is beneficial in an environmental, economic and socio-cultural way. The positive environmental aspects are linked to a reduced amount of waste and greenhouse gas emissions as well as a better energy efficiency and land use.

Furthermore, aspects regarding the economic sector are that adaptive reuse, inter alia, reduces material consumption, increase economic opportunities and extends the life and usability of the building. In a socio-cultural point of view adaptive reuse strengthens the idea of place and identity among the citizens and preserves the values of the cultural and historical heritage among others (Aigwi et al., 2023).

By using our existing buildings we have much to gain. It reduces emissions in the construction industry and impacts the city in a positive way. Knowing this, we understand that adaptive reuse could be one factor in mitigating climate change.

I believe that we can improve our cities and buildings if we take care of the existing building stock and embrace all our senses within the built environment. We need to design for the people that inhabit the cities and give the buildings purpose.

PHENOMENOLOGY & ATMOSPHERES

Phenomenology can be understood as a field in psychology where the basics of experience are described and looked upon with a first-person point of view (Merleu-Ponty, 2012). It is the perceived experience that is important rather than any hypothesis making or speculative reasoning of what experience is. Philosopher Maurice Merleu-Ponty (2012) describes phenomenology as “the study of essences” whereas Iris Aravot (2009) states that it is linked to our lived world and “the study of human experience”.

From this, we understand that phenomenology is a field rooted in the world we live in and address how people experience and perceive things. Tonino Griffero (2010) has a similar way of describing atmospheric perception. He adds that we experience atmospheres when we are being involved by things or situations and that atmospheric perception is holistic and an emotional aspect of being-in-the-world. Juhani Pallasmaa (2012) states that in atmospheric perception, characteristics of a space are unconsciously grasped before we notice all details and are consciously aware of the space. Peter Zumthor (2006) is on the same line, arguing that atmospheres are perceived quickly by our emotional sensibility.

Phenomenology and atmospheric perception seem to operate in the same area, seeking the core of experience and how the world is perceived. Carman describes in Merleu-Ponty (2012), perceiving as the act of dealing with and familiarizing us with our surroundings, making it possible to orient us in an environment. Additionally, Carman states that Merleu-Ponty means that perceiving is a bodily phenomenon and hence, that we, by perceiving, inhabit the world. They argue that perception is a mixture of sensory and motor, inner and outer, and subjective and objective (Merleu-Ponty, 2012).

When it comes to atmospheres, Griffero (2010) argues that atmospheres are relatively objective and not so affected by the perceiver's point of view. According to Pallasmaa (2012) architecture fills our experience of being-in-the-world with substance and makes us more aware of reality and ourselves. He also state that “I experience myself in the city, and the city exists through my embodied experience” (Pallasmaa 2012, p. 430). Merleu-Ponty (2012) also adds on the subject similarly, that one's own body determines how one sees the world and that it is objects and their relation to each other that we experience.

We experience the world through our bodies and thereby via our senses. Pallasmaa (2012) describes how the senses complement each other. The eyes regard things whereas the ears receive information and sensations of the nose are often directly connected to memories. He also states that these senses are understudies to the sense of touch and thereby serve as specializations of the skin (Pallasmaa, 2012). Merleu-Ponty (2012) has a similar approach and means that each sense contributes to the experience of the lived world in its own way, and that within the lived world each sense creates a smaller world. Consequently, each sense plays an important role in how we perceive the world.

Atmospheres are vital in architecture and in his book *Atmospheres, Architectural Environments, Surrounding Objects*, Peter Zumthor (2006) seeks to explain the things that make an atmosphere. He describes how materials create the architectural body and the

endless possibilities each material has. Furthermore, the atmosphere depends on the used materials and their interaction. In addition, also the sound and temperature of a space affect the atmosphere. When it comes to sound Zumthor argues that the shape of and materials in the space together with the kind of activity that takes place influence the perceived sound. The experience of temperature, both physically and psychologically, are according to Zumthor linked to materials. A space made of cold steel are perceived differently than one made of warm wood (Zumthor, 2006).

Another aspect according to Zumthor that influences an atmosphere are the things that fills a space, the Surrounding objects, i.e. details like books and furniture. He also adds that the movement of the space are important for the atmosphere. The way a building guides, direct you or lets you saunter, all create different atmospheres.

Zumthor continues with another factor, the Tension between Interior and Exterior as he calls it. This can be explained as the differences that can exist between the outside and inside. With the exterior being and saying one thing whereas the interior is and say something else and the tension that is created between these two entities (Ibid).

When talking about atmospheres, Zumthor adds that the Levels of Intimacy also are important. By this he means the size, dimensions and scale of things in comparison to the human body. In addition, light influences the perception of a space and its atmosphere. How a room is lit, the play between light and shadows and the way materials reflect light all affect the atmosphere.

The three last things that Zumthor address are the surroundings, coherence and the form. He means that architecture contributes to its surrounding and are a part of the context and the memories made there, and by coherence Zumthor suggests that everything in a building or room contributes to the whole and are vital components. Remove one thing and the whole begins to halter. Lastly is the idea of the form or more precise, the beautiful form. This refers to the fact that if a building is not beautiful in the end, it is hard to be moved by it (Ibid).

Zumthor points out that atmospheres are affected by multiple factors and when creating architecture, it is important to have these things in mind. Also, our senses need to be considered when designing, after all, our bodies are the key to the world and the sensations in it.

So how will this be integrated in the spa design? We know that phenomenology are linked to our perception and experience of the world, and therefore also to our view of architecture. Since perceiving is the body's way to understand its surroundings and also the focus of a spa, the bodily sensations should be a core in the design. When it comes to atmospheres there seems not to be any clear answer whether they are perceived more objective, subjective or with a mixture of both. Thus, it is not possible to control how a certain atmosphere are experienced. Consequently, the focal point in the creation of atmospheres should lie in what the architect can control, integrating the all senses in the design.

INTERVENTION STRATEGIES

Dealing with existing buildings, different types of intervention strategies can be applied. In their book *Adaptive Reuse of the Built Heritage: Concepts and Cases of an Emerging Discipline* Plevoets & van Cleempoel (2019) describes different strategies linked to adaptive reuse. They claim that it exists two ways of approaching a existing building, either as a monument or as a palimpsest. Treating the building as a monument is a type of conservation strategy. Plevoets & van Cleempoel refer to the Venice Charter from 1964 that states that monuments should be conserved without changing the layout or decorations of the building. On this note Plevoets & van Cleempoel adds that new interventions can be introduced to monuments as long as the new can be removed without altering the monuments original condition. The other type of approach, treating the existing building as a palimpsest is the opposite of conservation. A palimpsest is originally a manuscript on which the text is erased and replaced with new. After some time the erased text starts to show again and different layers of text become visible. In architecture this concept allows the history of a building to be preserved and complemented with new additions. Old and new coexist.

Furthermore, Plevoets & van Cleempoel explains that when working with a building as a palimpsest there are, in turn, different approaches that can be applied to the building. First, a strategy that aims to create a clear distinction of what is new and old. In this strategy the division between old and new are considered as the best way of respecting the history and cultural values of the existing, a strategy approved by the Venice Charter and Burra Charter Plevoets & van Cleempoel adds.

Plevoets & van Cleempoel argues that in addition to this strategy, three other strategies have emerged with a more conscious approach to the existing. These are called *translatio*, *imitatio* and *aemulatio* and operates on the spectrum between pure restoration and having a clear division between old and new. *Translatio* means translation and are a type of restoration method with a creative and critical view of the existing building. Plevoets & van Cleempoel refer to Scott who describes translation as a kind of poetry that brings the building from the past into the present. *Imitatio*, or imitation, are a strategy a bit more liberal than *translatio* and can be understood as a mixture of restoration and reinterpretation. The reinterpretation however, should be subtle and match with the old. Lastly, the *aemulatio* strategy, in which the interventions still are subtle but no longer tries to imitate the old. The additions aims to improve the old, both functionally and aesthetically (Plevoets & van Cleempoel, 2019).

In this project, the strategy is to create a clear distinction between old and new while introducing materials and interventions that match with and complement the existing. This strategy could be considered to be a mix of *imitatio* and *aemulatio*.

THERME VALS - PETER ZUMTHOR

In Therme Vals, a spa in the Swiss Alps, the architect Peter Zumthor have worked with phenomenological qualities (Brandt, 2009). Zumthor have worked with contrasts; in materiality with stone and water, adding details made of steel; in how the light meet the water and in the play between light and darkness. Between the roof and walls there is a small gap that highlights and accentuates the tectonics (Brandt, 2009).

The plan is formed by rectangular blocks that almost never are aligned to each other, often with short stairs down to the water in between. This creates a circular path around the middle pool, allowing a the visitor to walk freely and in the same time, are guided by the layout (ArchDaily, 2009).

All rectangular blocks contain some kind of bathing experience, each space carefully crafted (Hauser & Zumthor, 2007). The feeling of warm stones against naked skin; the special sound of bubbling water in an enclosed space; the light shimmering in vaporized air, are some of the sensations that can be experienced in Therme Vals (Brandt, 2009). The ritual of bathing have been a core inspiration in the design along with the surroundings, the building follows the natural landscape, have a grass roof and are made out of locally quarried Quarzite (ArchDaily, 2009).

Qualities that I take inspiration from in Therme Vals are the flow and how different contrasts are created and handled. Examples of contrasts are how light are used, both natural and artificial, together with the dark, rough Quarzite and water to create different atmospheres and experiences.

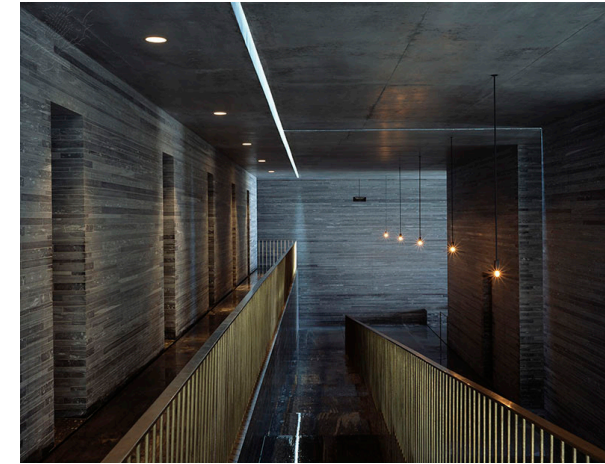


Figure 1. Walk from changing rooms to spa area (Encyclopædia Britannica, n.d.)

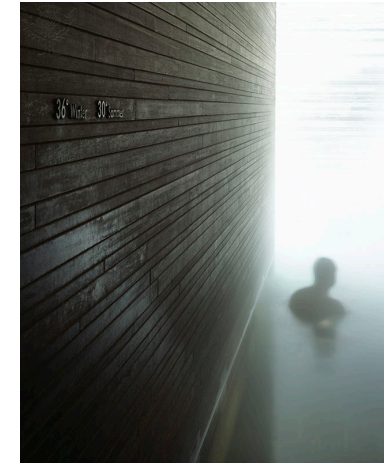


Figure 2. Light and water (Encyclopædia Britannica, n.d.)

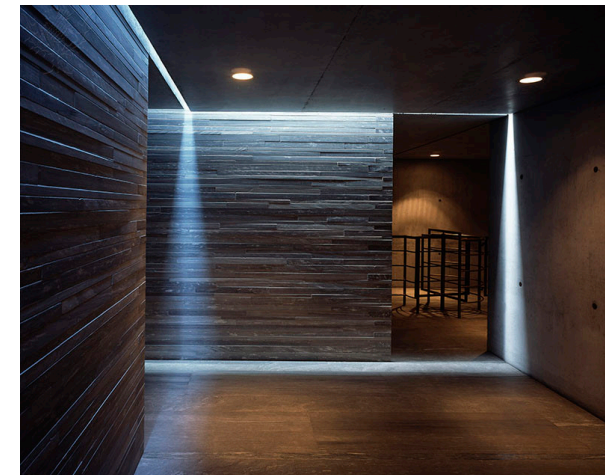


Figure 3. Light features (Encyclopædia Britannica, n.d.)

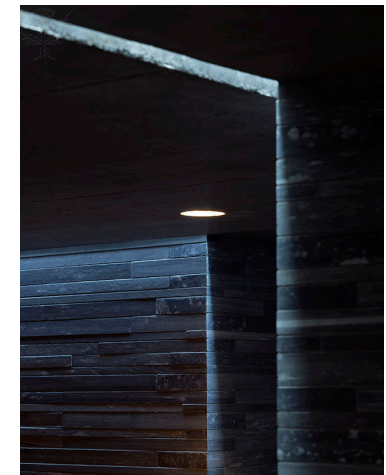


Figure 4. Light highlights the tectonics (Encyclopædia Britannica, n.d.)

ANDRUM - JOHAN SUNDBERG ARKITEKTUR & BLASBERG ANDREASSON ARKITEKTER

In Höör, the spa Andrum ("breathing space"), was finished in 2018 as a complement to Åkersbergs Stiftgård, a building complex with traces back to late 1600s (Johan Sundberg arkitektur, n.d.). The design of the spa focuses on bodily sensations linked to acoustics, light, touch, scent, and taste. By using materials almost always in their bare form, the visual impression is coherent and not excessed (Sundberg, 2017). Concrete, natural stone, glass and wood are gently put together to create a harmonious entity. Although the whole is soft-spoken, it exist a tension between the materials which adds to the experience of the space (Sundberg, 2017).

The acoustics varies throughout the building, in the changing rooms the sound is reduced by warm materials such as wood, textiles and leather whereas the spa area with double ceiling height have a longer echo (Ibid). Sundberg further describes how the scent are characterized by the stone, wood, herbs used in treatments, and water, with emphasis on reducing the smell of chlorine. And furthermore, how the water taste also are important and linked to the scent.

The spa layout is based on a circular flow with a centrally placed pool surrounded by more open or enclosed spaces (Ibid). Sight lines towards the nature outside are present within the whole spa without being to dominant.

Aspects I find inspirational in Andrum are the materiality, how a quite simple palette of materials and colours creates calm and harmonious atmospheres, and how the senses have been integrated in the design. The circular flow is an other feature I take with me.

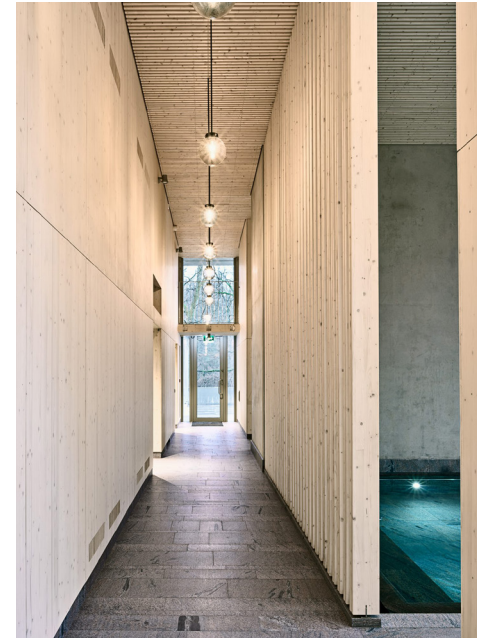


Figure 5. Central axis (Johan Sundberg Arkitektur, n.d.). Reproduced with permission.

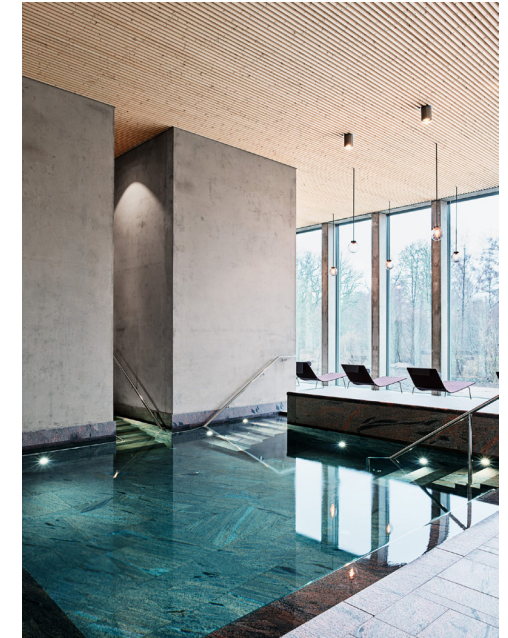


Figure 6. Indoor pool (Johan Sundberg Arkitektur, n.d.). Reproduced with permission.



Figure 7. Steam room (Johan Sundberg Arkitektur, n.d.). Reproduced with permission.

NEUES MUSEUM - DAVID CHIPPERFIELD ARCHITECTS

Neues Museum was built between 1841 and 1859 after a design by Friedrich August Stüler (David Chipperfield Architects, n.d.). After being bombed during WWII the museum was severely damaged and since it is located on the eastern side of the Berlin, the ruin was left for over 50 years. After the divided city was reunited, David Chipperfield Architects got to do the restoration (David Chipperfield Architects, n.d.).

The concept of the rebuilding was “complementary restoration”, developed by the architectural office together with restoration architect Julian Harrap (Stiftung Preußischer Kulturbesitz, n.d.). The condition of the building and its interiors varied from being almost intact to being completely demolished (Arquitectura Viva, 2024). Therefore, the type of intervention needed, changed with the degree of damage (Stiftung Preußischer Kulturbesitz, n.d.). The history was always prioritized with kept traces from the war and old structure, but with the newer added parts being visible (David Chipperfield Architects, n.d.). Although it is evident what is new or old there is not a big clash between the two. The new additions are gently integrated and the colour palette harmonizes with the old.

Some of the larger interventions addressing the history with a new form are the Northwest wing and the South Dome that were rebuilt from recycled brick, and the central staircase constructed of white cement mixed with Saxonian marble chips. Two other examples are the glass roofs over the two courtyards and the mezzanine gallery completed with a new structural frame (Ibid).

The thoughtful handling of materials and valuation of the old combined with new interventions creates a building with many layers. With each layer telling the history of a specific time in the building’s lifespan.

The Neues Museum is a project dealing with an old building in need of care. Careful handling of the existing in a combination with new additions as well as a respectful approach to its history is something that inspires me and things I take with me in my project.

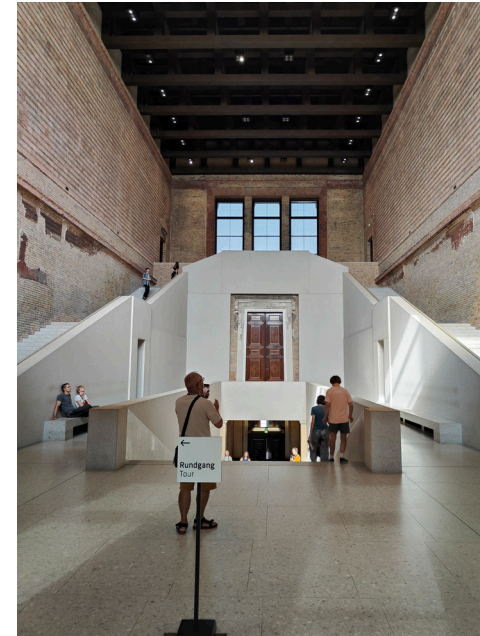


Figure 8. Central staircase

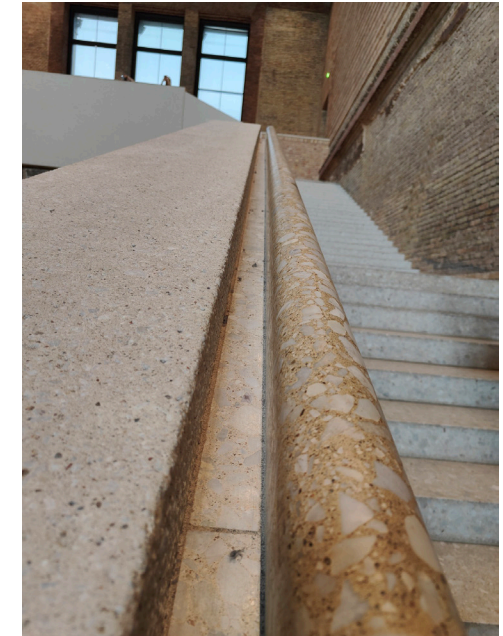


Figure 9. White cement with marble chips



Figure 10. Layers of old and new

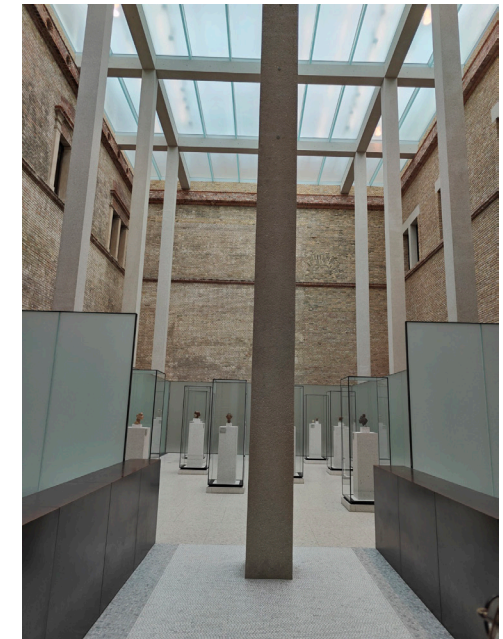


Figure 11. New light yard

PART III - PROJECT

CONTEXT
HISTORY
INVENTORY
ATMOSPHERES
DESIGN PROPOSAL

CONTEXT

The site is located on a peninsula called Visholmen in Strängnäs, Sweden, that currently have an old brick building. The brick building have previously been a water plant but is today without any function and left to decay. Strängnäs Kommun are currently in the process of creating a new detailed development plan for the area.



Figure 12. Strängnäs' central parts, scale 1:5 000

The peninsula, surrounded by lake Mälaren, is focused on summer and sport activities with large grass areas, small beaches, tennis courts, a sand football pitch and a beach volley court. In addition, there is also boules courts and miniature golf in the immediate vicinity of the site. Advantages of the site is also the proximity to the marina and city centre.



Figure 13. Location in Sweden

HISTORY

Visholmen was an islet until 1893 when the strait was filled and it became a peninsula (Nilsson, 2015). Since 1874 the peninsula has been an industrial area when a match factory started its production there. The following century the building on Visholmen served many purposes, as a residential home, ink factory and clothes manufacturer. A railway was built to the area as the proximity to the water allowed a port. In the beginning of 1940 a grain silo was built (Nilsson, 2015).

The water treatment facility was built, in brick, in 1899 along with an electricity plant (Ibid). In 1905 respectively 1907 two additions were made to the brick building, and around the same time a residential building was built close to the water treatment plant. Later, three additional buildings used for the treatment process were built 1950, 1964 and 1987 (Personal Communication, Särnkvist L., 2024 October 3). All buildings belonging to the water treatment facility were demolished in 2014, except for the original brick building that was kept due to its cultural historical value. Old pictures and drawings tell us that the building also had a high chimney and small towers.

The area has also partly been used as a lumber yard and winter storage of small boats. In 1925 the bath, Strandbadet, was established and the bathing prohibition, first introduced 1908 of fear that bathing would contaminate the water used by the water treatment plant, was removed. In 1980 the old match factory was demolished (Nilsson, 2015).

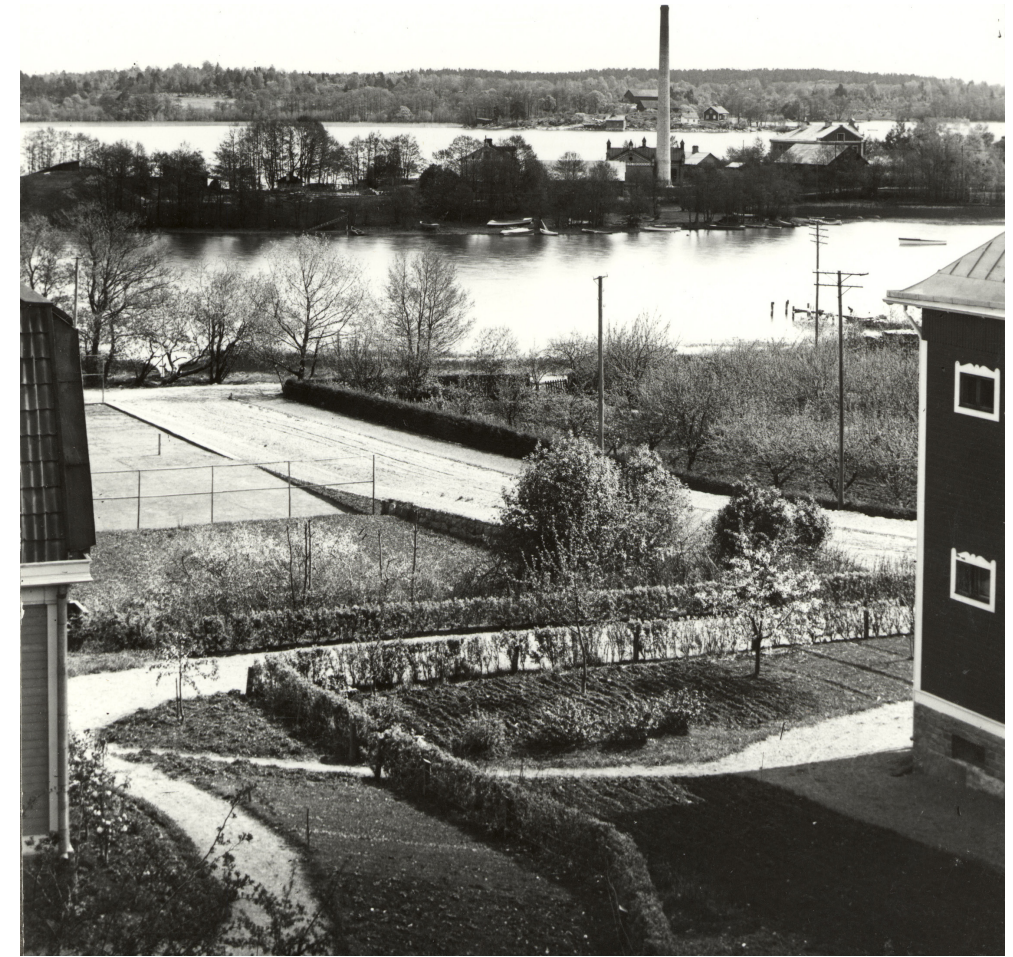


Figure 14. Water plant with high chimney seen from west (Sörmlands museum, 2024) CC-BY 4.0



Figure 15. Water treatment plant 1969 (Personal Communication, Sjögren S. 2024 September 27). Reproduced with permission.

INVENTORY

The building was, as already stated, first build in 1899 with additions in 1905 and 1907, there was also a newer addition on the entrance façade that now is demolished. Today the building is a one-and-a-half story house with a small basement, in which the intake for raw water was placed.

In 2022 the building was sanitized, with all technical installations and almost all non-bearing walls being removed (Hübsch, 2022). Also, old material containing asbestos, PCB, PVC and PAH were taken away. Therefore, the building today is more or less an empty shell.

The outer walls are approximately 490 mm masonry, richly decorated with a plinth of chastened granite meeting the ground. The foundation is probably concrete soles on untouched shaft bottom and uninsulated concrete floors (Personal Communication, Särnkvist L., 2024 October 3).

The load bearing capacity of the system of joists is not known but are made of 190 mm concrete or wood. The roof have a support structure of wooden trusses, "three-part frame" type with tension straps made of steel bars. They are partly broken, due to the fact that in some trusses, the tie rods are cut. Covering the roof is a trapezoidal corrugated metal, that probably lies on panels and battens (Personal Communication, Särnkvist L., 2024 October 3). Most of the roof have also most likely a layer of tarred roofing felt as well.

Inner walls are made of masonry or aerated concrete, they are painted. The concrete floor is painted in some areas and clinker occurs partly in one room. In a lot of rooms metal hatches can be found, testifying the location of pipes from the days of production. Some pipes are also left as well as a pool and cisterns for sedimentation and flash water drain. The room height varies and some spaces are open to the roof.

External doors are made of steel except for one in the southern façade that is made of wood. The window glass in the doors are broken and covered by plywood sheets, also glass sections above the doors are broken and covered by plywood. On the north side one of these sections are bricked up. Inside the only remaining door is found on the first floor and are made of wood.

Also the glass in the wooden mullioned windows are broken and covered. The condition of the frame could not be established since they were covered, but at least one, at the top of the east façade, is severely damaged. Windows on the ground floor have rusty metal shutters. Roof gutters and other metal fittings are made of painted or lacquered galvanized sheet metal.

On the right side of the north façade there are traces after a now demolished addition. The brick is damaged and there is dark coating, probably tar, covering some bricks. According to an analysis the tar contains high levels of PAH (Ibid). The pattern of the brick also suggest the placement of two windows that have been removed.



Figure 16. Metal hatches in floor



Figure 17. Damages in interior door openings

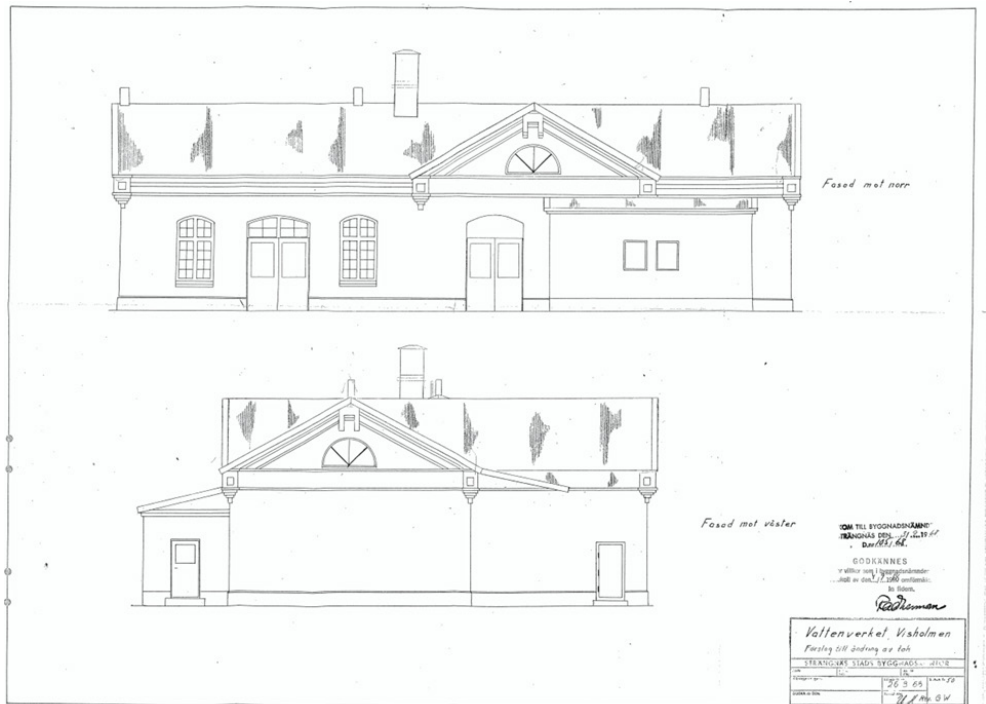


Figure 18. Drawing of water treatment plant from 1968 (Personal Communication, Sjögren S. 2024 September 27). Reproduced with permission.



Figure 19. Existing north elevation
Scale 1:200

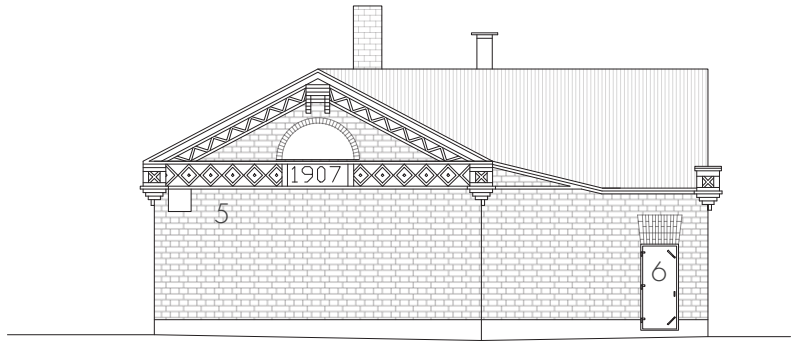


Figure 20. Existing west elevation
Scale 1:200



Figure 21. 1. Entrance door with covered glass partitions



Figure 23. 3. Entrance door with a walled upper part



Figure 25. 5. Covered hole



Figure 22. 2. Window shutter of deviating colour



Figure 24. 4. Dark coating and arches suggesting earlier window placements



Figure 26. 6. Rusty metal door and damaged bricks

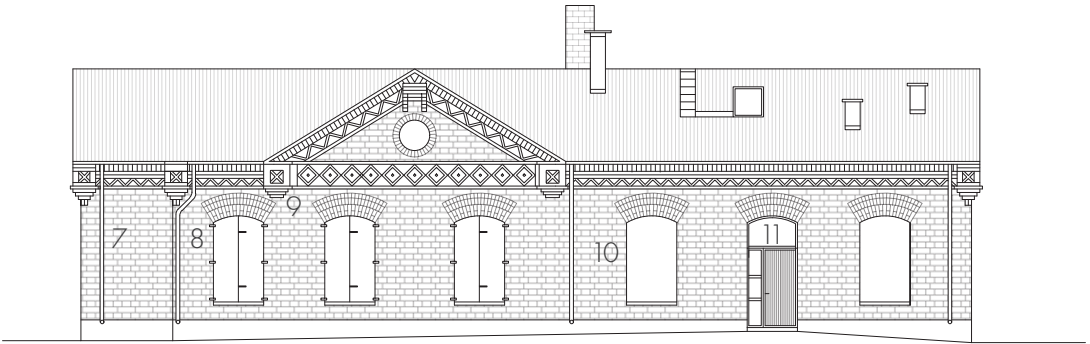


Figure 27. Existing south elevation
Scale 1:200

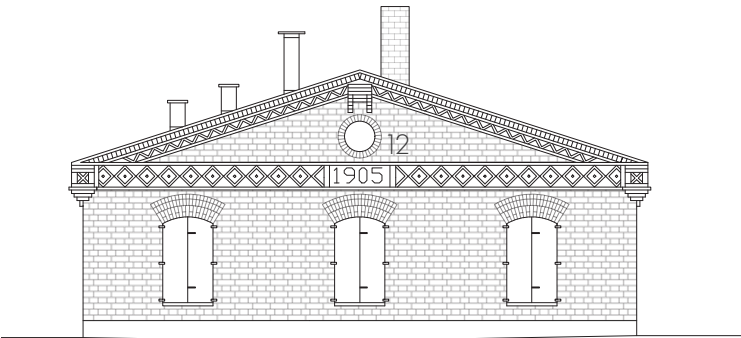


Figure 28. Existing east elevation
Scale 1:200



Figure 29. 7. Graffiti



Figure 30. 8. Rusty metal shutter
and damaged bricks



Figure 31. 9. Rusty decoration



Figure 32. 10. Window without
shutters



Figure 33. 11. Wooden door with
broken glass partitions



Figure 34. 12. Damaged window
frame and rusty shutters

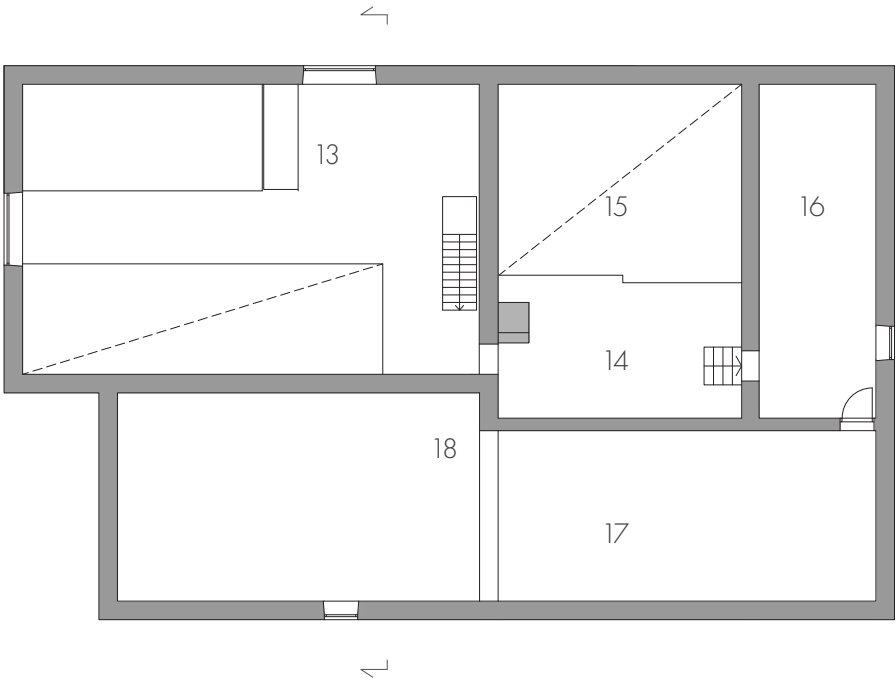


Figure 35. Existing first floor
Scale 1:200



Figure 36. 13. Inner ceiling and
upper part of cisterns



Figure 38. 15. View of entrance
floor



Figure 40. 17. Roof structure and
visible bricks



Figure 37. 14. Loose tie rods and
height differences



Figure 39. 16. Room without tie
rods with wooden roof



Figure 41. 18. Meeting between
roof structures

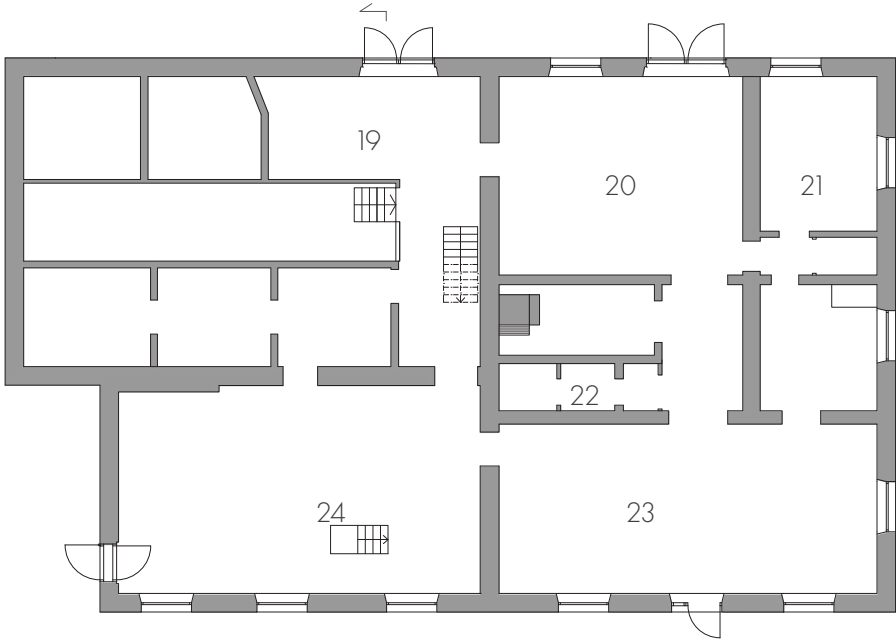


Figure 42. Existing ground floor
Scale 1:200



Figure 43. 19. Cisterns and an opening in the floor, surface layers in poor conditions



Figure 45. 21. Window and traces after radiator



Figure 47. 23. Metal hatches in concrete floor and cable remains in ceiling



Figure 44. 20. Inner wall in poor conditions and concrete floor with metal hatches



Figure 46. 22. Damaged tiles and door opening



Figure 48. 24. Floor made of concrete, tiles, and metal hatches. Placement of power supply

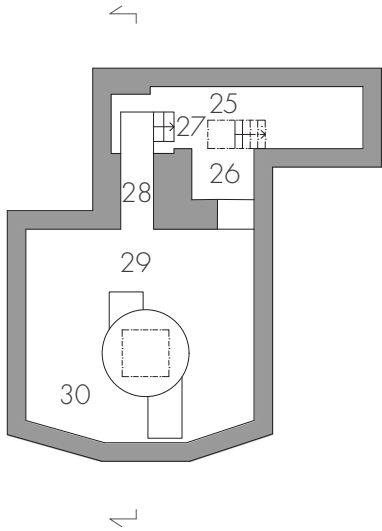


Figure 49. Existing basement
Scale 1:200



Figure 50. 25. Steep metal stairs



Figure 51. 26. Hole in wall and
damaged surface layer



Figure 52. 27. Low ceiling height



Figure 53. 28. Passage



Figure 54. 29. Remains of raw
water intake



Figure 55. 30. Remaining pipes

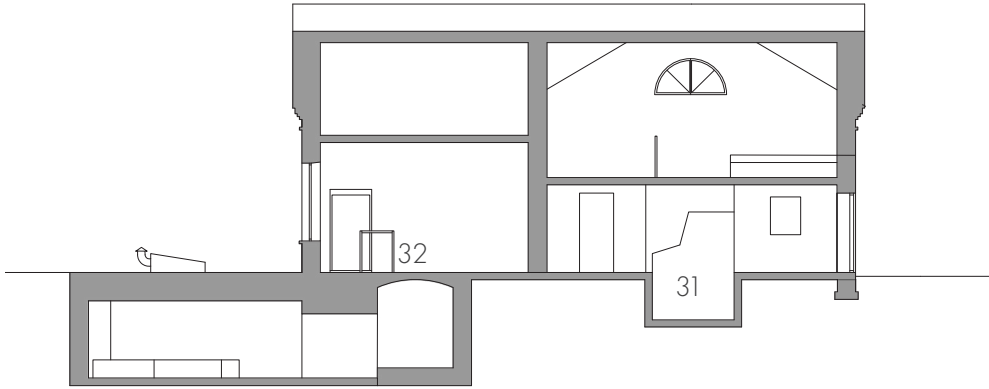


Figure 56. Existing section, scale 1:200



Figure 57. 31. Pool with pipes



Figure 59. Window above door



Figure 61. The only remaining interior door



Figure 58. 32. Hole to basement



Figure 60. Metal stairs to upper floor



Figure 62. Part of chimney

Conclusion of Inventory

The condition of the building varies and have different needs. Therefore, the main strategy for the adaptation is to keep, restore or repair vital features from a cultural historical point of view and then add new materials and functions suitable for the new purpose. The new purpose have a higher demand on the interior than on the exterior, this together with the cultural value of the exterior, the exterior are kept as it is to a higher extent than the interior. This strategy aims to maintain the exterior expression, adding a few new features. On the inside, the strategy is to keep traces of the earlier function when possible, and integrate them in the new design. It should be clear what is new and old, but at the same time speak the same language.

ATMOSPHERES

To implement the phenomenology in the project, the plan was divided into zones and the experience of the senses mapped in each zone. This helped me understand what we perceive throughout the sequence of rooms and the different atmospheres they create.

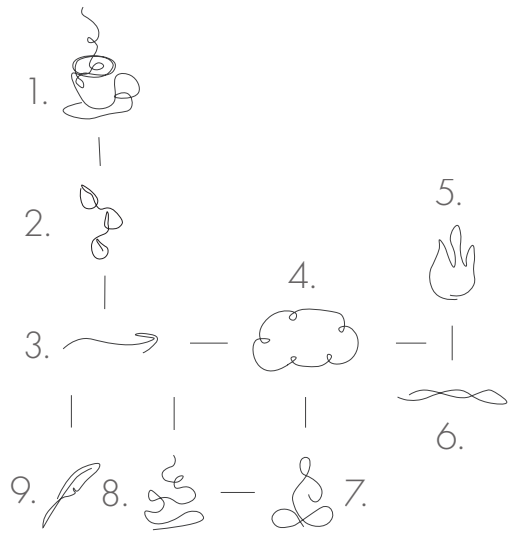


Figure 63. Schematic diagram: atmospheres & flow

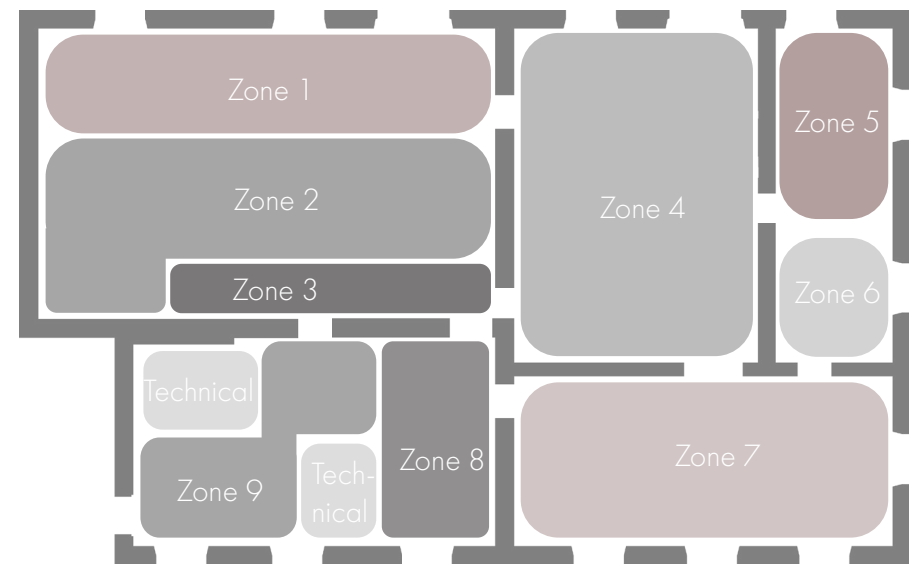


Figure 64. Schematic diagram: zoning

- Zone 1:

Atmosphere - Welcoming

Sound - Conversations

Light - Medium, artificial & natural, even

Touch - Dry

Scent - Natural, wood, tea

Taste - Tea, water

Materials - pinewood, microcement, frosted glass, concrete
- Zone 2:

Atmosphere - Cleansing

Sound - Conversations, showers

Light - Medium, artificial, directional

Touch - Dry & Wet

Scent - Herbs, wood

Taste - Water

Materials - pinewood, microcement, concrete, granite & brass
- Zone 3:

Atmosphere - Expectancy

Sound - Subdued conversations

Light - Low, artificial, guiding

Touch - Dry, cool

Scent - Water

Taste - Water

Materials - microcement & granite
- Zone 4:

Atmosphere - Spaciousness

Sound - Conversations

Light - Medium, artificial & natural, even

Touch - Wet & dry, warm

Scent - Water

Taste - Water

Materials - pinewood, microcement, granite, frosted glass & brass
- Zone 5:

Atmosphere - Revitalizing

Sound - Subdued conversations, sizzling, showers

Light - Low, artificial & daylight, directional

Touch - Humid, semi-dry & wet, hot & cold

Scent - Humidity, water, wood

Taste - Hot air, water

Materials - alder, microcement, granite & brass
- Zone 6:

Atmosphere - Soothing

Sound - Subdued conversations

Light - Medium, natural & artificial, even

Touch - Wet, warm

Scent - Water

Taste - Water

Materials - pinewood, microcement, granite, frosted glass & brass



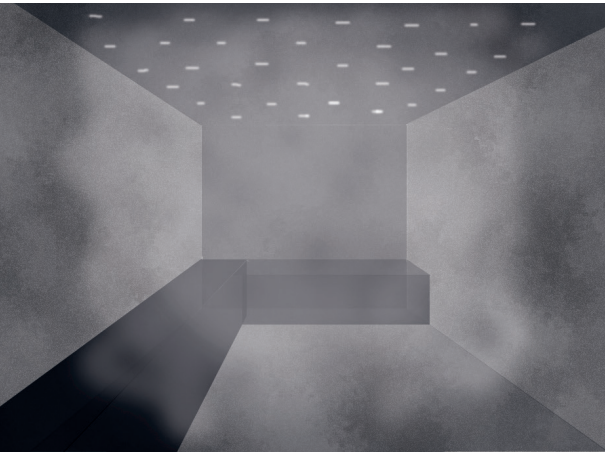
Zone 1: Welcoming



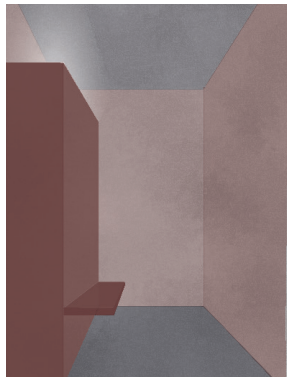
Zone 4: Spaciousness



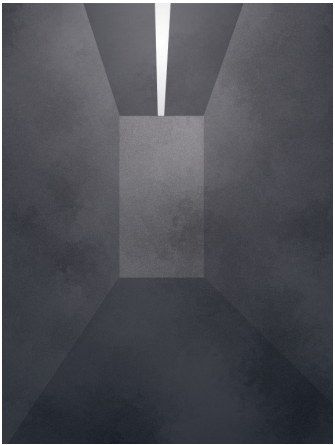
Zone 6: Soothing



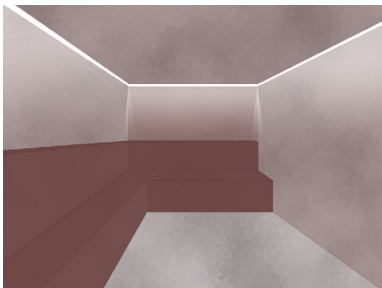
Zone 8: Healing



Zone 2: Cleansing



Zone 3: Expectancy



Zone 5: Revitalizing



Zone 7: Calming



Zone 9: Relaxation

Figure 65. Sequence of atmospheres

DESIGN PROPOSAL

Spa - Existing building

1. Entrance: 37 m²
2. Changing rooms: 12 m² x 2
3. Showers: 8 m²
4. Toilets: 8 m²
5. Long Pool: 14 m²
6. Hot Pool: 13 m²
7. Whirl Pool: 7 m²
8. Resting area: 76 m²
9. Sauna: 11 m²
10. Steam room: 7 m²
11. Treatment room: 13 m²
12. Technical: 81 m²
13. In between areas: 75 m²

Total: 372 m²

Spa complement - Additional building 1

14. Reception: 33 m²
15. Cleaning storage: 4 m²
16. Laundry & towel storage: 11 m²
17. Staff: 18 m²
18. Technical: 20 m²
19. In between area: 9 m²

Total: 95 m²

Café - Additional building 2

20. Seating area: 30m²
21. Toilets: 7 m²
22. Counter: 13 m²
23. Kitchen: 22 m²
24. Waste: 9 m²
25. Dry storage: 7 m²
26. Cold storage: 7 m²
27. Technical: 24 m²
28. In between areas: 36 m²

Total: 155 m²

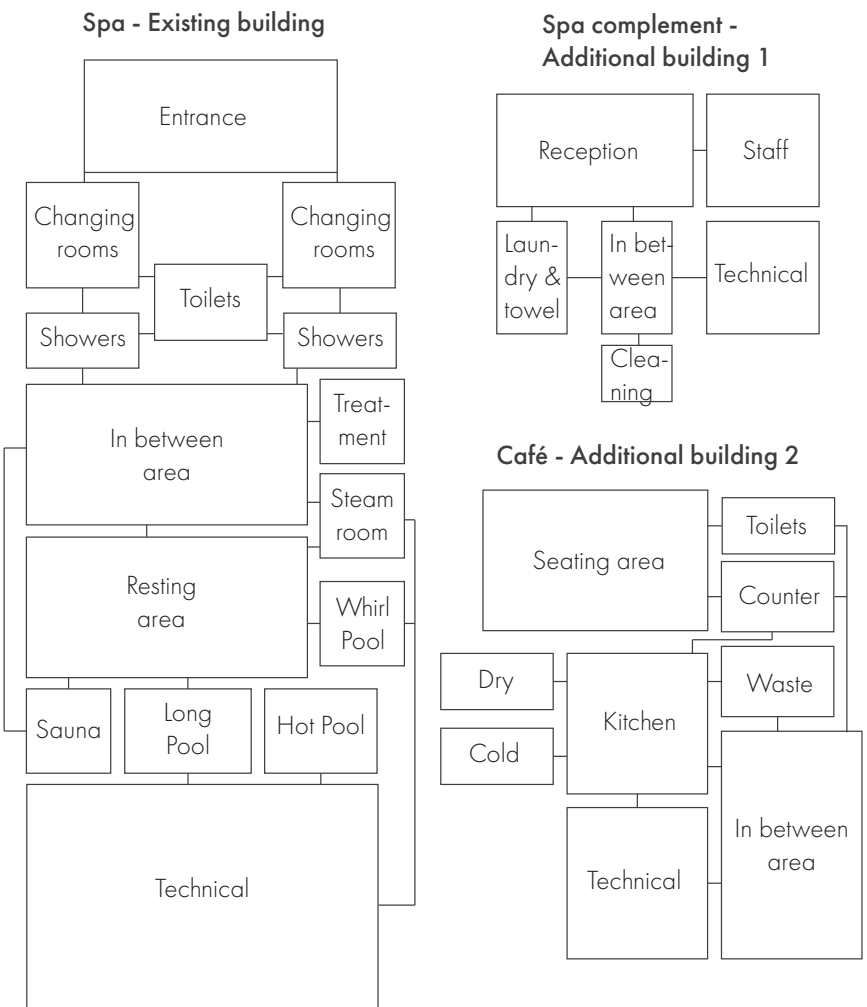


Figure 66. Building program diagram



Figure 67. Site plan
Scale 1:1000



Figure 68. North elevation
Scale 1:200

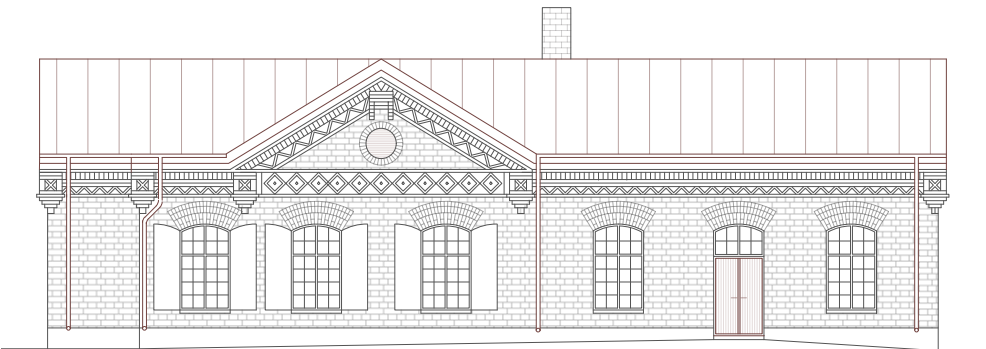


Figure 69. South elevation
Scale 1:200

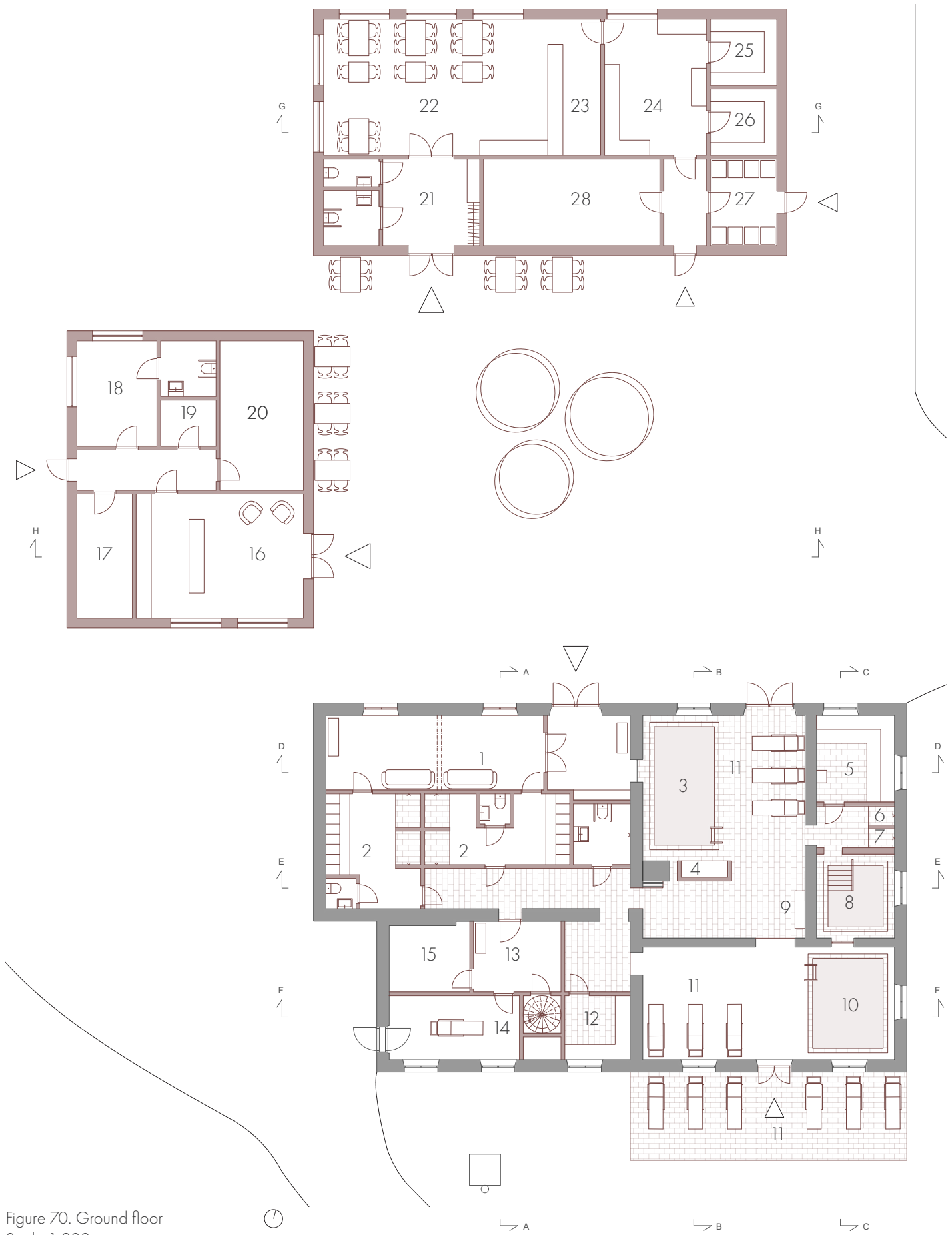


Figure 71. Courtyard

Spa - Existing building

- 1. Entrance
- 2. Changing rooms
- 3. Long Pool
- 4. Warm sitting stone
- 5. Sauna
- 6. Cold shower
- 7. Shower
- 8. Whirl pool
- 9. Water station
- 10. Hot pool
- 11. Resting area
- 12- Steam room
- 13. Wait room
- 14. Treatment room
- 15. Technical

Spa complement - Additional building 1

- 16. Reception
- 17. Laundry & towel storage
- 18. Staff
- 19. Cleaning storage
- 20. Technical

Café - Additional building 2

- 21. Entrance
- 22. Seating area
- 23. Counter
- 24. Kitchen
- 25. Dry storage
- 26. Cold storage
- 27. Waste
- 28. Technical

Aligned to the strategy formulated in the inventory chapter, the windows and shutters are kept and restored, as well as the damaged bricks. In the west façade the door are restored, whereas the other doors are replaced with new wooden ones, the walled upper part is also replaced with a new mullioned window. Further two new mullioned windows are added on the north façade where there previously have been windows. The largest change to the exterior is the new standing seam metal roof that is a bit thicker than the earlier one as a result of the added insulation. To visually reduce the height of the roof, the eaves are stepped which creates a shadow effect.

Interiorwise, the system of joists and interior ceilings are removed since their bearing capacity not is known and to open up and create a more airy atmosphere. Remaining walls without any load bearing function are also removed to give space for a new layout. The cisterns are taken away and the existing pool is covered at floor level to facilitate a new function. Some parts of the floor are kept whereas other parts is covered with new granite tiles. All walls have new surface layers of either microcement, granite or wood in some combination. An exception to this is made in one room where the brick is made visible. Also the window above the door is kept and restored and new stairs are introduced. Larger interventions are the new added pools as well as the new room configuration. The roof structure are also changed as a consequence of its poor condition in combination with the need for insulation. The rafters are replaced with replicas of the old ones, combining old with new.

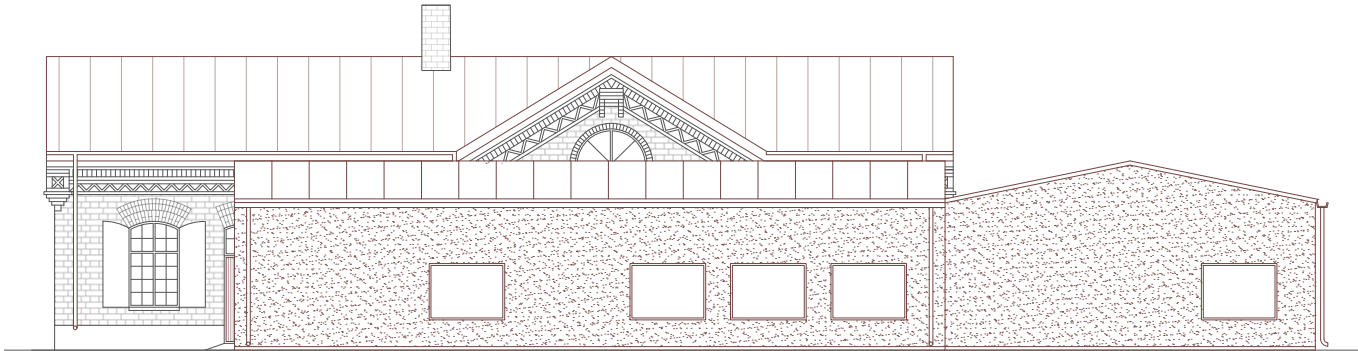


Figure 72. North elevation
Scale 1:200

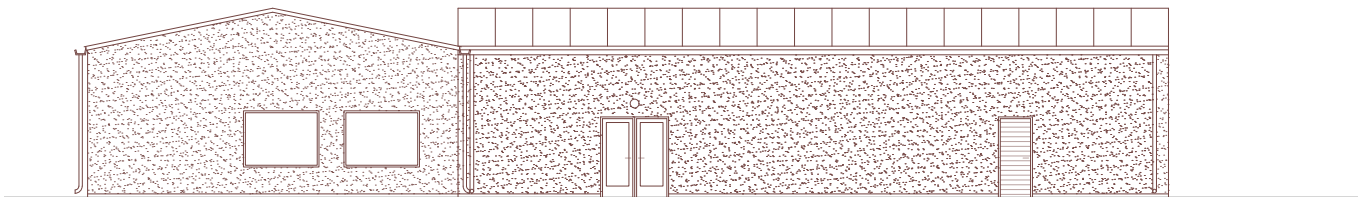


Figure 73. South elevation
Scale 1:200

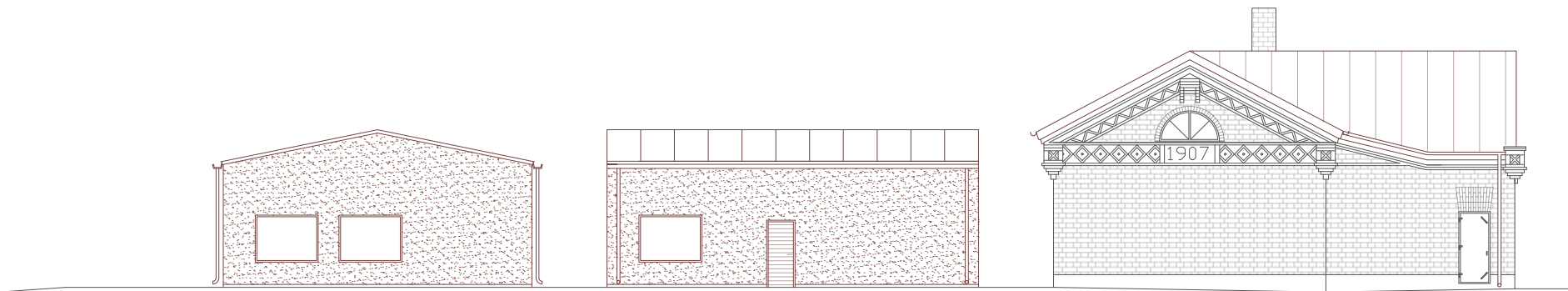


Figure 74. West elevation
Scale 1:200

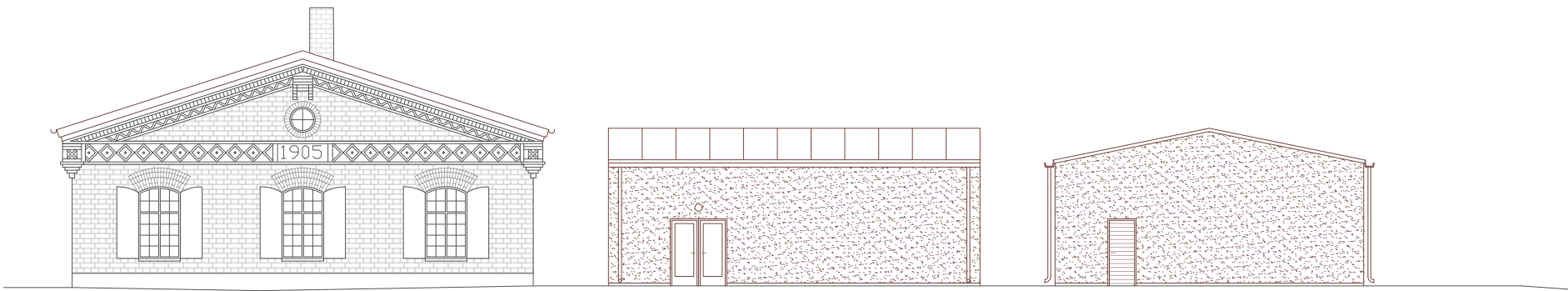


Figure 75. East elevation
Scale 1:200



Figure 76. Brick room, calming atmosphere

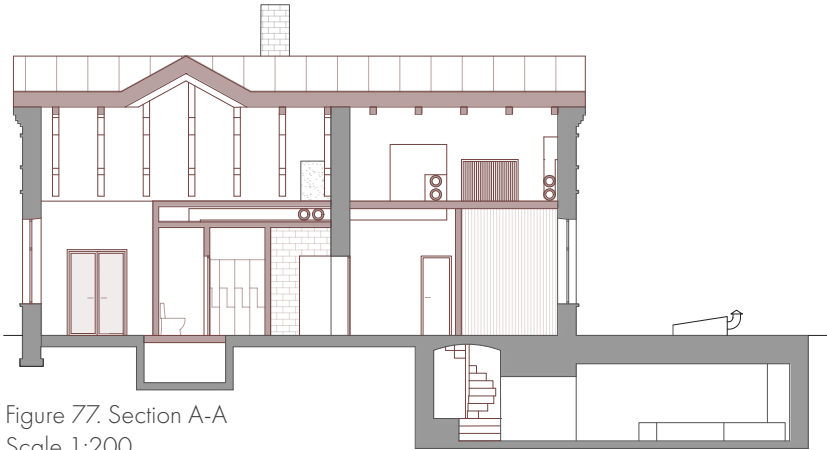


Figure 77. Section A-A
Scale 1:200

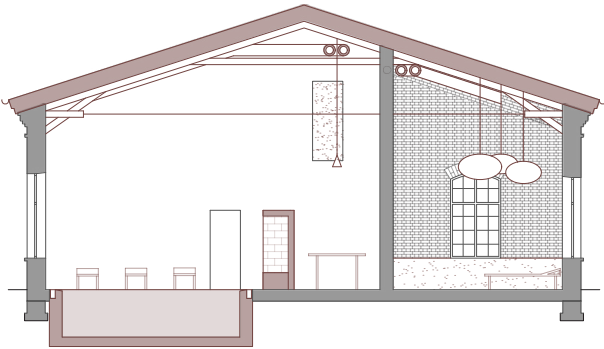


Figure 78. Section B-B
Scale 1:200

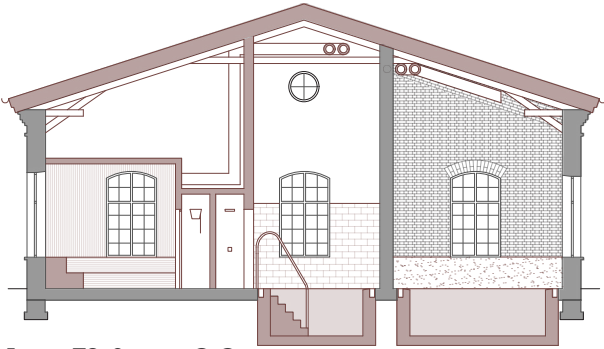


Figure 79. Section C-C
Scale 1:200



Figure 80. Section D-D
Scale 1:200



Figure 81. Section E-E
Scale 1:200

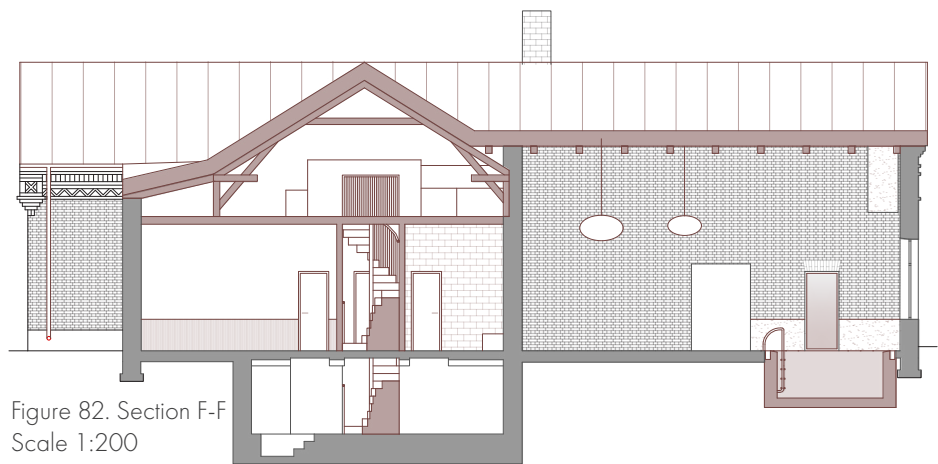


Figure 82. Section F-F
Scale 1:200



Figure 83. Central room, spacious atmosphere

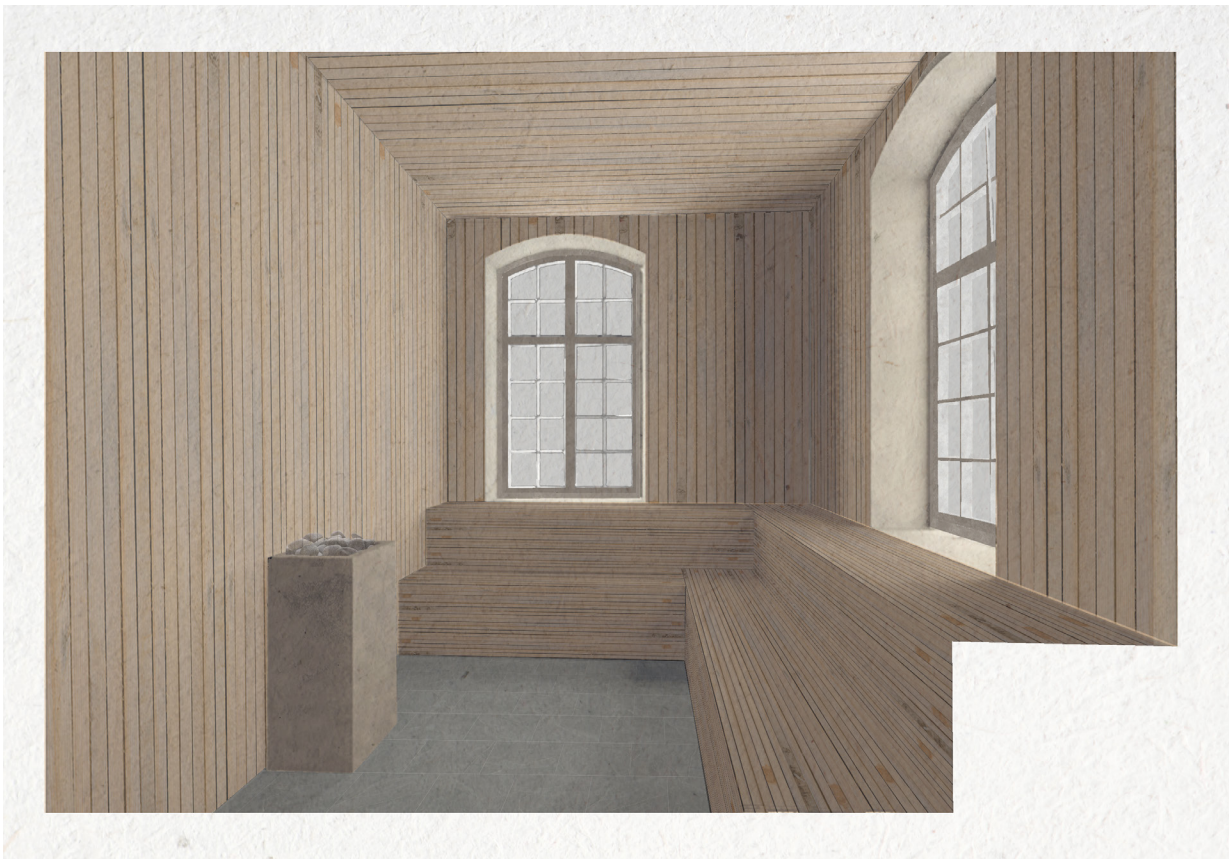


Figure 84. Sauna, revitalizing atmosphere



Figure 85. Kept existing floor



Figure 87. Added granite tiles



Figure 89. Added microcement



Figure 86. Added pine wood ribs



Figure 88. Visible existing bricks



Figure 90. Added brass details

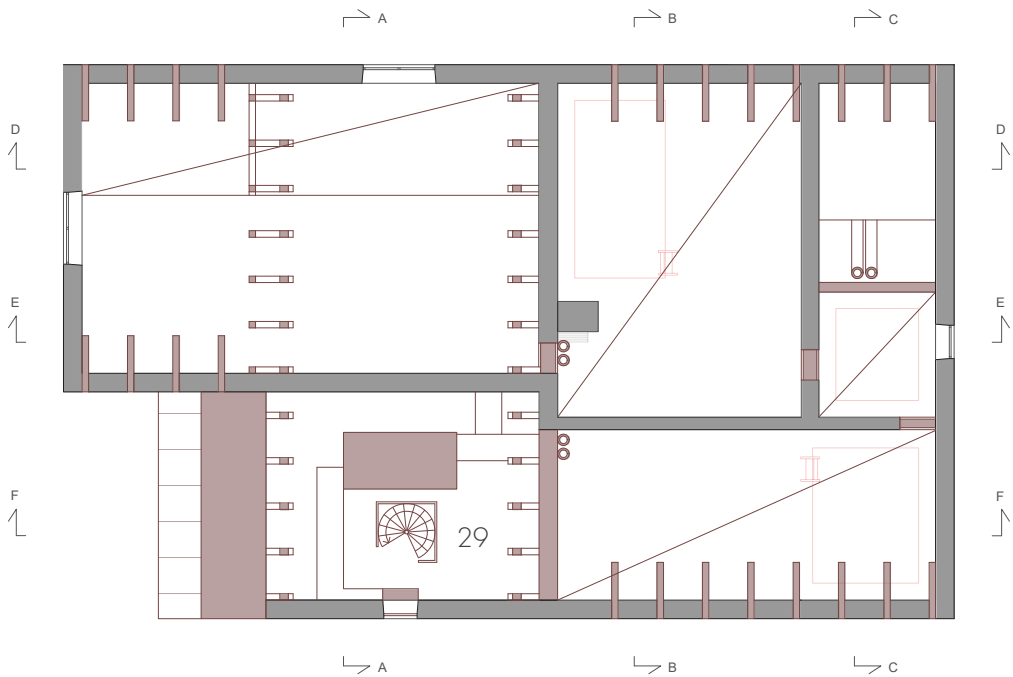


Figure 91. First floor spa
Scale 1:200

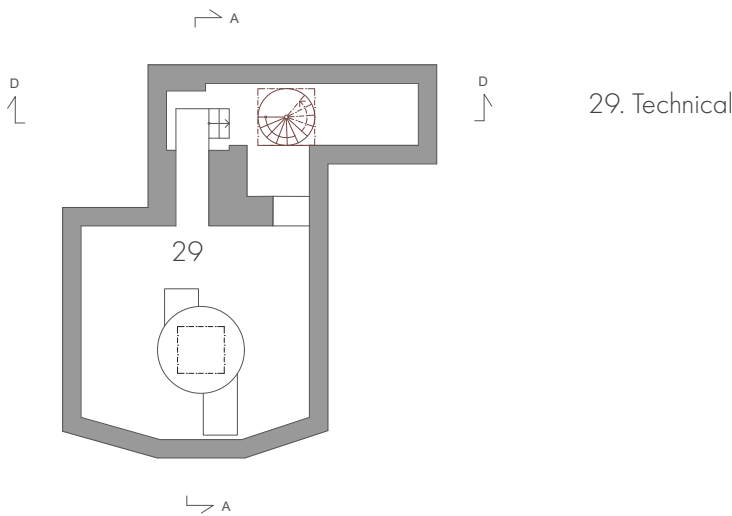


Figure 92. Basement floor spa
Scale 1:200

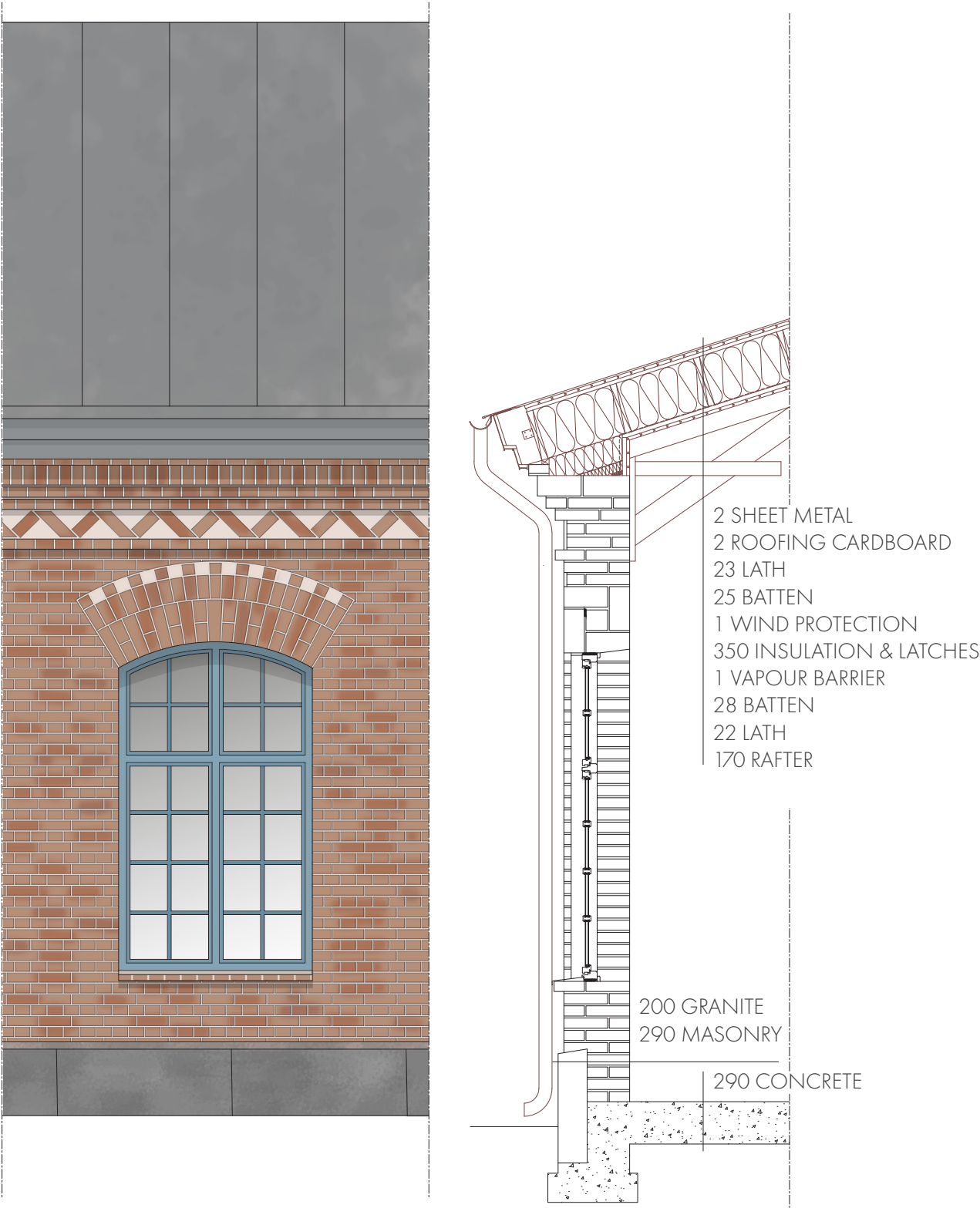


Figure 93. Detail elevation & section spa
Scale 1:40

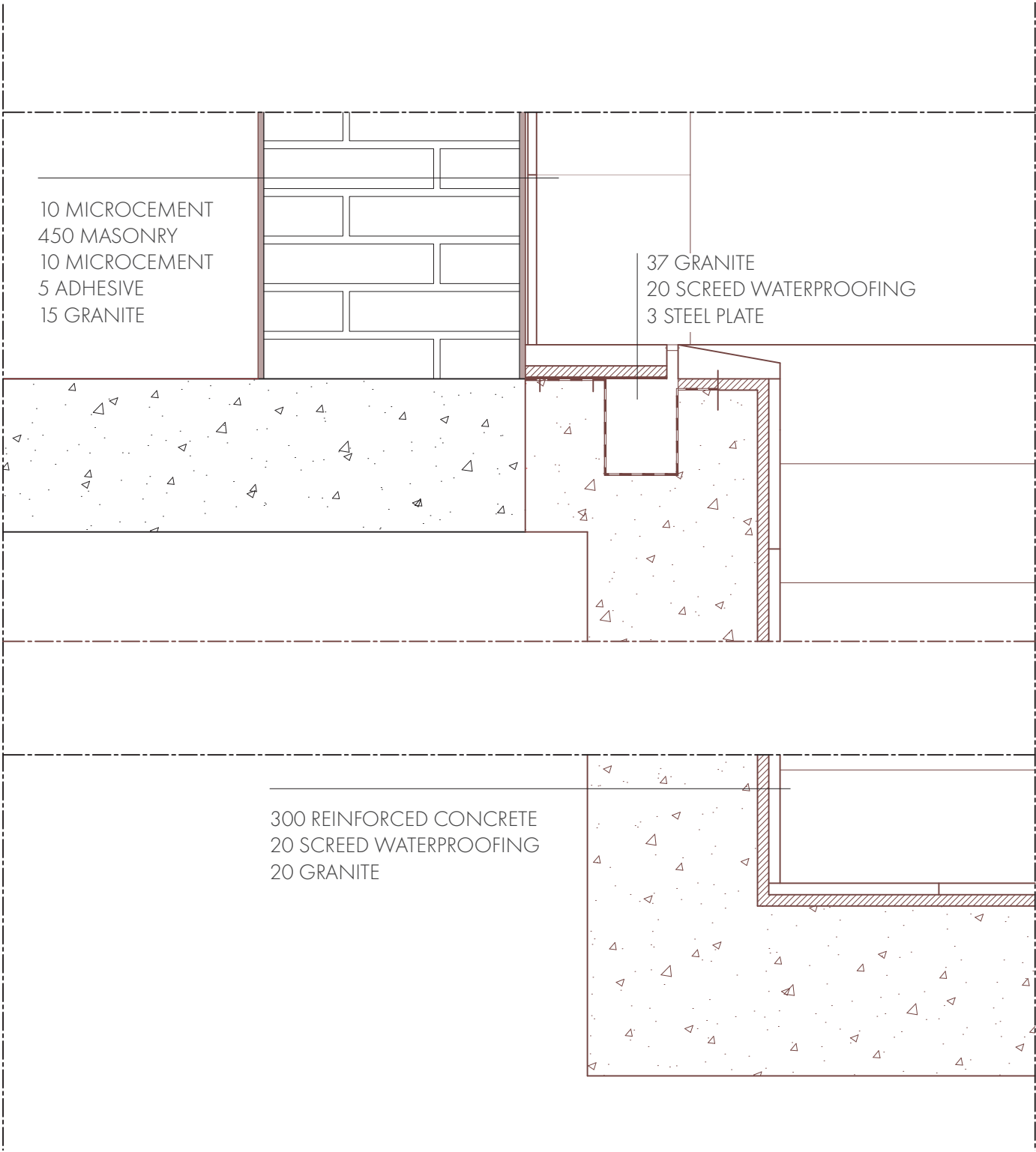


Figure 94. Detail pool
Scale 1:10

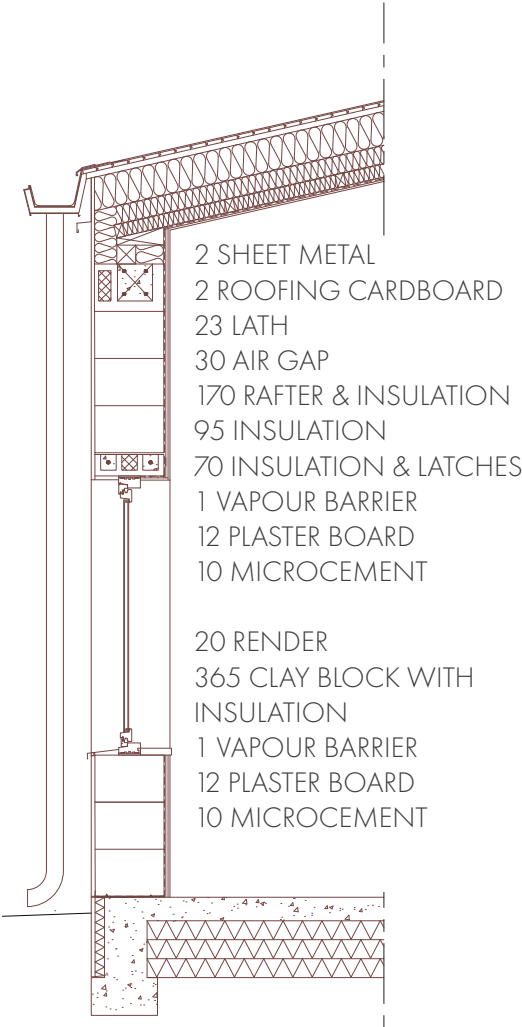


Figure 95. Detail section additional buildings
Scale 1:40

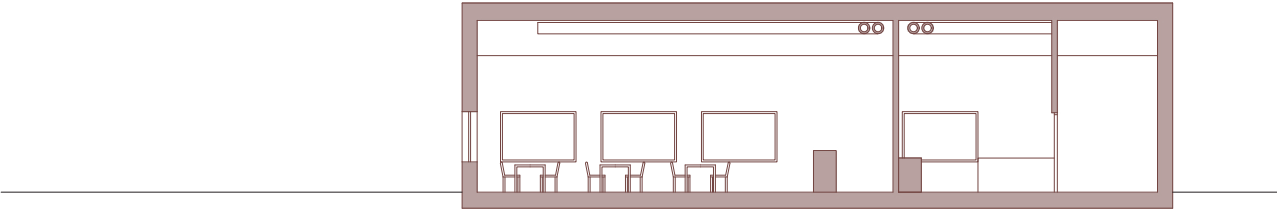


Figure 96. Section G-G
Scale 1:200

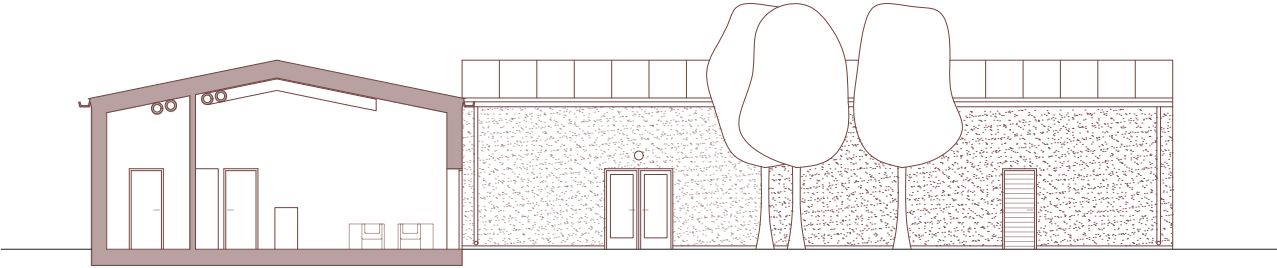


Figure 97. Section H-H
Scale 1:200

PART IV - CONCLUSION

DISCUSSION

PART IV - CONCLUSION

DISCUSSION

In this thesis, it is investigated how an existing building could be adapted into a spa focusing on atmospheres and phenomenology. Further, it is also investigated how the cultural heritage could be preserved while adapting the building to its new function.

We interpret the world via our senses, and therefore it is important to integrate senses within architecture. Atmospheres and phenomenology are linked to our experience of a space and how we perceive our surroundings and are two concepts that takes the body into account. By working with these themes I developed a concept were I divided the plan into different zones and then highlighted each sense in every zone. The idea was to make some adjustments so that every zone varied from each other and thereby created different atmospheres. The variation would primarily lie in how the space was illuminated, the use of materials and the sound level. These features are linked to our vision, touch and hearing and were quite easy to work with. However, how to make different atmospheres linked to scent and especially taste, were more difficult. These two senses are also strongly connected and influences each other. Furthermore, different atmospheres was created by having different scales in the building, that is, ceiling heights and widths for example.

When it comes to how to preserve the building's cultural heritage the strategy were to be modest in the changes made to the exterior and more or less restore the exterior. Interiorwise, larger interventions were needed in order to make it into a functional spa. Some traces were kept from the earlier function of the building whereas other were removed or covered. One feature that I found worth keeping initially, was the existing pool. However, moving forward with the project the layout become much better when the pool was covered and made it possible to use the area as a floor. When working with an existing building these type of problem occurs regularly and I found it sometimes hard to decide whether to keep the old. The solution was to keep the existing in some spaces, have new materials in other, and make the two work together to form a unity.

The building program also contains two new buildings with complementing facilities. They were introduced due to lack of space in the existing building and made it possible to create a smaller outdoor space before entering the spa. Adding two new buildings can be seen as a contradiction to my initial thought to adapt an existing building instead of creating something new. However, with the chosen new function, the creation of two new buildings were needed to fit all necessary facilities. In addition to this, the plot and outdoor space also gained qualities when adding the two new buildings. These buildings can also be considered to add to the heritage by being located where it once were other buildings connected to the old water work. They serve as a link between the past and the present and become new pieces in the history of Visholmen.

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STUDENT BACKGROUND

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Chalmers University of Technology
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