

# "A NEW STORY"

Transformation of an old paper factory in Forsåker, Mölndal

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# CHALMERS

2017

## **A NEW STORY -**

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Forsåker, Mölndal

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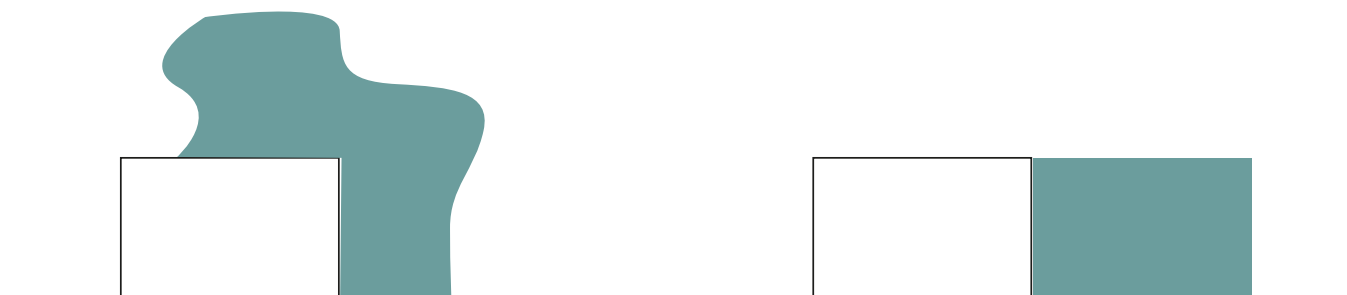
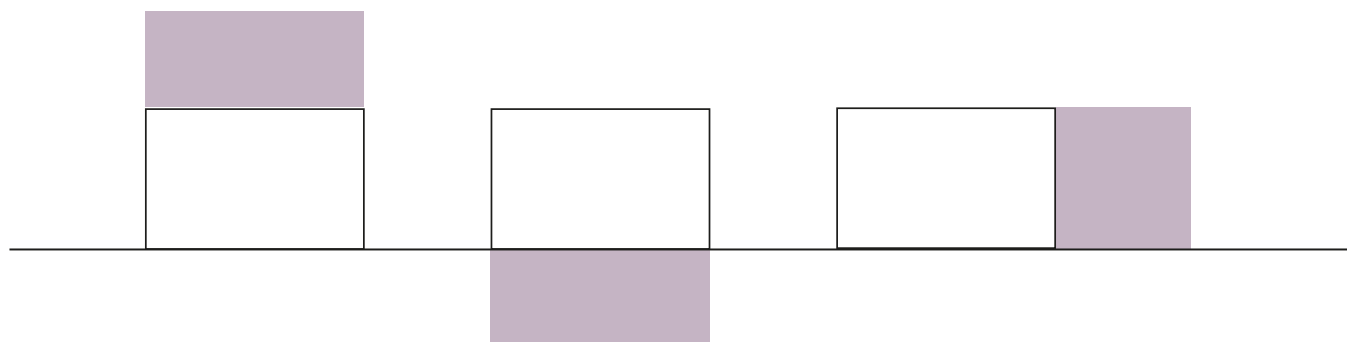
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Design for Sustainable Development **(MPDSD)**



# ABSTRACT

Almost all buildings have a story to tell, and as long as people use them the story continues. When society is changing so does the demands for certain types of buildings due to the fact that the function of what they were designed for is not being requested any longer. This change leads to empty structures on attractive locations in cities with no one to continue the story.

It doesn't have to be like this though, there are a lot of ways to utilise these structures without them being torn down and replaced. So how do you best work to not erase the history but instead rewriting it, adding new chapters, a new layer that makes the story continue further on with new life?

The purpose of my master thesis is to find new use for a couple of old industrial buildings that used to belong to a paper factory in Forsåker, Mölndal and investigate how to handle the meeting between old and new architecture when

facing the task of transforming and adapting these buildings to the 21st century.

The typology of this Master Thesis is research for design. Through thorough investigations, reading and analysing both the main topic, architectural heritage and urban transformation, and the specific site in Mölndal I have built a solid foundation that has served as the base for my design, resulting in a proposal for what the buildings could become in the future.

This thesis's aim has been to gain a deeper understanding of the complicated task of transforming old structures, the challenges you might face when working with them and how to approach the existing architecture when adding new elements of design. My wish is also that the result can be used as an example to show Mölndal municipality and the stakeholders invested in the site a possible solution of how the buildings can be used in the future.

# INTRODUCTION

## PURPOSE

This thesis explores the interesting **meeting in architecture between old and new** that occur when working with transforming or bringing old structures into the 21st century.

The purpose of this master thesis is to **find a new use for a couple of old industrial buildings** that used to belong to Papyrus Paper Company in Forsåker, Mölndal. With this thesis, my goal has also been to gain a deeper understanding of the complicated task of transforming old structures and challenges you might face while working with them. My aim has also been to find a design strategy of **how to best relate to and respect the existing architecture** when transforming these buildings and adding new design elements. My wish is that the result can be used as an example to show Mölndal municipality and the stakeholders invested in the site a possible solution of how the buildings can be used in the future.

## MAIN QUESTIONS AND OBJECTIVES

The main questions and objectives is **to find a way of how to best transform these buildings** and giving them new purpose, life and stories without forgetting their history. Investigate what functions could be suitable for the future of the buildings and the area in general and

to find an approach of how to best handle the meeting between existing architecture and new additions.

## BACKGROUND

The thesis falls under the category of **Architectural Heritage and Urban Transformation**. A field where there are always active debates and opinions on what is worth preserving and how to do it. My subject's aim was to explore this field and different opinions further and from the conclusions make a proposal that could contribute to the discussions of what to do with the buildings in Mölndal.

My first visit at the site was during the studio "Architectural Heritage and Urban Transformation" that I participated in during spring 2015. Back then, the focus of the course was working with conservation and transformation of building 18, the result of my project ended up being a proposal called **MöMoMA-Mölndal Museum of Modern Arts** that was developed together with **Yue Guo** and was an idea proposal of how to turn the building into a museum for art. During that time I only gained vague knowledge about the other buildings in the area but building 10-4-2 left a mental mark. So, when I decided to work with this site again, my aim from the beginning was to work with both of these buildings. Since 2015 a lot has happened on the site, many buildings have been demolished and new

plans for the area have been developed, meaning a lot of previous analysis of this area has had to be updated. During this thesis, I also encountered some difficulties in gaining access to the site and was not able to get inside the buildings, so most of the knowledge of interior spaces is from old drawings and site visits from 2015. It has not been as easy as I thought it would be from the beginning working with this site, but the unique character of this place and the time limits made me continue.

## METHOD

The typology of this MT is **research for design**. The project was started with thorough investigations; reading books related to the topic, making analysis on different scales, field studies and looking at relevant reference projects, building a solid foundation making my design decisions from.

There have been **two main focuses** that together have formed the final design proposal. **The first one** was investigating the site and buildings; from urban scale to building detail scale, from history to future. Finding its strengths and weaknesses and mapping out the different types of values that was later taken into consideration when working with transformation of the buildings.

The **second one** was finding a strategy for the design. Reading texts related to preservation and transformation

and looking at different reference projects of how the meeting between historic buildings and new additions has been handled previously was concluded into some factors or design strategies then applied to Forsåker. All investigations resulted in a design proposal of a future option for the site.

My **final result** is a proposal where spaces for public functions and a hotel is created, that will support and provide business opportunities for both new residents, workers and visitors to the area. The main focus of the design part has been the hotel hosted on the upper levels of the buildings and the addition of a new architectural element placed on top of two of the existing structures with ambitions to add something eye-catching and in the same time connect the buildings.

## THEORY

For learning about the site, I have gotten a lot of useful information from documents available on the municipality's webpage combined with information and photographs from the Mölndal museum. For the site's current state and future context, I have gotten a lot of help with material from Nyréns, the architects that together with Mölndal are responsible for the structural plan that is developed for the site's future.

For learning about theory of conservation and transformation I have

read a range of different books and articles, the two that has played the biggest influential part in the result of this thesis is the book Old Buildings, New Designs by Charles Bloszies (2012) and an article in the magazine "Arkitektur" called "Smit aldrig undan från historien" by Thomas Lauri (2015) where both texts discusses how to relate to the existing and its history when facing the task of transformation.

## DELIMITATIONS

In this project, I have limited myself to not question the urban planning of Nyréns and Mölndal, but instead use it as a scenario to put my buildings in a future context. I have also chosen to put the main focus on the hotel part and new architectural additions of the proposal and not show detailed floor plan solutions of how the spaces for public functions will be used.

## READING INSTRUCTIONS

Following is a brief description of the structure of the booklet work that is divided into **five** main parts:

**First part** is understanding and getting to know the site. The chosen buildings are located on an old industrial site close to the city center of Mölndal outside Gothenburg. This part will start with a thorough site analysis from the urban connections to the detail scale. From the past, to the

present and the future and all this will set a site-specific framework for my project. Conclusions will be made on p.40

In **part two** I will first start off with discussing the different reasons why old buildings should be preserved or not and our relation to them compared to new architecture. Further on I will look more into if and how they need to be adapted to meet up to new rules, legislations and changes in society's needs. This will provide me with the base for what issues that needs to be addressed when facing the old buildings in Forsåker and the arguments that can be used to promote their preserving.

In **part three** more focus will be on the design aspects when making alterations and additions to old buildings, how the meeting between old and new has been handled previously and defining some design strategy for this. Looking at different examples of transformation and additions with a variation of contrast, from the modest to the extreme.

The conclusions from these three parts will together create **part four**, which consists of the design criteria and strategies developed for my own project. These strategies will be transformed into the final proposal, which is **part five**.

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# CONSERVATION, PRESERVATION, RESTORATION AND OTHER SIMILAR WORDS

There are a lot of different words related to this topic, and many of them are quite similar in their meaning which make them hard to separate (especially when translated into Swedish). So, to avoid further confusion I will try to explain the different words connected to architecture and how I use them based on what I've learned in this process in this segment of the booklet. The definition of the words has been formed with help from different dictionaries online such as google translate.

**Preservation** - Bevarande." The act of preserving; care to preserve; act of keeping from destruction, decay or any ill". This word will be used as the main word for keeping old buildings from being demolished.

**Retention** – Bibehållande." To keep. The continued possession, use, or control of something." (Wiktionary 2017).

**Restoration** – Restaurering/Återställande." The process of bringing an object back to its original state; the process of restoring something" (Wiktionary 2017).

**Conservation** – Bavarande/Konservering. Similar to preservation but somewhat stricter." The act of preserving, guarding, or protecting; the keeping (of a thing) in a safe or entire state; preservation." (Wiktionary 2017).

**Transformation** - Omvandling." A marked change in appearance or character, especially one for the better." (Wiktionary 2017)

**Conversion** - Konvertering/Omvandling." To transform or change (something) into another form or state." (Wiktionary 2017)

**Retrofitting** - Eftermontering." To add or substitute new parts or components to some structure etc., that were not previously available; to modernize." (Wiktionary 2017)

**Adaptive reuse** - Adaptiv Återanvändning. Refers to the process of reusing an old site or building for a purpose other than which it was built or designed for.

# THE SITE

## LOCATION

The chosen site is the area of an old papyrus factory, nowadays known as Forsåker, in Mölndal south of Gothenburg.

The area has a strong location in a municipality that is becoming more and more interconnected to its surrounding areas. It is located close to the city center with only 500 m to Mölndal Bridge, the main public transportation node.

The infrastructure and close distance to Gothenburg makes the area good for future development. The European highways E6/E20 run through the area from north to south. The train station is connected to the western main railway line between Gothenburg and Malmö and Mölndal is also connected to Gothenburg by both tram and bus.

North of the area is the old historic neighbourhood called Kvarnbyn, an area rich in culture and history. Mölndal museum on top of the old river and its beautiful surroundings are the main attraction in the area today.

The Forsåker area is about 170 000 square meters and used to consist of production and

storage facilities, an old fruit garden and back in the days there used to be housing for the workers that were employed at the factory. During the last hundred years, the area has had an emerging, organic and dynamic building development along the Mölndal River. Buildings have been added and torn down after the factory's needs. This has led to a rich variety in materials and expressions of industrial architecture.

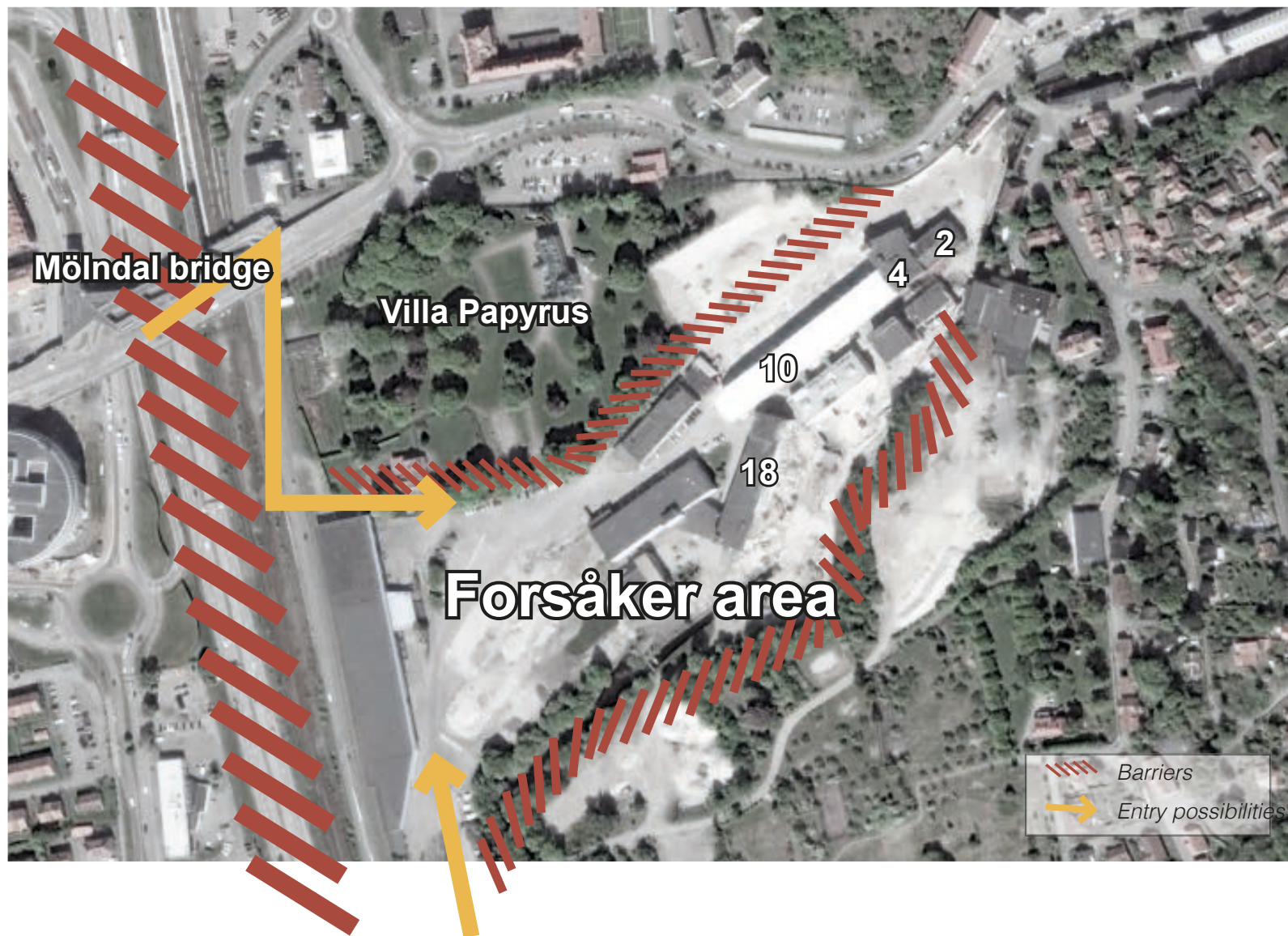
The factory was closed down in 2009 and Mölndala AB, a company owned by Mölndal municipality, bought the land. In 2014-2015 decisions were made to thin out the dense building area and to tear down some of the existing buildings to make the area more suitable for other types of development.

Today in 2017 most of the buildings on site are either empty or vacated. Two of the buildings left are building 10-4-2 and building 18, both which will be the main focus of this project.

# WHERE?



# BARRIERS



# BARRIERS & BUILDINGS

Although the Forsåker area has a good geographic location it also faces a few challenges. The area is visible to its surroundings but disconnected due to physical and mental barriers. The physical barriers, such as the topography and the highway, contribute to the closing of the area from its surroundings.

Villa Papyrus and the park belonging to the property are today owned by a private company and not accessible to the public, this also creates a big barrier towards the city center making it harder to access the site coming from the Mölndal bridge. There are also the combinations of physical and mental barriers in form of the area being private property and surrounded by fences. Today you are not allowed to access the site without permission.

The chosen buildings, building 18 and building 10-4-2, are located in the central parts of the area. Building 18 also called "the Chromofactory" is one of the oldest buildings in the area's almost 400-year-old history. Building 18 is different from the other buildings because of its orientation on a different axis which makes the building important in creating interesting spaces inbetween the buildings. In very close distance to building 18 is building 10-4-2, one of the most oblong buildings in this area.

Since the factory was closed down in 2009 the area has deteriorated, a lot of

buildings have been demolished and many of the buildings still standing are in quite bad shape. This empty and abandoned area has attracted graffiti makers to the site which today has led to that both interior and exterior surfaces are covered in colors and letters.



*A constant battle in the fencing around the area between people wanting to get into the area and the people keeping them out.*



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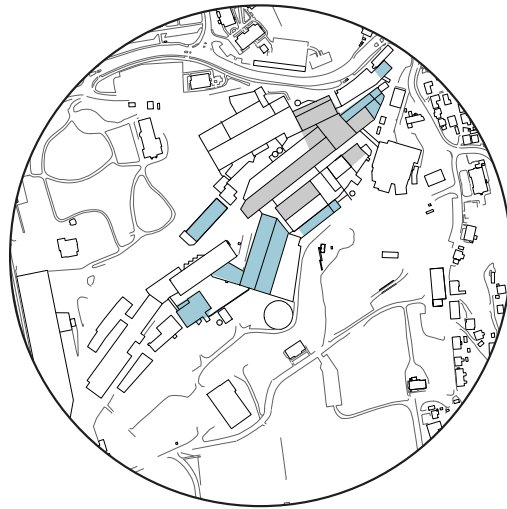
18

View from south in 2016. Photo: Nyréns



View from north west in 2016. Photo: Nyréns

# HISTORICAL DEVELOPMENT



*Buildings built during 1900-1920*



*Buildings built during 1932-1950*



*Buildings on a map from 1899*



*Buildings built during 1920-1932*



*Buildings built during 1955-1980*



*Buildings left in 2016*





*Buildings built during 1950-1955*



*Buildings in 2005*

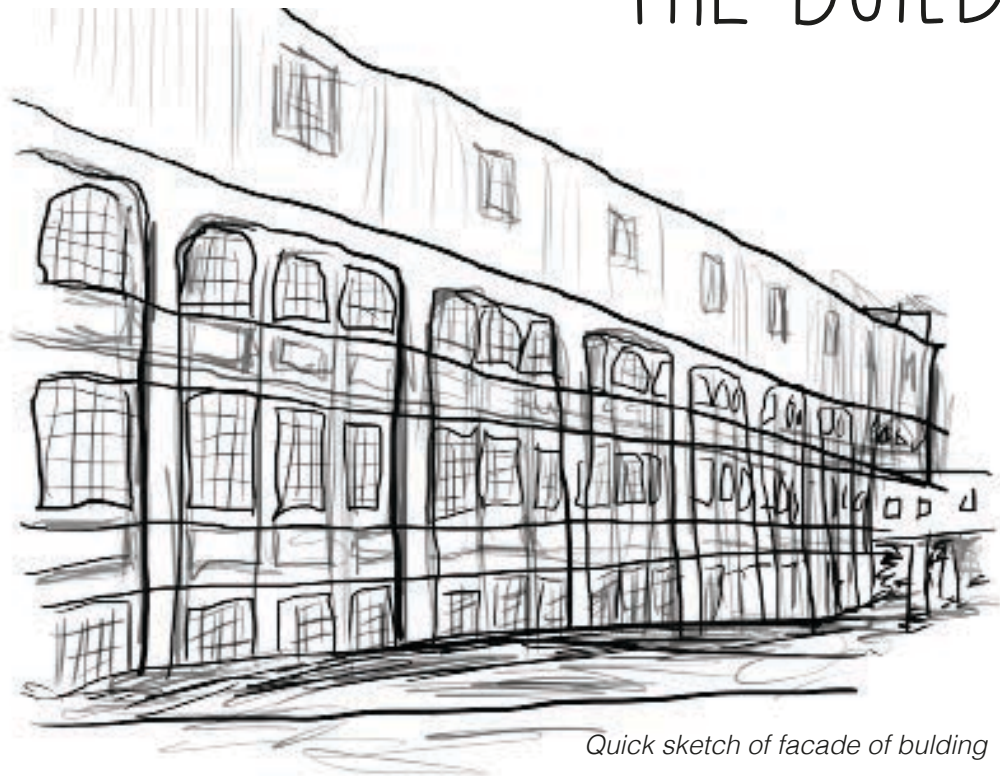
# HISTORICAL DEVELOPMENT

## SPACE/TIME MATRIX

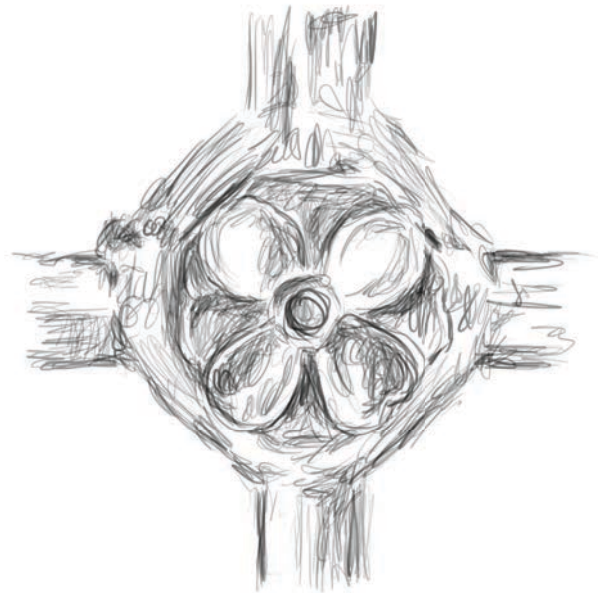
	1600	1700	1800
<b>Mölndal Municipality</b> (Fässberg, Källered, Lindome)	<p>During the 17th century the current Mölndal municipality was located in the middle of an active area. The city of Gothenburg is founded and the mills of the waterfalls in Mölndal supplies the emerging city.</p> <p>In the beginning of the century the area is a border region when parts of the municipality (Fässberg and Källered) belonged to Sweden while Lindome, was a part of the region Halland belonging to Denmark. Because of this, there were a lot of conflicts in the area but after the peace in Roskilde 1658 Halland becomes a part of Sweden and the battles cease. On the side of these big events, Mölndal is an area with quite scarce farmland and small villages.</p>	<p>The closeness to Gothenburg affects the municipality of Mölndal in many ways during the 18th century.</p> <p>The East Indian Company and other big businesses bring rich merchants with loads of money, some enough to build summerhouses like Gunnebo castle.</p> <p>In Lindome there are a lot of joiners who sell their furniture in the city.</p> <p>At the end of the 18th century the first shift in land reforms occurs. This was the beginning of a big change in the rural areas, when people moved out from small villages out to bigger farms.</p>	<p>The 19th century is an era of movement. The land reforms continue to affect the whole countryside. The small villages are scattered and replaced by bigger farms.</p> <p>During the later part of the century, many people leave the agricultural society and move to the fast-growing mill towns where you could work and live in the same area. Others go even further and emigrate to America.</p> <p>The railroad is also introduced during this century which leads to increased mobility within the country.</p>
<b>Ownership &amp; company structure</b> Forsåker area and Papyrus	<p>Thanks to the location of the Mölndal river, which provided an important source for waterpower, the first paper work is established in the area 1653 by bookbinder Thomas Khun. Unfortunately this first work was closed after only a couple of years.</p>	<p>Two new works were founded, Mölndals Gamla Pappersbruk 1736 by Esbjörn Schiller and Korndals Pappersbruk 1763 by Johan Georg Lange. At the end of the 18th century both companies were bought by Samuel Norberg who concentrated the production around Korndals pappersbruk.</p>	<p>In the 1850's the company was bought into a larger company called Rosendahls Fabriker AB who also owned other businesses such as both textile and sugar mills already established in the area thanks to the Mölndal river.</p> <p>The dominating owner of the company was David Otto Francke "the king of Mölndal". Francke dies in 1892 and the company goes bankrupt.</p>
<b>Paper factory &amp; production</b> In Forsåker	<p>The factory was dependent on old textiles to make the paper pulp, something that were a scarcity in a quite poor and scarcely populated area.</p>  <p>Source: Wikipedia, 2017</p>	<p>During this century, the paper manufacturing industry started to become an established business in the area. All paper were produced by hand.</p>  <p>Source: Wikipedia, 2017</p>	<p>Korndals went from producing paper by hand to making them with machines in the middle of the 19th century.</p> <p>New methods for paper manufacturing were developed and the textile rags were replaced with chemically treated wooden chips.</p> <p>The paper produced originally were of the finer sort. It later expanded into cardboard and different colors. In 1870 they produced nearly half of all the paper manufactured in Sweden.</p> <p>The area also provided living opportunities with small wooden houses for the workers.</p> <p>The fancier Villa Korndal (today Villa Papyrus) was also built in 1870 and was the home of the factory manager.</p>

1900	2000	FUTURE
<p>During the first half of the 20th century the industrial society reaches its culmination point, but during the latter half, many of the bigger branches of industry hit recession and a lot of people lose their jobs.</p> <p>In Mölndal and Lindome the textile-crisis in the latter half of the century means a big re-adjustment. The factories are closed, and the heart of the society stops beating. In the meantime, the combination of good economy and democracy creates a welfare society where more and more people are employed in sectors such as education, healthcare, public service and the service industry.</p> <p>The municipality invests in larger projects to supply all citizens with living opportunities, electricity, good infrastructure and education.</p>	<p>Since 2004 the municipality of Mölndal goes under the name of Mölndal stad. It has had a steady population growth during the latest decades. The town has around 62 000 inhabitants and is the third largest municipality in the county region.</p> <p>The most common occupation in 2012 was within personal care and related work sectors (SCB 2014).</p> <p>The average income in 2013 (319 000 SEK) is larger than in both county (277 000 SEK) and Sweden (282 000 SEK). (SCB 2014).</p> <p>The average age in Mölndal 2013 (39,3) is also slightly younger compared to Sweden's average (41,2) (SCB 2014).</p>	<p>The municipality have created "Mölndal vision 2022" which contains goals for the future development of the municipality and city centre. There are three main goals;</p> <ul style="list-style-type: none"> <li>x A brave city with a distinct history.</li> <li>x Mölndal strengthens the west of Sweden.</li> <li>x A sustainable city were everyone can grow and be well.</li> </ul> <p>"Mölndal is the sustainable city with opportunities for all. With courage and creativity, we will strengthen the western parts of Sweden".</p> <p>They will achieve this by creating new possibilities for new companies to establish in the area and develop residential areas with apartments and creating possibilities for more people to live in Mölndal. (Mölndal Municipality, 2017)</p>
<p>1895 The company was bought by Marcus Wallenberg who is the founder of Papyrus.</p> <p>1987 the company is bought by Stora Kopparbergs Bergslags AB and becomes Stora Papyrus.</p> <p>1998 the company merge with Finnish company Enso and changes name to Stora Enso Mölndal AB.</p>	<p>The last change in ownership happens in 2002 when Klippan AB takes over the business and the new name becomes Klippan AB Mölndals bruk.</p> <p>The company goes bankrupt in 2005 and the production closes.</p> <p>In 2009 the City of Mölndal acquired the industrial property under the company name Mölndala fastighets AB, and together with architecture firm Nyréns they are developing a new structure plan for the area.</p>	<p>2016 the plan program developed by Nyréns and Mölndala got approved by the municipality and they are now in full action putting the final touches on the detail plan. Together with 6 building companies; Aspelin och Ramm, ByggVesta, Peab, Trollängen, Veidekke och Wallenstam they are planning to build around 3000 apartments in the area. There are plans to start building in 2018.</p>
<p>Wallenberg concentrated the business around the lower parts of the area, a lot of the old buildings were torn down and new ones were added.</p> <p>The area is connected with rails to the railway station in Mölndal.</p> <p>Papyrus tries to become self-sufficient in the materials used for making pulp and experiments with own methods (making pulp with straw etc.) They never succeed in becoming self-sufficient and in the 1940's the production of pulp is shut down.</p> <p>During the following decades the business was developed into a big modern international company. Expanding the different variations of paper produced. Apart from also providing living opportunities Papyrus also set up bath houses, a gymnastic hall and grocery stores etc. for their employees.</p>	<p>In the later years before closing, the company produced three different types of paper; Macoprint, Colorit and cardboard.</p> <p>The increasing globalization and digitalization could be seen as the main reasons for the factory's loss in importance which subsequently leads to it being shut down in 2006.</p>	<p>Mölndala has no specific plans for the future of the remaining buildings except ideas for them to contain public functions that will contribute to the area and the new development planned.</p>

# THE BUILDINGS



*Quick sketch of facade of bulding 18.*



*Window mullion detail, cast iron flower.*



*Interior sketch of floor 3 in building 18.*



View from north east in 2016. Photo: Nyréns

# BUILDING 18

## BUILDING HISTORY

Building 18 is one of the oldest buildings in the area. It used to belong to the previous company established on site, Korndals and there are sources that indicate that the original building dates back to the 1850's. The original building was a one-story brick building with a pitched roof. During the time that the building belonged to Papyrus AB it was used as the chromofactory and as a hall for sorting paper. In the chromofactory they dyed the paper to become "chromo paper" or as it is also called "fantasy paper", a paper with both colors and patterns.

During the 20th century the building went through several reconstructions. In 1909 Building 18 was extended towards the east with building 19. In 1910, big parts of building 18 were also demolished and rebuilt by Skånska Cementgjuteriet due to the lack of space and bad condition of the structure.

The new building in armed concrete was built on a sloping plot with two and three floors and a flat roof on top of the existing granite foundation from the previous building. At the same time building 18 and 19 were joined and together formed the chromofactory and were given a common facade. Windows were placed in three between concrete pillars with

windowsills out of cast iron with a brick cornice and a parapet of cross bracing yellow bricks. The windows were mullioned cast iron windows with a flower decor, rectangular ones on the bottom floors and arched ones on the top floors.

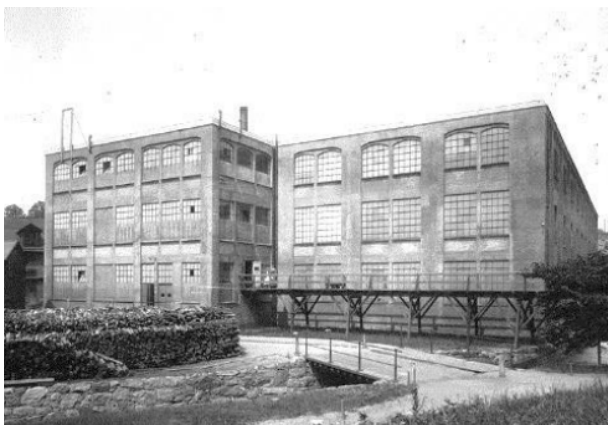
In 1916 Building 18 was extended towards the south in the same style as the original building.

In 1930, the building got an added fourth and a smaller fifth floor. The facade on the fourth floor was plastered and grouped in the same way as the original windows. The fifth floor was placed on the northern part of the building.

1962 building 18 and 19 got another extension connected toward the east, building 20 and the two top floors were covered in red corrugated metal. In the 1940's building 111 that connects building 110 to building 18 was added.

In spring of 2016 building 19 and 20 were demolished and today building 18 stands alone once again, but now with an open gap as a facade towards the east.

The building has a BTA around 7000 sqm and the interior ceiling height varies between 3-4 meters.



(1) Photo of the area in 1899. Part of the old chromo factory showing in the right corner. (2) Western facade of building 18 in 1918. (3) The western facade of building 18 covered in vines in 1999. (4) Interior photo from 1918 showing the hall where they used to sort paper. (5-6) Samples of the "chromopaper" also called "fantasy paper" produced in the building. (7) Picture from 1918 showing building 18 and 1. (8) Photo from 1968 showing building 18, 19 and 20. (9) Photo from 1973 where the facade of building 18 has been changed.

# BUILDING 18

## EXTERIOR CHARACTER

The old chromo factory is a big rectangular building placed on a sloping plot of land with the first floor partially below ground. It has a history of continuous change during the last 100 years. Today the building consists of four whole floors and a fifth smaller floor which only stretches over a small area of the buildings northern part.

The western facade stretches up to the fourth floor and consists of some type of grey plaster and yellow bricks below the windows. The fourth and fifth floor is covered in red corrugated sheets. The facade also used to be covered in vines that have damaged parts of it. The building is connected to building 110 with an extension (111) in the southern part. The extension 111 is covered in white corrugated sheets and is supported by concrete pillars.

The three bottom floors of building 18 share a cohesive architectural expression. The windows on the first and second floor are rectangular paned windows made of cast iron and aluminium (some cast iron windows on the first floor have been replaced with aluminium) the windows on the third floor have the same character but are arched instead of rectangular. All cast iron windows are decorated with a cast iron

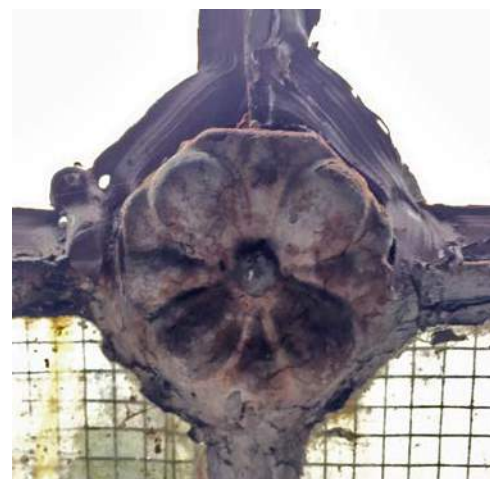
flower in the intersection of the mullions and have a yellow brick ribbon at the bottom.

The short side of the building in the south has a plastered facade in grey. The large windows have been walled up and replaced with smaller ones of concrete glass, three on each floor of the building. Down to the left there is a small port for trucks made of white corrugated sheets.

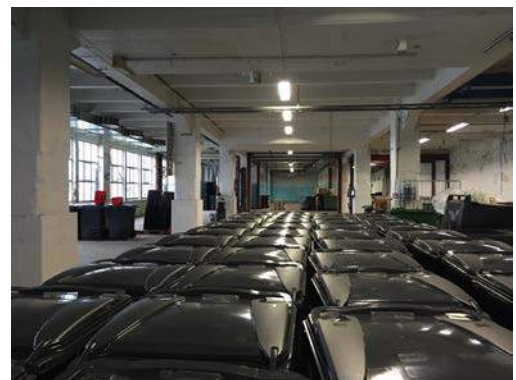
The eastern facade is today missing due to the demolition of building 19 and 20 and could be described as a patchwork of concrete with plywood and corrugated sheets to cover the former connections to building 19.

The north facade that also used to be connected to other buildings is today once again exposed and consists of a patchwork of concrete and metal sheets.

For me, the part of the building that creates the most memorable impression after leaving the site is the cast iron windows and the red extension on the fourth and fifth floor of the building. The expression of the red corrugated metal is nothing that I necessarily like, but it still has dominating characteristics that creates a mental image when you are not present on site.



1) Windows on floor two of the western facade in 2015. 2) Tallest part of the east facade in 2017 1. 3) Mullion flower detail on all cast iron windows. 4) Western facade with connection to building 111 in 2015. 5) Western facade with smaller fifth floor towards the north in 2015. 6) Southern short facade with connection 110 towards the left and the exposed south east facade in 2017. 7) Corner between southern and western facade and connection 111 in 2015. 8) Short facade of building towards the north in 2017.



1) Open space at floor four in 2015. 2) Cast iron staircase, original detail. 3) Interior details on fifth floor. 4) Graffiti on cast iron windows on floor two in 2015. 5) Division of space on floor four in 2015. 5) Elevator door, floor four in 2015. 6) Open space and elevator door, floor four in 2015. 7) The difference in height with and without the inner roof. Floor four in 2015. 8) Garbage bins at floor one in 2015. 9) (Opposite page) Open space layout with visible structural elements on floor three in 2015.

# BUILDING 18

## INTERIOR CHARACTER



The first four floors are built with the same general layout containing big open spaces carried by volute concrete pillars but the pillars on the fourth floor are a little bit smaller in dimensions than the others. Floor, ceiling and soffit is made out of concrete. The rooms only get daylight from the west facade windows. Floor four and five is lacking the same amount of daylight as the other three floors due to most of the original openings being covered up by a red corrugated sheet. Towards the east the building used to

be attached to building 19. On first three floors, you can also see the pillar structure of the old exterior wall before the extension in 1916.

After the industry's closure in 2005 the building has degenerated quite fast. Copper thieves and graffiti artist have left the biggest marks with pipe insulation laying on the floor and the walls covered in graffiti.

In the building, there are details left from the original building interior such as a cast iron spiral staircase with flower decor.

# BUILDING 10-4-2

## HISTORY

Building 10 was one of the first buildings established on site by the Papyrus Company in around 1896. The builder was F. O. Petersson, who was responsible for many of the buildings established on site 1896-97. During this time, the building had another separation of functions throughout the building and the current separation of 10-4-2 occurred later in the 1900's.

Building 10 was originally designed as a hall for paper machines, a linear one level brick building with a stone base and pitched roof. At its center there was a smaller transverse building. The brick facade had arched windows with mullions that were placed in pairs. Between each pair were buttresses that divided the facade into regular sections. The southern gable had a gate with double doors, paired windows and three arched windows placed near the ridge. Alongside the roof there was a brick cornice. Other ornamentations of the buildings were decorative segments in the window scopes made of yellow bricks.

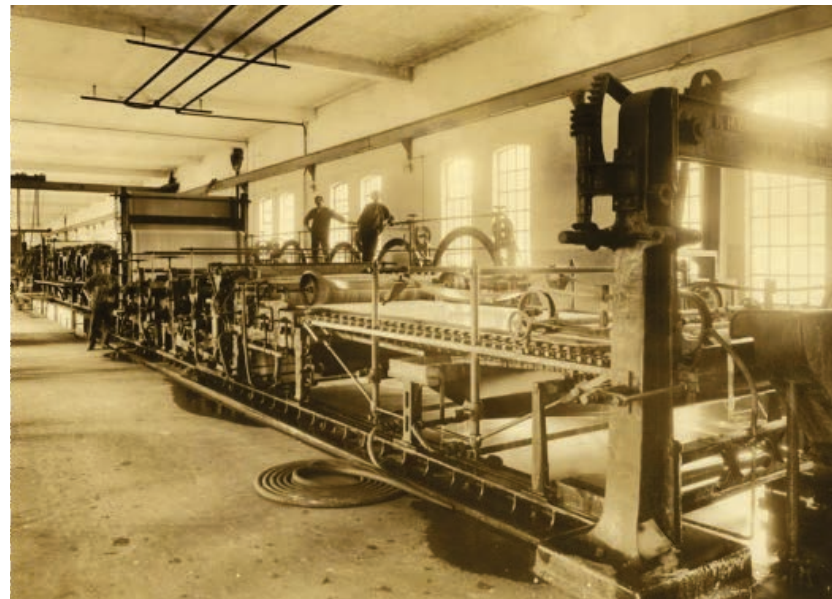
The building has a loadbearing structure made out of concrete and exterior brick walls. During the 20th century it went through several renovations and reconstructions, one of the earliest being current building 4, with several new floors

and a transversal-pitched roof. During the 1910's the whole building had an extra floor added and got a uniform facade with the same division with windows and buttresses on both floors.

Current building 4 used to be the place for the "Hollander beater", a machine that made pulp out of cellulose fibers. After a fire in 1914 the building was remodeled and modernized, because of this renovation the building now had three floors and a flat roof. The facade was made in the same style as the original with the same cornices and ornamentations but without the buttresses.

The building north of building 4, current building 2 were also used as a hall for paper machines but kept its previous shape during this renovation. Later on, even building 2 got another floor similar to the one added on building 10.

In 1929 building 10 got another extension that is the current southwest gable in the same style as the original facade. The corner towards west is beveled due to nearby railroad tracks that were there at that time.



(1) Photo from around 1900 showing the original facade. (2) Interior image of machine hall in building 10 from 1918. (3) Building 10 year 1918 showing the gable and buttresses dividing the facade. (4) Machine hall in building 10 from 1970. (5) Southeast facade 1918 after the added construction of building 2 nearest in image followed by 4 and 10. (6) The Hollander beater in building 4 from 1970. (7) Image from 1961 showing the southwest gable of building 10 with bevelled corner. (8) Image from 1998 showing the southwest gable of building 10.

# BUILDING 10-4-2

## CHARACTER & HISTORY

(1) Photo from around 1900 Building 10-4-2 was built by F.O. Petersson and is one of the oldest buildings on the site area. Due to its location and orientation in relation to its neighbours and the Mölndal river it is an important piece for creating rooms in the urban environment. When standing on the bridge running over the Mölndal river, separating Kvarnbyn from the Forsåker area the building is the main focus.

Until around 1930 the building was continuously developed with new additions and renovations, all executed in the original style which contributed to it maintain a cohesive appearance. Then, during the latter part of the 20th century more alterations were made, with a less aesthetical ambition and care that are visible today. One could argue that these alterations give the building a beneficial storytelling quality, showing a vivid and active past.

Overall the building showcase an architecture that was common in the industrial world in the beginning of the 20th century when it was important to showcase an ordered and successful business. The facades are made out of red bricks with buttresses and overhanging eaves.

The windows have arched vaults and a yellow brick ribbon at the bottom.

The interior is a rationalized space with large volume rooms carried by concrete pillars. It consists of two to three floors (and a part

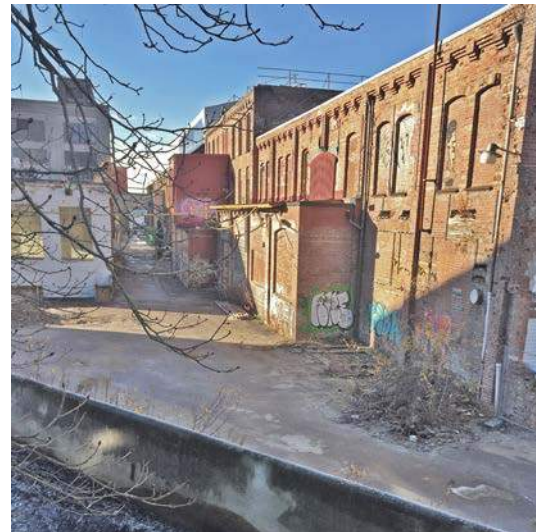
basement) in total around 7400 BTA. Ceiling height varies between 4,0-6,4 meters.

In 2016 the buildings got separated from its connecting neighbors and the western and north facade of the buildings is in the same state as the eastern facade on building 18. A patchwork of metal sheets, concrete and bricks.

For me, the most memorable parts of this building are the red bricks and their details, the old window openings and the graffiti bringing splashes of color to an otherwise grey area.



*Part of the eastern facade in 2017.*



1) North short facade building 2. 2) Eastern facade with building 2 in the foreground. 3) Short facade towards the south with building 18 in the foreground. 4) Western facade of building 4 and 2. 5) Graffiti on the eastern facade. 7) Openings on short south facade 8) West facade of building 10. 9) Interior space of building 10.

# HOLISTIC EXPERIENCE

## THE AREA

When entering the area for the first time, it feels like it may be one of the most depressing blocks in the entire city. There is a sadness to the area with buildings without purpose and no humans activating the place. Oversized structures with damaged facades. It has been worn down by time and climate, both have not been very kind.

After entering the interior spaces, the old buildings with strong structures and large, versatile and open spaces triggers a range of emotions.

A bit dark and frightening on the inside but also a trigger for curiosity to inspire new ideas. Cold and moist. The concrete and metal interior creates interesting sounds and echoes in the building.

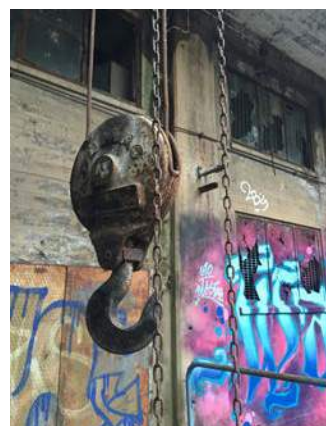
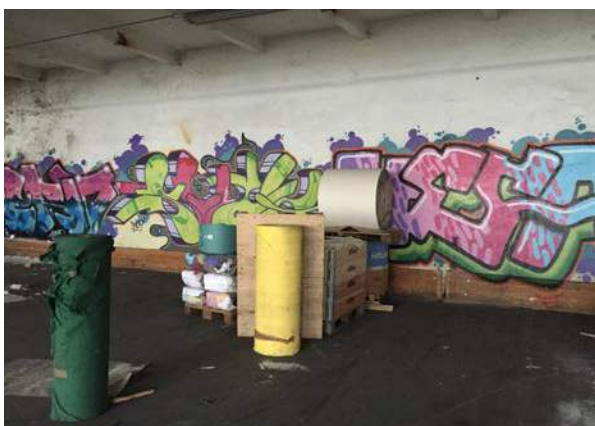
Unused but not abandoned, it is evident that people have been moving around in the buildings when no one else is around.

In the same way as the old factory was used for making paper, the buildings today have in itself become a paper, a canvas for the graffiti artists

to express themselves on. The colorful graffiti are balancing the dead atmosphere and increasing the artistic & cultural senses of the whole area.

As the buildings get older, new layers of art and history are added in the same way as on a palimpsest and also in the same way as they used to add new buildings continuously before the factory was closed. The histories and the stories associated with each layer are what make the buildings special.

Some of the creators of the wall art and graffiti are known artists, making a living as artists, art directors and designers both national and international. In that way, the graffiti could also be considered a part of the cultural heritage and not to be completely removed from the site.



- 1) Dark space with no natural light, perfect location for a horror movie.
- 2) Wall painting on site made by local artist Ollio and Sletz CWD.
- 3) Old industrial details still remaining on site, the colourful graffiti brings some type of life to the site.
- 4) Matching curtains and graffiti.
- 5) Windows being covered by the red cladding on floor 4 and 5 leads to no natural daylight.
- 6) There is almost no wall on the inside that hasn't been covered with colour.
- 7) Picture that summarizes the holistic experience, buildings are cold and moist and used as a canvas.



- Original buildings
- New buildings

# 2025

## FUTURE PLANS AND POSSIBILITIES FOR FORSÅKER AREA

Möndala and Nyréns architects are planning for the development of a new city district involving the Forsåker area. The area will be quite dense with offices along the highway to reduce the noise. The plans also contain housing blocks in varied heights with around 3000 new apartments that would generate approximately 6000 new residents who then would represent 10% of the whole municipality's population. In addition to new residents the area will include thousands of work places and public functions to support the area gathered around "Golvet" (the floor) which is the concept name for the old industrial areas that are going to be kept. The vision for "the floor" is for it to be an area with public functions and possibilities for events and activities to move out from the buildings and out on to the streets. This "floor" will also be free from cars, except from delivery transportations.

The plans also include a public bath place, where people can enjoy sunny days in a city environment very close to Building 18 (Möndal Stad 2016).

The fact that the municipality decided to keep these buildings also proves that they have some type of values and that there is a wish to utilise them and convert them into something new.

When speaking to Sarah Pennycook, project leader for Möndala at an open house at the site I visited in November, she told me that they didn't have any specific plans for the future functions of

the kept buildings more than that their wish was for them to host some type of public functions that could both support the future residents of the area and attract new visitors to the area as well.

In the new plans for Forsåker there are also plans for a new traveling node at Möndal bridge, expanding and rebuilding the current station and also creating more bridges spanning over the highway in an attempt to connect the two sides of Möndal that today are separated.

If this future plan will happen and is executed the way the municipality wants there will be a lot of new people activating the area. The need for spaces to host public functions and services would increase. The very central location of this site with a close distance to the old historic parts of Möndal attracting tourists together with the thousands of office spaces being developed could lead to an increased demand for possibilities of temporary staying here such as a hotel, hotel apartments and a hostel. One could also argue that tourists or people planning to go to Gothenburg but looking for more affordable options could choose to stay in Möndal since it is very easy to travel to Gothenburg in a very short time with frequent connections from Möndal bridge.

The layout of the big open spaces in building 10-4-2 and building 18 also make them versatile and suitable for a lot of these types of developments and public functions.

CONCLUSIONS  
SO FAR



## VALUE OF FORSÅKER

What types of values are there to take into consideration when approaching the heritage and future development of the Forsåker Area with building 18 and 10-4-2 in Mölndal?

First there is the historical value of the place, with the paper factory and its production that has been established on site for many centuries.

Socio-historical values in that when the factory still was running, the area used to function as a small society in itself, where the workers of the factory both lived and worked, which also add a communal value for the previous workers and their families. All of this creates some identity value as it has a key part of Mölndal's history, one that is important for both the municipality and its inhabitants.

There is economic value in the property land because of its location close to the city center, but the buildings in themselves might not have the same economic value since they are in quite bad shape and not that energy efficient. Environmental values are added where the buildings in themselves create interesting spaces

between them and there is also the Mölndal River running through the area and an old fruit garden.

The environmental and spatial values could be the main arguments for building 18 to be kept. It is one of the most important buildings due to its different orientation for creating interesting spaces. What parts of the building to conserve and restore is a whole other debatable issue since the building's appearance has been continuously changed during the last hundred years. This leads into the architectural values of the area, with the site showcasing a wide range of industrial architecture development throughout history with the most important architectural features being the old facades of building 18 and 10-4-2 with their cast iron windows and brick ornamentations.

Cultural values are also added. Since the factory was closed in 2005, the building has become a paper canvas for both local graffiti makers and international street artists. This is now a contribution to the place's identity and should be considered into further planning of the area.



## STRENGTH

Location

Big empty premises

Closeness to water

Rich in cultural heritage

Close to public transportation

Rooted history, a strong identity

Mix of building materials and expressions

Old history of crafts in the surrounding area

Small scale buisnesses already established close to the area

Möln dal River runs through the area

The existing buildings creates interesting spaces between the structures.

Available unbuilt land

Rich in different industrial architecture

History full of changes in both organisation, production and built environment, creates the identity of a resilient area that adapts and survives after hard hits



## WEAKNESS

Buildings in bad condition

Noise from traffic

Lack of options for entertainments, educations, and housing

The area has a strong identity in industrial production, a weakness because the loss of production on site

Mental barriers, private property, identity, visibility

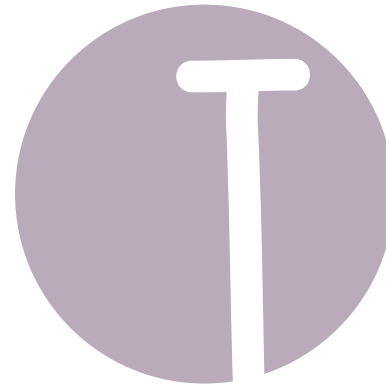
Physical barriers, fence, topography, roads

Infrastructure through the area, paths & roads not well connected to surrounding areas



## OPPORTUNITIES

- Location, close to Mölndal centrum (0,6 km)
- Mölndal River runs through the area
- Strong municipality, steady population growth
- Location, close to public transportation connections; train, bus, tram
- Close to Gothenburg city center (7km)
- Mölndal has a strong historical identity in crafts and industrial production, creates a sense of pride for the inhabitants
- The mental borders between Gothenburg and Mölndal become more and more vague
- Small scale businesses already established in the area
- Mölndal is attractive for young adults and families
- The new vision for the area would lead to more people activating the spaces.
- The municipality's vision for 2022 :  
"Mölndal is the sustainable city with opportunities for everyone.  
We will strengthen the West of Sweden with courage and creativity"  
(Mölndal Municipality, 2017)



## THREATS

- Economy
- Gentrification
- Polluted ground and soil, needs to be taken into consideration in further planning and development
- Mölndal River runs through the area, possible flooding risks
- Lack of investors, interest, needs of new office buildings etc.
- The highway and railroad tracks creates both a barrier and noise

# CONCLUSIONS FROM SITE

## SUMMARY

To summarize this chapter with a few key points to bring with me further:

- x Good geographical location
- x Large versatile structures
- x Part of buildings are damaged and in bad condition
- x Two major facades are today "missing"
- x Unique features in character such as the graffiti & street art and the red metal cladding on building 18
- x Good terms for businesses, suitable for public functions and services to support new residents and visitors to the area

These buildings are important enough to keep from being demolished, but not important enough to be frozen in time. They need new life and inputs to be brought back to life.

When approaching this task of bringing the buildings back to life and giving them a new purpose it is important for me to understand the basic reasonings in architectural heritage & transformation. Different motives for preserving buildings, the benefits and the disadvantages you might encounter and then apply my findings to Forsåker.

# PART 2

## THEORY OF PRESERVATION

# WHY DO WE LOVE OLD BUILDINGS?

I myself have quite a romantic relationship to old abandoned buildings, finding beauty in the broken and deserted. The quick decay that usually happens when structures are abandoned with no one to care for them, creating some type of post-apocalyptic sensation really triggers my interest and curiosity. Therefore, it was love at first sight when first entering the Forsåker area with all these empty buildings. I am aware of that most people do not share these feelings for decayed objects unless you are an urban explorer. But you still see people fighting for all different types of buildings and them being preserved all over the world. When not necessarily caring for the physical appearance or having it as the main priority, can the reasons be rooted in something deeper than architectural history?

It is my opinion that people in general tend to be a bit nostalgic and romantic about the past. Even more now in a time where the rate of change in society continues to accelerate, the past serves as a safe haven, something comforting reminding us of simpler times. Old buildings do the same; their familiar composition, massing and ornamented facades are often easy to understand, making the buildings more relatable and less threatening. Something that modern architecture usually tend to be missing.

Old buildings also tend to be familiar, many are well known landmarks with an active present, a rich history or both. The older the building is, the more memories and stories it has to tell, making it more

important for a larger amount of people in society and therefore also more important to preserve.

New buildings stand for something unknown, which often make people worried because we don't like change. We can't control ourselves. It is also important to remind ourselves that even old buildings were once new as well. With time, when people get more familiar with a new structure and get used to its existence the opinions usually shift and we do what humankind have always done; adapt to the change. One of the most known example of this change in affection is brought up in the book "Old Buildings, New Designs" by Charles Bloszies and the object is the Eiffel tower in Paris, originally intended to be a temporary structure and which during the time when it was built was proclaimed an eyesore by many. Today it is somewhat the very symbol for French culture (Bloszies 2012).

In the case of Forsåker I'm not convinced that the buildings in themselves without their context are loved by people even though both building 10-4-2 and 18 have some old familiar architectural elements such as the bricks and the cast iron windows. The site has always been factory property so it has been hard for people not employed at the site to have more than a distant visual connection to the buildings. Instead the history of the place, the memories and stories from people working at the factory and creating a part of Mölndals identity is the thing that people hold closest to their hearts.



# REASONS TO PRESERVE

Preservation of old buildings is a topic always in debate with a large number of different stakeholders and opinions usually taking part. There are many different motives for why old buildings should be preserved, from the most rational to the more irrational reasons.

In the book "Old Buildings, New designs" the author Charles Bloszies claims that most old buildings are irreplaceable and that this gives them a special endangered status in the eyes of many individuals. He states that the reasons behind this urge to preserve are based on rational thinking, emotional dogma or some combination of the two. The author furthermore claims that the reasons can also stem from a personal tie or fear that a new structure will be inferior to the existing (Bloszies 2012).

Preservation can often be promoted from an architectural point of view, which may be one of the main reasons why we protect old buildings today. The main objective is to keep meaningful architectural qualities, such as handcrafted details and materials, large operable windows, high ceilings and access to natural light which is more common in older buildings and tends to be less prioritised in newer ones. Retention of these features is something that is usually universally desirable.

The urge to preserve can also be based on distrust in modern construction and the conviction that buildings crafted by human hands are more reliable than the same work fabricated by a machine. This, in combination with a love for handmade features contributes to the belief that older buildings are constructed better than modern ones, which is somewhat false since the advancements in modern technology has led to more trustworthy, efficient and resilient buildings.

A fear of and dislike of modern architecture in general, or as a political tool to be used when opposing a project can also be reasons for preserving. In both these cases old buildings are used as a means to prevent new development.

Given all these different reasons, it is clear to me that there is no common consensus in what to preserve or not. Although one thing is for certain, we cannot just freeze time, new development is necessary to meet our society's needs and continued adaptation but preserving old buildings are of equal importance to remind us of our heritage and to keep the identities of our cities.

Reasons for preserving the buildings in Forsåker have already been brought up in the previous chapter discussing the value of place (see p.37). I believe that the main reasons for preservation stem from a combination of rational thinking and emotional dogma with the municipality realising that the papermaking industry is a big part of Mölndals identity as a city. Rich in cultural history and crafts and also as the factory has been a big employer of people in the area throughout history. There are also the architectural reasons with the strong and somewhat unique character of these buildings that contribute to the area and making it hard to replace and recreate. Perhaps the buildings can also be used as a political tool, to calm people being afraid what will come of all the new development plans. Keeping the old buildings will work as a buffer both visual and emotional creating some type of familiarity in an otherwise whole new district.

# REASONS TO PRESERVE



RATIONAL THINKING



EMOTIONAL DOGMA



COMBINATION OF BOTH



PERSONAL TIE



ARCHITECTURAL REASONS



DISTRUST IN MODERN CONSTRUCTION



DISLIKE OF MODERN ARCHITECTURE



POLITICAL TOOL

# SUSTAINABLE REASONS

## FOR PRESERVING OLD STRUCTURES

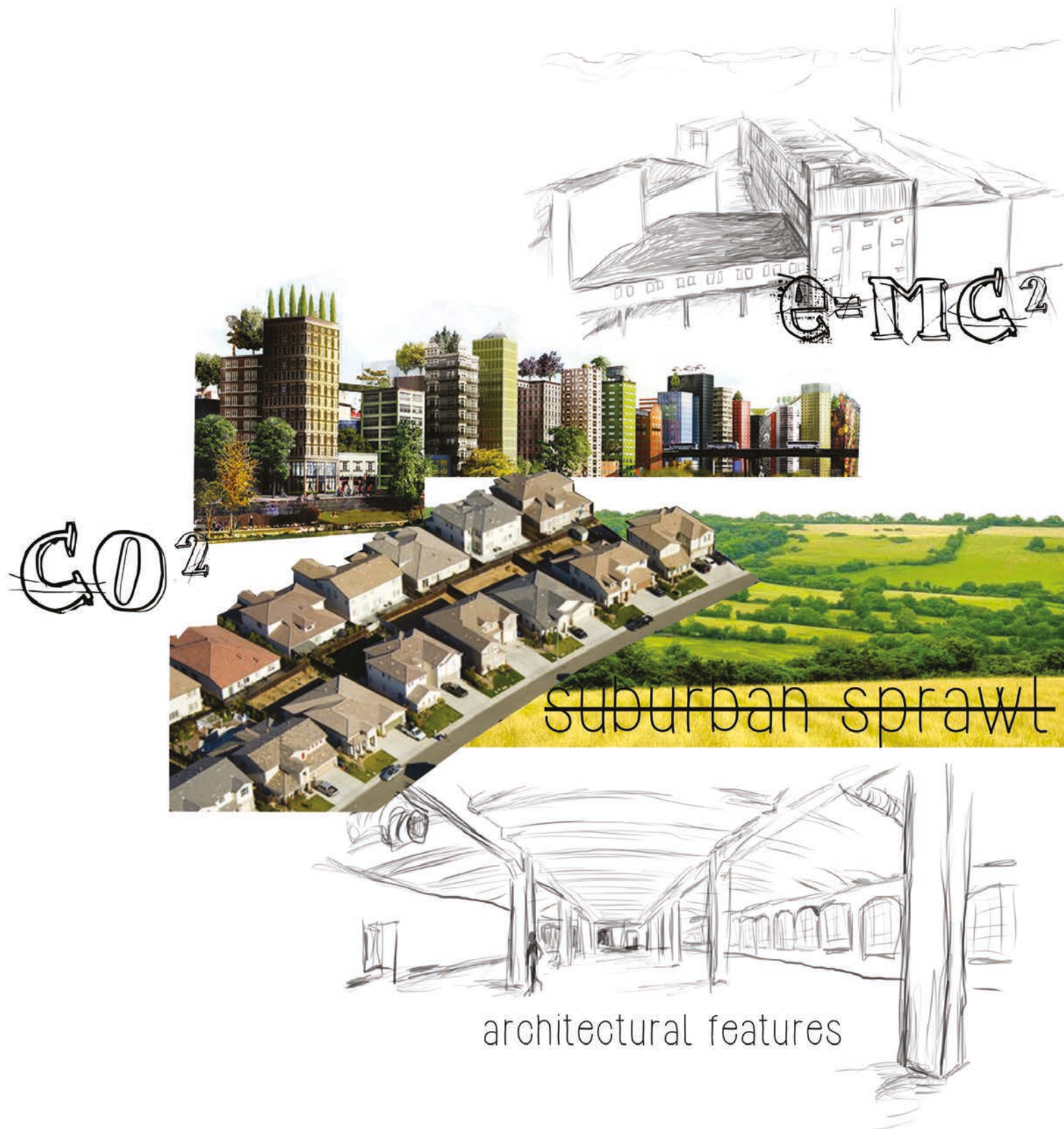
Apart from keeping parts of our built heritage and history, there are other reasons to preserve old buildings. One reason is the architectural features you rarely find executed in the same way in modern construction such as natural light and ventilation with high ceilings, and operable windows.

When looking further into aspects for sustainable design, old buildings also qualify as good candidates due to the energy that has already been invested in their structures. The goal in many new development projects is to minimize the energy required to operate a building, in the broader definition of this it also includes the energy invested when constructing the building in the first place. Retaining an existing building would therefore save a lot of energy compared to demolishing and recycling its components.

On the urban scale, there are also many sustainable arguments for preserving and transforming old structures, one of the main reasons being to prevent urban sprawl. Change in most cities have for centuries been driven by an increase in population. More than 54 percent of the world's population, 86 percent in Sweden, resided in urban environments in 2015 (The world bank 2016).

The continued desire to live in cities has resulted in physical expansion where the densification of the city core has spilled over to suburban sprawl, developing land in the outskirts of cities. This trend has caused significant loss of vitality within cities, a decrease in biodiversity as the natural habitat for wildlife has been exploited, loss of farmlands and it has also led to a more car dependent society. Sustainability advocates promote the principles of “a compact city” that would revitalize cities with an urban planning and design concept based on high residential density and mixed land use in cities where it is possible to both work and live and recreate. It also encourages walking, cycling and public transportation (OECD 2016). Projects based on this thinking will have to include the retention and preservation of old buildings.

For Forsåker one could argue that its location close to Mölndal bridge enables the opportunities of traveling in a sustainable way using public transportation, as it is easy to reach without being dependent on a car. All this in addition to the material and energy that is already invested in these buildings and their large structures.



# PROBLEMS WITH PRESERVING

All old buildings are not ideal to preserve. In some cases, preserving old buildings and adapting them to new standards and building codes (especially with respect for the old building's character) could be more complicated and cost more money than constructing new ones.

Buildings must be maintained and upgraded regularly to keep up with the changes in today's society. Building systems; structural, mechanical, electrical, plumbing, fire-protection, security and communication eventually become obsolete. Many buildings that are over a hundred years old originally had no electricity, air condition or central heating for instance. Structures surviving through to today that were built without these amenities have to be retrofitted to avoid becoming outdated and unfit for its original purpose. A mechanical or electrical retrofit of a large building could often be less economical than replacing the building completely (Bloszies 2012).

Stricter fire-regulations also lead to big problems when looking at retrofitting an old structure. Many older buildings don't have enough fire exits to comply with current regulations and they often lack sprinklers and other emergency systems that are required today. The taller the building is, the more complex and expensive it usually gets.

Another difficulty coming with old buildings is that they are inefficient consumers of energy. Even though facades of these structures include attributes that sustainability promoters would advocate such as operable windows, and good solar orientation they don't use energy efficiently. They lack enough thermal insulation

and the windows usually consist of inefficient single-pane glass. Old cooling and heating systems also consume much more energy than modern ones (Bloszies 2012).

New demands in social legislation is also something to take into consideration as the laws of accessibility has become stricter which makes it harder for old buildings to compete economically with new ones.

To summarize; even if there are a lot technical problems that occur when working with older buildings, many of them could usually be solved quite easily. However, it might cost a lot of money and could risk interfering with the integrity of the original design if not done with proper care. If you are looking beyond the economical aspect, the big challenge lies in how to create a design that allows the new adjustments to play well with the old structure.

For Forsåker there definitely has to be an update of the old buildings to new regulations and an adaptation to the new functions. Even if the interior structural parts are in good condition, parts of the facades are quite damaged and will need to be restored. One should have in mind that this can be both complicated and expensive. The current windows are not energy efficient with single pane glass; a lot of them are also smashed or broken.

# PART 3

DESIGN THEORY INVESTIGATIONS

# FACING OLD BUILDINGS

*For a design to have integrity, it must be a product of its own time - an honest expression of the cultural forces active when the design was executed. (Bloszies, 2012, p.44)*

How do you as an architect relate to the original work when facing architecture from another time period? Do you make a copy of the old or do you make an alteration that is following the style of current times? Transformation of buildings has occurred for many hundreds of years and the new additions made to older structures have usually been following the current style of that given period. But there are also exceptions when it comes to following the current time period when the goal is for the new to mimic the old so that it is impossible for the two parts to be differentiated without expert knowledge.

Two opposing opinions in the debate of what it means to restore a building in the 19th century can be found by the two influential architects during that time; John Ruskin and Eugène-Emmanuel Viollet-le-Duc. Ruskin claimed that imitating past styles was an insult rather than a compliment to the builders of the past, every generation should build according to the needs and manners of its own age (Jäger, 2010). He stated that since the original work and new additions always will be separated in time it is impossible to make an honest restoration.

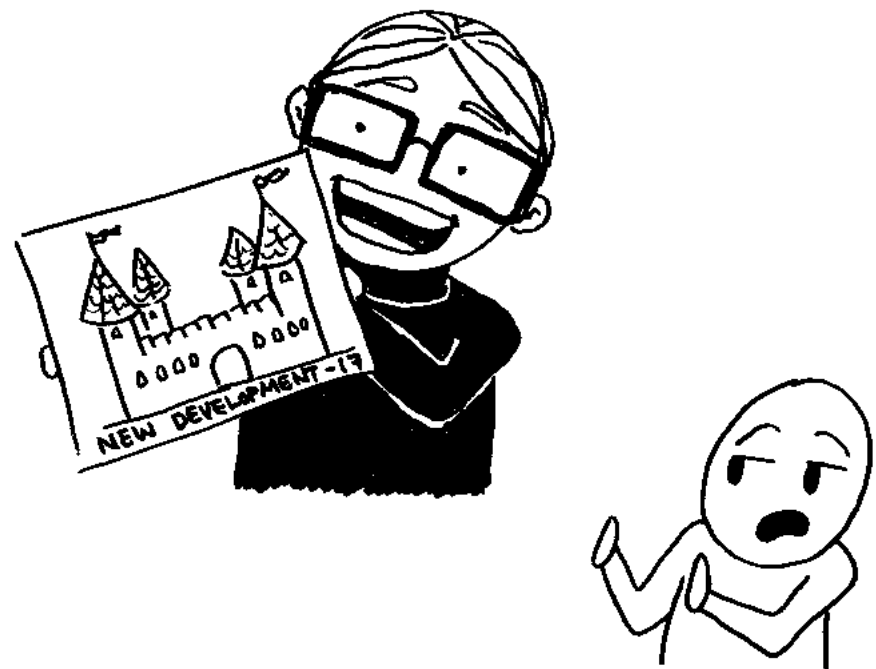
In the work "The Seven Lamps of Architecture" (Ruskin, 1989) the author states the following:

"Neither by the public, nor by those who have the care of public monuments, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture." (p.194)

Whereas on the other side of the debate was Viollet-le-Duc's view that restoration is a means to re-establish a building to a finished state, even if it may in fact never have actually existed at any given time. Viollet-le-Duc was a promoter of mimicking the original work with new construction which he himself practiced on numerous alterations and additions to existing architecture. During the 19th century in France one of his most

known examples is the medieval town of Carcassonne where he gave a crumbling village new gate towers in the exact same style as the old, making it impossible for people without knowledge to separate the two. His philosophy and way of working has gotten a lot of critique during the years, mainly for lacking integrity and altering the perception of history.

It is my opinion that as an architect your task is not to mimic the past, to create a replica of something previously made. New additions and alterations in architecture should always stay true to its time; it should be a visible separation of what is new and old when it comes to preserving and making additions. In the role as architect it is key for keeping one's integrity and also what separates us from e.g. building antiquarians whose main goal is to preserve, conserve and restore as much as possible. I believe that this is a more honest way of showcasing the history to future generations and adding more layers to the story of a place. With this said, it is however important to still have the history in mind when making alterations by understanding and respecting the history of place. It is very important to me that the new additions have some type of connection to the old architectural context. Although there is no single solution to how this connection should be created.



# THE MEETING BETWEEN OLD AND NEW

If you stay true to your time there will always be a difference between what's old and new when transforming or adding something to an existing structure. There are however different ways of relating to the existing and its history when facing this meeting.

In the article "Smit aldrig undan från historien" (Lauri 2015) the author discusses and presents **three ways to relate to existing architecture when making new additions**. First there is the **seamless** way where new and old melts together. **The history characterizes the new work**, there is little contrast between the old and the new and the goal is to blend in as well as possible but still staying true to time. As an example, he gives the architect Tony Fretton and the studio extension he made for the artist Brad Lochore. Where the new and old architecture melts seamlessly together.

As an opposite way of working to Tony Fretton, you have the works of Dorte Mandrup and Renzo Piano where the goal instead is to create a **contrast** between old and new, the **history is the opponent**. The aim is to create a clashing meeting between future and history that would bring more attention to both the old and the new. The old is almost conserved, making very few alterations to existing buildings and surroundings but instead focusing on the addition, which also contributes to enhancing the contrast between what's new and old. As examples Lauri mentions Mandrup's "glassbox" extension to the culture center on Jemtelandsgade in Copenhagen and Renzo Piano's Pathé foundation extension in Paris.

Somewhere in between, but also opposing, these two extremes you have the **manipulating** way of relating

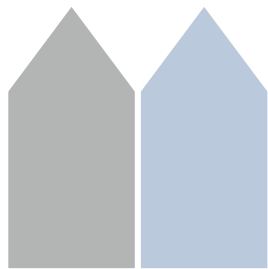
to old architecture and its history. In this case **history is the palette**. The main goal is not to erase history but rewriting it while still making clear separations of what's new and old. He gives Caixa Forum in Madrid by Herzog & de Meuron as an example of this way of working.

What they all have in common is that it is in the meeting between old and new that something happens, where a result that is larger than the sum can be created,  $1+1=3$ . Creating a characteristic work is about having a relationship to history, whether it is to break away from it or embracing it.

In another interesting article "Variation of extensions" (Ylimaula 2017) the author discusses the restrictions and opportunities that historical architecture imposes for extensions. She also discusses how to relate to existing architecture and concludes the article with the following statement.

"Whatever the approach to combining old and new, the decisions of each designer should be respected, if only for the sake of seeing an old building stay in use. This is the best kind of historic preservation, creating living layers in our urban environments." (p.13).

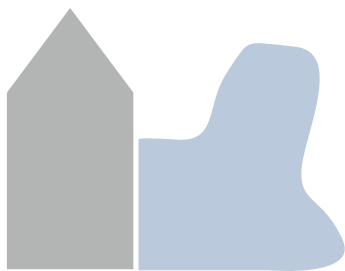
On the following pages, I have applied Lauri's ways of relating to existing architecture on different types of examples from all over the world, trying to divide them according to the three principles; seamless, contrast & manipulating.



SEAMLESS



*Tony Fretton's studio extension, London.  
Photo by David Baugh*



CONTRAST



*Neighbourhood centre,  
Copenhagen*



*Pathé foundation, Paris.  
Photo by Michel Denancé*



*Pathé foundation, Paris  
Photo by Michel Denancé*

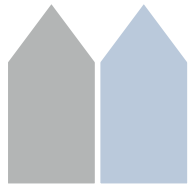


MANIPULATING



*Caixa Forum, Madrid.  
Photo by Duccio Malagamba*

# REFERENCE PROJECTS



*Gunnar Asplund's courthouse extension in Gothenburg*



*Regional state archives in Gothenburg by White architects*



*St Francesc Church in Santpedor, Spain by David Closes*



*Clarion Post Hotel extension in Gothenburg by Semrén & Månsson*



*Museum of Modern Arts in Malmö by Tham Videgård*



*Borås upper end roundhouse by MA architects*



*Kolumba Museum in Köln by Peter Zumthor*



*Factory conversion in Barcelona by Ricardo Bofill*



*Military history museum extension in Dresden by Daniel Libeskind*



*Fahle house extension in Tallinn by KOKO architects*



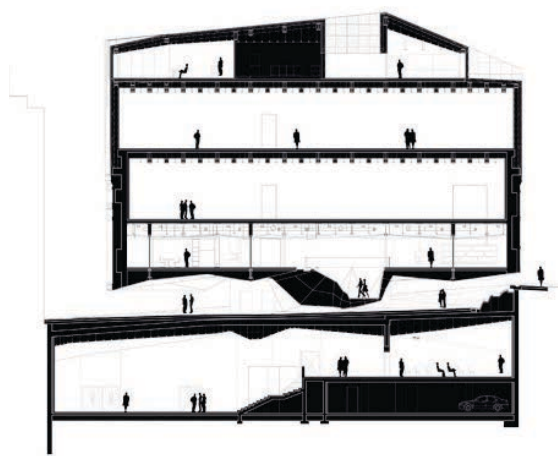
*Rotermann's old and new flour storage in Tallinn by HGA*



*Grønerløkka studenthousing in Oslo by HRTB architects*

# REFERENCE PROJECTS

## CAIXAFORUM MADRID MADRID, SPAIN HERZOG & DE MEURON 2001-2008



An art museum housed in a converted power station from 1899 with classified brick walls that was acquired by the Caixa Foundation in 2001. The architects responsible for the transformation are Herzog & De Meuron. They retained only the brick facades of the existing building and designed a largely new 7-story building. By removing parts of the base Herzog & de Meuron also created a covered plaza at the entrance level, in order to provide a sheltered gathering space for the center visitors and the passersby. The sculptural aspect of the CaixaForum's silhouette reflects the roofscape of the surrounding buildings (Herzog & de Meuron, 2017).

An insignificant gas station was demolished to create a small plaza between the Paseo del Prado and the new CaixaForum. A 24-meter-high vertical garden, designed in collaboration with the botanist Patrick Blanc, takes up one wall of the square.

The new addition is dominating the old brick facade, at least from afar. But this manipulation with new and old brings attention to a building that were previously quite anonymous. The materials used are in contrast but also somewhat similar in colour.



(1) Section of the building. By Herzog & de Meuron.  
(2) The building. Photo by Duccio Malagamba  
(3) Schematic. By Herzog & de Meuron. (4) Plaza. Photo by Herzog & de Meuron. (5) Building before transformation. Photo by Herzog & de Meuron.

# REFERENCE PROJECTS

## GRÜNERLØKKA STUDENTHOUSING OSLO, NORWAY HRTB ARKITEKER 1999-2001



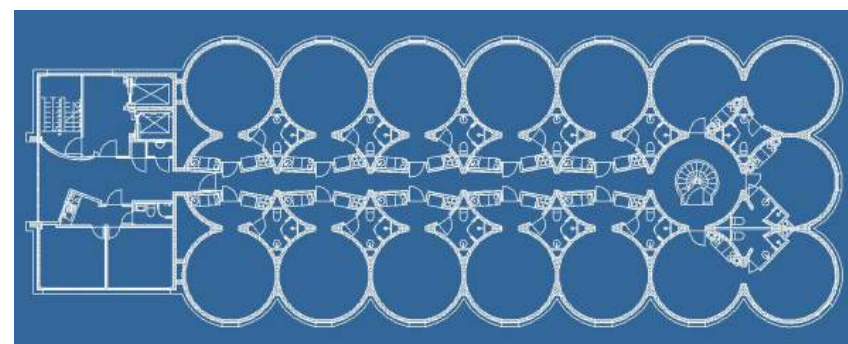
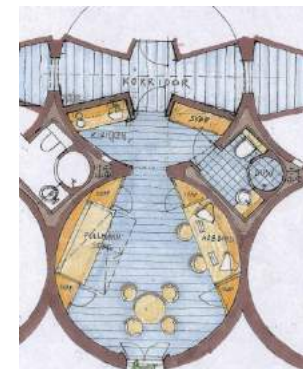
An interesting example of adaptive reuse can be found in Oslo. HRTB Arkitekter AS transformed an old grain elevator located along the Akerselva River into a 19-story student housing complex known as Grünerløkka Studenthus while leaving most of the original structure intact.

The silo was originally built in 1953 and was used to store corn from Oslo's Nedrefoss Mill and was in operation from the 1950s to the 1990s. The structure consists of 21 grain silos in three rows of seven. In 1993, the local government approved the conversion proposal; work started in 1999, and in 2001 the building reopened as a student-housing complex. (HRTB, 2017)

The building consists mostly of studios and one-bedroom apartments with customised furniture due to the fact that most of the rooms are round. The unique building has become an architectural icon, and it won the City of Oslo's Architecture Prize in 2002.

The conversion, which cost just under \$30 million, has had its share of problems though. In 2008, over 70 residents were evacuated from the building when it was discovered that leaking cisterns had caused widespread mold. The damage was estimated to cost \$3 – \$5 million. (Boyer 2013)

One can say that this project is manipulating in its relationship to history. The major additions here are inside the structure changing both function and layout, and shows only small changes on the outside. The overall shape is the same, keeping the familiarity but the gray monolithic exterior has been brightened up with colourful window elements.



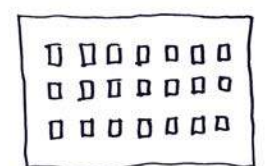
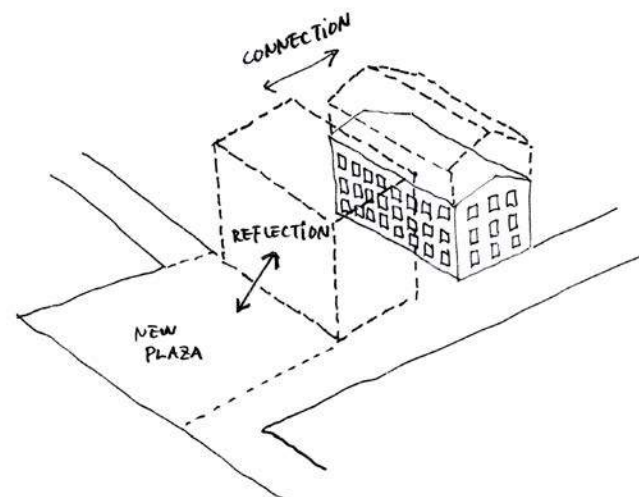
(1) The transformed building. Photo by Mark Boyer (2) Interior. Photo by HRTB Arkitekter (3) Floor plan sketch. By HRTB Arkitekter (4) Floor plan - arrangement of apartments. By HRTB Arkitekter

# REFERENCE PROJECTS

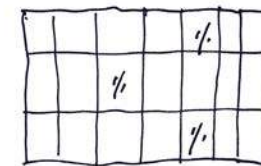
## ROTERMANN'S OLD AND NEW FLOUR STORAGE TALLINN, ESTONIA HGA (Hayashi – Grossschmidt Arhitektuur) 2009



From the architect: The 1,5 century-old Rotermann Quarter, a former industrial area for food production, is located between the Tallinn's old town and the port, where stands still historically-valuable limestone buildings under heritage protection. On-going redevelopment takes place between the existing historical limestone buildings, including the Old Flour Storage from 1904. The New Flour Storage was aimed to form a plaza as a new focal point of the quarter. The project consists of three volumes; the Old Flour Storage with 2 additional stories, the New Flour Storage and the Atrium connecting the two. The ground floor is for retail and all upstairs are for offices. Our approach was to relate and strengthen the character of historical quarter through finding and adopting the character of the surroundings. For facade articulation, we have abstracted proportion of wall versus window openings as a character of old industrial buildings. For main facade material cor-ten steel was chosen for its property fitting to the existing surroundings of rough surfaces; limestone walls, brick lintels and rusted steel details. It pays homage to the area's industrial past (Archdaily 2013). The combination of old and new elements creates a larger experience of the place and the space between the buildings brings attention to the old facade in a new way.



HISTORICAL BLDG  
MASSIV WALL + PUNCHED  
WINDOWS



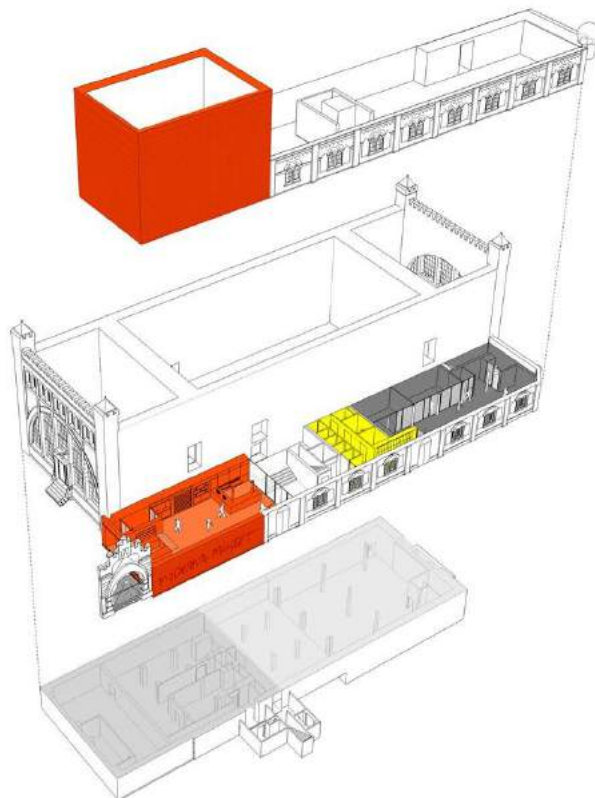
MODERN BLDG  
GLASS WALL = WINDOW

- (1) Concept diagram. HGA  
(2) The buildings. Photo by Martin siplane  
(3) Building with extension on top. Photo by Martin siplane  
(4) Link between buildings Photo by Reio Avaste



# REFERENCE PROJECTS

MODERNA MUSÉET  
MALMÖ, SWEDEN  
Tham & Videgård Arkitekter  
2009



(1) Exploded view of the building. (2) The new facade in contrast to the old . Photo by Åke E-son Lingman (3) Interior space of new extension. Photo by Åke E-son Lingman

An old electricity plant transformed into a modern art museum in Malmö, Sweden. The greatest challenge posed by the project was the need to adapt the existing industrial brick building to current climatic and security requirements to comply with the highest international standards for art exhibition spaces. The solution to these challenges became a building within the building and a contemporary addition to the existing facade.

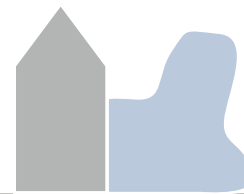
Seen from the exterior, a new extension marks the arrival of the new museum. The new extension with its orange facade provides a new entrance and reception space, as well as a cafeteria and a new upper gallery. The aim with this perforated orange metal facade was to both connect to the existing brick architecture and to add a contemporary element as a contrast to the neighborhood. (Archdaily, 2010)

Here is a good example of a contrast where both new and old are enhanced by each other. One could argue that this project could be falling under the "Manipulating" category as they are, like most transformation projects, making changes to the interior structure as well. But the very visible distinction of what is new and old made me believe it would be more suitable in the contrast category instead.



# REFERENCE PROJECTS

MILITARY HISTORY MUSEUM  
DRESDEN, GERMANY  
DANIEL LIBESKIND  
2011



From the architect:

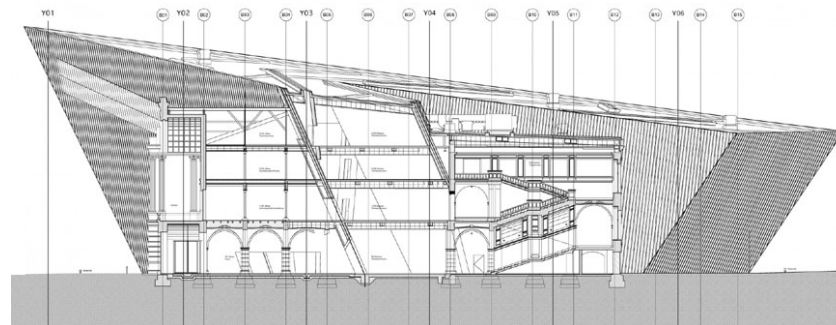
"The official museum of the German Armed Forces, the Dresden Museum of Military History was once shut down by a German government uncertain of how the institution would fit into a newly unified German state. Studio Libeskind was selected as design architect for an extension in 2001, when an architectural competition was held.

The winning design boldly interrupts the original building's classical symmetry. The extension, a massive, five-story 14,500-ton wedge of glass, concrete, and steel, cuts into and through the former arsenal's classical order. An 82-foot high viewing platform (the highest point of the wedge is at 98 feet) provides breathtaking views of modern Dresden, while pointing towards the triangulation of the area where the fire bombing began in Dresden, creating a space for reflection.

The new façade's openness and transparency is intended to contrast with the opacity and rigidity of the existing building. The latter represents the severity of the authoritarian past, while the former reflects the transparency of the military in a democratic society. The interplay between these perspectives forms the character of the new Military History Museum.

Inside, in the original, columned part of the building, Germany's military history is presented in a horizontal, chronological order. The wedge cuts through this horizontal chronology between 1914 -1945, creating a clear, architectural distinction."

(Libeskind, 2017)



(1) Section of building. Photo: Studio Libeskind  
(2) The building. Photo: Hufton + Crow Photography  
(3) Aerial view. Photo: Mattias Kunde

# PART 4

## STRATEGIES FOR PROPOSAL

# DESIGN CRITERIAS

1

Design should support the future development of the area.

2

Design should contribute to strengthening the identity of place.

3

Design should attract people to the area.

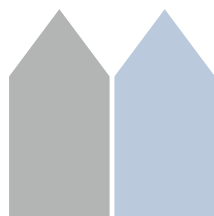
4

Design should support and enhance the existing  
character of the buildings.

5

Design should create new stories/layers.

# DESIGN FOR FÖRSÅKER



SEAMLESS

## EXISTING VOLUMES – NEW FACADES

Existing buildings keep their volumes, the missing facades are given an expression that harmonises with the existing ones but there should still be a visible distinction between what is old and new. Existing materials and organisation is the base for the new design.



CONTRAST

## NEW ADDITIONS/LINKS

New additions is designed with an ambition to create a visual **contrast** to enhance both old and new volumes. The links and new additions are elements connecting the buildings both horizontally and vertically.



MANIPULATING

## INTERIOR+FUNCTION

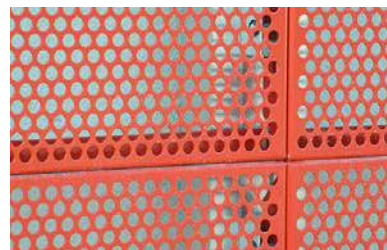
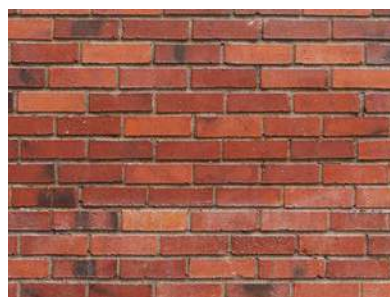
The interior spaces of the buildings are adapted and **manipulated** to fit new purposes. Old and new structures are merged together with new openings, walls and floor levels.

# DESIGN STRATEGIES

## MATERIAL PALETTE

2 4

Enhance and keep the unique materials of the site that create the most memorable impressions. Use the building materials as a starting point but also bring in new materials that work complementary to the existing ones.



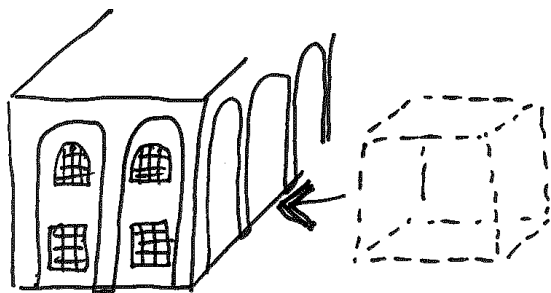
OLD NEW



## ENHANCE - STREET ART

Enhance and develop this unique feature of the site that today give the most memorable impressions by creating elements in the design that provides opportunities for street art in different scales from murals to paintings.

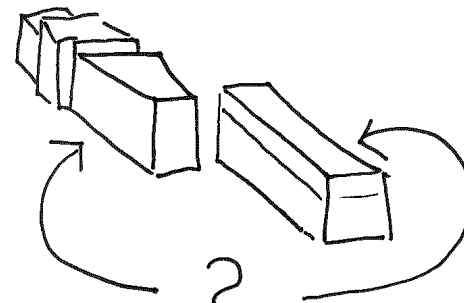
2 3 4 5



2 1

## KEEP THE CHARACTER

Keep the character of the buildings when adapting them to a new purpose. The old industrial feeling should still be present.



2 1

## THE MISSING FACADES

Both buildings are currently missing one long facade. The design of the new facades should relate to the old/existing ones.

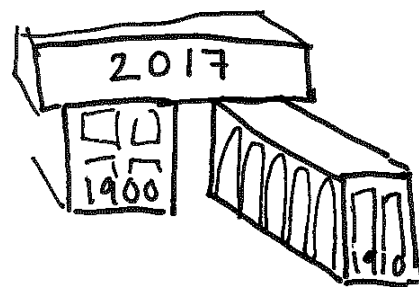


# DESIGN STRATEGIES



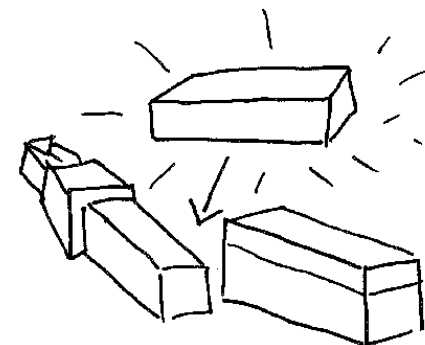
## MAKE AN ADDITION

Additions is a strong feature of the site's history. An addition would add something new, making a new chapter in this site's history.



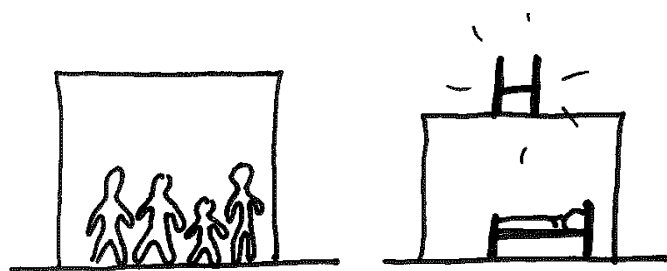
## CONTEMPORARY

The design should be contemporary and true to its own time.



## CONTRAST

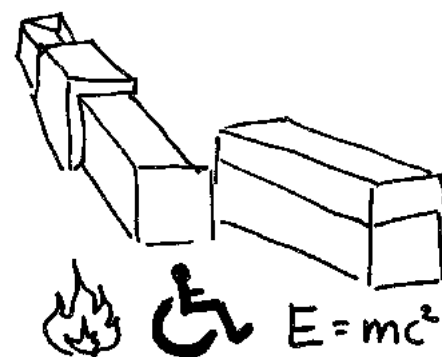
The addition should be memorable and create a contrast to the existing buildings that would strengthen the perception of both new and old architecture.



1 3 5

## PUBLIC FUNCTIONS + HOTEL

The new program for the building should host public functions that would support the new residential area and a hotel/hostel.



1 3 5

## ADAPTED TO NEW REGULATIONS

The buildings must be adapted to current regulations concerning fire, accessibility and energy efficiency.

# MATERIALS & DAMAGES

## BRICKWORK / MASONRY



Restored and repaired. Parts of the old brick facades on building 10 are in bad condition with eroding bricks and mortar. Brickwork should be repaired and restored. One suggestion is to re-use all the bricks that will be removed when re-opening all the old window openings. If this is not enough one should strive towards finding a brick and mortar that is as similar in appearance as possible.



- 1) Damaged red brick facade and walled up window openings, building 10.
- 2) Damaged yellow bricks in facade of building 18.
- 3) Damaged bricks in facade of building 10.

## CONCRETE, REINFORCEMENT & PLASTER

The concrete structures and reinforcement of both buildings should be repaired where necessary.

According to Sven Olof Ahlberg, heritage consultant and tutor, the material that resembles plaster on the old facade of building 18 is in fact “shotcrete” used on the surfaces where the concrete has been in need of renovation and covered with a new exterior layer. Plaster on the old facade of building 18

is in bad condition. It should also be repaired and restored. To do this you have to demount all the windows and remove all bad concrete with a waterjet. New molds that you cast with self-compacting concrete the same size and finish as the existing are made. This procedure needs careful and precise work, clear stage divisions and strength calculations to avoid a collapse of everything when removing the existing concrete.



- 1) Eroding reinforcement, old facade of building 18.
- 2) Old cast iron window bending, an indication that the loadbearing structure is damaged.
- 3) Eroding plaster/shotcrete falling off building 18.

# MATERIALS & DAMAGES

## WINDOWS

The original windows still left on site should be taken care of and restored with great care and respect of the original character, but they also have to be improved to make the buildings more energy efficient. Making old windows energy efficient is no smooth process. If you want to keep the ability to open parts of the windowpanes, any potential inner window will need to have this function as well. This is also the case if you want to be able to clean the windows. You either make a self standing new window frame that is mounted on the inner wall, this could be sliding or be made openable with hinges in order for both the old and the new to become accessible.

The second option is to renovate the existing windows with new “ISO-cassettes” that give the windows a better insulation value. However, the problem with this is that the cast iron is

still exposed on the outside which could lead to condensation on the inside. To solve this the old windows need to be complemented with a new window right next to it, which then leads to problems with the ability to clean and open them.

Most likely you make a combination where the old windows are renovated to look like new and could lead to manufacturing of new cast iron frames. The old windows are then supplemented with a new two-glass insulation window on the inside attached directly to the wall. this would solve all possible problems with energy efficiency, fire regulations and accessibility for cleaning. This solution has been used previously in the renovation of “Sejlduksfabriken” in Oslo, Norway an old factory that has been converted into a design school.



- 1) Window on floor 2 of building 18.
- 2) Reference example from “Sejlduksfabriken” in Oslo.
- 3) An attempt to make windows energy efficient on floor 3 of building 18.

## WINDOWS

### REOPENING WINDOWS

Few of the original windows are left today, most of the windows have been walled up with bricks and concrete glass.

The strategy is to re-open the old window openings and to insert new windows. The new windows should not have the same appearance as the older ones with the arch and mullioned divisions, because this would be a way of mimicking the past, which is not desired to achieve in this project. The proposal is that large square windows with as few divisions as possible should be fitted into the old openings, the square shaped window would also help to showcase that the windows are new but the openings are original.

- 1) Walled up windows on north-west gable of building 10-4-2.
- 2)) Sketch proposal of new windows.
- 3) Walled up window on building 10
- 4) Re-open and expand openings of old windows on the east facade of building 10-4-2



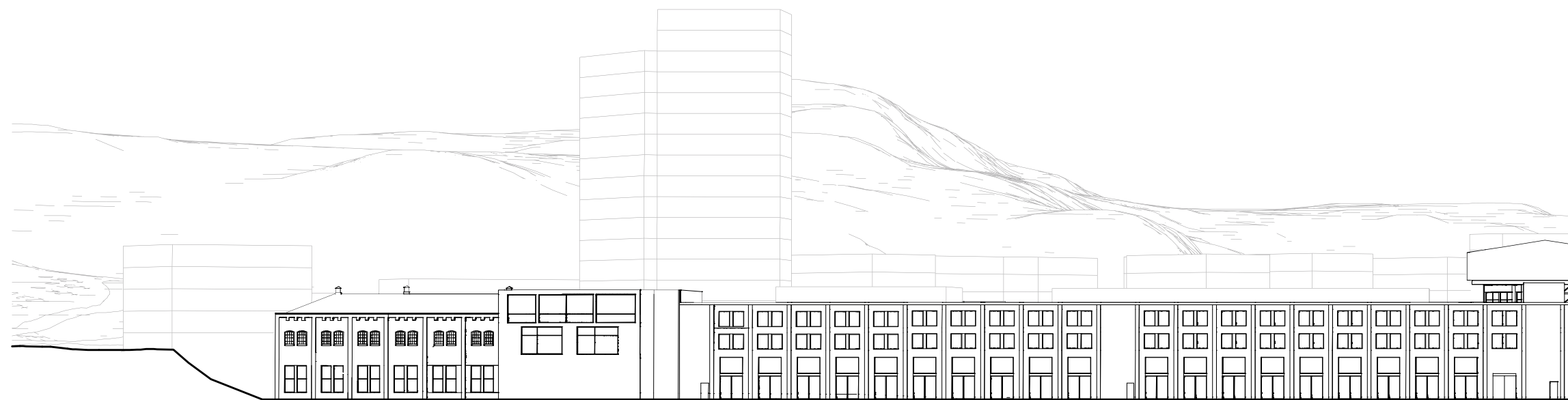
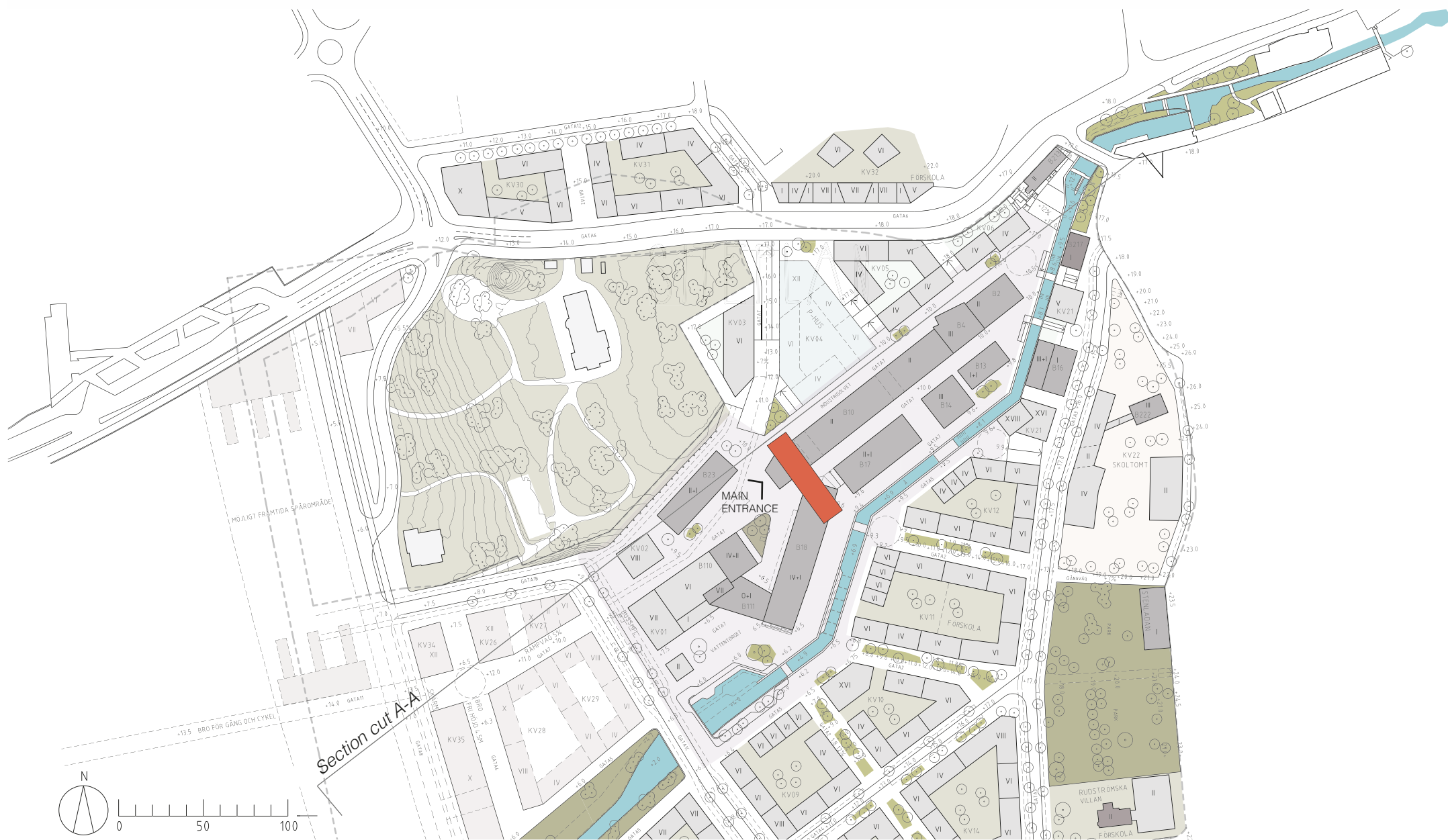


*Bird view over buildings from south-west.*

# PART 5

## THE PROPOSAL





SECTION A-A  
Scale 1:1000

# SITEPLAN & SECTION

**BYA:**

10-4-2  
3450 m<sup>2</sup>

18  
1690 m<sup>2</sup>

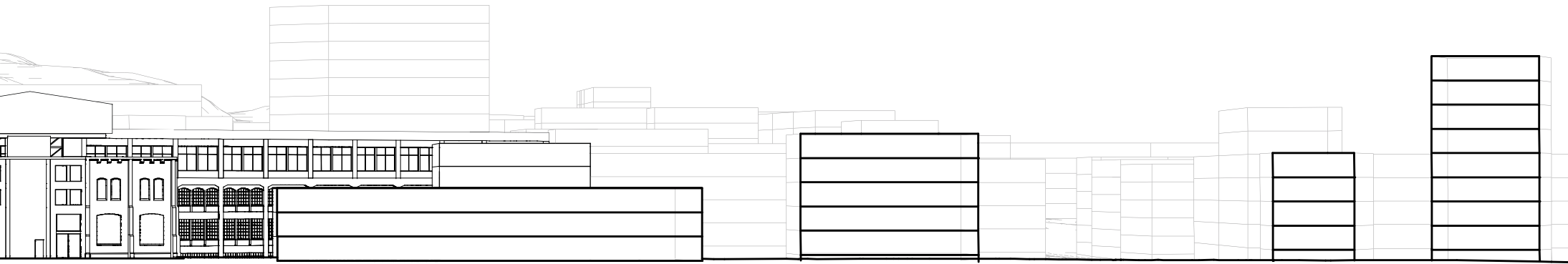
Red box extension  
1050 m<sup>2</sup>

**BRA:**

10-4-2  
approx. 8000 m<sup>2</sup>

18  
approx. 6000 m<sup>2</sup>  
(+ roof top terrace approx. 1200 m<sup>2</sup>)

Red Box  
approx. 1000 m<sup>2</sup>



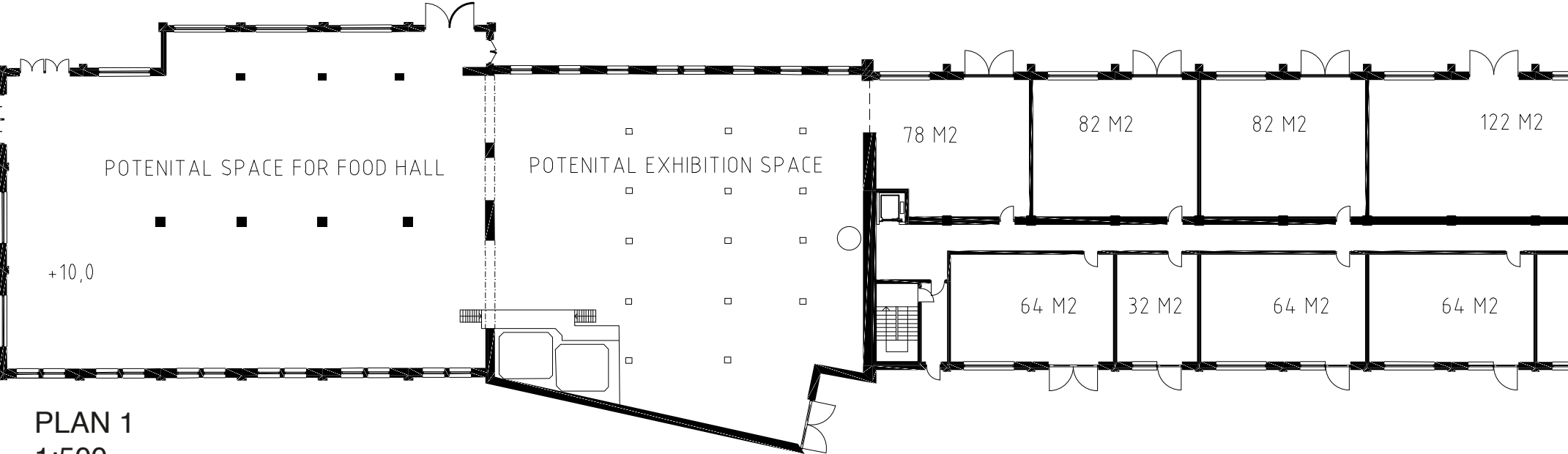
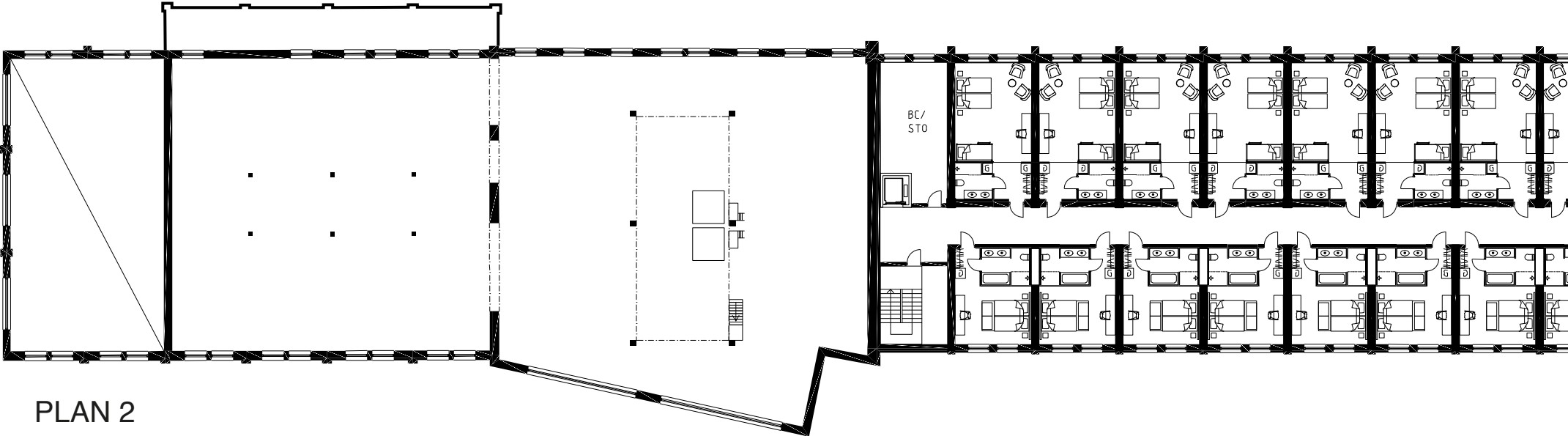


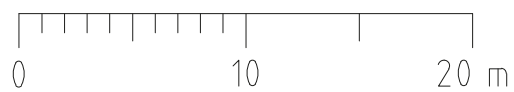
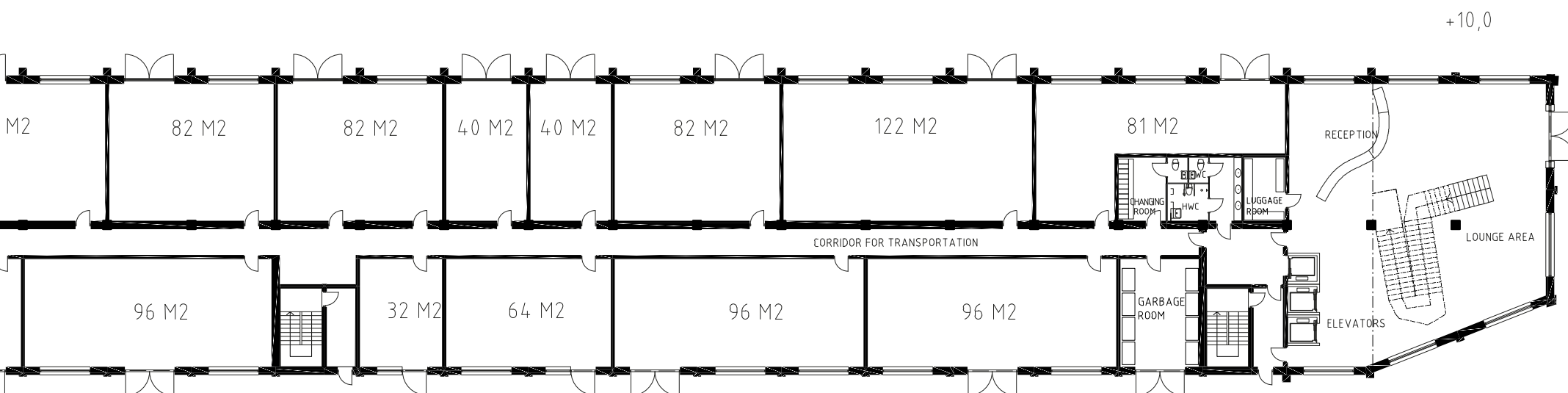
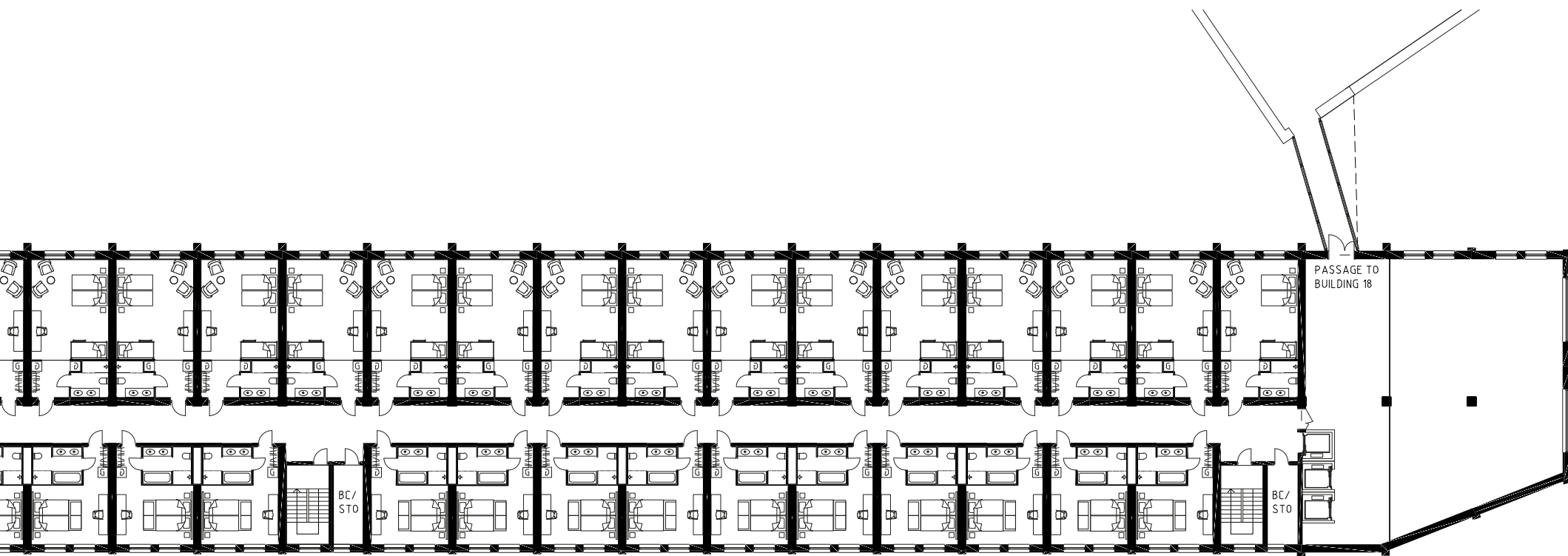
*View when coming from the urban bath place south of Building 18,  
the main entrance for the hotel and the red box extension*



# BUILDING 10-1-2

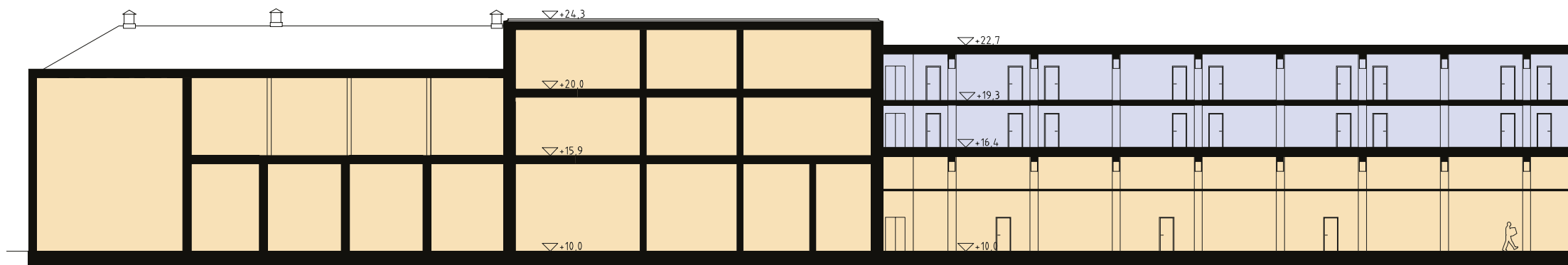
PLAN



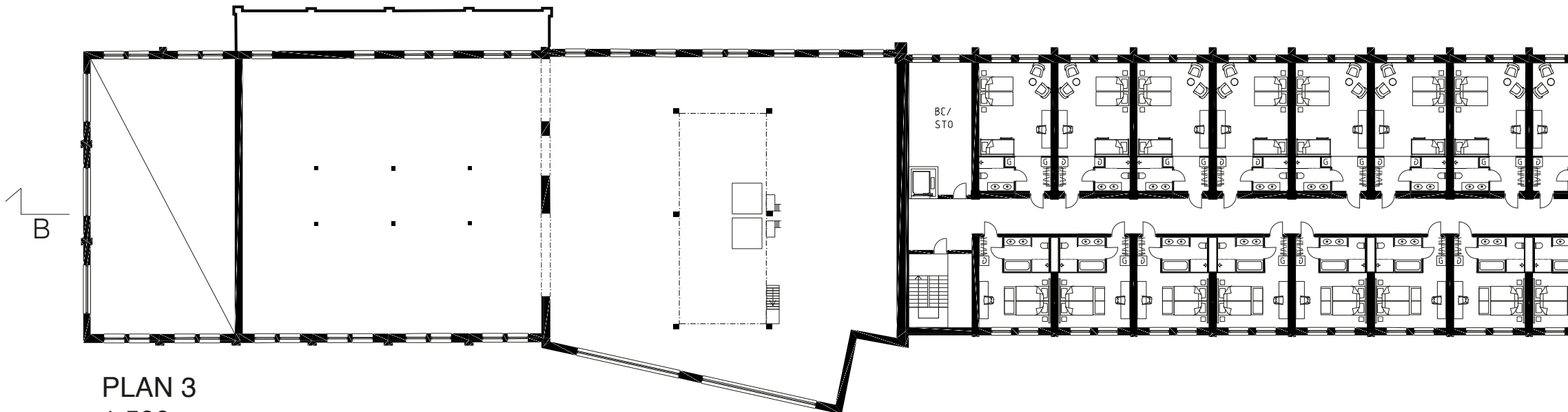


# BUILDING 10-1-2

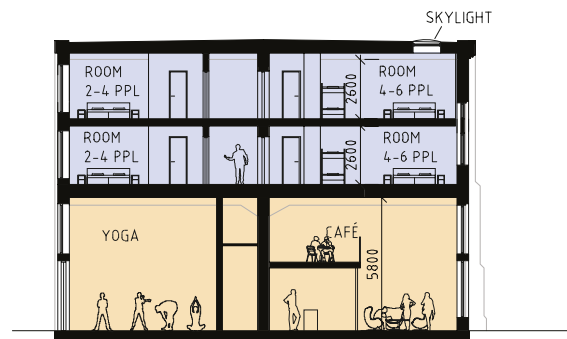
## PLAN & SECTION



SECTION B-B  
1:500



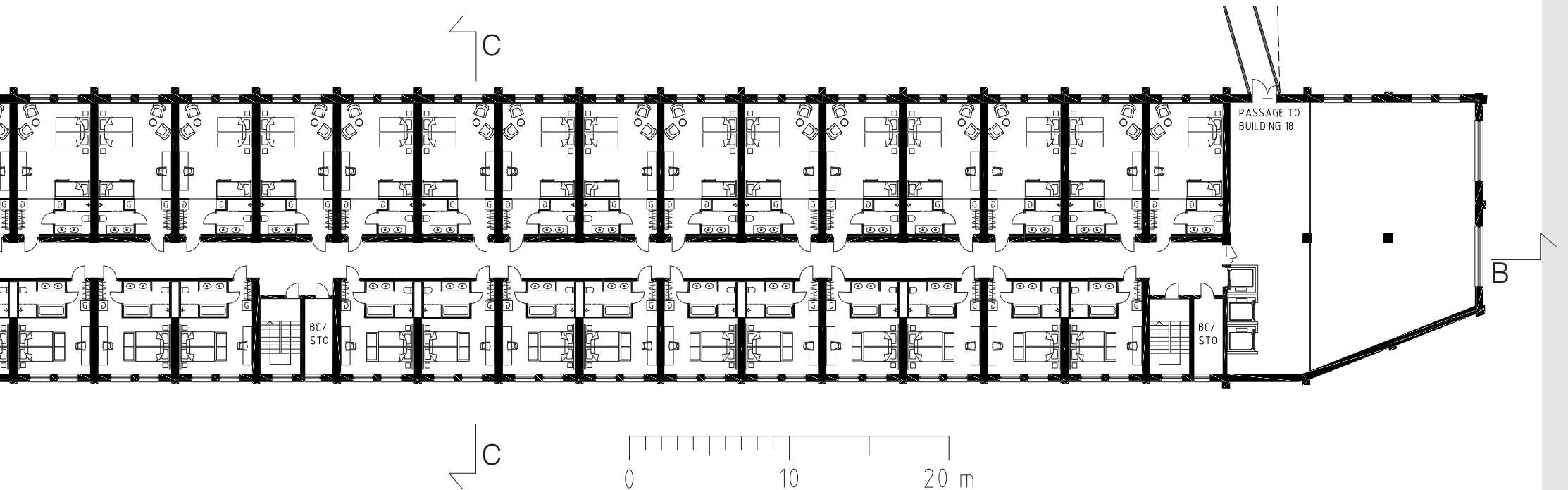
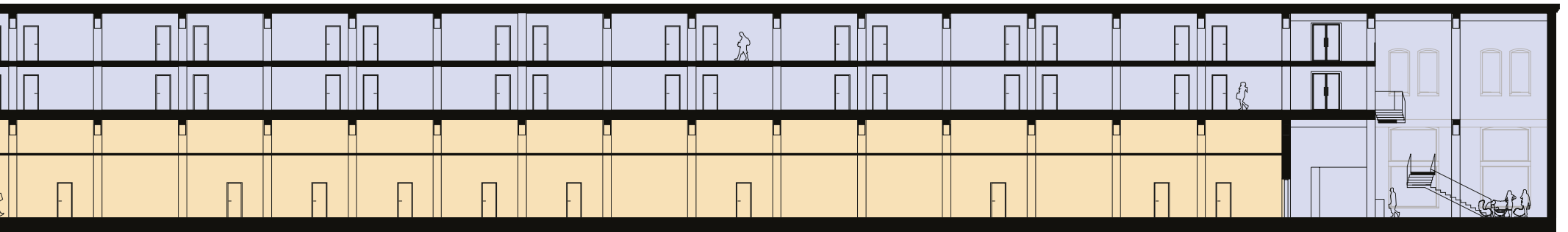
PLAN 3  
1:500



## BUILDING 10-1-2 PROGRAM

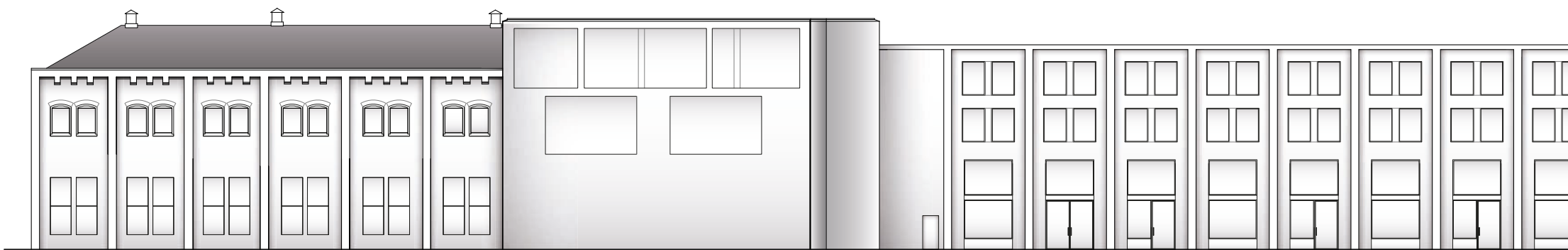
- HOTEL/HOSTEL
- PUBLIC FUNCTIONS, CAFÉ, SHOPS etc.

SECTION C-C  
1:500



# BUILDING 10-4-2

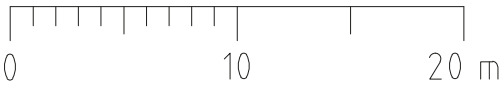
FACADES

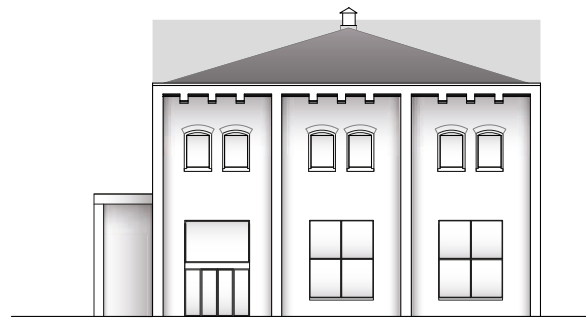


WEST  
1:500



EAST  
1:500

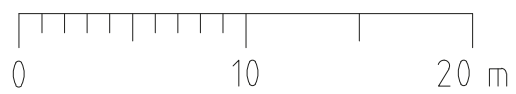
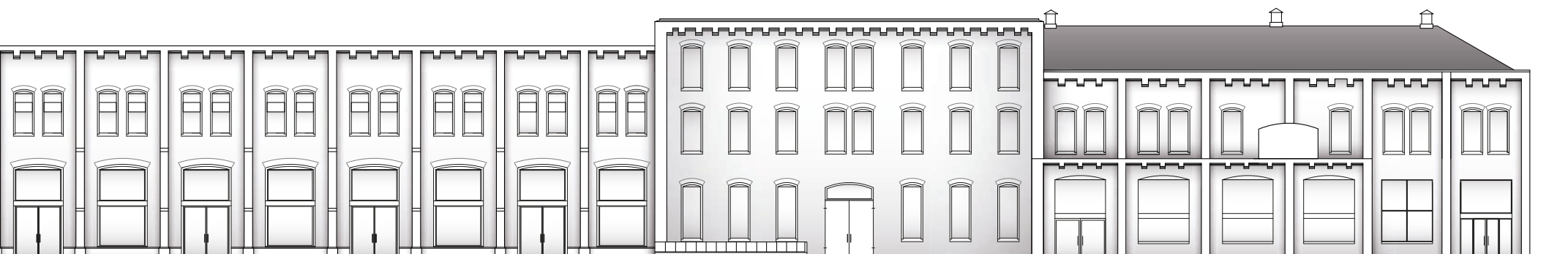
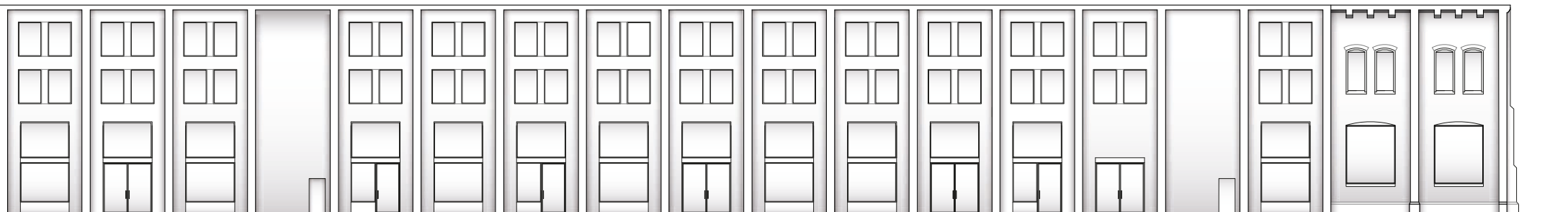




NORTH  
1:500



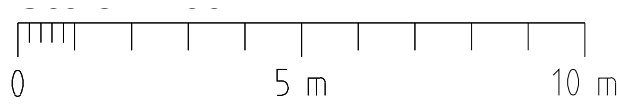
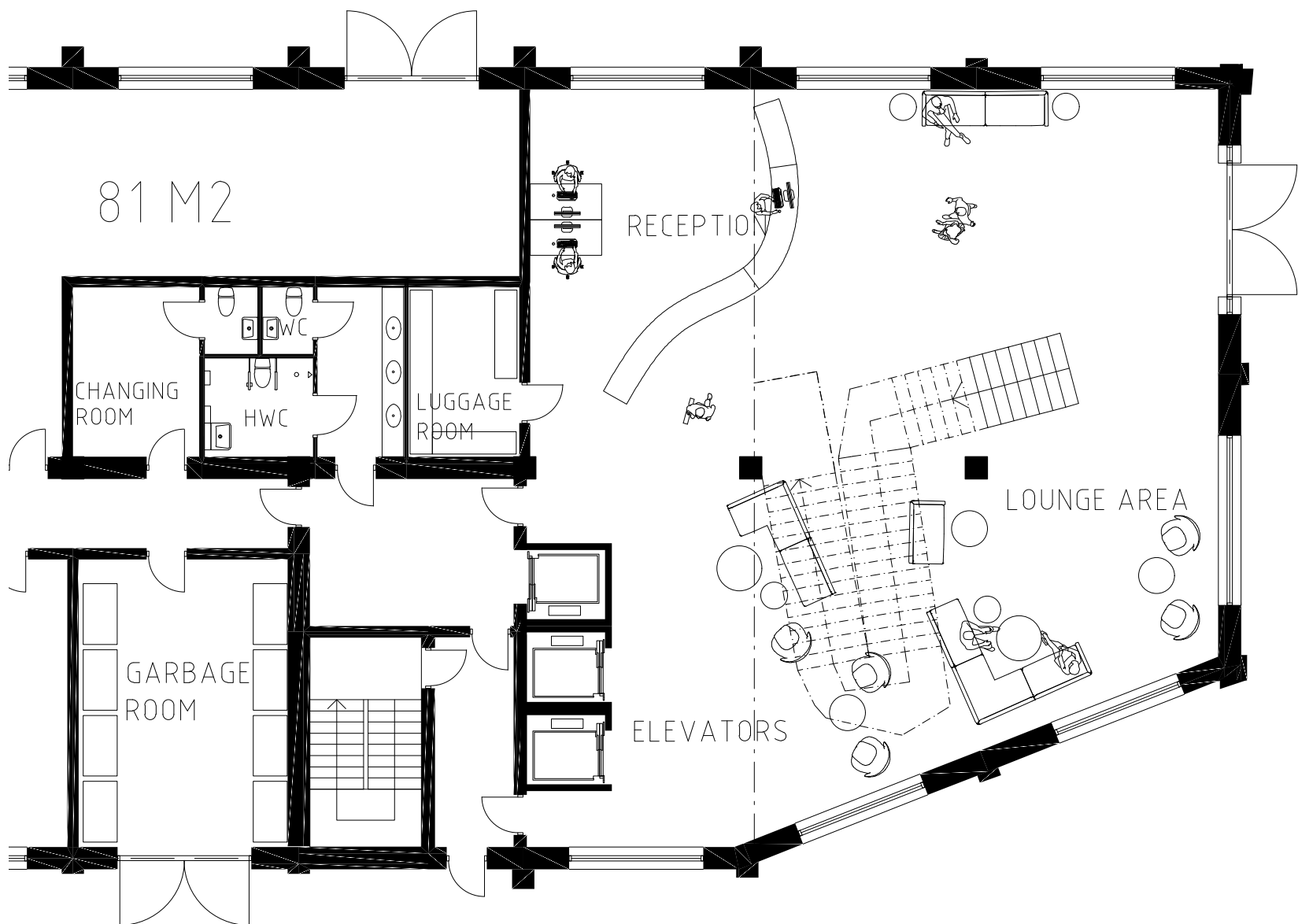
SOUTH  
1:500





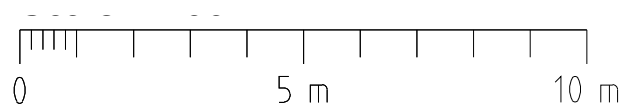
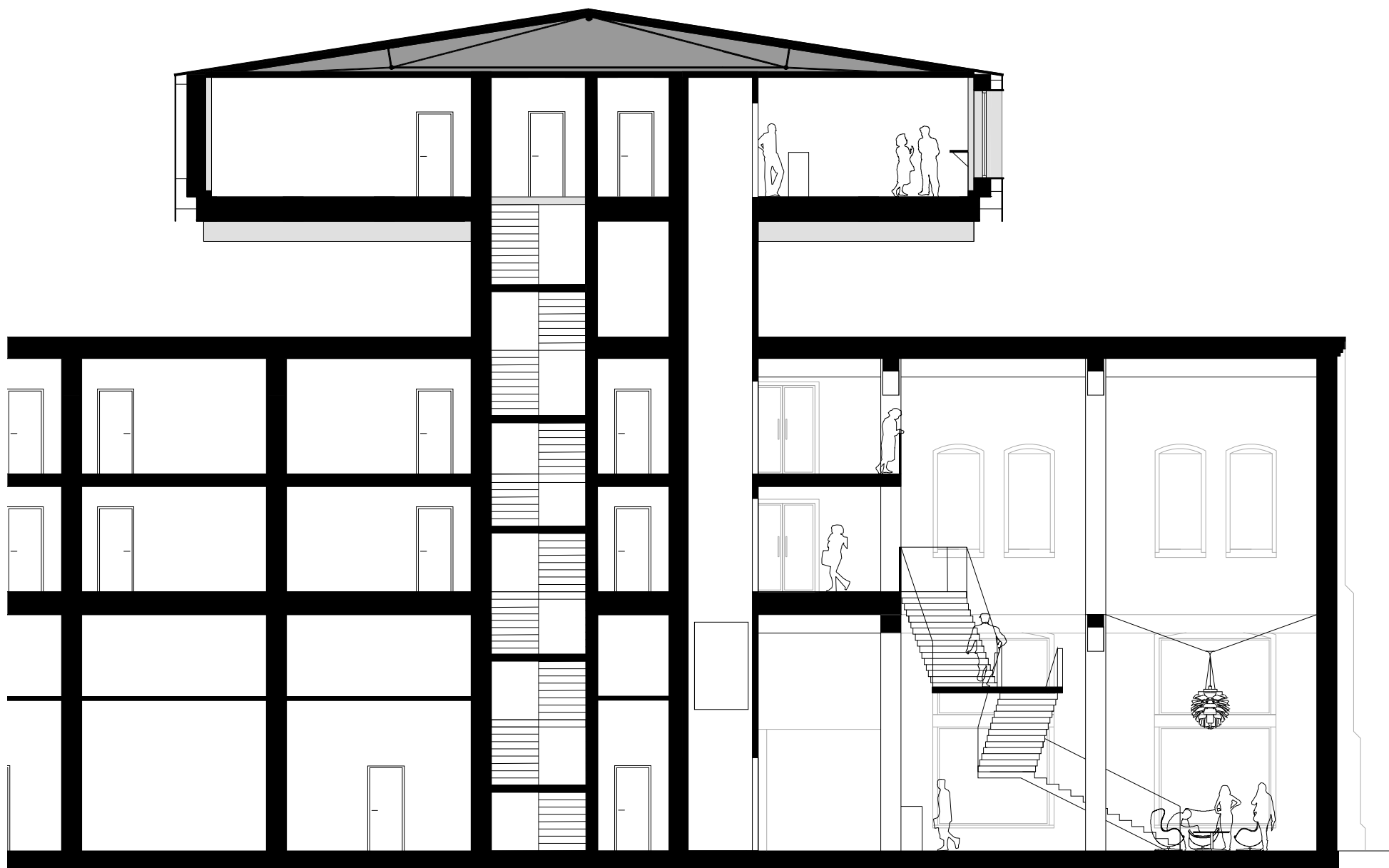
# PLAN 1:200

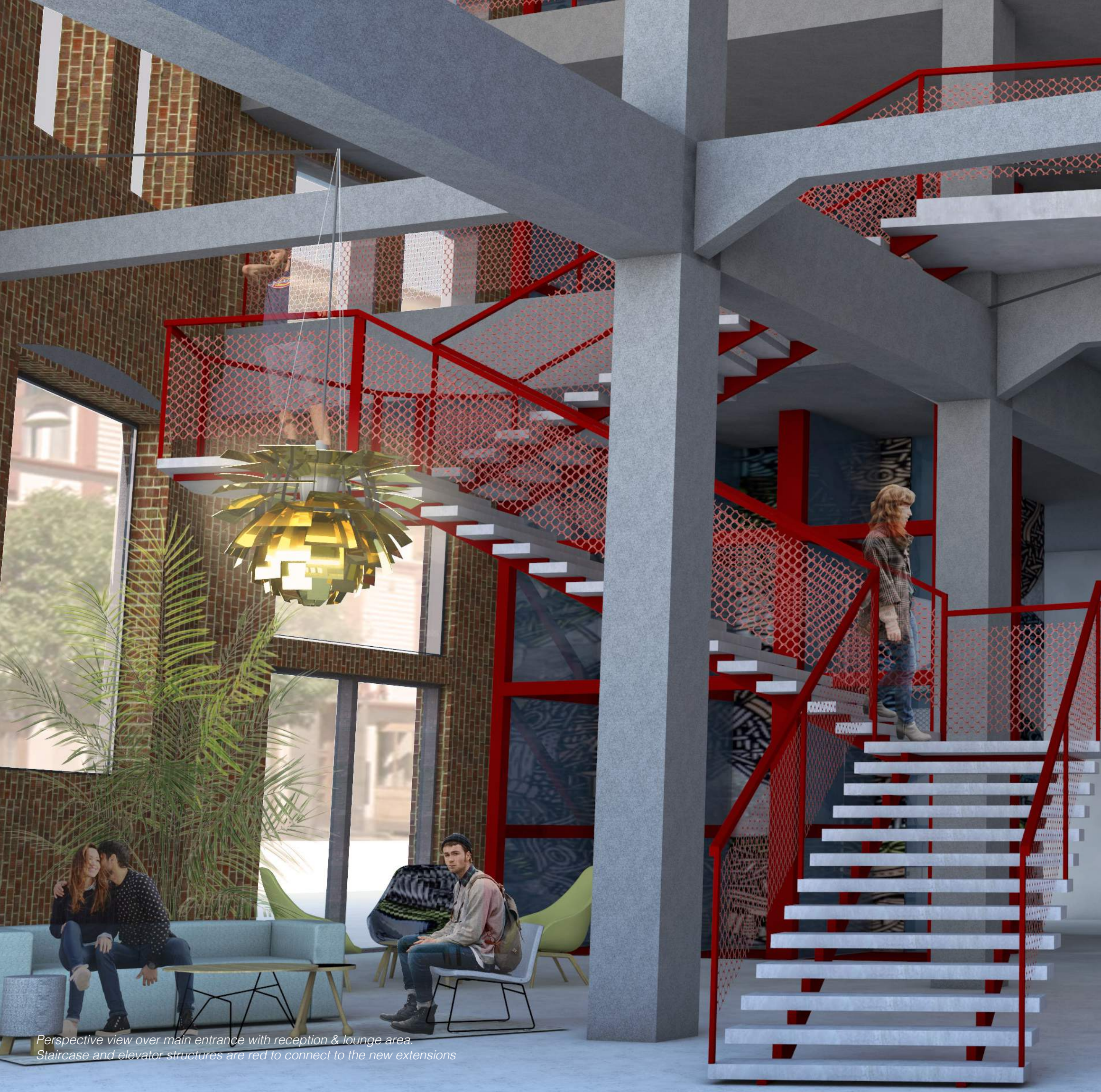
+10,0





# SECTION 1:200





*Perspective view over main entrance with reception & lounge area.  
Staircase and elevator structures are red to connect to the new extensions*

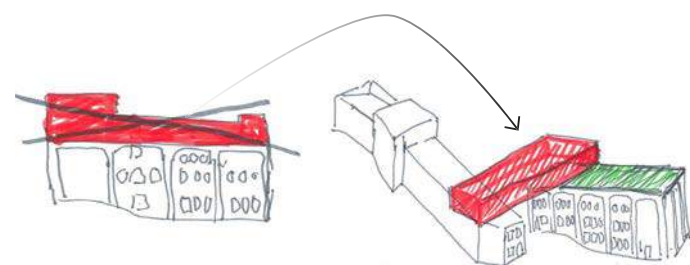
RECEPTION

<HISS

PAPYRUS



# THE RED BOX EXTENSION

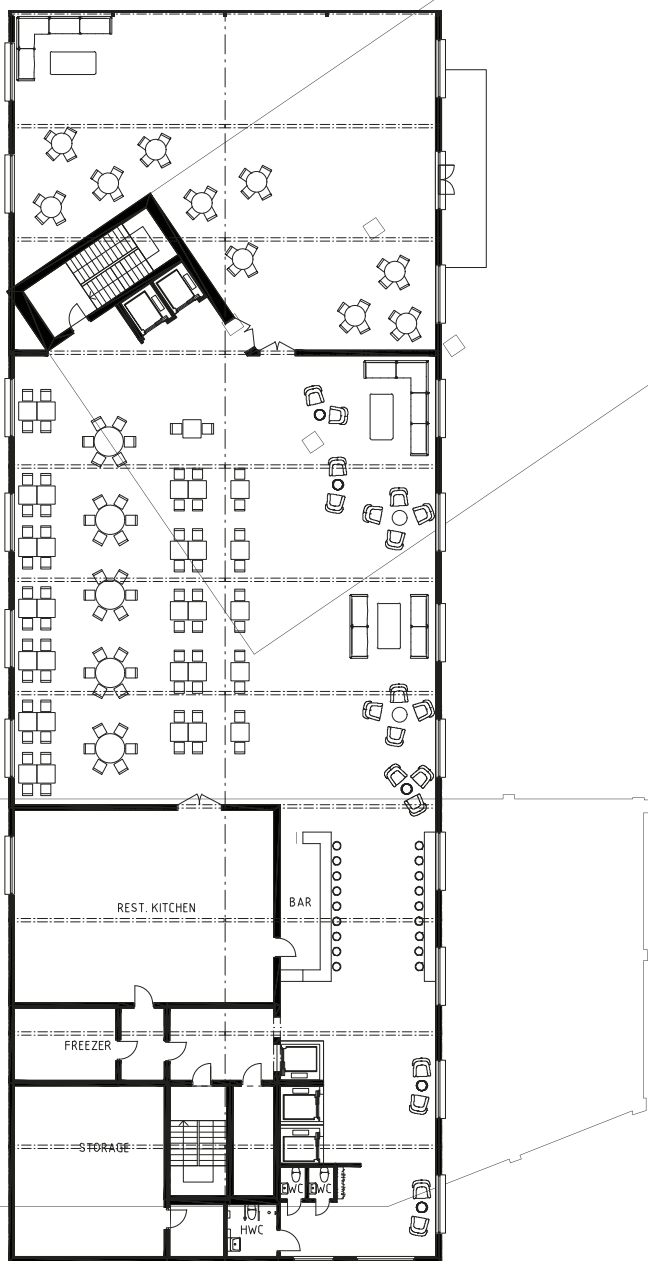


## A ROOFTOP RESTAURANT

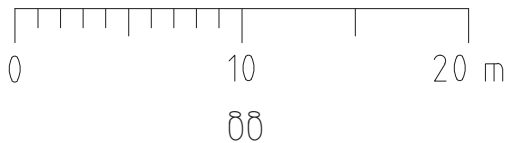
The old red metal cladding on the fourth floor of building 18 is removed to give the building a more seamless and cohesive appearance. However the memorable red character does not get removed from site but is instead re-interpreted in a new "Red box extension" connecting building 18 to building 10 from above.

The red box contains a restaurant & bar with a large terrace in the east to enjoy the view over thr Mölndal River. From the red box, there is also a possibility to access the roof of building 18, where the restaurant can expand during the summer. The red box will support the hotel with breakfast for guests during the mornings but will be accessible for all visitors during other times of the day.

The red color is dominating on both exterior and interior surfaces, maximizing the concept of the red box. It is constructed with a structure of red steel beams that lands on the new fire escape staircase in building 10 and on parts of the roof of building 18 (who's structure will need to be reinforced to carry the extra loads). The intention of the red steel and the cladding consisting of red perforated metal sheets is to create an industrial feeling and to connect to the industrial heritage and character of the site.



PLAN  
1:500

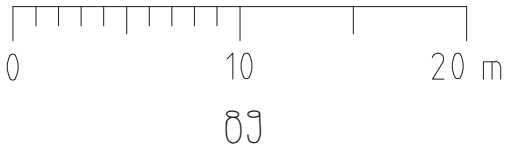


# THE RED BOX EXTENSION

FACADES



WEST  
1:500

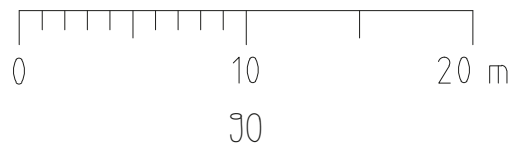


# THE RED BOX EXTENSION

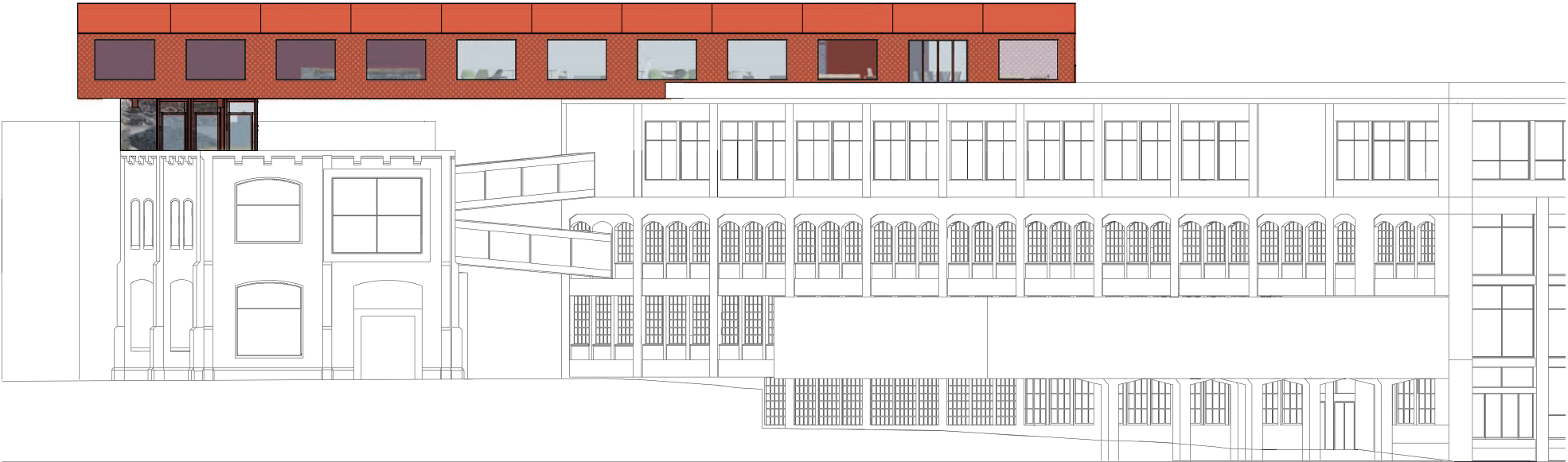
FACADES



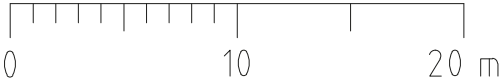
EAST  
1:500



FACADES



SOUTH  
1:500

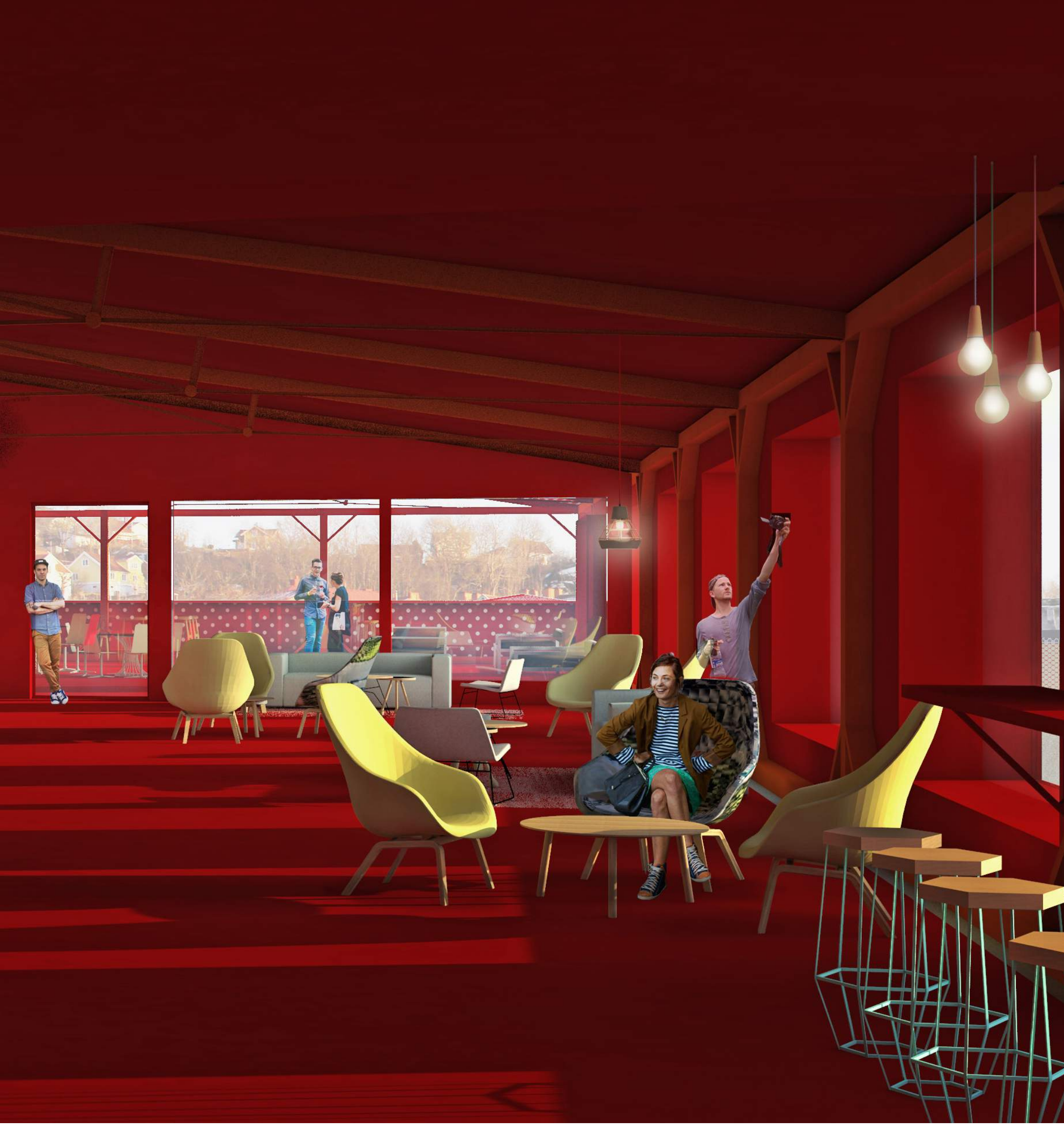




# REGNUM

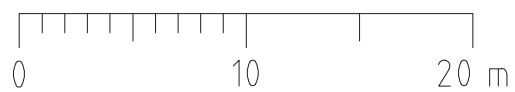
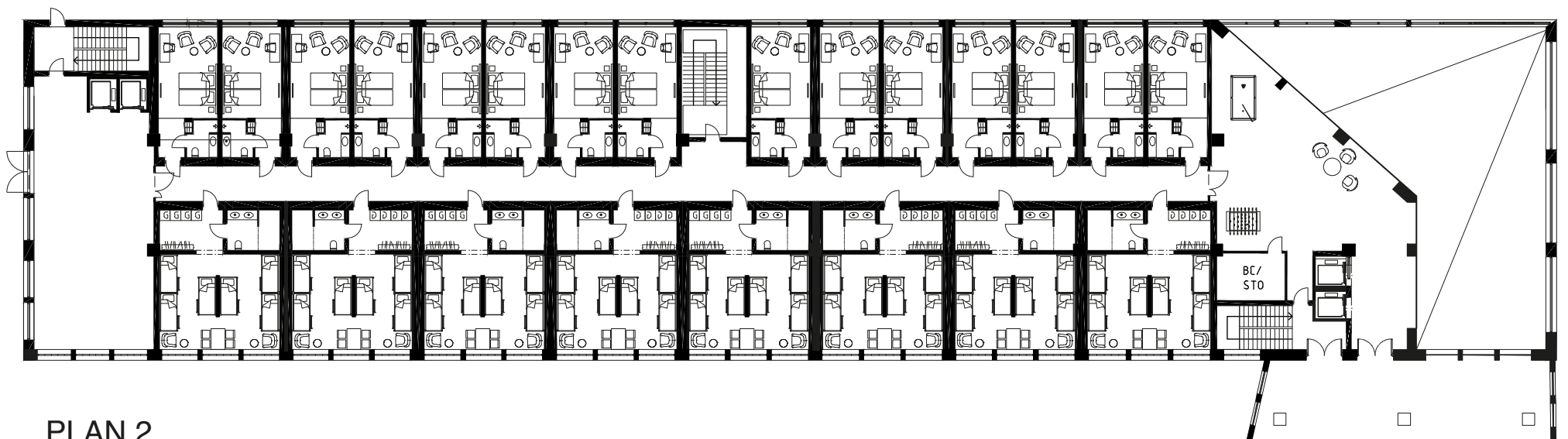
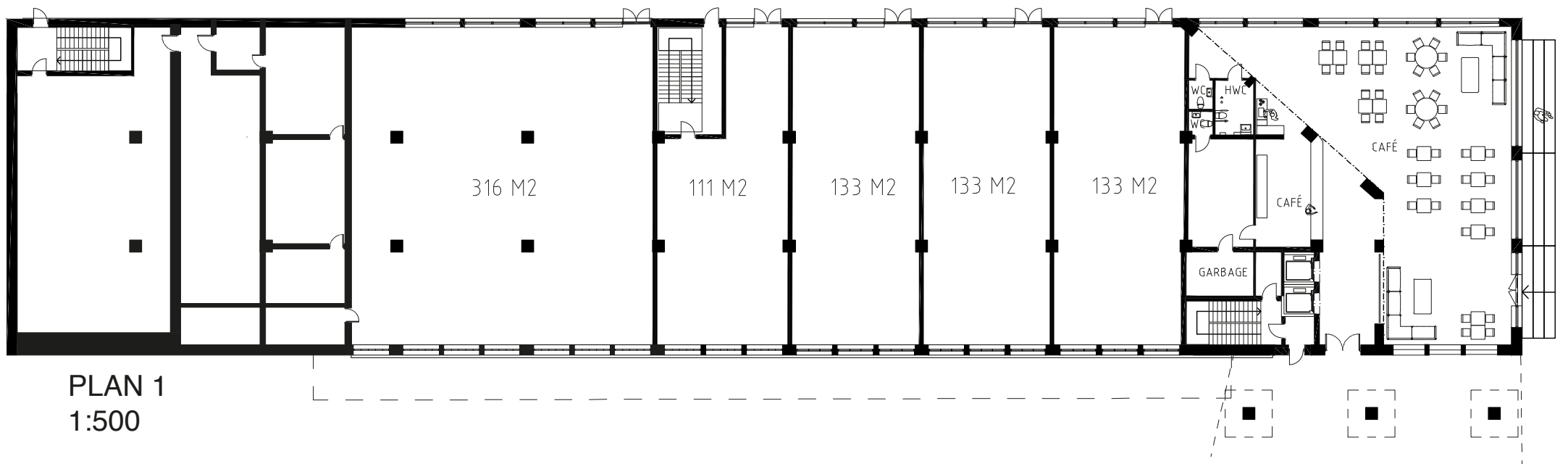
BAR & RESTAURANG

*View over the restaurant when entering from the elevators in Building 10*



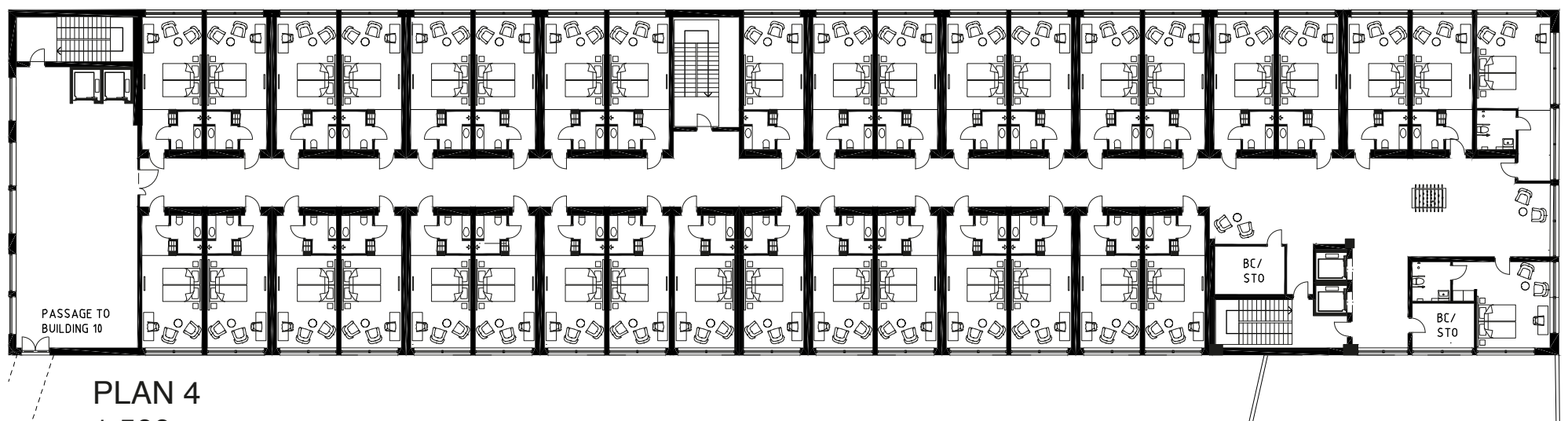
# BUILDING 18

## PLAN

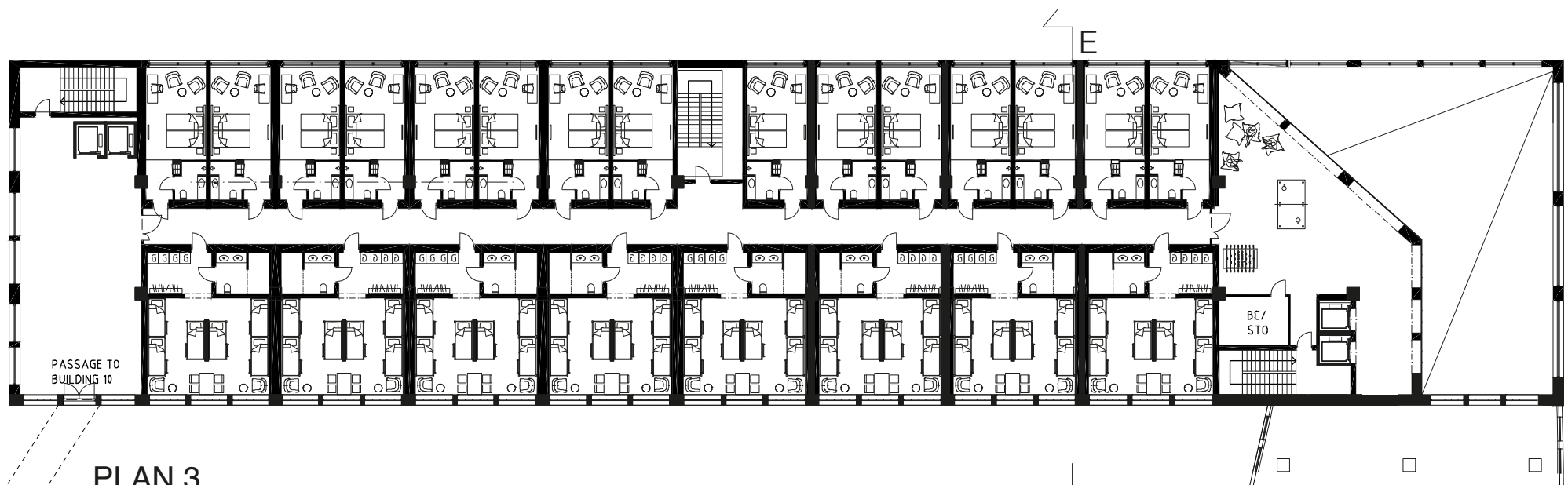


# BUILDING 18

## PLAN



PLAN 4  
1:500

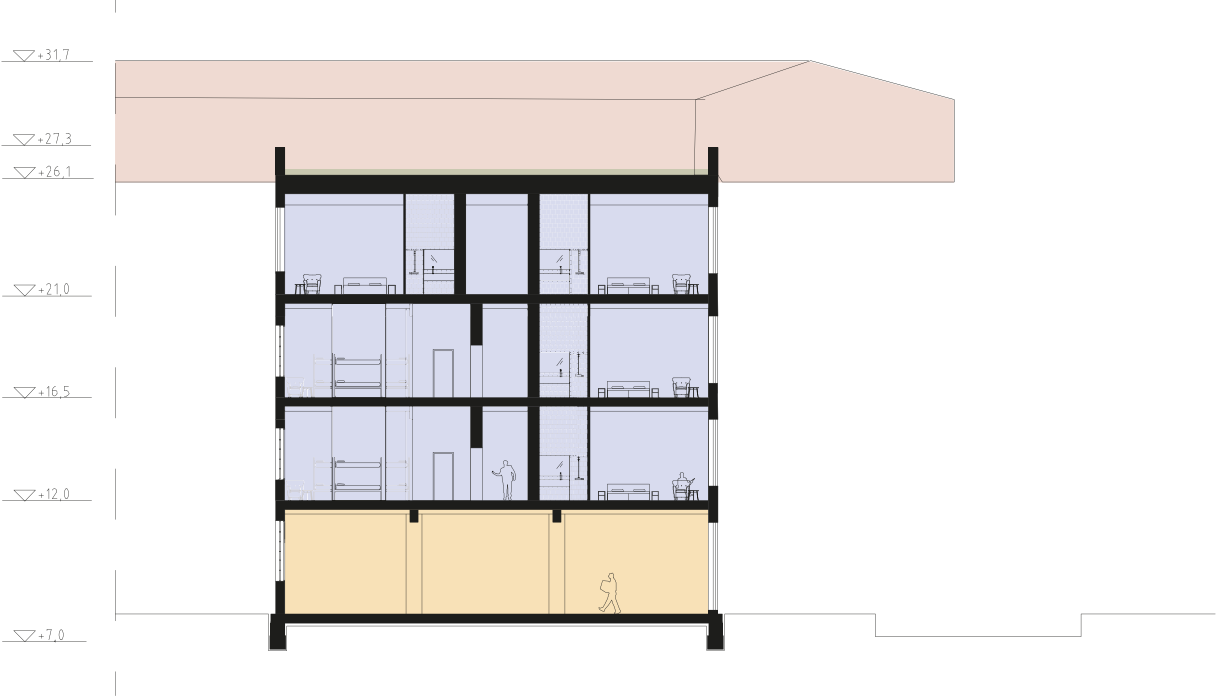


PLAN 3  
1:500

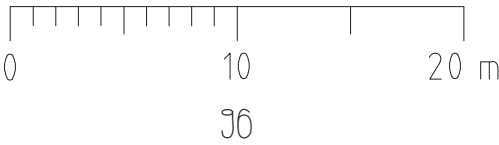
0 10 20 m

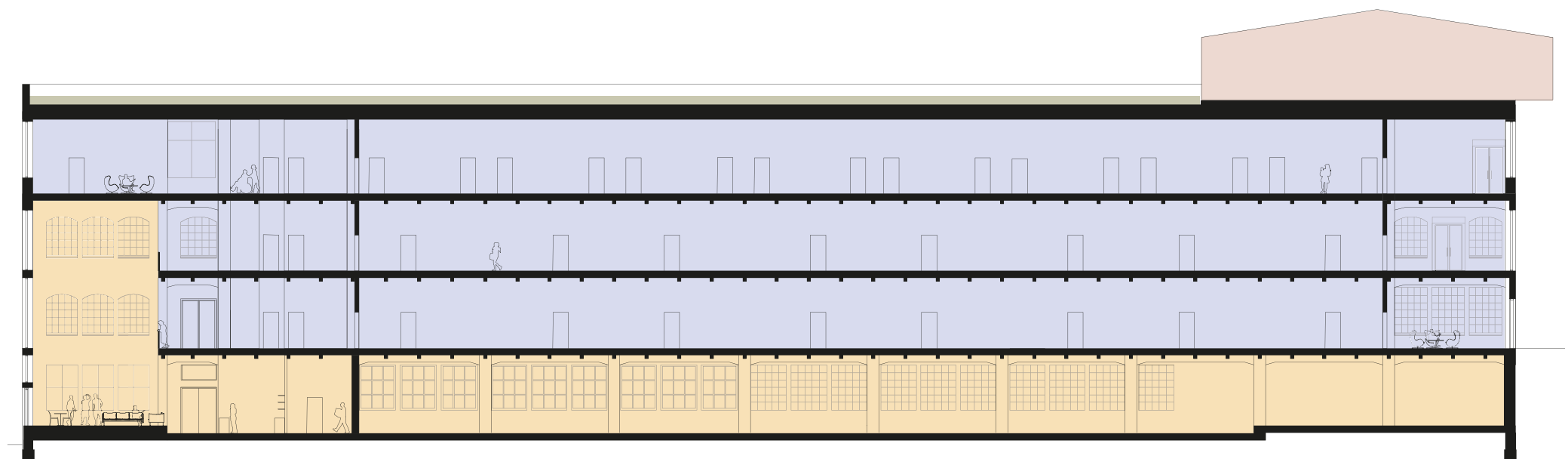
# BUILDING 18

## SECTION



SECTION E-E  
1:500

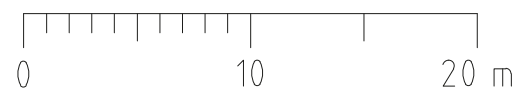




SECTION F-F  
1:500

BUILDING 18 PROGRAM

- GREEN ROOF
- ADDITION -  
ROOFTOP RESTAURANT
- HOTEL/HOSTEL
- PUBLIC FUNCTIONS, CAFÉ,  
SHOPS ETC.

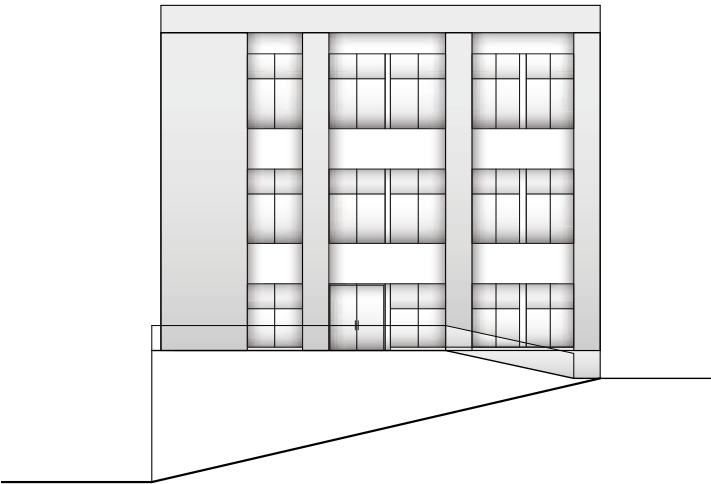


# BUILDING 18

## FACADES

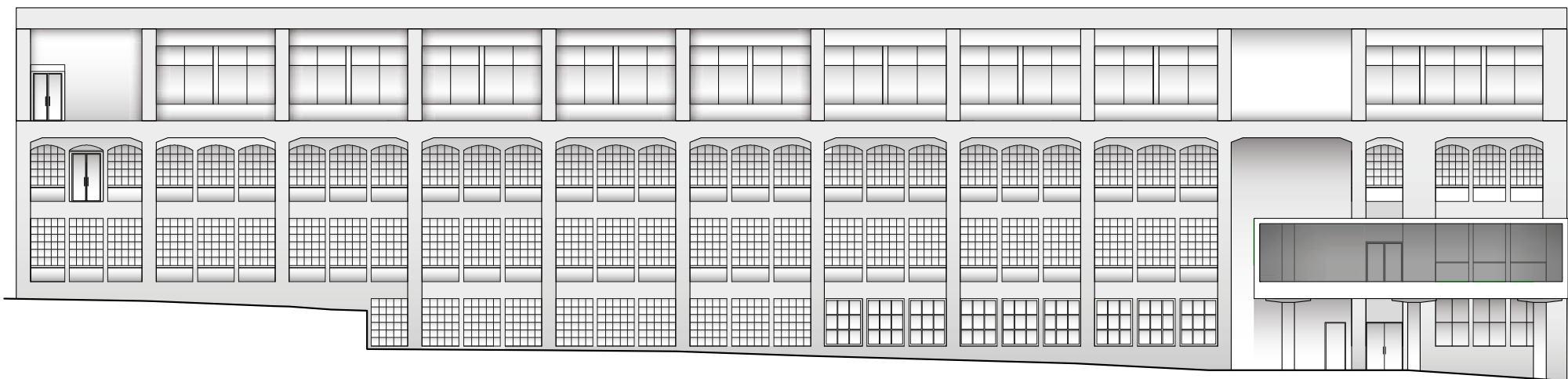


SOUTH  
1:500

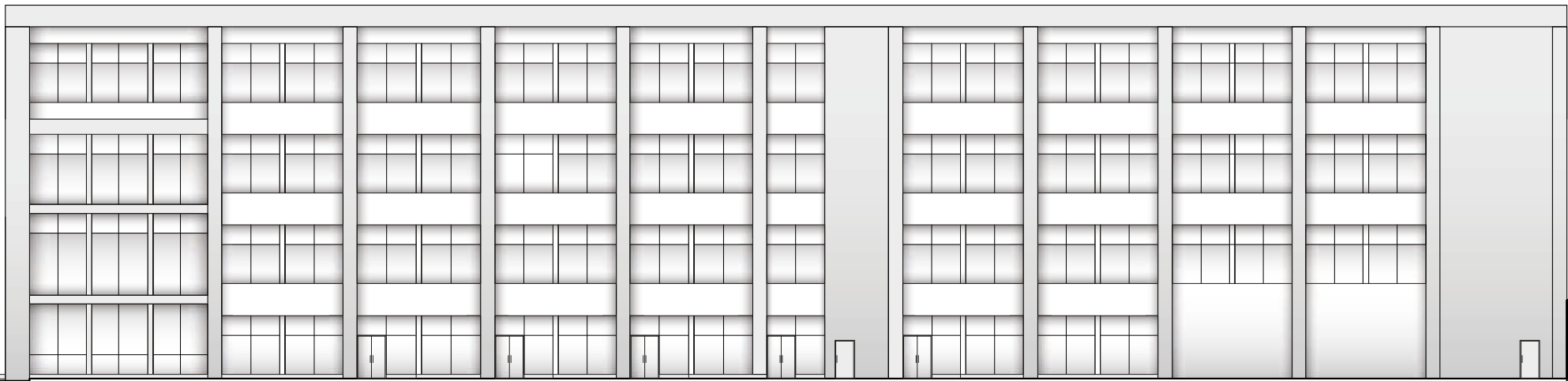


NORTH  
1:500

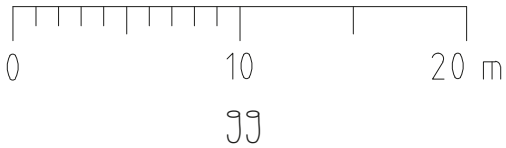




WEST  
1:500

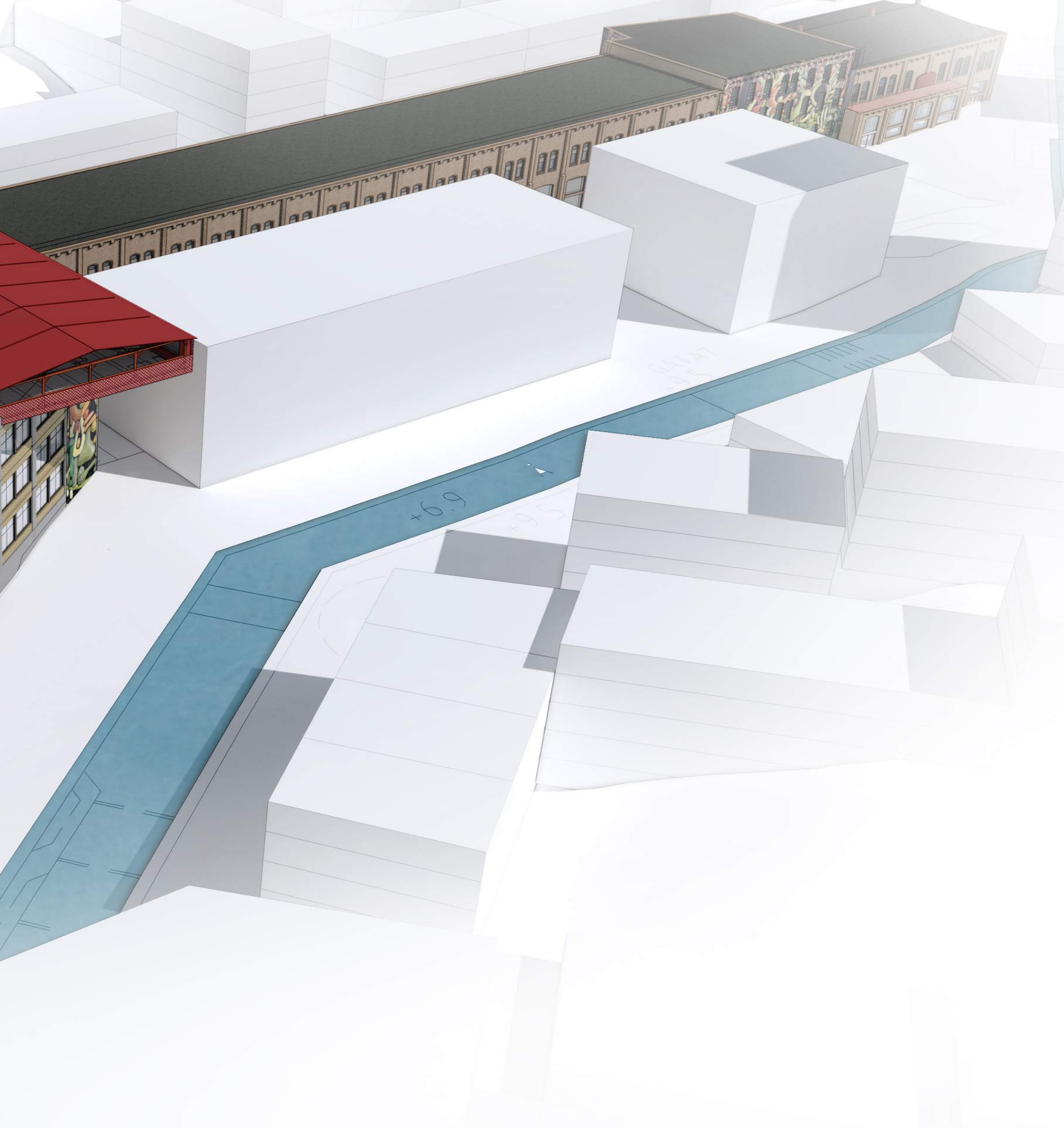


EAST  
1:500



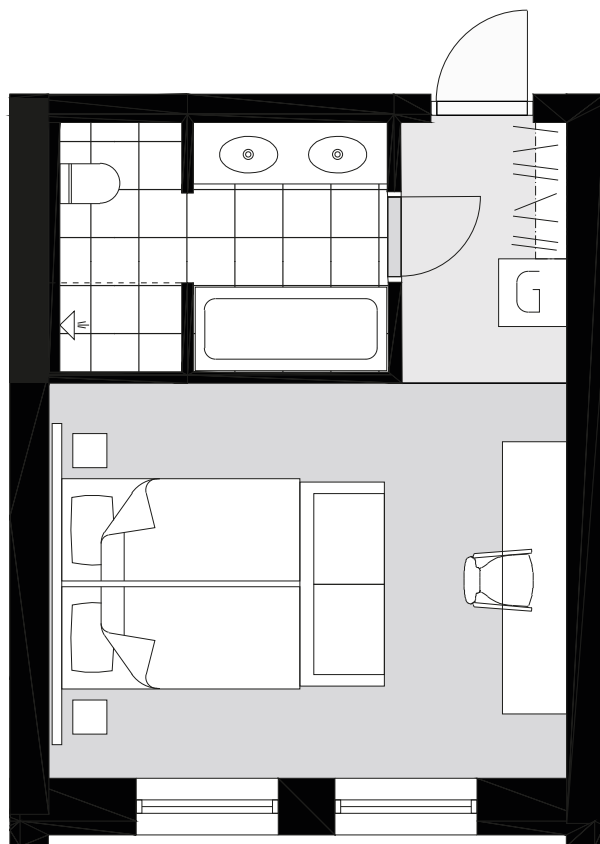


*Bird view from south-east.*

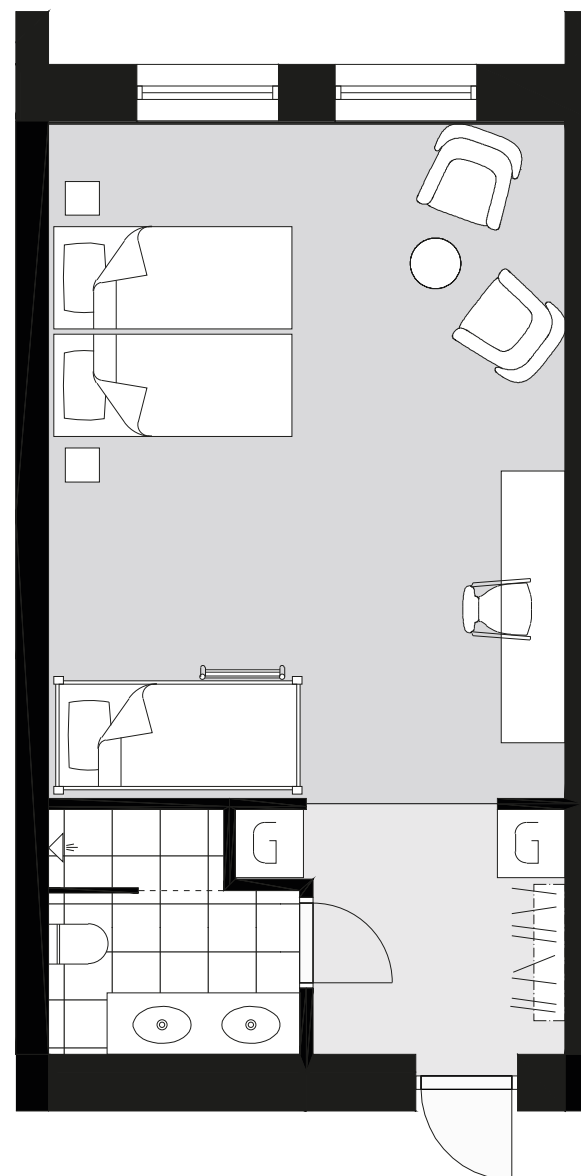


# ROOM TYPOLOGIES 1:100

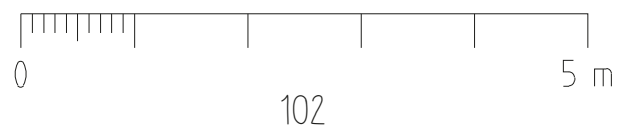
BUILDING 10



**2-3 people room-** total 40 rooms

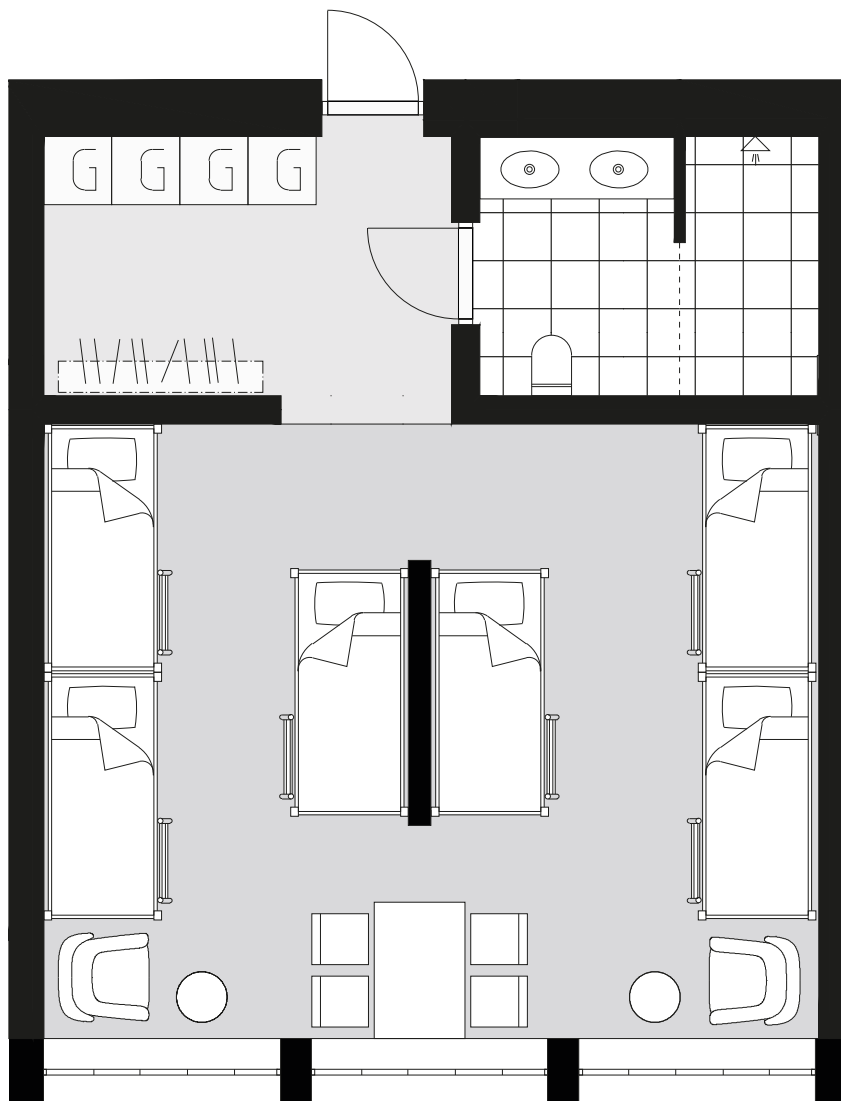


**4 people room-** total 44 rooms

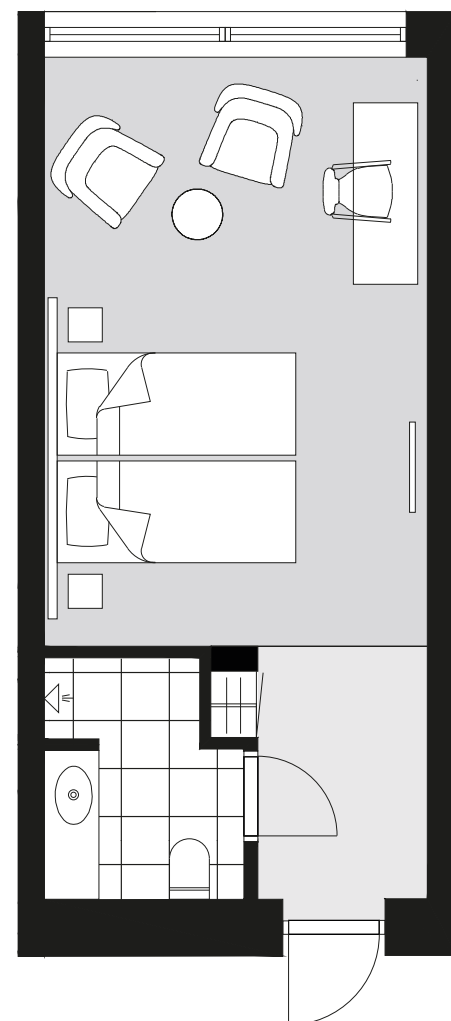


# ROOM TYPOLOGIES 1:100

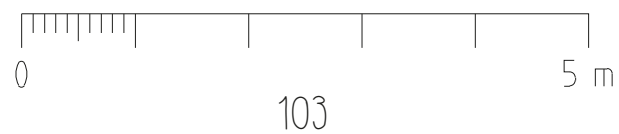
BUILDING 18



**12 people room-** total 16 rooms



**2 people room -** total 67 rooms



# INTERIOR CONCEPT



# INTERIOR CONCEPT



An industrial feeling with raw and exposed materials and splashes of colour. Keep the industrial elements in the building and have them visible where possible. Concentrate the graffiti to interior elements such as furniture. Establish some walls for murals that could be changed regularly, invite artist to come and make their mark. Attract people to want to come back to see new art.

# DISCUSSION/REFLECTION

The main question and objective for this thesis have been to find a new purpose for the old buildings in Forsåker, to gain a deeper understanding of the complicated task it could be to transform an old building and find a design approach on how to think when adding new architectural additions to old buildings. All the knowledge I have gained during this process has been put into the transformation and preservation of these two old structures.

Through my research on design, and how to relate to the existing when adding something new I found out that it is hard to find one single answer to this question. It always depends on the architecture in question but also on the architect responsible for the new addition. One could say that there is no right or wrong way to relate to the existing when transforming, only different opinions. I found the three ways of how to relate to history presented by Lauri in "Smit aldrig undan från historien" (2015) the most inspiring and that that is why I chose to adopt these strategies and apply them to Forsåker. These strategies are for me one of the most important parts of knowledge that I will take with me into future work.

The new purpose for the old buildings ended up including a hotel/hostel and spaces for public and service functions that could support

other new development in the area. I believe that my final proposal could add something to the debate in Mölndal of what to do with the old buildings and I also believe that there is a lot of room left for developing this proposal further. I realise that some parts of the project might be more controversial and harder for people to accept than others, but that it also can create an interesting discussion about heritage values. If the graffiti, for example, that has left the biggest mark on the buildings in recent years is to be included in these building's heritage or not.

In the end, I am quite satisfied with the final result and I am happy with all the knowledge I have gained concerning preservation theory and design. I wish that I would have had more time to develop the final proposal as I believe there is room for improvement here, going deeper into working with the interesting details of these buildings. There have been some big bumps in the master thesis road that have taken time from the design phase in the end. The process has not been as smooth and easy as I expected it to be since I have previous experience with this site. Coming back to Forsåker, I realized that a lot has happened during the two years since I last visited and much of my previous analysis had to be redone because of this, taking

time from the latter design part of the thesis. It has also been harder than expected to find proper drawing material of the current state of the buildings. I spent a lot of time trying to find the correct drawings and was in contact with both the municipality, the property developer Mölndala and the Papyrus historic archive without gaining a lot of useful information. In the end it was, Nyréns, the architects responsible for the structural plan for the whole area that provided me with the most helpful material, but not even that was complete. All the drawings I received were scanned handmade drawings that I had to digitalise before starting with my design. The restrictions to accessing the site were also a big problem as I only had small knowledge of the interior spaces of building 10-4-2 and the drawing material provided were conflicting each other. To improve or develop this thesis further, additional access to the site is necessary. Further investigations need to be made concerning facades, window openings and interior spaces to be able to take the project to the next level.

In the end, I do believe that I did the best I could with the material and time I had.

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Older photos of Mölndal from Mölndal stadsmuseum  
All current photos from site by Andrine Johansson  
All illustrations made by Andrine Johansson  
other sources named in caption

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I also want to thank my friends and family for putting up with my behavior the last year. Cheering me up when I felt down or stressed and for being there when I needed them the most. Special thanks to Fredrik for helping me with documenting the site and helping me with the preparations for the exhibition and to Sarah for all the support, giving me feedback on layout & design when I needed it and helping me with the English language.

I also want to thank my Co-workers at MA-arkitekter; Hanna, Helena, Kia and Peter for being my sounding board when I needed someone to discuss my ideas with. Nyréns Arkitektkontor for providing me with drawings and photos of the site, without them, this wouldn't have been possible.

And last but not least I would like to thank Niantic for creating PokemonGo, so that I actually took the time to go outside to get some fresh air, exercise and clear my head once in a while.

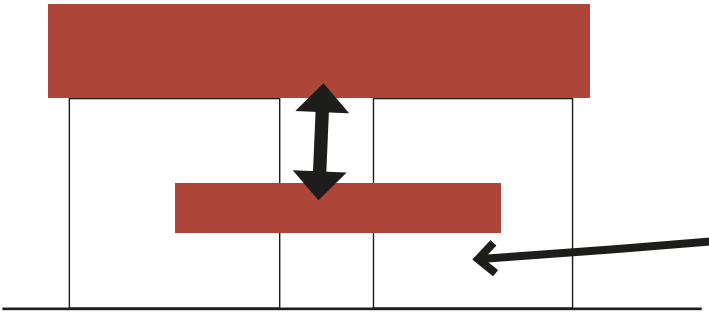


# APPENDIX

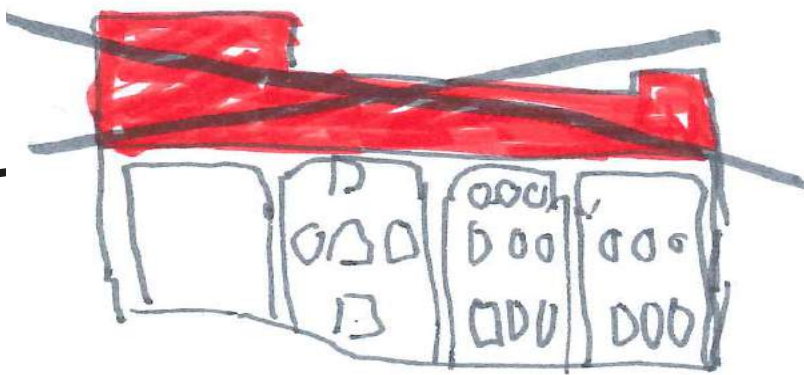
## SKETCH PROCESS



CONCENTRATE

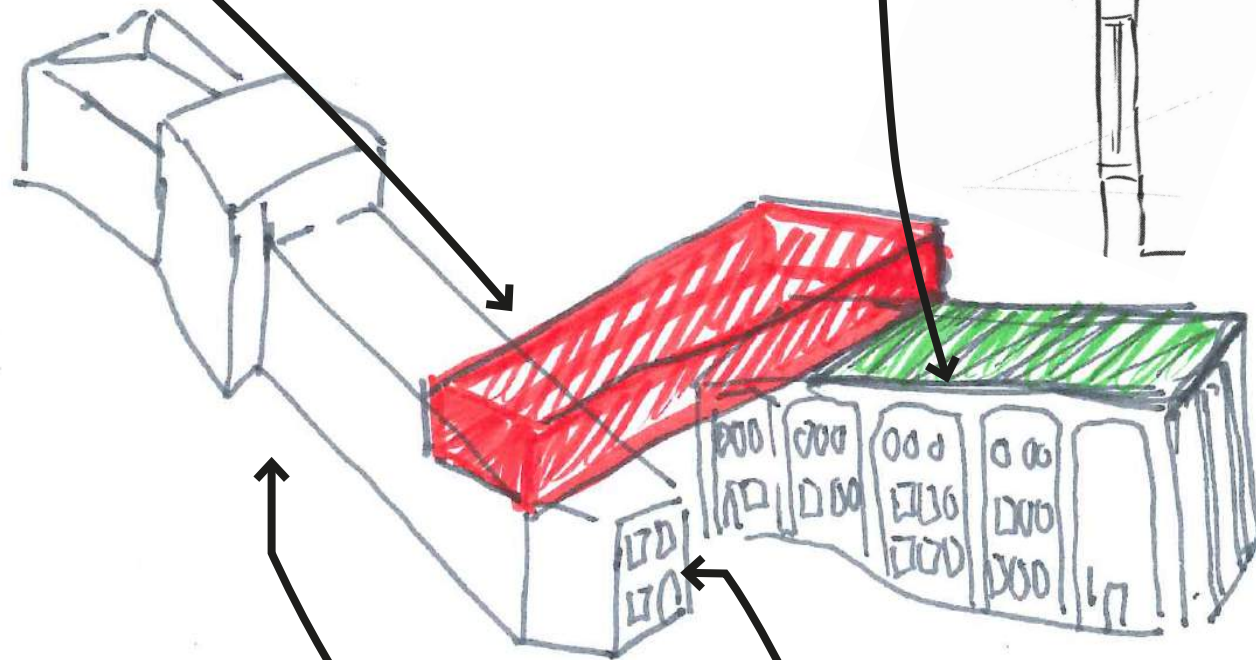
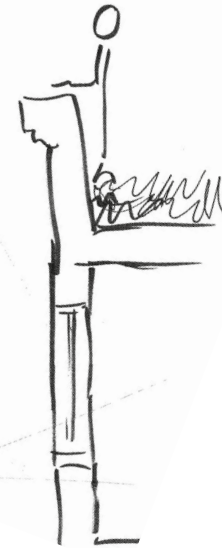
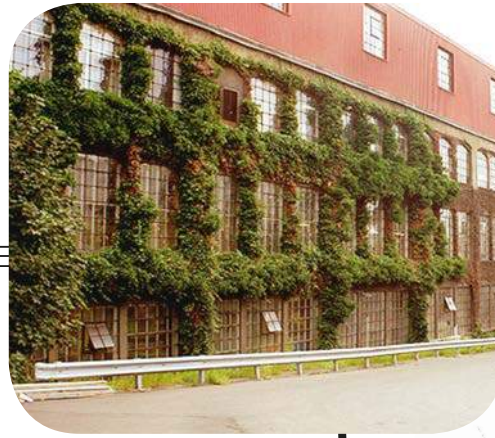


A transportation passage between second floor of building 10-4-2 and third floor of building 18. could be part of/integrated in addition on top?



REMOVE AND REDO

REINTERPRE



ENHANCE

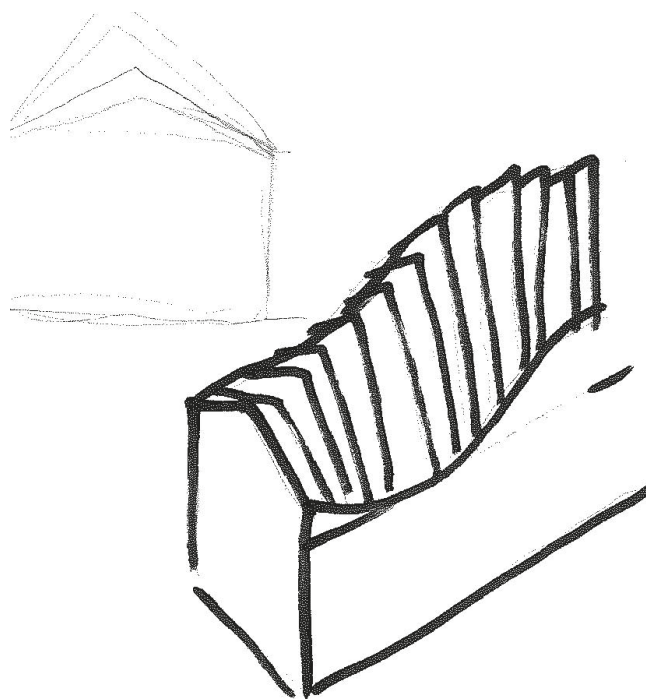


RE-OPEN WINDOWS

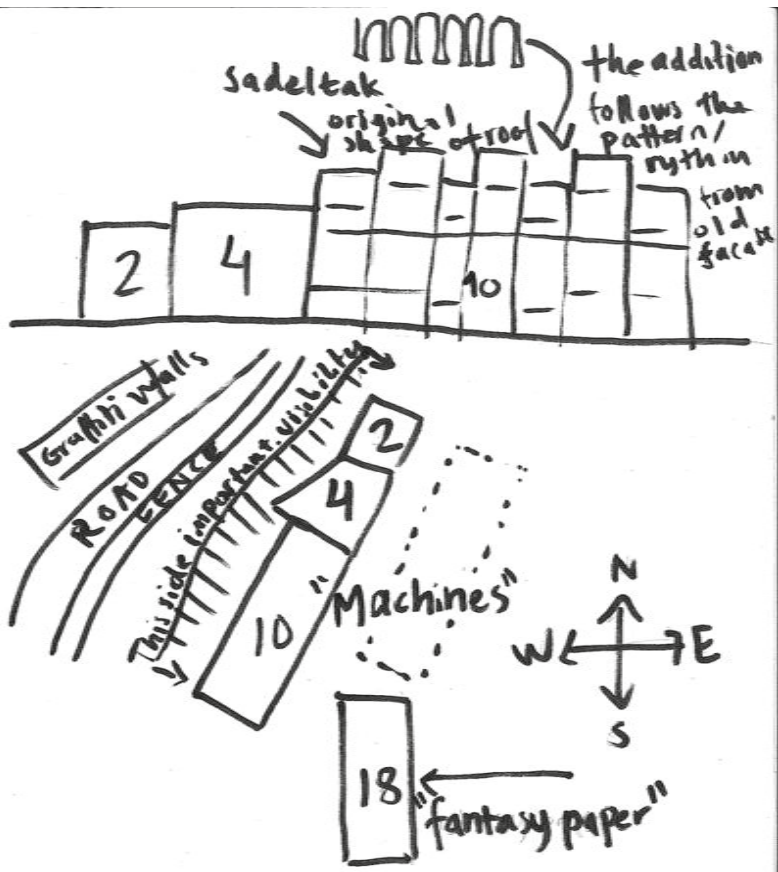
# EARLY CONCEPT SKETCHES



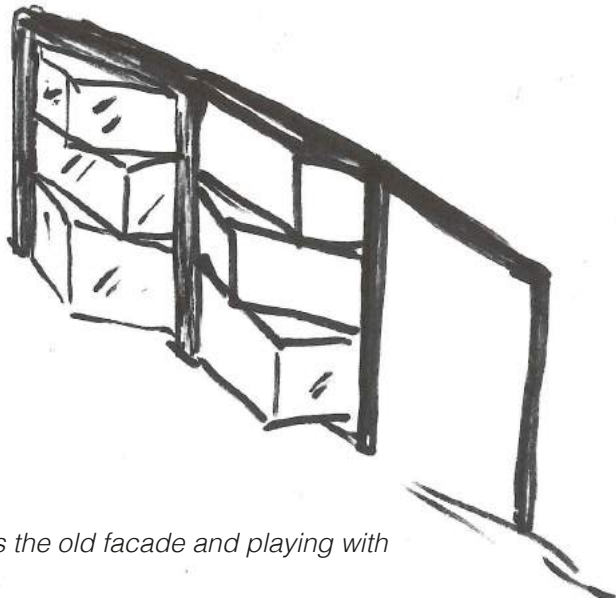
# EARLY CONCEPT SKETCHES



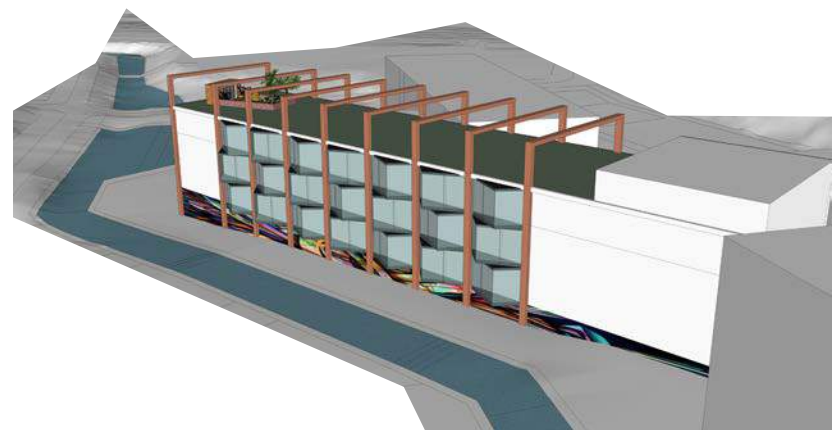
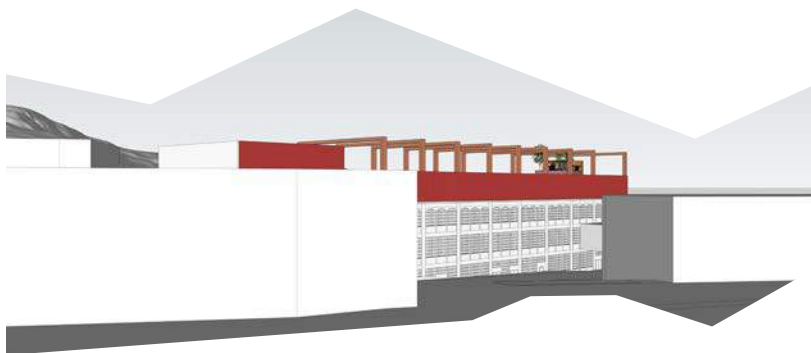
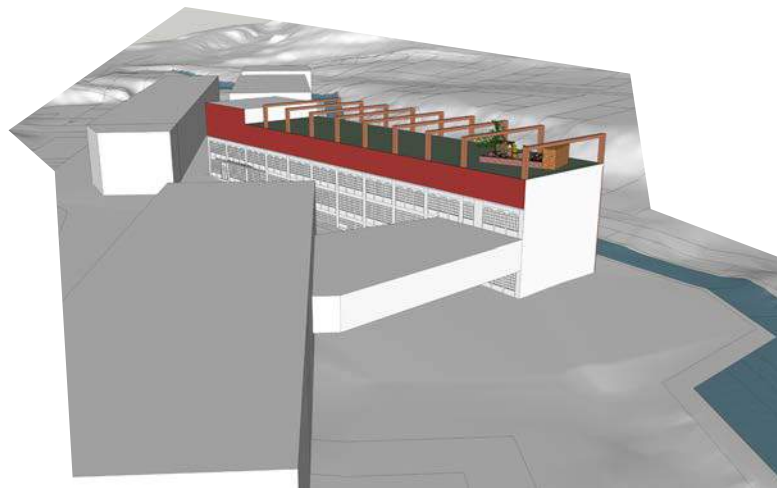
Adding a sculptural aspect on the roof of building 10



An early idea of the new facade of building 18, taking the same division as the old facade and playing with an interpretation of the three old windows

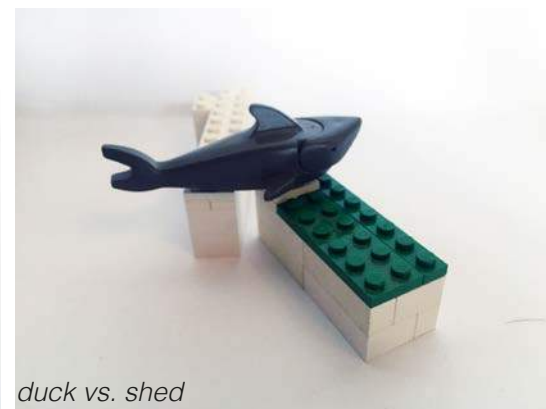
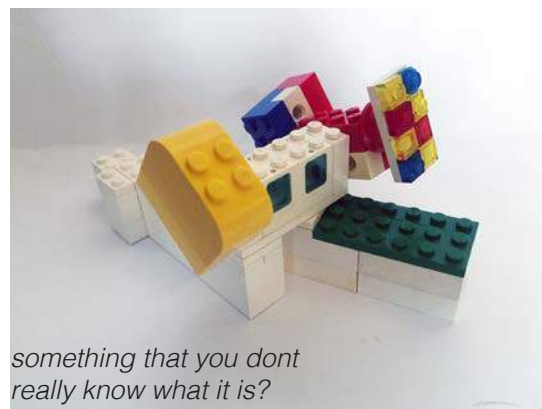
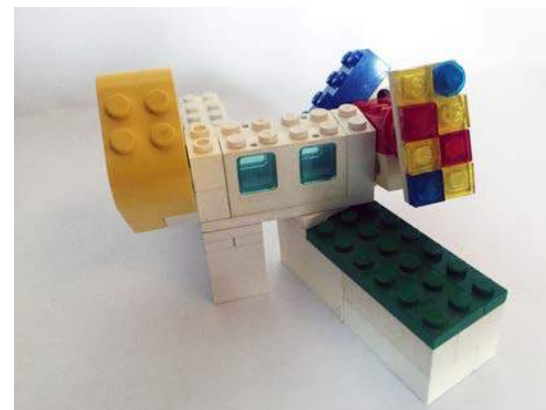
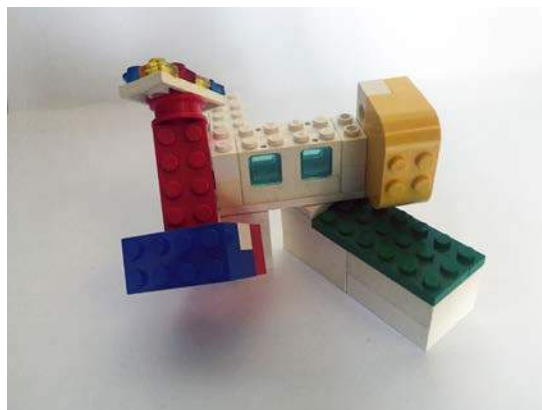
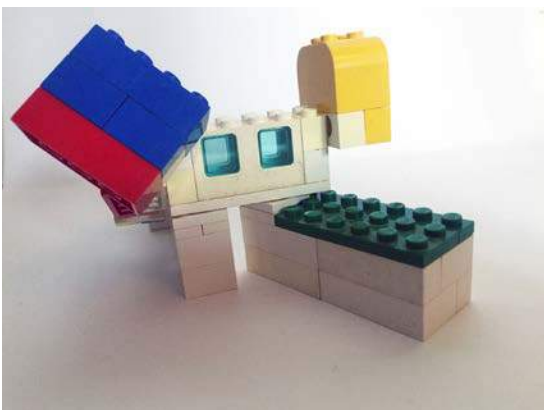
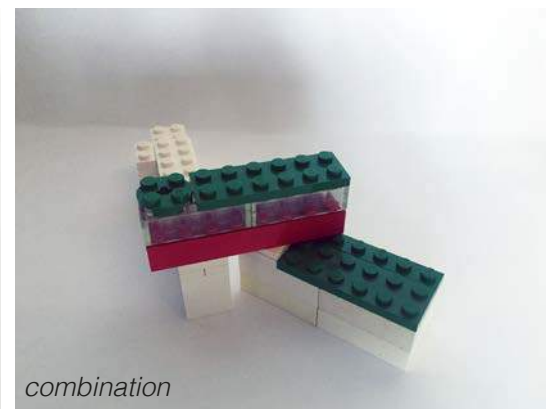
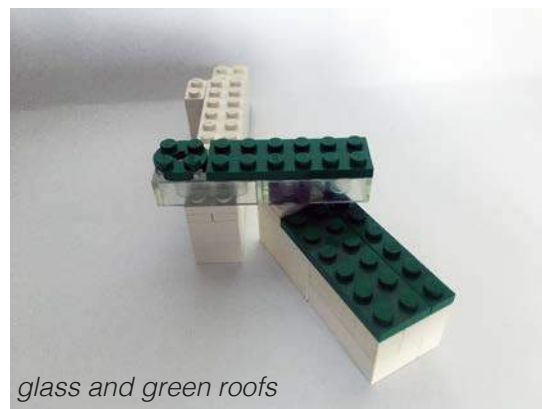
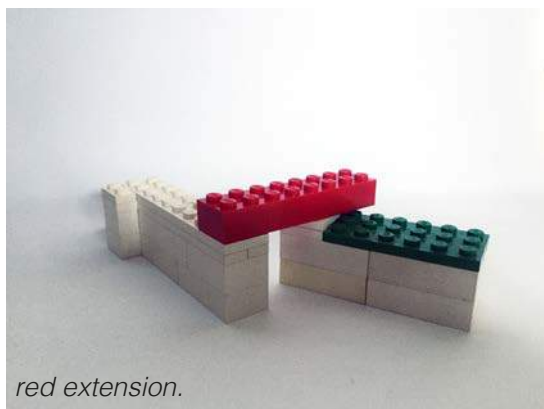


# EARLY SKETCHUP MODELLING

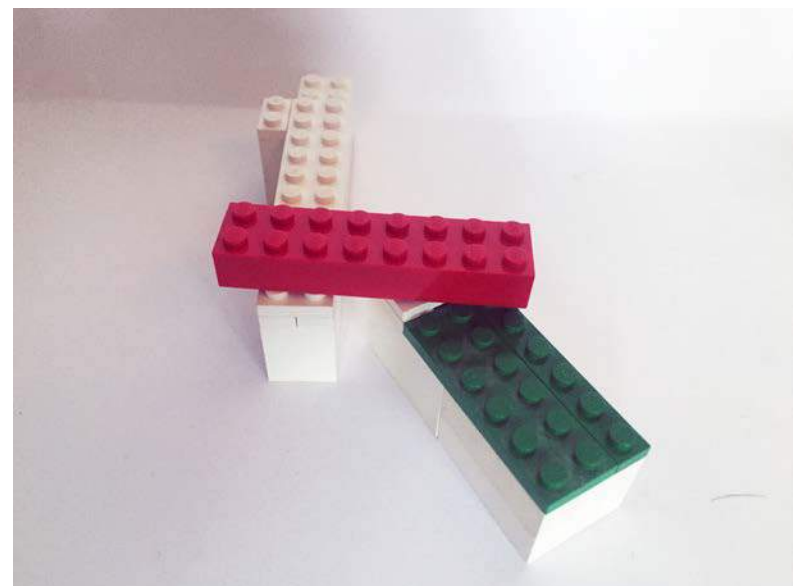
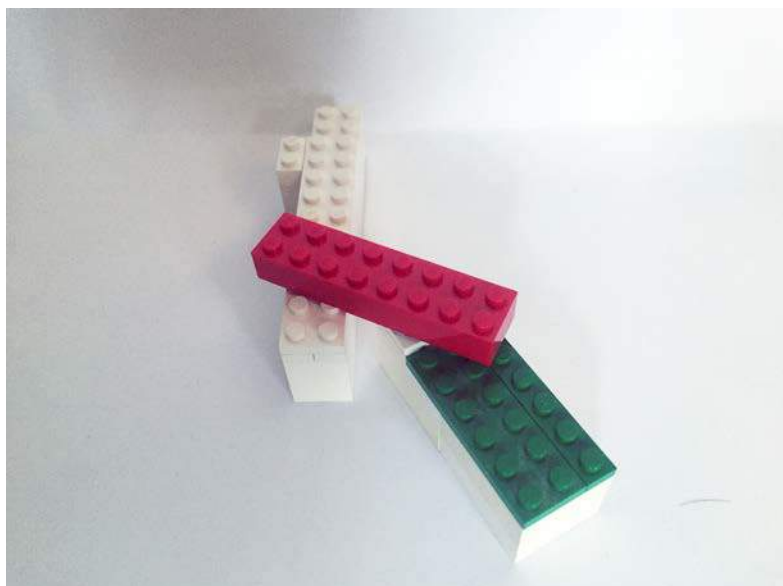
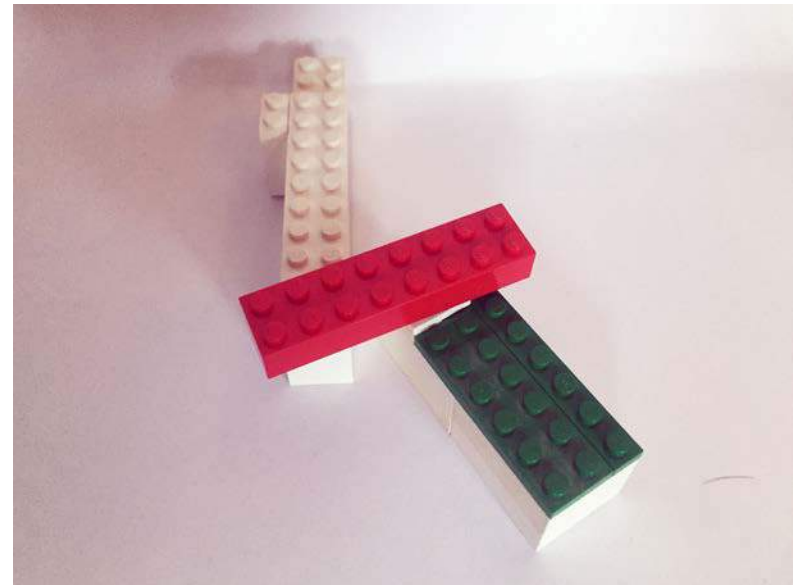
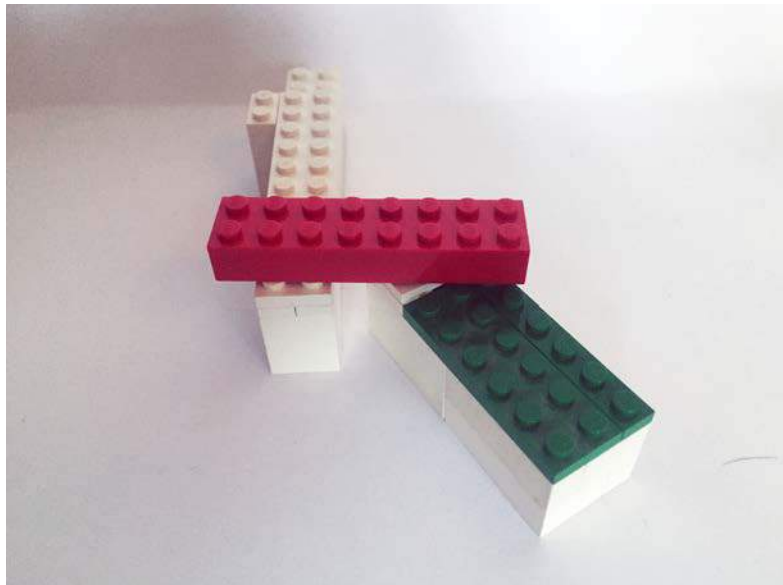


*An early attempt of trying to connect the two sides, old and new.*

# EXPRESSION OF EXTENSION



# ROTATION OF EXTENSION



# CONCEPTUAL SKETCH IDEAS



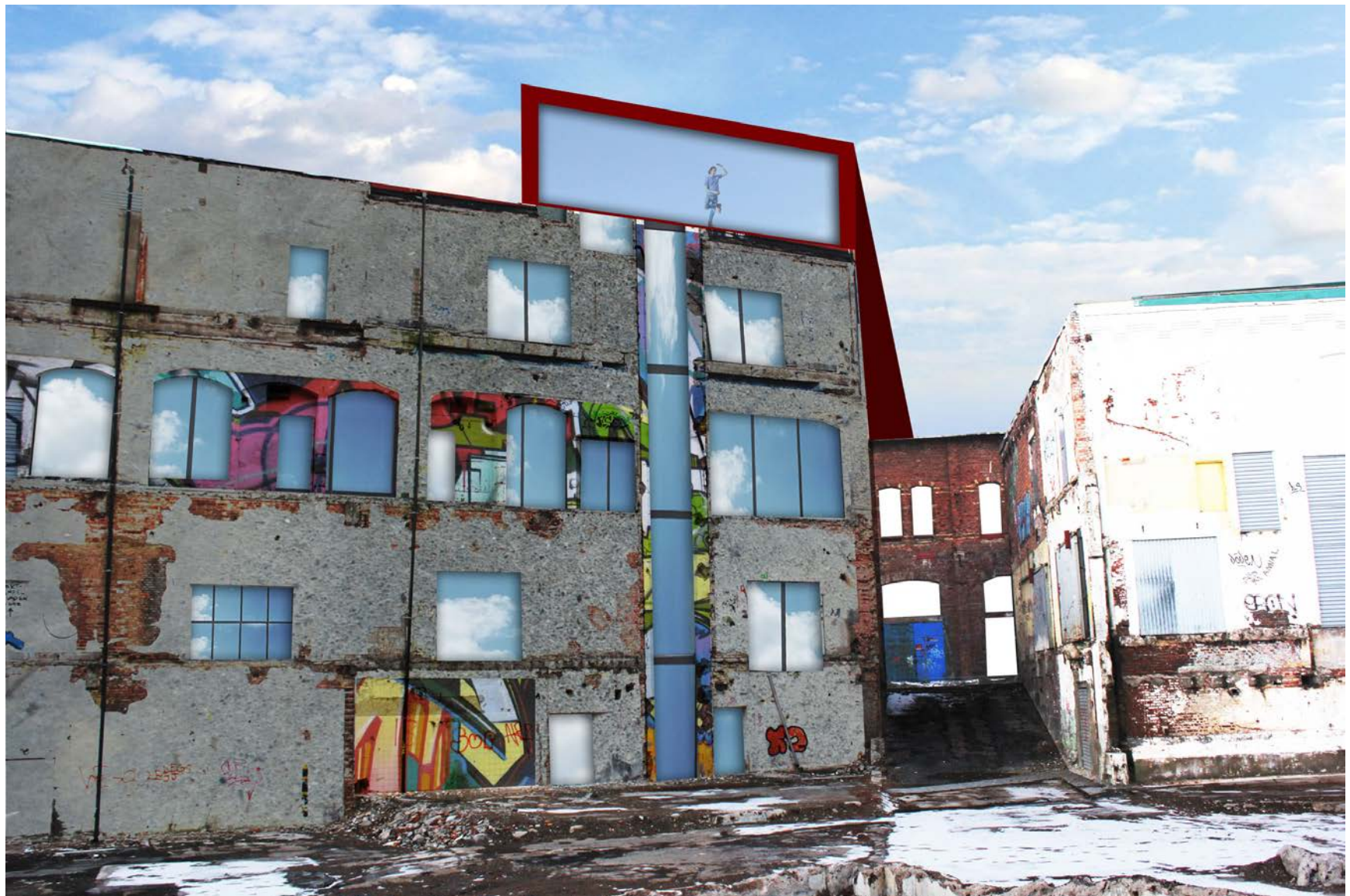
*Sketch of new openings and idea of example of what to do with the interior space*

# CONCEPTUAL SKETCH IDEAS



*Windows gets different shapes fitted into existing openings. New big window openings where neccessary depending on function inside the building. Clean up the facade materials and focus the graffiti, bricks and concrete as design elements on different building volumes.*

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*Use the exposed patchwork as an inspiration and starting point for design. Windows gets different shapes fitted into existing openings. clean up the facade and use graffiti, bricks and concrete as design elements to make a patchwork that varies.*

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# CONCEPTUAL SKETCH IDEAS



*Bringing the elements of graffiti to the facade*

# RED BOX & LINKS

