Tracing forward

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Exploring the interplay of
a historical landmark and
the new material world

Abstract

In times of change driven by contemporary concerns, the question of how to relate to the existing naturally arises. It has long been present in the architectural debate with two distinctive attitudes that dominate, i.e, conservation versus modernization. However, in recent times the focus has increasingly shifted to creating the new from the old where preservation has gained new relevance in architecture. As this thesis argue, the challenge lies in how to interact with a historic structure and adding new layers that reflect contemporary architecture without neglecting its past. The thesis aims to bring a new perspective to the debate, deviating from the traditional view on preservation yet highlighting the value of historical layers in architecture.

The use of history in the form of narratives as well as material traces can construct new relationships in architecture. Introducing the notion of palimpsest, referring to something altered with visible traces of its earlier form, into the design process offers an approach to the relationship between existing architecture and architecture added at a later stage. Through superimposing of information, various representation techniques and design studies the thesis approaches the many layers of a historic remnant and explores how architecture can recompose environments with cultural-historical value. Furthermore, it resonates around the ruin as phenomenon and questions whether to intervene with a buildings "natural state of ruination" as suggested by Stephen Cairns and Jane Jacobs.

The thesis results in a speculative design proposal of an exhibition hall added onto the ruins of Älvsborg's old castle in central Gothenburg. Some parts of the design are based on facts while others on fiction, since there is no complete documentation of the castle's appearance. The design incorporates the ruin in its current state, without restoring it, making it a part of the new architecture. The interventions made in the existing structure are minor and what has been subtracted from the ruin is visibly reused elsewhere as pieces of spolia. Combining a pragmatic view on the ruin as reused building material with critical regionalism, where historical characteristics are traced and reinterpreted, creates a multilayered architecture. The design proposal resembles a fictional collage with a tension between purism and symbolism, where tectonics play a major role in the architectural expression. The result embodies a new take on preservation of historical landmarks with focus on superimposing layers of time.

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Content

Reading instructions

This booklet is divided into three major sections: Preface, Place and Design. The first section covers the background of the thesis, essentially presenting the discourse, with thesis questions and aim, and discussing theory that sets the foundation for the work. It also includes a description of methods and presents a set of architectural references that have had a major impact on the project. The section finally gives a brief summary of the two pre-studies that were conducted during the autumn of 2020, exploring the concept of spolia and critical regionalism.

The following section concerns the background and history of Älvsborgs old castle, together with the current conditions of the site. This information is compiled in a pair of operative drawings that have been used as library and source of inspiration throughout the project.

The final section presents the design proposal, which is conveyed through drawings, model photos and axonometries. The proposal is also inserted into the operative drawings, making it possible to trace the design moves. The booklet concludes with a general discussion and bibliography.

Preface

Background and theory

In times of change driven by contemporary concerns, the question of how to relate to what already exists naturally arises. The focus has increasingly shifted to creating the new from the old, where preservation has gained a new relevance in architecture. The thesis deals with critical issues in cultural heritage and allows this to inform actions and design strategies.

There are several inputs to the discourse within this project. Seen in the local context, Gothenburg has a history of extensive demolition and is once again facing major transformations in the urban environment, bringing the subject to the fore. Since the specific context in which the project takes place consists of a historical ruin, the phenomenon 'ruin' is a central aspect in the discussion and plays an important role in the choices made throughout the project. In the broader, contemporary context, one can currently discern a growing willingness to challenge the traditional idea of preservation. An up-and-coming movement within art and architecture that engages with this theme is 'experimental preservation'. In line with the ideas of experimental preservationists this project explores a design strategy focusing on preservation of cultural value while simultaneously reflecting societal developments.

There are many ways of approaching history through architecture and different attitudes towards historical remnants. Reference projects stretches from serving as protection of the existing structure to a freestanding addition or an addition merged with the existing structure. Central are the extent of interference, which is something that have been determined based on the site's specifics.

Both the local context of Gothenburg, the specific phenomenon that the project engages with and the broader context with contemporary practitioners striving to create a more critical discourse on historical significance, spark discussion and lays the foundation for the thesis.

The local context

Gothenburg has a history of extensive demolition, where areas with cultural and historical importance have been changed to almost unrecognizable. Once again, the city is facing substantial changes in terms of urban planning, and with the history in mind, one can question to what extent the cultural heritage is taken into account. In order to secure and maintain historical values in the cityscape, it is important to put emphasis on slow movements and local qualities rather than new inventions and economic growth. With a starting point in the general perception of Gothenburg's mismanaged cultural heritage, we use a neglected historical site to examine how to cherish heritage by adding to - instead of restoring or preserving - the original.

The Ruins as phenomenon

Ruins mean various things to different people and are valued differently over time. Traditionally ruins have been seen as evidence of a lost golden age, most notable during the antiquity, where the traces of history were considered source to knowledge and inspiration. John Ruskin, who was a great advocate of the romanticized view on ruins, coined the expression "the lower picturesque". He saw the ruin and its negative attributes as "equal delights". However, in modern times the ruin can as well be perceived as a dysfunctional condition that testifies to social and economic defects. In contrast to Ruskin's view, the Japanese architect Arata Izosaki has a more pragmatic view of the post-war ruins of Japan, which he does not consider romantic traces of past but rather as the harsh reality where the reasons behind the ruination is acknowledged. Izosaki values the ruins as a lesson for future architects.

Although ruins are a historical reminder of what have been, it can also initiate what is to come. Historical remnants has proven to give rise to

creative inspiration and architectural life with the emergence of new styles serving as a reminder of a romanticized era. The revival of antiquity through classicism, the spolia churches of Rome and the gothic revival sets an example. In recent times, we have also seen an increased interest in re-inhabiting dilapidated buildings, where the patina of time makes an attractive setting. Examples of this can be found in Berlin where several post war buildings have been reclaimed for new purposes. Furthermore, this goes in line with tendencies of the romanticizing of decadence and the emergence of subcultures such as the urban explorers and "ruinologists". In this context the fascination for ruins is not sanctioned by historical values or "good taste". On the contrary, urban exploration is driven by the urge to seek out the unremarked, the forgotten and derelict buildings (Jacobs, Cairns, 2014, p. 167-193).

This thesis does not value the ruin per se, but rather put emphasis on letting history inform our creative process and push architectural thinking about cultural heritage. Based on theory and site observations, one can claim that the remnants of Älvsborg's castle consists of different layers of ruination. It has endured the ruination caused by the wings of history as well as a current ruination caused by general mismanagement such as littering and vandalization. This gives us incentive to intervene. The phenomenon of ruins clearly carries different connotations, what we can agree on is the aspect of time passing and its destructive forces.

Experimental preservation

Experimental preservation can be described as an up-and-coming movement within art and architecture, that challenges the traditional idea of preservation. The words experimental and preservation are often held apart since experiment proposes something being altered which is, from a preservationist perspective, risky when working on historical and cultural objects.

Historically it has been considered a crime to, as a conservator, change the appearance of an original work. If there is a need to replace missing parts, the change must be distinguished from the original work but still form a harmonious whole as stated in the international practice convention (Otero-Pailos, 2006). However, according to the experimental preservationists, the criteria for what constitutes a culturally valuable object and what "historical significance" means are outdated and could benefit from being re-evaluated in line with societal developments. Instead, contemporary practitioners strive to create a more critical discourse where experiments are seen as a way of exploring an object's potential as cultural heritage and question the conventions of preservation in general.

In this thesis, the experimental act lies in adding a new program and architecture to a culturally charged structure. It questions the rigid rules of preservation of cultural heritage (Oteri-Pailos, 2019). Furthermore, it explores a design strategy that preserves cultural value while simultaneously reflecting societal developments.

Given the conditions of the site, we argue that intervening through architectural reinterpretation would enable a more dynamic way for the visitors to consume history. To reconnect with Cairns and Jacobs, the ruin is now dead, and our intervention can be seen as its cultural afterlife.

Positioning

There are different opinions regarding if one should interfere with fallen structures or not. According to Stephen Cairns and Jane Jacobs, the ruination is a natural state of architecture that should not be prevented - meaning that renovation, restoration or any attempt to revive is not honest to the structure.

We do not oppose this, however in our opinion it is a complex question. The view on historical remnants and existing structures can vary depending on background and perspective. We do not necessarily believe in the inherent value of a ruin but look at the specific conditions of each structure to determine its significance. For instance, we consider if the revival or renovation of a fallen structure can answer the need of e.g., housing with a small environmental impact, if the ruin conveys valuable knowledge of the past or if the ruin can be seen as means to create a dialogue between past and present and reveal layers of time.

In line with the reasoning of Cairns and Jacobs, one can claim that the fortress of Älvsborg has gone through the three natural states of a building, meaning that the fortress is now dead, what is left is just a reminder of the ancient structure. Additionally, as mentioned previously, the remnants consist of different layers of ruination.

Consequently, we have applied a pragmatic view on the ruin as building material and used design strategies that speak to the site´s memory without romanticizing the ruin itself or creating a historical pastiche. However, using stories that exists can give rise to a personal architectural language. By applying a method where different time layers are superimposed, we make history and the present visible in one uniform structure. This creates a historical continuity without having to recreate the original appearance of the castle. In order to shape the place's narrative, emphasis is instead put on reinterpreting the limited archive material and letting this inform the design.

Through tectonics, a dialogue is created with the past where the existing walls are left in their current condition and integrated into the new architecture. Previously, the thick load-bearing masonry walls of Älvsborg Castle had the purpose of protecting and insulating, but the needs of today are different and the building techniques have evolved thus enabled other construction solutions. For that reason, we have allowed a lightweight, readable load-bearing structure to create a point of juxtaposition between heaviness and lightness, past and present.

In conclusion, this thesis results in a design proposal that adds a new layer of time and forms a dialogue with the past to give the site new recognition. The result can resembles a fictional collage with a tension between purism and symbolism, where tectonics play a major role in the architectural expression. Through the design proposal we want to make it possible to, as Jonathan Hill puts it; be able to imagine the past, the present and the future in a single architecture.
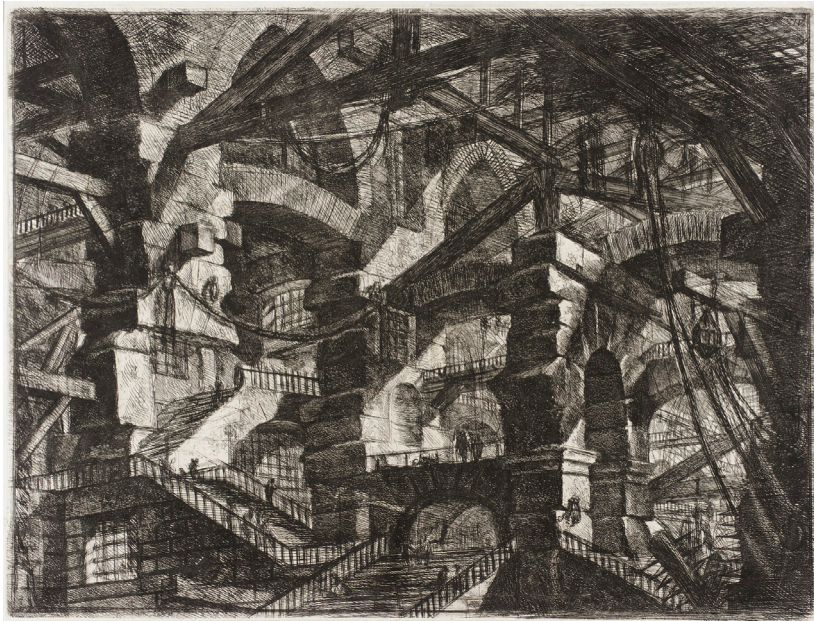
Carceri, an etching series by Giovanni Battista Piranesi from 1761 where he put emphasis on multiple, angled perspectives and mixing different forms. Piranesi was very skilled at combining the technique of documenting record of an existing site and the imaginery juxtaposition of diverse architectural and archeological forms and showing their creative connection.

Figure: Piranesi, G-B. (1761). The Gothic Arc.

Question and aim

How can the ruins of Älvborg's old castle be reactivated through a contemporary addition in a way that creates a strong identity as well as benefits the cultural heritage of Gothenburg?

What role does tectonics and materiality play in enhancing different time layers in architecture?

The purpose of this thesis is to create an awareness of how architects can relate to existing environments with cultural-historical value and what impact different design moves have on the reading of place. Furthermore, the aim is to examine how an addition to an existing structure can strengthen contemporary architecture by anchoring it in time and space. We wish to position ourself within the debate by identifying the gap between preservation and modernization in terms of intervening with landmark structures. The thesis aims to bring a new perspective to the debate, deviating from the traditional view on preservation yet highlighting the value of historical layers in architecture.

Delimitations

This is a speculative project that does not consider aspects such as accessibility and possible restrictions/building permissions on site. Nor does it engage with preservation methods or evaluate ground conditions.

Method

In order to engage with the discourse, we have conducted both theoretical and practical research and studied contemporary projects where existing historical remains have been integrated in a new structure. We have delved into theory and topics related to the discourse to create a thorough and nuanced understanding of cultural heritage. The ruin has been examined and its conditions evaluated in order to categorize potentials; what can be integrated in the new structure, what can be built upon and what can be preserved as it is or with other means. In the practical work, emphasis has been put on volume studies, model making and drawings.

The methods are chosen with regards to the multi-layered situation that historic landmarks imply. This has allowed us to efficiently and creatively experience and represent the interaction between new and old.

Models

The thesis uses photogrammetry as a method for digitally scanning the ruin, resulting in a high precision 3-dimensional model. In addition to being used as a basis throughout the sketching process and as representation in the mediation of the finished design, the digital model is also used to generate a physical representation. This is done by cnc-milling parts of the ruin in wood, resulting in a model with high tactility and texturing but lacking materiality and is

therefore given a gray color that conveys the true material. We have delved into one of the volumes, capturing a feeling that represents the proposal as a whole. The model's simple geometric shapes in combination with a high degree of detailing act as a complement to our two-dimensional esthetic. The physical model has been used to explore and elaborate the design further and study materiality as well as spatiality. It finally serves as basis for representing the design, both interior and exterior-wise.

Operative drawing

Digital drawings, inspired by the Spanish architect Enric Miralles, is used as an operational tool of representing space and investigating the site using a two-dimensional language. Hence, to investigate the relationship between the built environment that coexist within the area. This has been applied throughout this thesis from exploring the chosen site to representing the outcome.

Most notable in Miralles drawings is the multiplication of information within one plan using the same line weight for everything, thus erasing the hierarchy reading of the drawing. He is not restricted to the interior or the exterior, but rather represents what he finds as architectural key elements, spanning from the interior loose objects, exterior details, surrounding environment and construction (Diffusive, 2009). Our manner is rather free, using different line weights
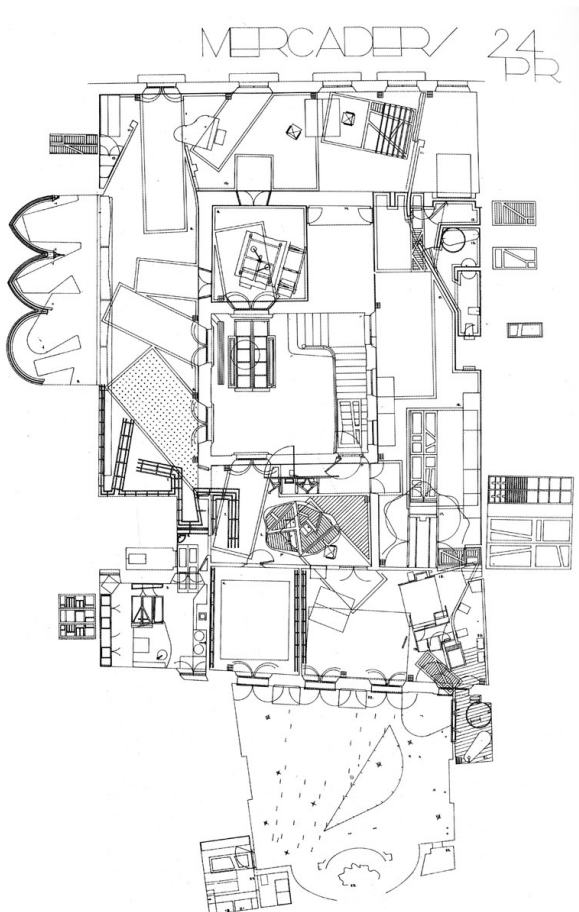
and textures to investigate and communicate information. However, what clearly distinguishes our drawings from Miralles is that we cut through different time layers, which he does not. We also develop the operative drawing further by superimposing information, spanning from archive material to the actual ruin, and introduce the concept of the palimpsest. This has resulted in a couple of drawings used as a library from which we have gathered information when developing our design. The library also functions as a tool for backtracking the design moves.

Palimpsest is a concept that captures history materially, it refers to something altered with visible traces of its earlier form. The use of history in the form of narratives as well as material traces can construct new relationships in architecture. Introducing the notion of palimpsest, referring to something altered but with visible traces of its earlier form, into the design process creates an interplay between existing architecture and architecture added at a later stage.

Figure: Miralles, E. (1995). Calle Mercaders Apartment.

Photogrammetry

To be able to capture the ruin in its current
condition in detail, we have used photogrammetry
as method for digitally scanning the ruin using
photographs. Since the ruin is ample and the
remnants are disseminated around the place, we
divided the ruin and scanned different parts one by
one by taking approximately 80-100 photos of each
part from different angles. Each scanned part has
been arranged together piece by piece, in order to
present a realistic 3D-model of the ruin. We have
used the photoscanning, not only as a basis for the
design but also as a represention tool. The ruin
and its current state is therefore represented by the
non-reduced mesh with a higher complexity, while
the addition is represented in thin black linework.

Total amount of photos, 1382
Aligned photos, ca 1300
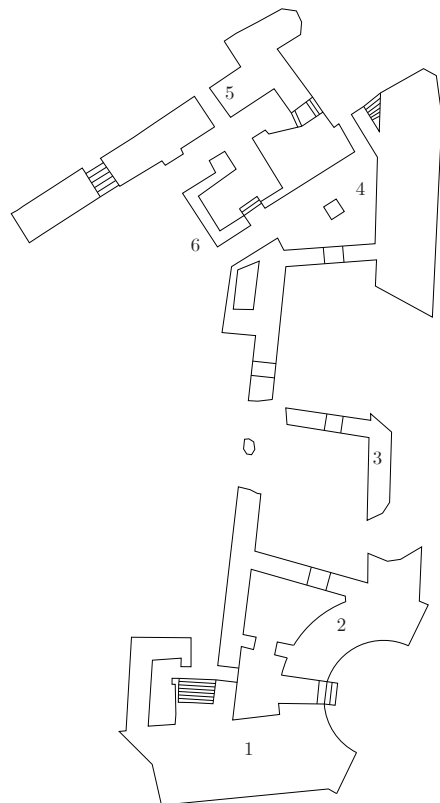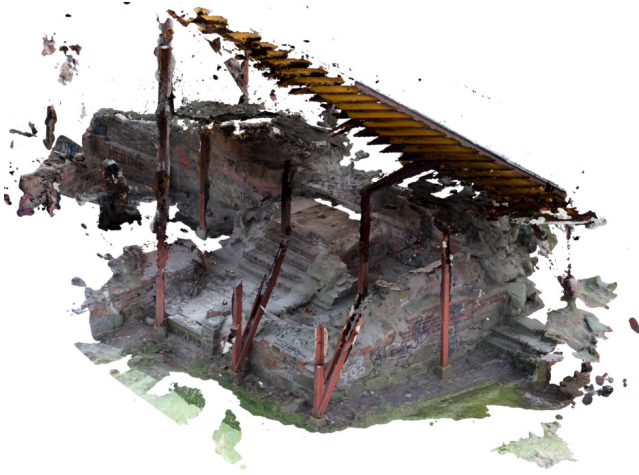
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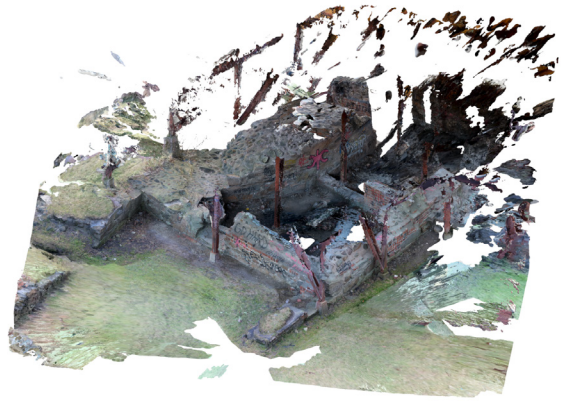
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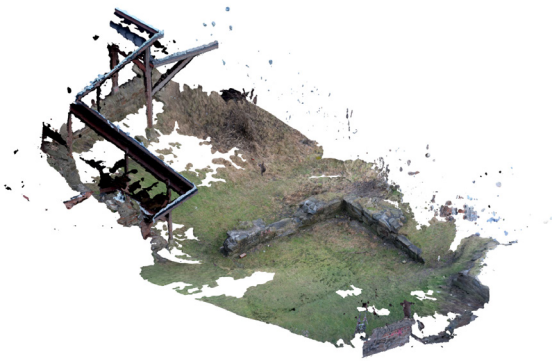
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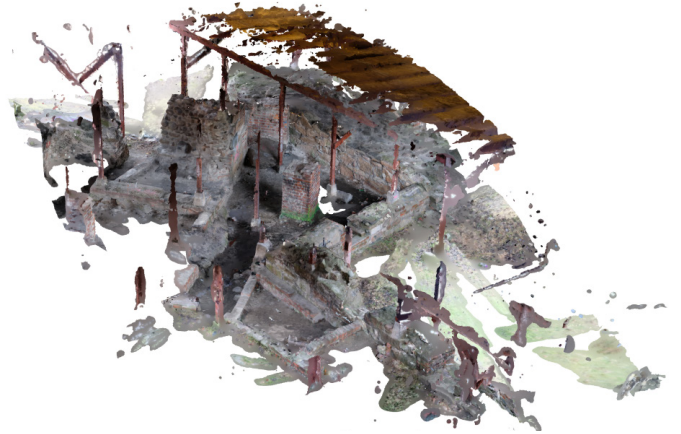
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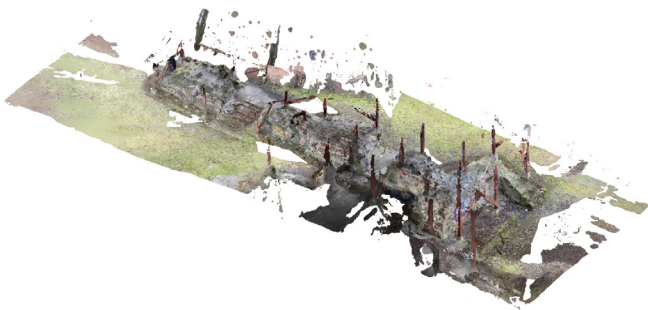
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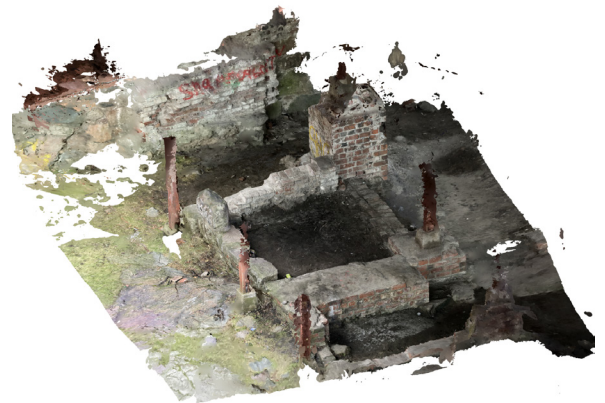
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Pre-studies

There are many ways of approaching history through architecture. During the autumn of 2021, two different exploratory projects were carried out, each involving its own subject/approach; 'Spolia' and 'Critical regionalism'. These studies have offered the project a broad basis to start from by providing a deeper understanding of how history can affect contemporary architecture. Presented here is a brief description of the two topics and how these have become operative in the project.

Critical regionalism was coined in the late 1970s by the architects Liane Lefaivre and Alexander Tzonis as a counter-reaction to Modernism that was seen as too individualistic, where emphasis was put on new inventions and less on history. Regionalism was on the other hand sometimes considered too provincial and vernacular which gave incentive to establish a more progressive approach called critical regionalism – focusing on the mediation between global and local qualities of architecture (Tzonis & Lefaivre, 2003, p. 10, 67). Critical regionalism was not considered as an architectural style in a traditional sense, but rather used as a design approach where the design of a building was based on the underlying analysis. It aimed to express modernity while relating to the traditional ideas or character of places and regions. This was explained by the great advocate Kenneth Frampton as a way to decrease the gap between modernization and tradition by emphasizing on local history, culture, topography, climate, building techniques and tectonics (Grillner, 1994, p. 70). He also wrote the essay "Towards a Critical Regionalism: Six points for an architecture of resistance" (1983), where he presented the traits that can be characterized as critical regionalistic. Today, architectural projects are seldom expressed as critical regionalistic. After all, the term was coined in connection with the emergence of

modernism at a different time in society where excitement towards new solutions characterized the architecture. We have established a more contextual way of working and one can therefore claim that critical regionalism has lost relevancy regarding its rebellious spirit. However, one can ask how good we have become at merging modernization and tradition. The 21th century is characterized by commercialization more than ever and it has clearly affected architecture. We believe that critical regionalism is still a relevant design strategy when trying to bring matters to a head and approach a site's local culture - while at the same time reflect the present and provide a dialogue between globalization and tradition.

This thesis has taken hold of the critical regionalist notion of importance of place and active role of history when shaping new architecture. For instance, characteristic elements found in the archive material have been reinterpreted and placed in a contemporary context. As Frampton addresses, this can be seen as a combination between a postmodern and phenomenological approach where known historical traits create associations and a sense of belonging of the place (Grillner, 1994, p. 73). In addition, the project applies critical regionalism in terms of topography and tectonics. The new building proposal relates to today's footprint and extends to ground that was previously built on. This is a reconstruction of the spatial dimensions that once existed, but gives an exterior expression anchored in a contemporary situation. Existing differences in the ground level are maintained, which give varying floor levels, as well as the thresholds in the ruin, that form the basis for the links between each volume. This means that the specific conditions of the site also give a spatial character while the ceiling heights have been interpreted freely. Emphasis has been

placed on differentiating old and new by, for example, the placement of the wall in relation to the ruin, which creates a visual and sensorial difference in the exterior versus interior, and that the ruin is kept untouched. Another critical regionalist strategy is the act of adding a new program to the site that connects to the local context. The choice of burnt wood as a façade material is based partly on the ruin's original appearance in wood and fire-ravaging history, as well as on the area's (Majorna) building history, which has been dominated by traditional houses in stone and wood. From a national perspective, wood is a local and accessible material.

The word *Spolia* originates from the latin word Spolium which originally meant the flayed skin of an animal but came to denote different sorts of plunder such as the booty of war. However, spolia later became the general term for architectural elements or sculptures taken from one site and reused in a different location. The earliest examples of spolia are from the 4th-5th century but the phenomenon hasn't been studied until 1940s when the German Christian archaeologist and Byzantine art historian Friedrich Wilhelm Deichmann published his study 'Die Spolien in der spätantiken Architektur' (Fabricius Hansen, 2015, p.242).

The discourse has long been driven by economic growth and inventions, followed by short cycles and cultural loss. But, in recent times there has been a shift towards a more sustainable approach. Today spolia is mostly considered an archaic practice but it has a clear connection to this emerging concern of our environment and the developing interest in adaptive reuse, recycling and slow movement. Spolia is a complex phenomenon beyond mere recycling, the pre-study

distinguishes the essence of the concept, extends it to contemporary architecture and discusses the potential of spoliation as a modern design tool in search of a more complex and history-based architecture.

Richard Brilliant claims that there are two different notions of spolia - spolia in se and spolia in re. This view expands the field of spolia from reuse of physical elements (in se) to virtual objects such as motifs or styles (in re). The concept was coined to describe the reuse of an older style in third-century Roman reliefs but can as well be applied to the present when referring to non-physical taking-over such as reinterpretations of earlier shapes or ideas (Brilliant & Kinney, 2011, p.2).

While reinterpreting historic shapes and placing them in a new contemporary context is a critical regionalist method it can also be considered an act of spolia in re. However, the thesis also takes hold of spolia in se by reusing the variegated bricks that have fallen of the ruin's walls/been found during excavations and creating a decorative flooring. In addition, some furniture has been constructed out of characteristic building fragments found on the site. The methods applied in the pre study on spolia have influenced the methods in the thesis. For instance, the notion of photogrammetry was evaluated as a method when working with existing elements and was subsequently considered a suitable tool to use for the thesis as well. Furthermore, spolia offers a new perspective on historic preservation which is a central aspect for the project.
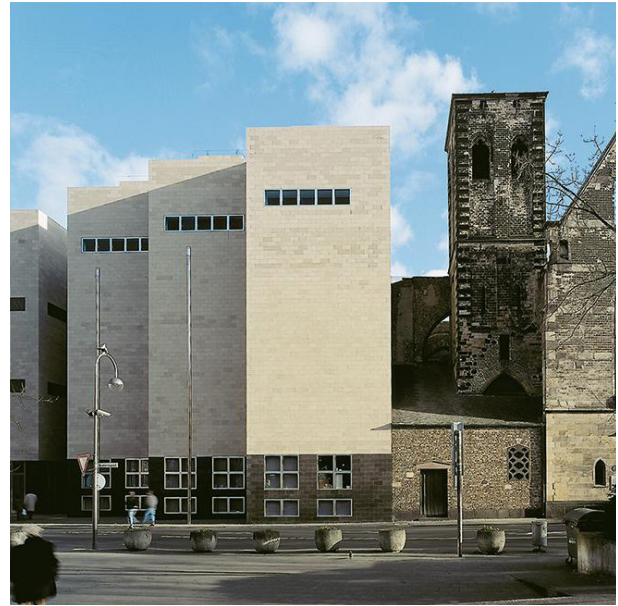
References

Koldinghus, 1975-1993
Inger and Johannes Exner

Koldinghus is a prominent reference on how to stabilize the existing/remaining walls of a ruin - while still keeping the ruins untouched. A framed structure has been designed to fit within the walls of the ruin. Columns carry the floor decks and roof. A timber structure fills the gap in the brickwork of the south-east façade and is freestanding within the ruin and does not touch the old brickwork (Exner, 1984). A strength of the project is the distinction between old and new; how those communicate with/ strengthen each other and how they create a whole. The project is applying critical regionalism in an inspiring manner where historic elements are remade as reinterpretations of the original ones.

The Wallraf-Richartz museum, 2000
Oswald Mathias Ungers

Inspiration has been taken from the architecture of Oswald Mathias Ungers and the concept that architecture derives from universal archetypes or typologies - geometric shapes - but assumes a different form each time based on the specific conditions or poetry of a site. The Wallraf-Richartz museum in Cologne is an example of a formal puristic architecture that at the same time reference to spatial and historical conditions. Each floor has its own layout and all rooms are of different size, arrangements and colors (Schittich, 2002). Recognizable in the work of Ungers, is the balance between poetics and pragmatics.

Figure 1 : Kallesö, E. (2018). Koldinghus.
Figure 2: Müller, S. (2001). The Wallraf-Richartz museum.

Elephant house, 2017
Leth & Gori

Elephant house is a project that transforms an existing chapel building from 1880 into an activity center. It shows how to visually work with historic layers in the interior and how to play with materiality. The project respects the existing qualities of the historic building including the historical marks that have been left over time. The choice of materials and colours derive from a careful reading and translations of the building (Leth & Gori, 2018). Contemporary elements such as red lacquered radiators and stainless steel kitchens connects the new spaces to history and time. The thesis has especially taken inspiration from the exposed load bearing timber structure that creates an interesting interaction with the existing.
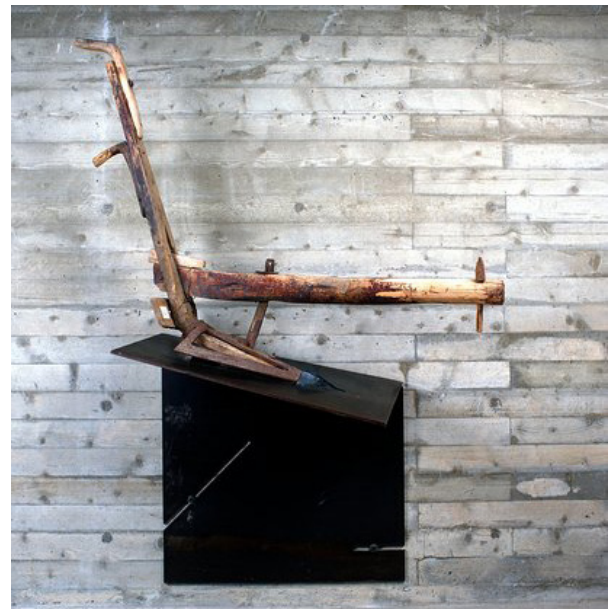
Hedmarks museum, 1967-2005
Sverre Fehn

In this project Fehn has adapted medieval ruins into a museum. The new construction is carefully inserted into the existing structure and emphasis is put on how you move through and enter the ruins, using elegant details as ramps and stairways in complementing material (Fjeld, 1983). Not only the structure has been a source of inspiration but also the interior details. All of the exhibited objects have their own specific place with a custom designed display. For instance, some are put behind a simple sheet of glass held by steel plating directly bolted onto the concrete and others are displayed on a bent metal sheet bolted to the concrete wall. Apart from the exhibited objects the ruins themselves acts as an important part of the exhibition.

Figure 3: Stamers kontor. (2017). Elephant house.
Figure 4: Photographer unknow (2021). Folkemuseumsutstillingen i nordfløyen av Storhamarlåven er designet av Sverre Fehn.

Place

Situation

The history of Älvsborg

Älvsborg old castle, built in in mid-1300s, was one of Sweden's most important frontier fortifications. Situated at the outlet of Göta Älv it was protecting the narrow corridor between Norwegian and Danish territories until the mid-1600s when a new castle was erected nearby. Throughout history the fortress has belonged to both the Danish, Swedish and Norwegians in a continuous fight of power of territory. It was originally built as a timber structure and was demolished several times due to fire. The fortress was for the last time rebuilt during the 16th century.

Figure 1: Gottfried, J-L. (1945) Elsburg.
Figure 2: Karlgren, E-K. (1954) Rekonstruerad borggårdsinteriör.
Figure 3: Classon, K. (1655) Gamla Älvsborgs slott med omtrakt.

The different appearances of the castle

There is not much information that reveals how the castle actually looked like. A few illustrations and floor plans give a clue, but no illustration is the other one alike. However, there is some written information that tells about the castle's different appearance, linked to the change of ownership.

The first castle on the site was built in wood and according to the German soldier Paul von Dolnstein, who depict the castle in 1502, it was covered with turf. After the Danish King Kristian had the castle burned down in 1519, he rebuilt it, once again in wood and turf. Earthwork and timber fortifications were erected using timber from Norway (todays Bohuslän). A few years later the Danes gave up Älvsborg and burned it for the second time. Gustav Vasa immediately began reinforcement work and turned the castle into a typical "Vasa Castle" built of stone. The principle of the new plan was the same as Gripsholm castle, another Vasa castle built during the same time. It consisted of a round tower to the south from which girders went out on both sides towards corner towers, connected by building lengths. The outer wall of Älvsborg was 3.80 - 5 meters wide and the tower wall about 2.60 - 3.40 meters, remnants of these can be seen on the site today. A building length in stone have secondarily been placed inside the rough retaining wall with the transverse walls connected directly to the mantle wall. Originally there may have been wooden houses in these well protected parts of the courtyard.

In 1563, the castle was again besieged by the Danes and the Swedes had to pay 150,000 "riksdaler" in ransom to regain the ownership. During the reign of John III Älvsborg was rebuilt into a palace with architectural pretensions, i.e. manifested in the carving details in gates, gables, stoves and stairs. Building lengths inside the eastern retaining wall were probably added at this time as well as the stairwell to the south, or at least its limestone portal, whose threshold and

profiled base remain. In the old building lengths located towards the river and in the rounded tower facing east, rectangular windows were carved up. The courtyard façade on the north-eastern part of the bastion was designed with a classic, column-bearing arcade (Lorentzson, M., Sandin, M., & Wennberg, T., 2011, p.25-35).

In 1612 the Danes marched in and the Swedes abandoned (capitulated) the fortress. In 1619 a second ransom of 1 million "riksdaler" was paid for and Gustav II Adolf entered the castle that was now very dilapidated. It had soon played its role, Gothenburg's solid defence was transformed in the middle of the 17th century and it was decided that the fortress would be demolished (Sandin M., 2011, p.09).
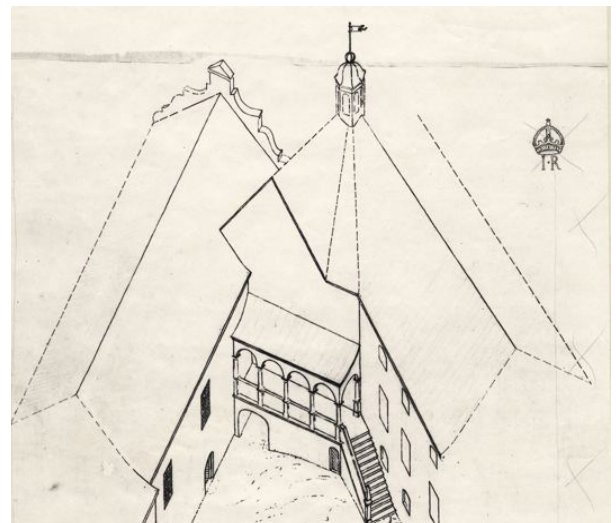
Vasa castles

As mentioned earlier, Älvsborgs old castle was for the last time rebuilt as a typical "Vasa castle", which is a kind of castles erected or modernized by the Swedish king Gustav Vasa and his sons during the 16th century. They were built in the Renaissance style and were often a mixture of fortification and palace with corner towers and wings in between (Statliga fastighetsverket, 2020). A common feature of most Vasa castles are the round towers that were built for defence purposes when the cannon began to be used. For the same reason, existing dated medieval castles were equipped with new earthen ramparts and strong surrounding walls (Tuulse, 1947, p.98).

To the right are floor plans of Gripsholm's castle and Älvborg's old castle from the 16th century, which are both classified as Vasa castles. As the illustrations show, the floor plans are usually characterized by a uniform external shape that surrounds an open central area – the courtyard. The interior however is often divided into smaller rooms. The outer walls are most often organized in a quadratic or rectangular plane, except for certain protruding parts such as wings/building lengths that connect the corner towers. The shape of the corner towers shifted over time from square to round. (Tuulse, 1947, p.98)
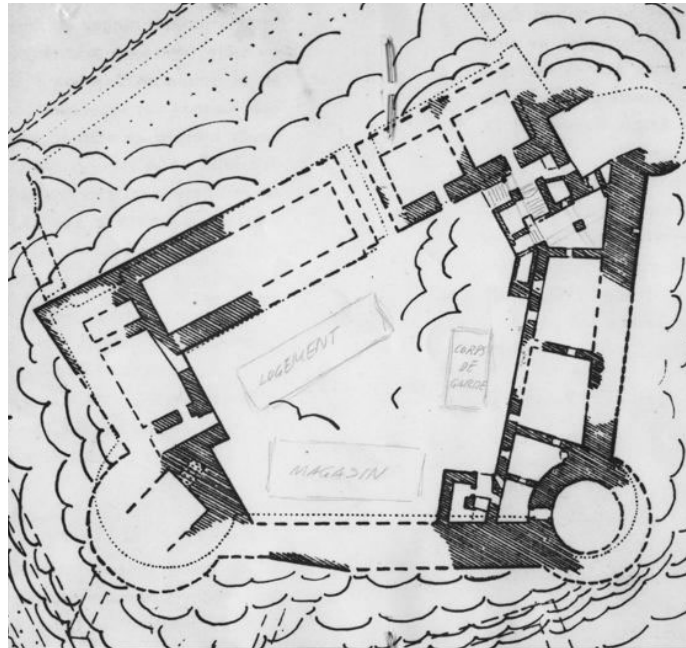
Illustration of the remnants of Älvsborg castle from the 1800s
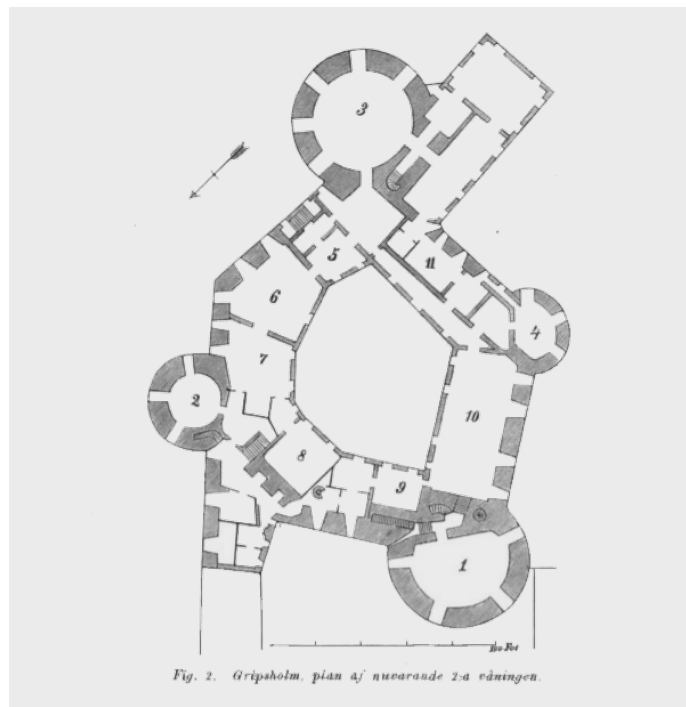
Fig. 2. Gripsholm, plan af nuvarande 2:a vdningen.

Gripsholm castle, 1537

Figure 1: Göteborgs stadsmuseum, drawing of footprint.
Figure 2: Tuulse, A. (1947) Gripsholm castle.

Prerequisities

The only remains of the fortress today are the footprint of the castle, inside the fortress outer walls. It is located in the west of the city centre, in an area called Majorna. Even though it is situated in the middle of an active and culturally recognized area it is relatively unknown by the inhabitants. The ruin is currently covered by a roof serving as weather protection; however, one can question how the use of the roof has favored the site besides the weather protection. Today the ruin has been vandalized by littering and scribbling, making it an unwelcoming place and neglecting its historical values.

The ruin is located on a steep hill which in combination with the hoovering roof, makes it inaccessible and hard to detect from the street level. It is squeezed between several multi-storey buildings, that covers the sight-lines in different directions. The surrounding buildings are made in brick and are a combination of 1900th century industrial-and 2100th century architecture.

The ground is relatively rough with different ground levels throughout the ruin's existing rooms. The hill is covered by stone and earth, with two large oak trees in the middle of the former courtyard.
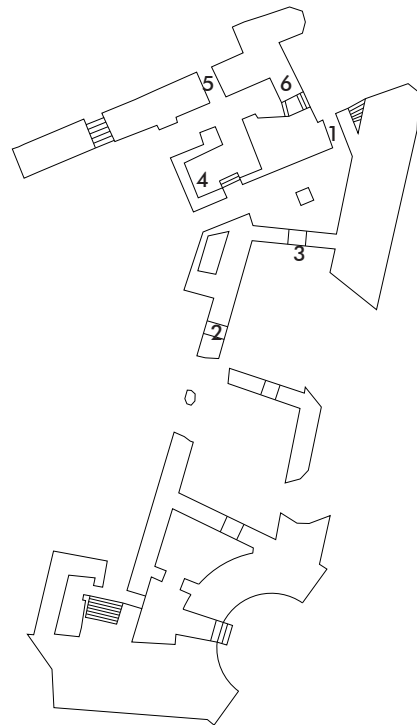
Sequences

Since the fortress was demolished and building parts as well as interior elements were reused in new castles, there is little left. However, there are a few interesting sequences still remaining, representative for the former appearance, that we have considered in the development of the design.

1. Vault in the former tower with a rich spatiality and higher precision than the rest of the ruin.

2. Former window recess with angled walls showing the thickness of the wall and spreads the light at an angle.

3. High thresholds and varying ground levels in different rooms are recurring elements that has the potential of characterizing the total roof heigh in each room.

4. Small rooms with different ground levels and shapes which stands out from the rest of the ruin's remaining spatialities.

5. Opening between the former housing structure and the courtyard. The walls around the opening are the most preserved ones with a height of 1,9 m.

6. Interior niche in the wall of the tower. There is another similar recess on the same wall.

1

2
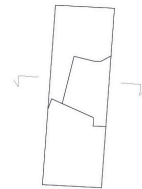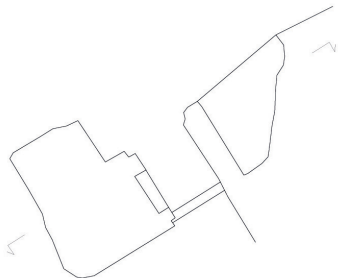
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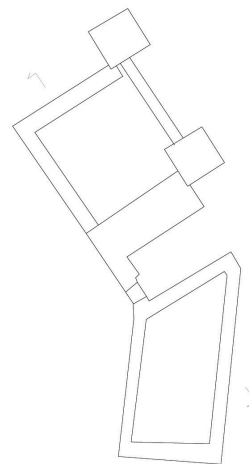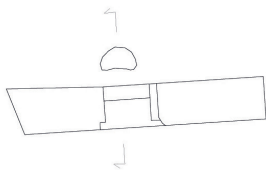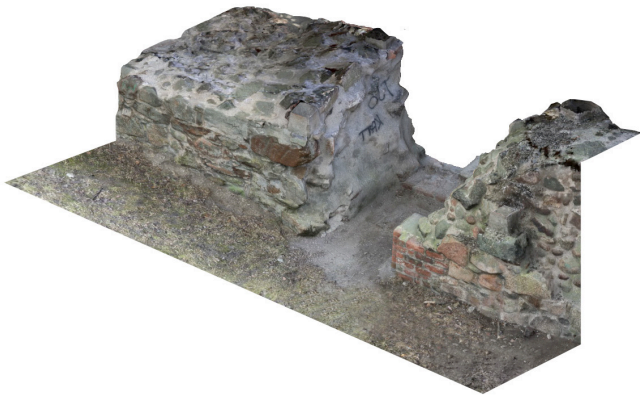
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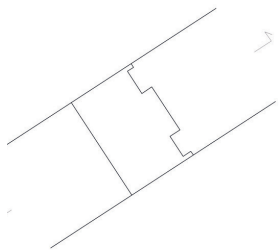
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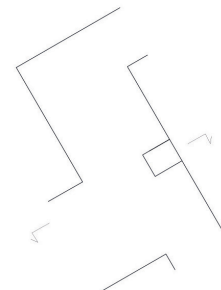
Old Älvsborg in stone 1566
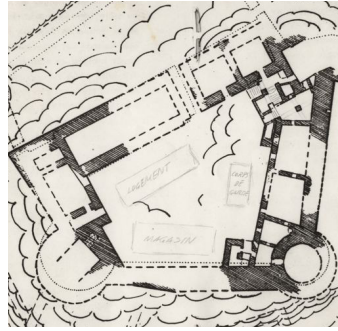
Drawing of footprint 1950
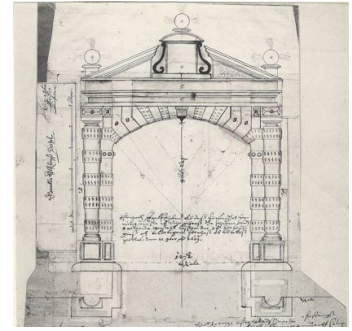
Reconstruction of portal 1950

Wooden fortress 1502
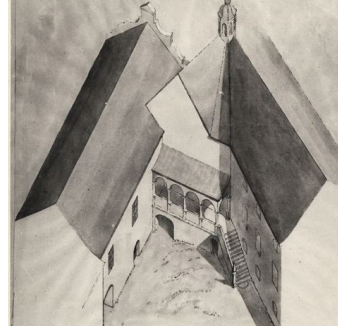
Reconstruction of the courtyard 1954
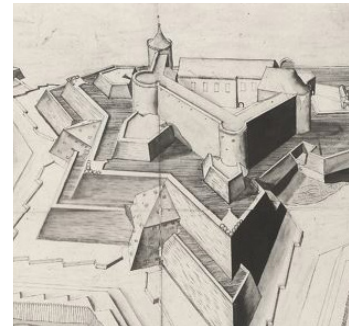
Old Älvsborg 1600th century

Characteristic elements of old Älvsborg

Since there are no reliable documents on the
appearance of the fortress, we have identified
recurring characteristics found in the archive
material and let them influence the development of
the project. Those that have been visibly operative
in the design are marked in black.

All images are retrieved from www.carlotta.se
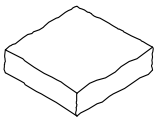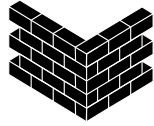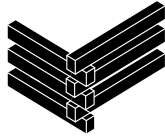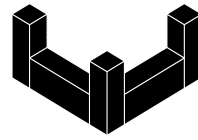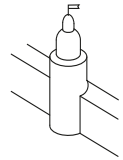
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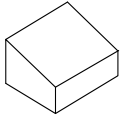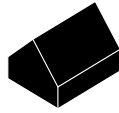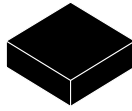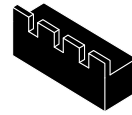
6 7 8 9 10
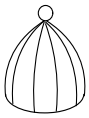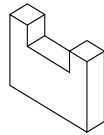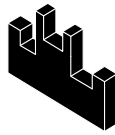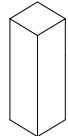
11 12 13 14 15

16 17 18 19 20
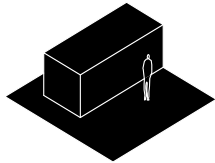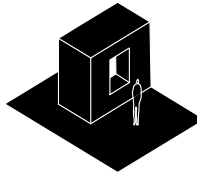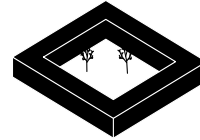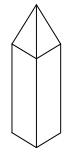
1	Stone	11	Cupola
2	Masonry	12	Symmetrical roof line
3	Wood	13	Asymmetrical roof line
4	Horizontal links that ends in vertical towers	14	Vault
5	Retracted volume	15	Rectangular tower
6	Sloped roof	16	Interior niche
7	Pitched roof	17	Thick walls
8	Flat roof	18	Deep window recess
9	Jagged wall profile	19	Closed structure with an open courtyard
10	Cylindrical tower	20	Tower with pyramid roof

Operative drawings
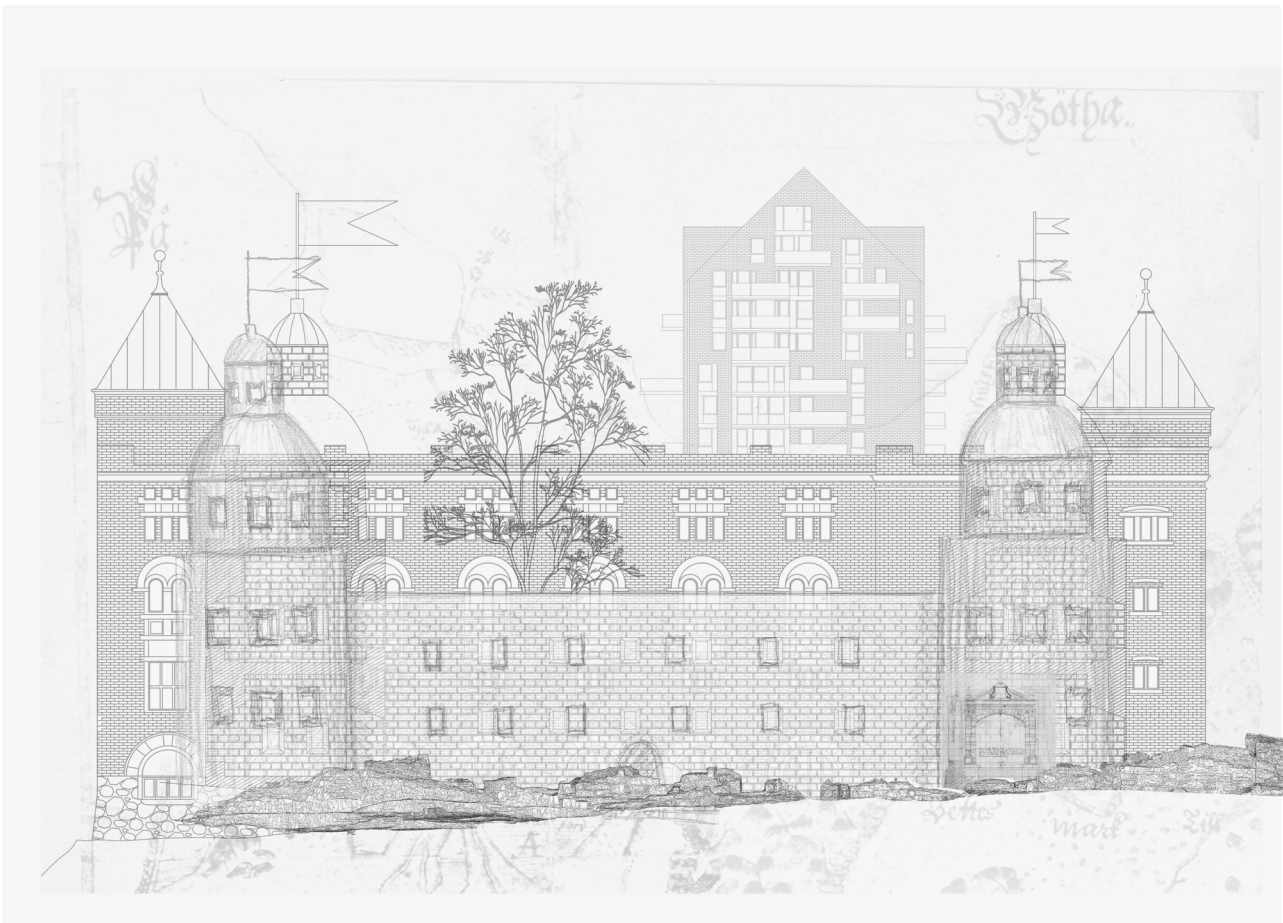
A historic landmark contains multiple layers. To get a better understanding of the chosen context we have put together the site´s physical conditions and history and created two operative drawings, allowing us to efficiently and creatively experience and represent the interaction between new and old.

The drawings are constructed out of superimposed information, spanning from archive material to the actual ruin, cutting through different time layers. The first one is focusing on the site plan and footprint developed over time and the second one on the exterior appearance of the fortress.

These are used as a library from which we have gathered information when developing our design. The library also functions as a tool for backtracking the design moves.
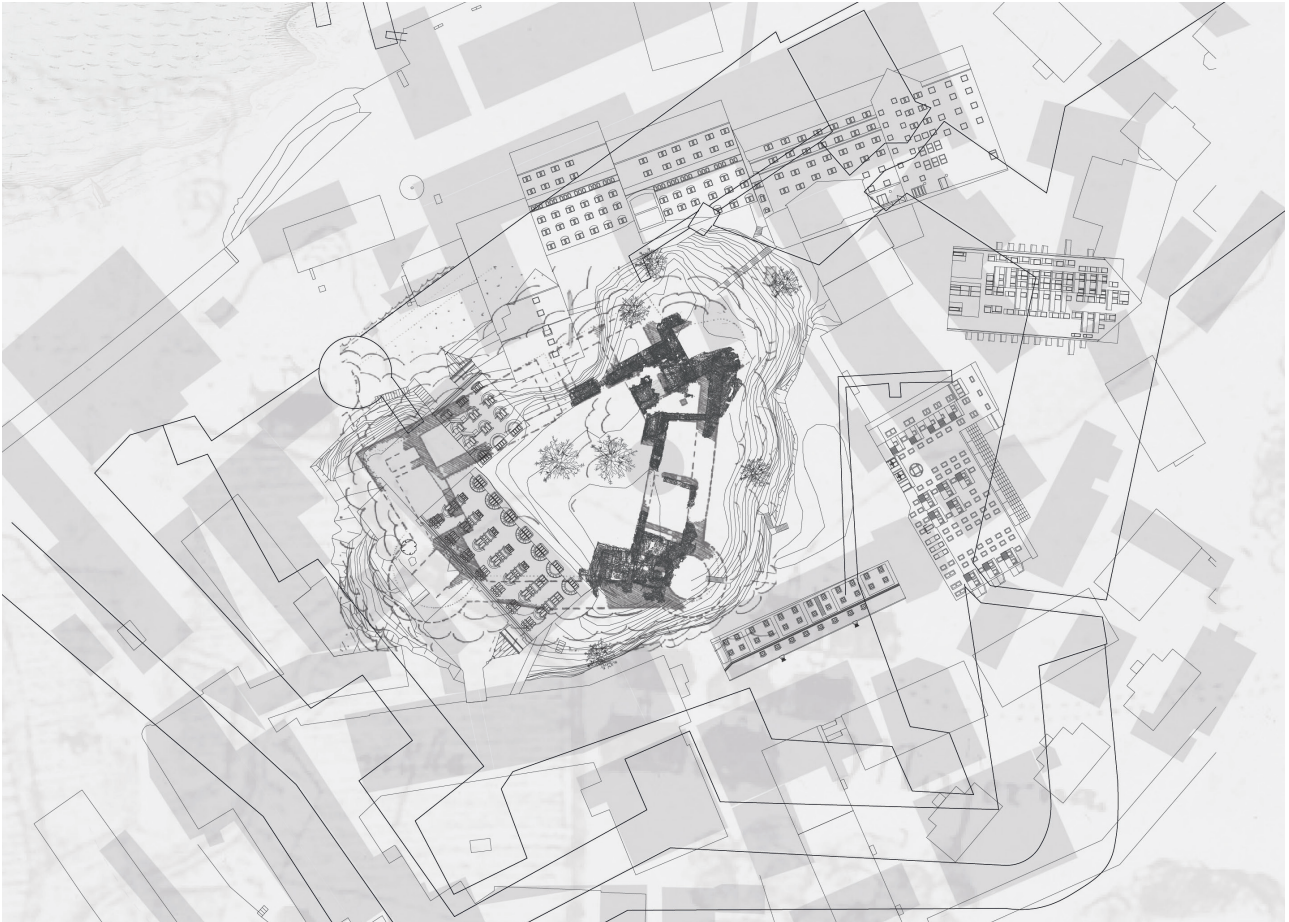
Figure to the left:
Historical map year unknown
Adjacent building today
Illustration of 1600s look
Pictured section 1600s look
Reconstructed portal 1950

Figure to the right:
Map 1600th century
Map with visible footprint 1938
Drawing of remnants 1980
Site plan with adjacent buildings 2021
Scanned ruin 2021

All layers in the drawings can be found in this booklet or the appendix.

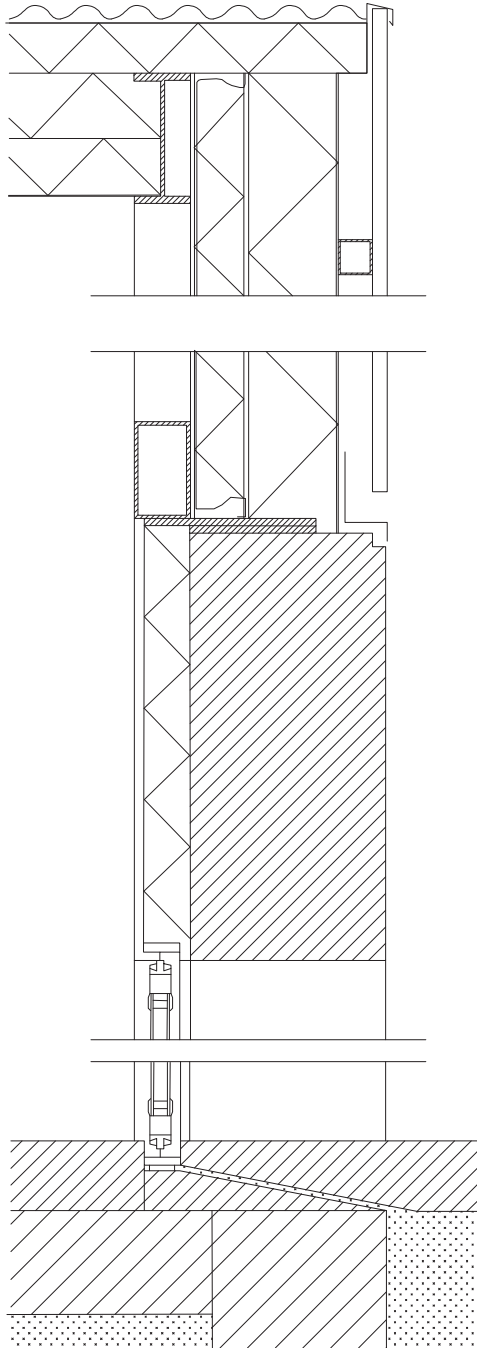# Design

Design studies

M03, private house in Toulouse by BAST

In our discourse and in the reference projects, the physical meeting between the existing structure and new addition is central. To examine what impact the tectonics might have on the experience and reading of a place, we have studied the references closer and distinguishes the central aspects and effects off different design moves. Presented here are two solutions to the meeting with the existing, that through tectonics emphasize history in different ways.

Figure: Bast (2014) M03.

Repairing existing wall using contrasting material

This example shows a combination of approaches. The ruin's wall is repaired with concrete and the new metal wall acts as an extension that contrasts with the existing structure, e.g. in terms of materials; the texture of the existing wall compared to the finer metal.
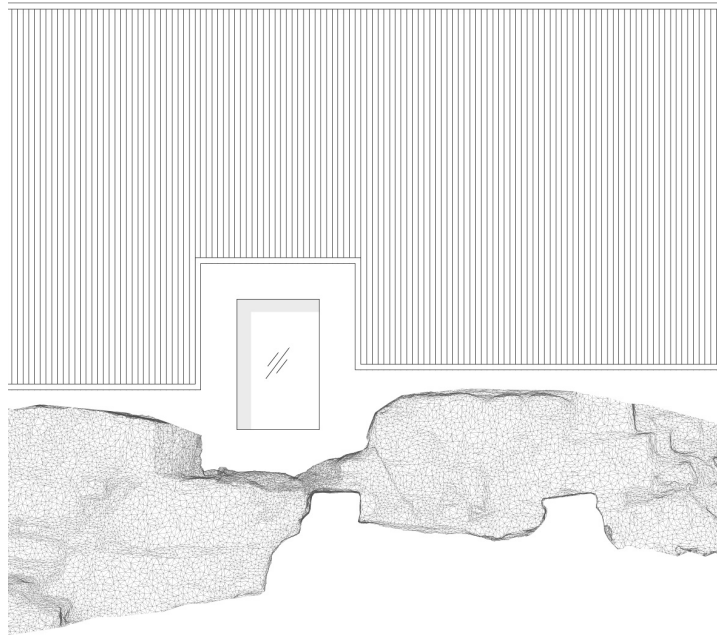
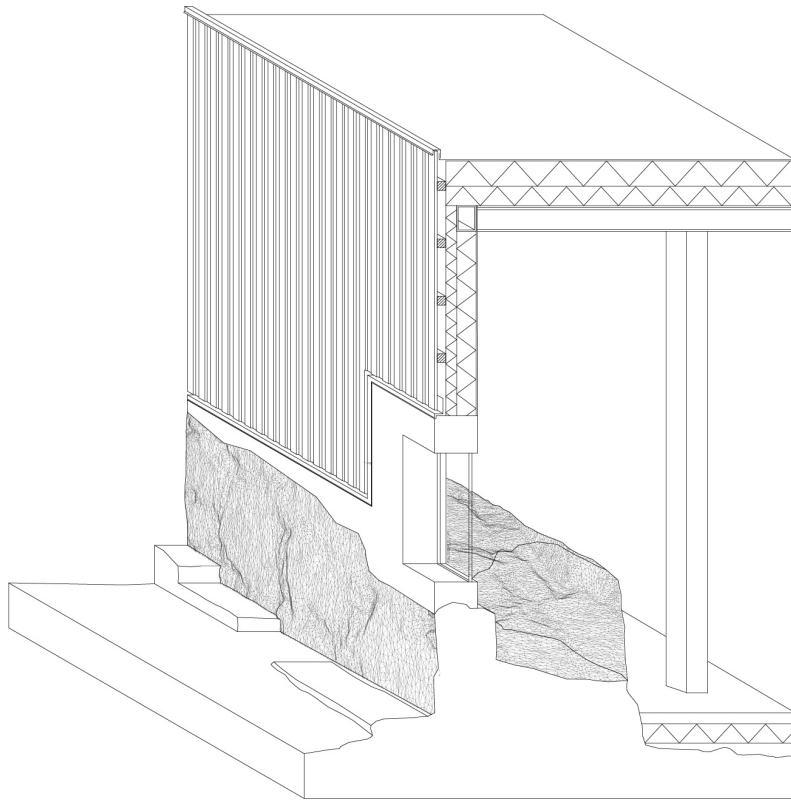## Design principle

The concrete serves as repairing material and as a
base for the additional wall in metal. It is casted
on top of the ruin, but no load is put on the ruin
walls. The metal creates a contrast to the rough
texture of the stone and enhances the time layers.
The existing openings are kept to enhance the
original structure.

Principled wall construction 1:50

Cast-in-situ concrete base
Corrugated metal sheet
Battens
Vapour barrier
Thermal insulations
Steel structure
Interior wall cladding

Koldinghus Castle by Johannes and Inger Exner

Hanging facade cut according to ruin wall

The new facade hangs in the y-shaped pillars to avoid putting load on the original wall. The new facade is bolted to the old wall. The construction consists of a steel frame, as well as wooden joists, insulation and wooden shingles.

Figure: Photographer unknown (unknown), Koldinghus.
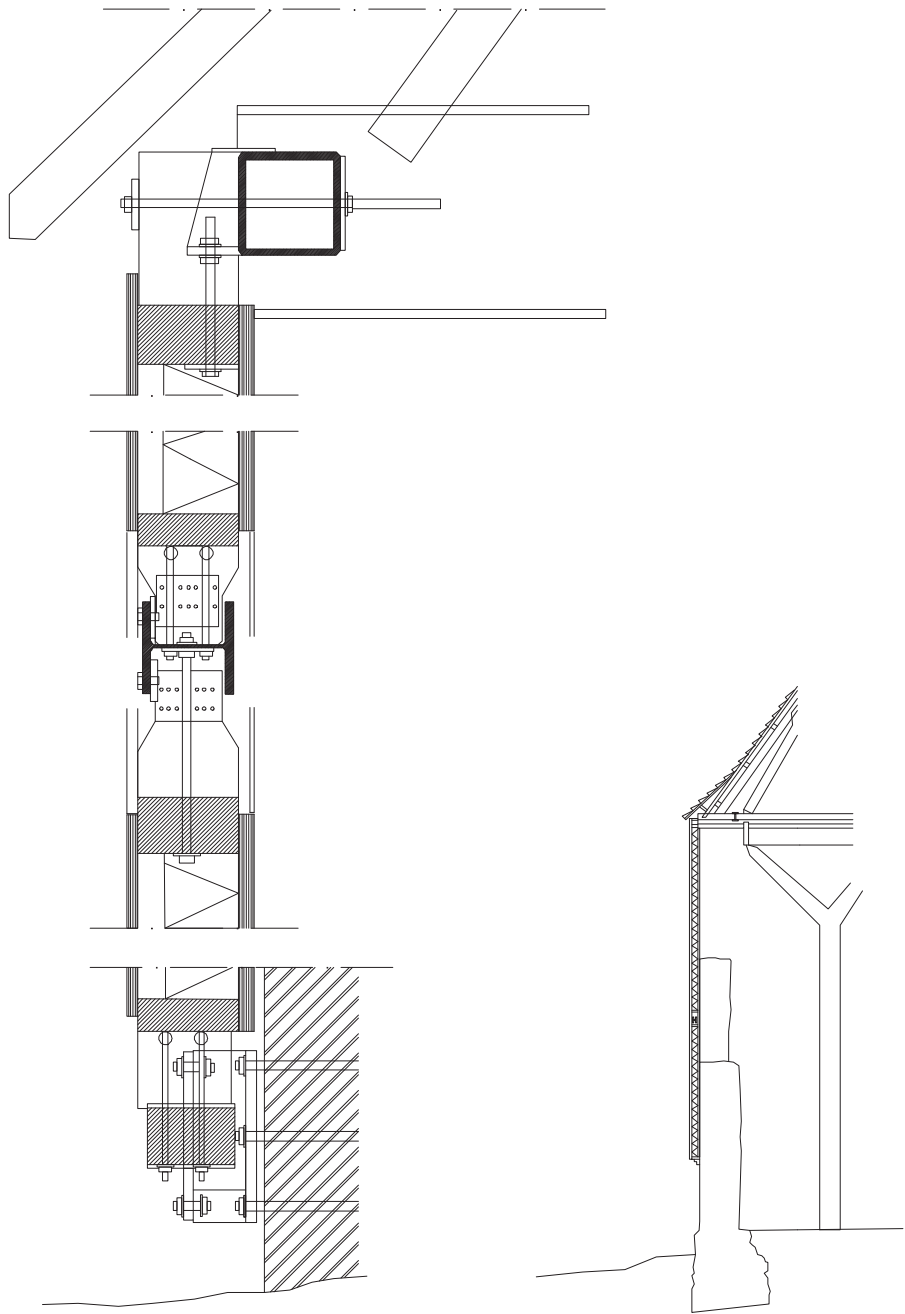
Design principle

The wooden facade hangs from a steel structure,
resulting in a non-loadbearing exterior wall. This
gives depth in the facade and emphasize the
meeting between the existing and the addition.
The wooden panels are cut in order to enhance the
profile of the ruin's wall.
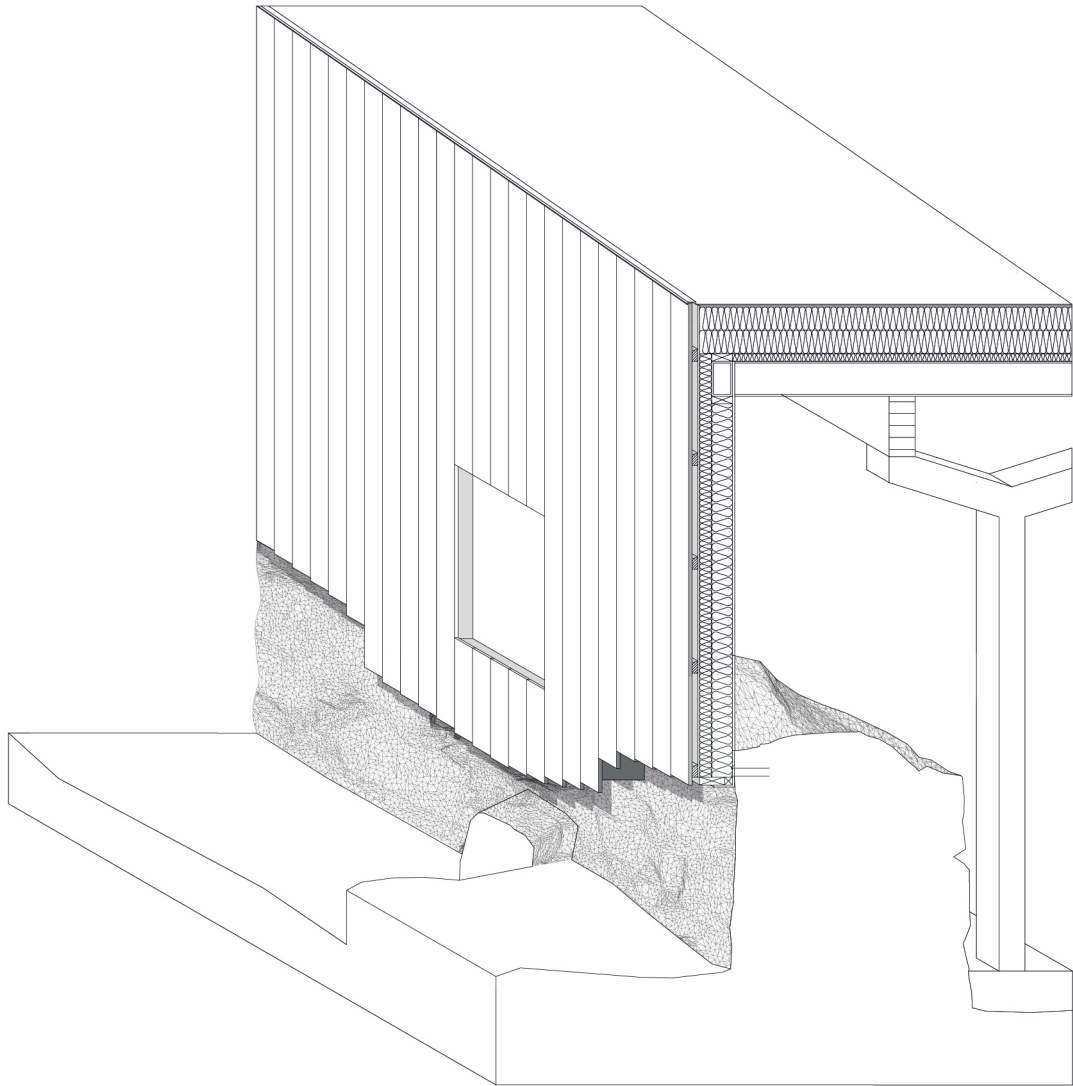
Principled wall construction 1:50

Vertical wooden panels
Battens
Vapour barrier
Thermal insulations
Steel structure
Interior wall cladding

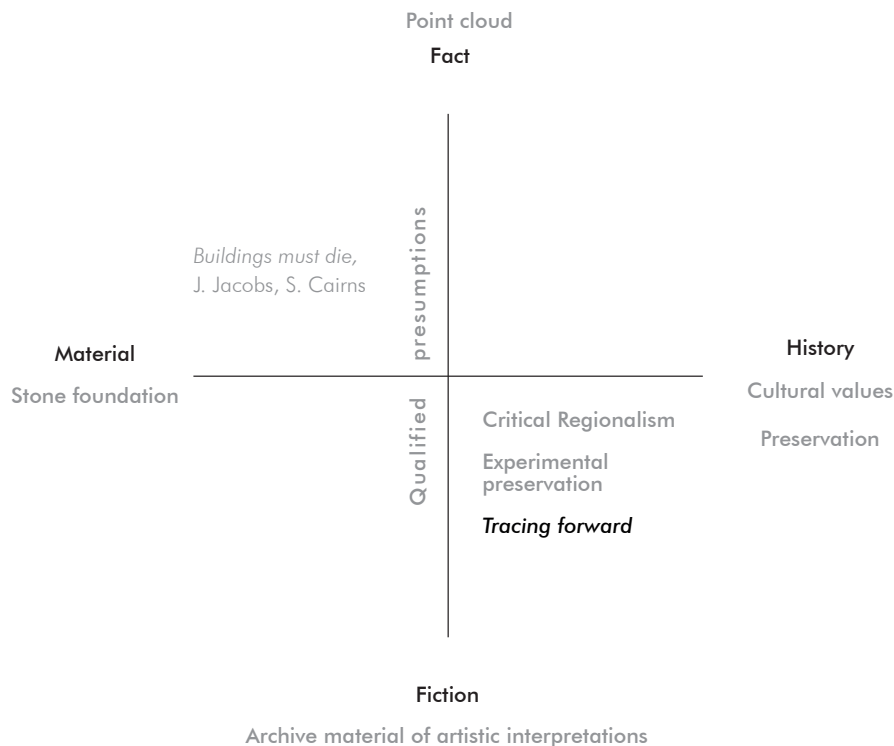The presented solutions emphasize history in different ways, the first one is rather pragmatic and uses the ruin as base for the new building. At the same time, it is honest to the original structure by distinguishing the repaired parts and adding a contrasting material that creates an interesting interplay between existing and new. Working with a historical landmark constituting of a multitude of layers, awakens many different aspects and we believe that the principle of Koldinghus succeeds better in answering to these. In addition to consider materiality and distinction between new and old it also cares for the placement for the new wall and to what extent it affects the existing. Furthermore, it also reinterprets historical architectural elements.

We have thus concluded that this principle is better suited to the chosen situation. The principle of a non-load bearing hanging façade outside the ruin walls, with all new walls and ceilings separated from the ruin, enable a different experience exterior-and interior-wise. The shadow created from the new wall enhances the boundary between new and old - while interior-wise the thickness of the wall is experienced. The ruin itself remains largely untouched and the new architecture constitutes of a superimposition, which enhances the experience of a multi-layered situation and results in a contrasting encounter between history and the present.

Approach

Point cloud
Fact

Buildings must die,
J. Jacobs, S. Cairns

presumptions

Material

Stone foundation

Qualified

History

Cultural values

Preservation

Critical Regionalism

Experimental
preservation

Tracing forward

Fiction

Archive material of artistic interpretations

Our intention has not been to remove anything significant from the ruin, but only to add and merge. The interventions made are small-scale, where everything that has been subtracted from the ruin is visibly reused elsewhere as pieces of spolia. The ruin is incorporated in its current state, without being restored, making it a part of the new architecture. Combining a pragmatic view on the ruin as reused building material with a critical regionalistic approach where we include local and historical characteristics creates a multilayered architectural composition.

An important aspect of the design is to let the visitor take part of the ruin in different ways, meaning some parts are left open to be experienced as they are and the ruin's wall is partly expose within the addition. The massing is based on the planned program (art gallery) in combination with the size and prerequisites of the site. Considering the public programme, the ceiling height is at least 3.5 m, which set the framework for the total height of the volumes.

The northern part of the ruin contains more articulated spatialities, with higher walls and more preserved details. Externally, the ruin's wall height vary from 0-4 meters and where the wall is at its lowest, our extension dominates the facade. This variation creates different points of interest depending on wall and the different time layers are revealed depending on how you move.

Positioning diagram

The diagram to the right illustrates where we position our design based on how it relates to and value the ruin (material verses history) and what the design moves are grounded on (fact verses fiction). Our approach is considered a combination of a pragmatic view on the ruin as material and critical regionalism where historical characteristics are reinterpreted. The design is based on a speculative method, where we have taken the liberty of interpreting the ruin since there is not sufficient information to find. This implies that some parts of the design are based on facts or qualified guesses while others are based on fiction.

1. Use existing pathway up to the ruin
2. Outdoor climate / possible open-air exhibition
3. Preserve the courtyard
4. Indoor climate

SILJA LINE
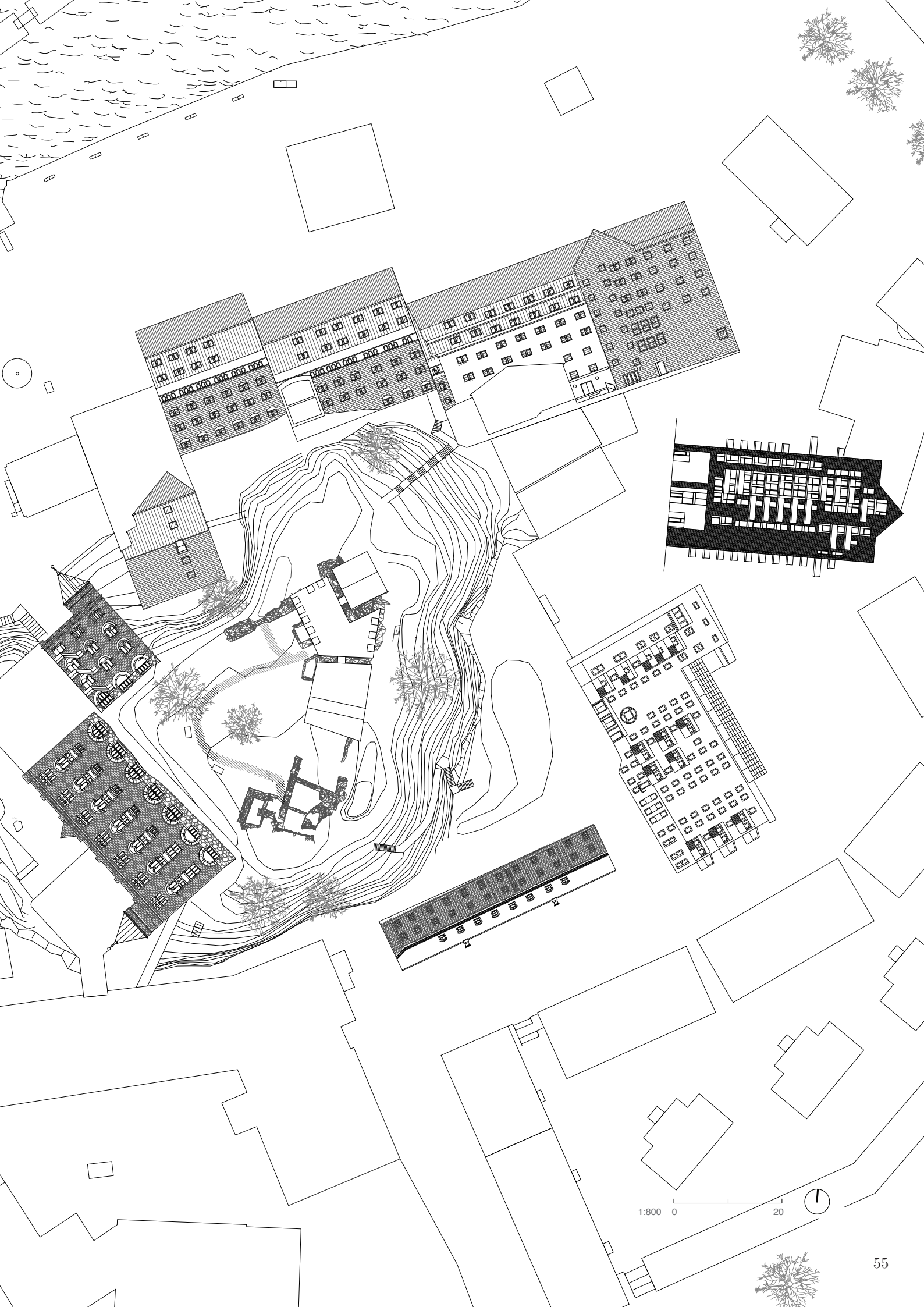
1:800   0   20

Proposal

The design proposal is a combination of a pragmatic view on the ruin as material and critical regionalism where historical characteristics are reinterpreted. The result embodies a new take on preservation of historical landmarks with focus on superimposing layers of time.

We have applied a speculative method, where we have taken the liberty of interpreting the ruin since there is not sufficient information to find. This implies that some parts of the design are based on facts or qualified guesses while others are based on fiction.

The area in which the project takes place is culturally recognized with several artists' studios, an art workshop and a contemporary art museum. Despite the amount of artists housing in the area there are little exhibition space, with the exception of the museum though it mainly exhibits established artists. Since the ruin is located adjacent with the art workshop (Konstnärernas kollektivverkstad), the proposal consists of an exhibition center, first and foremost dedicated to the practitioners at the workshop. The addition is divided into three parts and each of the volumes has its own function and character. The southern volume consist of a small scale café, the middle of a historic museum and the northen of a contemporary art gallery. The volumes are connected with glazed links placed on the existing thresholds.

The additional building relates to today's footprint and extends to ground that was previously built on. This results in a reconstruction of the spatial dimensions that once existed, but gives an exterior expression anchored in a contemporary situation. Existing differences in the ground level are maintained, which give varying floor levels, as well as the thresholds in the ruin, that form the basis for the links between each volume. This means that the specific conditions of the site also give a spatial character while the ceiling heights have been interpreted freely. All new walls and ceilings are separated from the ruin so that no load is put on the existing. Instead, the wooden facade hangs from a load-bearing structure in glulam, on the outside of the existing wall. The wall is therefore experienced differently exterior- and interior-wise. The thin wooden wall hangs on the outside of the ruin wall and creates a shadow effect that enhances the boundary between new and old - while interior-wise the thickness of the wall is experienced. The ruin is left in its existing condition and becomes part of the new architecture, which creates a contrasting encounter between history and the present. The choice of burnt wood as a façade material is based partly on the ruin's original appearance in wood and fire-ravaging history, as well as on the area's (Majorna) building history, which has been dominated by traditional houses in stone and wood.
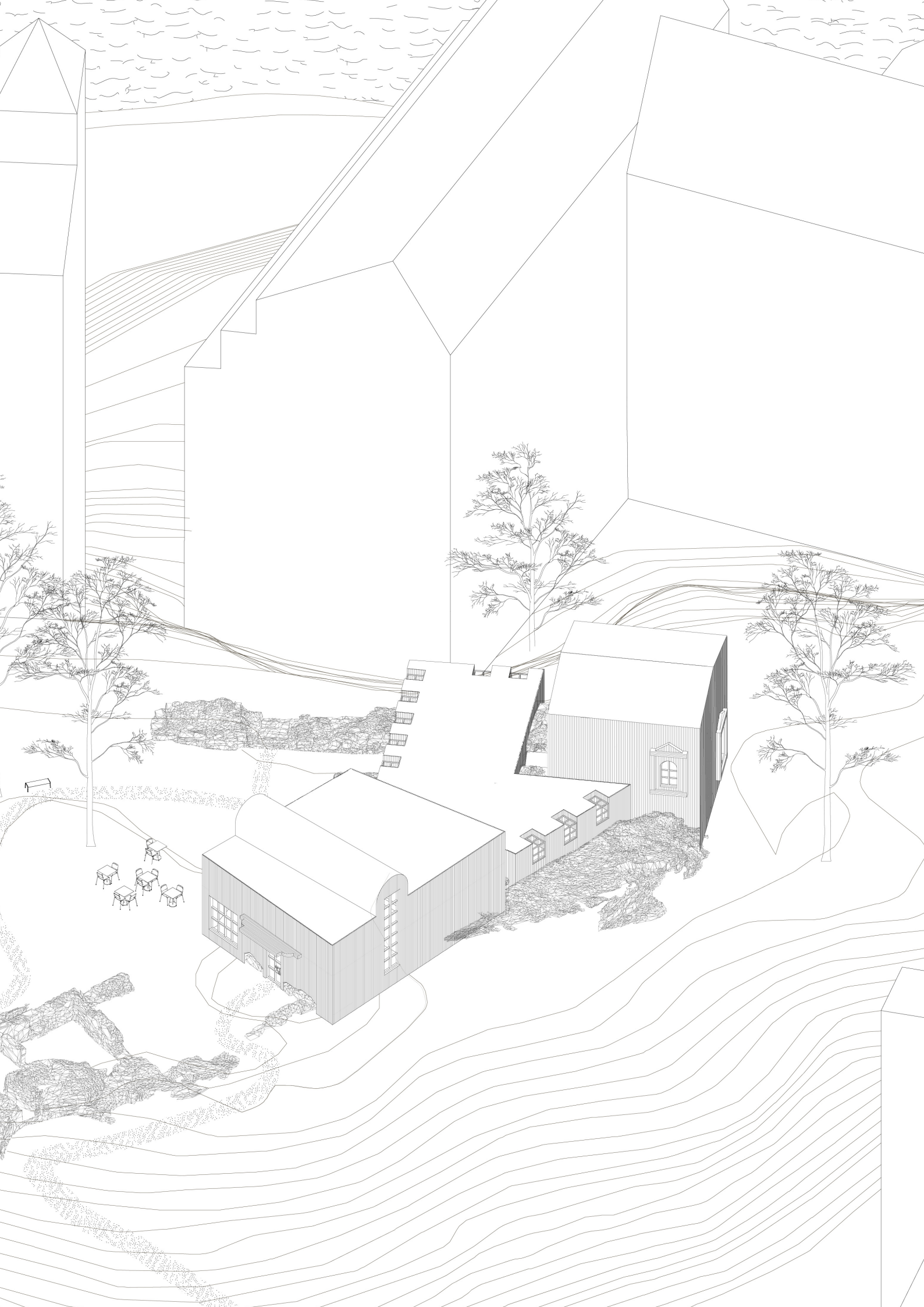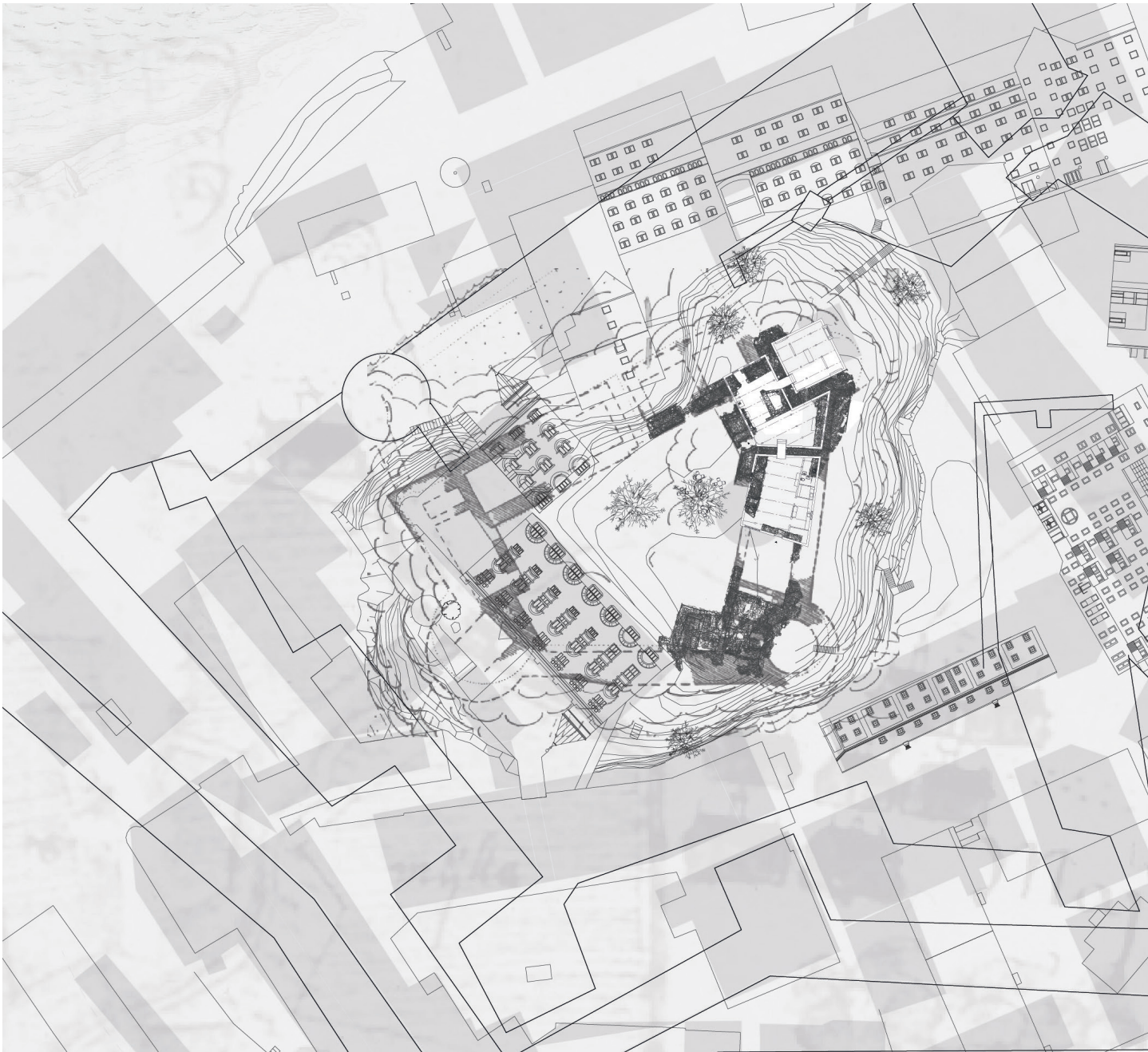
Map 1500th century
Adjacent buildings today
Illustration of 1600s look
Pictured section 1600s look
Reconstructed portal 1950
Scanned ruin 2021
New proposal

We have identified existing spatiality within the footprint of the ruin and created our addition within those, which resulted in a site-specific volume. The design incorporates the ruin in its current state, making it a part of the new architecture. The interventions made in the existing are minor and what has been subtracted from the ruin is visibly reused elsewhere.

An important aspect is to let the visitor take part of the ruin in different ways, meaning some parts are left open to be experienced as they are. The massing is based on the planned program in combination with the size and prerequisites of the site.

The first you encounter when you have walked up the hill where the ruin is situated, is the entrance with a canopy shaped as a fragment of carved stone found during one of the excavations. The entrance leads into the art café from where you reach the exhibitions spaces. If you want to enter the exhibition spaces straight away, there is an alternative entrance in the historic museum. The interior is characterized by the glulam construction with visible beams as well as the flooring made of reused (spolia)bricks in different tones. The flooring is inspired by the original appearance, beyond acting as a visual reference the choice of using authentic bricks adds a sensorial experience of walking on historic grounds. Authentic elements has also been used to create benches, mainly made out of pieces of carved stone found in excavations.

The volume is characterized by the high and slim vault that rises above the roof, derived from the archive material of a façade facing the courtyard. The windows and openings are all wedged in existing niches indicating where there have been openings historically. The ruin is an important part of the interior and adds a sensorial quality with tactility and authenticity. A reoccurring element in all volumes is transom which was often used in typical Vasa Borgar which is the latest

typology of Älvsborg's old castle. The façade consists of burnt wood inspired from the fire ravaged history of the castle.

When passing through first link you enter the historic museum where the ruin itself is put on display as well as artefacts and photos connected to the castle. There are no interior walls and what is left of the existing walls act as room dividers. The space has several podiums, specifically designed to fit on the ruin, integrated to the handrail that is needed in regard to the different floor levels that follows the ground. The openings in the facade is a reinterpretation of the classic breastwork found in the archive material. In addition, the niches of the opening are slanted in order to spread the light at an angle.

To enter the art gallery you walk through the second link and take a step down to the recreated tower with the highest ceiling height. This volume is characterized by three large window openings with a frame derived from an archive drawing of an entrance vault. The pitched roof is inspired from old illustrations of the wooden castle. The existing interior vaults are made visible through openings in the walls covered by glass attached to the wall.

1:200

Exterior view of the entrance 1:30

Interior view of the café 1:30
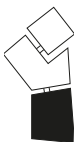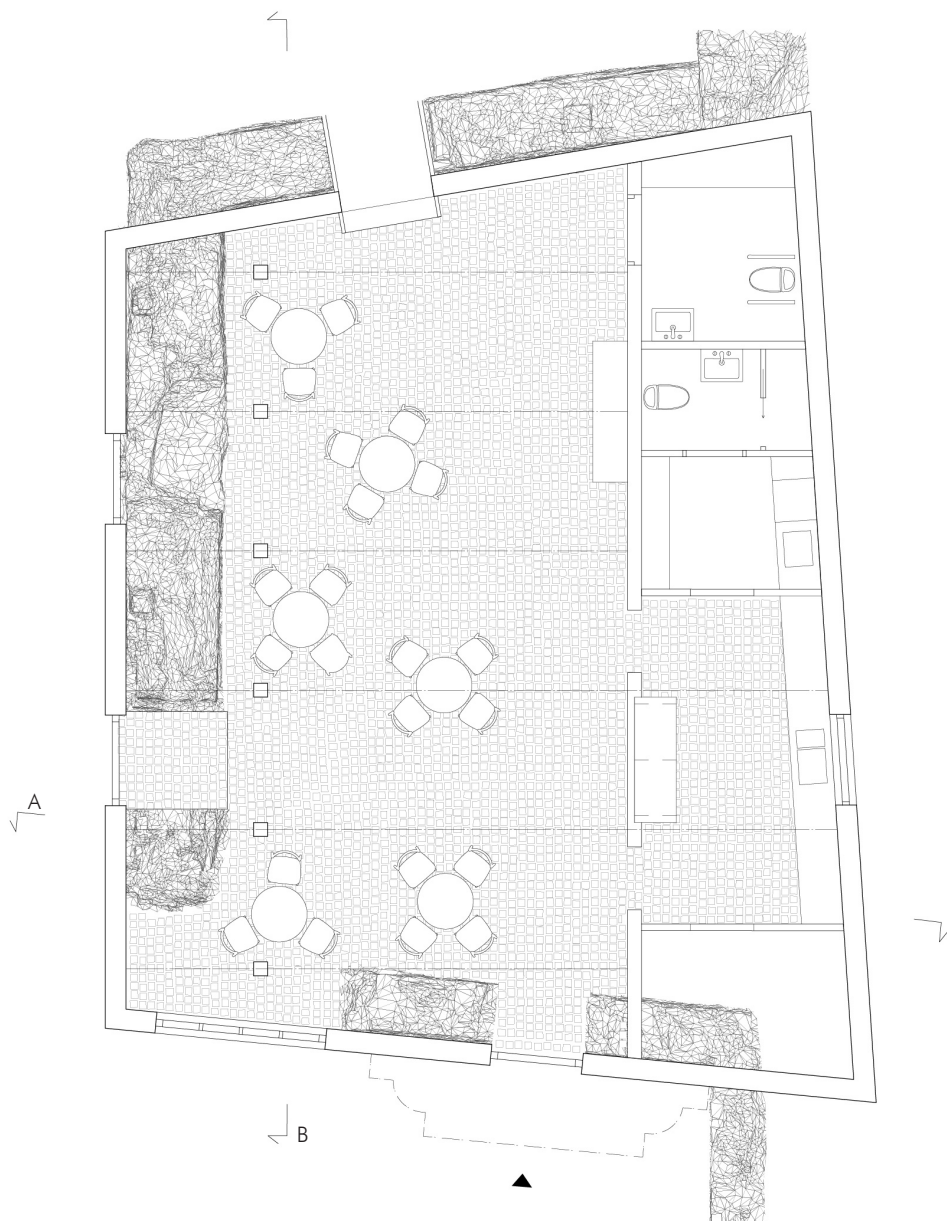
Exterior view from the courtyard 1:30
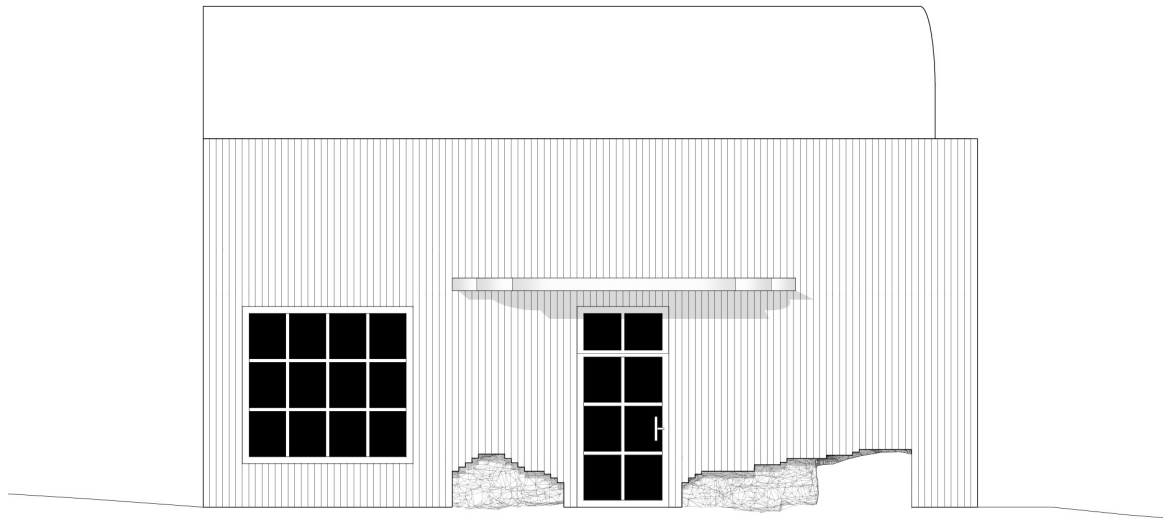
Section 1:100
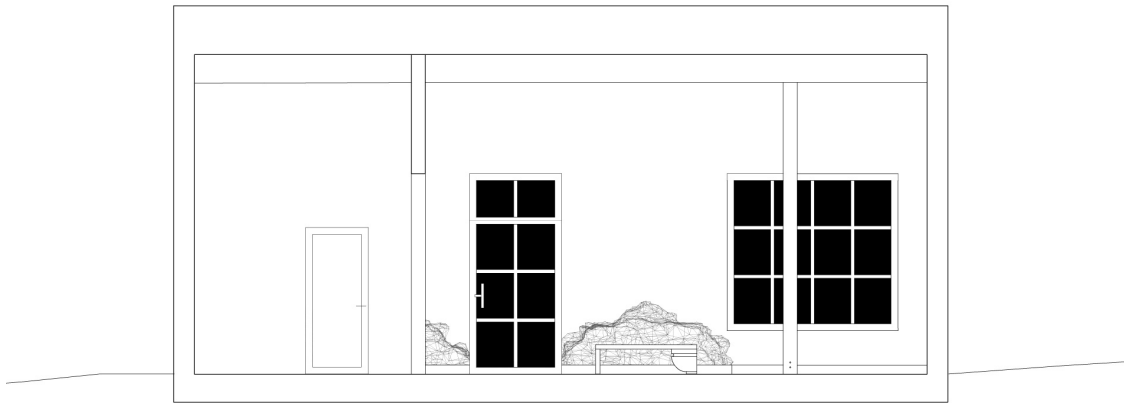
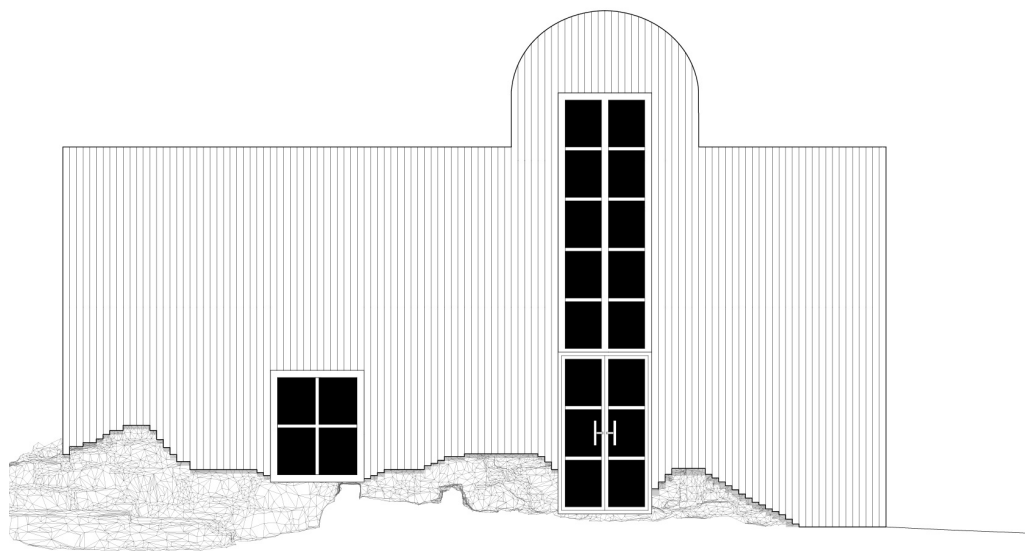0   5   10

Art café

A

B

Plan 1:100

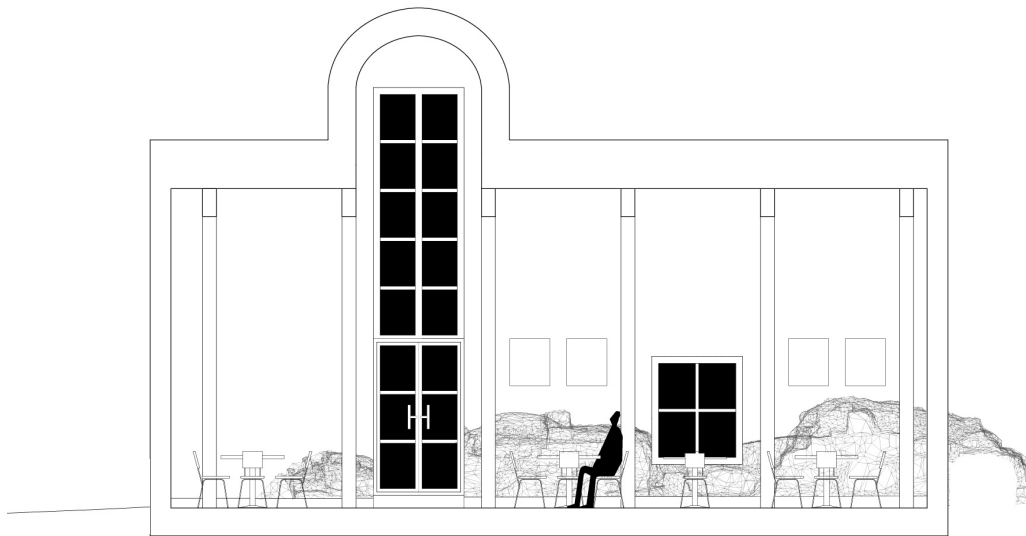Interior view of the café 1:30

South facade 1:100

Section A 1:100
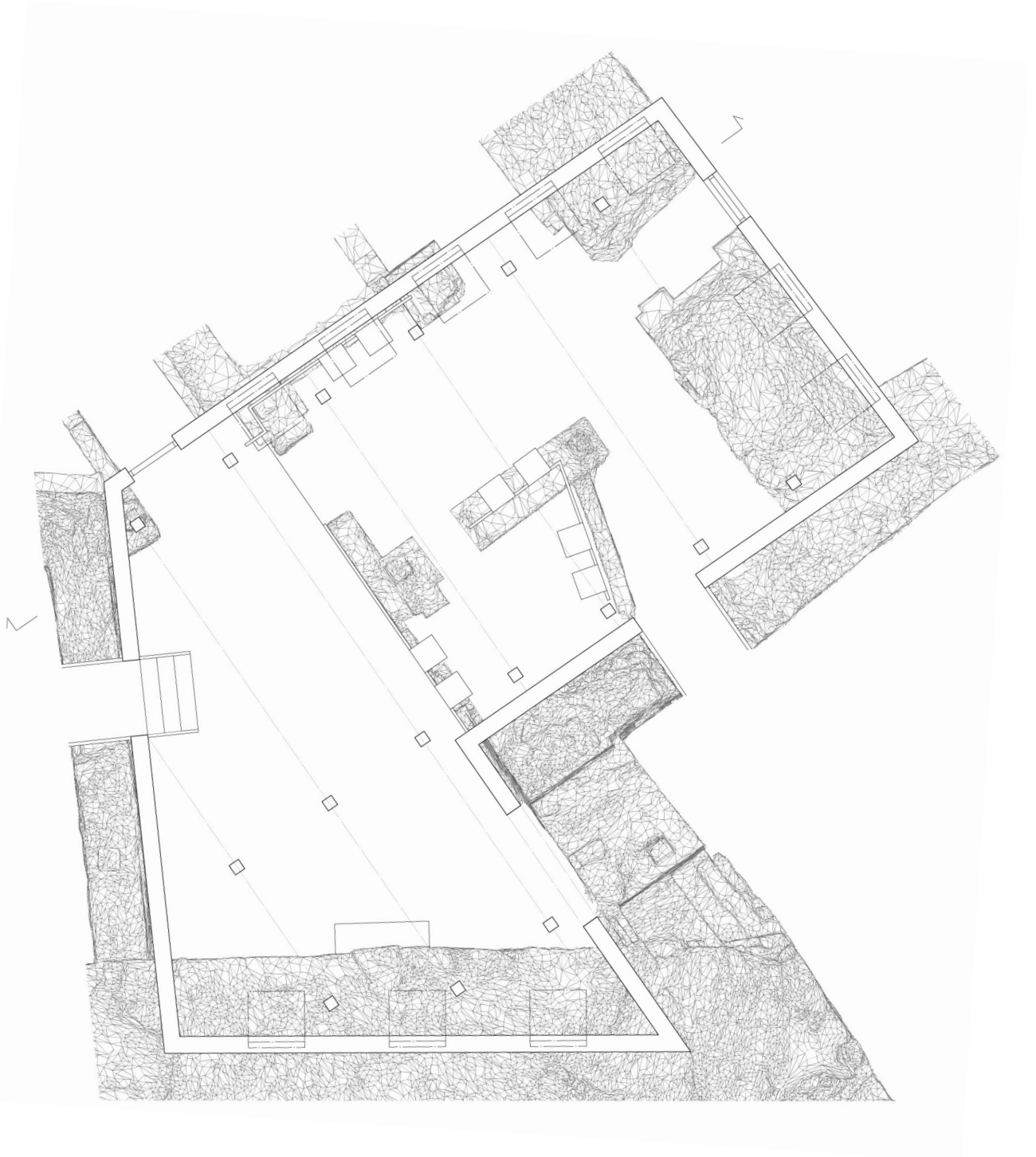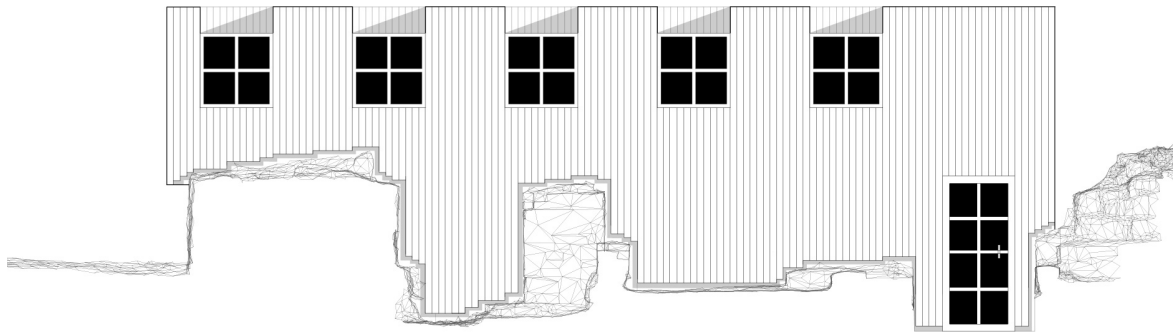
West facade 1:100

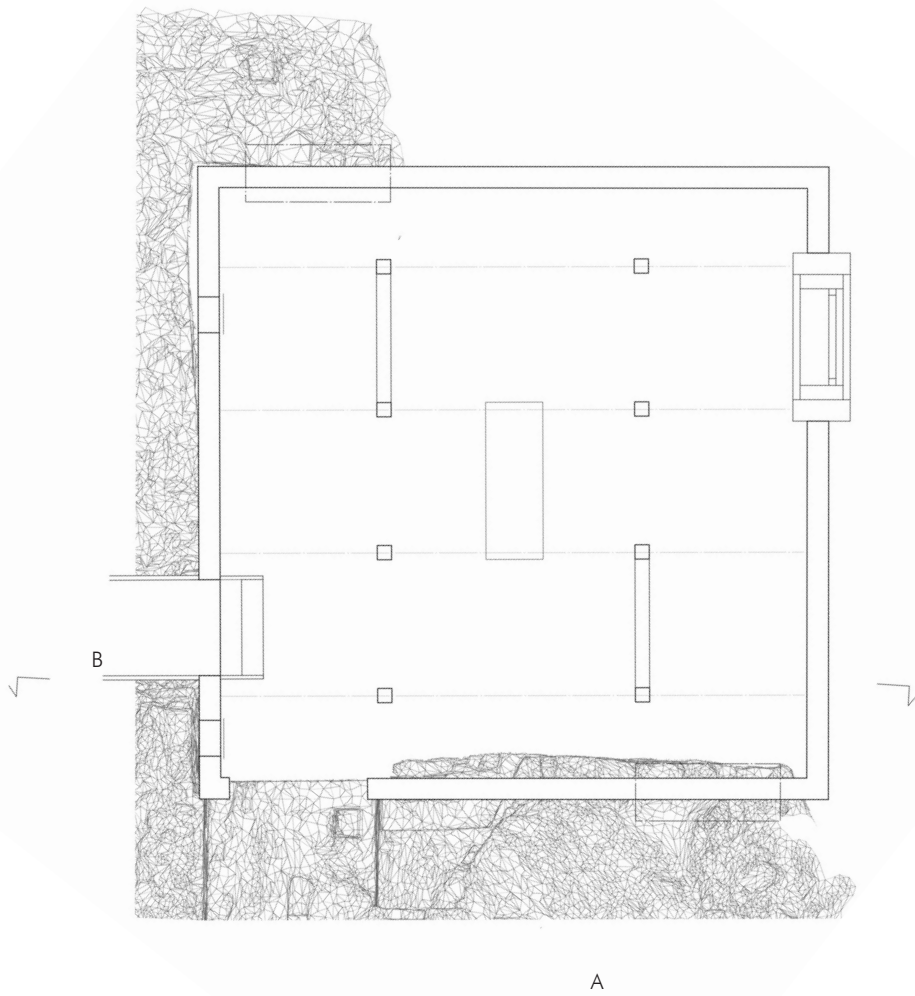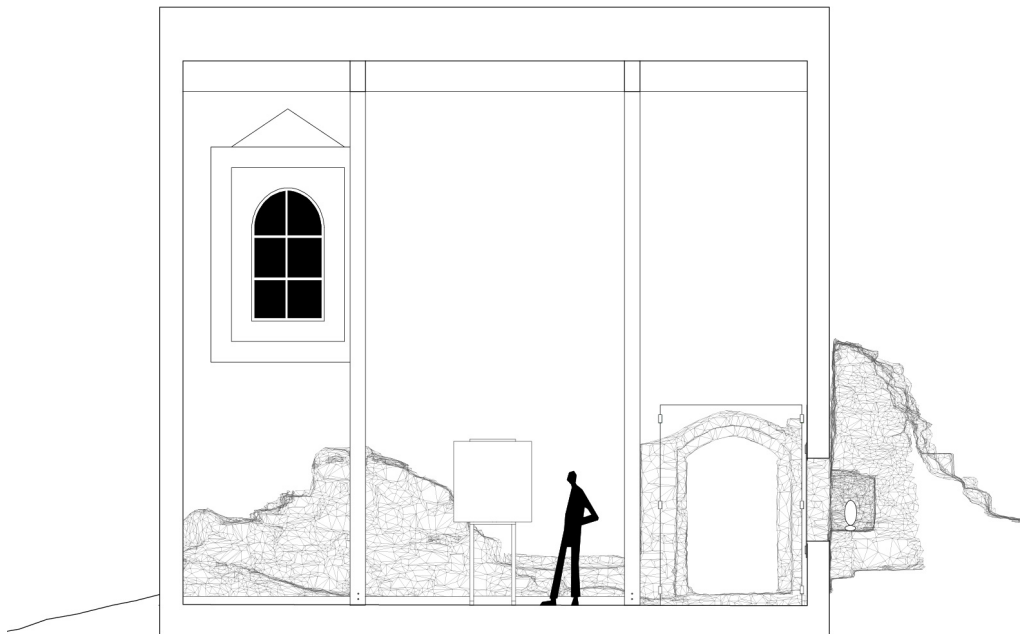Section B 1:100

Ruin exhibition hall

Plan 1:100

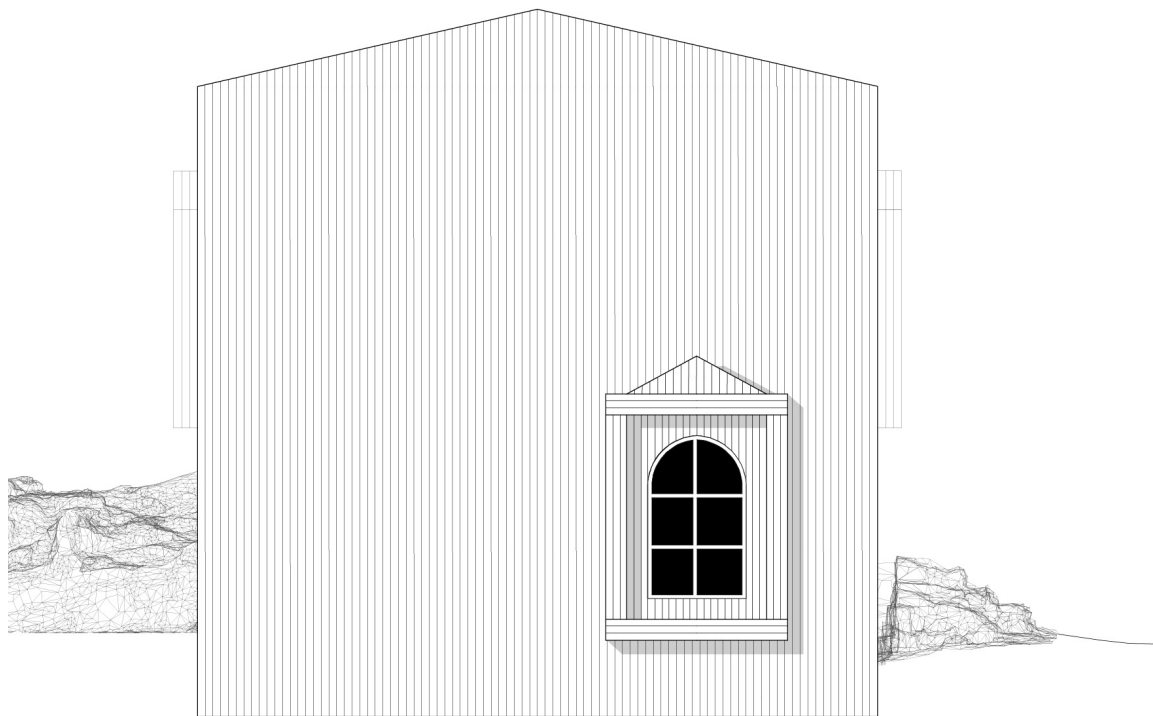Facade west and section 1:100

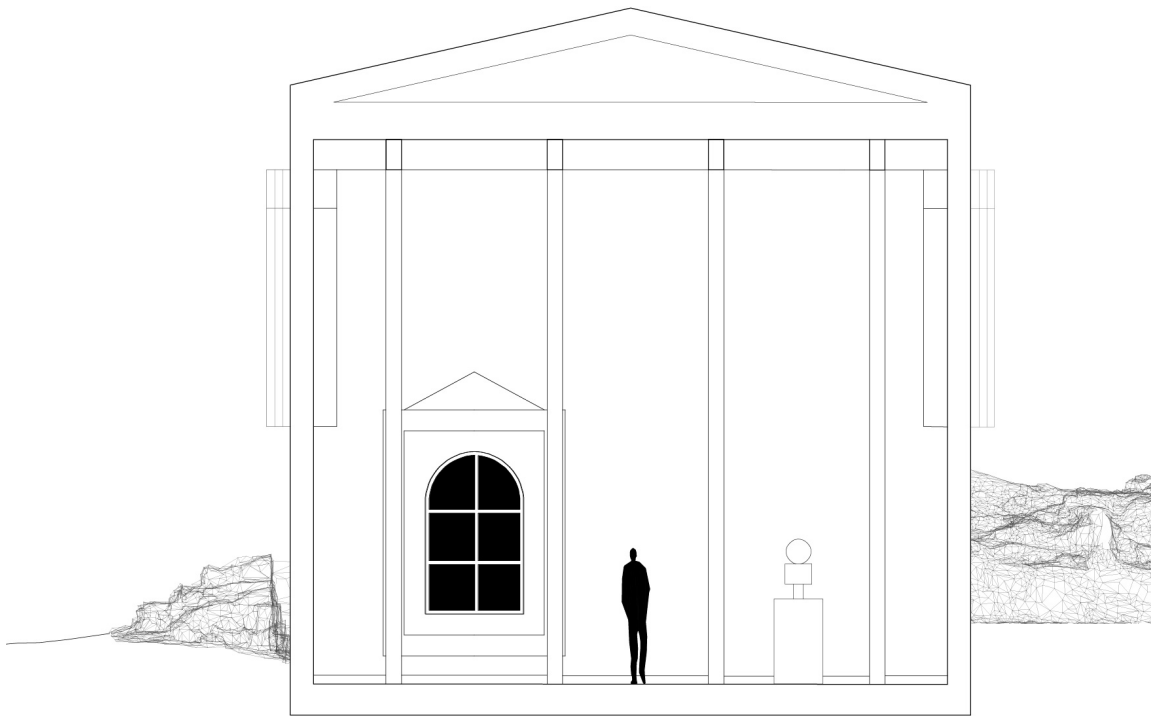# Contemporary art gallery

B

A

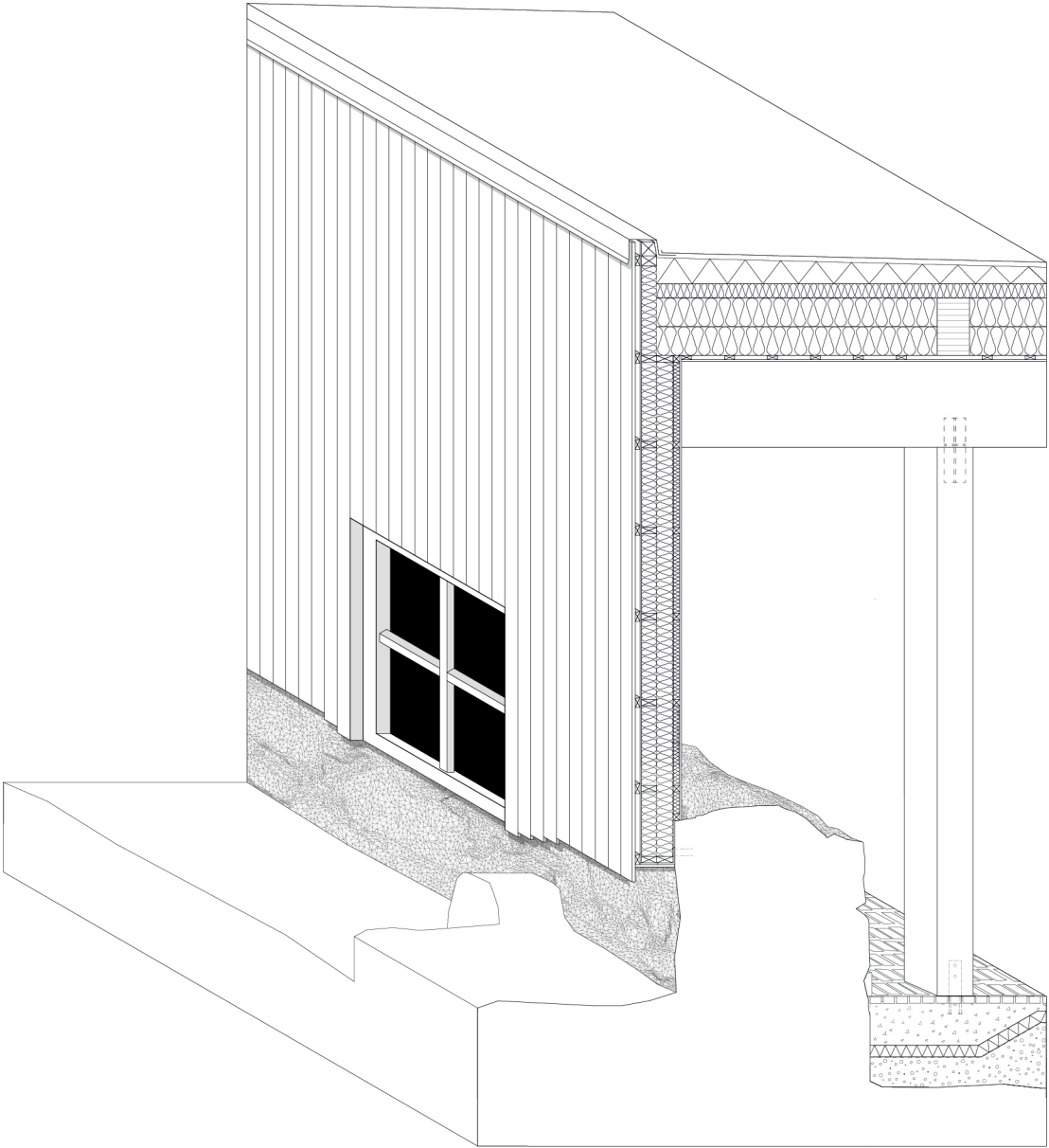Plan 1:100

Section south east 1:100

Facade east 1:100

Section east 1:100

Principled construction

During the course of the project, it has become clear how tectonics play a role in the reading of the site. The proposal has taken inspiration from one of our reference studies, Koldinghus, where the new hanging facade in burnt wood is bolted to the existing structure without putting load on it. The wall is therefore experienced differently exterior-and-interior-wise, the hanging facade on the outside of the ruin creates a shadow effect that heightens the boundary between new and old - while interior-wise the thickness of the wall is enhanced.

Unlike Koldinghus, our structural system is consistently made of wood with hanging columns in wood instead of steel. The load-bearing structure consists of glulam with discreet connections (using slotted plates) to the beams and floors in order to let the material speak for itself in simple forms, which creates a point of juxtaposition together with the high-detailed texture of the ruin. Furthermore, it results in an interplay between history and the present.

The subtracted and left-over bricks in different burnt appearances from the site are reused in the flooring of the café. This creates a decorative interior detail as well as relates to the original appearance of the flooring of the castle, adding a sensorial experience of walking on historic grounds.
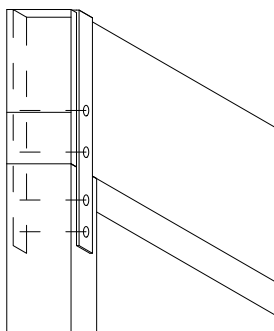
The walls hang from the glulam construction with a hinged connection with a bent steel plate that folds over the beam so that the load is primarily transferred through contact on the upper side. The screws ensure that the steel is fixed to the hanging column. Same principle is used for primary as well as secondary beams as both carries the load from the outer walls.

Foundation

Flooring made of reused bricks
Cast-in-situ concrete base
Thermal isolation
Macadam
Vapour barrier

Wall

Planed board
Battens
Wind barrier
Ventilated gap
Horizontal battens cc 600
Thermal insulation
Vertical battens cc 600
Hanging columns
Vapier barrier
Horizontal battens
Interior cladding

Roof

Protective layer (roof covering)
Drip edge
Water proofing
Thermal insulation
Secondary beam
Primary beam (connected to column through slotted steel plate)
Vapier barrier
Nail batten
Ceiling boards
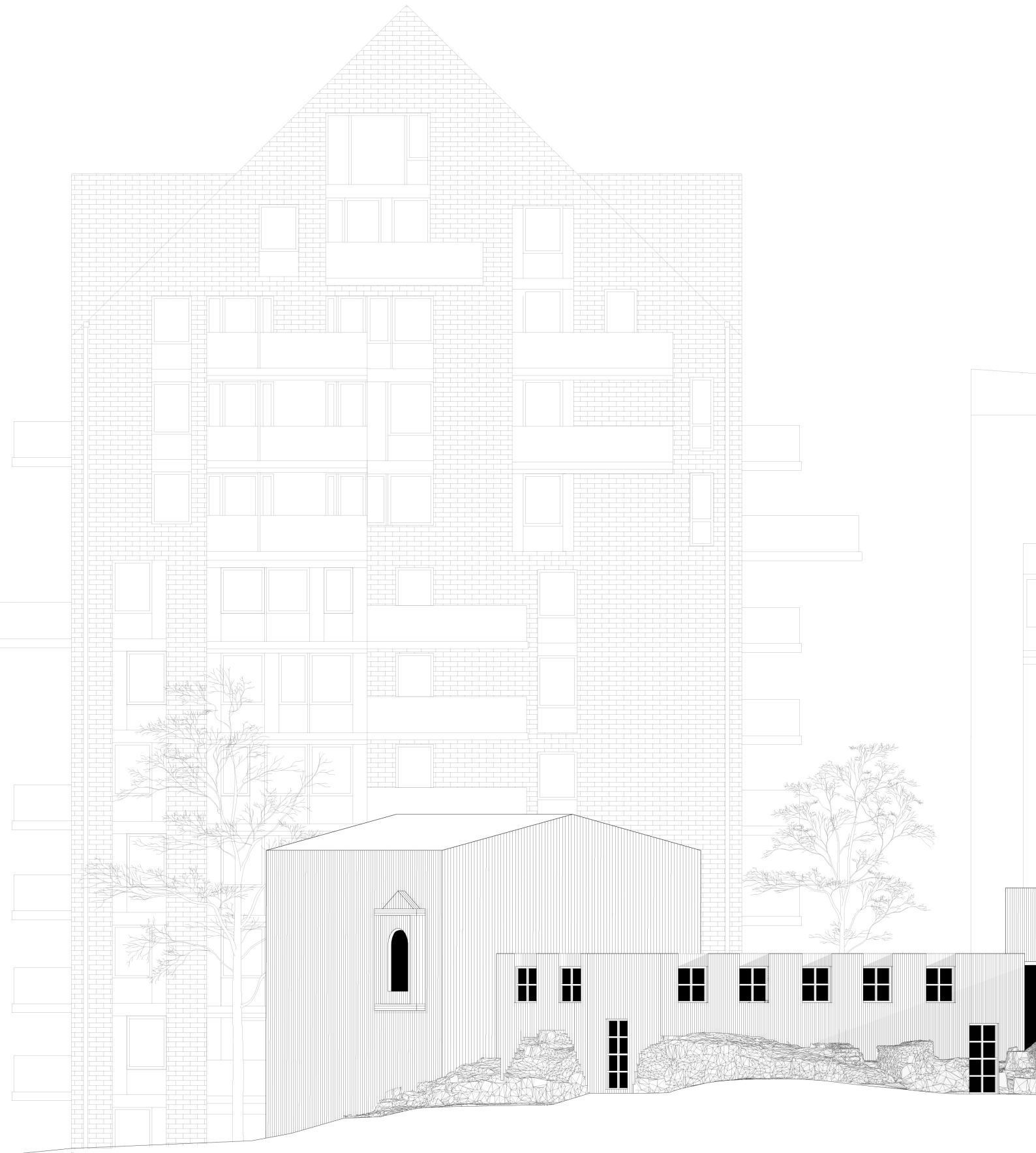
Elevation 1:100
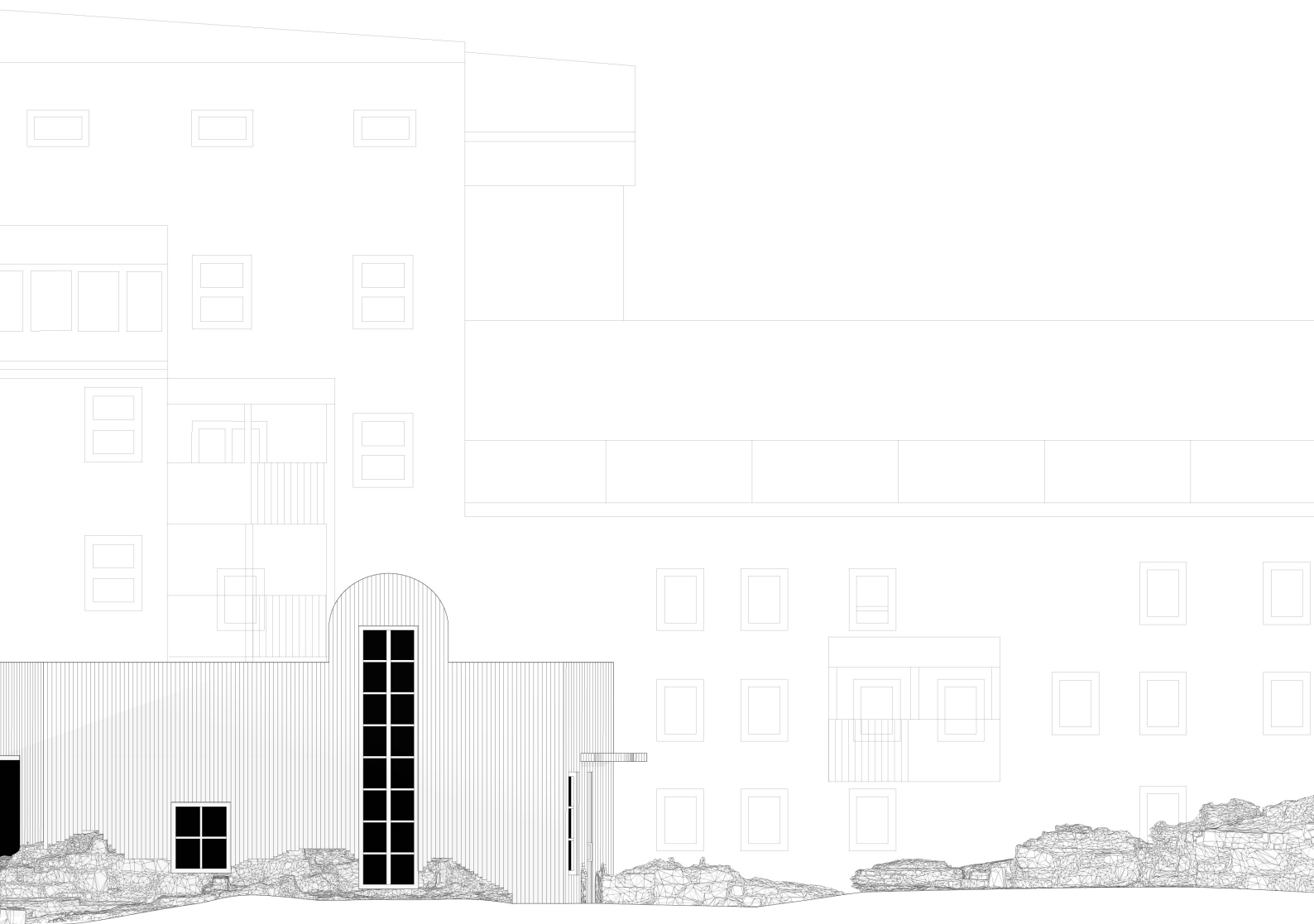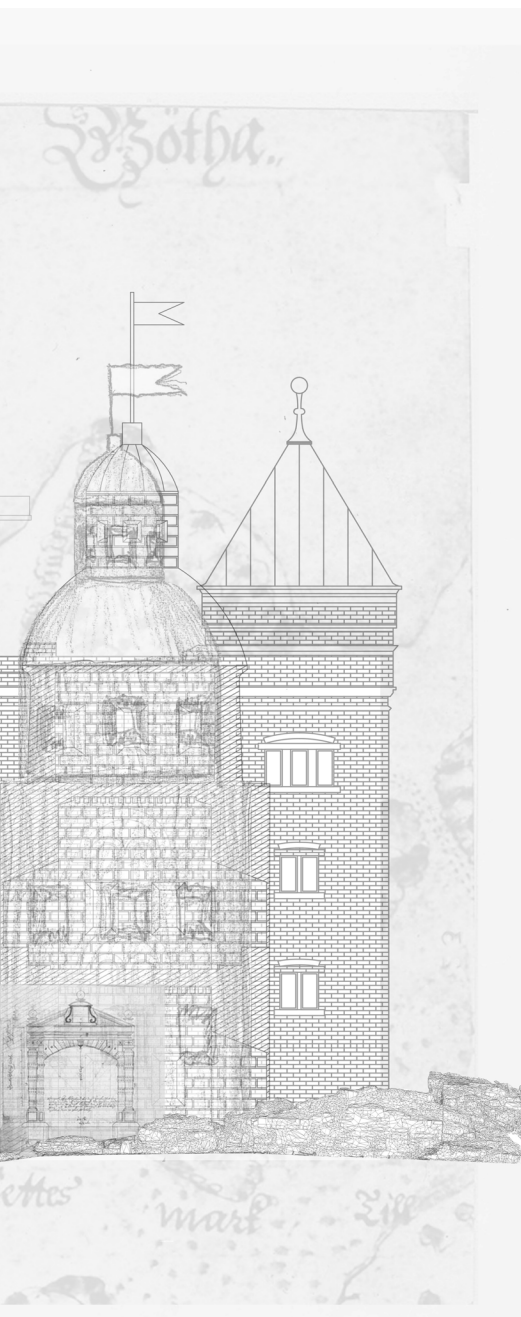
Figure to the left:
Historical map year unknown
Adjacent building today
Illustration of 1600s look
Pictured section 1600s look
Reconstructed portal 1950
Scanned ruin 2021
New proposal

The historical references and associations become evident when superimposing the new design and different time layers. Volumes connected by links, varying roof heights and shapes relates to the former appearance as well as the wooden façade. Other visible connections are the repetition in the facade, windows forming the shape of a breast work, a portal reinterpreted as a window frame and the elevated vault that gives associations to the shape of the tower. The profile of the new addition is itself a reflection of (one of) the assumed original appearances of the castles.

Discussion

Addressing history is a central task for architecture and the matter of preservation has for long been present in the architectural debate. This thesis argues that the challenge lies in how to interact with a historical landmark and adding new layers that reflect societal development. Älvsborg's old castle, that was once an important and high valued building, has endured ruination caused by an active disassembly and removal of materials as well as recent mismanagement and vandalization. The ruin is under governmental protection meaning that it is protected from alteration, while at the same time it is losing its former significance and the notice of its existence seems to decrease. This raises the question of whether the impact of protection and preservation of the ruin has maintained its value and importance for Gothenburg's cultural heritage.

The idea behind preservation is that historically and culturally charged objects, structures and places should be accessible for future generations as living documents of history. This is essential to consider, but it is important to question how this is best implemented since society is constantly evolving, and nothing remains static. As stated by the Swedish National Heritage Board, cultural heritage should be a shared source of knowledge, education and experiences that are to be preserved, used and developed. In line with this, we believe that in order to convey the value of a cultural heritage, it must be made visible and be experienced by people. Älvsborg's ruin does not seem to answer to the National Heritage's policy which is probably a result of the lack of information and attention from the municipality. For instance, there is no information available on Göteborgs stad's website and other websites that convey tourist attractions emphasize that the place is mismanaged. Even though the area has gone through major transformation in modern times, the site of Old Älvsborg has been left untouched apart from the addition of the covering roof as weather protection.

The thesis does not believe in the intrinsic value of the ruin but rather consider its specific conditions. It strives to avoid a romanization of the ruin since it contributes to a static view on preservation, where a historical remnant is to be preserved as it is or restored to its original appearance. This reconnects to the reasoning of experimental preservationists, who considers cultural heritage as an "open-ended process of social negotiation". Furthermore, the thesis argues that intervening with the ruin of Älvsborg by adding a new public program would favour the site to a greater extent, hence benefit the cultural heritage of Gothenburg. The ruin would not only be conceived as a historic object but as a part of a contemporary context, where combined functions create an interactive experience and in addition, encourage people to stay longer at the site. This enables a more dynamic way for the visitors to consume history and manage cultural heritage.

Letting history inform the architecture can be consider as means to cherish the history of the site, since it indicates an awareness of the site´s previous role and creates a sense of belonging. This corresponds to the critical regionalist notion of importance of place and history. When adding to the existing, particularly to a landmark structure, the tectonics are a central aspect. The choice not to put load on the ruin and the placement of the wall is based on the method of superimposing information in order to convey the multi-layered situation. This enables different time layers to speak for themselves and remain the same, thus differentiating old and new and so does the use of spolia.

In conclusion, this thesis argues that it might be valid to rethink the concept of preservation as a dynamic process rather than a static object, in line with the experimental preservationists. We see a value in broadening the term preservation and what it implies and question the rigid rules of preservation of cultural heritage.

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