

KV . BOLMÖRTEN



A building lost In changing context
How to retain, reuse and reinvent a neglected structure

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“Bolmört” - Swedish term referring to a type of plant known as ‘Belladonna’
‘Kv. Bolmörten’ is also the name for the block this thesis will focus on.

Kv. Bolmörten
- *A building lost in changing context*
- *How to retain, reuse and reinvent a neglected structure*

Building Design and Transformation
Chalmers School of Architecture
Department of Architecture and Civil Engineering
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Master Thesis


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CHALMERS
UNIVERSITY OF TECHNOLOGY

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Especiallly Miranda! 

Abstract

Buildings are often seen as static entities created to perfection on the drawing board, yet in reality, most cities are filled with 'ordinary' buildings constructed to meet the simple needs of their inhabitants - needs that, at different rates always will require reinvention. Monuments in all their glory, are part of a cities identity, but most cities identity has been shaped and curated by the evolving relationship between a typical 'ordinary' building and its inhabitant. Resulting in cities constant continual change. With that in mind will this thesis consider how we, as architects, can care for these already existing structures.

This thesis will use a neglected structure located in the southern part of central Gothenburg as an example of the buildings we live and interact with, without paying much attention to its qualities. Today, Gothenburg is developing large parts of its central areas, making the question of how we navigate change in the built environment highly relevant. The block Kv. Bolmörten is currently situated in a context that is rapidly transforming from industrial to residential use in just a few years - making the block lost in changing context. The thesis will results in a proposal exploring how to retain, reuse and reinvent the neglected block to sustain a purpose and endure in its new context - at least until it needs to adapt again.

By proposing a new program and making Kv. Bolmörten go from passive to active for its surrounding results in a number of interventions. Implementing adaptive interventions focusing on necessary and pragmatic aspects does the thesis seek for effective and aesthetic outcomes. Supported by drawings, visualizations and models is the proposal exploring different scales of interventions with help of materiality and textures, merging old and new. The result manifests that the imperative approach to rehabilitate rather than demolish, is not only more sustainable, it can lead to an altogether richer urban environment. The thesis serves as an example how to balance preservation with the inevitable need for continual change and modernization.

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LIVETS TEATER (song lyric)

(...)

Det är inte lätt, lätt att va trogen
En stad med mutor i varje gathörn
Den nya tiden kommer mot mig som en knockout

(...)

En pojke spottar från ett höghus
Och demonstrationer, vinglar längs gator av gamla visioner
Och vad dom än letar efter så finns det här
fast inga kartor stämmer

(...)

Livets teater
Lämnar dig tom och full av hål

(...)

När man är yngre vill man ha åldern
När man är äldre vill man ha elden

Sommarnatten när man var ung
Som man hade när man var ung

(...)

- Håkan Hellström (2013)

Håkan Hellström sings about the theatre of life, and about being
faithful to Gothenburg and a city in rapidly changing times.

Aim & purpose

The main focus of this thesis is to emphasise the potential of architectural strategies as a tool to revitalize and help to adapt a building neglected in a changed context. The thesis wants to highlight the importance of understanding the buildings existing values but also its need of change to sustain a purpose. Because a building without a purpose is a building no one need. By approaching a local site in Gothenburg that has been in big change, the core objective is to highlight the potential of pragmatical and effective architectural interventions to catch up and adapt - at least until it needs to adapt again. By understanding the values of whats exists and the needs that can be added, the purpose is to do an architectural conversion of Kv. Bolmörten, with both different approaches and scales of interventions, acting example for architecture not in need to only follow one approach, instead revalues the building from being a static object to a sequential narrative. The structure is seen as a 'living' body, transforming over time while revealing traces and memories of the past - like a "collage of time."

As we face and adjust to a new carbon reality, the judgement made in terms of which buildings to preserve needs to be looked trough new lenses. We will need to explore what value the buildings has in new ways. Everything to supporting and prolong a new lease of life. This thesis will demonstrate that the imperative approach of rehabilitating rather than demolishing is not only more conducive to sustainable development but also acknowledging the inherent values of our existing buildings, carrying the memory and reality of past life.

Through exploration, this thesis aims to propose a transformation of the industrial structure Kv. Bolmörten, effectively adapting to its new context. By implementing adaptive interventions, it aims to demonstrate how neglected industrial structures can be rebirthed. The proposal seeks to contribute to the discussion of how to maintain continuity in our growing cities while also embracing the future of our everyday buildings we dwell in on daily basis.

Thesis question

(01)

How can industrial buildings, like Kv. Bolmörten, which have been neglected in rapidly changing and developing environments, be retained, reused, and reinvented to adapt and thrive in its new surrounding?

(02)

How can a conversion contribute to the discourse of embracing the inevitable change, while cultivating traces and memory embedded in its already existing structure?

Background

In the world of architecture, buildings are sometimes thought of in terms of permanence: What is on the drawing is the perfect solution. However, that is an ideal situation, not coinciding with reality. Buildings naturally change because the predictions of the users behaviours fall short. A building can lose connection to its context, and then it needs to be adapted in the new one.

**“ Flow, continual flow, continual change, continual transformation
- Everyones culture. ”** (S,Brand. 1994. p.5)

When servants disappeared, kitchens suddenly grew, and servants rooms were rented out. Cars came, grew in size and numbers, then shrank in size, garage and car parks tried to keep pace. Asbestos went from being very good for you to very bad for you.

This reality testifies the need to understand and explore how to work within our changing cities and built heritage. With the rising climate crisis and growing building stock, will it be our task to explore and revalue our existing built environment in new ways. Buildings inevitably change - either through outdated technology or changing user needs. The major challenge will be to determine how to best revitalize the building, ensuring it is prolonging its lifespan in the most effective way possible.

“ First we shape our buildings, then they shape us, then we shape them again - Ad infinitum. ” (S,Brand. 1994. p.3)

In today's architectural profession, the idea of navigating change and continuity within our built environment is highly relevant, especially in fast growing cities like Gothenburg. But the debate around how architectural production in our cities should prolong, seems to be out of answers. In the postmodern age, everyone has their own personal history, which is inherently subjective. Mass communication has made everything beyond our individual biographies to fade into obscurity (Zumthor, 2017). Largely because each theory often contradicts another. We search for authenticity, but what truly is authentic?

In 2012, the Gothenburg City Council adopted a vision for the development of Gothenburg's central areas, becoming northern Europe's biggest development plan. Aiming to increase density and connectivity between previously disconnected regions of the city. With a rich history of industrial heritage, the central parts of Gothenburg feature a unique topography of industrial character. However, these areas are viewed as sealed off 'barriers', separating important connections within the city (Göteborgs Stad, 2012). As a result of the development plan, many historically significant buildings, that contributed to the city's historical identity, is now at risk or already torn down.

This thesis will specifically focus on the block Kv. Bolmörten, established in the early 1950s, and originally part of the industrial area known as 'Spårvagnshallarna', Kungsladugård. This thesis will explore the block, a structure that used to serve a purpose - but is today mostly abandoned. While the urban context rapidly changed its fabric from industrial to residential area, Kv. Bolmörten has been left behind, lost within its new context. Despite the city recognising the block, it is still uncared of, without purpose in the development plans (Göteborgs Stadsbyggnadskontor, 2018). With departure from the developing plans, the thesis seeks to activate full potential of the neglected block, making it adapt to its new context, and draws on the idea that the heyday of the building lay in the future.

Method

This project unfolds across four phases with a design based methodology, combining literature and theories with design and explorational tools. The methods will be delved into my process working with research for design and research by design. AI has been used strictly for grammatical purposes only.

The initial phase(1) is the theoretical framework, 'research for design'. The theoretical phase introduces literature and theories as well as built references relevant to the research question creating the theoretical framework. The second phase(2) will 'zoom in' and focus on Kv. Bolmörten and its context. The third phase(3) will be a proposal conducted and explored through sketches, physical models, material sampling, drawings and digital modelling, focusing on contributing to the theoretical discourse. The concluding phase(4) contains a discussion, outcomes and possible contribution to the discourse.

Delimitations

The project, although broad in its conceptual aim, will be limited to one specific site and its context with the main material focusing on Kv. Bolmörten, Kungsladugård, Gothenburg. The design proposal should be seen as a concept/example and proposal for how to implement methods, not as factual methods. Every site has different possibilities even the same project have many possible outcomes. Transforming an unknown building in contrast to a monumental or institutional building is two very different things. This thesis will focus and contribute to the discourse on how we deal with our everyday buildings, somewhat forgotten - not buildings with high architectural heritage. The project will consider but not be restricted with regulations regarding profitability, possible stakeholders and other economic aspects. Although the project will touch upon urban planning the focus will be on one specific site and its direct surrounding.

Reading instructions

As mentioned in method, this project is unfolded over four main sections - excluding introduction. You as a reader will in chapter [02] Theory, be introduced to this projects main subjects and built references forming the theoretical framework of the research discourse.

Chapter [03] Context, will let you be introduced to the situation of the project, giving historical context and highlight the buildings current state.

Chapter [04] Design proposal, will be the biggest chapter and main material. Here will the proposed transformation be outlined trying to contribute to the research discourse. The chapter will focus on interventions within existing structure and further on extending the existing structure.

Chapter [05] Discussion, will reflect upon this thesis main material and proposal simultaneously contemplating the research question.

INEVITABLE CHANGE VALUE OF AGE ADAPTIVE REUSE PALIMPSEST LOW ROAD BUILDING CONTEXT COMPLEX MATERIAL POETRY

Buildings and cities keeps changing because of three irresistible forces means Stewart Brand in his book *How Buildings Learn*, 1994. Technology, money and fashion: technology, offers for example, insulated windows or solar panels - expensive at first but will save money in long run. If people have money to spare, they will mess with their buildings. Minimum to solve current frustrations with the place, at maximum to show of their wealth - 'Form follows Funding'. As for fashion, it is change for its own sake. This issue has nothing to do with function, fashion can be described as "non-functional stylistic dynamism" or an easier word "trends" (S, Brand, 1994). By accepting these elements of inevitable change, the discussion around navigating change in our built environment can be much more efficient. One objectives of this thesis is to accept and emphasize that change will sooner or later be required.

The age of an object or structure is today considered to hold significant value; the patina of wear, the discolouration of time, and the tarnish resulting from repeated human interaction. These unique traits are highly valued today means Plevioet & Van Cleempoel in their book *Adaptive Reuse of the Built Heritage*, 2019. The value of age cannot be replicated by computer algorithms or manufactured in an off-site factory. While new buildings begin their histories upon completion, their brief existence in time often puts them at a disadvantage in the eyes of a spectator. The appearance of age develops over time, created through continuous exposure to life by the people who lived and worked within and around those spaces, infusing them with a sense of memory. Weather also contributes to this sense of value; the rain and wind of harsh winters. The wear and tear of many years of use and abuse, imparts a great authenticity to a place. This moves away from artificiality and mass production - toward the real, the genuine. In a postmodern world of false truths and easy access to unlimited information, reality is highly prized (Plevioet & Van Cleempoel, 2019).

Adaptive reuse

Not long ago, Adaptive reuse was a minor practice within architecture. However, over the last decade, it has emerged as a highly relevant professional approach in the realm of built heritage (Plevoet & Van Cleempoel, 2019). With a rising climate crisis and rising building stock, 'adaptation' and 'reuse' of the already built environment will be among priority of society and cities for many years to come. To try to explain the term shortly; a transformational project with a big architectural gesture-, a rehabilitation of old retained walls, - two very different things - both under the broad term adaptive reuse. Working with altering existing structures you often will deal with three types of approaches: conservation, preservation and transformation. All three approaches is very different with clearly different stand-point - but all three includes a process of re-valuation and negotiation between historical values to architectural, societal, and economics. Rather than freezing a building's historic fabric, 'adaptive reuse' seeks to activate full potential of its heritage (Plevoet & Van Cleempoel, 2019). This thesis will work with adaptive approaches, reusing, retaining and reinventing a neglected industrial structure.

Palimpsest

Palimpsest is a concept discussed in the book 'Adaptive Reuse of Built Heritage', which portrays buildings as novels - chronological sequences where new layers are continuously are added, overlaying older ones. The concept views structures as evolving 'living' bodies, transforming over time while still revealing traces and memories of the past (Plevoet & Van Cleempoel, 2019).

Low Road Building

Most of our built environment isn't monuments and made for fame. Most of the worlds people live and work in low road buildings - buildings made for a simple purpose (S.Brand, 1994). Over time they later adapt and changes in an ad hoc way to meet changing needs of their inhabitants. The buildings can therefore be somehow empowering. If you're comfortable fixing up a crude space, discarded buildings can become luxurious customised spaces. Young couple moves into an old farmhouse and are lit up with adventure. An entrepreneur opens a shop in a declining warehouse. Everyone feels joy at the prospect. The low road buildings can often be fairly free from concerns; 'Do what you want, it can't get much worse - a landlord might say'. Low Road buildings are low-visibility, low-rent, no-style, high-turnover (S.Brand, 1994). Kv. Bolmörten is a Low Road Building.

Context Complex

The word 'context' used alone is a useless, an empty banal signifier, means Andrew Scheinman. It bears whatever purpose the architect ask of it. Context might suggest on conditions of a site, topographical, geographical or ecological settings. Context might denote the urban fabric, the poetic texture of a city or a landscape. It might refer to the architectural style ignoring physical, social, or stylistic concerns altogether. Very often is the word used as an umbrella term. Relational by its very nature, the word 'context' means nothing - until an architect calls it by its actually purpose (Scheinman, 2020). In this thesis - 'context' will refer to a specific sites physical conditions. The sites topographical, geographical and urban fabric.

Material Poetry

Materiality combined with volume gives a place soul. When recall a space, the materials are often mentioned first. Material, as Zumthor describe, is not poetic in themselves, but if used correctly, they can assume a poetic quality in the relation of architectural structure and context. "A good building must be capable of absorbing the traces of human life and thus of taking on a specific richness. Naturally in this context I think of the patina of age on materials, of innumerable small scratches on surfaces, of varnish that has grown dull and brittle, and of edges polished by use. (...) Architecture is exposed to life. If its body is sensitive enough, it can assume a quality that bear witness to the reality of past life." (Zumthor, 2017 p.24) What Zumthor beautifully paint an image of is how the right choice of good 'honest materials' that is exposed to life will always endure over time, as an expression of passing time. Making stylistic elements, historical significance and practical manners at secondary importance.

BUILT REFERENCES.

- (01) SALA BECKETT
- (02) THORAVEJ 29
- (03) STRANDGADE 104

Excluded references, although, inspired the process:

Anish Kapoor Studios. (2016)
Caseyferro Architects.

Newport Street Gallery. (2016)
Caruso St John Architects.

House14a. (2023)
Philmann Architects.

Studio House London. (1995)
Caruso St John Architects.

Haldenstein. (1988)
Studio Peter Zumthor.

Upper Lawn Pavilion. (1962)
Alison and Peter Smithson



Figure 1. Sala Beckett Theatre, Flores & Prats Arquitectes

Sala Beckett Theatre (2016)
Transformation and rehabilitation
Barcelona, Spain
Flores & Prats Arquitectes

A former abandon warehouse building owned by a workers cooperative was rehabilitated and transformed into a drama centre in the neighbourhood Poblenou, Barcelona. Before being an abandon warehouse, the building was occupied by a social club which was well known and deeply rooted in the neighbourhood Poblenou, a space where neighbours had celebrated marriages and parties. When the architects visited the building for the first time, a large majority of the decoration was preserved in its walls roof and floors even after its been a warehouse; flooring in hydraulic mosaic, doors and carpentry in wood with coloured glass, frames and rosettes in different rooms. The architects set out to rather rehabilitate the building into the new program trying to maintain and give back the social memory of what the building ones meant for the neighbourhood (Flores & Prats Arquitectes, n.d.).

Sala Beckett Theatre is a practical project to study and relevant for this thesis because of the approach to how the architect have worked with fabrics that has been exposed to life. The architects have in such interesting and tasteful way left fragments of walls, floors and structures untouched, without any particularly reason they can hardly argue for, but because they feel it incorporates an important narrative for the activities and life that have been acted within and around the structure. Working with adaptive interventions on several scales the architects try to be pragmatic yet sensible, to find the balance between the new programs modern needs, yet to sustain the memories lodged in the buildings walls, roofs and floors.



Figure 2-3. Sala Beckett Theatre, Flores & Prats Arquitectes

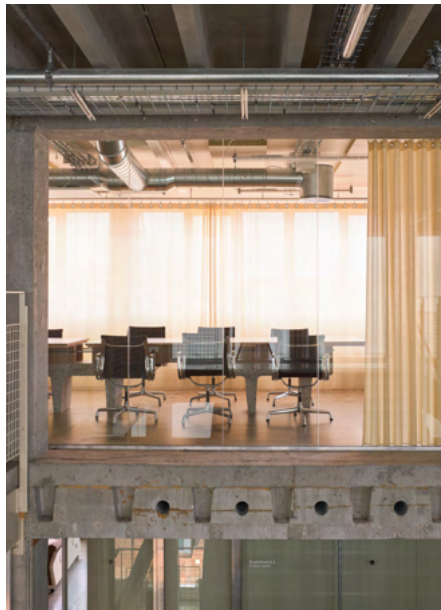


Figure 4-7. Thoravej 29, Philmann Architects

Thoravej 29 (2025)
Transformation
Copenhagen, Denmark
Philmann Architects

Thoravej 29 is a project that embodies 'to embrace what's already there'. In an old former factory from 1960s have Philmann Architects done a transformational project to create a cultural community hub. The core objective was to see every layer of the structure as an asset. Slabs tilted into stairways, façades reorganised into pavement, doors morphed into furniture - utilize every possible element (Philmann Architects, 2025). The transformation highlights pragmatic reuse of materials and components and explores the architectural value of the already existing. As a result emerges an informal and rich architecture, and by subtraction rather than addition reveals echoes of the buildings origins. The architectural heritage of the building is intuitively recognized.

The project has been really interesting to study because it covers so much relevance for this thesis discourse. Thoravej 29 is a conversion that reuses itself, it is a project that build up on a new era of reimagining built environment. The project search within and resonate with what it have instead of dreaming big of what it can be. Even if it has a hardcore cyclical non-waste approach the architect manage to keep its elegance and essence of its historical narrative.



Figure 8. Thoravej 29, Philmann Architects



Figure 9-12. Strandgade 104, Studio David Thulstrup

Strandgade 104 (2024)
Transformation
Copenhagen, Denmark
Studio David Thulstrup ApS

An architectural transformation of an old warehouse in Copenhagen. With the conversion of once an industrial space into exclusive apartments, the project aimed for historical integrity with contemporary luxury (Studio David Thulstrup, n.d.). By only rehabilitate the structure and skin of the building the idea was to reveal and referencing the beauty of the original structure. To prevent the structure and skin to be hidden in the apartments, creating to many internal spaces, the architect implemented modern functionalities within cubes in the central core of the building. This cubes fitted a stairwell, an elevator, a kitchen and bathrooms - making the whole building possible to read structurally while it creates a good flow and composition within the apartments.

Strandgade 104 is practical to study for this thesis in the sense of approach towards an old industrial building getting refurbished with sensibility and transformed by different scales of interventions. A big architectural gesture is not always needed - this reference exemplifies how a good approach with different interventions can create a beautiful coherent whole. An example of conservation within transformation. The reference is also relevant in how the architect works with material as a major strategy of connecting aged with contemporary. Working with the existing palette of original materials, the architect implement the same materials in the new added palette. The result is therefore a narrative where the patina, scratches and marks of use is telling the story of old and new.

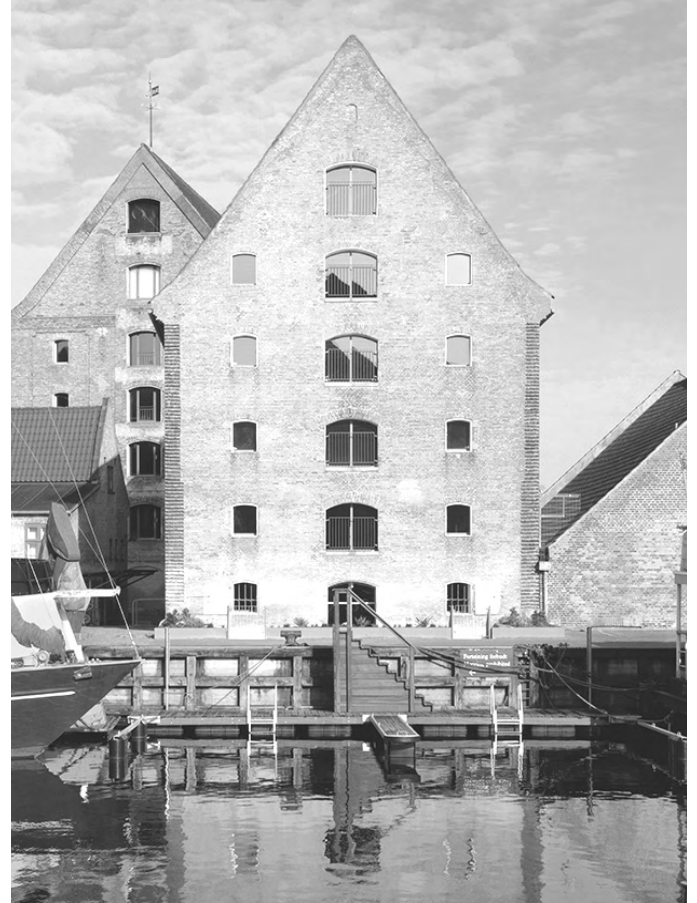
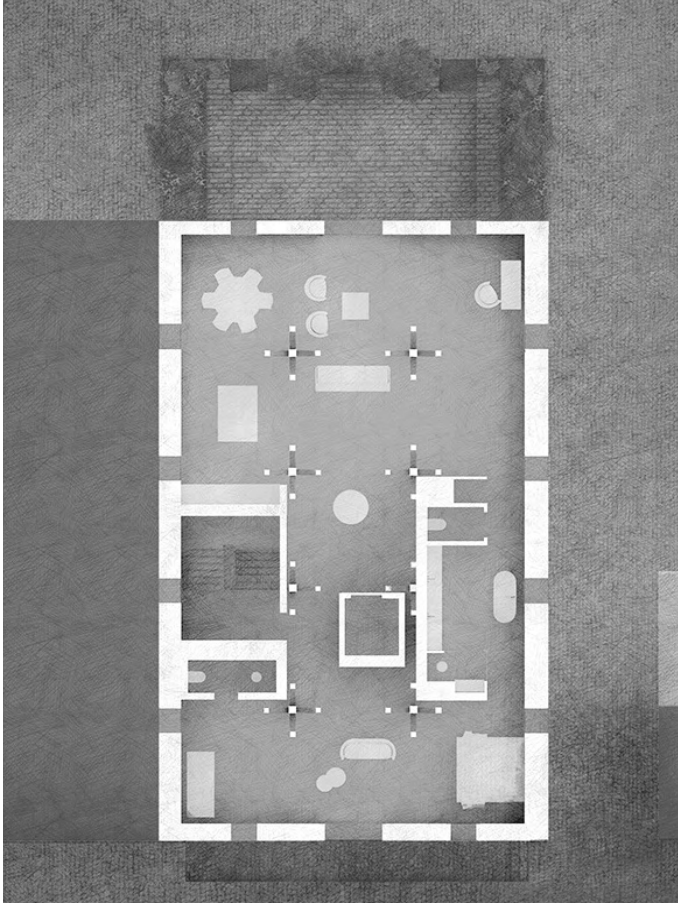
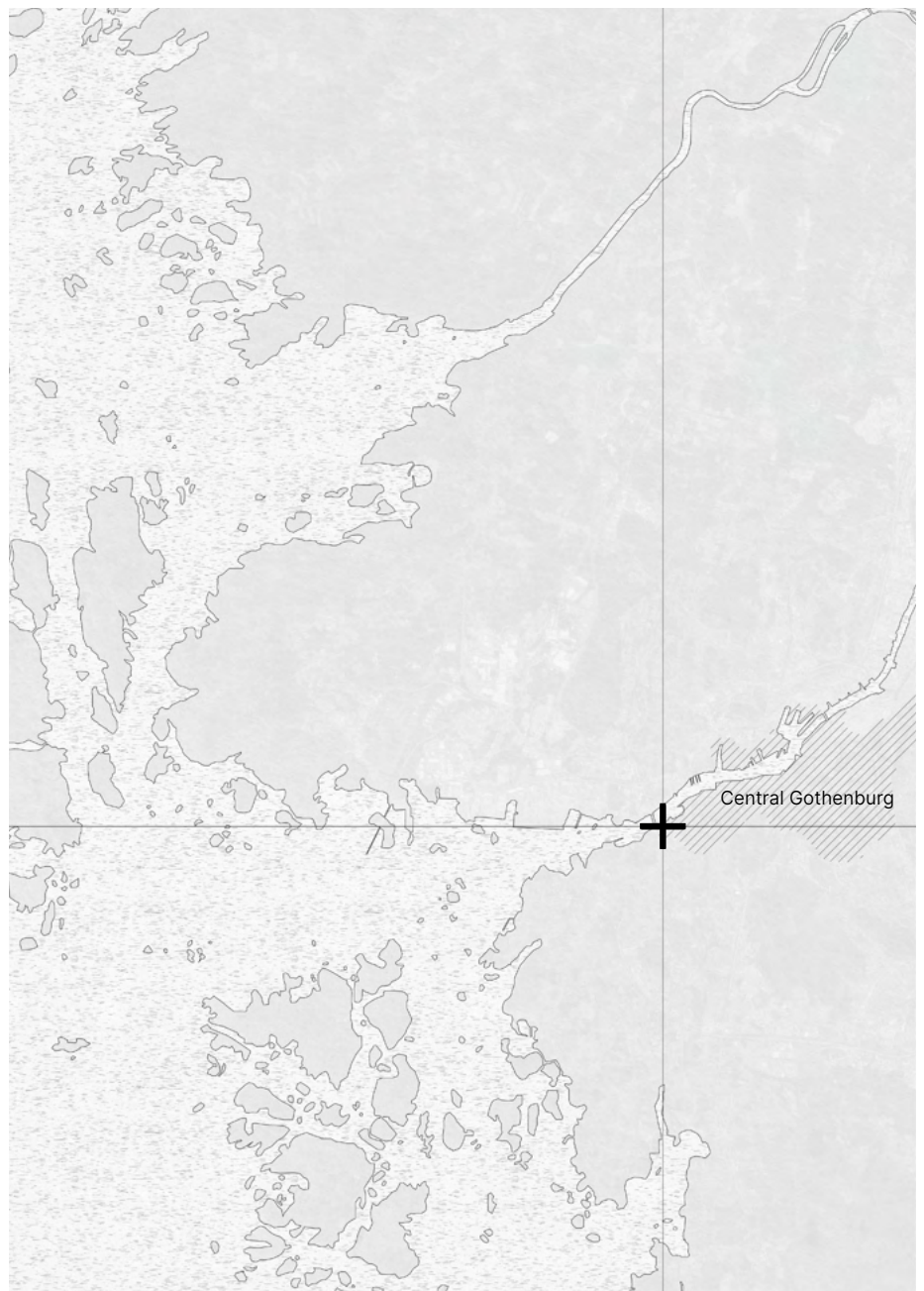
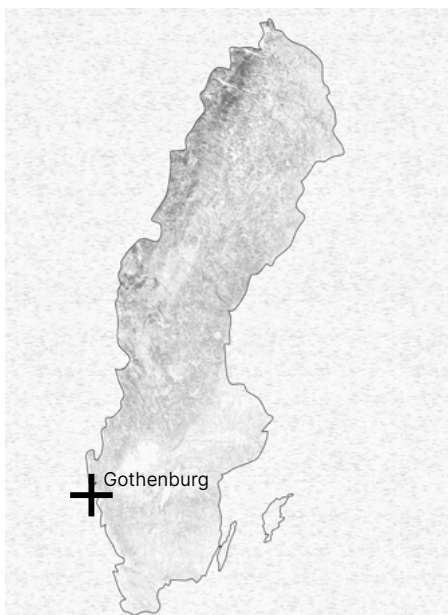


Figure 13-14. Strandgade 104, Studio David Thulstrup

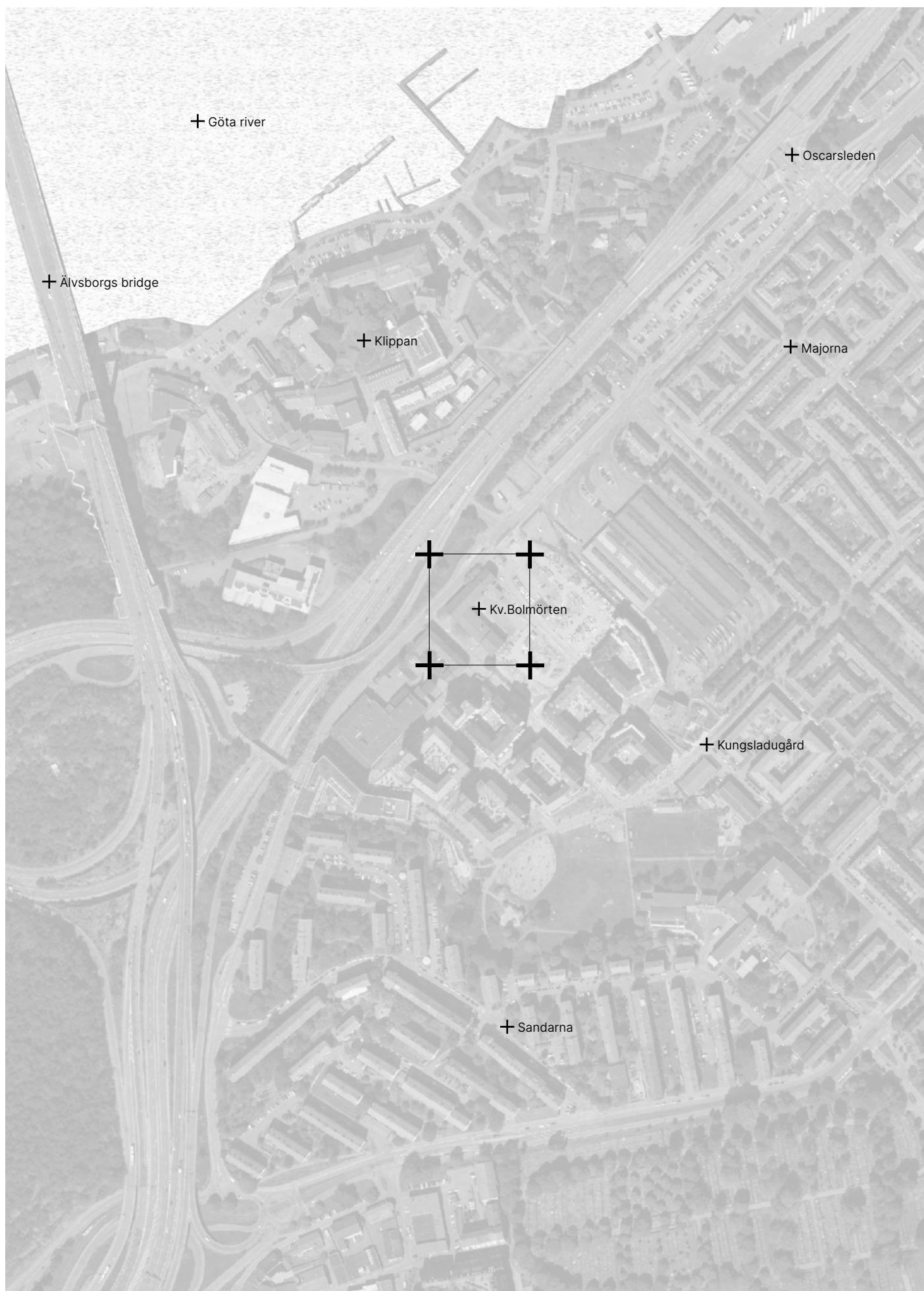
Context



Destination



Oriantation



Orthophoto

scale 1:5000 ⊕

Historical background

Kungsladugård, a historical working suburb

In the south-western part of central Gothenburg, the area's history stretches back to the Stone Age. However did the area first record itself in written history in the 1600s, when King Karl IX granted his lands here. The name "Kungsladugård" originates from this period, as the area was the king's farmland. However, it wasn't until the 19th century that the area began to take the shape we recognize today. With the rapid rise of industrialization, the area became a working-class suburb, with several industries established within its borders. In the 1900s, the area continued to grow with ideas that aligned with the area's purpose and character. From Kungsladugård and Majorna's classic straight streets and block-structure with houses in wood or brick, a newer district emerged in Sandarna (1930s). Like Kungsladugård and Majorna, Sandarna developed with a focus on the working class but was built with new modernist and functionalist ideas. The houses were built as terrain-adapted buildings with plastered facade's (Göteborgs Stadsbyggnadskontor, 2018).

In the 1940s, a somewhat unusual addition was made to the area when tram depots were constructed in the buffer zone between these three districts - Kungsladugård, Majorna, and Sandarna. In the 1950s, industries were added in the same buffer zone, including Kv. Bomörten, turning it into an industrial area surrounded by working-class neighbourhoods. During the large-scale traffic projects of the 1960s, the central highway 'Oscarsleden' was constructed, today one of Gothenburg's main roads in centrum (Göteborgs Stadsbyggnadskontor, 2018).

The history of this site is a great example of Gothenburg's history and development, and today the area continues to develop. With the Gothenburg City Council adopted vision to increase density and connectivity between central regions of the city (Göteborgs Stad, 2012), they have identified the industrial slot that was created during the 1940s and 1950s a good possibility to achieve the city's vision.



Figure 15. Archive photo, Typical street in Kungsladugård and Majorna

Site plan (2018)



1:4000 ⊕

Site plan (2028)



1:4000 ⊕

An area changing fabric

In 2012, the Gothenburg City Council introduced an ambitious vision to transform large parts of the city's central areas. The plan aimed to increase density and improve connectivity between previously isolated districts. Central Gothenburg, with its deep industrial heritage, features a distinctive industrial landscape - even in central parts. However, these areas are often viewed as barriers, preventing important connections within the city (Göteborgs Stad, 2012). As a result, many historically significant buildings that once shaped the city's identity are now at risk.

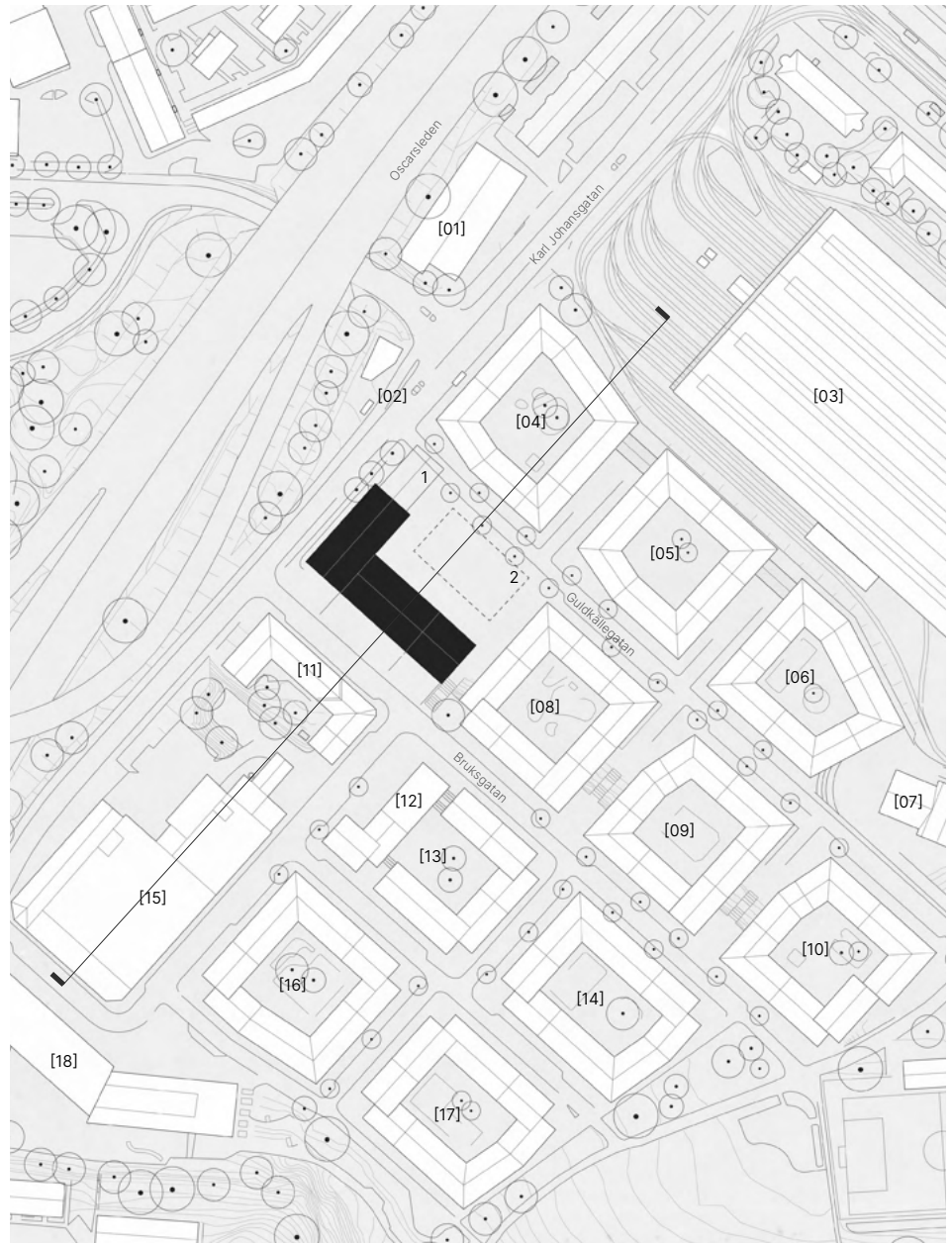
With the City Council's vision unfolding, the block Kv. Bolmörten is today situated in a transitional zone between popular and well-populated districts (Kungsladugård, Majorna & Sandarna). As seen in the site plans, in a span of ten years, Kv. Bolmörten went from being a industrial building in an industrial area - to an industrial building in a high density apartment district. The block kv. Bolmörten now finds itself part of an area that has seen the construction of 1,500 new apartments and commercial spaces being established just over a few years time. Despite this development, Kv. Bolmörten remains mostly untouched - only getting the northern gable shortened to secure a safe road grid in the new development plans (Göteborgs Stadsbyggnadskontor, 2018). With the development plan creating many positive outcomes the municipality has yet to define what role Kv. Bolmörten could play in this evolving context - that's what this thesis will explore.

The site

Kv. Bolmörten's surrounding (2028)

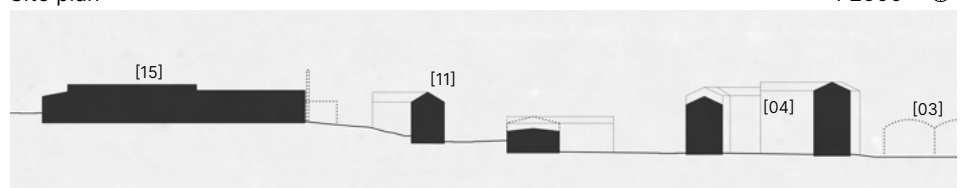
According to development- and detail plan
(Göteborgs Stad, 2018)

- [01] Office/mixed use
- [02] Bus station
- [03] Tram Depot
- [04] Apartment block
- [05] Apartment block
- [06] Apartment block
- [07] Office (preserved)
- [08] Apartment block
- [09] Apartment block
- [10] Apartment block
- [11] Apartment block (preserved)
- [12] Restaurant (converted)
- [13] Apartment block
- [14] Apartment block
- [15] Gym (converted)
- [16] Apartment block
- [17] Apartment block
- [18] School



Site plan

1:2500 ⊕

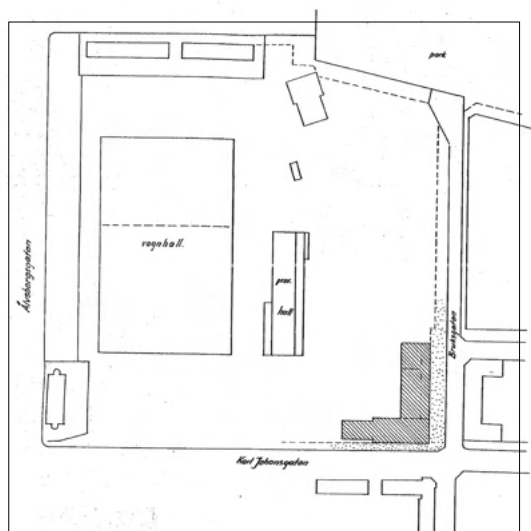


Sequential section

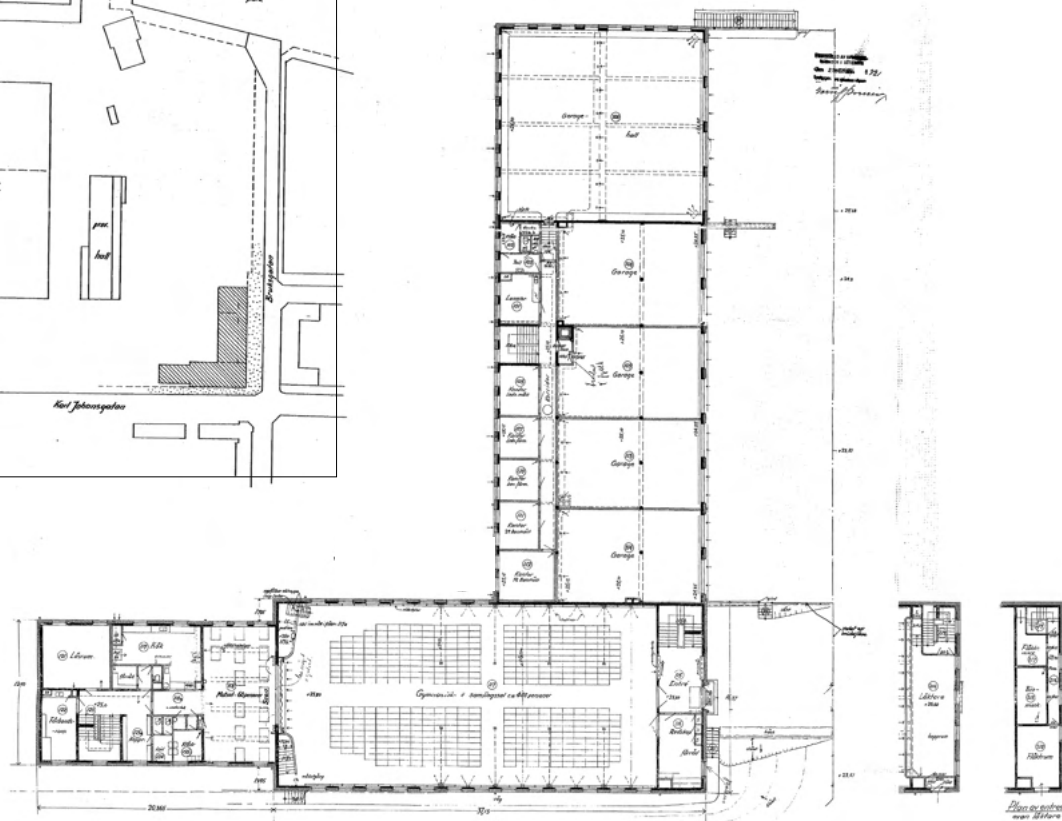
1. Shorten gable for safe connection to Karl Johansgatan.
2. Square or terrace houses.



Kv. Bolmörten in its current situation, 01.03.2025.

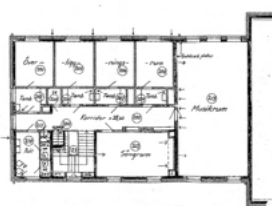


Siteplan

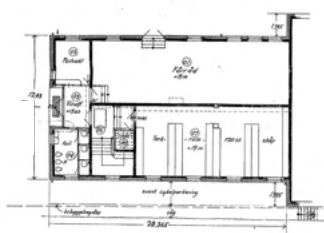


Floorplan level 02

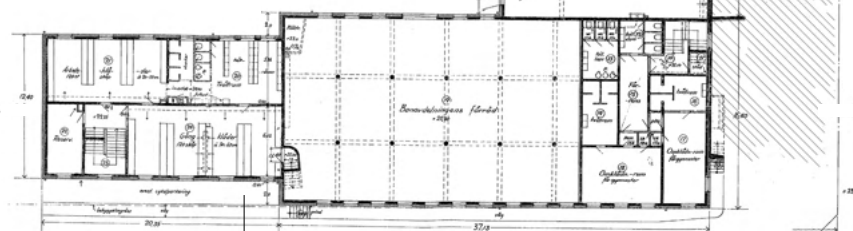
Entresol & Loft
(Level 3 & 4)



Floorplan level 04



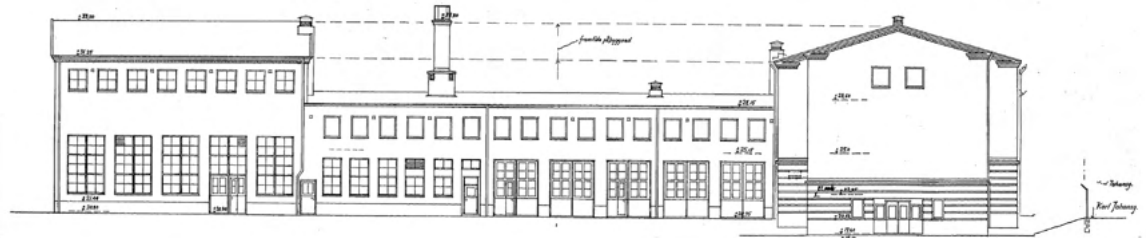
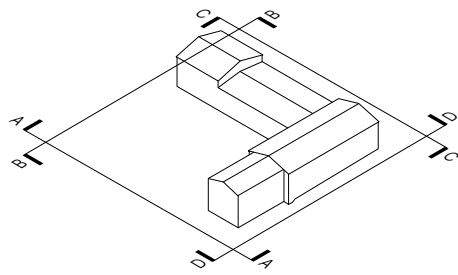
Floorplan level 00



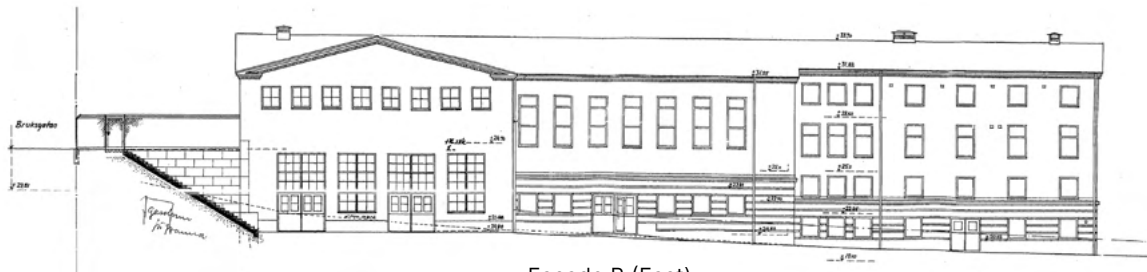
Floorplan level 01



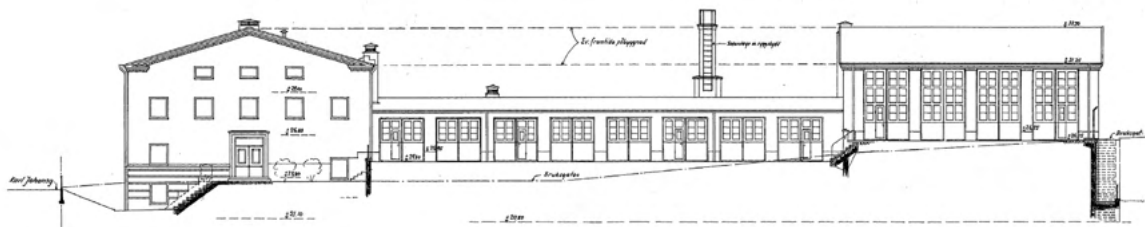
Figure 16. Set of original drawings (1953), floor plans



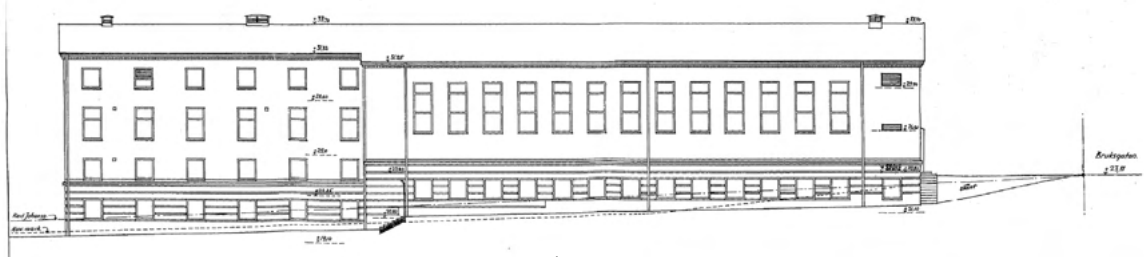
Facade A (North)



Facade B (East)

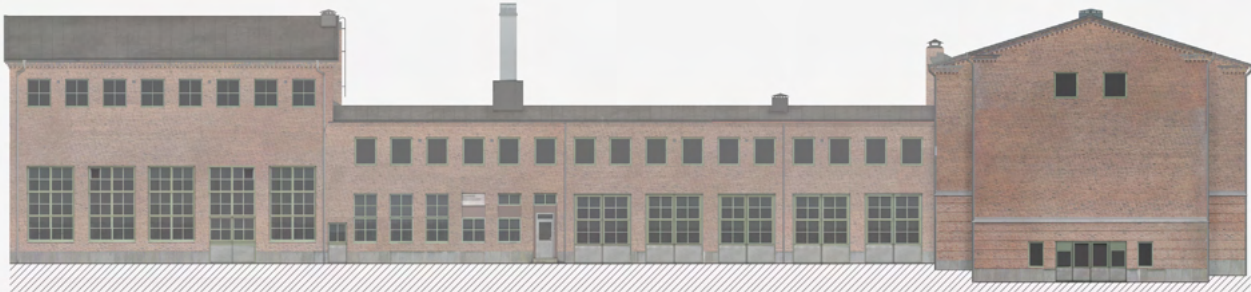
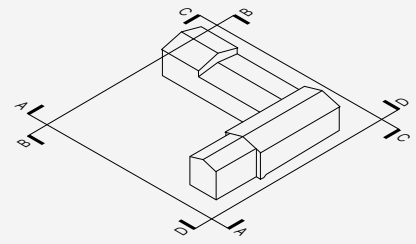


Facade C (South)

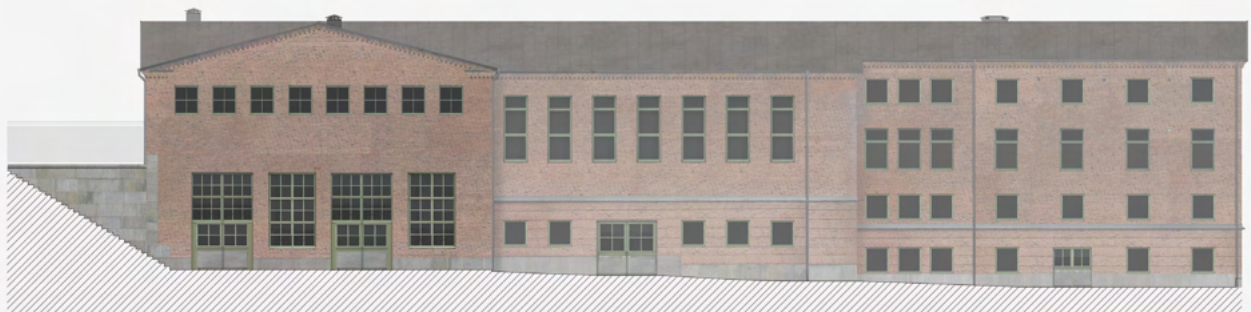


Facade D (Western)

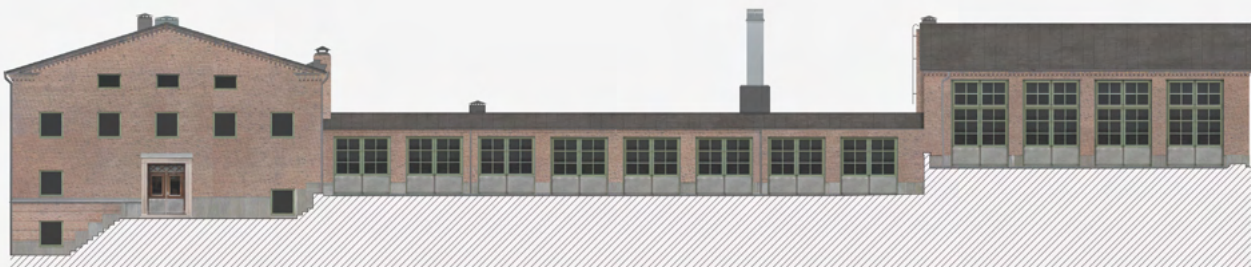
Figure 17. Set of original drawings (1953), facade's



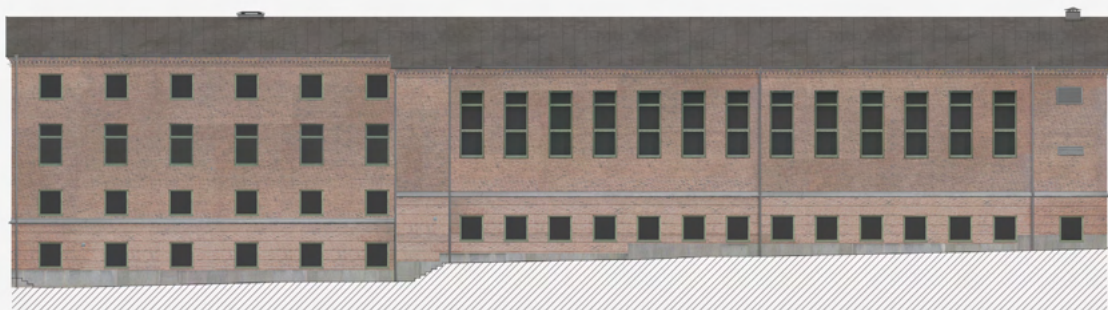
Facade A (North), towards Guldkällegatan



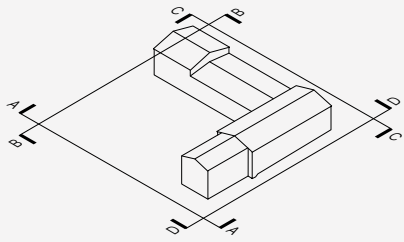
Facade B (East)



Facade C (South), towards Bruksgatan



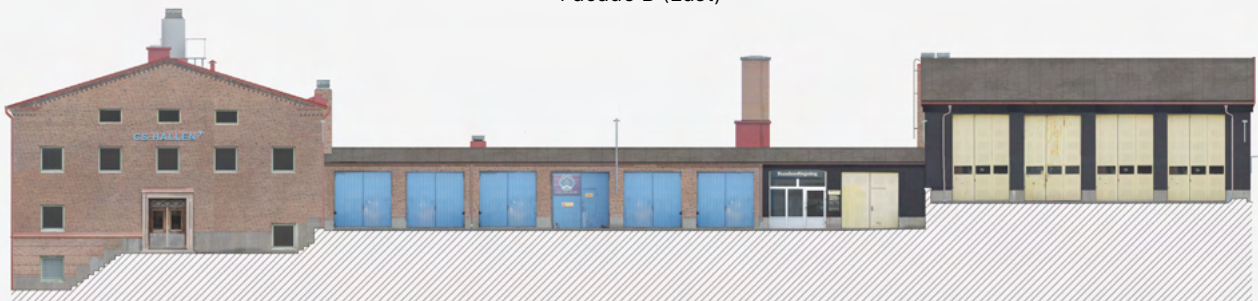
Facade D (Western), towards Karl Johansgatan



Facade A (North), towards Guldskällegatan



Facade B (East)



Facade C (South), towards Bruksgatan



Facade D (Western), towards Karl Johansgatan

Current state of Kv. Bolmörten

Construction & Materials

Built for a simple, yet important purpose, was Kv. Bolmörten created with beautiful well-crafted materials that has withstand the wear and tear since established. Taking part of the plan document of its establishment, the bearing structure and base is made of reinforced concrete on piles, walls is made of concrete and brick, and the floor is polished concrete. Over the years the inner walls, doors and fabrics within and around the building has been changed pragmatically, thus made the building very diverse.

The block Kv. Bolmörten has been listed as industrial heritage, and thus therefore have regulations to consider. But even if the regulation is produced by the city and the building is managed by the municipality, the interventions made since established in early 1950s, has been done with various measures and quality (See the current façade and its original state for comparison). Regulations will therefore be considered but not prioritized.

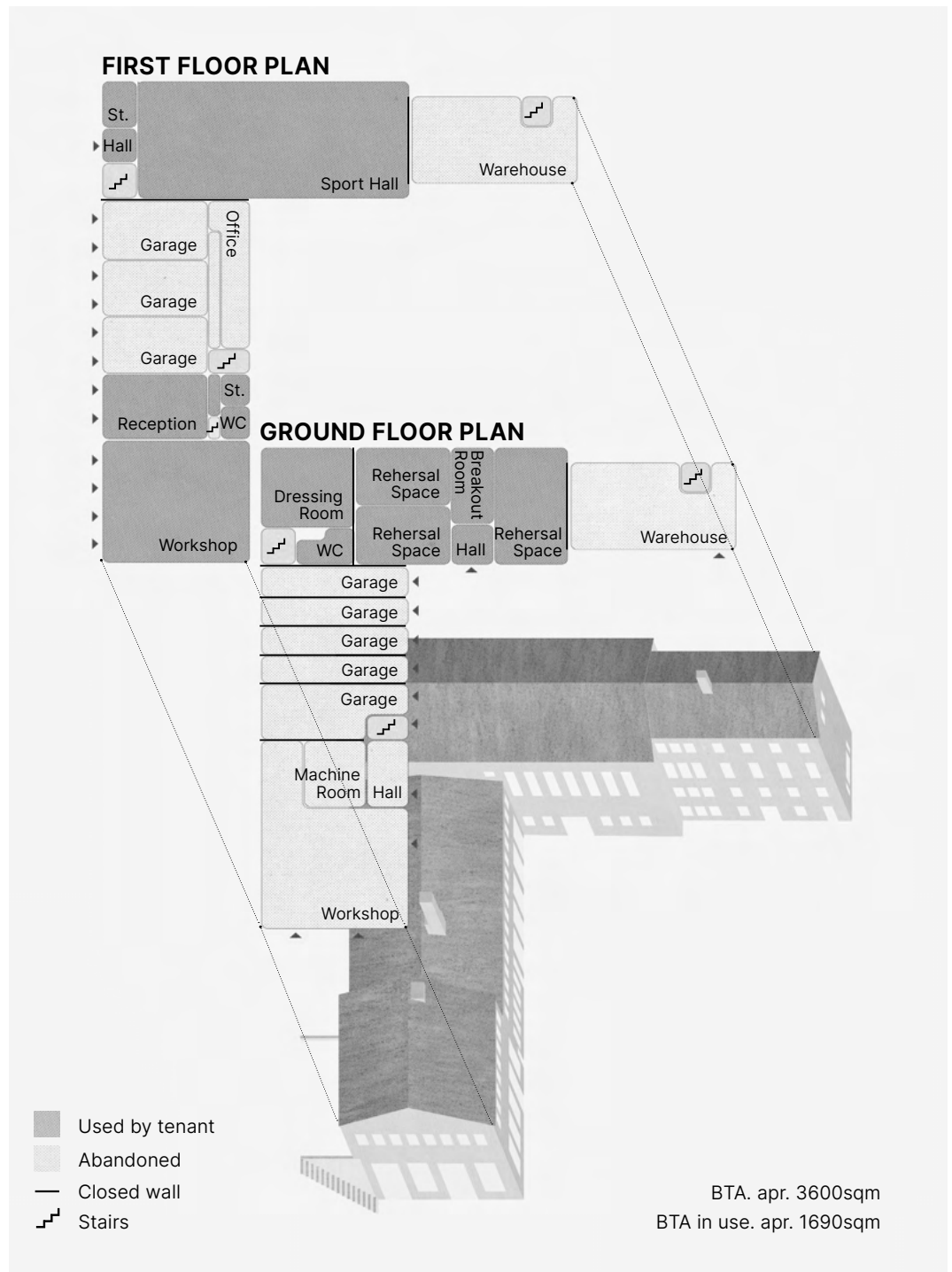
Concept of identity

With the block once looking unitary and coherent have today changed with various measures creating a diverse appearance, makes me pose the big question: what is the buildings authentic identity? When proposing a conversion, to which state of the buildings layers do you pay homage to? It is a discussion with many outcomes and few answers. By analyzing the building and consider the thesis theoretical framework, an intention to explore the answer was formed: a block like Kv. Bolmörten develops its identity through evolving in an ad hoc, pragmatic, and inconsistent manner to fix, fit, and adapt to its inhabitants' changing needs. Having that in consideration and core objective when proposing a transformation, the structure can hopefully maintain the essence of the buildings identity.

Occupancy

Occupants and buildings constitute a complex non-static relationship, and once in a while the building is in need of an update (S,Brand, 1994). Certain layers of a building have a longer rate of change than others. Changing the structure itself is quite a significant intervention with a correspondingly significant cost - and thus, therefore inherent reluctance to such an approach as 'form follows funding'. In relation occupants usually use simple means to fix the aspect and issue that 'do not work'. These traces is easy to see when looking at 'ordinary' structures such as Kv. Bolmörten (See the current facade and its original state for comparison). (See diagram of current occupancy to understand buildings need of update)

Diagram of current occupancy and function



Challenges & opportunities

To propose a new design for the building it was crucial to analyze and understand the current building. By investigating and analyzing the buildings historical context, to urban context to the smaller scale as the buildings attributes and materials, it will be easier to understand the necessary needs of change and possible opportunities. What to retain, what to reinvent and what can we reuse? Following outcomes:

[1] Doors & Windows

Openings such as windows and doors are in quite bad conditions and diverse expression. These elements are seen as necessary to update to modern standards and more welcoming appearance.

[2] Tilting floor construction

Floor on the first level is tilting apr. 1.5 degrees creating a difference of 45cm in height. Challenge to fit a new program within this space.

[3] Facade elements in decline

The facade has a lot of decaying signs, cables, parabols that will be hard to maintain in accordance to safety and new functions.

[4] Roof cladding

Roof cladding are in bad condition and in need of an update.

[5] Low roof construction

The lower roof structure is somewhat to low height to fit new modern functions and also badly isolated. A challenge will be to understand how to best convert that space into new usage.

[6] Unwanted destruction

The northern gable will be shortened to secure a safe road connection to Karl Johansgatan (Göteborg Stad, 2018). A challenge will be to create activity in that vacant spot.

[7] Deconstruction opportunity

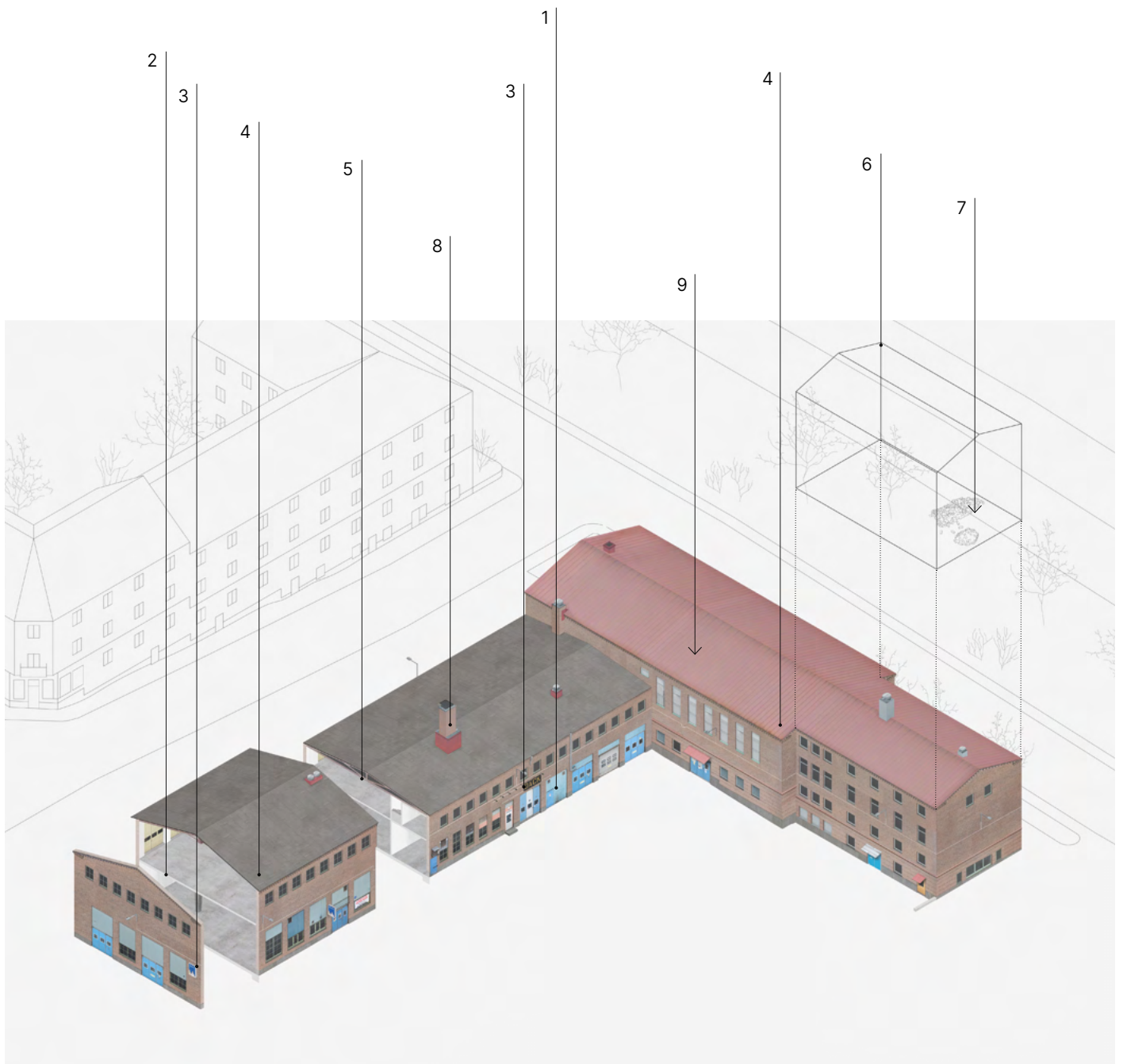
With a big volume being demolished, an opportunity will appear to take care and reuse material such as handmade bricks from 50s.

[8] Unnused elements

Unnused elements like chimney taking space in the interior space. Dilemma of; keep for future possibilities, take away for better contemporary flow within building?

[9] What works, works

The western part of the building with sport hall and rehearsal spaces is used daily, here is an opportunity to maintain whats already working.



Exploded axonometric of Kv. Bolmörten's current state

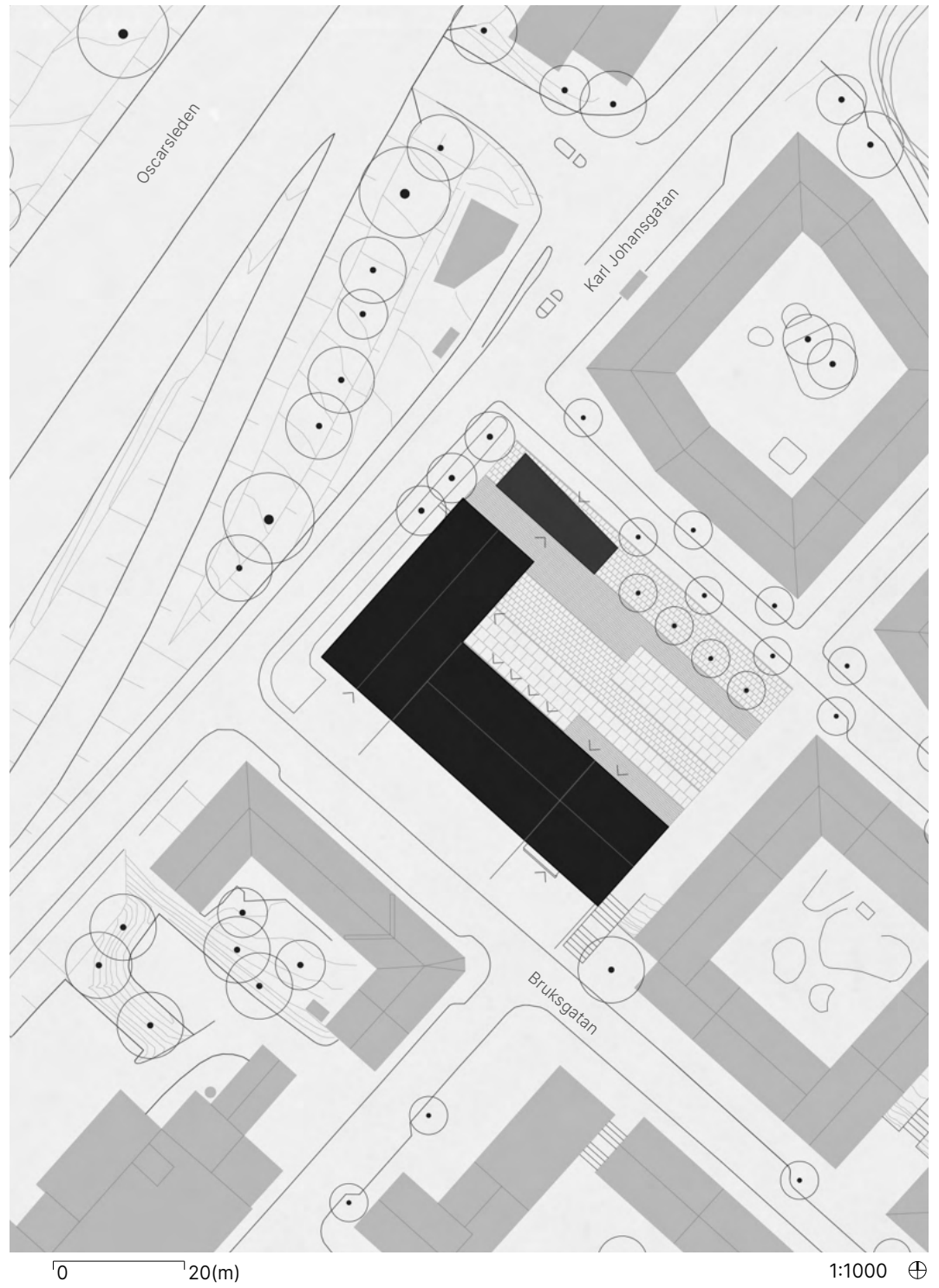
Project description

When working within built heritage, there are today many approaches and intervention strategies for transformation and urban regeneration. To exemplify approaches: conservation *meaning in latin "to maintain"*; preservation *"to keep"*; renovation *"to renew"*; adaptation *"to fit"*; and alteration *"to change character/composition"*. Furthermore, there are many different intervention strategies that can be either fabric-focused or usage-focused. Projects usually tend to use one approach and one method: one project creating a big architectural gesture, another preserving to the very extent. This project will highlight the opportunities that comes when looking beyond choosing one confining path. With the knowledge of different approaches, this thesis will investigate approaches and strategies merged together in one transformational proposal. The main objective will be to ask how to best retain, reuse and reinvent Kv. Bolmörten, to effectively adapt and catch up with its rapidly evolving context.

The first focus will be repurposing and converting the block into a new program that will contribute to its new context. During the conversion will material choices and textures juxtaposition be considered to create a cohesive impression with the existing structure. Alterations will be made either because the element is in decline or to fit the new program. Otherwise, the building will aim to keep the building in its current state for the most extend, maintaining the narrative and traces of the past. Some parts of the building are functioning well today - such as the sports hall and rehearsal space that are used daily - these will remain untouched, even in the new program, as they do not require a new purpose.

Further on will the proposal show additional interventions building upon the existing structure. Focusing on the courtyard and plot that will become vacant. As the surrounding area is densified with new constructions and apartment buildings, this open, untouched public space will not be pressured for new functions. Instead, it will aim to contribute to be a dynamic durable space in the area. A smaller free standing volume will be added on the spot becoming vacant as an interactive volume connecting the existing block with the square.

Site plan



Design strategy

Program

The new program will transform Kv. Bolmörten from an industrial garage, workshop into an office hub with commercial functions. From passive function is the block now active for its environment. Keeping the sport hall and rehearsal space plays on the pragmatical idea to keep what works well. Once a place where workers clocked in and out from 9 to 5, the objective is to remain a place for workers. In a society that is constantly changing, is the typical worker today more likely to sit behind a desk rather than work in a factory. The strategy has therefore been to create a community hub where small offices can have the space they need, and where restaurants, cafés, and ateliers can contribute to the overall vision, forming a community and eco-system for the modern worker.

Existing structure

The design strategy within existing building is to maintain and build upon the existing structure, using the bearing structure, walls, and facade as a foundation. The interventions added to the structure will be driven by the desire to utilize the existing elements as architectural assets to interact with, creating an appearance where the new and old merge together. Interventions will be modest, aiming for necessity and pragmatism while trying to effectively enhance the building and infuse quality. Materials added will contrast with the existing ones to build upon the sequential narrative of old and new. However, the idea is to use materials with coherent quality and durability similar to the original ones, ensuring the building endures respectfully over time - as a whole.

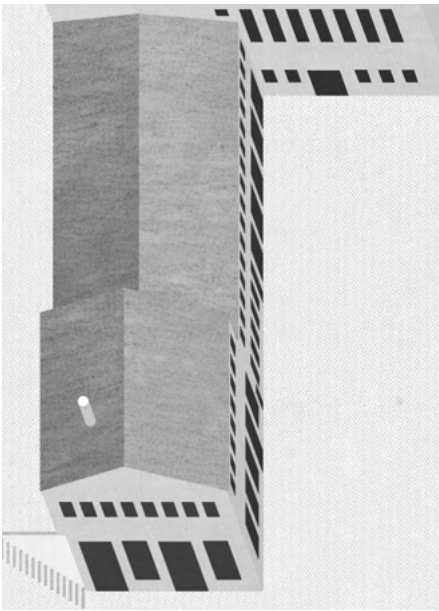
Square

With the new program becoming a mixed use block with diverse span of functions such as; office, sport, culture/music, restaurants and commercial. The strategy is to implement additional interventions complimenting the existing structure. The courtyard will try to be a durable space for, gatherings, coffees in the sun, a place to pass by and a place to stay by. Concentrating on the squares surface, the design aims to lend a new type of character. Removing damaged asphalt and parking, to establish a unitary surface will enhance the public space in the area. The square uses different pavement to break down size and create a dynamic space.

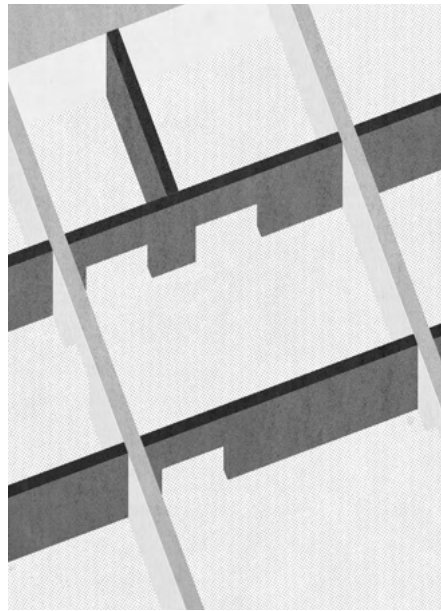
Additional volume & vegetation

The new volume will respond to the block in the same way the block has evolved over the years, a structure with varied spatial composition changed and altered to adapt to its occupants changing needs. The extension does not aim to choose between contrasting or mimicking the existing. Instead, the strategy has been to add a volume that, together with the existing structure, merges into a coherent and well-working whole. The sculptural added volume serves as the pivot and link between the square and the existing structure. With its smaller scale, interactive shape and its durable materials does it provide an interesting addition to the square.

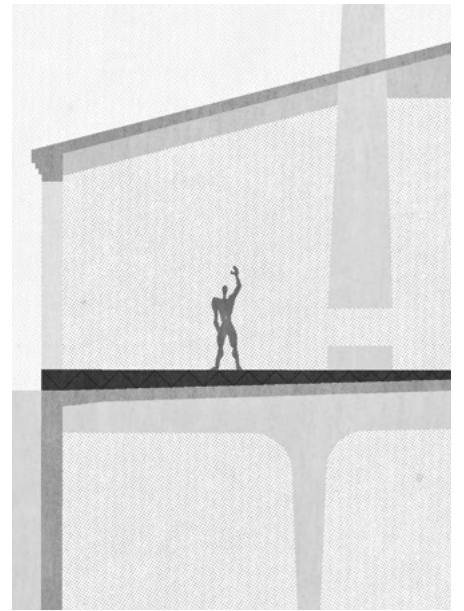
The strategy with the trees is to make the square more shrouded. Vegetation was chosen because it doesn't block as a volume would, it shield in a balanced, soft and public manner - resulting in a public space easier to enjoy. Bushes and plantings are used with the same idea - inspired by untouched corners of the city will they over-grow beautifully and be a added characteristic to the block.



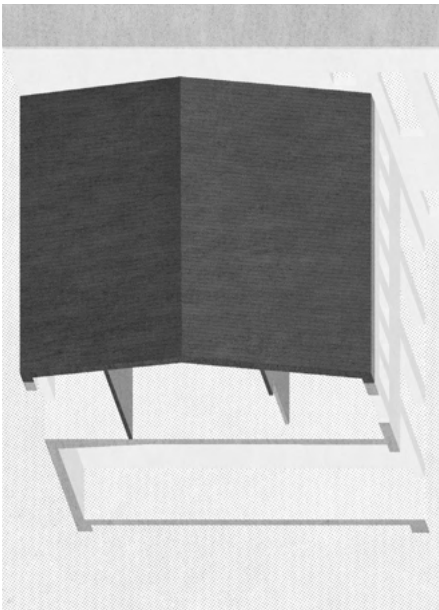
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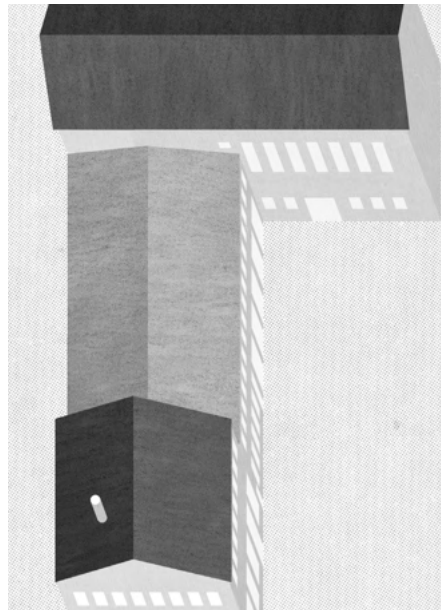
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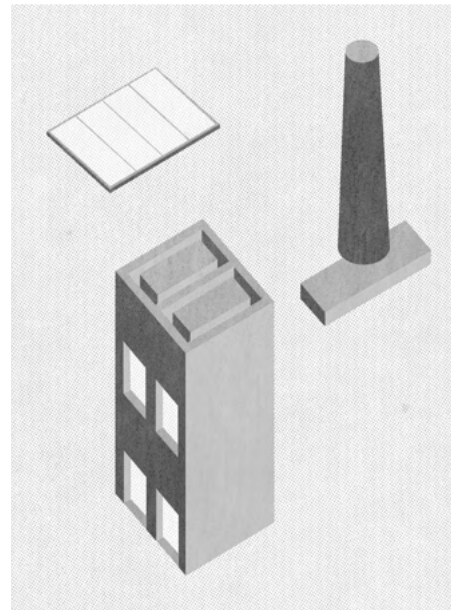
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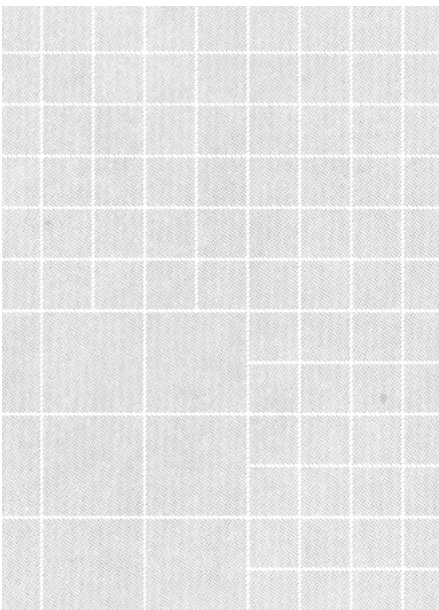
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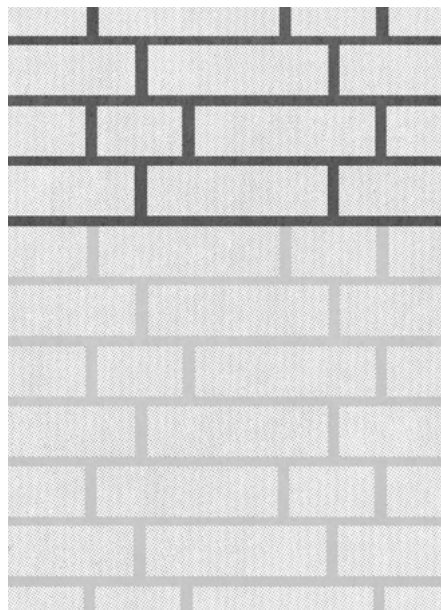
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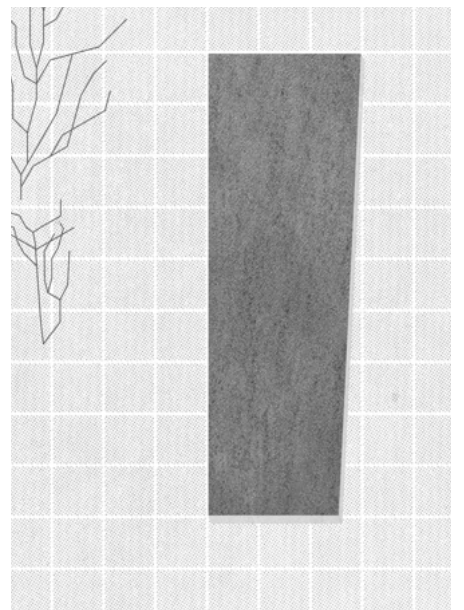
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7



8



9

Interventions

[1] Update doors & windows

(Objective) Major flaws and bad conditions on current elements and to fit new program.

[2] Rearrange walls within bearing structure

(Objective) To create new spatial needs.

[3] Fix tilted floor

(Objective) The floor-structure was built for workshop/garage environment. To fit new function suiting modern needs.

[4] New roof structure

(Objective) To fit within swedish standard for an office environment and in best way isolate roof to modern standards.

[5] Update roof cladding

(Objective) Todays conditions are bad

[6] Additional spatial & infrastructure elements

(Objective) Adding accessibilty with elevator. Roof windows add light into the darkest parts of the building. Fireplace add charachter. Display on roof both communicate the new epoque of the block and pay homage to its industrial heritage.

[7] Create pedestrian friendly sqaure

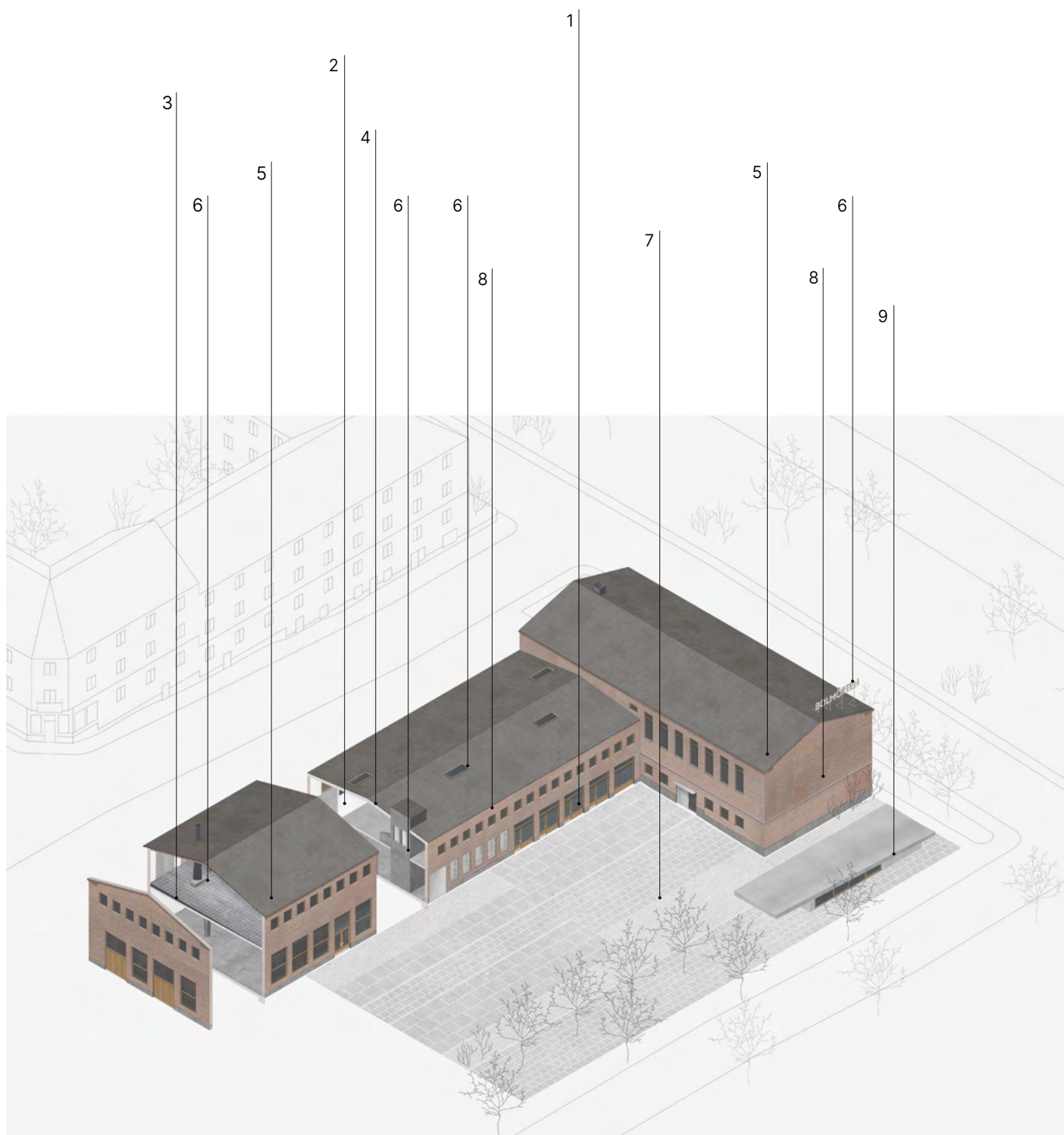
(Objective) Current pavement is in bad condition with major cracks and gravel heaps.

[8] Reuse brick from deconstructed volume

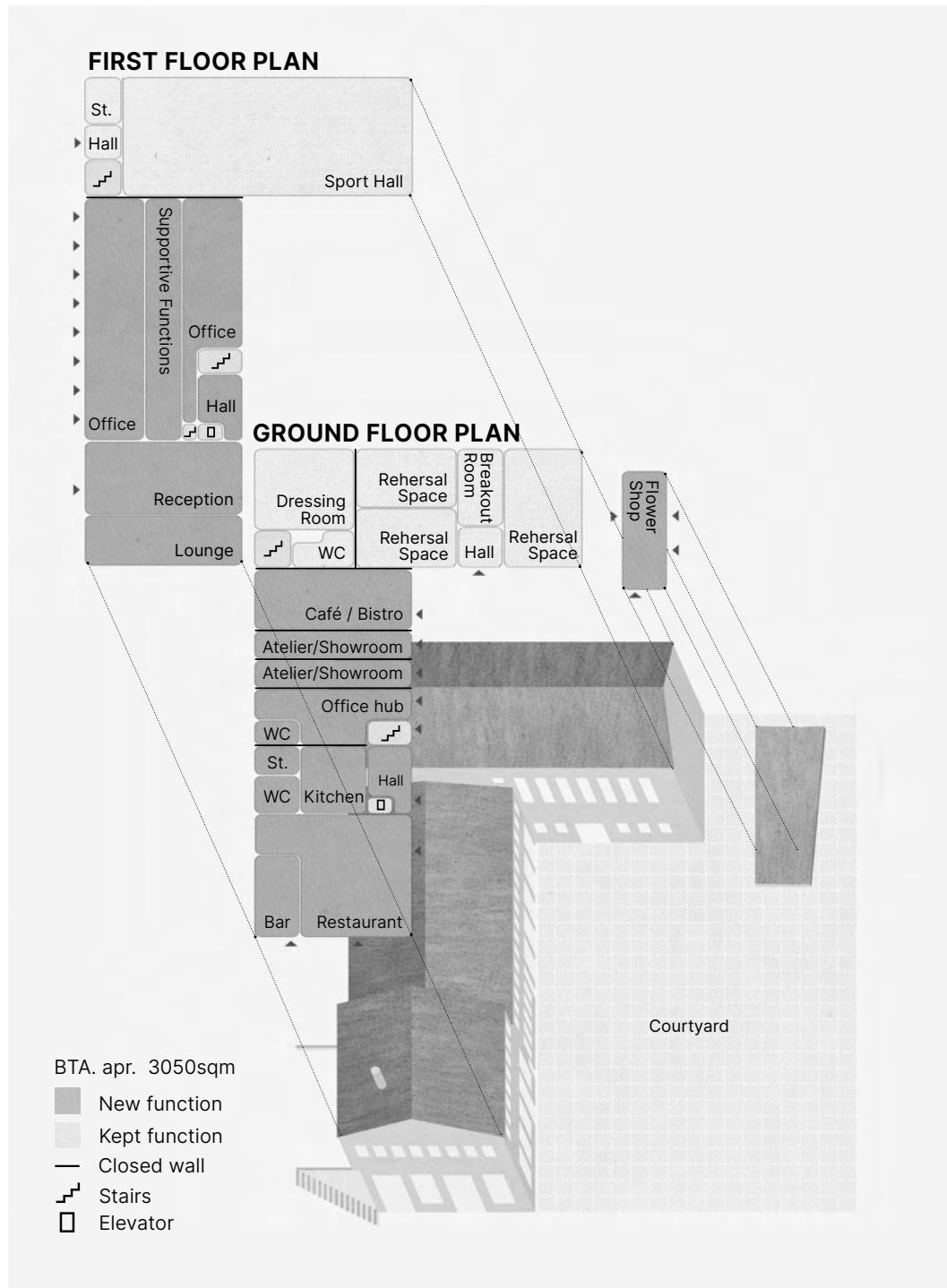
(Objective) To rehabilitate connected wall and and to keep a coherent appearence merging old and new layers (such as the surface created by slightly hightened roof)

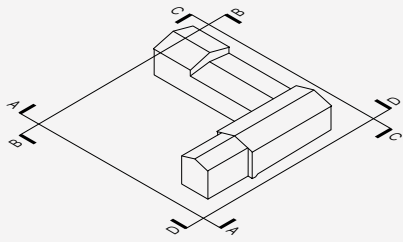
[9] Added volume and vegetation

(Objective) Enhance an otherwise empty spot. Create activity- and focal spot inviting and welcoming visitors to the sqaure. Vegetation shrude and soften the sqaure.



Exploded axonometric view of Kv. Bolmörten's transformational proposal.





Facade A (North), towards Guldkällegatan



Facade B (East)

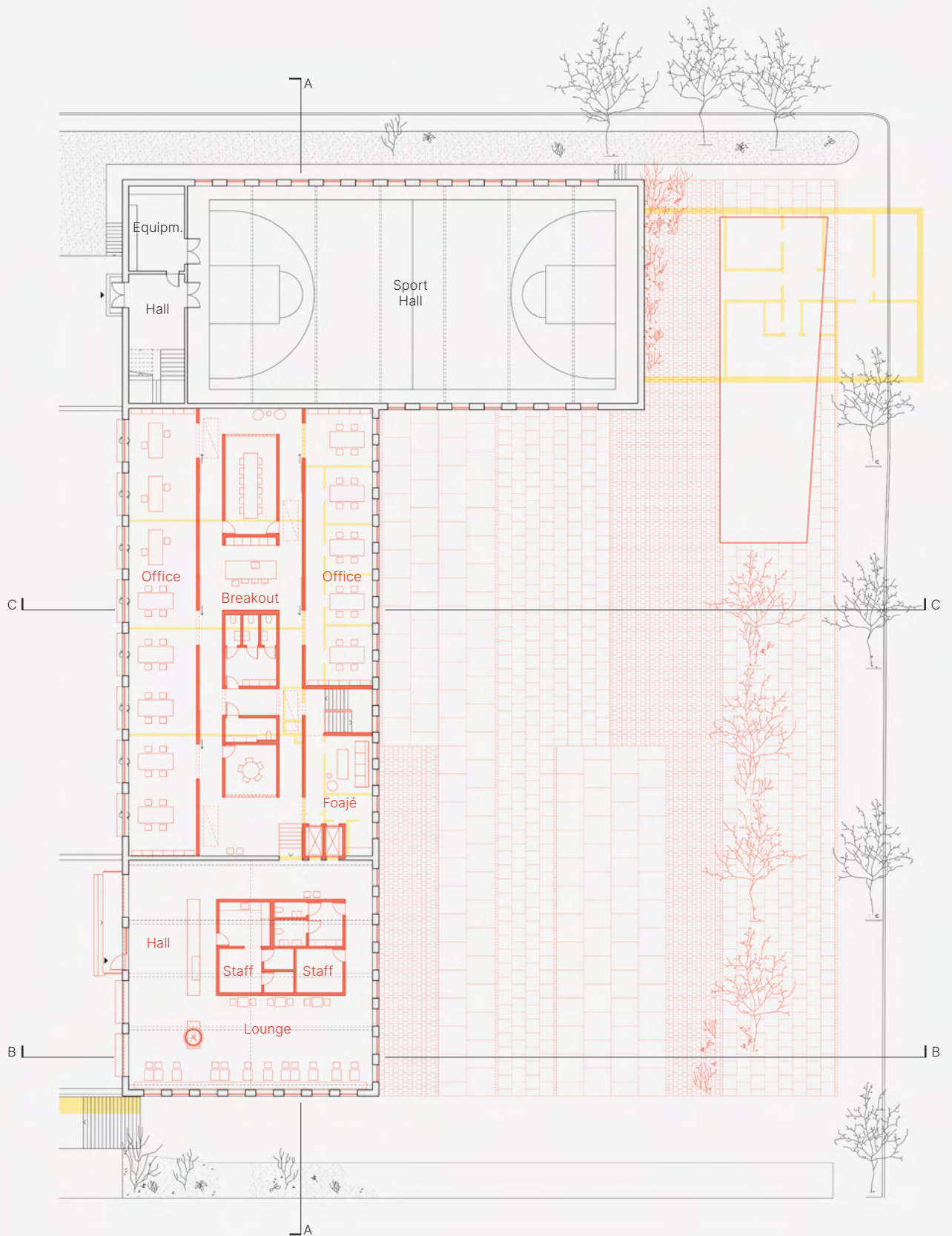


Facade C (South), towards Bruksgatan



Facade D (Western), towards Karl Johansgatan





- Existing
- New
- Removed



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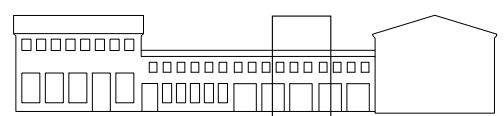
Part of current northern facade



From passive to active functions

The current northern facade will be updated to a more welcoming aesthetic matching new program and purpose. Hardwood frames with details of sanded steel meets the existing brick and granite. Materials that are possible to age and withstand coherently. More glass both creates transparency and bring light into the dim interior spaces. Reused brick is used to cover the slightly hightened roof construction- blending old and new in subtle yet visible manners.

Proposal ↗



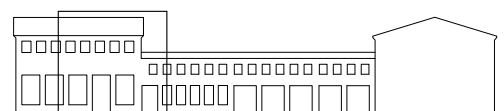




From one worker to a another worker

The proposal convert one of the workshops into restaurant - the space has high ceiling and big concrete beams creating unique spatial character. The pavement gets updated from cracked asphalt to pedestrian friendly. Displays and signs will be in stakeholders and tenants disposal to enhance the relationship between the building and its occupant.

Proposal ↗







Reception and lounge to community hub. (Level 01)

Corridor showing office landscape and breakout kitchen area. (Level 01)



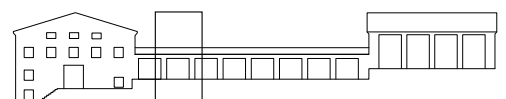
Part of current southern facade



From closed to nuanced transparency

From solid garage doors in various conditions, the south facade is updated with large hardwood-framed windows, which can pivot horizontally. To manage the transition from inside to outside, a solid granite slab is added, matching the existing granite base of the facade. Curtains on both the inside and outside add nuance to the juxtaposition and expression throughout the day. Possible to see reused brick on this facade image as well.

Proposal ↗



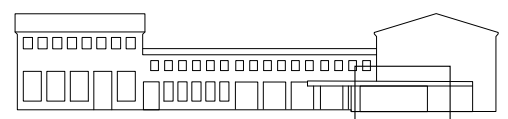




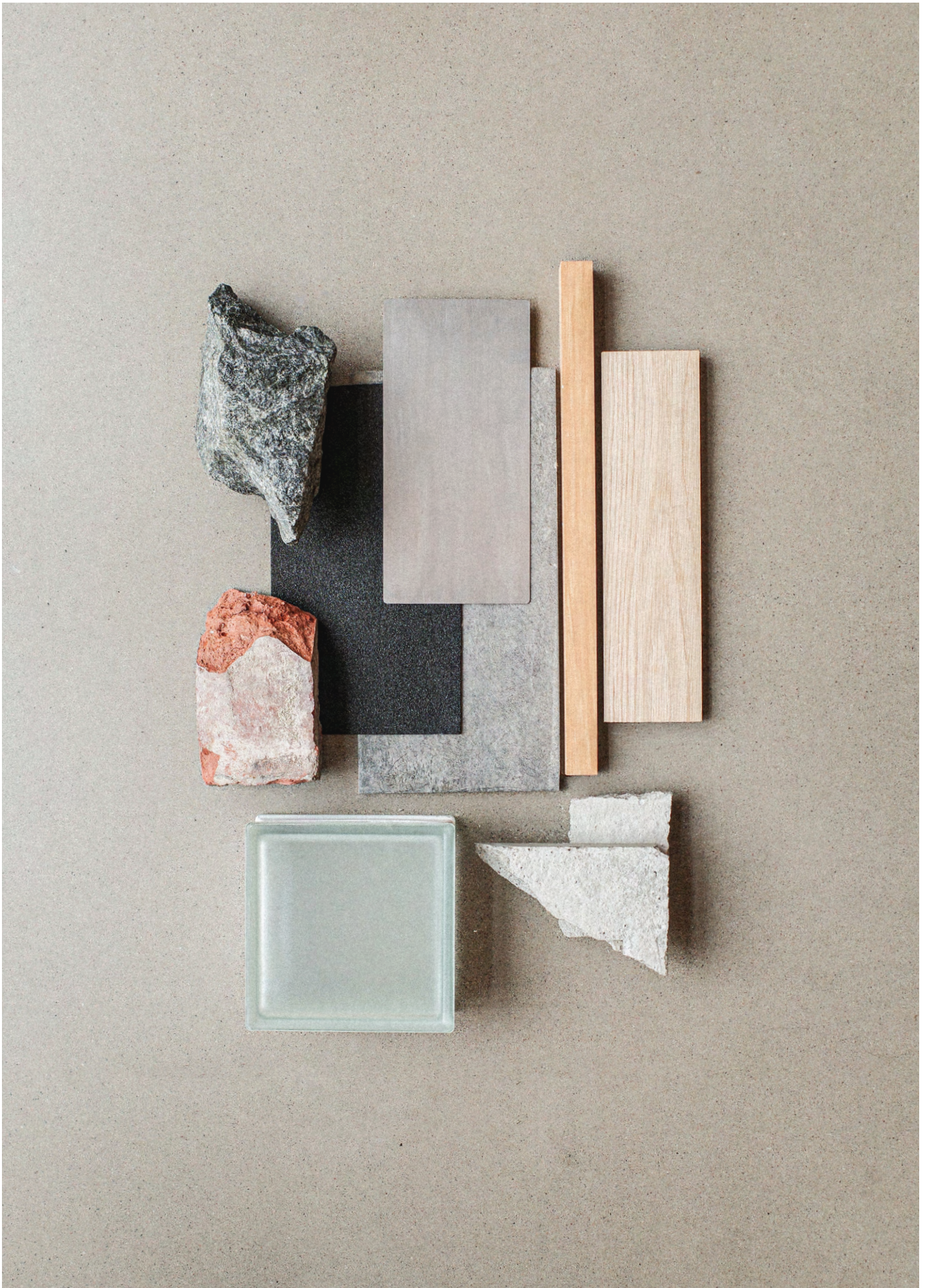
Proposed flower & coffee shop

Instead of establish an extensional volume connected to the block, the area seemed to call for something smaller, more interactive and sculptural. The scale is smaller and disconnected from the original block-volume to engage better with visitors and square - playing on its own terms. Materials is coherent to the rest of the conversion - aiming for the same industrial and solid expression of high quality materials. With the volumes core configuration being a simple box with big hardwood windows is the roof adding character and fosters activity within and around the structure - playing on the inspiration of kiosks, newsstand and other street structures common in our cities. A flower shop that serves coffee, or a similar function, would be perfect for this volume.

Entrance ↗







Material moodboard

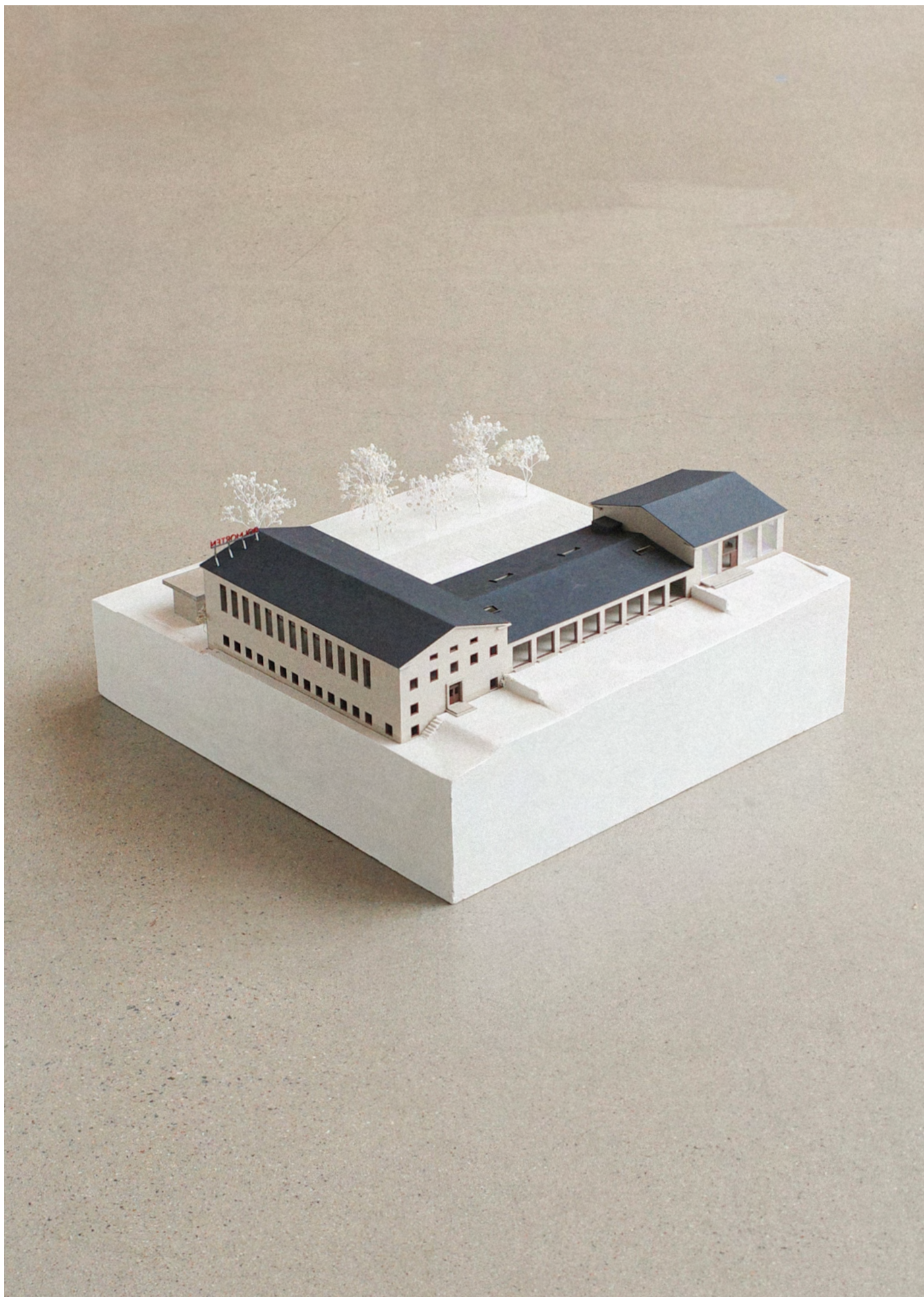


Image of model 1:100

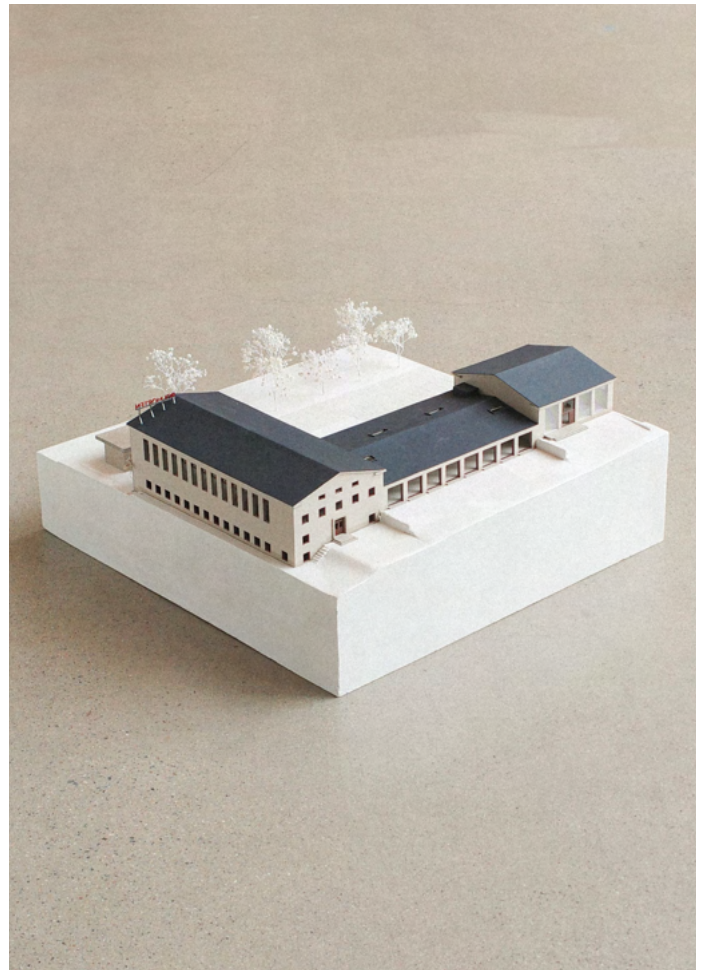
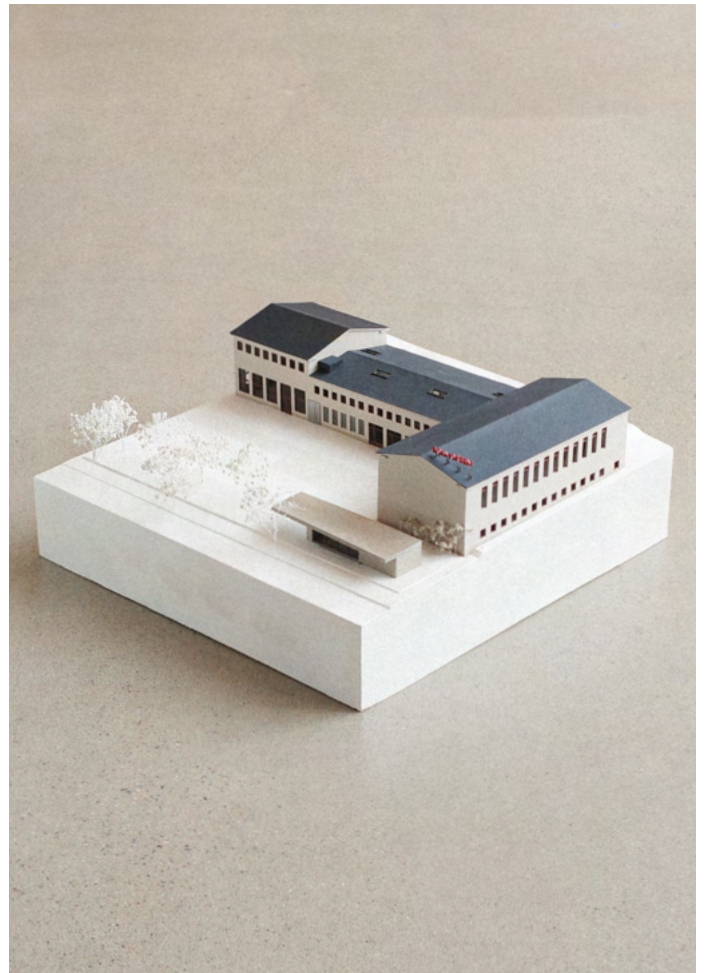
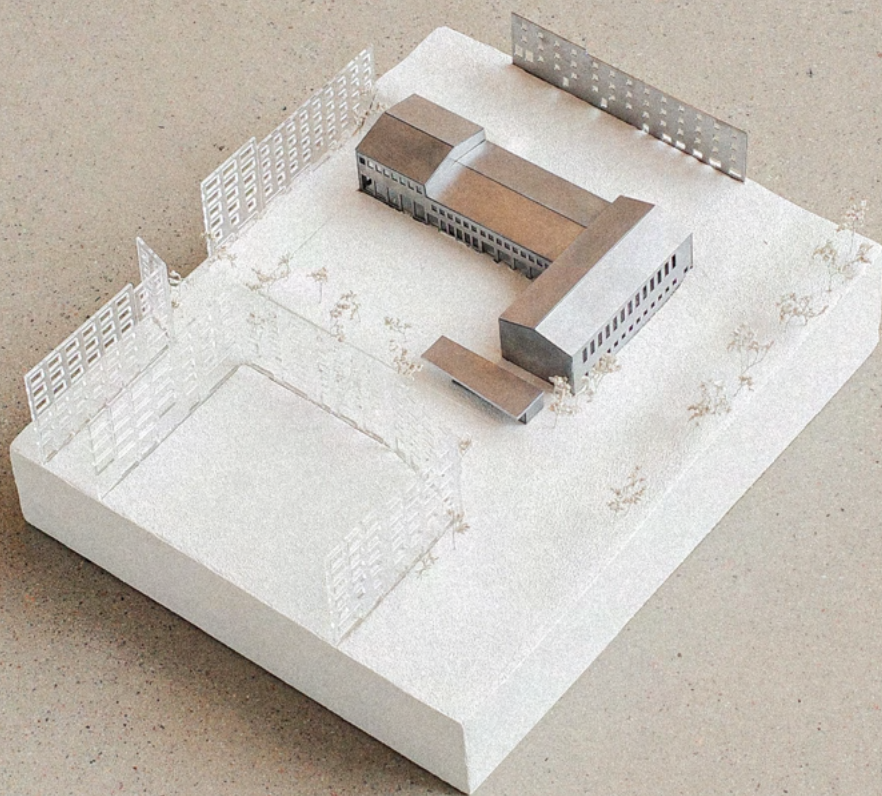
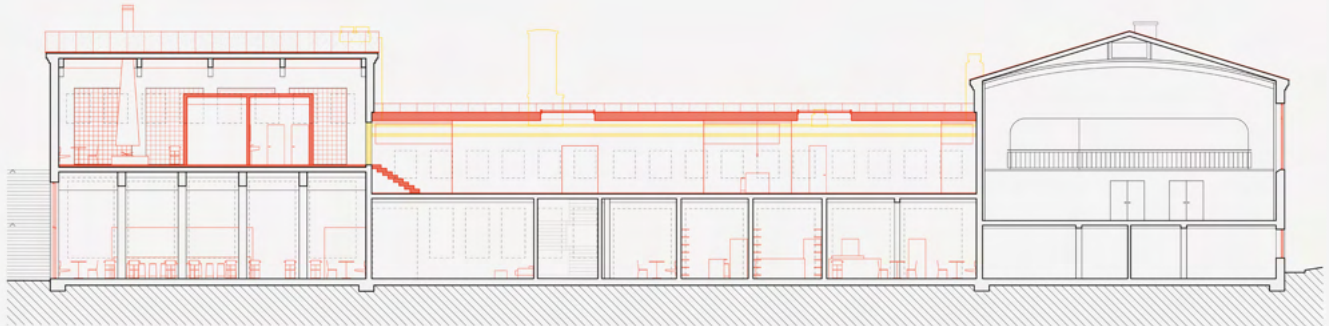


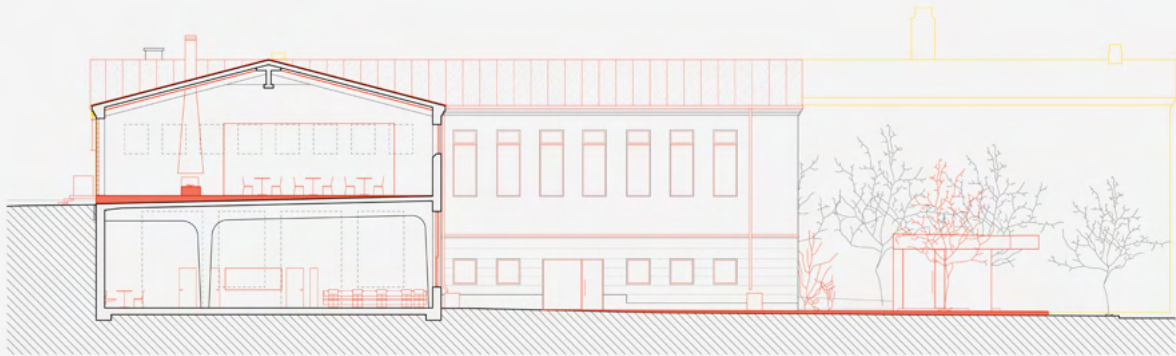
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Image of model 1:300 ↗

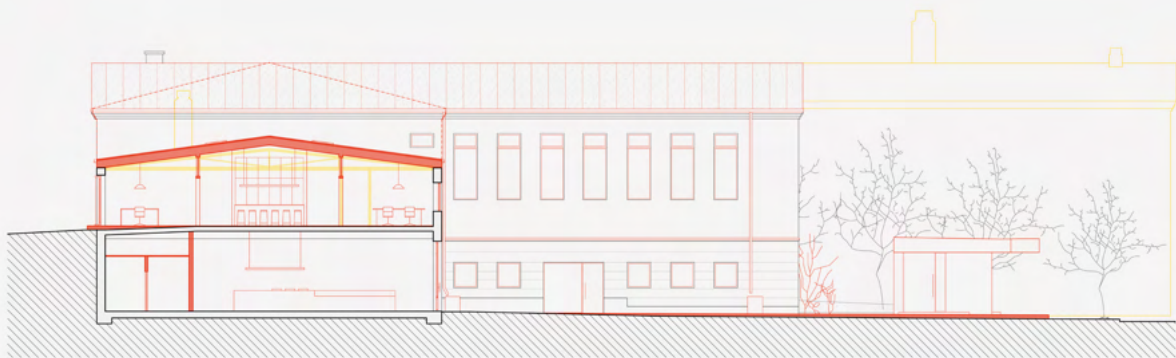




Section A

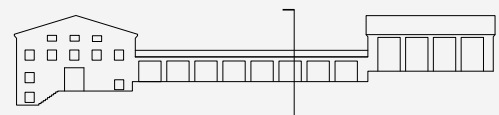
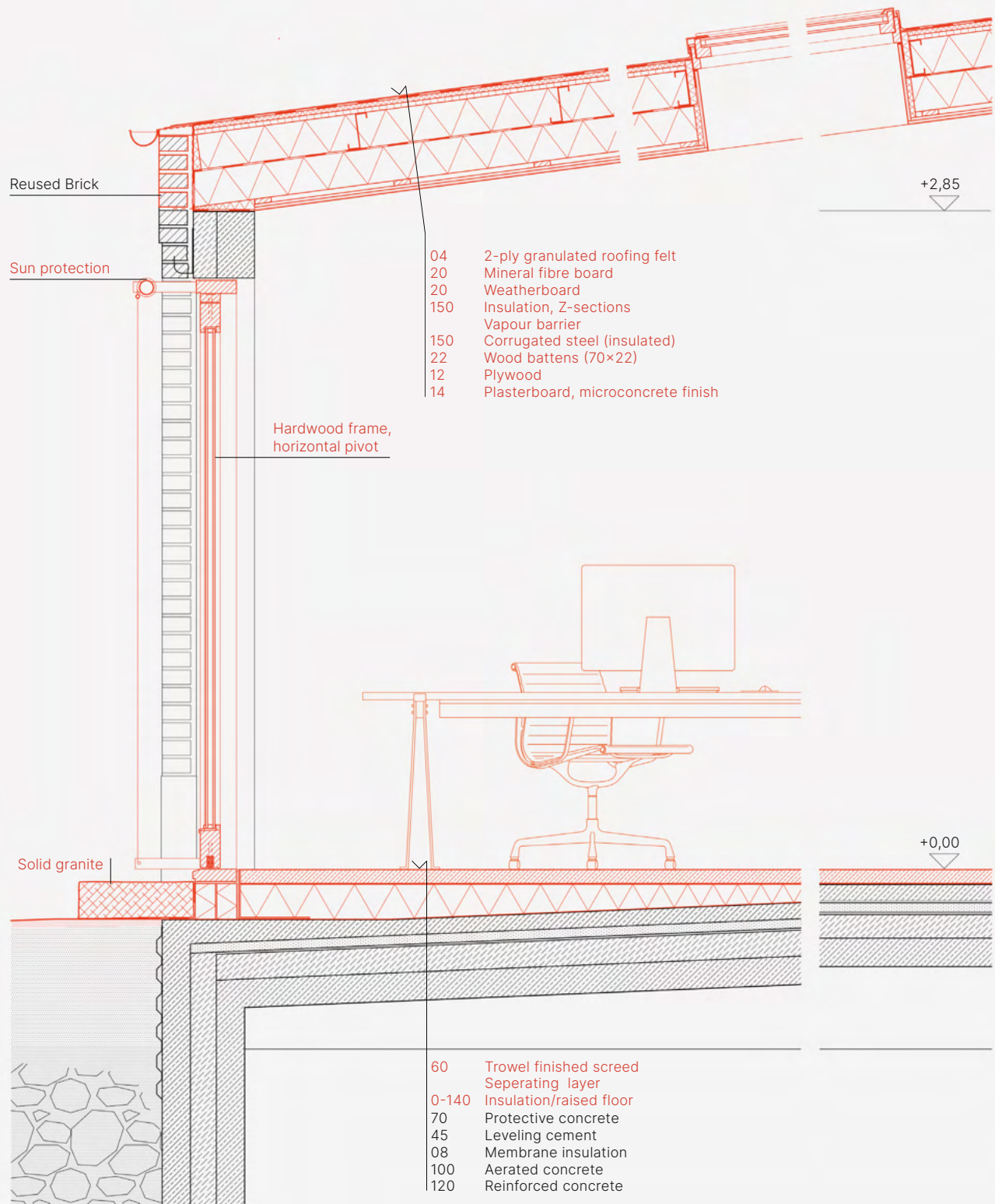


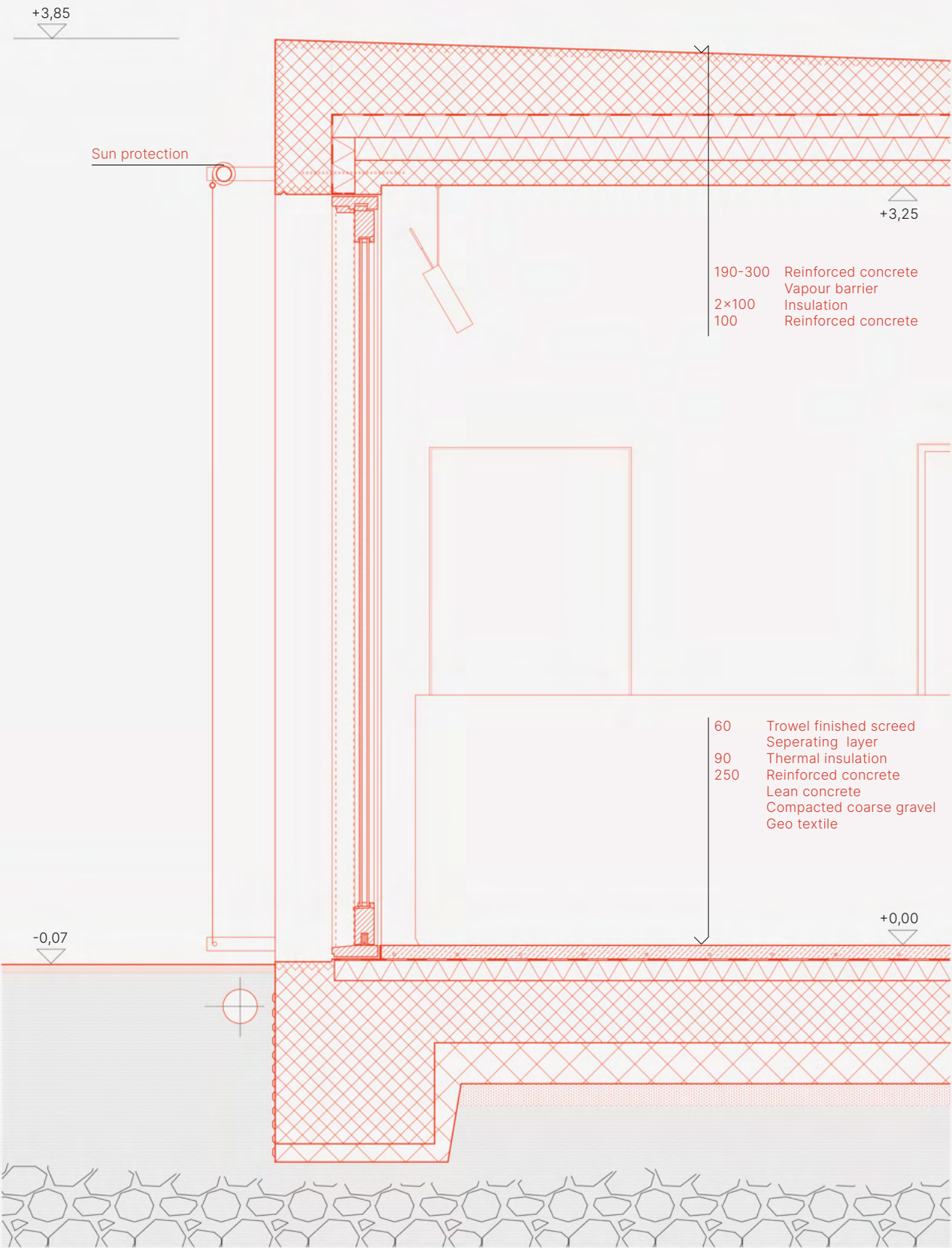
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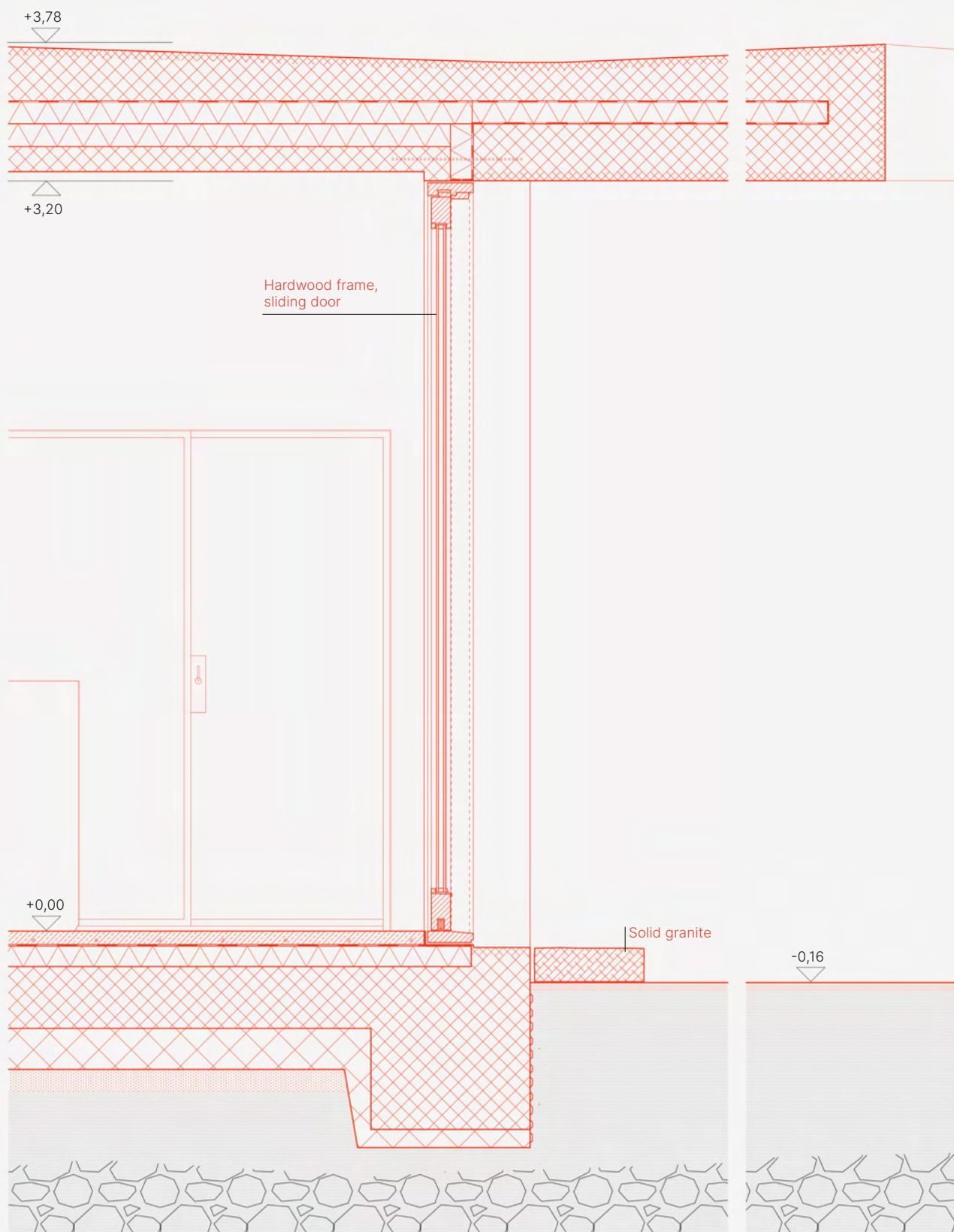


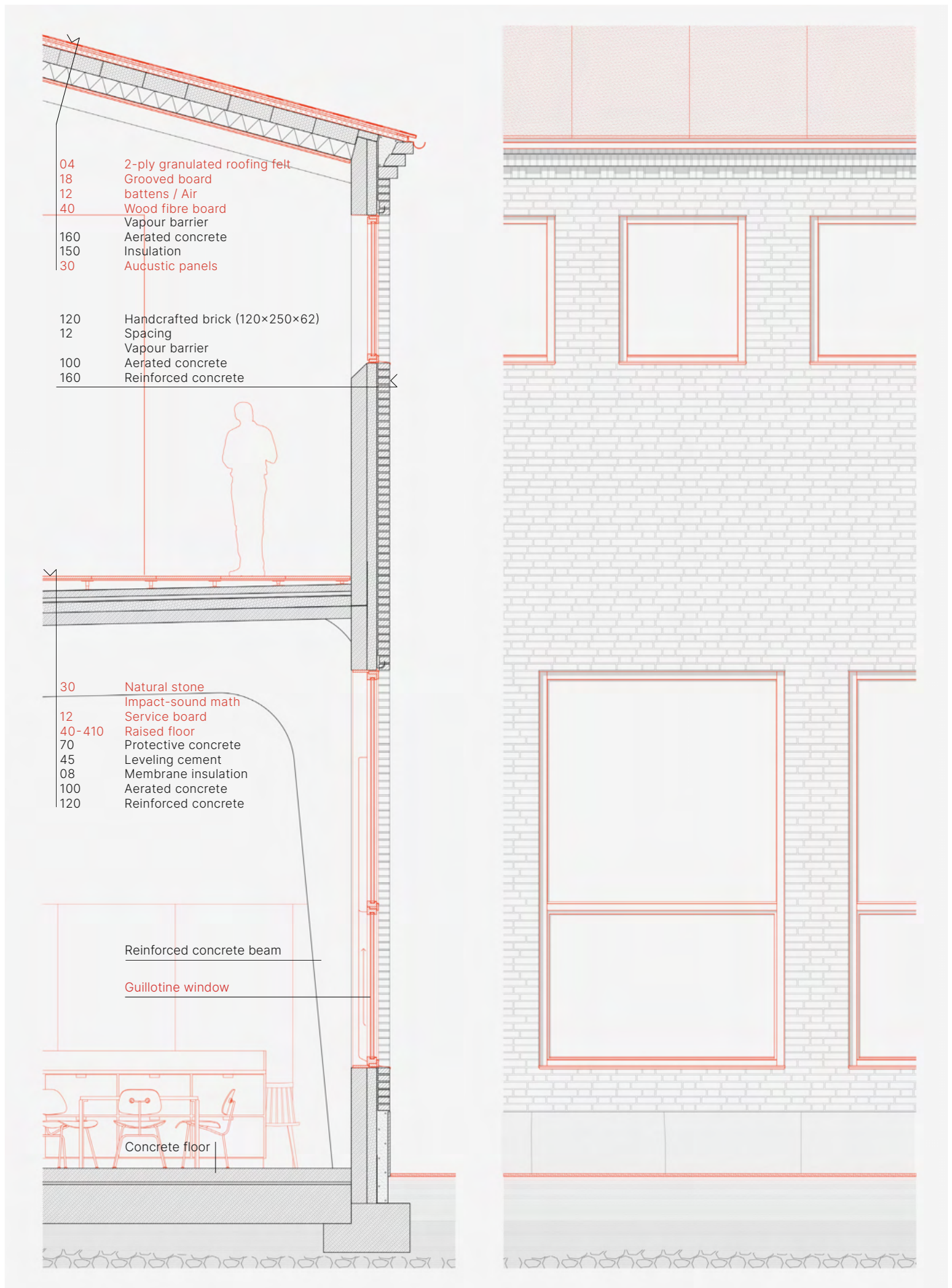
Section C

- Existing
- New
- Removed

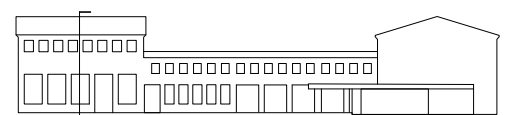


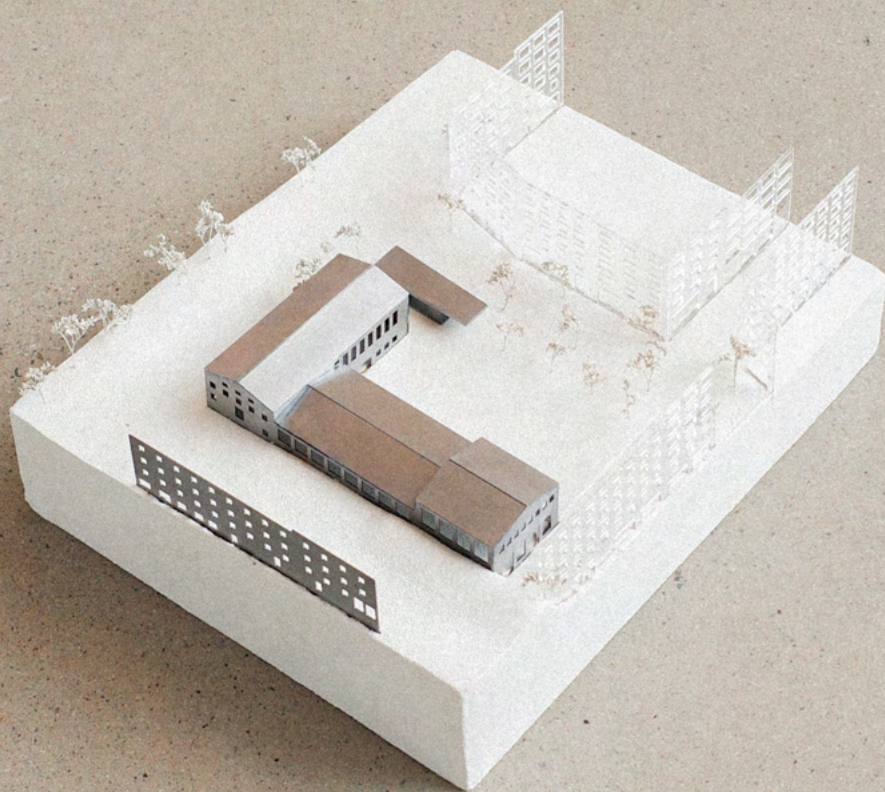






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Summary

The thesis has attempted to answer the two following questions:

(01)

'How can industrial buildings, like Kv. Bolmörten, which have been neglected in rapidly changing and developing environments, be retained, reused, and reinvented to adapt and thrive in its new surrounding?'

(02)

'How can a conversion contribute to the discourse of embracing the inevitable change, while acknowledging traces and memory embedded in its already existing structure?'

The questions have been studied and explored through literature and architectural research. In an iterative process, the thesis has developed through modelling, sketching, and reference studies, eventually leading to a design proposal. The proposal is presented with refined process materials including drawings, physical models, visualizations and illustrations. The design proposal engages in several topics of building transformation and adaptive-reuse - building within, upon, and around the an existing structure.

The project has been conducted on the site Kv. Bolmörten, Kungsladugård, Gothenburg - which serves as a good example for the research discourse. Being an utilitarian structure neglected from its rapidly changed context.

Discussion

Reflecting on the research and proposed conversion of Kv. Bolmörten, it began from a personal interest and fascination of Gothenburgs big development plans. When a city rapidly evolves and dreams big, I wondered what happens to the 'ordinary' buildings orientated within where these visions are unfolding. Kv. Bolmörten became a good example to study. With theoretical subjects forming the framework was the thesis starting point to enlighten and manifest that the imperative approach to rehabilitate rather than demolish, could lead to an altogether richer urban environment.

Approaching this building from different perspectives has been very challenging. The building itself is quite large and to transform and reprogramming it presented to be a substantial task. Additionally, including both the courtyard and a small additional volume that would build upon and form a whole with the existing structure added even further layers of complexity. The design proposal is formed out of the theoretical framework but also by my own perceptions when embodying the design. This reliance on my subjective perception also establish a limit to this thesis, making it inevitably subjective.

Critically reflecting on the design approach and outcome, the proposed conversion could be viewed as fragmented or ambiguous, disrupting the building's identity. Therefore, leading to ask the question: what is the buildings identity and how can identity be kept while adapting to contemporary needs? By mimicking, paying homage or something else? The core objective of this study has not been to answer those questions, but as research question (2) states, I have tried to explore how to find a balance between the inevitable change and cultivating the past. Early in the research, a clear idea and intention was formed: a block like Kv. Bolmörten develops its identity through evolving in an ad hoc, pragmatic, and inconsistent manner to fix, fit, and adapt to its inhabitants' changing needs. With the core objective of converting the block with the new context and its inhabitants in focus, and with the focus on material, patina and textures juxtaposition - I would end up in the conclusion that the identity is preserved and cared for both for the interventions focusing on fabric and usage.

However, the thesis could benefit from a deeper exploration of how the project's program would function in practice, particularly in terms of stakeholder involvement. Additionally, factors such as accessibility within the existing space could have received more attention. It is also important to acknowledge, as mentioned in the theory chapter, that kv. Bolmörten is not a building with high architectural heritage. The block is more of a crude space than a well-known monument. Therefore also fairly free from concerns; 'Do what you want, it can't get much worse - a landlord might say'. This marks a significant difference in the discourse on how to work with existing buildings when compared to a structure of cultural significance or public interest. This thesis contributes to the discourse on how to manage and work within our everyday buildings, not how to engage with buildings of high cultural and public heritage.

The aspiration was to create a deeper understanding of working within existing structures and their heritage, simultaneously contemplating the research questions. In essence can the proposal serve as a foundation for the research and dialogue on how to deal with buildings in need to catch up with its changed contexts. By implementing adaptive interventions focusing on necessity and pragmatic aspects aiming for effective and aesthetic outcomes has the process widened my perception of architectural transformation. Mostly in terms by redefining architecture as a static permanent entity to seeing the buildings as a formable living body acting as a 'collage of time'. The insight led to use the potential of adaptive reuse to create a form of storytelling, merging old and new to let it sail into the unknown future as a new whole. By working with materiality and textures, has the idea been to let them be exposed to life, allowing them to evolve in accordance as the relation between a building and its occupant evolves. To conclude, by retaining, reusing and reinventing our existing building stock, can we create a more sustainable and altogether richer urban environment.

[06] BIBLIOGRAPHY

Student Background

Education

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Work

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Reference list

Figure list

All images belong to the author unless otherwise stated.

Figure 1-3:

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Figure 4-8:

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Figure 9-14:

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Figure 15:

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Thank you for taking part of my project!



