CHALMERS SCHOOL OF ARCHITECTURE

MASTER´S THESIS 2022

ABSTRACTS

CHALMERS
UNIVERSITY OF TECHNOLOGY

CORNELIA AHLSTEDT

RECONNECT TO NATURE

- Designing learning environments that strengthen children's connection to nature

BUILDING DESIGN FOR SUSTAINABILITY

Supervisor: Walter Unterrainer & Janneke van der Leer
Examiner: Liane Thuvander

MT´22

This thesis emphasizes the importance of nature's presences in our lives. An increasingly urbanized world with reduced access to green spaces, a rise in electronic media, a change in social norms and a reduced perception of the role of the natural world for human survival have all lead to a disconnection between human and nature. The disconnection has been proposed as a root cause of the global environmental crisis and research findings across a wide range of sectors show the benefits of contact with nature and its impact on human health and well-being. Against this background the purpose of this master's thesis is to investigate how humans can be reconnected to nature through architecture.

A good relationship to nature is strongest when developed in early ages and a connection to nature during childhood is essential for physical and mental development. In this thesis, strategies for reconnecting children with nature are explored and a preschool located in an urban context is used as a basis for the investigation.

We spend approximately 90% of our time indoors so a satisfying relation between people and the natural world in the built environment is crucial for human's connection to nature. Architects are using biophilic design as a method to improve human health and to create an experience of nature in the built environment. In this thesis biophilic design is explored and interpreted into design strategies with the aim to create learning environments that strengthen children's connection to nature. The use of the strategies also aims to improve children's development and well-being and strengthen pro-environmental behaviours.

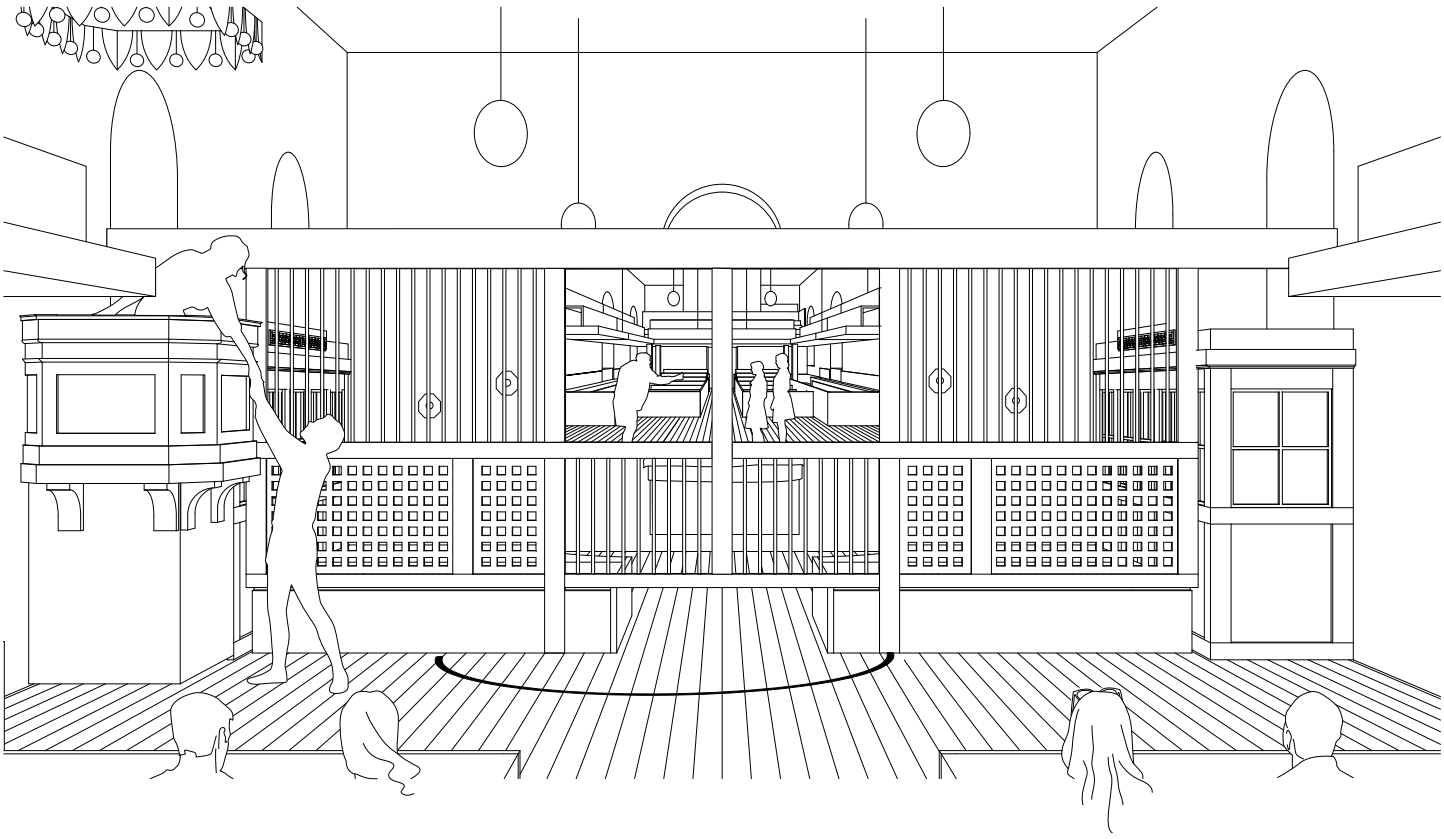
The design strategies are translated into physical form in a design proposal; a transformation of the preschool Levgrensvägen 3 in Gothenburg, Sweden, which showcase an architecture that incorporates nature and nature experiences in the design. The outcome is a speculative transformation of the building and its outdoor spaces in the light of biophilic design, which can contribute to a raised discussion on the importance of a connection between human and nature and the awareness on the benefits and limitations of using biophilic design.

Keywords : Human-nature connection, Biophilic Design, Learning environments, Preschool

ALBIN ALDÉN

STAGING ARCHITECTURE

DESIGN OF A THEATRE COMPLEX THROUGH CONVERSION AND ADDITIONS TO AN EXISTANT CHURCH



MATTER, SPACE, STRUCTURE

Supervisor: Naima Callenberg
Examiner: Daniel Norell
MT´22

This is a transformation project for the use of a church as both church and theatre. The backstage area and the foyer of the theatre are additions to the church, which itself is used as a more or less ready-made auditorium, with some relatively minor adjustments, thus retaining its usability as a church.

The project employs a methodology of staging that draws from the context, which is understood in a very wide sense. It includes the city, the specific church and its history as well as the history of the site and of churches in general.

I discuss the future of the churches of Sweden in relation to the theories of Italian architect Aldo Rossi, emphasizing the need for transformation as well as preservation. I propose that churches can be transformed today in continuity with how they've historically been transformed, thus preserving a tradition of transformation as opposed to conserving them in their current state.

Transformation and multi-purposing of churches becomes a way to preserve them for religious ceremonies. Very few churches are used at full capacity, but almost all of them have at least a small group of devoted members. In terms of property management, this implies that surplus churches need not be sold and completely rebuilt but could be partly rented out. This is the commission that is simulated in the project, one that I would anticipate becoming more common than complete sale and reuse of churches for profane purposes only.

Architectural practice is understood as the synthesis of a complex and contradictory reality. This project seeks a synthesis between demands of heritage preservation, religious practice and theatre production, convinced that they together can generate a whole that is richer and more culturally relevant than its component parts.

Keywords: transformation, church, theatre, context, staging, Rossi, history

ADAM ALDOWSARY & GUSTAV NORDAHL

META

ELICITING INTROSPECTIVE STATES THROUGH VIRTUAL REALITY
- AN ARCHITECTURAL EXPLORATION OF EXTERNALLY INDUCED PHENOMENA

MATTER SPACE STRUCTURE

Supervisor: Peter Christensson
Examiner: Daniel Norell
MT´22

Architecture is a field inherently connected to art. The artist can create pieces that purposefully challenge our emotional states. Often, the architect is merely responsible for supplying the canvas. These emotional challenges, often conveyed by art, can frequently be left as secondary in architecture.

In big cities society is constantly changing at a high pace. According to the Swedish Social Insurance Agency (2020), the population stresses more and more, which leads to mental illness through exhaustion. That, in turn, leads to long-term sick-leaves and unemployment. We have little time for self reflection and introspection and during the remaining hours of our days the media steer us in directions of their own. Our minds are crowded with ideas and needs that are not inherently ours that further increase toxic societal norms.

The relation between our bodies, our minds and our direct environments has a great impact on our mental well-being. Architecture and spatial design have the ability to inspire and influence human behaviour. So, the spaces in which we spend most of our time could help us become mentally stronger and reduce stress levels.

In order to explore how to create these kinds of built environments, Virtual Reality (VR) can be used as a tool to test spatial experiences that would emulate real life situations and trigger real emotional reactions. After surveying the field of VR research and performing VR experiments, a virtual space was designed. This VR experience was to act as a summary of the exploratory stage of the project, acting as a precursor to the architecture set in the real world.

The reality-based project is located on site in central Stockholm, in connection to areas where stress levels are recorded to be among the highest. In this building, visitors could pause for a short time, being surrounded by an architecture that triggers positive and beneficial emotional responses, ultimately contributing to a more socially sustainable city.

Keywords: Introspection, Virtual Reality, Psychology, Mental Health

LINNEA ALENIUS

BUILDING WITH BUILDINGS

- AN INVESTIGATION OF THE DEMOLITION STOCK IN SWEDEN AND HOW THESE BUILDINGS COULD BE TURNED INTO RESOURCES AGAIN

In Sweden we use resources four times beyond our planetary boundaries. One of the reasons are that objects, goods and even buildings are treated as if they were disposables that become waste and gets demolished when they are not useful or wanted anymore. The building industry stands for 45% of Sweden's resource extraction, 40% of our amount of greenhouse gas emissions and 35 % of our waste production. This a cycle of events that could be decreased remarkably if already built buildings were treated as resources and material banks instead of being crushed through demolition when they are not wanted anymore. Against this background following questions are asked:

Q1: What type of buildings are being demolished in Sweden?

Q2: What are the aspects that could enable an industrial reuse of building elements in new construction?

Q3: How could building elements from the demolition stock in Sweden be turned into resources suitable to use in new construction in a systematic way?

To answer these questions the thesis is mapping demolition permits from three municipalities in Sweden showing both types, the amount, and local characteristics of the demolition. Through literature studies, reference studies and interviews the thesis investigates how these found resources can be used. It discusses what the major differences are with a reuse project compared to conventional new construction and what the aspects are that could enable an industrial reuse in practice.

Findings are that the biggest difference is the reliability on the resources and the amount of labour that is needed to ensure them . The reliability concerns both the supply and the difficulties in ensuring technical aspects. The suggested answer to found problems, possibilities, and resources is a general design proposal with a loadbearing wooden construction that use reused building elements as filling. This is tested through a redesign of a multifamily building in Gothenburg examining the impact on expression, floorplan, and overall layout of the building.

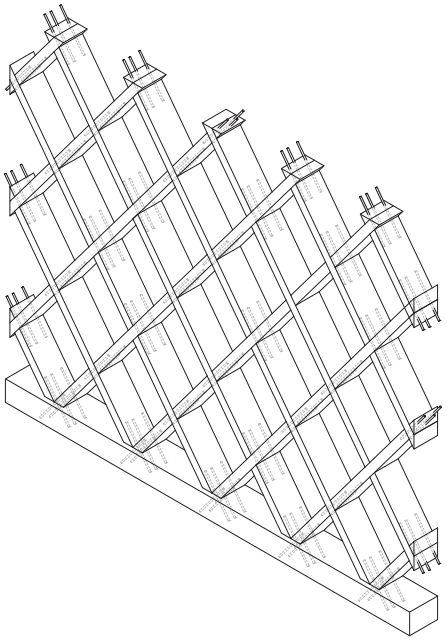
Keywords : Circularity, Deconstruction, Demomlition, Reuse

HOUSING

Supervisor: Kaj Granath
Examiner: Ola Nylander
MT´22

CLARA A. FRICK & ALMA N. UNENGE

ARCHITECTURE AND THE CHOCOLATE FACTORY



BUILDING & TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

The latin word for the cocoa tree Theobroma Cacao could directly translate to Cacao - “food of the gods”. Cocoa, which is the main ingredient of chocolate, was from the beginning considered a luxury product. Today it is seen as more of an everyday feature, but the picture of it being a treat giving pleasure has not disappeared. In 1901, the chocolate company Cloetta decided to build their new factory outside of Linköping in between the two watercourses Göta Kanal and Motala Ström. The natural river Motala Ström provided electricity, while the man made Göta Kanal functioned for carrying goods. While the factory expanded over the years, the small community later to be known as Ljungsbro started to grow. Cloetta had a big responsibility in the development of Ljungsbro and the chocolate company even employed an architect who designed buildings in the society under Cloetta’s management. The architecture reflects a great belief in the future, with hope for the factory and the community to grow bigger.

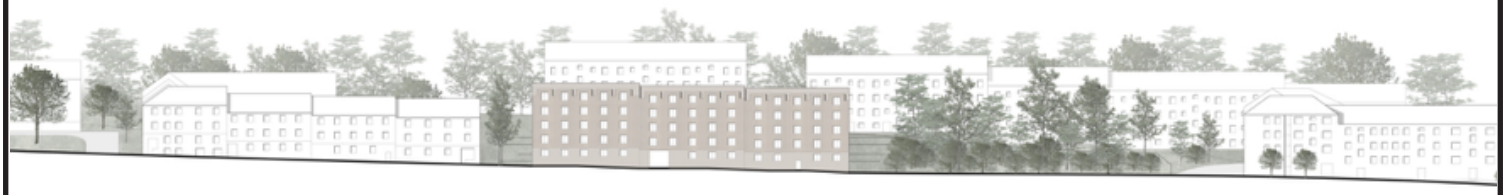
Cloetta is known for famous chocolate products such as Kexchoklad and Plopp and is recognized as one of the oldest chocolate producers in the Nordic context. Today the factory hosts a small outlet shop in the basement which is the only public area of the factory. With the nearby location to the tourist destination Göta kanal together with the richness of the company history, there is potential of making an addition to the society’s tourist attractions. This thesis therefore aims to create a proposal for a new visitor center for the speculative client Cloetta in Ljungsbro. A chocolate visitor center puts a need for a proposal being designed with playfulness and curiosity. Through analysing built and theoretical references, the thesis aims to investigate how to use sequences as a method of composing movement and spatial experiences. The thesis also treats experimenting with different architectural tools for achieving a dramaturgy in the created spaces.

Keywords : Cloetta, experience based, public architecture,architectural dramaturgy chocolate, historical context, tourism

ELIN FRITZ & ELSA ANDERSSON

SÅGGATAN 49

- A TRANSLATION OF A LANDSHÖVDINGEHUS



BUILDING & TECTONICS

Supervisor: Björn Gross
Examiner: Mikael Ekegren
MT´22

Between 1875 and 1940 almost all tenant housing built in Gothenburg was Landshövdingehus. Landsövdigehus are a big part of Gothenburg's architecture and a very popular housing typology to live in. The building typology was developed due to fire restrictions and consists of a ground floor made of stone and two upper floors in wood. Between the years of 1875 and 1940 many different architectural norms and styles evolved which also influenced the looks of the Landshövdingehus. All though the basic structure of having a ground floor in stone and two upper floors in wood remained the same, the facades and expressions of the buildings followed the trends.

Today, residential buildings are often made of prefabricated elements. Prefabrication enables the building process to be faster, since it permits a big part of the production to be inside and to be mass produced. More and more prefabricated buildings are made out of wood, but the majority are made of concrete.

Cross Laminated Timber, CLT, is a material that can be used in a highly prefabricated process. CLT components are massive elements made of layers of wood planks glued together. CLT have similar properties as concrete, but is much lighter and generates less emissions.

Nowadays the fire restrictions do not limit wooden constructions in the same way and there are even high rises made of wood. With this in mind, if we were to build a Landshövdingehus today, what would it look like? How would the architectural norms and styles of today affect the look of the building? Can modern building methods, such as prefabricated CLT, be combined with old building typologies like Landshövdingehus? What aesthetical and technical solutions can be improved today by using modern techniques? And what are the challenges?

The project will be a combination between research by design and design by research. The process will start by looking at Landshövdingehus and their composition. We will also look into CLT as a material and what it means to use it in housing. We will then, based on the research, continue the design through model studies and drawings.

Keywords : Landshövdingehus, CLT, wood, housing

MIKAEL ANDERSSON

NECROPOLIS

BUILDING AND TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

Sweden is one of the most secularized societies in the world and many swedes go through their entire lives without the involvement of religion, but that is not true for their death. The purpose of this master's thesis is twofold: to propose a design for a truly secularized burial site, that celebrates death in a meaningful way without religion, where religion is welcome but not the norm, and secondly to find a typology for the burial ground that fits the urban landscape and don't occupy unnecessarily vast areas of land, useful for other types of urban expansion.

Through dialogs with Sveriges Kyrkogård och Krematorie förening, manufacturers of cremator ovens and filter equipment, as well as reference projects, a room program was constructed. From this a connection diagram was established that in conjunction with the room program became the necessary toolbox in working with the separate flows and functions of the facility. On top of this separate focus studies were performed to further enhance and detail the design.

Through historical and reference studies of architecture relating to death, primarily the thoughts of Étienne-Louis Boullée, his theory of architecture parlante and what he fittingly describes as the "Poetry of Architecture" (Boullée, E. 1953), as well as crematories of Italy, Germany, Scandinavia, and France, a visual language is distilled that has the dignity and stature to manifest a memorial for our loved ones. The design of the necropolis is imbued with the symbolism and an architectural language that is associate with death while not making the religious connections.

The building should communicate both civic authority as well as emotional resolution (Worpole 2016). The atmosphere of these grave settings is of paramount importance, it should not through mediocrity sit at odds with the emotional range of the funeral service or while visiting a dearly departed. Atmosphere is investigated through the nine qualities of atmosphere proposed by Peter Zumthor (2006) in his book Atmospheres.

Keywords: Columbarium, Crematorium, Funeral, Mausoleum, Necropolis

ELISABET ARNS

RURAL HOUSING

- Towards diverse living

More people are choosing to move from the metropolitan regions and it's time to question the urban norm. Gävleborg, Jämtland and Värmland have now more people moving to the regions than from, which is the first time that this has happened in 20 years. This thesis is about rural residential architecture and how development of rural housing can be affected by-, and respond to an increasing interest in moving to the countryside.

The work examines how an increased move to the countryside can affect and shape space and life inside the home and in the surrounding outdoor areas. Through studies of current reference projects and in-depth interviews with people who want to move to the countryside, a design proposal is presented for a multi-family housing on a plot located in the municipality of Gothenburg, Sweden. Different focus areas have been addressing issues of land ownership, shared space, flexibility, and access to nature among other things.

Together with the architectural proposal the project reflects on the need for new types of typologies in the rural settings as well as how different factors in residential architecture can be lifted for further development and challenge leading norms of rural housing.

Keywords : rural, urban norm, housing, residential architecture, ruralization.

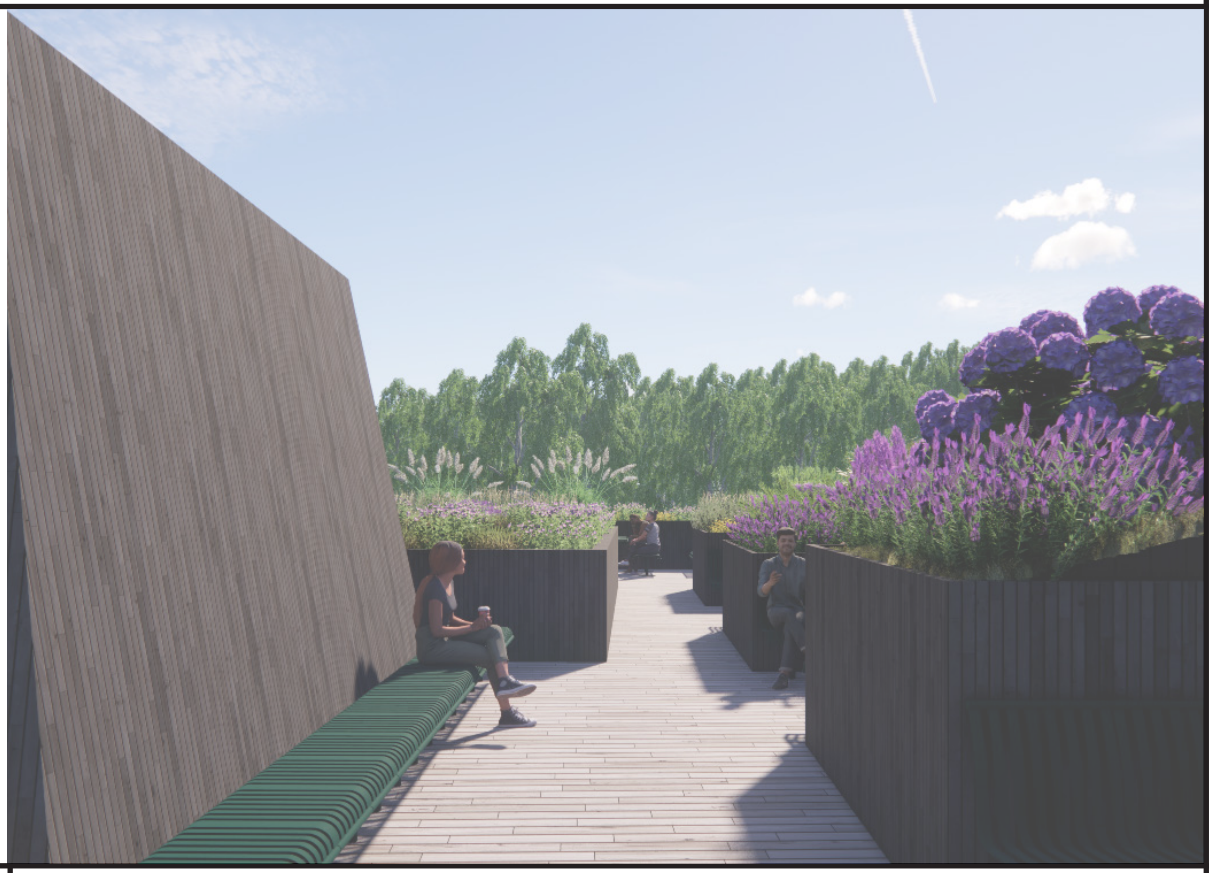
MATTER SPACE STRUCTURE

Supervisor: Daniel Norell
Examiner: Daniel Norell
MT´22

EBBA BARKFORS AND JENNIE BERGMAN

A (S)PACE FOR REST

- HOW ARCHITECTURE CAN SUPPORT RECOVERY AND REDUCE STRESS FOR HOSPITAL STAFF



HEALTHCARE

Supervisor: Elke Miedema
Examiner: Cristiana Caira
MT´22

Work-related stress is one of the most common causes of illness reported by workers. The Swedish Work Environment Authority's forecasts show that stress-related illness is expected to increase in the future. The solution to the problem of work-related stress is complex and requires multidisciplinary measures. Recovery is a key factor for us to feel good and be able to perform. The institute of stress medicine in Gothenburg has conducted a study to assess how the pandemic has affected the work environment. One of the conclusions from the study is that it is vital to ensure that there is a possibility of recovery during working hours. The most vulnerable workers are those in the healthcare and health sectors. During times of high workload such as the pandemic, studies show that many healthcare workers perceive their work environment as deteriorating. In general, healthcare staff currently have no guaranteed specific space at their workplace to be able to have an effective recovery during working hours.
The physical environment has a great impact on our ability to recover mentally. Studies show that access to greenery in the workplace has a positive effect on stress and that the right type of focus and degree of complexity in a space can also reduce stress.

The purpose of the thesis has been to explore the need for and design of a facility for healthcare workers that can support recovery and prevent work related stress.

The aim has been to create an architecture where the design can support mental recovery by working with senses and atmospheres.

The methods include literature studies within restorative environments, biophilic design, salutogenic design and interviews with relevant informers such as healthcare workers and people working within the field of occupational health.

The investigation resulted in a design proposal consisting of partly acupuncture interventions and mainly a building, with a restorative layout that supports healthcare workers mental health both in a preventive and rehabilitating manner. It is located within Sahlgrenska University Hospital in Gothenburg.

THEO BELZONS

GALTABÄCK ARTIST RESIDENCE

- Spaces for withdrawal and unconditional creation

BUILDING & TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

Artists, writers and various creative practitioners can apply for allowances, grants and stay at residencies in different lengths. These accommodations provides opportunities for short term cultural exchange between participants, host and their culture, while providing possibilities for individual creative development and networking. Contemporary residencies are diverse and unique in their setting, profile and prescribed outcome. We see tendencies of various forms of residencies providing dwelling and studio space having been allocated in peripheral areas since the early art colonies to this day, where contemporary residencies witness of a potential greater public interest in escaping modern commodification.

There are no artist residencies in Halland to this day, although the characteristic lowland along the coastal line of the region demonstrates peripheral peculiarities with much desirable qualities for established and emerging artist or creatives seeking for environmental change, exchange or temporary withdrawal.

But in peripheral regions where natural phenomenas constitute the greater part of the immediate surroundings, human activities are easily overlooked. The thesis aims to explore how a residence providing temporary withdrawal and cultural exchange between parts can materialise in a peripheral context, without undermining a place identity that individuals and groups orient themselves towards and in relation to.

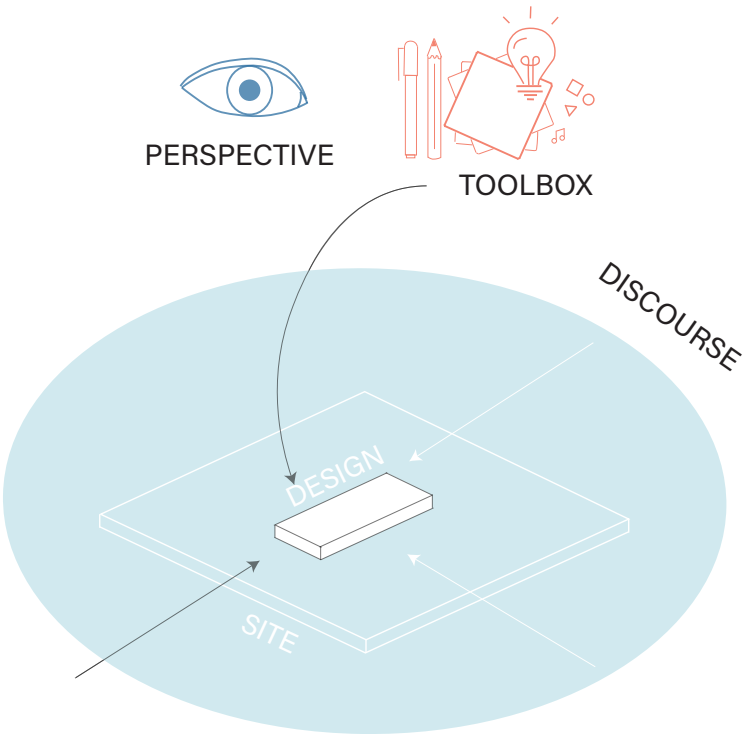
The thesis includes a design proposal driven by a research by design methodology that explores how a peripheral artist residence in the light of increasing diversification of residency models can take expression and benefit from the cultural exchange in the specific peripheral context of Galtabäcks hamn, situated south of Varberg.

Keywords : Artist residence, periphery, place, identity

KELLI BERG MCILROY

THE URBAN LIVING ROOM

- CONSTRUCTING APPROPRIATION VIA THE THIRD SPACE



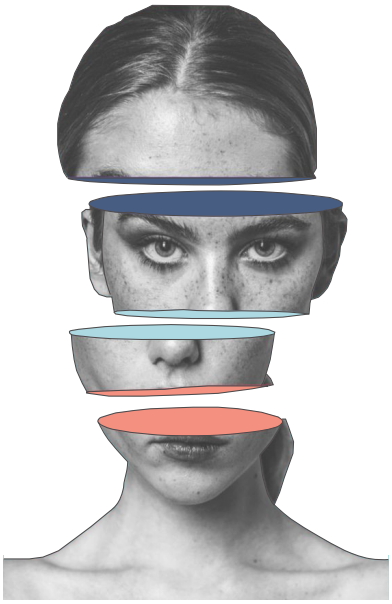


Fig 1. SPLIT(Юлия КреаТИВ , 2022)

URBAN CHALLENGES

Supervisor: Kengo Skorick
Examiner: Joaquim Tarasso
MT´22

The aim of this thesis is to spatially investigate The Third Space, using life's transitions within this fast-moving society to be absorbed in the Urban streetscape of Gothenburg. Investigating social dynamics, the concept of The Third Space is designed to encourage social interactions, foster creativity, trigger co-creation & to make use of spaces otherwise left without purpose.

What does a successful environment mean? The city of Gothenburg seems today to celebrate industrial and labour oriented progression with high-rise built office & industrial spaces. Gothenburg, like many other urban cities, indeed seems to be in need of a Third Space: To breathe between labour and domesticity, a space dedicated for the people.

This thesis problematizes the city formed after industry. It attempts to propose a design for the individual as for the group within the urban room, fostering public agents and new communities & supporting domestic movements.

The methodology used will investigate the industrial city that Gothenburg has become, in contrast to its early history as a merchant city, where social encounters constantly occurred next to the river banks. Another city, also very dependent on its river, with a merchant background, is Venice. Venetian Gothic architecture is explored within its urban expression, a precedent of The Urban Living Room, the space which the theory of The Third Space will be tested upon. The belief is that the urban model of Venice could give room for The Third Space.

The testing platform is allocated on Gothenburg riverbank, surrounded by industry & domestic space. At first glance, the site seem to pose a lack of public & private gradients, leading to pedestrian confusion, resulting in neglection.

The Third Space (Soja, 1996) is the transitional gap between the urban built form & the imagined, perceived space. It is the connection between the now & the future. It is a hybrid space between public and private, indoor and outdoor, where imagination & creativity occur.

Keywords : Relations, Appropriation, Third space, Identity, Belonging

SARA BERGQUIST

REMAIN CALM

- A CENTRE FOR HEALING THE STRESSED

HEALTHCARE

Supervisor: Elke Miedema
Examiner: Cristiana Caira
MT´22

Long periods of stress without time to recover is a common and increasing problem in our society. As it often leads to a higher risk of complications down the road, such as mental health problems and fatigue syndrome, it's important to prevent these cases from escalating and to provide people with help and support no matter where they are on the spectrum of health and stress.

The aim of this project was to design a healthcare centre for those who need help in dealing with their stress-levels both in the long-term and in the short-term through healing environments and holistic therapy for stress-management activities such as psychotherapy and mindfulness.

The exploration was conducted through literature studies about healing and stimulating effects that built environments can have on our health and how stress can be reduced and managed through different therapeutic activities. Literature studies surrounding biophilic- and salutogenic design contributed to a large scope of the research, resulting in design strategies which were implemented in the project through explorative sketches and digital modelling.

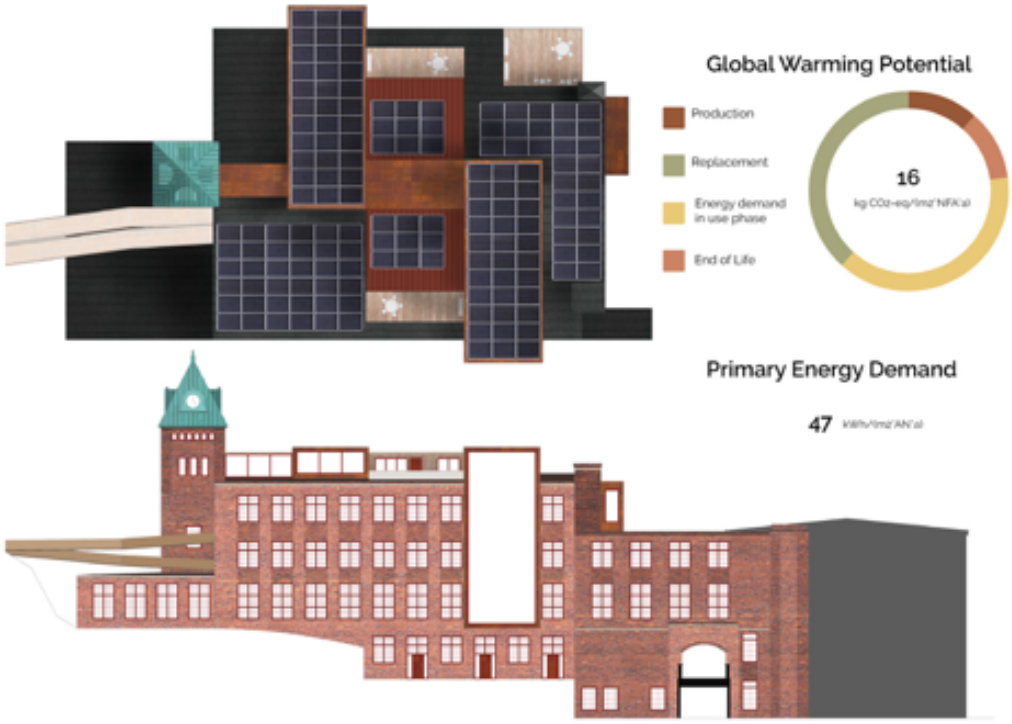
The project resulted in the design of a centre that specifically targets stress-reduction and management through healing environments and supporting activities. A place where the stressed receive support, tools, and guidance in their journeys towards greater health.

Keywords : healing environments, stress, biophilic design, salutogenic design, holistic therapy

VIKTOR BIENEK

OLD INTO NEW

- A SUSTAINABLE TRANSFORMATION OF A FORMER SPINNING MILL IN THE RURAL AREA OF GOTHENBURG



BUILDING DESIGN FOR SUSTAINABILITY

Supervisor: Walter Unterrainer
Examiner: Paula Femenias
MT´22

I have always liked the idea of former industrial buildings being used for communal purposes. That‘s what they were built for in the first place. So, if it can’t be a factory anymore, what about transforming it into architecture for the local community, such as co-housing, a cultural centre, or something similar? Something that the community benefits from. The number of vacant factories, warehouses, and mills in the rural area of Sweden is still high. Spinning mills, paper mills and other industrial buildings were often built near rivers, which served as an energy source. With an industry, society began to build up, which was mostly dependent on the factory economy.
Today, many industrial buildings and former factories are abandoned, or used for a temporary purpose. They are omnipresent and often go unnoticed, but they exist as a valuable resource and offer a great opportunity for community projects that could enrich the lives of many.
This thesis looks at a particular former spinning mill in Alafors, a community in the rural area of Gothenburg. The factory area consists of several buildings and has been partly developed in the past. However, the current concept is unclear, but the municipality and the property owners see great potential for further development.
A new concept focuses on a mixed-use that creates synergies within the factory site, but also beyond its boundaries. With appropriate new functions, financial risks are spread and lead to resilience for future happenings. New functions can feed off each other, making a scheme more attractive to all users and giving it long term vitality.
An evidence-based design proposal focuses on one building specifically and displays improvements in its environmental impact through an iterative design approach. This was performed through different design tools. Architectural qualities, such as functionality, proportion and materiality, have been investigated through literature, interviews, and design experiments.
The outcome of this thesis is an appropriate new architectural programme for the former spinning mill in Alafors that includes all aspects of sustainability. Social, ecological, and economical.

Keywords : #rural development #evidenced-based design #LCA #transformation

EMIL BLÜCKER

FUTURE MONUMENTS

- TRACING THE ANTHROPOCENE

MATERIAL TURN

Supervisor: kengo Skorick, Jonas Runeberger
Examiner: Jonas Lundberg
MT´22

Part of human nature is our need to materialize and manifest our existence and the events shaping our lives. Not only for ourselves, the ones living those very lives. We also feel the need to tell the afterworld of our existence and its trials and tribulations.

This thesis explores how climate change - the defining feature of the anthropocene - can be immortalized through structures. These structures make the slow paced yet dramatic changes in nature visible, creating instruments that alarm us about where we are headed today, and preserve what's left of us tomorrow - telling the story of the past, present and future all at once.

The melancholy of the anthropocene is humankind's asymmetrical relationship to nature. For us, nature is a means to an end, all the while we ourselves are both that very means and that very end. For nature, we are merely a factor among many, to which she is completely indifferent. Therefore the structures play the immortal song of human mortality, tracing climate change and human "nature" through nature itself.

Humans needs nature, but nature does not need humans, yet the paradox is that we are a part of nature in its highest regard. In these structures, nature is playing the tones of the anthropocene, but we are always able to alter the tone, changing the outcome. The hidden shifts that the anthroprocene creates are revealed and translated in to the human scale, making us able to interact with it, understand it, perhaps even mourn it. Natural phenomena is the musician, the structures are the instruments and the anthropocene is the name of the song.

This thesis manifests nature's complete indifference towards us, and the interplay with our everlasting tendency to alter nature, for better or for worse. The structures will keep playing the song of the anthropocene, commemorating human nature.

Keywords : anthropocene, narrative, speculative architecture, climate change

JULIA BRANDBERG

CONSTRUCTING THE LIMINAL

- APPYING THE JAPANESE CONCEPT OF MA TO THE DESIGN OF A LIMINAL SPACE

MATTER SPACE STRUCTURE

Supervisor: Malgorzata Zboinska and Naima Callenberg
Examiner: Daniel Norell
MT´22

The void is an important feature in the Japanese concept of Ma. Ma is found within many artistic fields in flexible and unique expressions, but in architecture it appears in the negative space of an environment and its potential of atmospheric character. It is an in-between space designed for heightened awareness in relation to its contrasting borders.

A western coined term, liminal spaces, is an in-between space, creating a form of threshold from one place to another, a transition. Traditionally the limen would appear in historical architecture at for example the Propylaea at The Acropolis, a monumental gateway between the outside of the temple area, and the sacred inside, consisting of the rite of passage's three phases: the separation, the limen, and the incorporation. In architecture, the rite of passage is a tool to enhance expectations while creating a moment of ambiguity and disorientation.

In recent years the term "liminal space" has boomed on online platforms such as Reddit, Instagram, and Youtube. The images shared online intend to capture and transfer the spectator(s) to the unidentified and transitional realm portrayed. However, for architects, the spaces shared and discussed as examples of mysterious and atmospheric liminal spaces becomes an interesting reaction to our designed surroundings. It is something we should have in mind, especially as the online examples in most cases are unintendedly designed to trigger such a response.

This project aims to discuss and understand in-between space from a physical and atmospheric point of view and will be put into example through a speculative design at Gustaf II Adolf's square in Gothenburg. Here, the concept of the eastern Ma and western liminal spaces will work in symbiosis, contrasting, and complementing each other in the creation of a physical space that holds room for atmosphere on a more complex level than what the space, in relation to its rational concrete format as a space, has the expected outcome to create.

Keywords: Ma, liminal space, negative space, non-space

RAQUEL DOMINGUES

HOUSING AFTER HOUSING

- Design strategies for resilient housing, focusing on adaptability concepts in modern architecture in wooden buildings

HOUSING

Supervisor: Anna Braide
Examiner: Ola Nylander
MT´22

Today, demographic changes require that the apartments we design need to be able to meet changing living requirements, both for today's dwelling families and for those to come. With adaptable housing, a dwelling can respond to changing needs and enable families to remain in their apartments when such circumstances arise.

In line with the building industry's current direction toward sustainable solutions with wooden construction, this master thesis explores wooden architecture as a precondition for qualitative and adaptable dwellings in multi-family residential buildings.

As part of a collaboration with housing developer Riksbyggen and Sweco architects, alternative apartment floor plans are being explored in *"Gibraltarvallen"* to assess how wooden architecture and design strategies for adaptable space can be combined to create qualitative and valuable apartment spaces.

The current thesis examines the following research questions against this background:

- How can adaptability strategies develop and create spatially optimal living environments that are resilient and best serve people?
- In what way can apartments in a multifamily residential building be constructed using cross-laminated wood and designed to meet the requirements of adaptable space?

Methods used will be *Research For* and *Research Through Design*; literature reviews and case studies analysis.

The case study *"Gibraltarvallen"* will serve as a starting point for investigating the adaptability concepts most suitable for wooden structures.

The preconditions for this thesis are the theoretical framework based on adaptability concepts, the prerequisites for design in wooden construction and the qualities of both the housing developer and household/user, focusing on the spatial capacity and use (time).

The results will define a set of guidelines for creating a typologies concept model, emphasizing the adaptability in wooden construction and how to create an adaptive concept to be used in future wooden housing projects.

This thesis demonstrates that implementing adaptability strategies can affect the spatial qualities of the dwelling and the social attributes of the household. This will lead to increased autonomy and resilience in overcoming challenges that only time will inform.

Keywords:
Dwelling, Adaptability, Usability,
Resilient living solutions, Multi-family housing, Modern wooden houses.

RASMUS CANFJORDEN

FOLDING WOOD

- INVESTIGATING ACRHICTECTURAL OPPORTUNITIES OF FOLDED PLATE PRINCIPLES IN TIMBER STRUCTURES

MATERIAL TURN

Supervisor: Jonas Lundberg & Jonas Runberger
Examiner: Kengo Skorick
MT´22

The concept of the folded plate has existed within the field of architecture and engineering for close to a century. However, one seldom encounters folded plate structures in the built environment. In theory, the folded plate is an efficient way of enclosing large volumes using a relatively small amount of material. Nevertheless, in architectural design, there seems to be a multitude of challenges that prevents this theory from becoming reality.

This thesis investigates how the folded plate principles can be pushed beyond perfectly symmetrical shapes to gain spatial values. Aspects such as inclusion of apertures, space division and shell construction are discussed on a conceptual level. Moreover, this thesis looks at the use of Cross Laminated Timber (CLT) in folded plate structures and how these can be designed using digital design tools.

The work departs from existing literature and built examples and uses a combination of physical and digital modeling to further explore the folded plate as a structural and architectural concept. Fundamental principles found in origami are used to initiate the discussion on folded geometry. To contextualize findings and ideas derived from this research and to suggest an expanded use of folded plates, a design proposal for a public building in central Gothenburg was produced.

Finally, conclusions drawn from the research done relating to asymmetry as well as additional aspects are presented. The practical and architectural significance of design choices made in the final proposal are discussed in relation to knowledge gained from this research.

Keywords: Folded plate structures, cross laminated timber, origami, asymmetry, digital tools

CASANOVA LEONARDO

RE-THINKING CHLDREN'S EMPOWERMENT

An exploration to the zapatista school model to promote resilience and empowerment through design

DESIGN ACTIVISM BEYOND BORDERS

Supervisor: Shea Hagy / Emilio Brandão
Examiner: Liane Thuvander
MT´22

This thesis explores how designers can foster children's empowerment through three approaches that aim to understand children's physical and mental development and one study case to bring values that could positively impact children's development.

The first step is to understand what characteristics are required to address children's development and provide mechanisms to bring their perspective into design propositions that meet their needs. Therefore, this project combines psychological (Cognitive development), spatial (Cognitive experience), and pedagogical (Popular education) approaches to create a framework that understands their age necessities.

The second step is to incorporate a case study that has put people and the environment at the center of its values. This move has the intention to discover concepts that could provide human values to design proposals. That is why this project has decided to implement the Zapatista School model (from the southeast state of Chiapas, Mexico). It represents an essential component for understanding how community values can help to construct a caring, empowering, resilient and sustainable environment where children can thrive and create stronger bonds within their communities.

Knowing this, the outcome of this thesis is six strategies dedicated to providing a new perspective for designers to collaborate with children and bring them into the discussion of transforming the future with present actions. The work aims to turn the designers' position around the children and their active involvement in their empowerment by proposing these strategies.

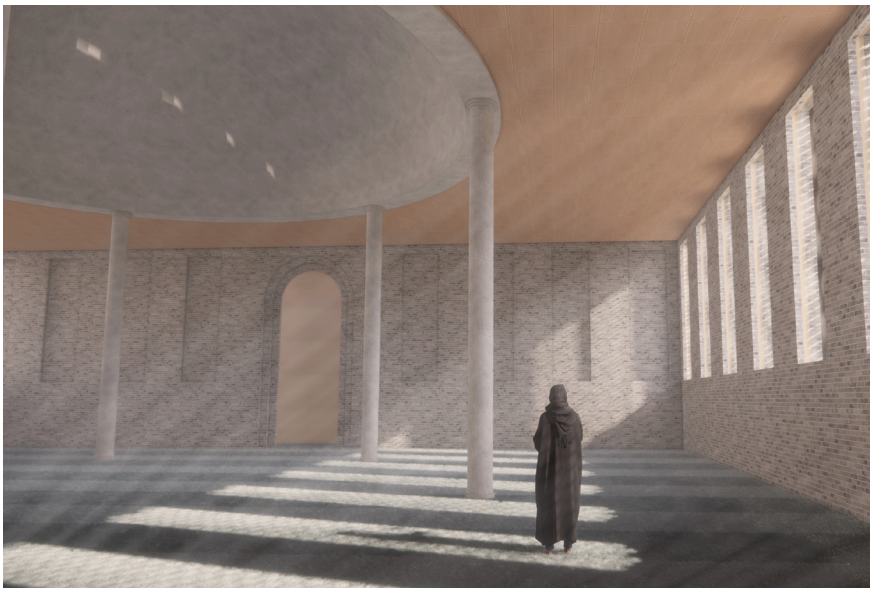
Keywords :

Education
Social changes
Empowerment
Critical awareness
Community

NEMIR CHAUDHRY

NORDIC MOSQUE

- AN ARCHITECTURAL EXPLORATION OF CO-EXISTANCE BETWEEN RELIGION AND NORDIC CULTURE



BUILDING TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

Multiculturalism is one of the words that is used to describe Sweden as a country where individuals of different ethnicities, ideologies, and religions co-exist. One of the aspects that makes this a possibility is the constitutional law of religious freedom in the country.

During the last century, the amount of practicing Muslims in Sweden has grown exponentially, and statistics predict even more growth in the coming years. However, there is a lack of sacred spaces built for the country's Muslim population. One of the reasons is that the architectural style of these sacred spaces is typically influenced by other regions in the world and not the Nordic context.

Through a *research by design* method, this thesis aims to explore how the typology of a mosque can be incorporated into a Nordic urban context of Gamlestaden in Gothenburg. Theory, reference study and analysis of the local context work as a framework that underlays the understanding of the design requirements of mosques and how it can be integrated with the Swedish ideology and architectural building typology.

The proposed building within the framing of this thesis deals with the complexity of an urban site, materiality and enhancing the spirituality of space through light and sequences. This resulted in a mosque in brick oriented towards the Ka´aba with a surrounding concrete colonnade following the city grid creating courtyards inbetween.

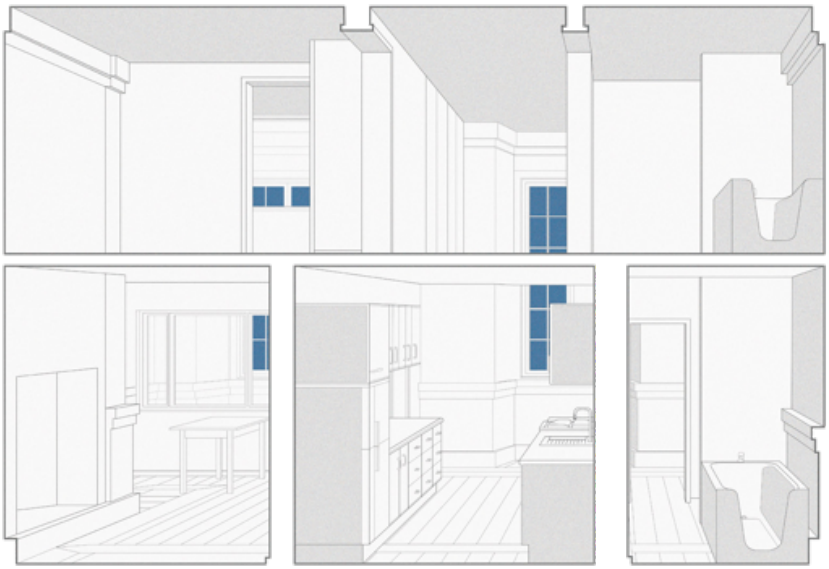
The objective of the thesis is to communicate the benefits, and the need, for an Islamic sacred building to be part of the 21st century Nordic building typology, thus promoting social sustainability through integration.

Keywords : mosque, spirituality, nordic context, social sustainability, light

LUCY CHEN

PERPETUATION THROUGH RADICAL ADAPTION

- IMAGINING A MILLION-PROGRAMME MODERNIZATION OF A BAROQUE CASTLE



MATTER SPACE STRUCTURE

Supervisor: Daniel Norell
Examiner: Daniel Norell
MT´22

The point of departure was a curiosity in the polarized opinions of contrasting architectural eras. Huge castles mostly stand empty but are seen as invaluable material heritages, while modernist buildings are looked down upon despite being the homes of millions. The topic is complex, but arguments often involve beauty and modernization as each other's opposites. The thesis aims to bring a new perspective to the discussion, regarding buildings as material assets as well as bearers of stories– not only stylistic representations. As climate crisis escalates, it becomes increasingly important to appreciate all existing buildings. Using superimposition and the effects of juxtaposition, the project explores what could happen if buildings with completely different levels of appreciation are mixed.

Explorations are focused on two contrasting eras in the Swedish context, both in terms of societal structures and stylistic ideals: baroque castles of the 1600's and the Million-programme in the late 60's. Specifically, the project engages in a speculative transformation of Skokloster Castle, the biggest private castle ever built in Sweden. Planned and constructed during the Swedish Empire, it is the ultimate status marker of a rich noble of its time, as well as a prominent piece of baroque architecture. In contrast, Skolspåret in Gothenburg stands as the result of an architect strongly inspired by Le Corbusier, operating during a time when new building technologies and quality housing for all was on top of the political agenda.

The result is a proposal in which the halls of Skokloster Castle is transformed into functional living spaces, and the floor heights are utilized to create multi-storey apartments. The stylistic characteristics of the two architectures are maintained. The goal of the proposal is not to turn the castle into a million program, but rather showcase alternative views on how buildings can endure the fluctuations of time: by adapting to them.

Keywords : adaption, speculation, baroque, million-programme

LAURA COMMERE

HEMP MADE

BUILDING DESIGN FOR SUSTAINABILITY

Supervisor: Walter Unterrainer
Examiner: Krystyna Pietrzyk
MT´22

We live in a society where people spend most of their time indoors. Buildings should thus provide safe and sound spaces to live, work and sleep in. However, the building industry nowadays is mostly relying on non-renewable, man-made materials that could badly impact the indoor quality of our built environment. Above that, these materials have a non-neglectable negative influence both on resources and on emissions, putting significant pressure on our planet. Natural materials can provide an ecological and healthy alternative to numerous conventional building components. This thesis work investigates hempcrete, a sustainable, natural, biobased material that has great potential as an insulative infill component. Hempcrete is a mixture of hemp hurds with a mineral binder, most often lime-based. The hemp plant is fast-growing, making it a particularly resource-efficient raw material. This work explains what hempcrete is, how it is made and what different construction techniques are applied nowadays. Further on, the work focusses on the material's performances both regarding indoor climate regulation and environmental impact. Various characteristics such as vapor permeability, hygrothermal performances and thermal mass allow for hempcrete buildings to achieve a steady and comfortable indoor climate. Furthermore, hempcrete has a small carbon footprint, mainly thanks to the hemp hurds.

The possibility of associating hemp with clay rather than with lime is also investigated throughout this thesis work. This would enable to create a completely sustainable, safe and sound biomaterial. Lime has non neglectable embodied energy and embodied carbon, whereas clay is a local resource, available everywhere, that does not require processing. Furthermore, hemp-clay is a zero-waste product, as both hemp and clay can be reused or recycled and are both 100% biodegradable. Both theoretical research and material testing are led to study the potential of hemp-clay, and indoor climate performances are compared. In the end, guidelines on how to implement hempcrete in design are given and exemplary construction details, with their performance, are elaborated.

Keywords : hempcrete, hemp-lime, hemp-clay, indoor climate, environmental impact

GABRIEL DANIELSSON

ROOM FOR NATURE

- A Visitor's Centre for the Botanical Gardens in Gothenburg

BUILDING & TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

The fast pace of the city can often feel wearing and hectic. To find peace and quiet, nature can often offer an escape for many people and for some the tranquillity of nature can act as an almost religious or contemplative substitute. Regardless of how nature is perceived or experienced by various people, I doubt that there are few who would not feel relaxed when being present in a serene natural landscape.

In Gothenburg – this web or road, chaos and stress – there are fortunately a few green islands or serenity and peacefulness. During the Corona pandemic, the Botanical Gardens acted as such a place for me.

The setting for this thesis project will be the Botanical Gardens in Gothenburg where the aim is to present a proposal for a visitor's centre combined with greenhouses. Such a project is currently under construction and indicates that there is a need for a building that can inform and inspire more people to experience and learn about nature. This will not only be of interest to the public, but also to university students of botany as an enhancment of their studies. In fact, the Botanical Gardens already have extensive collaboration with the university faculty.

The design method can be described as contextual or organic where the building aims to encapsulate natural forms into it's design language. This is formulated through the question of research:

How can a visitor's centre for nature be designed using geometrical abstraction of natural elements to harmonise with the surrounding context of the proposed building?

This thesis will, apart form the design proposal, encapsulate reference studies of other well known greenhouses, architecture in the same type of design field as well as an analysis and shorter historical description of the Botanical Gardens in Gothenburg.

Keywords : Greenhouse design, Visitor's centre, Organic architecture, Nature, Garden design

ULRIKE DONNERHACK

HOMAGE TO HOME

- An architectural investigation at Stora Stenbrottet in the Kinnekulle region

BUILDING & TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

"Architecture is the very mirror of life. You only have to cast your eyes on buildings to feel the presence of the past, the spirit of a place; they are the reflection of society."

- I. M. Pei

In this thesis, I return to my home region on Kinnekulle in order to explore how the design of a public building can connect to- and enhance the experience of a place and the cultural history of a region.

Through a research by design approach the thesis aims to investigate traditional stone- and timber building techniques from the area of Kinnekulle and explore how they could be translated into the typology of a modern visitors center and through this contribute to the knowledge on using stone and timber as a building material in an architectural project.

The thesis engages with theory on architectural regionalism, tectonics and materiality and through studies on site, in models, sketches and drawings results in a two-part visitor center at the large quarry on Kinnekulle.

One part tells the narrative of stone — its durability, strength and timelessness. The other part tells the tale of wood — its lightness and warmth. Through this the thesis aims to pay homage to two contrasting materials — to a place — and to the cultural heritage of Kinnekulle.

Keywords : Kinnekulle, natural stone, timber, visitor center, rural, heritage, landscape

MARCELA DZIECIATKOWSKA

SENIOR HEALTH PARK

- A HEALTH PROMOTIVE COMMUNITY PARK FOR OLDER ADULTS

HEALTHCARE

Supervisor: Susanne Clase
Examiner: Johanna Eriksson
MT´22

We live in the times of an aging society. Elderly is often affected by physical and mental diseases, the progress of which may result in the need of full living assistance. Changing demographical composition will limit the availability of such service and change the approach to elderly care. To truly meet their needs and ensure a fulfilling life, planning for their future needs to be started as early as in the close coming years. The challenge we are faced with is complex and requires a wide range of solutions and approaches. One of them is health promotion among the independent elderly which could help them remain healthy and active, reducing their risk of needing living assistance.

A health promotive facility could prove successful if it responds to the multitude of seniors' varied needs, making it easy and engaging for them to use it. This effect can be achieved in a sustainable way by involving them in the design and planning process.

The purpose of the thesis is to explore and develop the idea of a health promotive building project in an existing context, with focus on urban and architectural design aspects related to user experience. The main research methods, namely literature studies, area analysis and design combined with user participation will lead to a deeper understanding of the design factors and tools that contribute to a positive influence of the project.

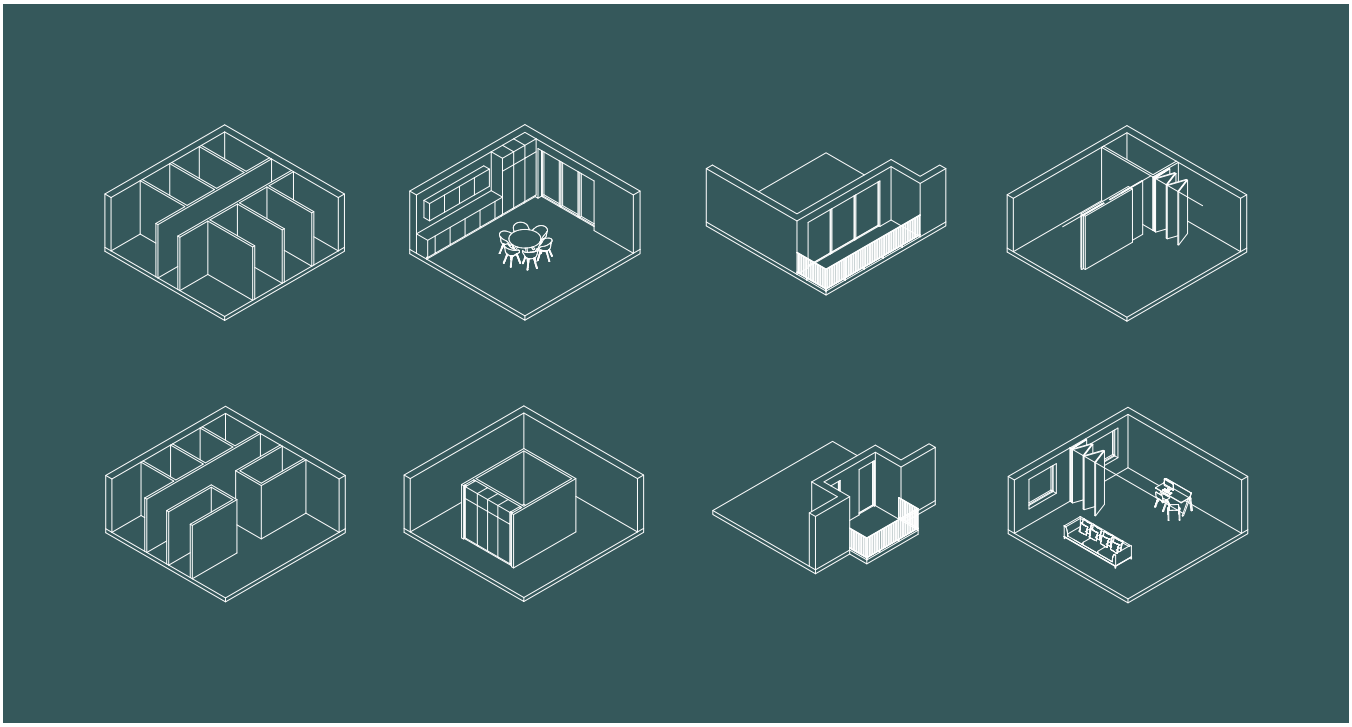
The outcome of the research is a design proposal of a health promotive facility in Mölndal, Gothenburg. Due to the chosen user-focused approach, the paper will not cover all perspectives in depth. Research with focus on the other stakeholders as well as the technical side is suggested as the next step.

Keywords: health promotion, health promotive design, healthcare architecture, participatory design

EDVIN EDSTRÖM

ENDURING A CROWDED HOME

- A STUDY ON DESIGN PRINCIPLES AND APARTMENT TYPOLOGIES THAT ALLOW PARALLEL ACTIVITIES IN HOMES POST-PANDEMIC



HOUSING

Supervisor: Anna Braide
Examiner: Ola Nylander
MT´22

The pandemic has changed many people's habits. Some started working remotely and others started using their home as a gym. This shift has contributed to new demands on housing architecture, namely creating homes that allow more activities to take place during the same time in accordance to people's daily actions overlapping now more than ever before.

This thesis aims to examine which design principles and apartment typologies are best to support parallel activities. The aim is to create design strategies that all work towards supporting parallel activities. The research consists of literature reviews, reference analyses and implementation sketches of the defined strategies.
The questions that the thesis aims to answer are:

Q1: Which design strategies do housing architecture need to incorporate to allow parallel activities to take place?
Q2: How would the apartments that implement design strategies which focus on parallel activities in a multi-family residential building look like?

Six design principles are derived from the research: utilizing a zoned plan and/or neutral hall apartment typology, making sure the home has a high-quality kitchen which can fit a dining table, adding outdoor spaces of at least 6 m^2, creating circulation, giving the homeowners the option to choose between an open floor plan and being able to divide social rooms and lastly adding the possibility to create a temporary room. Other, more general ideas are that homes should be at least 50-60 m^2 to support parallel activities. There also needs to be at least one bedroom so privacy can be achieved.

The found strategies serve as the basis for a design proposal on a site by Gråberget in Majorna, Gothenburg. The project shows that it is feasible to design apartments which implement the design strategies and therefore are suitable for parallel activities.

A societal transformation that began with the pandemic will cause people to change their expectations of their homes. If future housing stock is to be adapted to these changes, architecture must evolve now.

Keywords : Covid-19, post-pandemic housing, parallel activities, floor plans

SARA EIDENVALL

WOOD-WOOD SHELTER

- DEVELOMENT OF A NATURE SHELTER

MATTER SPACE STRUCTURE

Supervisor: Jens Olsson
Examiner: Daniel Norell
MT´22

One draws, the other builds, and the two never meet. Developments in the building industry have primarily shifted from craftsmanship driven to the organised construction industry. Conceivably the essential difference is that the creative idea and the practical work of the hand are now separated. In the craft tradition in Sweden, it was a long time when almost all men could build with timber. Today, we can state that we architects possess a much more limited knowledge of older building techniques and only exceptional specialised artisans master the traditional building crafts. The history of building technology is a possible way to connect the ability of the craft tradition with modern architecture and between architects and crafters.

The project addressed this topic by having a close dialogue and collaboration with the craftspeople from an early stage as a leading method.

At the same time, this master thesis seeks a practical strategy by working with a carpentry approach emphasising the expressive quality of exposed details implemented in a hiking shelter.

Time and money have also been constraints that have formed a framework for the design. In addition, different alternatives have been evaluated based on how much material and how long it takes to manufacture the profiles and assemble them. Accordingly, it also reflects the design result. The outcome has ended up using only one type of profile with an identical cross-section for the entire building, making the manufacturing process shorter and more affordable. In this process, a balance was essential in simplifying without compromising the crucial architectural concepts.

This project aimed to illustrate how architects can work close to craftspeople from an early stage and, at the same time, highlight carpentry connections within architectural design. This project completes with a nature shelter on a scale of 1:1 in Kroppefjäll nature reserve in Dalsland.

Keywords: timber, log construction, architects and craftspeople, research by design, nature shelter, build 1:1.

ELISABETH EK

ARCHITECTURAL CHARACTER

- EXPLORING FORM AND CONSTRUCTION

MATTER SPACE STRUCTURE

Supervisor: Naima Callenberg
Examiner: Daniel Norell
MT´22

This thesis seeks to investigate ways to explore and convey character in architecture. Through an exploration of how character relates to form and construction, it aims for craftmanship and a sense of playfulness. Qualities in a selection of existing buildings are studied to create a vocabulary for inspiration. This makes a starting point for the design work that is implemented in a program of atelier houses, where characteristic and playful qualities are tested.

This project is a reaction to the generic building industry, generally lacking the qualities mentioned above.
I have a longing for buildings that contrast the anonymous and standardized. The vernacular architecture is often intriguing where there are irregular lines, tactility, and a human scale.

Two main references are studied: Japanese architect Terunobu Fujimori and vernacular architecture of Gotland, Sweden. They corelate as they are both non-normative, where Fujimori is a contemporary practitioner that uses natural materials, embraces work made by hand and makes architecture with a sense of playfulness. This is shared with the vernacular architecture of Gotland, which also holds a traditional craftmanship knowledge in the construction. They are differentiated by time and by geography, yet Fujimori is often inspired by vernacular architecture.

The leading question for the thesis is: Which approaches to design regarding character can be conceived whilst making a synthesis of the works of Terunobu Fujimori and the Gotlandic vernacular architecture?

This thesis embraces the research through design-approach and focuses on methods of physical models built by hand. The models are iterated into digital drawings, alternating between the two mediums. The materials in focus are primarily wood and reed, followed by clay and stone.

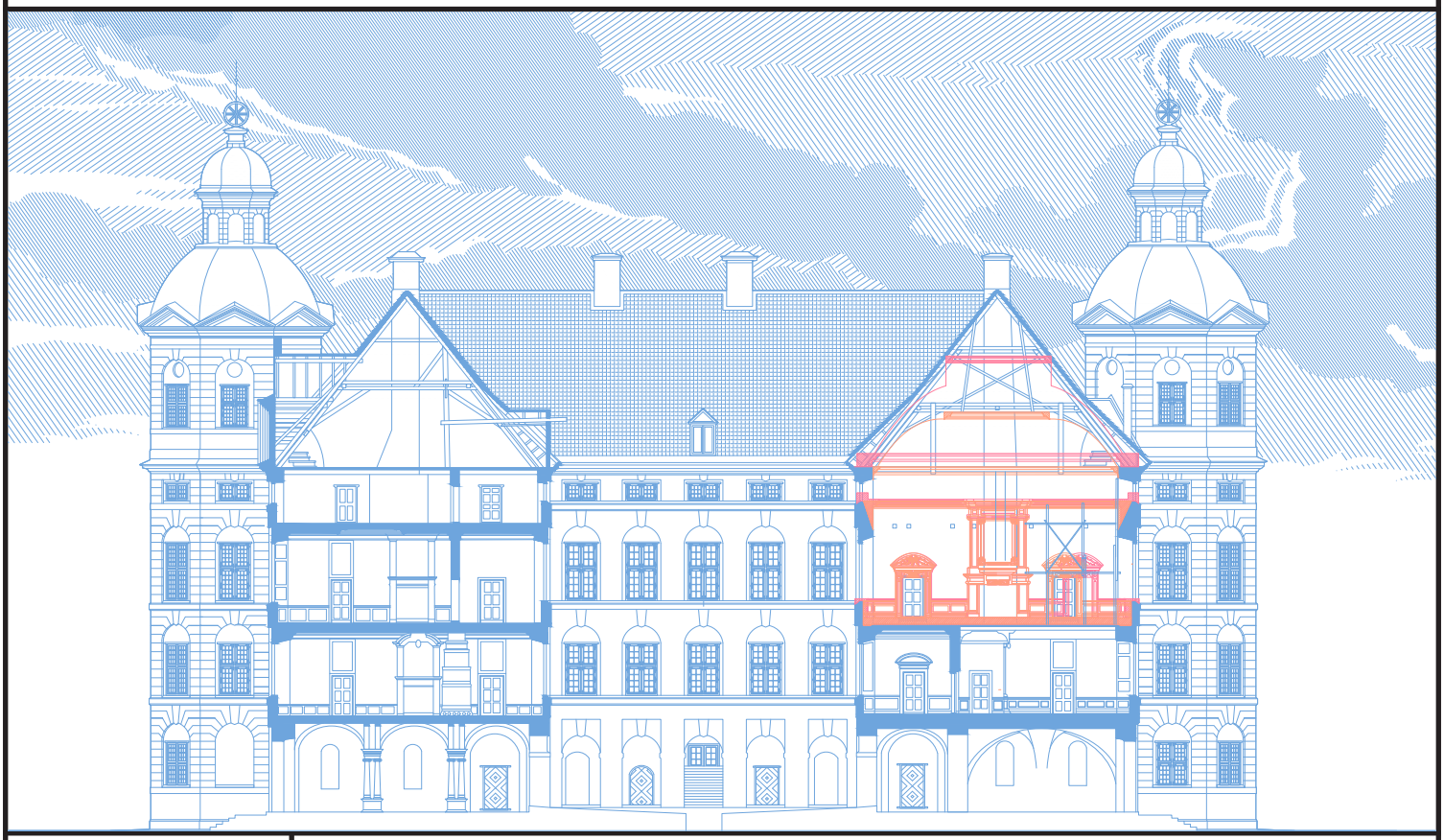
There seems to be a longing for alternative ways to build and a revival for craft, contrasting the industrial and abstract aspects of today's society. The character of the natural materials could not only hold tactical qualities but also sustainable ones. Designing with the aim of craftmanship is, to me, to show care for the users, and it often shows marks of the creators.

Keywords : character, craftmanship, vernacular, Gotland, Terunobu Fujimori

ANDREA EKLUND

DO NOT TOUCH?

- SPECULATIONS ON THE PLACE OF HISTORICAL INTENTIONS IN BUILT HERITAGE.



MATTER SPACE STRUCTURE

Supervisor: Daniel Norell
Examiner: Daniel Norell
MT´22

What is the value in historical heritage? Is it in the bricks and stones or is it in the their unique position to carry stories of the past? Stones are easily kept but how do places keep stories and what stories makes their way though time? What do we do when the stories not in physical form and are we allowed to “do” anything at all?

The subject of heritage conservation has been debated persistently since the 1800s, yet today there is no one answer to the question. One of the reasons for the many theories is the disagreement in what is to be preserved to start with. The intended use, the material itself or its symbolic value? Different theories all claim their version of what is right, true and authentic. This thesis explores mainly three different theories within the field of conservation, namely preservation, restoration and the contemporary umbrella of the communicative turn. Trough investigation and design it navigates the theories and aims to propose a design in which people’s understanding of a place is put above the protection of objects.

The site for this investigation is the castle of Skokloster, a place regarded as one of Europe’s best kept baroque castles. However one room was never completed and has been left uncompleted since 1676, the grand banquet hall commonly known as “Den ofullbordade salen” (the unfinished hall). This thesis examines the unbuilt intentions of the room through historical records and aims to propose a way for the intangible history of the unfinished hall to be communicated to the public. In the end, the unfinished hall is not proposed to be finished, but rather equipped with objects which together fills the gap in the current narrative and provides the visitor with the full story of the space. The intervention proposed encourages a tactile and explorative approach to the space, allowing people to create personal memories, adding to the story of the historical place.

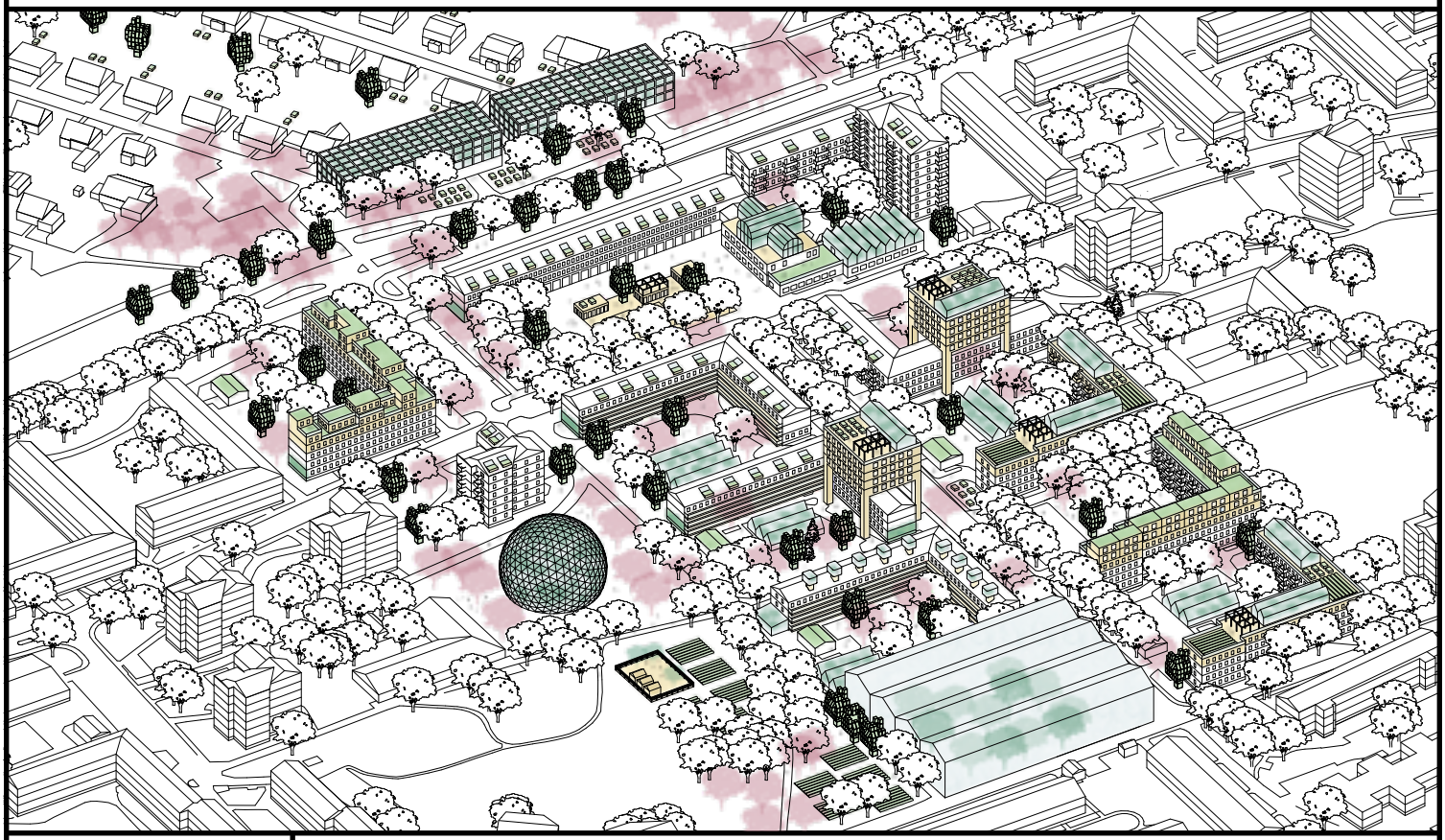
In a time where the use of existing building stock may become conventional praxis, the thesis questioning of honesty, authenticity and use become increasingly relevant. Here, they are met and dealt with through design with emphasis on public communication of the full story.

Keywords : Conservation, Heritage, Communication

LINA EL-RIFAI & LINNÉA SEEVERS

THE PRODUCTIVE FRINGE

MAKING GOTHENBURG SELF-SUFFICIENT IN VEGETABLES AND FRUITS BY EXPLORING URBAN AGRICULTURE IN THE INTERMEDIATE CITY



RURBAN TRANSFORMATION

Supervisor: Louise Didriksson
Examiner: Marco Adelfio
MT´22

Food production, which is linked to social-ecological sustainability and food security, is a major concern in Sweden. Sweden imports double the amount of agricultural food items that it exports. If an unforeseen tragedy or crisis strikes, Swedish agriculture will be unable to function without imported fertiliser and fodder. Agriculture is one of the most essential operations since it produces food for the human race. Many of the sustainability concerns posed by urbanisation and a growing population can be mitigated by urban agriculture.

This thesis aims to present ways to implement agriculture in the intermediate city, which can be defined as the link between rural and urban, by utilising residual spaces within existing typologies and fabric, such as rooftops, facades, courtyards, streets, parks, and undeveloped spaces. Furthermore, the aim is to explore if the intermediate parts of the city can make the whole municipality of Gothenburg self-sufficient in vegetables and fruits. This investigation is addressed by picking a site that depicts a typical configuration of the intermediate city in Gothenburg and then calculating a potential yield in this specific area.

In order to highlight the benefits of agriculture in a project, it is also intended to enhance the practical skills of architects and planners at all stages of the planning process. At the end of the research, a handbook is produced showcasing today's agriculture systems and design ideas on how to integrate these systems into the built fabric and the open spaces in their surrounding.

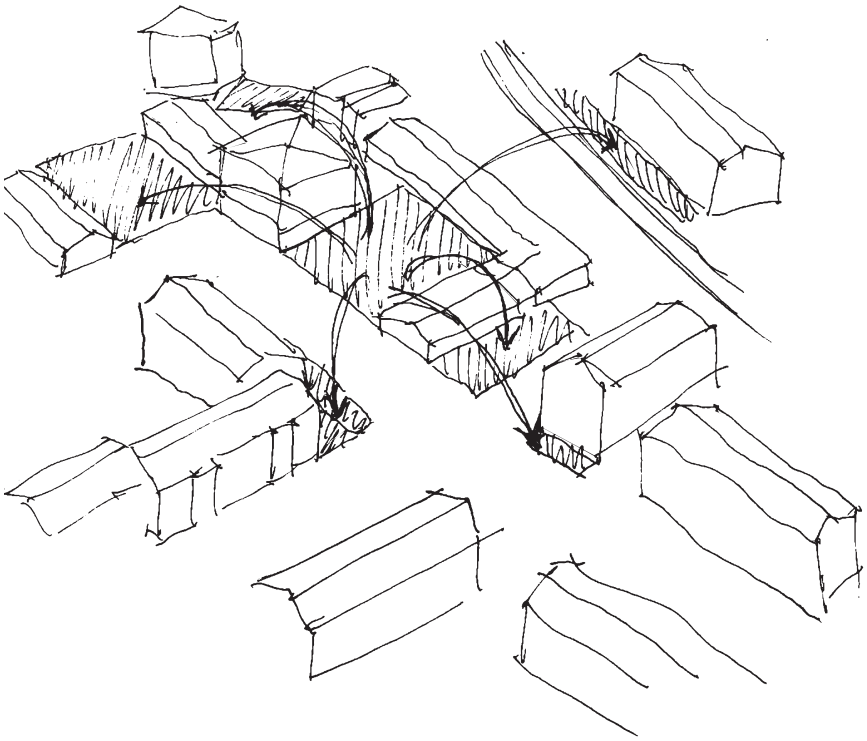
The exploration of the research questions consisted of utilising the knowledge gathered through literature studies and reference projects about the agricultural systems and their productivity. Combining this information with various analyses of the selected site allowed the programming of the land according to its optimal agricultural functions. The simple answer to the question is: yes, urban agriculture in the intermediate city can produce enough vegetables and fruits to make Gothenburg self-sustaining.

Keywords : urban agriculture, self-sufficiency, intermediate city, agricultural systems, food production.

PETRA ELF

REIMAGINING CITYTORGET

- A SPATIAL INVESTIGATION INTO THE POTENTIAL OF A SUBURBAN LOCAL SQUARE



RURBAN TRANSFORMATION

Supervisor: Nils Björling
Examiner: Marco Adelfio
MT´22

The starting point of this thesis is a personal experience of living in the area which is the subject of this project - seeing both things lacking in the local context as well as great values and potentials. The thing most noticeably lacking is meaningful public space, where we as inhabitants actually want to spend our time providing the possibility for social encounters.

Suburban areas are however often underestimated and preconceptions about their potential for city life risk dictate the planning of new additions in these locations - leaving public space as a negative, what simply becomes left over when new building additions are made.With several social challenges in society today, public space is too valuable to be left to chance, but rather needs careful planning to fulfill its potential.

This thesis aims to discuss the importance of meaningful public spaces in the local context which can work as a catalyst for city life and social encounters. This is made through the redesign of Citytorget and its surroundings with a focus on creating the preconditions for social encounters. The aim in the design proposal is improving the quality of the physical environment to a degree which can promote voluntary activities in public space as well as prolonging the necessary activities - making the sense of city life greater and increasing the likelihood for social encounters.

Local preconditions, municipal strategies for the intermediate city and literature are studied and used as a starting point for the design and following discussion.

The outcome of the thesis is a design proposal from which ten principles for design are derived. These principles are formulated as follows; strengthen the design and atmosphere of the physical environment, turn functions towards movement, switching up the venues, a coherent built environment, there are different ways to define space, a coordinated planning, readable space and clear sightlines, strengthen and extend connections in the larger scale, real public places and leaving parts of the design for others.

Keywords : Public space, City life, Social encounters, The intermediate city, Kortedala

FILIP WIKMAN

REIMAGINING A MILLION

- An Investigation into the potential of the dwellings of the million program

HOUSING

Supervisor: Maria Niklasson
Examiner: Ola Nylander
MT´22

This thesis is an investigation into the potential of the dwellings of the million program. It came to fruition through an interest in Sweden's record years', an era from 1965 to 1974 known as the million program.

According to Boverket (2020), one in five of Sweden's current homes was built during these years; this was a time when prosperity and hope for the future, powered by new modernistic ideas, created an expansion of the housing stock at a scale that is today hard to comprehend.

The background of the topic selection was the negative image of the dwellings today; it sparked an interest in if it is as imperfect as it is perceived today. Are there qualities? If so, which?

Today, six hundred thousand dwellings from the era are in a desperate state; there is an urgent need for rearmament. However today there is an ongoing debate if they should exist at all. Destroy or refurbish?

The starting point of the thesis is the perspective that the best buildings are the ones already built. Especially when the building is as well built as most of the million program buildings are. The focus is on getting familiar with the debate around the buildings while concluding an opinion. Therefore, the history has been researched, its motivations, the era's trends, what is possible and what needs we have in today's society.

The thesis will be developed through research by design by creating models and digital visual representation. The aim is to provide a different perspective by proposing an intervention of a building from the era, which can further contribute by inspiring developers and municipalities in what can be done. In essence, to provide an option by visualizing the potential from an aesthetical- and sustainable point of view. The intervention will have the outset that architectural interventions are dependent on context. Every site and era of the building has more or less its own history, social factors, and culture, which all are essential to take into account when designing. The history of a building should not be hidden or neglected but somewhat enhanced through improvements and change.

Keywords: The Million Program, Residential, Refurbishment, Identity, Sweden

JONATAN FORSMAN

HERITAGE CONDITIONS

- DEVELOPMENT ENABLING PRESERVATION AT BANGATAN, GOTHENBURG

HOUSING

Supervisor: Magnus Almung
Examiner: Ola Nylander
MT´22

This thesis stems from a frustration with the inconsistency of today's city planning where valuable buildings, from both a heritage and sustainability perspective, are being torn down. This while politicians argue for new buildings in "classic style" not recognizing their power to save our actual built heritage.

This thesis locates such a situation, where the municipal planning has shown limited power in a clash with market forces and speculation that puts architectural and historical values at risk. At Bangatan there was an attempt to develop a detail plan with the intention to protect buildings of high heritage value, but the owner of those buildings sees the old plan as an opportunity for a counter proposal that disregards the preservation of unique architectural values in favour of new development. This resulted in a deadlock where the parts can't agree. Meanwhile, the buildings continue to deteriorate as they suffer from neglect and repair of questionable long term quality.

The aim of this thesis is to provide a proposal to contribute to a long-term solution to the deadlock, by suggesting a careful balance and compromise between preservation, renovation, and new development.

The proposal is conducted on two different scales. One where a group of buildings along Bangatan are given a new program to enable a more effective use of spaces and qualities. Key elements of the proposal are a new storage facility enabling the buildings of high heritage value to be converted back into their original function as housing. The cost of such transformation is compensated by new development on empty land as well as a careful addition to existing structures.

On the second scale one of the properties are studied in detail where the building is complemented by part renovation, part new addition, reconverting services and floor plans to the original use as apartments. The ground floor is activated through public commercial use and the front and backyard are opened up for access from the street and the mountain side.

The result highlights the qualities in the already existing and argues for the importance of architecture as bearer of a valuable collective memory.

Keywords: heritage, renovation, demolition, city planning, preservation, infill

LINNÉA FORSMARK

STORIES OF AN ISLAND

- AN INVESTIGATION OF HOW LOCAL GEOLOGICAL SYSTEMS CAN BE TRANSLATED INTO ARCHITECTURAL STRUCTURES

Architecture tells stories. Stories of historical, present, and future aspirations. For the past century, economic considerations have held the role as main character. This is a global trend. The result is unstimulating buildings and urban settings. Perhaps, to ensure the habitability of future architecture, is time to recruit a new main actor?

Humans have an inherent need to connect with nature. It is our natural habitat, and the environment our brains were developed for. Perhaps, by gaining inspiration from nature, architecture can bring inspiration and excitement to its users?

This thesis investigated how the logic of local geological systems on Öland can be translated into an architectural structure with the affordance of a historical museum. On Öland, the limestone bedrock is of great importance. It has provided the island with a unique landscape, containing various types of nature. On the alvar, an open and dry moorland, the limestone bedrock is exposed. This area, and its visible geological systems, was chosen as subject for translation into a building.

Throughout the thesis process, a method for translation was developed. The result was a museum proposal, inspired by the limestone joint systems and the limestone scarp systems of the bedrock.

Keywords :Geomorphic architecture, limestone, biophilia, Öland

MATERIAL TURN

Supervisor: Jonas Runberger, Kengo Skorik
Examiner: Jonas Lundberg
MT´22

AMITIS FOULADI

FROM ANXIETY TO ACTION

- EXPLORING HOW PARTICIPATORY ARCHITECTURE CAN AID YOUTH WITH CLIMATE ANXIETY

DESIGN ACTIVISM BEYOND BORDERS

Supervisor: Shea Hagy
Examiner: Emilio Brandao
MT´22

We can observe a correlation between a decreased mental well-being of individuals and the rate of temperature increase on our planet. This connection is often referred to as climate anxiety. Most vulnerable to climate anxiety are those with the least amount of power to impact their decisions and surrounding, namely children and youth. Youth are however having an increased risk of feeling hopeless as they are having a better understanding of the complexity of global problems. According to climate psychologist Kata Nylen, a way for us to feel better is if we see that the planet is feeling better and that the society is moving in the right direction. For that to happen we need to take action.

This thesis aims to explore how architecture can aid youth in coping with climate anxiety through creating an equal and inclusive process where they will have the power to impact their environment. Making sure architecture and planning adapts to the new challenges we face and considers all factors in which our profession can help people and the planet. By prioritising making coping available for those most vulnerable, the community as a whole can grow stronger.

Through a participatory process, a group of youth get an opportunity to shape a new public space intended for dealing with climate anxiety by taking action and deal with their emotions regarding the climate crisis at the same time. This thesis tests how the involvement of youth in planning and design can have a positive impact on their well-being while at the same time using architecture as a medium of activism, taking advantage of the impact the built environment has on people.

The result of the thesis is a design proposal shaped by youth to develop meaningful coping as well as an analysis of the participatory method which aims to bring a sense of hope and empowerment to the participants by involving them to impact their surrounding environment.

Keywords : Climate Anxiety, Climate Action, Participatory architecture, Vulnerable community, Youth, Meaningful coping, Design activism

SOFIA FREDRIKSSON

ORIGIN OF THINGS, MAKER OF PLACE

-AN INVESTIGATION OF BIRCH BARK AS MATTER IN TRANSFORMATION.

MATERIAL TURN

Supervisor: Kengo Skorick, Jonas Runberger
Examiner: Jonas Lundberg
MT´22

Each material comes with an embedded set of historical, cultural and physical attributes. Furthermore, each material has a sourcing place as well as production processes during which it becomes something else. When finally material has become thing, it has often travelled far and with many stops along the way. In the master's thesis Origin of things, maker of place, a deep dive is made into birch bark in order to explore this specific material's attributes and connotations.

With the use of an intuitive and iterative method, themes have emerged and formed through collecting and producing information, and the produced information have then generated new impulses. Evoking associations such as nature and culture, forest and city, resource and consumer, affected and affecting, usefulness and uselessness, tradition and creativity, birch bark is both the starting point for exploration and the thematic glue that binds the disparate subjects together.

Since birch is a tree native to Sweden and its bark a product of its forests, this thesis can also be read as a comment on the Swedish forest industry. Because of the industry's vast impact on the landscape it is interesting from a spatial point of view, but further than that it taps into broader questions concerning what, how and why we produce as a society.

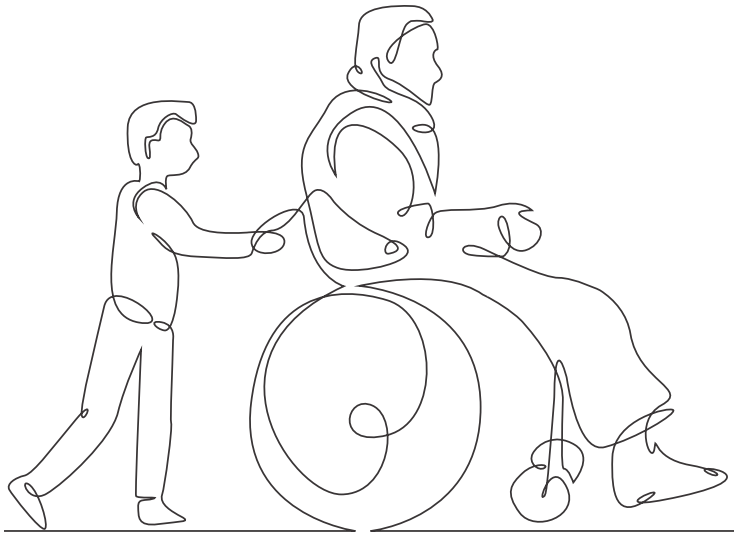
The aim for the investigations have been to rework them into spatial visualisations within a fictional narrative. Through working with the method, the fictional narrative became centred around the forest and our relationship to it. The visualisations were then organised into chapters, where the themes have been brought together and restructured as speculative scenarios with their own designs and architectural structures.

Keywords: birch bark, forestry, craft, fictional narrative

EMMA FRYKBERG

BRIDGING THE GAP

AN INTERGENERATIONAL CARE FACILITY WHERE YOUNG AND OLD PEOPLE ARE SHARING THEIR EVERYDAY LIFE



HEALTHCARE

Supervisor: Morgan Andersson
Examiner: Johanna Eriksson
MT´22

Good health is a combination of physical activity and mental well-being. The World Health Organization defines: “Health as a state of complete physical, mental and social well-being”. With increasing age, physical activity decreases. Residents in residential care facilities in Sweden rarely achieve the general recommendations for their daily activities.

Social isolation is another problem we encounter when we get older. Mental illness is a widespread problem in Sweden and the loneliest are the people above 75 years old. Mental illness is more common for residents at residential care facilities than among people who live in ordinary accommodation.

Through architecture, the concept of combining different generations will be developed, and hopefully, inspire society to deal with today’s issues of the aging population.

This Master Thesis investigates how young children and old people can make use of each other and in what way the connection between the generations can contribute to better health. The study will be conducted through literature studies, and interviews with different target groups combined with professions in the field of healthcare and architecture. The report will analyse examples of existing intergenerational programs and adapt them to a concept that can be implemented in a design of a building.

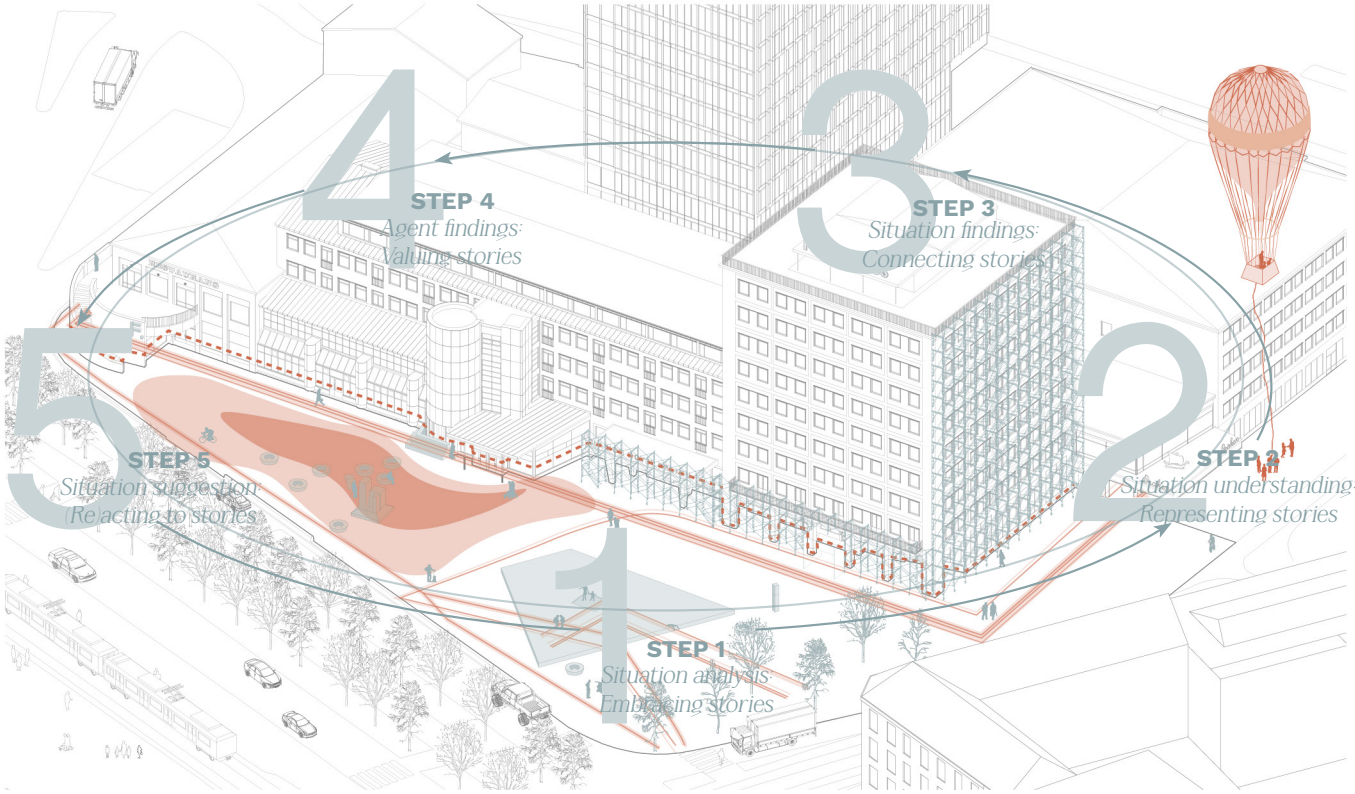
The result of the theoretical studies will be implemented in a design proposal with a focus on the social benefits of a building where children and older people are sharing their everyday life together. This Master Thesis will hopefully open the question and discussion about how our society is taking care of our elderly.

Keywords : Intergenerational programs, Mental health, Physical activity, Residential care, Childcare, Healthcare Architecture

LEELOO GHIGO

BEYOND / BEHIND BELONGINGNESS

- TOWARD AN ARCHITECTURAL APPROACH ENHANCING SITUATED BELONGINGNESS THROUGH EMBRACING, VALUING AND (RE)ACTING TO STORIES.



CRITICAL SPATIAL PERSPECTIVES

Supervisor: Bri Gauger
Examiner: Isabelle Doucet
MT´22

How does one belong? Belongingness is a complex notion binding Place and self that matter to be investigated in architecture. To be addressed in this field, the notion should be deemed beyond a common and singular perception of the definition to acknowledge the particularities of each situation. Hence, the thesis draws on *Situated knowledges* theory to tackle belongingness and address the Place in its whole complexity. From both a literature study and an in-situ application, the thesis investigates an approach that can enable the mapping and design for belongingness through the research question: How can architecture enhance situated belongingness through embracing, valuing, and (re)acting to stories?

Belonging is first defined theoretically through study from social sciences to architecture, and addressed in relation to *Situated Knowledges*, allowing for belongingness to be acknowledged regarding connectivity and interactions and go beyond dichotomies of human/object. Situated belongingness is then explored in praxis through the investigation of a suitable architectural approach giving a direction to search and design for belongingness.
The five steps approach is developed conjointly with an application to understand what is behind belongingness in the context of the transitional network around the Folkets Hus in Gothenburg, Sweden.

The thesis emphasizes the necessity of a complex approach as well as a more suitable definition of belongingness for architectural praxis referring to one being part of a system. By working from an empathetical position ‘within’ the location, the thesis addresses the relevance of first decomposing the location through the representation of specific agents’ (hi)stories, to later reconstruct an understanding of the situation as a connected network and value the agents that matter in the local belongingness. The research highlights the design praxis as a (re)action to the found situated knowledge, allowing the design answer to be specific and contingent on the situation. Finally, the master’s thesis opens a critical discussion regarding the architectural practice and the element behind its understanding.

Keywords: Belongingness, Situated Knowledge, Design approach, Subjectivity, Place.

JOLINE SCHIKAN & BARBARA GWÓŹDŹ

THE SEAWEED ARCHIVES

- A MATERIAL STUDY OF SEAWEED AS A BUILDING MATERIAL AND ITS IMPLEMENTATION ON TWO BUILDINGS ON NORTH KOSTER, SWEDEN

MATERIAL TURN

Supervisor: Jonas Lundberg & Jonas Runberger
Examiner: Kengo Skorick
MT´22

At the beginning of April 2022, Sweden had already depleted its annual budget of the earth's resources. The current climate and biodiversity crisis brings new challenges to architects as thirty percent of the global energy-related carbon emissions are produced by the building industry. Facing these challenges, the need for environmentally friendly and sustainable building materials has increased significantly.

This master thesis aims to offer an alternative to current conventional materials and move from carbon emission to carbon storage by focusing on an abundant, underutilized and, if harvested right, highly sustainable material: Seaweed. It is easy to grow and abundant along the Swedish coastline, requires no land, fertilizers or fresh water and grows about thirty times faster than land-based plants. Marine plants have been used as building materials in the past as insulation and roofing material, and have been proven to be efficient and durable. Its natural resistance to mould and fire has allowed the material to be preserved for centuries. Although there are a few new examples of seaweed being used in architecture and design, it is still a quite underutilized material within this field.

This master thesis highlights the versatility of seaweed and explores its potential use as a building material through material experiments and reference studies. As a part of this thesis, real architectural elements are proposed and tested in relation to different aspects like tactility, visual appearance and durability. The material experiments include algae bioplastics, seacrete panels and kelp leather shingles, serving as both interior and exterior materials. Material findings are applied to the design proposal of two buildings on the Swedish island North Koster. This site is surrounded by Kosterhavet National park, the first national marine park in Sweden and home to the most diverse marine life in the country. One of the proposed buildings contains a café and exhibition space displaying the versatility of seaweed in architecture and design. The second built structure is a floating sauna and deck that can be reached by foot or kayak.

Keywords : seaweed, algae, material studies, koster islands, sustainable

ANNA HAMMARLUND

FJÄLLENS RÖRELSEARV

- Movement heritage of the Swedish mountains

URBAN CHALLENGES

Supervisor: Kengo Skorick
Examiner: Joaquim Tarraso
MT´22

The fjäll*-landscapes are debated areas in Sweden. Within these districts there are varying interests by different actors. But what sometimes seems to be neglected is the culture of this area and the goal is, according to Naturvårdsverket and Länsstyrelsen (2018), to preserve fjällen the way that it is.

If one looks at how humans have used the landscape historically, it is defined by movement and nature, which is why the term movement heritage is used. The trace of humans is in general small, and usually in shapes of trails and paths. These traces are discreet and do not make much impact on nature. (KTH 2015)

Groups with different interests in fjällen have managed to co-exist without too many conflicts; samis, small scale tourism and researchers have all used the area without leaving anything but “discrete monuments’ ’. (KTH 2015)

One can be inspired by this sustainable way of using the mountain landscape. By promoting the movement heritage, preservation and care of the area might increase. (KTH 2015)

This thesis explores how architecture can contribute to do so through mapping of the situation in the mountains, art studies, literature studies and design exploration of movement, nature and culture.

The graphic material in this thesis can give a deeper understanding of the term movement heritage as well as showing the historical and natural values of the mountain landscape in Sweden.

An architectural addition could help to promote important spaces found within the movement heritage and thereby contribute to give ideas of how to use the landscape in a sustainable and respectful way.

The design proposal is an infrastructural element that provides safety, visibility of the path and efficiency in a functional but different way. At the same time, it enhances cultural aspects and natural effects through architectural elements and spatial effects. This augmented trail is a segment of a walking path and is using by the, in fjällen, commonly used footbridge plank as a design concept.

* Fjäll is a definition used in the scandinavian languages that explains a mountain or a hill which has a part above the treeline

Keywords : Fjäll, movement, cultural heritage

JOAR HANSSON

GOTHENBURG HILLS

- DESIGN METHODOLOGIES EMPLOYING LOCAL CONTEXT.

MATERIAL TURN

Supervisors: Kengo Skorick & Jonas Runberger
Examiner: Jonas Lundberg
MT´22

The purpose of this thesis was to explore architectural design through the development of a design method. The method was established with the objective of exploring ways to identify and interpret aspects of local context and regional characteristics, as well as how to inform a design process by addressing such aspects.

The project was carried out by engaging with a site which itself possesses characteristics typical for the greater region. Specifically, the entry point to the topic of regional characteristics was the variance in topography, which in Gothenburg with its many peaks and valleys certainly is evident.

With a base in site conditions, immediate aspects such as natural materials and textures were explored, but also other more external factors, which originate from the views offered by the site. Said site is a piece of unbuilt public land on top of a hill, bordering a quiet back street whilst within close proximity to an urban node. For the reason of keeping the land public, together with a need for new premises expressed by the local district library, the choice was made to use a public library as building program within the project.

The thesis relates to discourses within regionalism and contextualism as input for architectural design, and was informed by written as well as built work that in different ways deal with these themes. Sampling and reinterpreting were together important design strategies for the process and were used as a way to communicate clarity about adopting contextual references, while avoiding too literal gestures. The result of the thesis is a building whose design originates from a range of different ways to reference local context. In other words, the outcome can be described as a mixture of strategies, which have the incentive to involve certain local characteristics in the design in common.

Keywords: local, regional, character, context, topography

JENNY HELMER

A STUDY OF THE SWEDISH BATHROOM

- AND ITS FUTURE FUNCTION

The bathroom might be the most essential room of the home. It is a room of acceptance and freedom, but exactly what people do in there is often kept in secrecy. During the last 100 years, the bathroom has developed from a room of function to a room for living. The everyday activities that take place in the bathroom are influenced by recreation, learning and socializing, yet the bathroom is limited by its original purpose to serve as a room for personal hygiene.

This project studies the Swedish bathroom and its development, from when it first entered the homes to what it could be in the future. There is a sense of change in our society where the definition of rooms in the home tend to become less defined and blend into each other. The Covid-19 pandemic generated new and innovative ways for utilizing the home. Others escaped to their holiday homes and created an everyday life in the undefined space that is significant of holiday homes.

The bathroom has been strictly regulated from the start, and firmly defined. However, Boverket's regulations regarding the bathroom and its use is now being updated. The new regulations will only require certain functions, and is therefore meant to promote innovation and creativity. Will this contribute to the bathroom's possibility to flourish, and what will it mean for the role of the bathroom in tomorrow's home?

In order to better understand the bathroom and its form, the historical development of it has been researched, which was useful for exploration of the future as well. Because of the secrecy around the bathroom, the project is also partly based on personal experiences. The aim with this project is to make the bathroom´s qualities visible, as well as the shortcomings. The purpose is to challenge the outdated standard design of apartment bathrooms. As well as with new design incorporate its potential of being a room of living. Incorporating social aspects into the bathroom, might affect the Swedish prudery regarding nudity and toilette.
I want this project to raise new thoughts and create new possibilities for the bathroom.

Keywords : bathroom development, Möjligheternas byggregler, questioning the standard, bathroom qualities

HOUSING

Supervisor: Christer Malmström
Examiner: Ola Nylander
MT´22

TOBIAS HELMERSSON

FROM THE GROUND UP

- RESEARCH ON RAMMED EARTH AND TIMBER FOR A RESIDENTIAL BUILDING

HOUSING

Supervisor: Jan Larsson
Examiner: Ola Nylander
MT´22

Rammed earth is a building material that consists of compacted clay, sand, gravel and stones. It is a great option to consider for sustainable constructions, in combination with timber, since earth is abundant almost everywhere and the technique requires minimal energy. However, it is not used as a building material in Sweden today.

This master thesis aims to spread knowledge of the material properties, architectural qualities, and practical applications for rammed earth and timber, show how rammed earth is being used in central Europe today, investigate how rammed earth and timber can be combined to construct a 4-story residential building and explore how the erosion of a weather-exposed rammed earth facade can be an integrated part of the design.

The research method starts with examining the literature on rammed earth and timber. Erosion and pigmentation of rammed earth are then explored further with material tests. Observations from visits to rammed earth projects in central Europe and the company Erden's prefabrication factory are then presented. The knowledge gained from these investigations is then implemented in the design of a 4-storey residential building of rammed earth and timber. Timber is a lightweight material that can be used structurally in compression and tension, while rammed earth is heavy and can only be used in compression. These properties, among others, make timber and rammed earth a good combination, which is emphasized in the design.

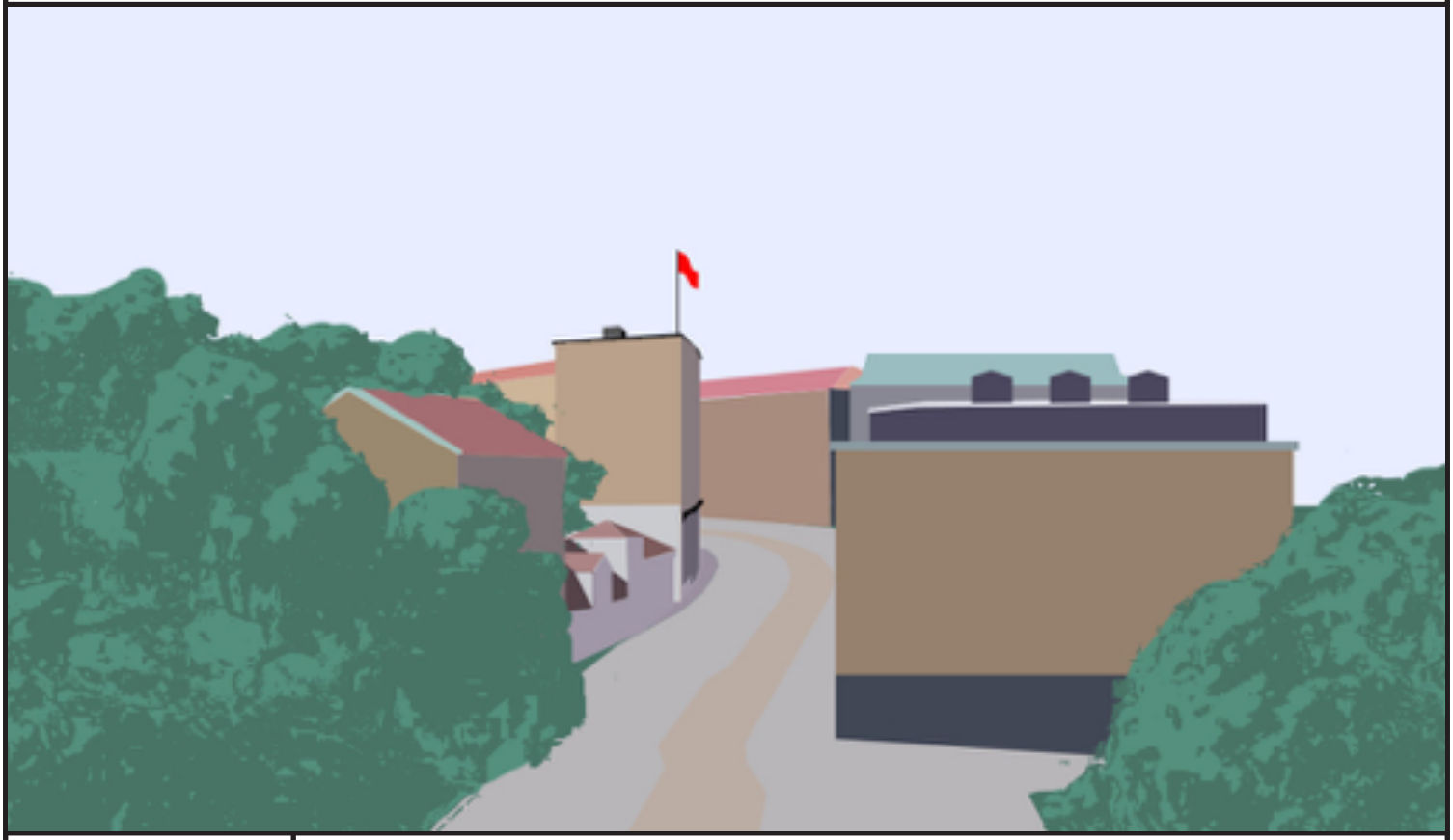
The design implementation shows that a residential building constructed with rammed earth will need a bigger footprint than one constructed with timber only. However, rammed earth offers great qualities such as unique appearance, deep window niches, acoustical and fire separation, recyclability, indoor moisture control and great air quality. But further developments in this technique need to be done for it to become an economically viable option in Sweden. By spreading the knowledge gained from this master thesis to the field, interest might eventually lead to investments in rammed earth construction here.

Keywords: rammed earth, timber, erosion, prefabrication, residential.

HUGO HENRIKSSON

THE OUTPOST

- conformity and curiousity



This master thesis seeks to investigate the visual and spatial conditions for building design in the context of the complex cultural and urban landscape that we, as architects, find our selves working in.

Specifically, it is a design project for an apartment building situated along Stigbergsliden, a street which act as a bottleneck passage between Majorna and downtown Gothenburg. The site has been chosen for it's dymanic location in the in the urban sequence and the fact that there are currently approved plans for an apartment building on the site. The project of this thesis relate loosely to these plans in terms of volume and program, without taking the role of an being active counter-proposal.

The objective is to reach a sense of visual continuity with both the immidiate surroundings of the site, and the general typology of urban dwellings in a gothenburg-nordic context, aiming to achieve a certain level of *conformity* under given conditions.

The other key notion from which the proposal draws inspiration is *curiousity*, which means providing an architecture of spatial varitation and dynamics.

Keywords: typology, continuity, gesture

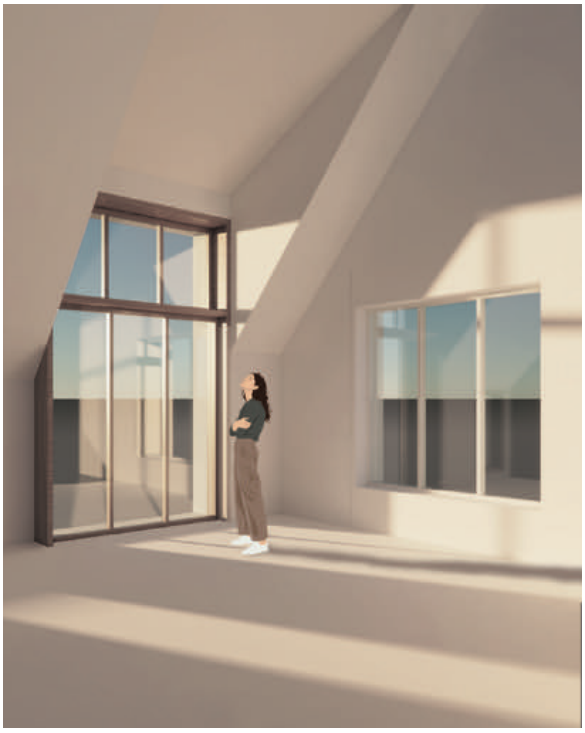
BUILDING & TECTONICS

Supervisor: Mikael Ekegren
Examiner: Björn Gross
MT´22

ELIN HOLM

FACADES

MORE THAN A WALL - INVESTIGATING HOW TO REACH ARCHITECTURAL QUALITIES USING DIFFERENT DESIGN PRINCIPLES



HOUSING

Supervisor: Jan Larsson
Examiner: Anna Braide
MT´22

The residential façade, defined as *the building enveloping shell*, impacts the interior environment, while simultaneously acts as the backdrop of the exterior space. The duality of the façade makes the topic span over several architectural quests in one. While addressing the delicate question of integrity for the residence the design of the façade is also a subject of interest to the public view, with a large impact on the atmosphere of the urban environment in our cities.

The thesis investigates the performance of the individual façade as a crucial contributing part of the coherent city and its' simultaneous importance for the home environment. The focus is the interface, the transition where the private home and the public space meets.

The thesis aims to define architectural qualities connected to the private home and the connecting public space, set in a Swedish city environment. Further, to develop design tools aiming to reach these qualities through features in the façade design.

The purpose is not to propose the ideal façade, but rather to contribute to a more conscious approach to designing façades in general and inspire fellow architects by providing suggestions to design qualitative living environments.

Through theoretical research of subjects like *Enriched Environments* connected to the human perception of the home, and influences from classical city planning theorists, conclusions are made leading to the outcome of a number of design principles possible to use as tools when analysing a façade and in the design process of a façade. The principles are showcased in a re-design of a façade of an existing building in Gothenburg. An analysis of the result regarding reached qualities and consequences of the design choices in the project are presented to conclude the project.

Keywords : residential façade design, design principles, duality, interface, privacy.

DAVID HOLST

ATTACK ARCHITECTURE

- DESIGN BEYOND THE BUILT

HOUSING

Supervisor: Kaj Granath
Examiner: Anna Braide
MT´22

Since the early 1900s, the oxygen levels in the Baltic sea have been decreasing in the deep-water basins due to nutrients emitted from infrastructure, housing and farming. The result is a rapid increase of algae blooms in the surface water, suffocating the sediments in a process called “Hypoxia”. This leads to the Baltic Sea dying at a pace faster than ever before. The dead zones of the ocean are now reproducing by themselves and our efforts of reducing the pollution is no longer sufficient to reverse the trend.

Through studies of up to date research and similar structures, this master thesis shows a design proposal working proactively with the issue. By breaking the layers in the brackish water with wind driven pumps, the oxygenated top layer of water can be relocated to the suffocated bottoms, activating the sediment and giving nature a chance to break down the algae and eventually heal itself.

This project shows an example of how it is possible to revive the anoxic deep water basins, making it possible for sealife to strengthen and enable a cultural coastal life in the future. This is done through the design of an “off grid” research station in the Baltic sea’s extreme environment, designed with regenerative architecture in mind, focusing on sustainable periodic living with zero impact on nature as well as human well being in an isolated environment. The design is based on an understanding of the site with the aim of showing how architectural design can be used to push sustainable inventions further.

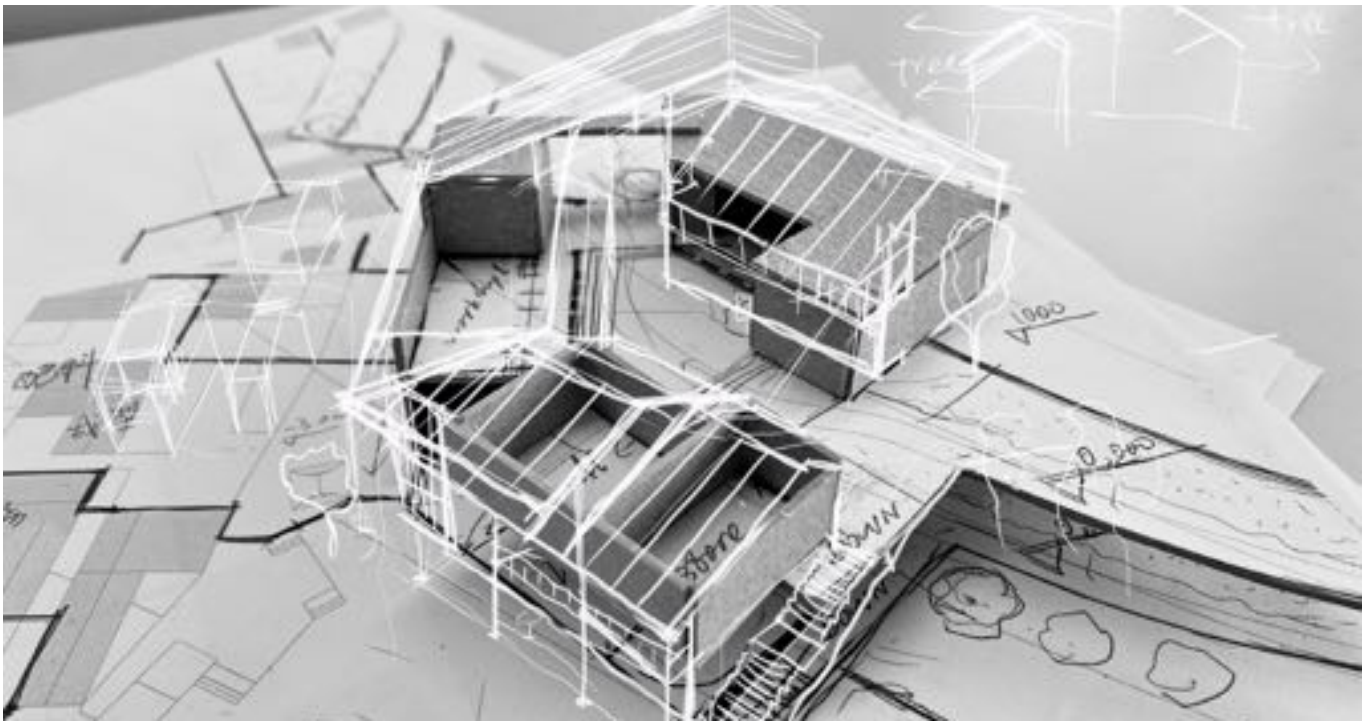
We need to rethink design, design itself creates us, therefore we need to start designing who we are going to be tomorrow.

Keywords : Baltic Sea, Hypoxia, Oxygenation, Regenerative architecture, Flexibility, Invention.

HAIHONG HUANG

FOOD CULTURE WORKSHOP

- EXPLORE TEOCHEW CUISINE IN SHANWEI



RURBAN TRANSFORMATION

Supervisor: Nils Björling
Examiner: Kristina Grange
MT´22

This thesis is a design process of a local food culture workshop located in Jieshi Town, Shanwei City, Guangdong Province, China.

The region is abundant with a long history, rich natural scenery and strong folk culture, especially food culture. In recent years, influenced by the surrounding metropolis, tourism has emerged on the east coast of Guangdong, including Shanwei, which bringing with it economic vitality. In order to avoid losing local identity under rural and urban transformation, it is of great important to study the reginal ecologies of Shanwei to preserve the local culture.

It is aimed to provide a platform for villagers and visitors to learn, communicate and experience with various local cultures in this region in terms of food and its related traditional activities, to awaken villagers' self-identity to the land and strengthen cultural inheritance and innovation.

Inspired by how Reyner Banham describing ecologies, this thesis categorized the ecologies of the village as the flavour of the land, the flavour of the ocean, the food trail and the shrine in area and village scales, which provided environmental cognitive support for the design process.

In the design proposal, a pathway was reshaped to connect the gap between ecologies of the village and its contexts. The food culture workshop acted as an adaptor between village ecologies, in terms of daily work, communication and leisure, seeking balance and communication between villagers and tourists.

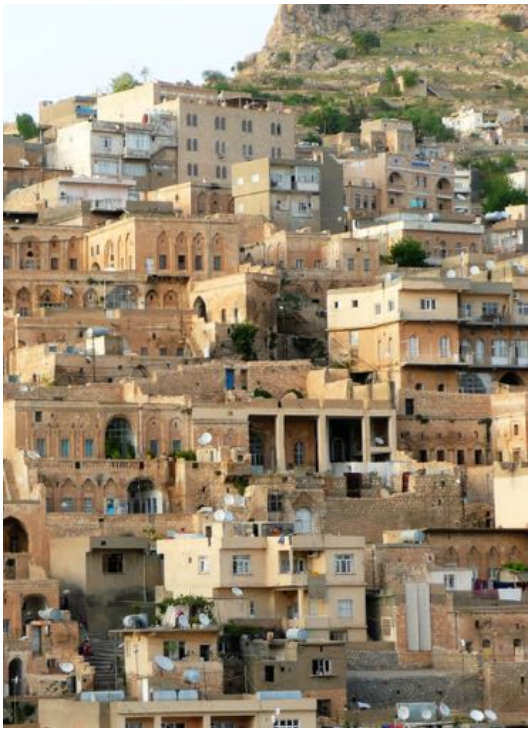
The research provides a way for rural tourism industries and urban planners to better understand the local ecologies, which also showcases the surrounding potential of local food culture to radiate the influence of the tourism to the surrounding towns and areas.

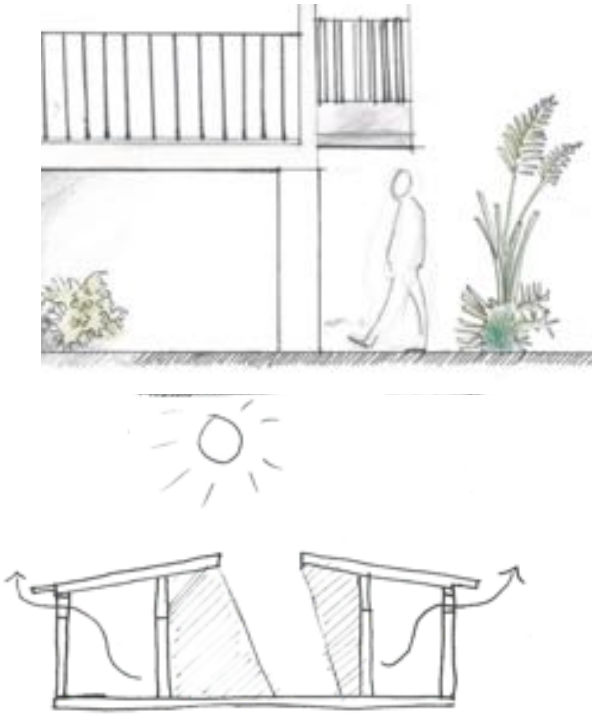
Keywords : Local food culture, Ecologies, villagers, visitors

MIRIAM HÄGGLÖF

BEAT THE HEAT

-RESEARCH ON HOW TO ACHIEVE THERMAL COMFORT DURING HEAT WAVES IN SWEDEN, INSPIRED BY ARCHITECTURE IN COUNTRIES WITH A WARMER CLIMATE





HOUSING

Supervisor: Sara Förbom
Examiner: Ola Nylander
MT´22

Extreme weather due to climate change will become more common in Sweden. Researchers at SMHI (the Swedish Meteorological and Hydrological Institute) have estimated that heat waves that previously occurred every 20 years in Sweden during the summer, can occur every three to five years at the end of the century.

Apartments in Sweden is not adapted to these high temperatures and will in many cases result in uncomfortable indoor climate. The elderly, young children, the sick and the disabled are particularly vulnerable to warmer indoor temperature and the issue has become a high priority among both property owners and authorities.

There are ways to cool a residential building mechanically, such as air-conditioning, but research indicates that large amounts of energy will be needed to gain thermal comfort with these solutions, which rhymes poorly with set climate goals. Therefore, we need investigate and other ways to counteract high indoor temperatures and see the issue from different perspectives at an early stage.

By investigating architecture in countries with a traditionally warm climate, focusing on passive solutions to lower the indoor temperature, this Master Thesis aims to research whether there are any methods or design strategies that can be implemented in Swedish housing construction.

The reference projects are selected freely based on design solutions and relevance, rather than from a specific country, which enabled me to investigate architecture in many different contexts.

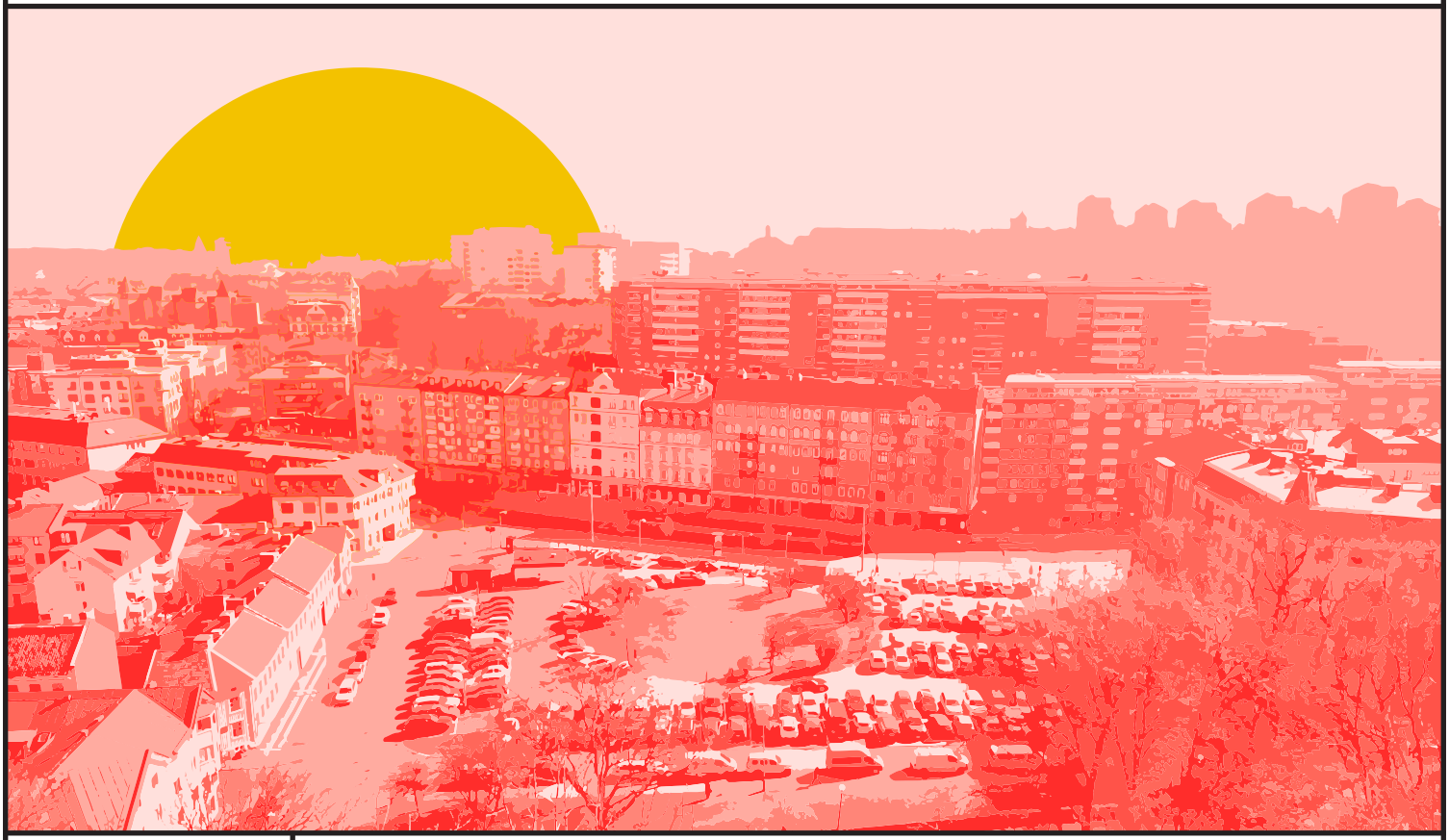
In my research i found that there were similarities among the different reference projects, even though they in many cases were built 1000 of miles apart. My investigation also showed that some of the buildings were so adapted to the local conditions that it was hard to transfer the solutions directly to a Swedish context, while some strategies, like cross-ventilation and bright facade colors could easily be applied.

Keywords : #passive ventilation #thermal comfort #solar shading #material #swedish housing #heat wave

AGNES JANFALK & LI WALLIN

DON'T BE A SQUARE?

- A SEARCH FOR A DEMOCRATIC PUBLIC SPACE



CRITICAL SPATIAL PERSPECTIVES

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The square is a symbolic place for democracy. It is a space where manifestations and speeches are held, but also an everyday arena where people from different classes, backgrounds and cultures meet, interact and observe. Here, societal conflicts and injustices are made visible. The current values of society determine the definition of the good city and thereby also determines who has access to, and agency to impact public space. We see tendencies that indicate that the democratic functions of public space are being displaced for the benefit of economic profit.

Through an extensive analysis of the historical, societal and political context that frames the design of public space, we have gained an understanding of the forces that shape it. We use the local square Skanstorget as a case study to make visible how the values of society impact the design of public space and the consequences this has for the citizens of Gothenburg.

Skanstorget has had a richness of functions and a strong identity as a square in Gothenburg. It was first marked by its military presence, fields, pastureland, and market gardens. When it was later transformed into a square it was used as a commercial site as well as a central space for political movements. In 2018 a competition for developing Skanstorget was advertised, the programme for the design was a dense housing block covering almost the entire square. The process surrounding the transformation of Skanstorget has been filled with conflict, and in many ways it effectively examplifies the issues embedded in the development of public space today.

Most people that we talk to about Skanstorget comment: ”but it's just a parking lot without any use anyway”, referring to a deserted, non-human space in the middle of the city. The connection to its history has been lost and with-it people's ability to imagine alternatives. As a conclusion to our work, we present an alternative design proposal that includes the values and perspectives that we feel are missing or have been lost, to help the citizens reconnect to history and visualise alternative futures for Skanstorget.

Keywords: Skanstorget, Public Space, Democracy, Urban Planning, Entrepreneurial Urbanism