

SKFuture

adaptive reuse in the SKF quarter in Gamlestaden, Göteborg

Master thesis at Chalmers Architecture | Design for Sustainable Development | June 2015
Examiner: Krystyna Pietrzyk | Supervisor: Elke Miedema

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CHALMERS

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Abstract

Keywords: adaptive reuse, industrial heritage, transformation, social sustainability, SKF

The reuse of historic industrial buildings that were left underused, vacant or even derelict, has been a current topic since the 1960s. In Sweden, the industrialisation during the late 19th-early 20th century has left several examples of industrial buildings inside the urban fabric. These, although often seen as urban voids, have the potential to become redevelopment nodes.

In the area of Gamlestaden, Gothenburg, public discussion and an ongoing development process are already dealing with transformation of existing buildings. Aiming to a sustainable transformation that can be adapted to future changes, the question on how to adaptively reuse the industrial building stock emerges.

The aim of this Master Thesis is to investigate how a part of an industrial complex (M-verkstaden in the SKF quarter in Gamlestaden), that will soon be evacuated, can be transformed into an active social intersection between the city and the neighbouring river landscape.

Visions for adaptive re-use and urban re-branding are discussed in a theoretical level while the existing conditions of the site are thoroughly analysed. Their outcome is determinant for the proposal, that focuses in enabling M-verkstaden to host new, revitalizing functions, while keeping the building's identified architectural qualities.

The creation of an internal neighbourhood and the sequence of spaces and forms as a re-interpretation of a production line are the guiding design concepts. Issues such as connectivity, social sustainability and collective memory surrounding industrial heritage stand in the core of the proposal.

The outcome is a design that conceptualises the above mentioned ideas and aims at developing further the sustainable future of the SKF quarter and the M-verkstad building in particular.

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Introduction

WHY INDUSTRIAL HERITAGE?

Globally, we see more and more remains of the industrial era transforming into new places of urbanism and become the core of multiple redevelopment plans. What are the reasons behind this tendency? What is the feature of those industrial remains that attracts both investments and the attention of the public?

First of all, each industrial site has specific features that makes it different from buildings of a different context. This difference strengthens their identity, which is an element that contemporary architecture and urban planning are happy to incorporate (Baum, Christiaanse, 2012).

Furthermore, it is significant that such sites usually carry names with which people have identified with. Those names frequently name the entire surrounding area as well, further proving the importance of those industrial sites for the city life and the collective memory.

An industrial site was usually not only influenced by the urban context it grew into, but it affected the surrounding city scape itself; important industrial complexes have frequently led the way for the urban development of their surrounding area. Therefore, their reuse can have a significant impact on their surroundings as well.

It is quite important that the memory of their previous function and the architectural features that are still present create a historical value for the whole area that surrounds them, while it is easy for the contemporary visitor to trace the story of the building and the area (Baum, Christiaanse, 2012).

In the building scale, former industrial buildings usually offer open, flexible, well lit spaces. Therefore it is easy for them to adapt in both physical and semantic terms, receiving different contemporary functions and welcoming new ideas.

From the inside, industrial complexes are often left to decay and appear disconnected from the urban space around them. From the outside, an abandoned or derelict industrial site is often seen as an urban void, a gap in the sequence of urban fabric. As it hosted industrial functions for many years, with security, contamination and heavy industrial activities being the main concern, it was standing secluded and fenced, usually occupying a large area that remained inaccessible and untouched by urban life. Today, the challenge is to transform this void into an integral part of the city.

WHY ADAPTIVE REUSE?

The concept of adaptive reuse has its roots in the 1960s and 1970s in the United States and was mainly economically driven in the beginning. At that period, increased environmental awareness and the rising prices of materials and fuel led to adaptive reuse being “a viable alternative to new construction” (Cantell, 2005). The examples of adaptive reuse were marketed as financial success stories, as they were developed to be commercial and touristic “attractors”. In the 1980s, adaptive reuse became itself a subject of exhibition and was highly advertised in the United States through successful examples, gaining public interest and praise (Legren, 2008).

In Sweden, the concept of revitalizing industrial sites through rehabilitation projects was not gaining much support either from the developers and local authorities, or from the public during the 1970s - 1980s. Politicians and developers were not willing to sacrifice development and economic growth for the sake of architectural and cultural values, while the public had associated the declining industry with the rising of unemployment. In the 1990s however, a shift of objectives aiming at public accessibility and increased attractiveness of the site brought industrial sites to the forefront.

Nowadays, in a global context, adaptive reuse has evolved into a strategy to reconnect with heritage, address all tangible and intangible values of a place and give new life to communities. It is an approach that is not only connected to economical benefits and is not reduced to the scale of one single building; the reuse of existing buildings and especially of the industrial building stock, often becomes a tool to attract both future users and possible investors, as well as to densify areas and create vibrant living environments.

WHY IS THIS RELEVANT?

From an architectural perspective, industrial sites and buildings can become a substantial canvas for a redevelopment process. They offer both challenges and opportunities, and most importantly, they have their own identity, which can be a starting point for new concepts.

From the urban development perspective, the importance of industrial sites for the city development is undeniable. The challenge today lies in understanding the significance they had in their early days and reinterpreting it to achieve a similar boost in urban life today.

From the sustainability perspective, reusing what is already

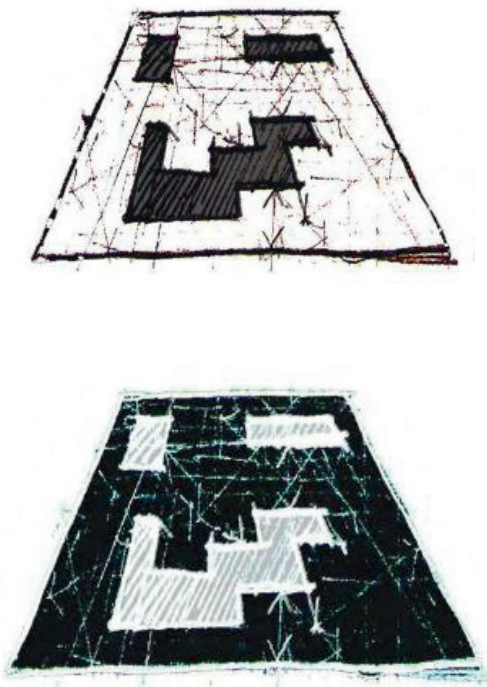


Figure 1. Industrial sites that are left unused are seen as disconnected from the inside, and as urban voids from the outside (source: Jone Belausteguigoitia 2001).

there, both in terms of material reuse and space reclaim, can have multiple benefits. For the society, it does not challenge the existing collective memory but rather using it to create added value. For the environment, it takes advantage of the old material and renews the building stock using contemporary energy systems. Financially, it allows for alternative models of investments and is usually cheaper due to its former industrial nature and degradation.

For industrial buildings, it adds to the concept that where there was contamination, heavy industry and seclusion, now there can be social activities and accessibility.

AIM OF THE THESIS

The objective of this thesis is to **examine the future visions** for the SKF quarter in Gamlestaden proposed by the official authorities, to **critically reflect** on them through an updated strategic programme for the quarter and then focus on a specific part of the SKF complex, in order to provide a design proposal for its adaptive reuse.

The proposal will be aimed to be further used as a tool or inspiration for the municipality, the future owner or developer of the premises, or the future student who will want to deepen into another part of the same area.

STRUCTURE OF THE WORK

In the **urban scale**, the overall goal is to transform a part of the SKF quarter in order to be an integrated part of the surrounding area and the city of Gothenburg in general. This should take into account possible threats connected to gentrification and segregation.

In the **building scale**, we argument on why should the building itself be preserved and reused, as well as to which extent parts of it should be kept or removed, in order to achieve a balance between gains and possible losses; for instance between keeping the landmark qualities of the building and at the same time enhancing its viability.

To achieve that, it is necessary to **investigate the values** that the building carries, namely tangible (materials, typology, decorative elements, structure) and intangible (identity, value as a landmark, collective memory that surrounds it). The overall value of the building cannot be described easily, as it is shaped as an accumulation of different layers of information concerning the building and its context. This evaluation is also used as an argumentation for the transformation process

proposed in our final result.

The thesis is design oriented, but with the design proposal being strongly based on the findings from the analysis of the area and the challenges and opportunities that can be recognised.

RESEARCH QUESTIONS

MAIN QUESTION

How can a part of the SKF industrial premises be adaptively reused to serve non industrial functions in a sustainable way and in a changing context?

SUB-QUESTIONS

What is an adaptive reuse process?

What is the identity of the SKF quarter?

How can a reused industrial building become an integrated part of an evolving context? How can it fit the authorities' vision for the entire area?

How can there be a sustainable way of adaptive reuse?

What could be the new functions for an adaptive reuse?

METHOD

The thesis starts with a **theoretical part** which is based on literature and case studies. The theory part is a compilation of the major adaptive reuse principles concerning industrial heritage. The case studies are examined in terms of functions, development stages proposed and their view on adaptive reuse. From these, we tried to extract the meaning of the major terms involved in the thesis and conclude in our own approach for the studied building.

For the **analysis of the studied site**, an analysis of the area's past is based on literature and online research.

For the current situation, findings are based on our own site analysis through layer mapping of the area (including the 3-step cognitive analysis) and observations after study visits and interviews.

For the future plans, analysis is based on studies of municipality documents, interviews with decision makers from both the municipality of Gothenburg and the SKF premise manage-

ment and proposals from architectural offices. The result is a **reflection on the strategic plan for the reuse of the SKF quarter**. At the same time, a collection of criteria are decided, which should guide the selection of functions for the selected building.

DELIMITATIONS

The research part is not the main focus of this thesis, but a tool to identify the main core of adaptive reuse and social sustainability, in order to form the guidelines for our proposal.

Therefore, we tried to develop a concrete view of our own reflection on social sustainability and adaptive reuse, while investigating and using features of other notions, such as transformation and rehabilitation.

In the context of this thesis we are focusing on the building scale, but without neglecting the overall site and its connection to the surrounding area.

Considering the limited time of the MT semester, we tried to avoid proposing a strategy which is entirely different from the municipal one for the whole site and its context.

Therefore, we develop a strategy for the chosen building through our programming, that examines both the case in which the existing development plans are materialised and the one in which they are not. The final proposal is guided by the notions of social sustainability and adaptive reuse as a means for the sustainable use of the existing building stock. Aligning with the concept of a flexible intervention, the aim is mainly to showcase one alternative of materialising the outcomes of the programming, rather than a definitive design proposal.

Background

What is the process of adaptive reuse? What are the tools it provides? Is it different from the term "transformation", and how? How can social sustainability be defined and achieved through such a project?

Answering these questions through literature research and two selected case studies helped to place the proposal in a wider theoretical framework. In the end, reflections were crucial in formulating our own programming as well the extend of transformation.

Theoretical framework

Starting this master thesis, it became clear that many references are misusing the term of adaptive reuse, by assigning to it characteristics that rather describe transformation or rehabilitation processes. It was therefore essential to highlight the differences and the areas where those terms overlap. It was also important to formulate into a consistent narrative the elements that we found determining for an adaptive reuse proposal.

We focused on elements of adaptive reuse that would influence social sustainability, by enabling the users to modify and appropriate the space, and thus become more engaged in its creation and evolution.

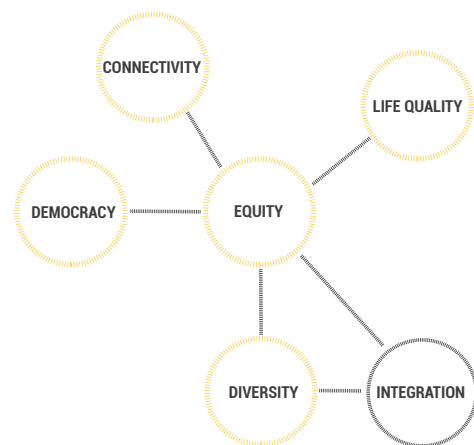


Figure 2. Factors for viable communities

SOCIAL SUSTAINABILITY

In general, the success of a sustainable project, and therefore of a sustainable transformation, can be defined by the **level of improving the living standards**, while having the least environmental impact (McKenzie, 2004). Social sustainability is quite hard to be given a single definition and perhaps it would be more useful to describe it through different approaches.

In an attempt to give a definition to social sustainability, it could be described by all the processes, systems, structures and relationships that could give the **chance to present and future generations to have viable communities**. These communities should incorporate certain factors, which are **equity, diversity, connectivity, democracy and good life quality** (McKenzie, 2004).

It is quite clear that from the definition given about social sustainability and the factors composing it, that everything is filtered through the notion of **equity**, which is strongly connected to **diversity** and **cultural integration**. In a socially sustainable community, all people should have the same rights and access to all the structures, systems and elements that compose it, both tangible and intangible (Polese & Stren, 2000).

If social sustainability is about equity, then equity in education, green space, work opportunities, affordable housing (Polese & Stren, 2000), or even leisure activities become integral parts of a sustainable society. At the same time, all members of a sustainable community should have the same opportunities in meeting their daily needs on three scales; the individual, the group and the community scale (McKenzie, 2004), in order to ensure a high standard of life quality.

Considering the above and through a quick scan in the areas of eastern Gothenburg, it seems that although there are equal opportunities in basic services like healthcare, there is also a lack in some others that would give the inhabitants equal opportunities to **leisure, recreation and places to meet**. An analysis of Gamlestaden and the SKF quarter in particular, showcasing such issues in that area will be further presented on page 46 of this booklet. In this particular case, the aspects of equity (or the right) to **green space, nature and recreation** are highly narrowed or even eliminated, not only by missing functions, but also due to the boundaries that disconnect from the already existing elements.

In addition, while Gamlestaden may not be a community highly characterized by inequity, as a part of Gothenburg which will play a crucial bridging role in between the city centre and the north-eastern suburbs (Göteborgs Stad, Stadsbyggnadskon-

toret, 2012), it should incorporate all these activities that would fill in the gap of any lacking of services and opportunities.

The area of Gamlestaden, having a 'crossroad' position, should take a step forward in **cultural integration**, as the different cultural groups in the neighbouring areas seem to not be very connected or mingled, especially with the population living closer to the city centre. The space for this mingle should be provided in Gamlestaden and this is something that should be reflected in the new functions that would take place there.

THE CONCEPT OF TRANSFORMATION

Historic urban cities are the product of **multiple layers** of styles and values that, composed together, have given them their unique morphology and formed their identity (Orbasli, 2000). Each era leaves its footprint on the urban fabric and as one succeeds the other, both built and unbuilt environment are changing and therefore transformed (Yang, 2010). As a result, heritage and industrial sites are products of this transformation (Oevermann & Mieg, 2015), which is a process that does not end, as contexts continue to change or evolve naturally.

Transformation is a set of tools which is used to ensure that heritage sites can keep up with the urban development, often aiming and including practices to protect and preserve (Oevermann & Mieg, 2015). It includes the tools that would make the site **viable and up to date** with all contemporary standards for a reuse, such as building envelope improvement, energy performance etc. (Oevermann & Mieg, 2015). At the same time, it is not just a programming method, but also an opportunity to **introduce new structures and designs** to the existing building or urban fabric (Kostof, 2007).

The main question that emerges when transforming an industrial site is, as for any heritage site, which are the **values** that should be preserved and highlighted (Oevermann & Mieg, 2015), while making the site capable of evolving along with its context and to what extent should the new design intervene in the existing structures. Therefore, an in-depth analysis is required, in order to define the level of transformation and therefore, the extent of the design interventions.

THE CONCEPT OF REHABILITATION

Rehabilitation is a process in which all alterations and interventions in an existing building have as a principle the recognition and maintenance of the features that carry **unique values** and make the building or the site **authentic and significant**.

Rehabilitation practices aim at recognising the **key elements** that add value to a building, restoring the ones that may have been lost or distorted through time and removing the ones that alter what is considered to be its authentic character.

In the urban scale, rehabilitation aims at re-connecting the building with its surroundings, making it again a living part of its context.

THE CONCEPT OF ADAPTIVE REUSE

Adaptive reuse is a process during which a building or an existing site is used for other purposes than the ones it was designed for. It aims to investigate the potential and possibilities of an existing building within its context and create the basis for its future evolution.

The careful and extensive analysis should always precede the design (Clark, 2013). It can result in selecting a fitting new function that can turn the building or site into an active component of the existing urban fabric and part of the city's social life.

It is very common for older buildings to have taken their contemporary form as a result of gradual development and different phases of construction, rather than being meticulously preserved in their original shape. Therefore, they reflect multiple layers of history. An adaptive reuse project aims to create an additional phase of construction, a new layer (Clark, 2013), by taking into account and setting the ground for the layers to come in the future. In this sense, it becomes a lot more than a traditional transformation project.

ADAPTIVE REUSE AND THE EVOLUTION OF THE CONTEXT

What is crucial to realise early enough in a design proposal that aims towards adaptive reuse, is the fact that the site in question had its own purpose in a broader context, its particular function and significance in the past, being part of

an already established overall urban system (Stratton, 2000). This observation is particularly valid when it comes to historical industrial buildings, since they were almost always closely connected to their surroundings; their development has often been a starting point for the growth of the surrounding urban tissue and the industrial buildings were ending up being integral parts of people's' lives.

Therefore, a project that aims in creating one more phase in the building's storyline should make sure that its significance will not be lost in the future. And even if this significance is already lost, the redevelopment should restore it by re-interpreting the building's or site's connection to the surroundings. Furthermore, to re-establishing it as a site that will be meaningful for people's' lifestyle again.

As urban environment is an ever-evolving element, then so should be the site in question and this should be one of the main principles when designing for adaptive reuse. Since it is impossible to guarantee a specific future when it comes to urban environments, increasing the adaptability of the proposal to fit multiple possible scenarios would ensure viability, integration and continuity.

KEY FACTORS TOWARDS AN ADAPTIVE REUSE

1. The new function:

By its very definition, adaptive reuse implies that the new function or combination of functions becomes a crucial factor in a redevelopment. The new function has the potential to determine the success or failure of the building's re-integration in the urban fabric. For example, installing a new function that was previously missing from the area can turn the site into an attractor for interested users, while recognising the tendency and extending a successful network of functions by developing similar ones also makes sense. Those aspects should always be examined in terms of the gentrification risks they carry.

2. Adaptability and flexibility:

As stated before, in an ever-evolving urban context, the users of a site or building are the first to either observe those changes or the ones who will provoke more of them. As a consequence, their needs, needs that the building was designed for and around, will be eventually altered. The building itself will have to change, to adapt and embrace the newly created needs.

Adaptability to the user gives another dimension to the reuse. An increased ability of the user to adapt -and re-adapt if needed- the existing structure and the designed spaces to his

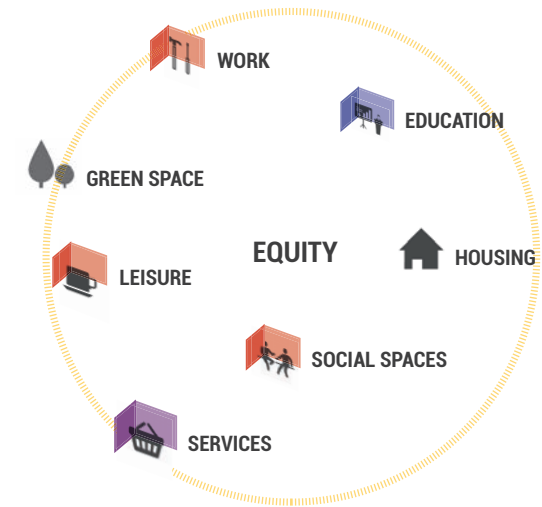


Figure 3. Aspects of equity that concern this thesis



Figure 4. The scales in which people should meet their needs

changing demands, will extend the longevity of the building. In another perspective, the ability of the building to adapt to different users and their diverse needs could also have the same result. Therefore, flexibility becomes another component of adaptive reuse and the designer should not only take contemporary needs into account, but also allow maximum freedom for future adjustments.

3. People's participation - The example of Sweden;

Sweden has a well established public participation culture, that has been promoted and applied in many architectural projects. Involving the public into the project from the very beginning can fit the concept of adaptive reuse.

Feeling free to adjust the space according to your changing needs requires the creation of intimacy between the user and the premises. An important benefit when people are involved from the very beginning in a project is that they get a feeling of ownership. This can evolve into a feeling of care for the building and trust to the developers.

Through participation processes the developers can also identify the collective memory that surrounds a particular building or site, and address to that later through the design and the programming for the new development. In many cases (e.g. Zollverein complex) the established negative collective memory was challenged through new elements that would attract back the people into the industrial site.

ADAPTIVE REUSE AND SUSTAINABILITY

Adaptive reuse can be a way to achieve urban sustainable development objectives, since resources available in the existing building stock can be managed in a prudent way in a proposal. In this way, the city itself can become "a source of new developments and lifestyles", in which the existing buildings have an important role. But it is not only the building stock that stands there and can be used; infrastructure and people can also be parts of a redevelopment proposal. Adding those extra elements in the redevelopment mix, the possibilities for more communication, exchange of information and materials are increased.

It is clear that all three aspects of sustainable thinking - economy, ecology and society - can be developed, to a certain extent, through an adaptive reuse project.

Adaptive reuse is a constantly developing process, which implies that the users will continue to shape and alter their direct surroundings and the area they live and work will keep on

being dependent on the city's development. Therefore, adaptive reuse has a new aspect to add to the concept of sustainability, that of time. It becomes a ground for "new possibilities", showing how sustainability itself can be a developing process instead of a static and definitive proposal.

REFLECTIONS

To our understanding, the concept of adaptive reuse is complementary to the notion of transformation, focusing however in the element of change; transformation takes into account the current context and therefore provides with the tools that would make a site or a building able to keep up with the present situation. It is quite clear that the need to use (or reuse) is the driving force behind transformation, which although considers the current situation, does not take into account the ever changing context and the future evolution. Adaptive reuse on the other hand, is the concept that formulates the buildings' future and their further stages of development in a viable way. Therefore, transformation needs the notion of adaptive reuse in order to ensure flexibility, adaptability and finally durability.

Rehabilitation is the notion that gives guidelines during a transformation process in order to ensure the preservation of the unique values that are carriers of the site's identity and significance. In this way, transformation does not deprive the site of the elements that define its authenticity and contribute to people's collective memory.

To sum up, the notions of transformation, rehabilitation and adaptive reuse are closely connected together. The first provides with the tools that bring the site up to date, the second provides with the necessary guidelines regarding the values of the site and the latter ensures the viability of the above in an ever changing context.

Reference projects

The further study of two reference projects of adaptive reuse in an industrial context is demonstrating how the theory has been manifested through transformations that are already considered iconic. Reflecting on both successes and failures of these case studies will also enrich our understanding of the possible challenges.

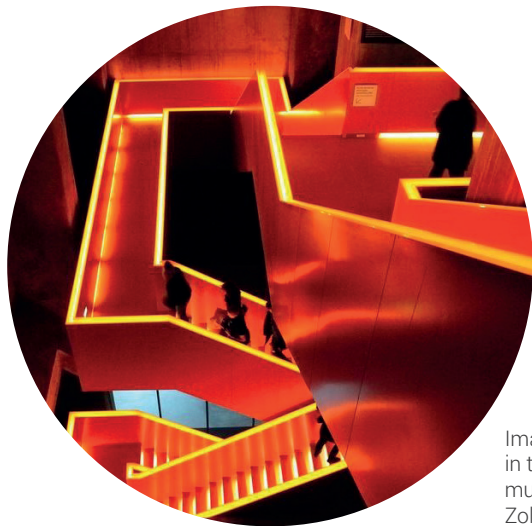


Image 1. Staircase in the Ruhr museum, Zeche Zollverein (source: OMA 2015)



Image 2. Industrial infrastructure was kept and preserved, Zeche Zollverein (source: Eric Kohler 2009)

ZECHE ZOLLVEREIN MASTERPLAN

Essen, Germany

Design by OMA, 2002

THE SITE AND ITS HISTORY

The Zollverein industrial complex, located in Essen, Germany is a historical coal-mining and manufacturing site. It is known not only as Europe's biggest and most modern coal mine, but also for its many significant, Bauhaus influenced buildings. The area has been experiencing a decline since the mid 1960s leading to unemployment, lack of maintenance for the buildings and landscape pollution.

In 2002, a master plan was developed by OMA, aiming to reinforce the historical context and re-use the infrastructure, by building a new identity for the post industrial site. Design industries have become a focal point of the strategy to make Zollverein economically viable, while connecting to its architectural value. Parts of the site are going to be tried out as models for residential and working areas, where creative companies can be established. In addition, offices, studios and workshops, apartments, restaurants, cafés and a hotel are also planned.

OPENNESS

The three large industrial complexes on the site are now more or less isolated from each other. The master plan focuses on openness as well as a well defined design concept by proposing a new band of activity around the site, with three "attractors" that will be a facade to the world outside. These are the Ruhr Design Museum, the visitor centre, and the design school by SANAA. New functions were added to the former factory without even removing the existing machines, which dominate the spaces and are seen as part of its identity.

The site still remains rather concealed from its surroundings. The artist Ulrich Rückriem created a sculpture park in the industrial forest, encouraging a change in the perception of the area into a place of art and nature.

AESTHETICS

Visitors can now enter the building like the coal did before them, an idea that puts forward experiential aesthetics. The new identity is shaped through the visual competition of the New and the Old, and the dominance of one over the other at times. The grandeur of the existing building cannot be under-

mined anyway. However, the additions do not remain hidden among the whole, but rather establish the architect's presence through his interventions.

OUTCOME

In 2006 the Zollverein School of Management and Design opened in a futuristic cube building designed by SANAA. Together with the "designstadt N°1," which offers office space for creativity, it was supposed to form the core of a new "design city" in what is still the region's poorest area. However, so far, public investments do not seem to have paid off; the school had to close in 2008 due to lack of students, while the designstadt is mostly empty.

Nevertheless, Zollverein is again the centre of the region's effort to re-brand itself as the "Metropole Ruhr," a 21st-century metropolis dedicated to high tech and culture, a tourist destination and post-industrial economic powerhouse. Since tourism and culture cannot themselves replace the thousands of lost industrial jobs, it is still unclear if it's possible to attract viable businesses in sufficient numbers.

REFLECTIONS

The existence of **diverse functions** and a **well established connection** to the surroundings are important for a successful project. Moreover, that even in such elaborate master plans there is always the risk of **financial dead ends**. Maybe for smaller scale projects, **alternative scenarios of financing** and a **development in steps** could reassure that the investment risk will be reduced and most importantly, that the outcome will not be a failed urban landscape.

NDSM BREEDING SPOT

Amsterdam, the Netherlands

Design by O+A studio

WHAT IS A BREEDING SPOT?

Breeding spots are sites where living and working places are provided for cultural and manufacturing production. The shared lifestyle along with the individual vision of each tenant is believed to create an independent culture spot in the existing city. A breeding spot is meant to be flexible; it will renew itself often, for example each time a tenant moves out. A future scenario could be that it will have created a social infrastruc-

ture of artists and will have evolved from a breeding spot into a part of urbanity.

NDSM

This formerly industrial area was occupied by shipbuilding industries until economic pressures in the late 80s-early 90s forced them to another location. Located along Amsterdam's north bank, NDSM Shipyard's new identity is a focal point for the revitalisation of Amsterdam North. Previously regarded as the industrial backyard of the city, Amsterdam North's redevelopment was run mainly by artists who occupied it since 2007.

Despite the promising start though, the future still seemed uncertain, as the investment to maintain the building could not be collected. Kinetisch Noord and the project developer Lingotto addressed to O+A studio to create a master plan for a more prosperous future.

The design team used first opened up the western façade to strengthen the public character of the interior. Secondly, public space was programmed with temporary commercial and cultural functions, including markets, events and performance acts. Finally, the commercial functions were assigned with a welcoming role, as retail was a function absent from the site.

The NDSM wharf offers facilities for a number of artistic disciplines and small crafts. The NDSM hall houses in total 10,000m² of workshops, a 2,000m² skate park, 4,200m² devoted to youth activities and 6,000m² of exhibition and theatre space.

Kunststad (Art City) is a complex of artists' studios and workshops on one or two levels. Kinetisch Noord builds only the framework of these spaces, which are then finished by the resident artists. Each block has electricity, water and sewerage connections.

The Vrije Kavelstrook (Free Lot Strip) on the south side of the hall contains lots where tenants can design and construct their own buildings. Section 4, on the west side, is earmarked for youth-oriented projects and initiatives, such as a floating skate park.

The Docklandshall, next to the NDSM hall, is suitable for large-scale events, such as theatre and music performances, company conferences, parties, exhibitions, markets. The hall is offered as an empty space, without partitions, stages or bars, giving clients full freedom to arrange the space as they wish.

OUTCOME

The NDSM Shipyard is very successful in ways that many projects are not. The plan provides a framework, while it leaves spacial design up to the users. Every person collaborating is leaving his mark on the result, which although may not be comprehensive, is funky and spontaneous and thus appropriate for such an environment.

Since the overall master plan has been adopted, several other major developments have occurred. Royal HaskoningDHV was also involved resulting in a plan that respects the history of the area and preserves many of the historic cranes, warehouses and docks, to help integrate the new areas with the remaining parts of the active shipyard.

On the other hand the organisational, very clustered structure of NDSM has made it difficult for tenants to materialise their own decisions and for the leading NGO to impose a common policy. This fact and the lack of showcasing options for the artists' work, have led to financial problems. Future plans include the selling of the property and the continuation of the cultural breeding spot so that the concept will become financially viable.

REFLECTIONS

It is very clear how an initially small "spot" can trigger so many different projects, but at the same time how essential a central management is to orchestrate everything efficiently. Another fact to keep in mind is that extensive redevelopments don't necessarily mean an expensive redevelopment, as cheap materials and individual, sometimes amateur effort add a special value to the project.

This feature, of **allowing users to shape their own space by only providing a framework**, is perhaps the most important one for the NDSM case. Being well organised it really adds to the adaptation of the design to fit different needs through time, and to meet individual demands. Therefore it helps to get closer to the most essential of the adaptive reuse ideals.



Image 3. Visitors follow the path of the coal to enter the Zollverein complex.



Image 4. NDSM canteen



Image 5. NDSM Tenants are allowed to adapt to a predefined framework according to their needs

COMPARATIVE REFLECTION

Both of those adaptive reuse projects appear to have faced severe difficulties in reaching the desired outcome in a short time. Having design-oriented functions as the main theme was challenging, since design itself could not replace all the industrial jobs that were previously vitalising the area. However, such a theme managed to **re-brand** the sites in people's minds, from industrial relics to creative areas.

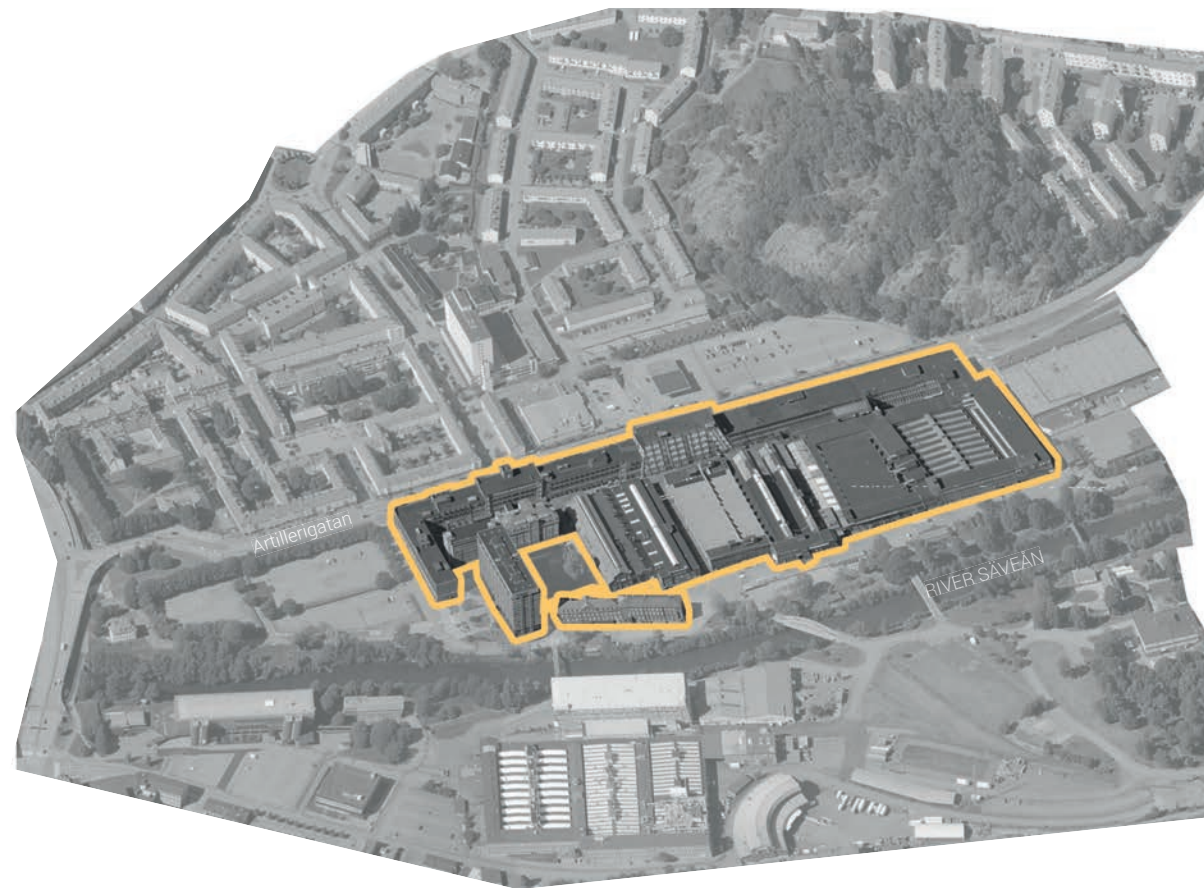
Either in an **extremely predefined context** (Zollverein) or as an **environment adaptive to its users** (NDSM), an important element of both projects was the **concept of implementation in stages**. Designing this way, it can be safer to plan and adapt to the changing needs and circumstances. Taking into account not only what is already happening but rather what might happen can result in a proposal stable yet dynamic for the future to come, which is what adaptive reuse is about.

At the same time, it should be taken into account that the case studies had a considerably higher budget than the budget for the proposed redevelopment of the

Analysis

The analysis of the building and its context (city, neighbourhood) will provide important information about the framework -both in tangible items such as the built environment or intangible ones, such as the social framework-, the values that have to be preserved or high-lightened, the challenges that exist and have to be addressed.

The analysis will divide the time in Past, Present and Future, while investigating the scale of the city, the neighbourhood and the building in each step according to the available information.



ANALYSIS: THE CASE

the past

The investigation of the past will help understand how Gamlestaden as an area and the chosen building evolved and expanded through time, to eventually get the shape they have today.



Figure 5. The position of Gamlestaden in relation to the city centre and Gothenburg city, scale 1:50.000

GAMLESTADEN

In and around Gamlestaden there have been a lot of industrial premises, dealing with wood processing, soap and rope production, with the SKF plant being the main landmark, naming after it the adjacent tram station. The textile industry Gamlestadens Fabriker AB is also defining for the development of the area.

The residential buildings that today characterise the skyline of Gamlestaden are mostly built between 1910 and 1960, according to Albert Lilienberg's urban plan. Lilienberg was the first director of urban planning in Gothenburg, and his trademark design for residential areas was the "sealed quarter", a city block framed by residences towards the street that create an internal protected shared backyard.

The original "governor" houses in the area were built when Gamlestadens Fabriker and SKF established themselves as powerful industries, and the need for workers increased radically. During the 1950s, the first foreign workers arrived to SKF and settled themselves around Gamlestaden. Soon, the housing demands, led by the increased production demands, forced the company to build more residences along Artillerigatan.



Figure 6. 1935 economic-historic map of Gamlestaden. The production units appear in black both along the river banks of Göta älv and Sävån rivers and especially framing the very centre of Gamlestaden.

THE HISTORY OF SKF

- ● ● ● ● Construction of SKF premisses in Gamlestaden
- ||||| Development of the detailed plan for Gamlestaden and SKF quarter
- Period of no significant building activity

Gothenburg population grows from 105.000 to 220.000 inhabitants

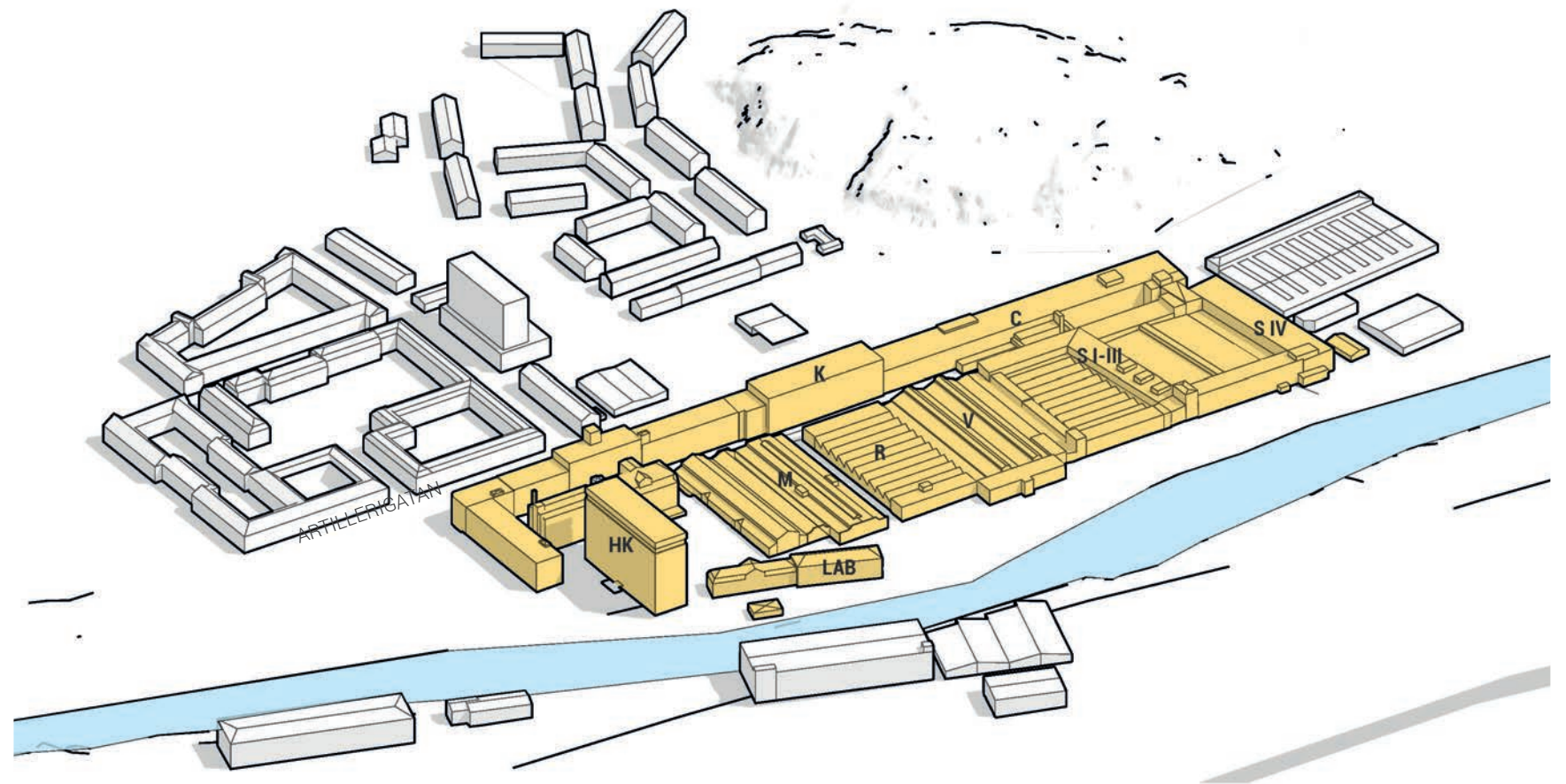
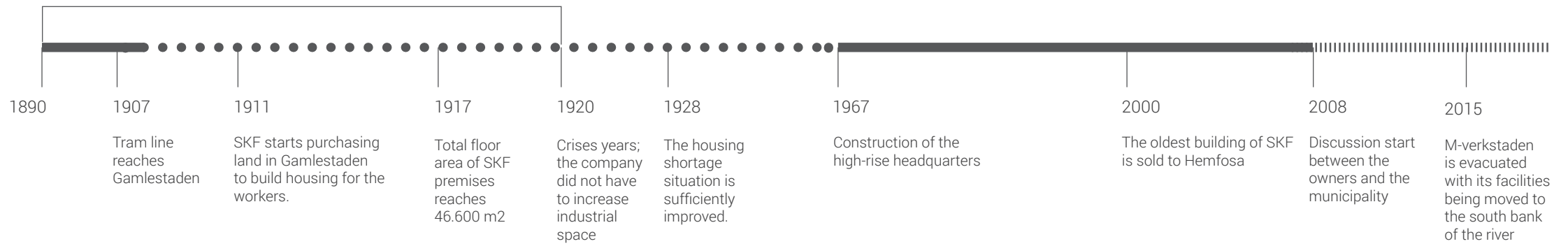


Figure 7. The limits of the initial SKF quarter in Gamlestaden, the main residential area following Lilienberg's urban plan and the south bank of river S ave an with the newer premisses of SKF factory. Buildings in the SKF quarter are tagged according to the municipality documentation.

THE SKF QUARTER

In 1907 SKF begun its operations as a ball bearing factory and in the autumn of the same year its first building was constructed in Gamlestaden, Gothenburg.

The first buildings started to rise along the corner of Hornsgatan and Artillerigatan, sealing the interior of the quarter and creating a strong boundary towards the street. Especially during those early days, the SKF facade is dominating the skyline of Gamlestaden with its height and length (Image 7).

The first steel balls that the factory needed for the bearing production were not available in the Swedish market and therefore, they had to be imported from Germany. In order to control their quality though, the company decided in 1910 to produce the steel balls themselves in Gothenburg and import the required machinery for this production.

This resulted in the expansion of the factory in Artillerigatan with new buildings, constructed in 1911, that would host this new production facility.

Year 1911 was quite significant for SKF, as there were several important decisions made in order to ensure the production quality and the attraction of the workforce. These decisions involved the manufacturing by SKF of their own exclusive machinery, in order to produce bearings, and the establishment of a laboratory. The first resulted in the construction of the machine workshop, while the latter to the control of the steel quality that was purchased from Swedish mills. The laboratory (Image 12) also became "the most important private research laboratory for metallography in Sweden".

Furthermore on the same year, the company bought land in Gamlestaden in order to build housing for its growing workforce (Image 9), which made SKF one of the main contributors in housing construction, attracting workers in Gothenburg. By the year 1928 the general housing shortage in Gothenburg problem had been significantly reduced.

Industry had become Gothenburg's main economical resource, reflected also on the population growth of the city. In the years 1890-1920 the city had more than double the amount of inhabitants (from 105000 to 220000 people) and SKF was continuously expanding their premises, that were also reaching to the southern part of the river of S ave an. During its first 10 years of operations, SKF had managed to build a total floor area of 46,628m², which was enough to support the production needs until 1928 without any further expansion.

It is obvious that major buildings inside the SKF quarter were built gradually between 1909 and 1967. New construction works were almost always led by the need for more space, either for production, storage or administration purposes.



Image 6. The first headquarters building inside the SKF quarter



Image 7. The building with the clock tower, along Artillerigatan in a 1914 photo. It dominates the landscape, which is still mostly empty fields in front of SKF (G teborgs Stadsmuseum).



Image 8. The oldest building that still remains in a photo taken before 1912 (G teborgs Stadsmuseum).



Image 9. An entire residential complex was built by SKF for its workers, in the site that is now the company's parking lot (1966 photo) (G teborgs Stadsmuseum).



Image 10. The extension to the east. Photo taken in 1930 (Göteborgs Stadsmuseum).

older  newer

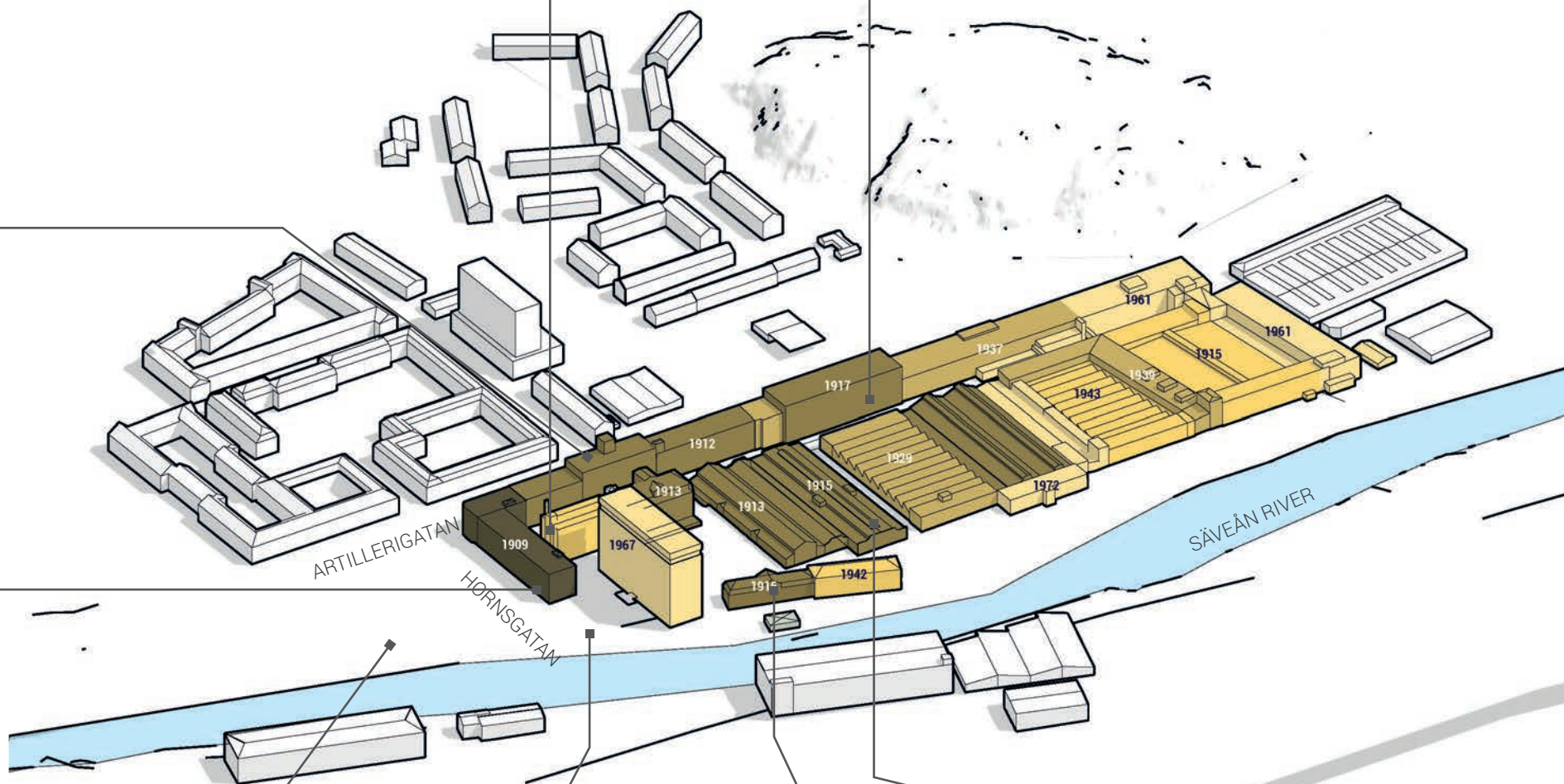


Image 11. The first building in the SKF complex, now demolished (Göteborgs Stadsmuseum).



Image 12. The laboratory building (Göteborgs Stadsmuseum).

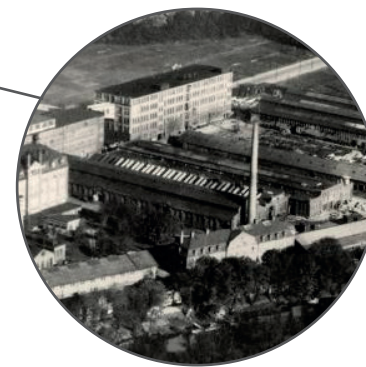


Image 13. The back of M-verkstaden around 1920. A big chimney stands close to the smith workshop (demolition date unknown) (Göteborgs Stadsmuseum).

THE M-VERKSTAD

Examining the shaping and the uses of the chosen building will provide useful information on the ideals that were guiding the development of M-verkstaden. Having those ideals in mind, either architectural or functional, is important for any further transformation process in the future.

WHY M VERKSTADEN

The SKF quarter hosts many buildings with significant industrial architecture, many of which are eligible to be adaptively reused. However, aiming to see **how the principles of adaptive reuse could be implemented in a particular building**, M-verkstaden was chosen for various reasons.

M-Verkstaden is a building quite **centrally located** in the SKF quarter, close to the main entrances and with high potential to be connected to Saneån river on the south. According to the municipality plans, that will be further analysed in a following chapter, its location will be even more important, as it will be on the borders of a new commercial centre and the business facilities of SKF. This **crossroad position** of M-Verkstaden in between the business and commercial centre and the proximity to the entrances and the river indicate its crucial role in the future development of the site and was a quite challenging topic to further look into.

At the same time, the building itself has **rich architectural value** and gives a lot of **potential for the introduction of a new design**. The decorated brick façades are in good condition and create a unique identity. Its big open plans and height, give the potential for a more **flexible design**, while the rhythm of the load bearing structure allows a modular expandable intervention. These opportunities are **consistent to the concept of adaptive reuse** that this thesis aims for.

HISTORY

M-verkstaden (the machine workshop) was built in the period 1913-1916 by Ernst Krüger. At the same time, two more buildings were raised in the SKF quarter; the A-fabriken along Artillerigatan and the Huvudkontor HK 1.

Its construction was decided as SKF wanted to produce their own machinery, instead of purchasing it from Germany or Lidköpings Mekaniska Verkstad in Sweden. By the time SKF had expanded abroad, it was already producing bearings exclusively made by its own manufactured machines.

The building is representative of the **prominent industrial architecture** of its era; structures combining external masonry walls and a metal or concrete supporting system that could bridge wide distances and create workspaces suitable for industrial activities. Original elements, such as floors, railings and trusses have been preserved to a great extent.

Initially, SKF decided to start producing their own machinery instead of importing it, which resulted to the construction of the machine workshop (M-Verkstaden). By the time SKF had expanded abroad, it was already producing bearings exclusively produced by its own manufactured machines.

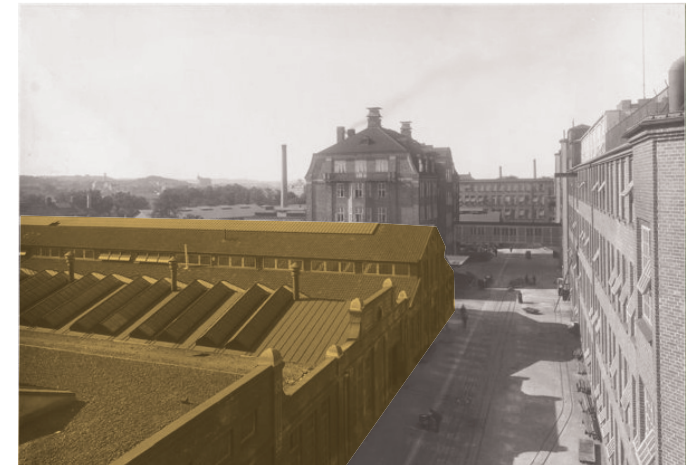


Image 14. The interior of the SKF quarter in front of M-verkstaden in 1922. The roof of building C still stands in its original form with multiple skylights (Göteborgs Stadsmuseum).

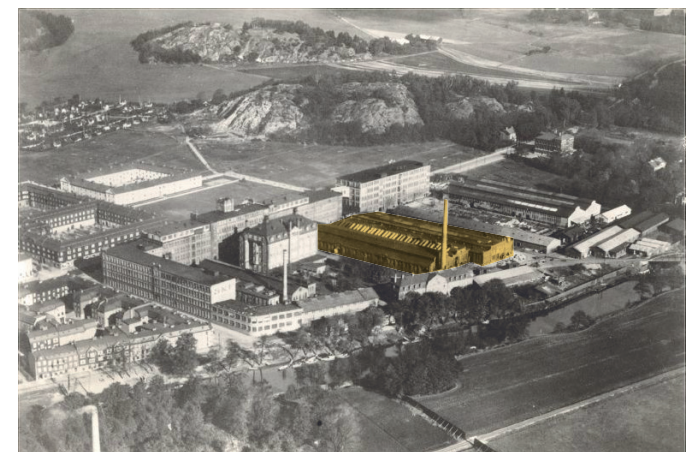


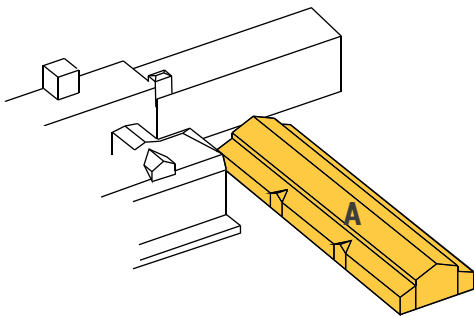
Image 15. View from air. The chimney next to M-verkstaden stands over the complex in 1920 (Göteborgs Stadsmuseum).

STAGES OF CONSTRUCTION

Just like many buildings in the SKF complex, that were built in stages following the company's plan for expansion and need for more space, the M-verkstad was also **built in stages**. It is composed by three different buildings that are however joined to each other. The first building (A) was built in 1913, the second one (B) was built in 1915, resulting to a street being formed in between them.

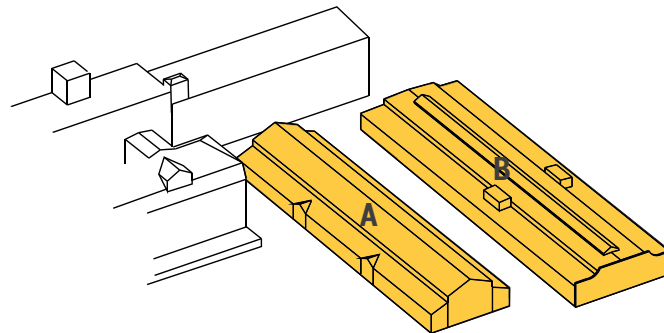
The third part (C) was built in 1916 on the road that was separating the two existing structures. Only the roof and the short north and south façades needed to be built as the building C uses the long walls of Building A and Building B.

As a result, the three buildings were united, forming the final volume of M verkstaden. These three parts that compose M-verkstaden are quite **clear and distinguishable on the northern and eastern façades**.



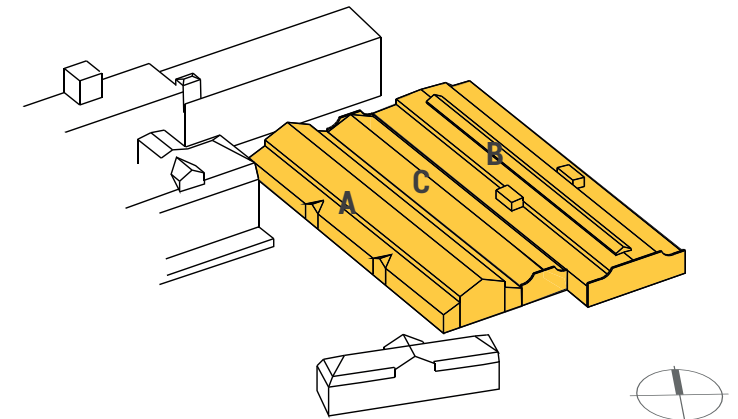
1913 - PHASE 1

The west part of the building is built opposite of the head offices.



1915 - PHASE 2

Another building rises at a short distance from Building A, creating a street in between the two. Paving material of this street can still be found.



1916 - PHASE 3

In the place of the internal street, Building C is erected as a bridge between Buildings A and B.

FUNCTIONS

The functions of the building have changed through the years, as SKF was developing. Starting as a machine workshop in 1913, it was also used as a **carpenter's, casting and rolling workshop** in 1917, while it incorporated **smith** facilities and a **central power station**.

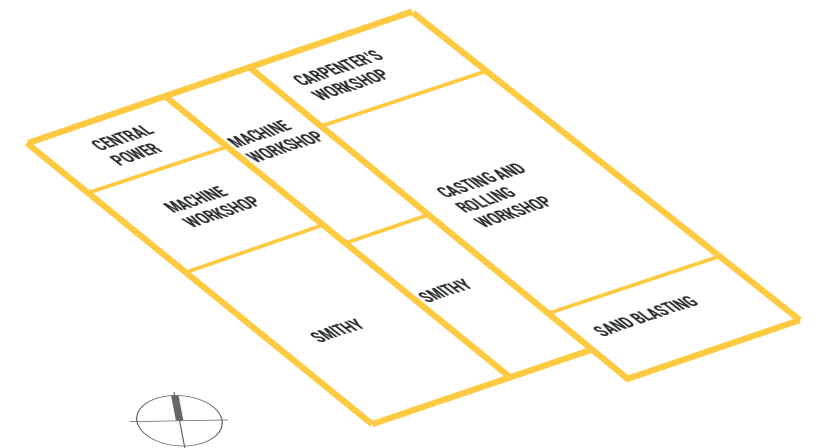


Figure 8. Original functions in the M-verkstad when all three buildings were completed (1917)

Figure 9. Phases of construction of the M-verkstad, according to the Gothenburg city planning archives

ANALYSIS: THE CASE

the present

An evaluation of the existing situation in the urban and the building scale will indicate the strengths and weaknesses of the area, as well as its potential for the future. The challenges that should be addressed through a transformation project in the M-verkstad should also be pointed out.

THE SITE IN THE CITY CONTEXT

Gamlestaden (the Old town) is located approximately **four kilometres northeast** of Gothenburg city centre.

The area lies on the northern bank of Sävån river, just before the latter is emptied into Göta Älv. Between Göta Älv and Gamlestaden lies the industrial area Marieholmsbruk, along the Marieholmsleden national road (E45). The area is **framed to the south by the SKF factory area**, which stretches even further to the south across Sävån.

Natural elements, such as the **rivers Göta Älv and Sävån** and the **extensive green spaces** to the north, as well as the **railway** and the **national roads**, all frame the area somehow.

However, public transport to the city centre is excellent and the commuter train also stops there. Gamlestaden is also **frequently referred to as one of Gothenburg's least safe areas**.

DISTANCE FROM CITY CENTRE (BRUNNSPARKEN)



53
mins walk



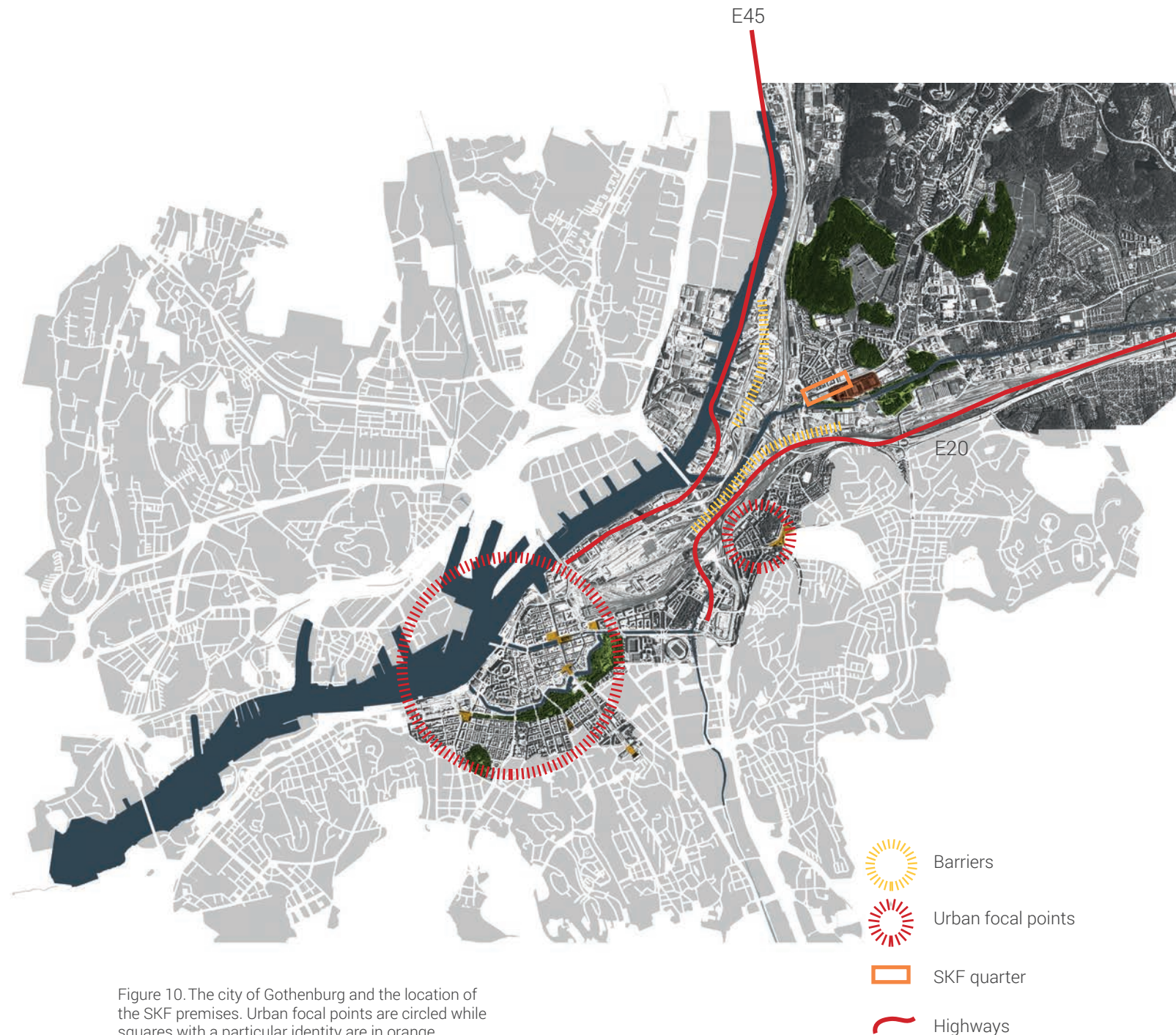
17
mins cycling



10
mins driving



11
mins with tram



DEMOGRAPHICS

The area is a **node** between the city centre and the North-East suburbs, as the main road and railway network connects the centre with these areas through Gamlestaden.

The northern suburbs mainly belong to the region of Angered, while the eastern ones belong to the region of Östra Göteborg (Eastern Gothenburg) and contain the areas of Gamlestaden (the intervention area), Bergsjön, Kortedala, Kviberg and Utby. The approximately 100.000 people living in the latter could be a potential target group for a possible transformation project.

The statistics show that nearly half of the population in the studied area has a non-swedish background, quite more than the same percentage in the city centre. Therefore, issues such as **integration, chances for further education and employment** should be investigated and perhaps addressed by the proposed functions.

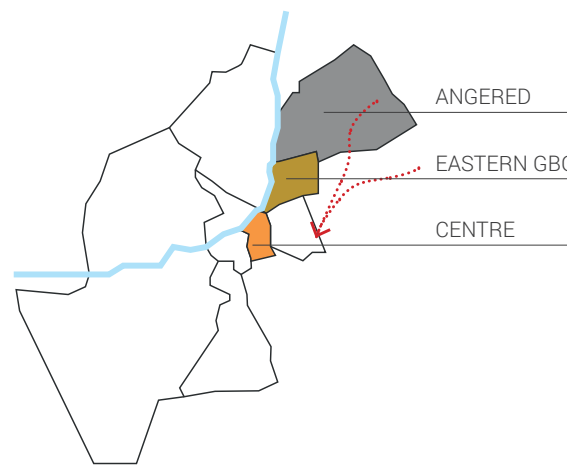
POPULATION:

50621

PEOPLE IN ANGERED

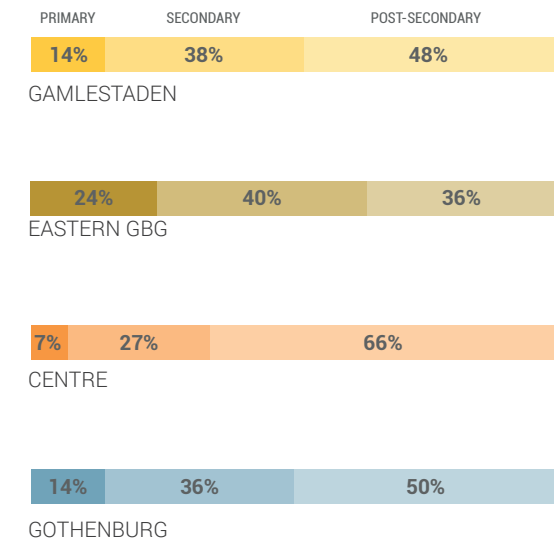
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PEOPLE IN EASTERN GÖTEBURG



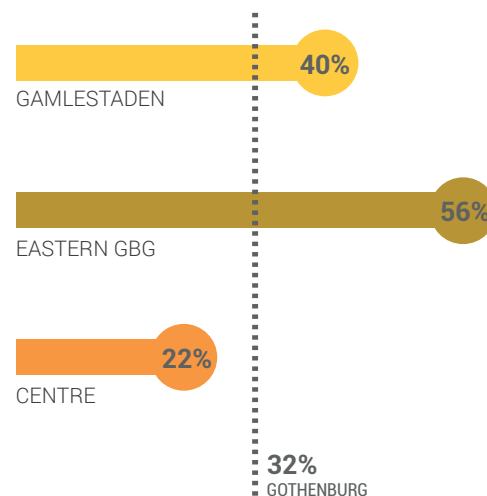
EDUCATION LEVEL

Possible interest for an educational centre in Gamlestaden



FOREIGN BACKGROUND

People that need to integrate and can help create multi-cultural environment.



GAMLESTADEN UNEMPLOYMENT RATES

8% are unemployed in Gamlestaden.

6%

OF PEOPLE WITH A SWEDISH BACKGROUND ARE UNEMPLOYED

12%

OF PEOPLE WITH A FOREIGN BACKGROUND ARE UNEMPLOYED

STAKEHOLDERS IN OUR SITE

Stakeholders are divided into developers/decision makers and users/neighbours. It is important to map them as they either have a strong voice concerning future development around the area, or they will be directly or indirectly affected by our proposal. Moreover, some of them should also be considered as possible investors for the sake of this master thesis proposal.

DECISION MAKERS

MUNICIPALITY OF GOTHENBURG

The municipality is already proposing a development plan for the area of Gamlestaden and the SKF quarter.

Several buildings in the latter are also declared buildings of architectural and historical significance and therefore they are included in a preservation plan.

SKF

The old premises are no longer capable of hosting industrial activities, which are gradually moving out and transferred to the south bank of the river.

SKF has not yet reached a final agreement with the municipality or the successor owner, with discussions ending before summer 2015.

TK DEVELOPMENT

TK Development is an international company that has been assigned to develop the new plans for the SKF quarter, in the perspective of eventually buying them from SKF.

There is already a master plan proposal being developed in cooperation with architectural offices.

There have been different preliminary versions of these plans, but the final ones are not yet published.

POTENTIAL USERS

FUTURE WORKERS IN THE NEW FACILITIES

The people who will be working in the new commercial facilities, the offices and the proposed functions for M-verkstaden.

INHABITANTS OF GAMLESTADEN AND THE SUBURBS

People who either live in the area or in the adjacent suburban areas and can be the future users of the quarter and the M-verkstaden.

HEMFOSA

The owner of the oldest existing building in SKF, which is the one in the corner of Artillerigatan and Hornsgatan.

Part of this building is used for offices and stores, but not all of it is in use today.

SKF

After finishing moving out of its old premises, SKF will remain a direct neighbour to the south, responsible for reduced noise levels and any future redevelopments on the south bank of river Säveån.

SITE ANALYSIS

Site analysis was conducted through mapping of the area in terms of accessibility, green and meeting areas, infrastructure and land uses and personal observations through different times of the day and year. The aim was to understand the qualities and lacks of the area, with a focus in identifying how current conditions affect the SKF quarter.

The mapping of those conditions was an effort to identify at the same time the relations between physical and social space.

SITE ANALYSIS:

3-STEP ANALYSIS METHOD

This method show the potential to connect to the point of interest (in our case, the SKF quarter), from all possible directions. Originally developed as a method by Peter du Bois, it maps the potential of an area to become a lively and intensively used public space. It is based upon cognitive mapping of an area by an individual, a mapping that suggests that every person can easily orient himself during the first three turns he takes during a walk.

REFLECTIONS

The first observation is that the lines don't stretch far into different directions, especially not towards the Göta Älv river bank and the southern bank of river Säveån. That means that it is difficult for a person to orient himself from the above mentioned areas towards the SKF quarter. On the contrary it is indicated that it is much easier to orient for someone coming from the north (Kviberg residential area), as the lines stretch out far towards there.

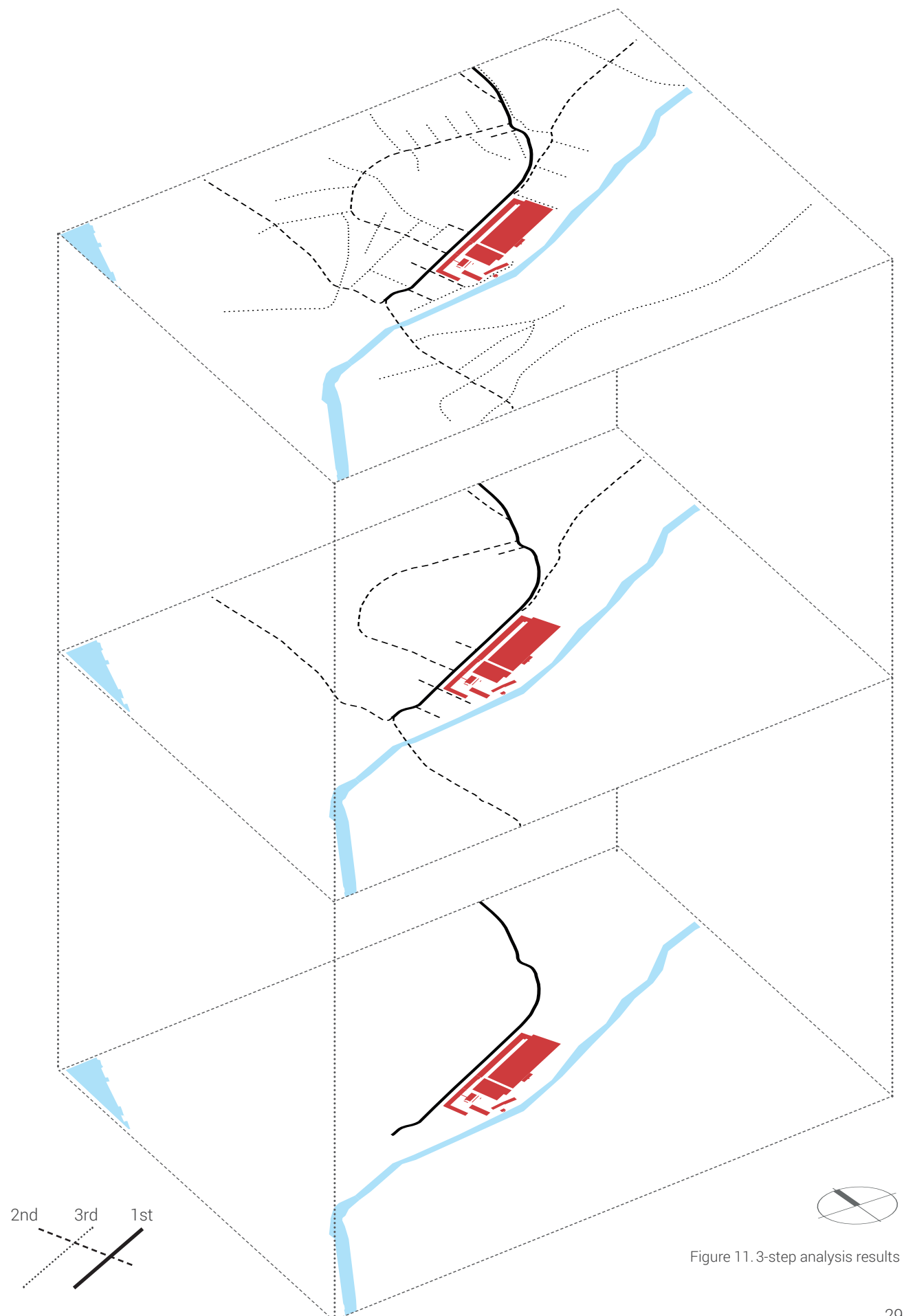


Figure 11.3-step analysis results

SITE ANALYSIS:

GREEN SPACES AND ECOSYSTEMS

What are the main characteristics of natural elements in the area? What are the existing conditions, opportunities and threats that need to be taken into account in a future proposal for SKF? Is it important to consider linking the river ecosystem better to the urban qualities of Gamlestaden?

TOPOGRAPHY

Gamlestaden is neighbouring with two hills; Tingsberget (east of SKF) and Forsaberget (north of SKF). Forsaberget was recently redeveloped as a park, providing access to views over the SKF quarter. Unfortunately, accessibility to the latter hill remains questionable since the entrance is almost hidden behind a fenced parking lot on Artillerigatan.

The area is framed by Sävån river to the south. The river and its banks form together an area of environmental importance.

SOIL

The soil layers consist mainly of clay. In the exploited parts of the area there is a superimposed surface layer of filling, which consists of clay, sand, gravel and parts of construction waste. Depth of the bedrock varies and is expected to be 40-100m. The greatest depth is in the western part of the Gösen quarter. The upper groundwater table is generally 1-2m depth below surface.

Although a radon survey has not been conducted, the clay is considered to be low radon soil.

PROTECTED AREAS AND SPECIES

The area along Sävån river is declared a landscape of National interest. The river itself is declared as a Natura 2000 site and protected for the following purposes:

1. the preservation of spawning ground for an original strain of Atlantic salmon.
2. the maintenance of an adequate nesting site and foraging environment for kingfishers (type of protected bird species)
3. the preservation of a Fenno-Scandinavian, natural water-course.

OPPORTUNITIES

Possible development plans evaluate Sävån river as a landscape of great importance in terms of its natural and recreational values. The riverside is proposed to become an accessible green path for people to walk and cycle along the water, starting from Kviberg and reaching Göta Älv.

THREATS

Stability of Sävån north side is unsatisfactory and the safety against landslides is low. Reinforcement measures have been carried out in instalments close to Sävån, but do not provide sufficient security.

The river landscape is sensitive to:

- the excavation of natural sandy banks
- change of the natural flow in the river
- erosion
- pollution of various kinds
- felling of shore vegetation
- tilting and filling

Within the planning area the natural beach environment is destroyed.

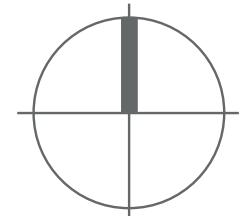
REFLECTIONS

The landscape formations around Gamlestaden are quite interesting although there is little chance for someone who lives there or visits the area to have a full understanding of them.

Making an accessible path to connect the city to the river and backwards would be a first step towards this direction.






Sävån river, a landscape of big environmental importance remains either hidden behind the SKF facade or inaccessible behind extensive fencing. This strengthens the previous argument even more. A master plan proposal could be directed towards **linking the centre of Gamlestaden and the river ecosystem through the SKF quarter.**

What could be a recreation centre for the neighbourhood is now a major urban gap. In any case, **only the northern part of the river can be developed**, as to the south, it will continue to remain fenced due to the adjacent industrial functions.



GREEN AREAS MAP

Scale 1:5000

-  FORREST
-  WATER - NATURA 2000 PROTECTION AREA
-  UNPLANNED VEGETATION
-  PLANNED VEGETATION
-  AREA OF NATIONAL INTEREST



FORSABERGET

TINGSBERGET

SAVEÁN RIVER

SITE ANALYSIS:

INFRASTRUCTURE

How well is the area connected to other parts of the city? What are the important traffic nodes? How well are the individual parts of the area connected to each other?

Gamlestaden benefits from **very good transport connections** as several trams and buses are passing through the area. The nearest stops are 50 and 100 meters from the SKF quarter.

Tram connections in front of the SKF quarter can transfer towards the city centre and the eastern suburbs of Gothenburg metropolitan area. To the central station, it takes only 11 minutes by tram.

The site is also easily accessible by car from the centre as well as from the E20 leading to the north towards Angered and Highway 40 leading to the east .

In the regional level, the site stands in between two commuter train stations, Gamlestaden and Sävenäs.

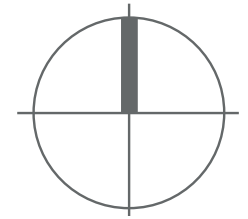
At the same time, in the neighbourhood level, Artillerigatan is considered one of the most traffic heavy roads in Gothenburg, a fact that has multiple negative consequences for the liveliness and the pedestrian movements across and along the street. The area occupied for car and tram circulation is much greater than the area dedicated to the pedestrian flow, while at the same time the shaping of the pavements makes it complicated to walk on the same side without having to cross the street (for example, along the northern sidewalk between the SKF quarter and the Gamlestadstorget station). Artillerigatan's traffic congestion is also supposed to increase in the next ten years.

Lighter traffic streets are spread across the inner neighbourhood.

REFLECTIONS

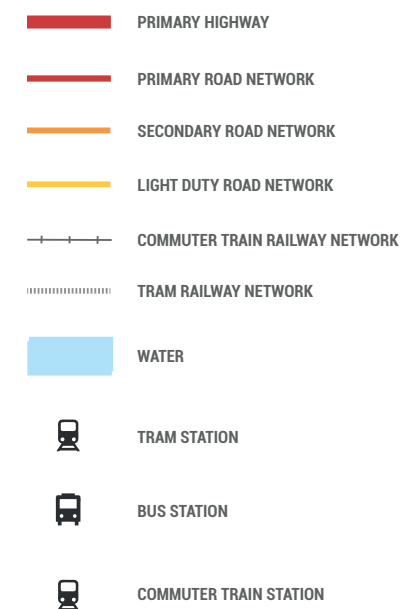
The infrastructure analysis proves that the transport connection is efficient as the area is well linked to both the city and the region's traffic network.

However, this works against the potential for pedestrian movements. The pedestrian flow could lead towards and along the river, while there could be a good connection to the inner area of Gamlestaden to the north. On the contrary, **traffic loaded streets discourage connection between opposite blocks** (e.g.. Artillerigatan), even with unnecessarily extensive use of roadblocks, thus **isolating the SKF quarter** even more from the residential part of Gamlestaden.



TRAFFIC NETWORK MAP

Scale 1:5000



E 45 HIGHWAY

NYLÖSEGATAN

BELLEVUE

ARTILLERIGATAN

SKF

P

GAMLESTADEN

GAMLESTADSTORGET

KRISTINEDAL

BYFOGDEGATAN

E 20 HIGHWAY

SÄVENÅS STATION

GUSTAVSPLOTSEN

SITE ANALYSIS:

LAND USES

What are the activities that exist in the area? Are there any functions missing? What are the areas where most functions cluster?

SERVICES

In the area, there is a community centre and a library, while there is one school and two kinder-gardens (with limited capacity).

Other functions include a Systembolaget (alcohol store), a grocery store, a bank and several private services, such as hairdresser, restaurants etc.

SPORT FACILITIES

While there is a football pitch and a sport hall close by, there is a lack of an easily accessible green space for exercise and recreation.

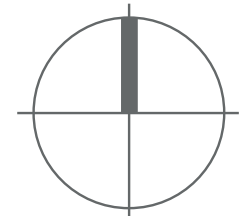
HEALTH

Basic needs such as a pharmacy store, a dental care centre and two general health care centres are covered in the area. Interestingly there are also a lot of rehabilitation centres and institutions for psychological support and treatment.

REFLECTIONS

Basic needs are generally covered in Gamlestaden without much effort. However, it is notable that there is a **lack of central functions** and the **lack of places to hang out after business hours**.

At the same time, most the above mentioned functions are mainly located along Artillerigatan and Brahegatan, leaving the **rest of the inner streets quite deserted during most of the day** and especially after business hours.



LAND USES MAP

Scale 1:5000

	COMMERCIAL / RETAIL / OFFICES
	HOUSING
	SPORTS AND HEALTH
	CULTURE AND RELIGION
	EDUCATION
	MIXED USE
	INDUSTRY
	SERVICES
	PARKING BUILDING
	WATER
	SKF QUARTER



GAMLESTADS SPORSTALL

ELEMENTARY SCHOOL

CEMETERY

GAMLESTADSSKOLAN

GBG CHIRO REHAB CENTER AB

COMMUNITY CENTRE LIBRARY

NYLÖSEGÅRDEN DRUG-FREE SUPPORT HOUSING

BUNKEBERGET SKATEPARK

ISLAMISK KULTURCENTRUM

STUDIEFÖRBUNDET VUXENSKOLAN

ISLAMISKA SUNNI CENTRE

BALETTAKADEMIENS TEATER

AL SALAM MOSQUE

ÄLDREBOENDET GÖTAHOLM

FAMILJEHÄLSAN VÅRD CENTRAL FOLKTANDVÅRDEN PSYKIATRISK MOTTAGNING

SKF

FEELGOOD FÖRETAGSHÄLSA SKF TEKNISKA GYMNASIUM SPORSTALL KONFERENS

NÄRHÄLSAN ARBETSFÖRMEDLINGEN

MÖLNLYCKE HEALTH CARE MINI MARIA REHABILITATION CENTRE PSYKIATRISK ÖPPENVÅRD PSYKOSVÅRD NORDOST NOSTALGICUM MUSEUM

PSYKVÅRD ÖSTER

SITE ANALYSIS:

SOCIAL SPACES

Are there enough and equally distributed meeting spaces in the area and what is their quality? Do they refer to everyone and how accessible are they? Are there spaces to meet after working hours?

DESCRIPTION

The public space in Gamlestaden takes the form of a social space mainly on the northern side of Artillerigatan.

It is separated into two main categories; the social spaces that address to everyone, regardless any cultural, age or other limitations and to the ones that concern specific groups.

There are three main social spaces for everyone in the area; the forest area on the east, the sports area on the north and the community centre in the heart of Gamlestaden. The more specified social spaces are more scarce and either concern age limitations (schools) or religious ones.

The area seems to have ample social space, in terms of scale at least. However, there is no social space on the southern side of Artillerigatan and specifically in the SKF quarter or the river bank of S ave an.

BARRIERS

Artillerigatan, along with the long SKF buildings attached to it and the ones on the east, are barriers themselves. They deprive the southern areas of public social functions, making pedestrian flow and the development of a meeting place in SKF quarter highly problematic, although there are spacial values that could promote it. Due to the additional barriers on the southern border of SKF quarter, pedestrian circulation is almost impossible. There is no access to the river bank or to the other side of it, unless someone has permission.

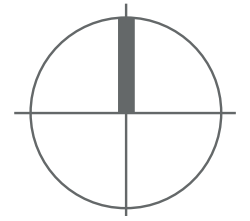
AFTER WORKING HOURS SITUATION

It is quite obvious, that after the working hours, some of the meeting places become private, as their primary function is not active any more. The area may have some social areas during the night, but they are not enough to keep it active and give the feeling of a vibrant city. The forest for example, would not be so welcoming when it gets dark during the winter.

REFLECTIONS

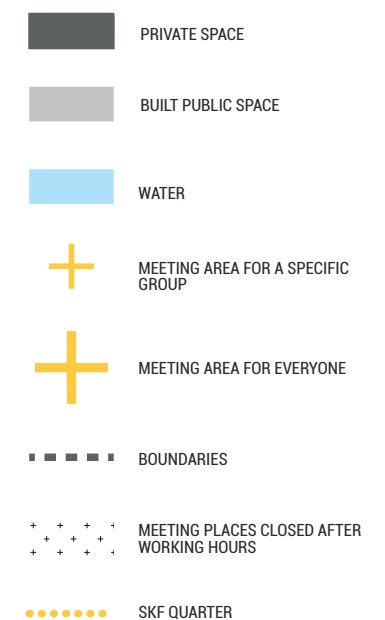
The area has great potential in exploiting the existing open space and its natural and spacial qualities. Barriers should guide the pedestrian flow **into the SKF quarter or the river** and **away from the heavy industrial activities on the south**. They could be a **tool for protection and not for restriction**.

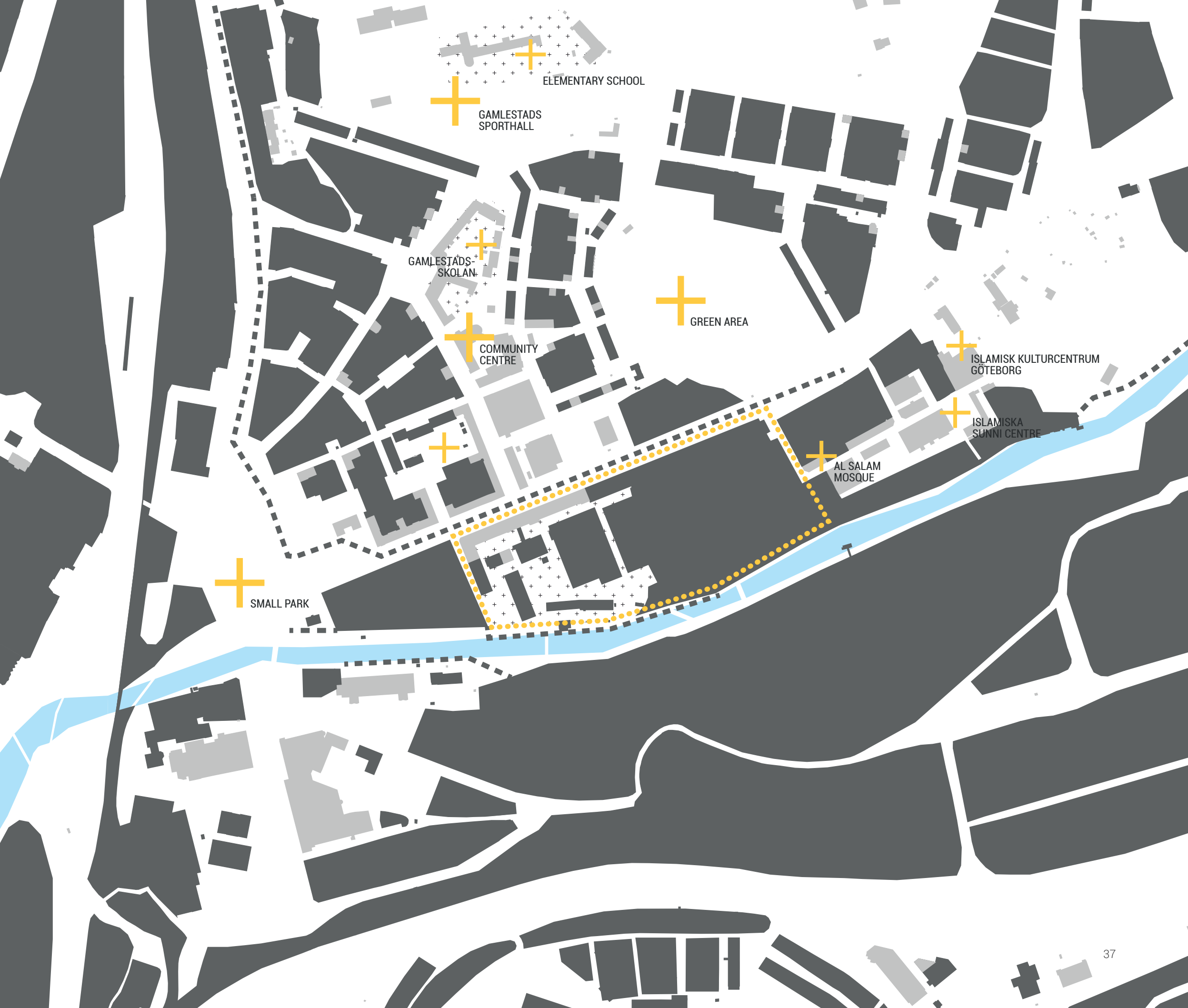
The **quality and distribution of social spaces** should be taken care of, in order to achieve a vibrant city life 24-7.



SOCIAL SPACES MAP

Scale 1:5000





ELEMENTARY SCHOOL

GAMLESTADS
SPORTHALL

GAMLESTADS-
SKOLAN

COMMUNITY
CENTRE

SMALL PARK

GREEN AREA

AL SALAM
MOSQUE

ISLAMISK KULTURCENTRUM
GÖTEBORG

ISLAMISKA
SUNNI CENTRE

M-VERKSTADEN AND THE SKF QUARTER

Planted square between the headquarters and M-verkstaden

Building A southern facade is highly altered

Original door opening is blocked

Narrow street between M-verkstaden and R-building



Image 16. The south facade of M-verkstaden



Direct connections to river Säveån

M-VERKSTADEN: BUILDING ANALYSIS

FUNCTIONS

Today, M-verkstaden is used partly as a solution factory, an SKF service that is dedicated to solve customised problems for different clients, and partly as storage space. The three parts it consists of are attached to each other, but only buildings B and C are well interconnected.

More specifically, Building A today remains rather underused, with old machinery standing still inside. Building B and C are used for offices, storage and distribution space for the customised products, and rooms for the different kinds of machinery.

Some parts of Building A were available to lease to other smaller companies in need for some extra storage room.

However, the modern industrial demands, regarding sustainable energy consumption and available space are not any more fulfilled by the existing structure. This is also the case for the rest of the old industrial SKF buildings in Gamlestaden and therefore they cannot host the current facilities any more.

A new building at the south bank of river Sävån, that will be ready by the end of June 2015, will host the services of M-verkstaden from August 2015 and on.

SPACE AND CAPACITY

After being emptied from its current use, M-verkstaden can offer plenty of available space for a future development. With contemporary building standards and taking into account the minimum floor heights, **the entire area of Building A can easily have a second floor**, while its **central wing that stands a bit higher, offers height for a smaller third floor as well. Building B central wing can also host two floors.**

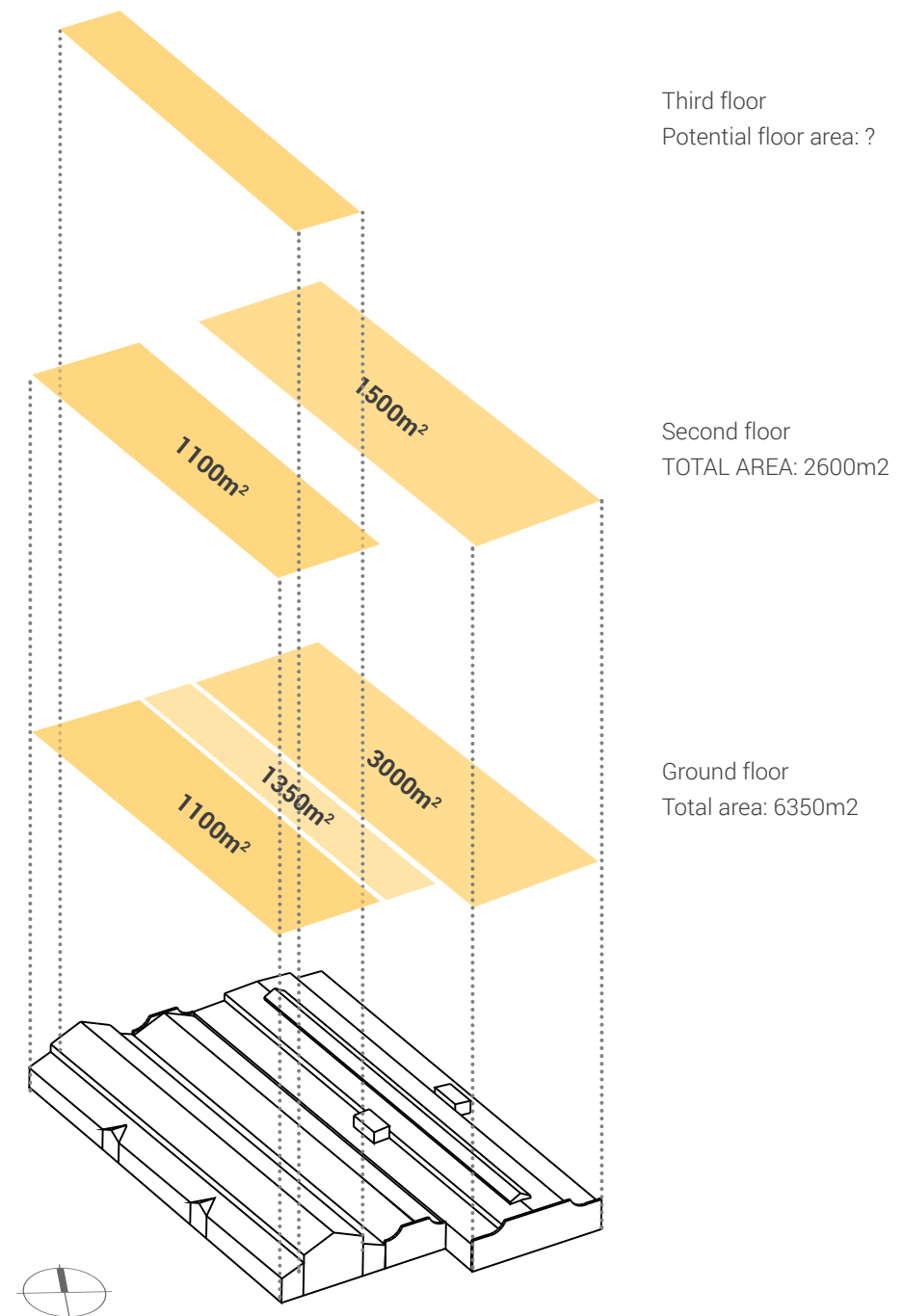


Figure 12. Potential usable area inside M-verkstaden according to the minimum floor height

M-VERKSTADEN: INTERIOR

ADDITIONAL STRUCTURES

The interior of M-verkstaden consists of **high spacious sections, with visible structural elements**. The original plans indicate that the long dimension of the three adjacent buildings was uninterrupted by internal walls. However, today, there are several of those, dividing each building into smaller sectors. Several parts of M-verkstaden have been remodelled to fit production and administration needs, keeping the **load bearing structure intact except for some exceptions**.

LIGHTING

Natural light could once enter the building from many points; **linear skylights along the roofs** and between the different wing heights in Building A and B, **individual square skylights for Building C** and a **dense sequence of tall windows** on the side walls.

However, today many of the original windows on the side walls are blocked, either individually bricked-up or covered by later additions of rooms and mezzanines. Therefore in many cases **incoming light becomes less effective** for working conditions, and artificial lighting is needed even during morning hours.

Considering though that it is quite easy for the majority of the windows to be re-opened, as they are only covered with additional bricks or hard surfaces, **Buildings A and B can easily get more natural light**. Building C, as it stands in between the two other buildings, is less benefited, and further **opening up of the roof is the only way to bring more natural light in**.



Image 17. Later additions inside Building A



Image 18. Sound absorbing partition inside Building A



Image 19. Blocked windows



Image 20. Original floor tiles, trusses and later added level inside Building A



Image 21. Altered ceiling and additional partition inside Building A

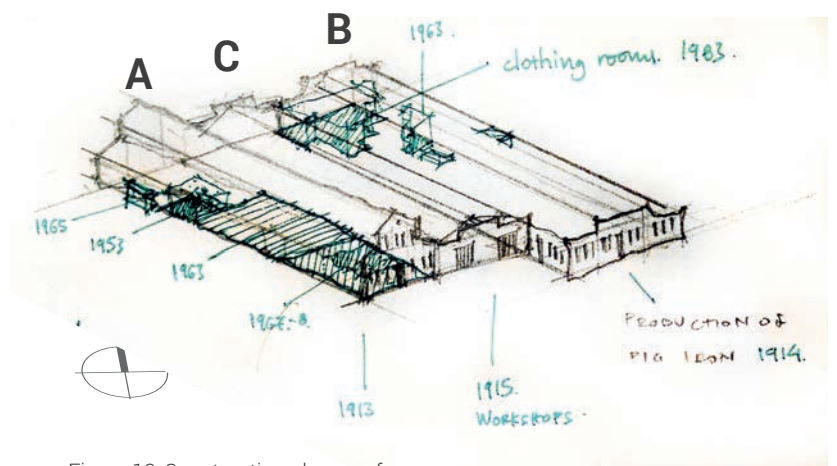


Figure 13. Construction phases of our building; Identifying the additions

LOAD BEARING STRUCTURE

The load bearing structure is different in each of the three buildings and is better explained on page 45 of this booklet.

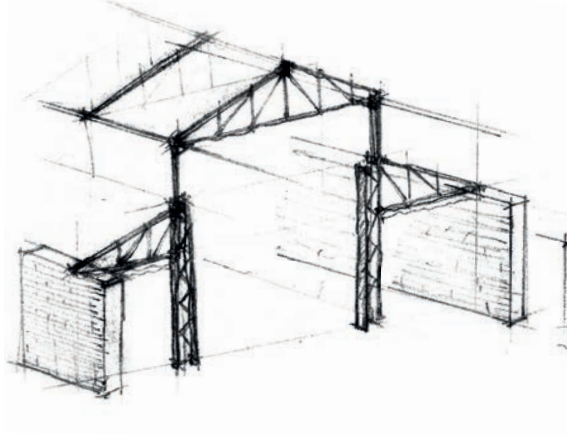


Figure 14. Steel structural elements support the roof and form skylights in Building A

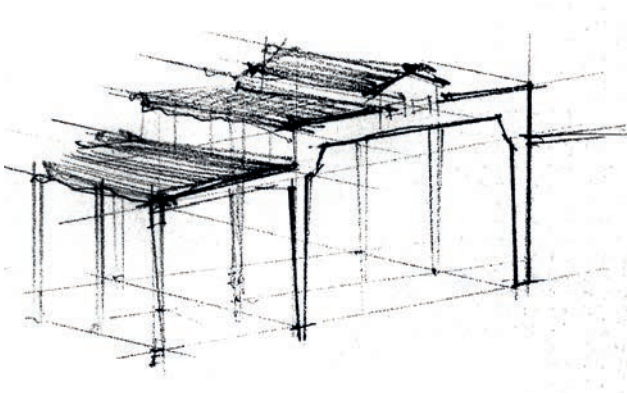


Figure 15. Concrete frames support the roof and form skylights in Building B

Image 22. Additional partition in Building A



Image 23. Blocked windows between Building A and C



Image 24. Truss structure in Building C



Image 25. Concrete frames and skylights in Building B

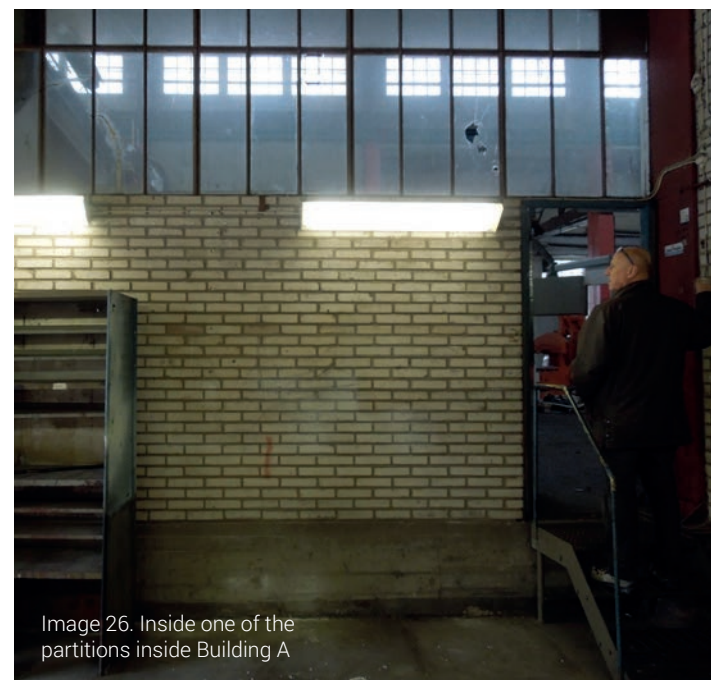


Image 26. Inside one of the partitions inside Building A



Image 27. North facade of Buildings B and C



Image 30. Remaining original and blocked windows of Building A



Image 28. Detail of the decoration of the masonry wall of Building A



Image 31. Detail from the NW part of Building A



Image 29. South facade of Building A

MORPHOLOGICAL ELEMENTS - INTERVENTIONS

On the exterior, the building is characterised by a **variety of brick patterns** on the walls, **large openings on all façades** and various brick ornaments on the wall finishes. The windows seem original to an extent, but with many **alterations** on their size and number; some of them have been entirely or partly closed with bricks, while some others have been more recently opened. On the western facade, there is a long window strip as part of the truss roof.

An additional volume has been placed externally on the western facade (1965).

TPOLOGICAL QUALITIES

All three buildings that form M-verkstaden appear to have great **symmetry in both directions** of their layout plan. The two opposite façades of each building are almost identical in their original form and symmetrical to a central axis.

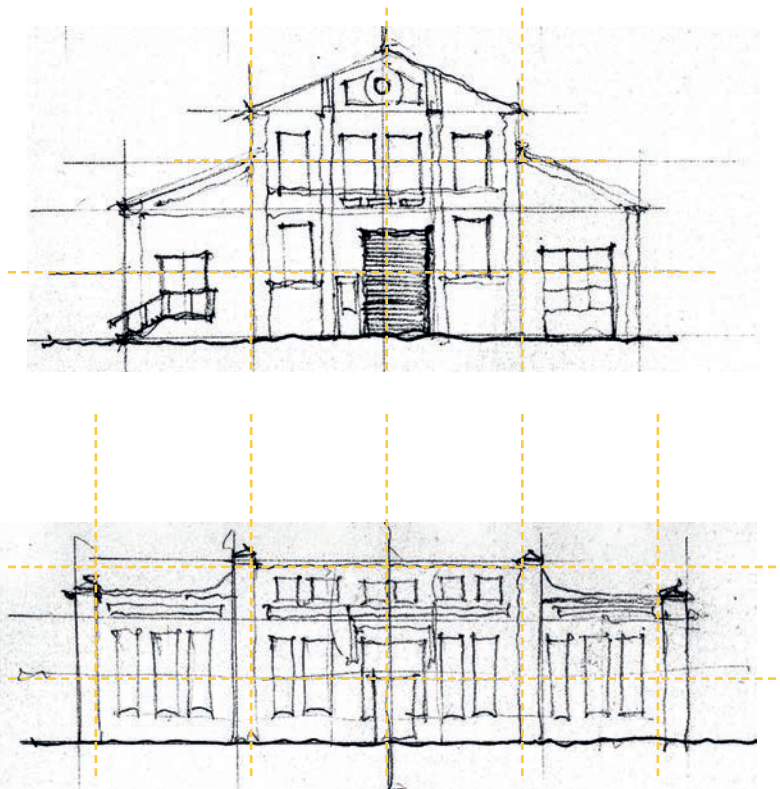
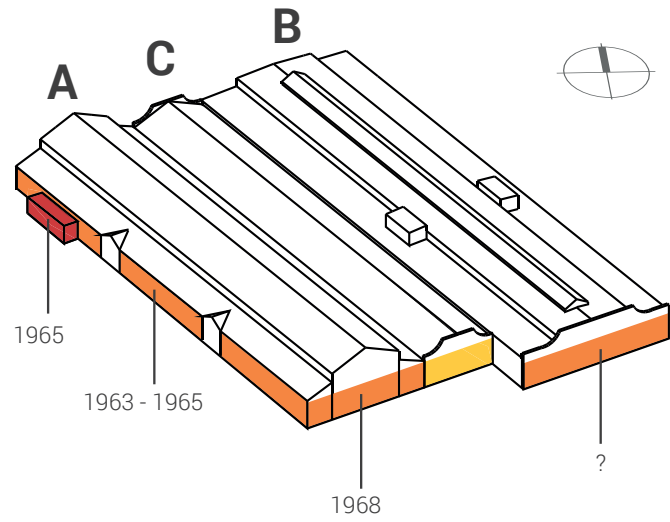


Figure 16. Buildings A and B; Typological analysis of the façades; axes of symmetry, alterations



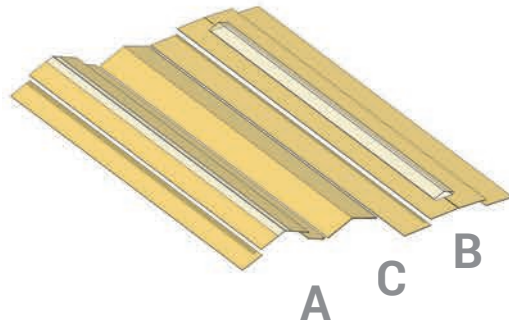
ALTERATIONS OF THE EXTERIOR



- Additional volume that alters the typology and should be removed
- Changes of the windows also altering the facade
- Minor alterations of the windows

Figure 17. Photographs included in the booklet and their position on the plans

ROOFS



BUILDING A

Wooden planes under the roofing material show visible signs of damage caused by moisture.

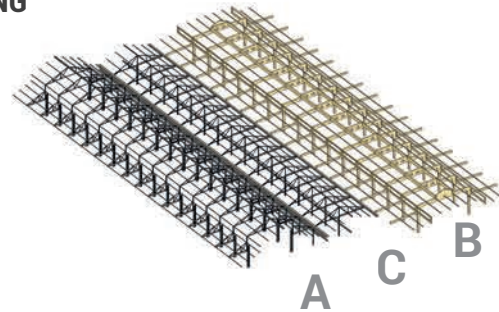
Skylights bridging the central and the side wings roofs remains but with added concrete parts.

BUILDING B

Roofing material a little more than 8cm layer of concrete. Roof stands slightly lower over the two side wings.

Skylights along the building's central wing.

LOAD BEARING STRUCTURE



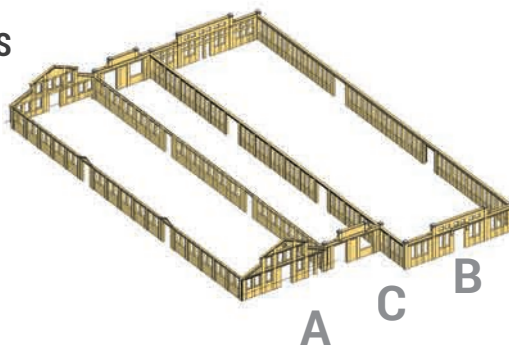
Metal load-bearing structure creates a central wing with two lower wings on both long sides.

Metal truss columns support the central wing's triangular trusses, while the side wing smaller trusses are supported on both the metal columns and the external brick wall.

South part: columns have fire protection covering.

Concrete load-bearing structure partly supported on the external brick walls.

EXTERNAL BRICK WALLS



North and south façades: Significantly altered, with most windows blocked using bricks similar to the original or transformed into doors. Permanent distortions of the masonry wall.

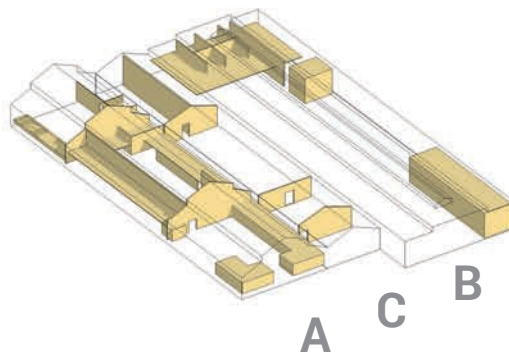
Side façades: Windows are divided to fit the added interior floor. Concrete external addition. Eastern windows blocked to isolate from Building C.

North facade: Long windows are divided to correspond to the added interior floor. Central entrance transformed into window.

Side façades: Long windows divided into smaller, one entrance is turned into a window.

South facade: Almost intact. Central entrance turned into window.

INTERIOR ADDITIONS

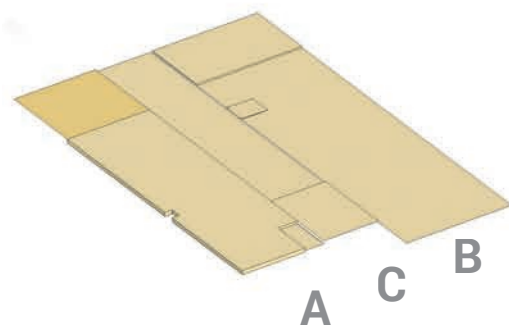


Northern part: Elevated platform covers the western wing. Small partitions for tool storage under the eastern wing.

Southern part: Metal structures under west and east wings divide the height into two floors. Upper floors are used as changing or shower rooms. Noise insulation added along the perimeter.

Free-standing partition walls create office spaces to the north, spaces for supporting functions under the side wings, and two main storage rooms.

FLOORS



Northern part: covered with a red and white tile floor, which is mostly preserved in its original form except for some minor damages and holes opened for infrastructural reasons. The floor under the western wing was elevated with an additional platform.

Southern part: Exposed concrete with no extra coating for the two smithy spaces. Tiles in the shower rooms.

Northern part: Polished concrete floor covers the office space.

Southern part: Polished concrete floor used for the storage space. Engraved lines indicate walking and storage spaces.



BUILDING C

Northern part: Wooden planes under the roofing material.
Original skylights closed or altered to reduce glass surface.

Southern part: Roof replaced with corrugated metal roof. Most of the original skylights are closed.

EVALUATION

DEMOLISH - REDESIGN

Lack of maintenance, moisture, mould and insufficient insulation for contemporary standards suggest that the **roofs should be replaced.**

Metal truss roof structure supported by the brick walls and one central metal column.

PRESERVE

Generally the **load-bearing structures appear to be intact.** Only **minor changes** are visible and they are easy to be restored in order to ascertain the stability of the structure again.

North facade: Almost intact. Entrance replaced.

South facade: Both openings replaced or blocked with metal sheets.

Exhaustion air opening opened in both façades distorting the brick decoration elements.

PRESERVE AND REDESIGN

The **external masonry walls** are considered the most significant element of M-verkstad. Openings have been heavily altered, with the load-bearing elements only partly distorted to an insignificant extent. These parts should be **redesigned to reflect again the original typological qualities** of the façades.

Northern part: Wall partitions divide this space in three parts, according to the type of machinery.

Southern part: Wire fences are supported on the metal columns.

DEMOLISH

The partitions in the interior are there clearly for functional reasons, with little or no architectural significance. In many cases the used materials are worn out and unmaintained. **Parts might be considered to be preserved only to highlight the industrial and rough character of the interior.**

Northern part: Polished concrete floor covers the area occupied by machinery.

The southern part, is left rather unmaintained, with the concrete floor in severe decay, and possibly directly contaminated with lubricants and oil.

PRESERVE

The industrial floors are generally in good condition and could be used almost immediately.

The original tiled floor in the north room of Building A could also be preserved, although in mediocre condition.

Figure 18. Description of the general features of the M-verkstad structural elements and their assessment in the context of this thesis.

ANALYSIS: THE CASE the future

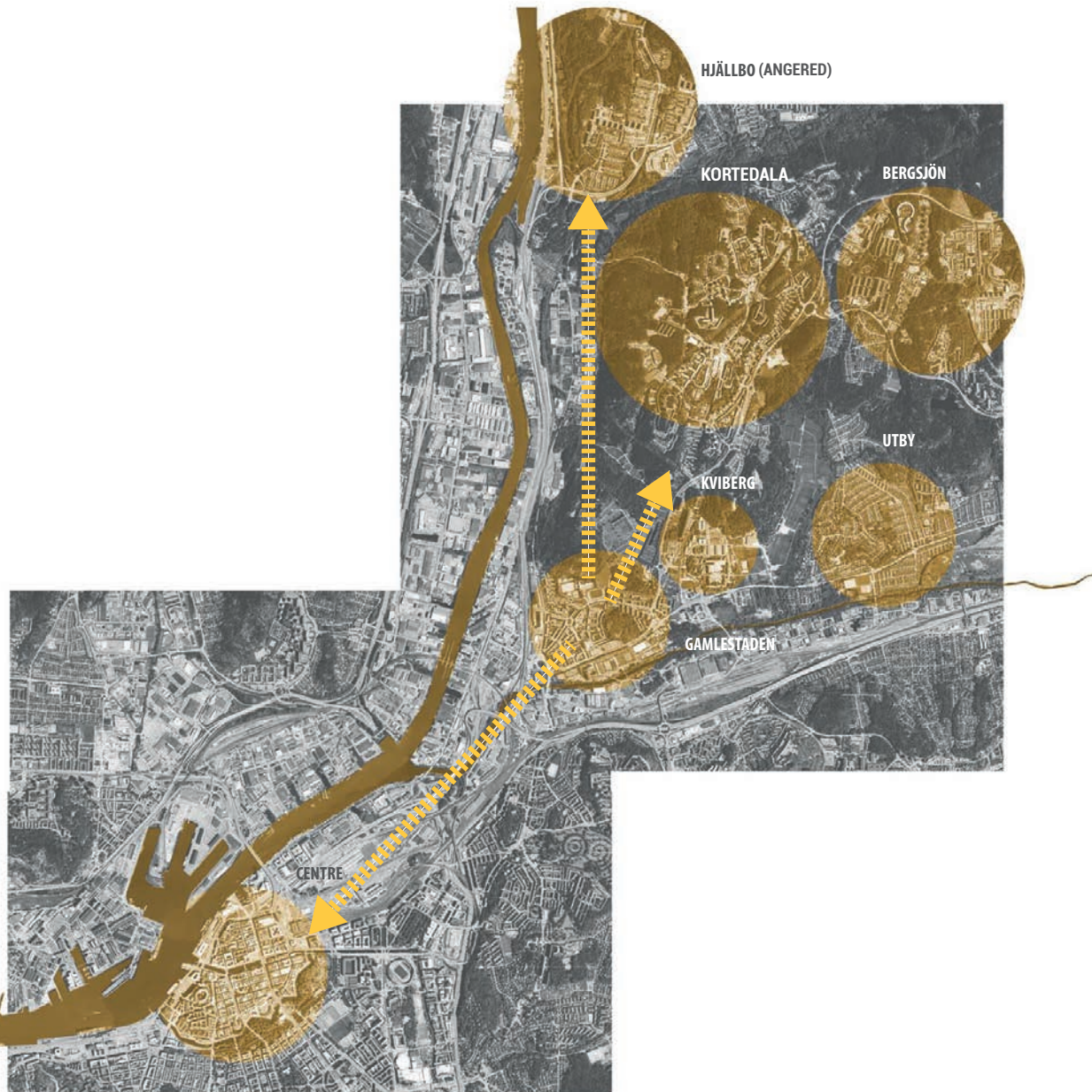


Figure 19. The municipal vision for Gamlestaden in the city context; a focal point among the north, the eastern suburbs and the city centre.

THE MUNICIPAL VISION FOR GAMLESTADEN

The vision of the municipality for the area is “to create a vibrant mixed city with high qualities”.

According to the municipal plans, the area of Gamlestaden will become a **centre for Eastern Gothenburg and a link between the eastern suburbs and the city centre**. In Gamlestadstorget, there will be a **new traffic hub** with characteristics similar to those of Korsvägen. On top of that, there are plans for a **travel centre** that will also host offices and retail for the new square (Göteborgs Stad, Stadsbyggnadskontoret, 2012).

The area will be **complementary to the city centre**, but not another suburb; it should have **inner city qualities**, in terms of density and mixed use.

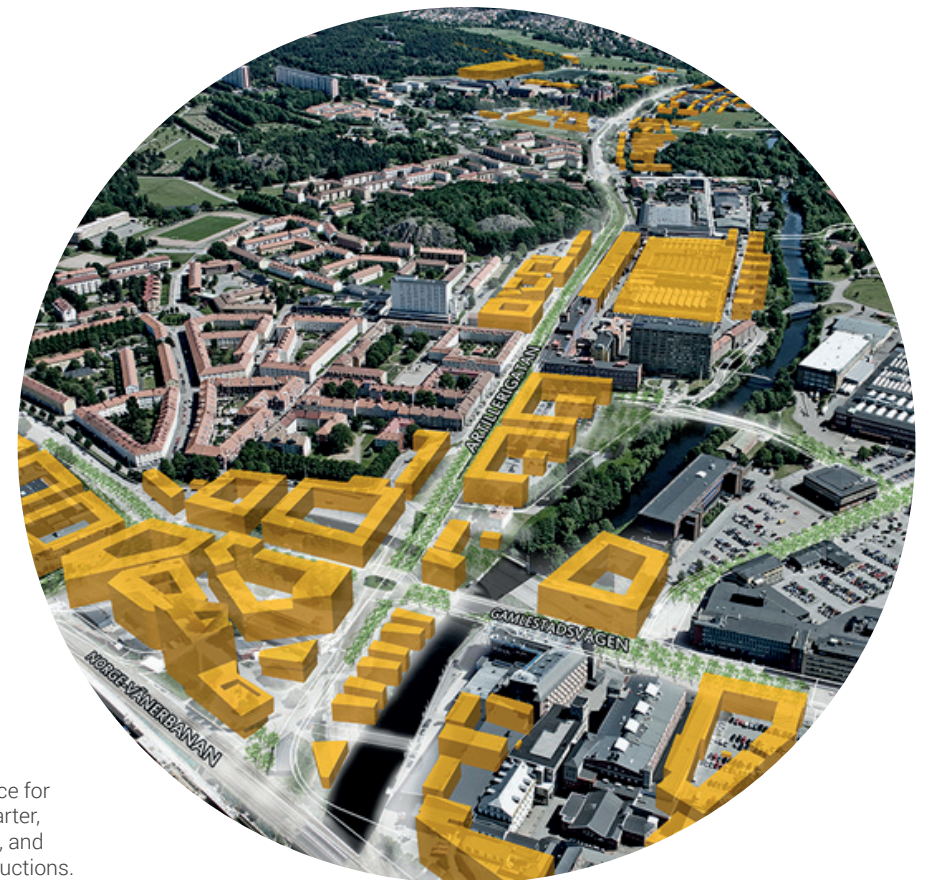


Figure 20. The vision of the city planning office for the redevelopment of Gamlestaden. SKF quarter, as many other plots, will be further densified, and several buildings are replaced by new constructions.

THE MUNICIPAL PLAN FOR SKF

According to the municipality plan, buildings in the SKF quarter will be evaluated in order to be preserved, transformed or demolished. The main parts of the official policy lie in transforming SKF into a shopping area.

Opening up the quarter towards Artillerigatan and therefore connecting better the city to the river through SKF and making the interior of the complex more accessible.

Densifying with new residential buildings at the south part, over the river bank, and opposite of the SKF quarter, implying more families in the area with over 600 apartments in multi family buildings (300 of which in the SKF area).

Replacing the least significant buildings with new ones, either with entirely new shapes or by replicating the shapes of the demolished buildings. The new entrance to the SKF quarter from the north will be strengthened by placing there the new community centre.

-  PROPOSED NEW CONSTRUCTION
-  BUILDINGS TO BE PRESERVED
-  NOT INCLUDED IN THE PROPOSAL
-  TO BE DEMOLISHED
-  RESTRICTED AREA
-  MAJOR EXISTING ROADS
-  SECONDARY ROAD NETWORK
-  NEW ENTRANCES
-  EXISTING ENTRANCES

1. New residential area in the quarter "Makrillen".
2. The existing structure will be demolished and replaced by a newly designed one, hosting the community centre and creating an entrance to the SKF quarter.
3. The area is not included in the plans. The buildings on the corner of Artillerigatan and Hornsgatan host mainly office spaces and retail. The rest of the buildings will be still occupied by SKF.
4. M Verkstad will probably be part of the commercial centre, although it has not been officially stated yet.
5. Part of the commercial centre.
6. The buildings will be replaced by new ones imitating the existing structure and will host a commercial function.
7. New residential area in between the river and the commercial centre.

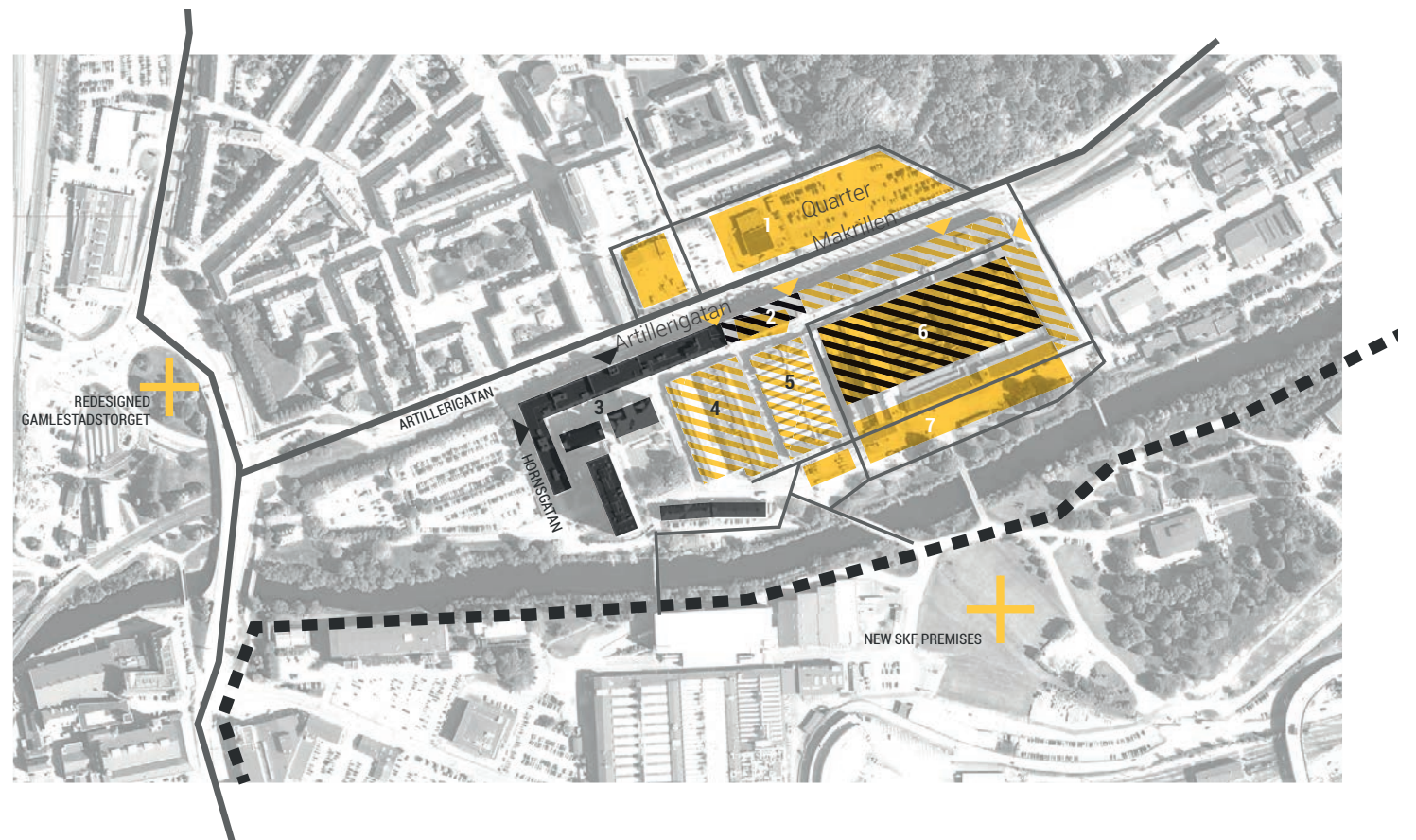


Figure 21. The vision of the planning office for the redevelopment of the SKF quarter (Gösen quarter) and the quarter opposite of Artillerigatan (Makrillen quarter).

Image 32. The northern part of M-verkstaden is proposed to be occupied by high fashion stores (image source: R-studio).



Image 33. In an old proposal by White Arkitekter, S building is demolished and remodelled into a retail centre. A new internal street is created between the place of S building and the R building (image source: White Arkitekter).



Image 34. The building that is demolished along Artillerigatan is replaced by a new community centre that allows entrance to the interior of SKF quarter (image source: R-studio).



Image 35. The V-factory is demolished and replaced by a new one, that is mimicking its architecture (image source: R-studio).

REFLECTIONS ON THE EXISTING PLANS

GAMLESTADEN

The vision proposed by the municipality is quite **justified**, as the area is already a crossroad and a link between the suburbs and the city centre. As it is so close to the central area of Gothenburg, it has the potential to become a **satellite, having inner city urban qualities**. The goal is to create an active city life and the SKF quarter could become a key part of the proposal, since it has the appropriate location, spacial qualities and building dynamics for this purpose.

Being a barrier itself today, it could be transformed from a disconnecting to a **bridging hub**.

The proposed functions for Gamlestaden are attempting to bring life to the area and to host some additional population. The main concerns here are whether the traffic hub (Gamlestadstorget) proposed on the eastern part of the area would become **another barrier**, interrupting the pedestrian flow and whether an excessive commercial function, would **activate the area 24/7**.

SKF QUARTER

SKF premisses will be **mostly preserved**. The demolition of specific buildings is justified to an extent, as they are either of no heritage value, interrupting connections or too contaminated to be reused.

The main arguments against the proposal are:

- The oversized commercial function
- The new residential buildings on the south that add a barrier to the river
- The redesign of some industrial buildings resembling their previous form
- The lack of functions that would activate the area for longer than the working hours

Most of the buildings (including M-verkstaden) will have a commercial function, something that we identify as an **extreme scenario**. Although there is a need for retail, having so many square metres of it concentrated in one area, leads to a mono-functional space, with no mixed-use qualities.

At the same time it is important to consider to whom this redevelopment addresses to. Until now, proposals for the R-fabriken to become a food market (saluhallen) have been dismissed by the developers as financially unprofitable and instead the extension of the retail mall has been proposed. For the M-verkstad, cultural functions have also been replaced by high fashion stores. This fact raises questions about whether this redevelopment is addressing to the limited income population of Gamlestaden and Eastern suburbs at all.

The selected building is quite **centrally located**, close to the two main entrances, neighbouring to the future commercial area and the community centre, while it is the only one with ample open space attached to it.

It is quite clear that the selected building (M-verkstaden) is **one of the first things that a visitor is in contact with when entering the area**.

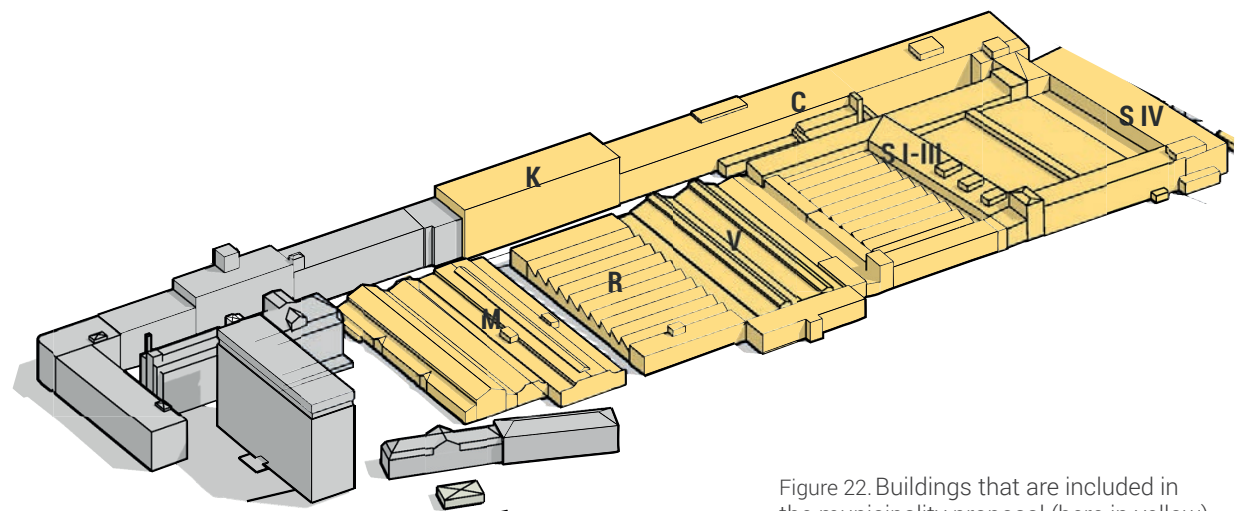


Figure 22. Buildings that are included in the municipality proposal (here in yellow), and naming of each building according to the city planning documents.

SWOT ANALYSIS (URBAN SCALE)

SWOT analysis is a planning tool to identify the site's current strengths and weaknesses, as well as the opportunities and threats that may be evoked. The data used here was provided through the site analysis, the mapping of different elements, the interviews, the study of the municipality's proposal for the area and the literature research.

A SWOT analysis was used as a tool to identify the factors that can be favourable or unfavourable to the desired objective; a **lively and interconnected urban spot**. At the same time this tool can help to **shape the objective further into a strategy**.

STRENGTHS

Adjacency to S ave an river landscape.

Good public transport towards the city centre.

Pleasant density in the northern residential area.

Well conserved samples of different eras of industrial architecture.

SKF is already a landmark for G teborg.

Active interest from actors.

OPPORTUNITIES

Exploit green areas that are currently fenced.

Industrial heritage can define the redevelopment concept.

Activity in old industries can once again trigger the area's development.

Create an area complimentary to the city centre - not another suburb.

SKF; from a barrier into a connector. Transform into an interval zone between the residential area and the river.

Place functions that will activate the area 24/7.

WEAKNESSES

Artillerigatan is a strong and disconnecting barrier.

S ave an river is a barrier, rather than an attraction; its bridges are private or lead to private properties.

Area secluded by industrial zones and greenery.

Lack of mixed-use environment; no activity after business hours.

Pedestrian unfriendly, excessive traffic on main roads.

Few facilities cover basic needs and only along the two central streets.

Rather indifferent impression from the suburb.

Lack of awareness of the river and the nearby landscape.

THREATS

Industrial qualities may be overshadowed by the scale of the redevelopment.

Proposal focused mainly on commerce (shopping mall instead of open market, scale similar to Nordstan)

Densification plans are cutting into the protected river shore

Overly exploitation of the river in the redevelopment plans (tourist boats etc.)

Overly densification inside the SKF quarter; only a small exit to the river will be left public

SWOT ANALYSIS (BUILDING SCALE)

STRENGTHS

Central location in the SKF quarter and direct connection to Sävveån river.

Decorated brick façades create a unique identity.

The larger part of the façades is well preserved and in its original form.

Flexibility due to open plans and height that can host multiple two or three floors

Pedestrian friendly perimeter; even though there is asphalt car movements are rare.

Very visible patina from many different layers of history.

OPPORTUNITIES

The rhythm of the load bearing structure allows the installation of a modular expandable intervention.

The visible industrial past can give many ideas for design concepts.

Densification with new residences and the shopping centre at a short distance can increase safety and bring more financial gains for the its future functions.

WEAKNESSES

Long façades, boring for the pedestrian since there is no public access to the building or through it.

Many later additions in the interior are blocking the open plan layout.

Building C does not receive enough daylight due to lack of windows. Also, there is a lack of views towards the outside in the specific building.

Lack of proper insulation and updated energy systems.

THREATS

Risk to not place a new function quickly. The shorter period the building stays unoccupied, the less damage will be caused.

Risk in deciding what to preserve, between important original elements and industrial qualities that might be less architecturally significant. Keeping both can result in a very complex building to adjust to in the future.

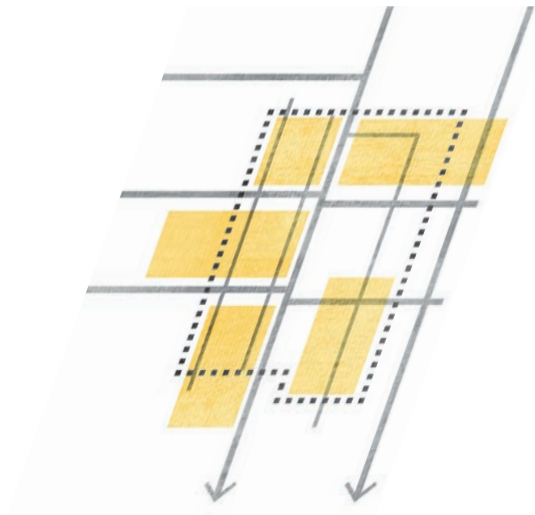
Proposal for adjacent buildings implies that there will be almost no activity after late afternoon.

Programming

This thesis' main objective is to approach the main principles of adaptive reuse in an industrial context and present them through a case project.

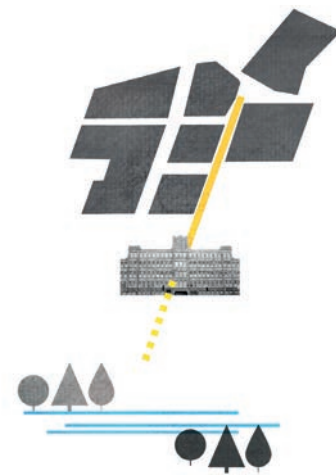
The result is the formulation of all the knowledge gained into a program for the adaptive reuse of the studied building. In the following chapter, a design alternative is also presented.

OUR GOALS



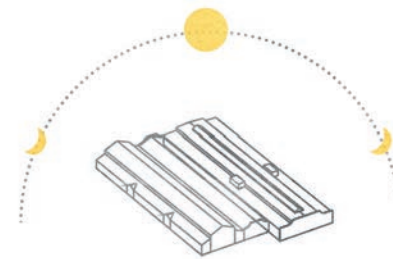
1. ENHANCE THE PUBLIC/ PEDESTRIAN CIRCULATION FLOW

Create a street network that will connect to the larger scale urban network.



2. CREATE A LINK BETWEEN THE CITY FRONT AND THE RIVER

Transform M-verkstaden from a part of an inaccessible industrial building into a link between the city and the river landscape



3. ADD ACTIVITIES THAT WILL BRING LIFE EVEN AFTER BUSINESS HOURS

Commercial functions will be attracting visitors mostly during the day leaving the SKF quarter rather inactive and ultimately unsafe if they are not balanced with others that allow a 24-7 activity.



4. INCREASE ALTERNATIVES FOR COMMON ACTIVITIES

The functions can overlap and create meeting points for the users. This will enable not only social interaction but also knowledge exchange and professional potential (e.g. the Technical school with the Start up business spaces).

OUR STRATEGY

FROM AN INDUSTRIAL WORKSHOP TO A SOCIAL WORKSHOP

Intervening in a former industrial setting can offer many spatial and architectural qualities and become itself an attraction for new users while reminding the area's past. At the same time, enhancing a previously inaccessible place with neighbourhood qualities and attractive functions that promote collectivity can help inhibit this space with functions that will give something back to Gamlestaden.

MAIN THEMES

The main themes of the proposal are summarized in three key words: **Activating, Inviting** and **Connecting**.

Since the project deals with the adaptive reuse of a former industrial building we would like to address to the industrial past and former atmosphere of the premises. The design proposal could be a reminder and a visual link to this past; its materials, structure and overall concept can resemble a production line.

THE PROCESS TO FIND SUITABLE FUNCTIONS

1. PARAMETERS AND QUESTIONS TO BE ANSWERED

In order to set the final criteria for the new functions which would be hosted in M-verkstaden, there were several **parameters** that had to be taken into account.

To begin with, the building should be used in a way that would work well and interact with the **surrounding buildings' functions** - both existing and proposed ones. At the same time, the analysis for the area of Gamlestaden, revealed that there were certain **functions missing**, especially those covering daily-life needs and those which could activate the area after working hours, such as recreation facilities.

However, the area of Gamlestaden is quite close to the city centre and very well connected to it. Therefore, one might say that the need for commercial and recreation functions could be very easily fulfilled for the people of Gamlestaden.

This remark, leads to the question of **who would this intervention would be for** and who should be the user of the new facilities in the SKF area; **for whom would it be important** to make Gamlestaden a focal point in terms of the activities mentioned above?

As a product of this discussion, it was clear that Gamlestaden should not only provide with possibilities and a vibrant life quality to its own inhabitants, but also to people from different regions of Gothenburg.

Finally, from the analysis of the chosen building, it is quite clear that its large volume and the flexibility of its typology and layout could easily host more than one function.

2. SETTING THE FUNCTIONAL CRITERIA

Based on the above and on the strategy that was developed for the area, the final criteria were set. The criteria were evaluated according to their importance, through a **point system** that was set. According to this system, there was a scale of 1 to 3 points, where the most important ones would get the maximum number (3 points). This would not mean that the ones with less points were neglected. The final criteria are the following:

CRITERIA	POINTS
Inviting people from the suburbs	3
Providing with basic everyday services	3
Activating the area 24-7	3
Attracting people beyond Artillerigatan barrier	2
Feeling safe inside the SKF quarter	2
Potentially exploiting the open space around	2
Fitting the industrial character of the area	1
Addressing all age groups	2
Complying with mixed-use area	1
Current need for the function	3
Promoting sustainability - education	2
Financially viable	2
Addressing to all cultural groups	3
Activating the area after working hours	2

3. PROPOSING FUNCTIONS

Afterwards, several functions were proposed and were evaluated based on the point system. Each function would cover some of the criteria and therefore would receive the points accordingly.

1. **EDUCATIONAL FACILITY FOR TECHNICAL PROFESSIONS** (KY utbildningar)
2. **WORKSPACES FOR START-UP COMPANIES** (ex. "Seats to meet")
3. **AUDITORIUM / CINEMA**
4. **REPAIR CAFE**
5. **ARTS AND CRAFTS WORKSHOPS**
6. **BAR-SMALL STAGE**
7. **SMALL STORE** (ex. Pressbyrån)

PROPOSED FUNCTIONS

WORKSPACES FOR FREELANCERS AND START-UP COMPANIES

Attracting freelancers and professionals from different areas

Complying with mixed use area

Already an established business environment in Gamlestaden

Enhancing the financial sustainability for the proposal and for the area

Addressing all cultural groups



Space for freelancers and start-up companies to temporarily work



Space for freelancers and start up companies to have meetings



Space for freelancers and start up companies to arrange events promoting their work



Creating the space for a network of professionals exchanging knowledge and information, as well as permanent places for companies to start

SCHOOL FOR TECHNICAL PROFESSIONS

Breaking the Artillerigatan barrier

Attracting people from Gamlestaden and different regions of Gothenburg

Co-working with repair cafe

Fitting the industrial character of the area

Potential to exploit the unused outdoor space

Addressing to all cultural groups



Providing technical knowledge to people who do not have higher education



Providing practical and applicable experience for the professions that are taught



Seminars and events involving companies, where people could find a work position

ARTS & CRAFTS WORKSHOPS

Breaking the Artillerigatan barrier

Attracting people from Gamlestaden and different regions of Gothenburg

Co-working with repair cafe and technical school

Fitting the industrial character of the area

Addressing to all cultural groups



Providing practical experience and application for the professions that are taught



Seminars and events engaging students from the technical school

CINEMA / LECTURE HALL

Activating the area after working hours

Co-working with repair cafe and bar/small stage

Addressing all age and cultural groups

Attracting people from other areas

Breaking the Artillerigatan barrier

Complying with mixed use area



Cinema theatre that can be used by other functions as well, such as the school and the community centre



Space for freelancers and start up companies to arrange events promoting their work

BAR - SMALL STAGE

Providing the area with a function that does not exist

Complying with mixed use area

Activating the area 24-7

Co-working with cinema

Addressing to all cultural groups

Breaking the Artillerigatan barrier



Space for leisure



A small stage where bands can have performances

REPAIR CAFE

Breaking the Artillerigatan barrier

Complying with mixed use area

Potential to exploit the outdoor space

Addressing all age and cultural groups

Co-working with the school and the cinema

Activating the area after working hours



Space for leisure



Space where the customers may bring items that need to be fixed

SMALL STORE

Providing the area with a daily need that does not exist

Complying with mixed use area

Activating the area after working hours



PHASES OF DEVELOPMENT TOWARDS AN ADAPTIVE REUSE

NOW

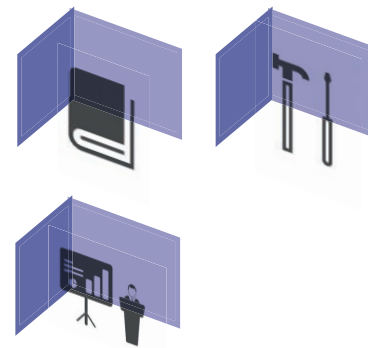
PHASE 1: 2016

PHASE 2: 2017-21

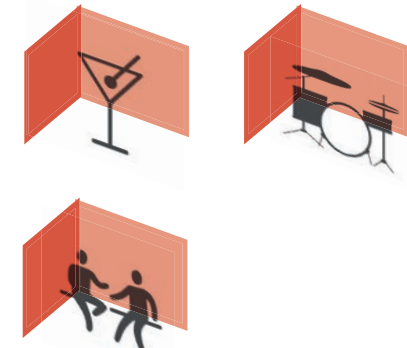
PHASE 3: 2020-25



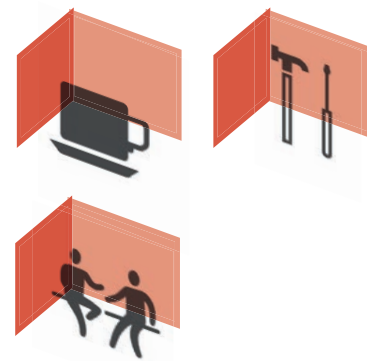
FREELANCERS AND START-UPS



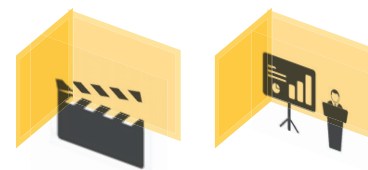
SCHOOL FOR TECHNICAL PROFESSIONS



BAR - SMALL STAGE



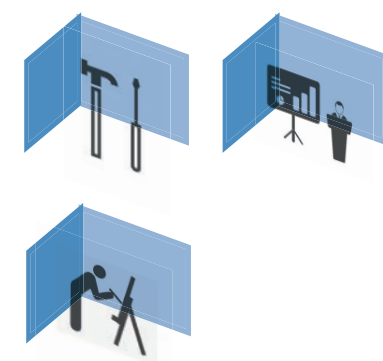
REPAIR CAFE



CINEMA



STORE



ARTS & CRAFTS WORKSHOP

PHASE ONE: 2016

The Solution Factory is removed. The school and/or the small start-up businesses are placed to give immediate income. Single office start-up businesses could have a dynamic interaction with the bigger companies that are going to rent the more extensive office spaces of the Artillerigatan building.

PHASE TWO: 2017 TO 2021

The cinema and the repair cafe are placed, when the adjacent buildings are transformed into a shopping mall, in order to interact with each other.

PHASE THREE: 2020 TO 2025

Less financially viable functions can be tested afterwards, such as artist workshops or facilities connected to the river protection.

At the same time the outdoor spaces can be developed to establish a direct connection between the river and the city front through the factory.

PRESERVATION DIAGRAM

Elements that are identified as original or significant and have to be preserved (green).

Elements that have been altered without being able to return to their original shape, and have to be redesigned (red).

Elements that have been slightly altered and can be either return to their original shape or adapted to the future design (yellow).



SITE AND SURROUNDING BUILDINGS

Possible connections between the proposed functions are first investigated in a diagrammatic way. The objective is to find overlapping facilities that can be shared and therefore reduce cost and create intersections between functions and provoke meetings.

The major functions that surround M-verkstad are also included to help to orient the functions inside the SKF quarter.

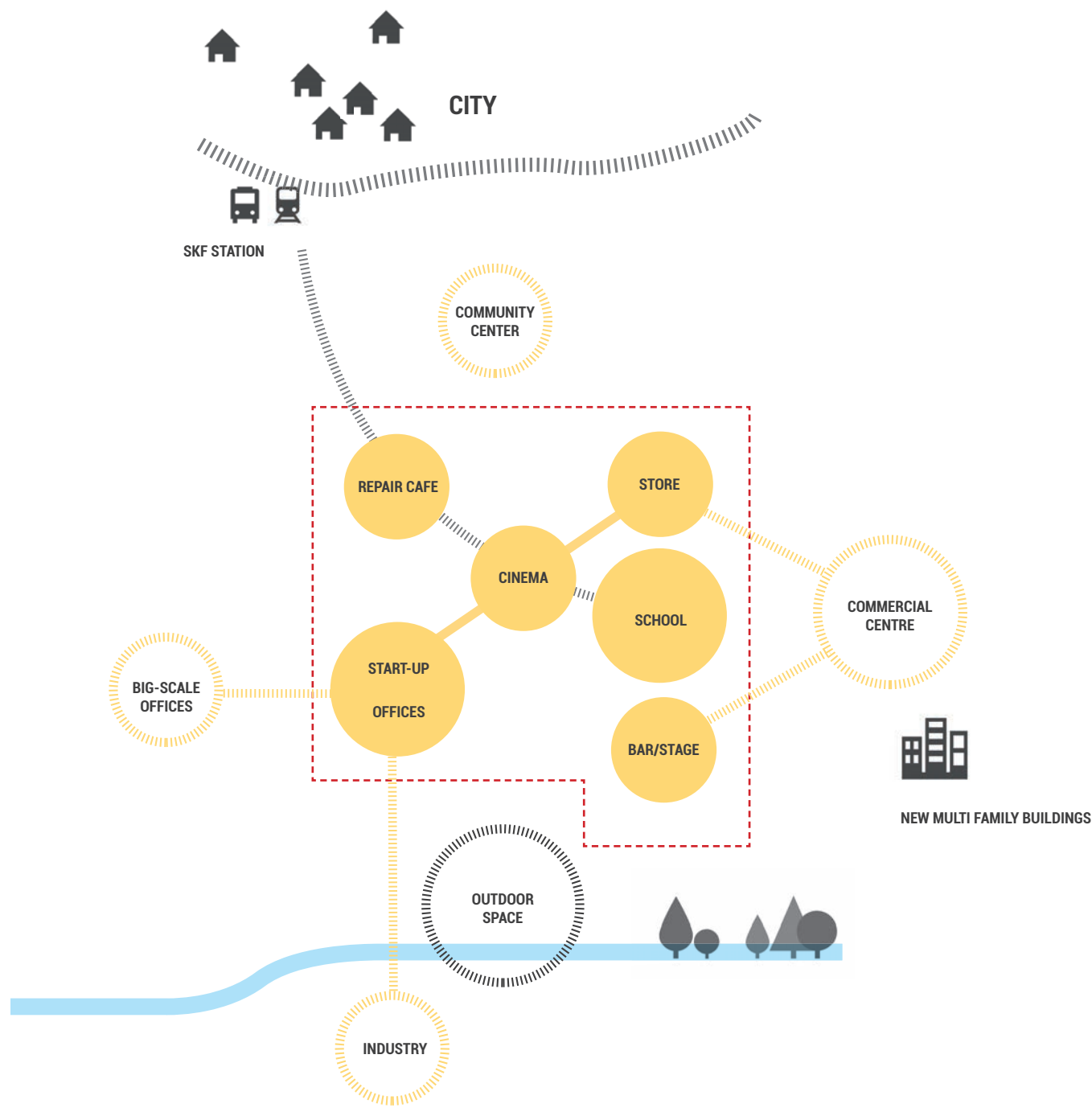


Figure 23. The desired connections between different functions and their surroundings

- Functions inside M verkstad
- Functions placed in adjacent buildings
- Outdoor activities
- M verkstad limits

ALTERNATIVE CONFIGURATIONS FOR THE FUNCTIONS

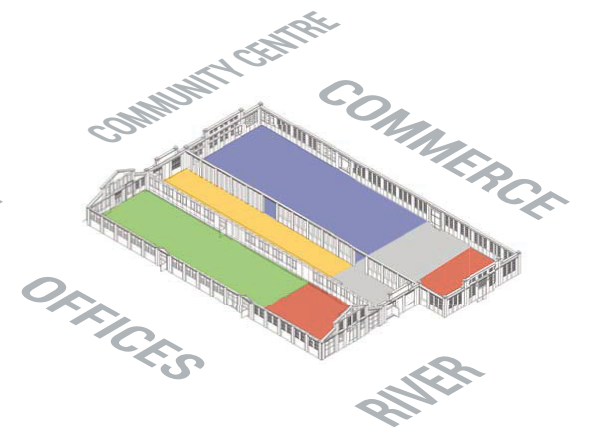
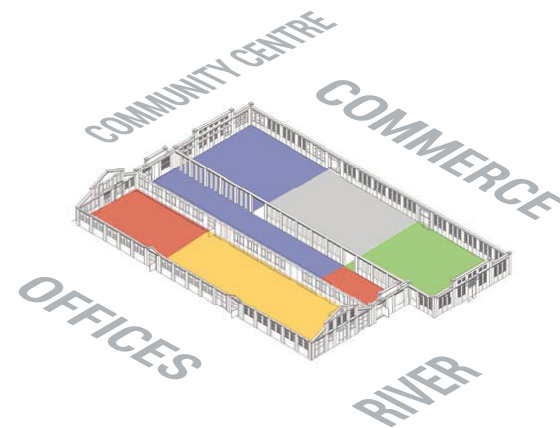
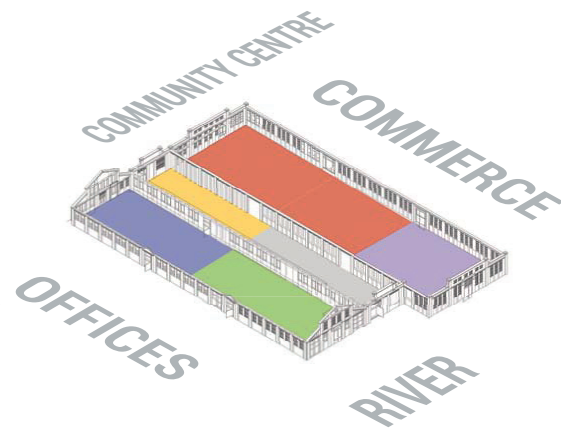
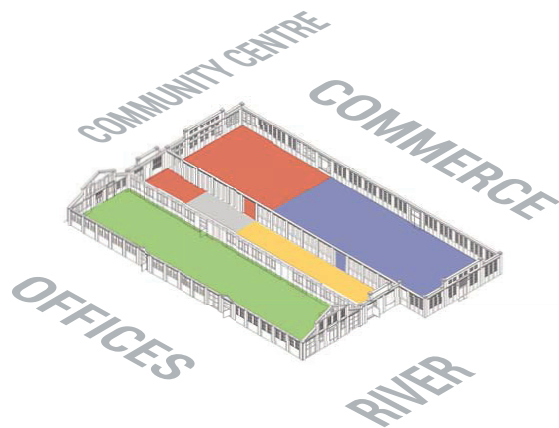
Before choosing the final placement which is illustrated on the opposite page, possible alternative combinations and orientations of the proposed functions were tested against each other in order to find additional criteria for their final placement.

- Cinema
- Start-up companies
- Bar/Cafe
- School
- Atrium
- Store

**THE SOLUTION THAT WILL COVER BOTH CASES
WILL BE TOWARDS ADAPTIVE REUSE**

APPLICABLE IF THE MUNICIPALITY MASTER PLAN IS IMPLEMENTED

APPLICABLE IF THE MUNICIPALITY MASTER PLAN FAILS



1. OVERLAPPING FUNCTIONS

Functions are placed in order to create overlapping spaces (e.g.. the cinema/auditorium) or sequences of similar functions (e.g.. repair cafe to the technical school)

2. FUNCTIONS IN RELATION TO THEIR NEIGHBOURING ONES

Functions are placed in order to create interaction between their users and the users of similar functions placed around M-verkstaden (e.g.. start up offices towards large scale offices and industries at the other side of the river / cafe and bar opposite the mall / school close to the tram station and the city).

3. EASY TO FIND VERSUS ADVENTURE TO FIND

Functions that address to a wider group of people that don't have knowledge of the SKF quarter are placed in prominent positions close to the entrance from the tram station. On the other hand, functions that are visited often by people that work or study here, can be found in a less obvious position.

4. OVERLAPPING FUNCTIONS THAT ARE EASY TO FIND

Functions that don't require much light (e.g.. auditorium/cinema) are placed in the volume in the middle. Technical school works well with the repair cafe and the auditorium. A zoning vertical to the long dimension of the buildings is also shaped.

BUILDING PROGRAMME

SPACES FOR START-UP COMPANIES

Meeting spaces 20m² each
 Workplaces 100m² each
 Temporary offices 10m² each
 Event spaces 80m² each
 Administration offices 60m²
 Rest-rooms 60m²

REPAIR CAFE

Kitchen 50m²
 Storage for the kitchen 50m²
 Sitting area 60m²
 Service area 15m²
 Space for repairing 60m²
 Storage for the repair facility 60m²
 Rest-rooms 30m²

LECTURE HALLS / CINEMA

Lounge and ticket selling place 100m²
 Two cinema theatres 230 m² each
 Projector room 30m²/cinema theatre
 Rest-rooms 60m²

RETAIL

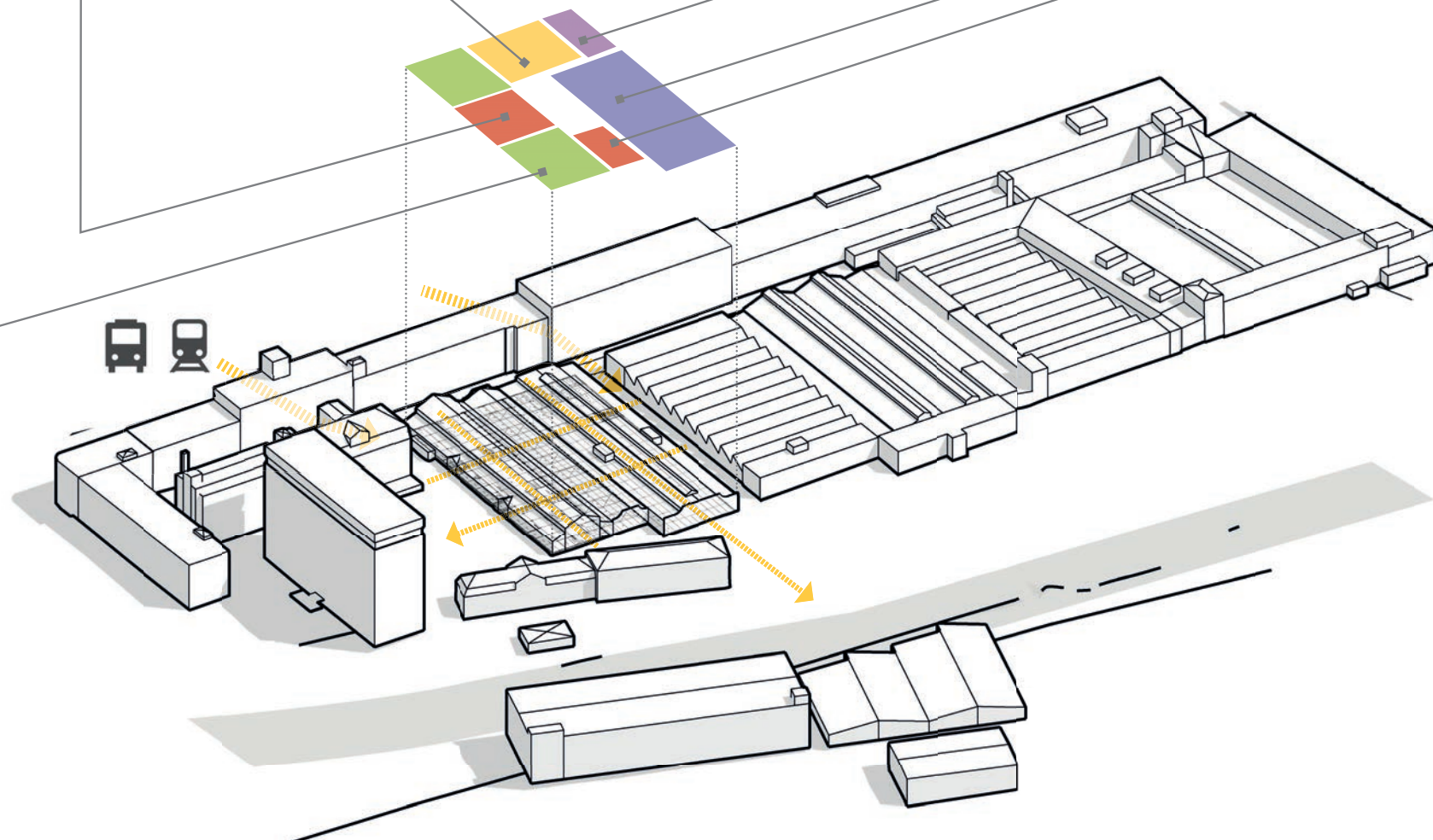
Store space 30 m² each

TECHNICAL SCHOOL & WORKSHOPS

Lecture rooms 60 m² each
 Workshop containing machine and design rooms 500 m² in total
 Offices for teachers and administration 100m²
 Storage 100m²
 Computer room/lab 80m²
 Kitchens and lunch room 50m²
 Rest-rooms 60m²

BAR

Storage space 60m²
 Sitting area 80m²
 Kitchen 50m²
 Service area 15m²
 Rest-rooms 30m²

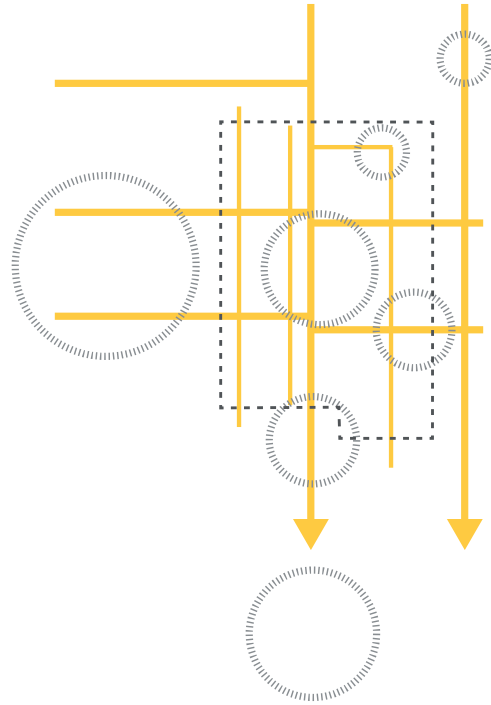


Proposal

The proposal is an effort to express the principles of adaptive reuse in our case project through a "design alternative". "Design alternative" describes the fact that the proposal could be one of the many ways of implementing the guidelines and objectives formed in the programming part.

Having set the criteria that the building programme should achieve, the concept is taking shape through a design where the architectural values of the reused building and the social space created come together.

THE MAIN CONCEPTS

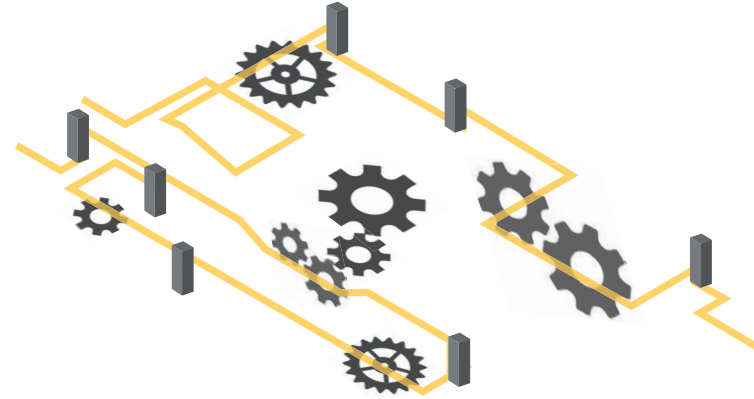


A NEIGHBOURHOOD INSIDE THE BUILDING

The pedestrian circulations inside and outside the SKF quarter guide the creation of an internal neighbourhood inside M-verk-staden. Its **main axes are aligned to the existing ones and to the new entrances** that are going to be opened after the implementation of the municipality proposal.

On the intersections of those new pedestrian axes, **open spaces** are created, while the opposite happens where they dilute, creating smaller, more intimate spaces.

Main elements of the city are recreated in a smaller scale; the **street**, the **square**, the **intersection**, to break the building's overwhelming area into smaller, usable sections, and establish connections that are also found in the rest of the urban fabric (for example, the neighbourhood).

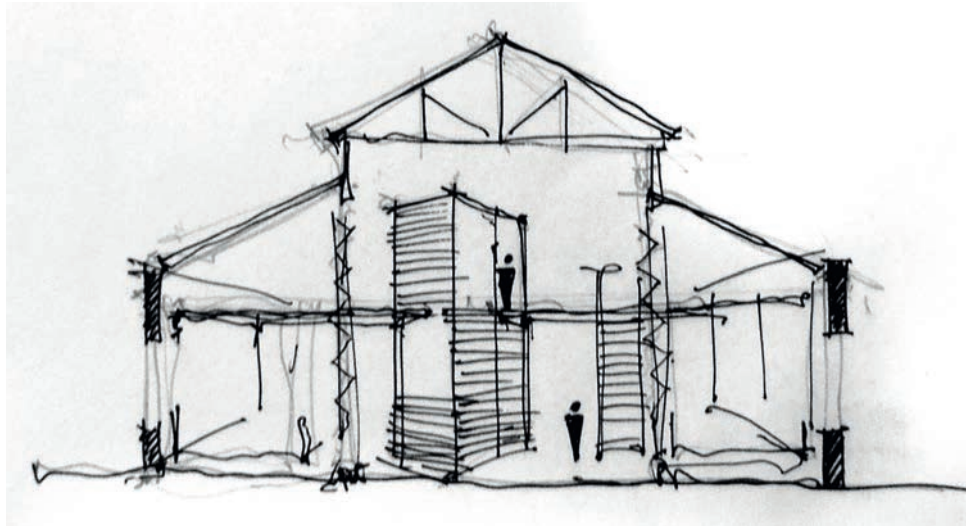


A MOVEMENT SIMILAR TO A PRODUCTION LINE

The former industrial function of the building (a solution factory) is used as a starting point for the design concept; previously, it was the materials that were following a certain path around the building before they were assembled into the finished product.

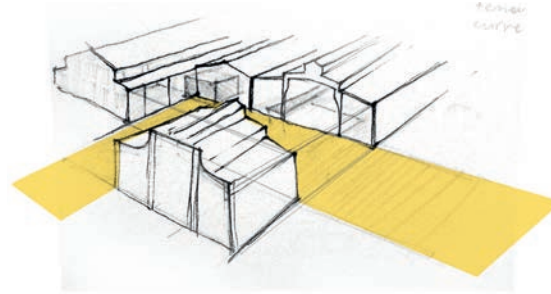
Movement was the dominant concept. Our proposal aims at making **social connections and exchange of knowledge the final "product"**, with movements once more as an important element of the design.

As it is also an interesting building to work into, movements that take place at different heights enable the visitor to have view of the spaces from places that it was impossible to reach before, and at the same time to reduce its industrial scale.

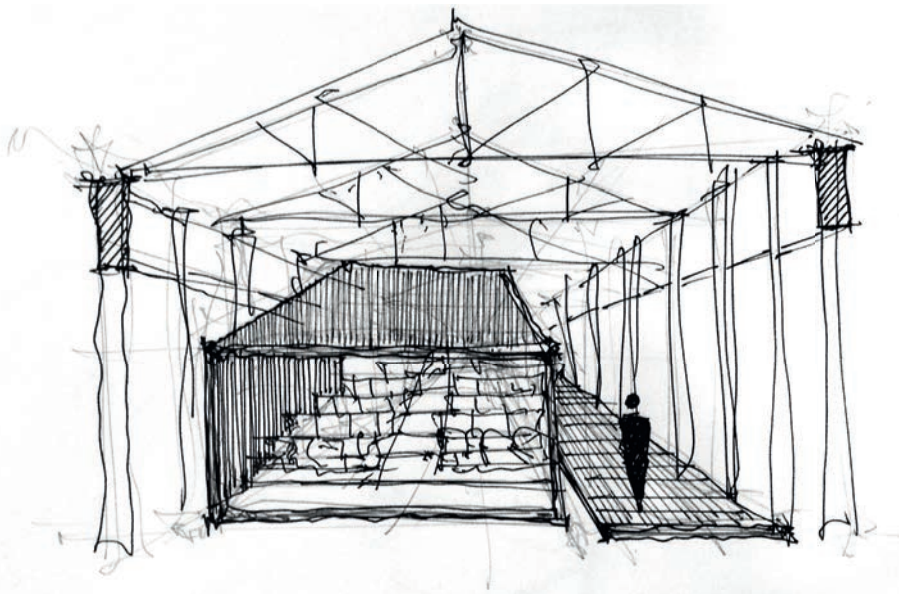
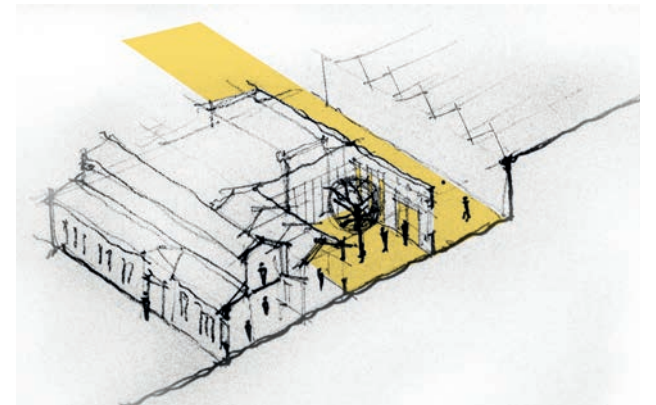


RELATION OF THE LOAD BEARING STRUCTURE AND THE NEW ELEMENTS

Stand alone elements, for example the meeting spaces in the Start-up section of the building, can "float" in between the columns in another angle, in order to provide views and bring closer to the original structural elements.

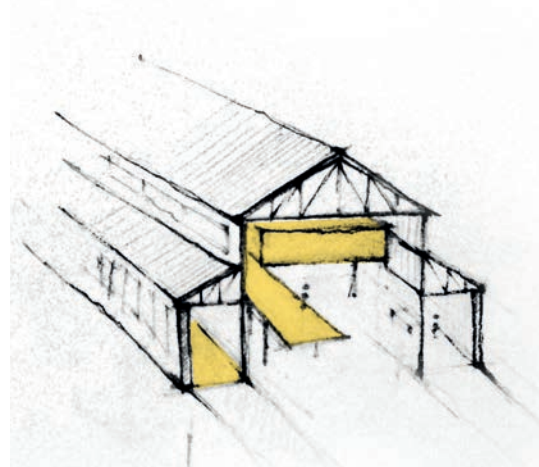


Questioning the current limits of the buildings and cutting open-air atria at different parts of it.

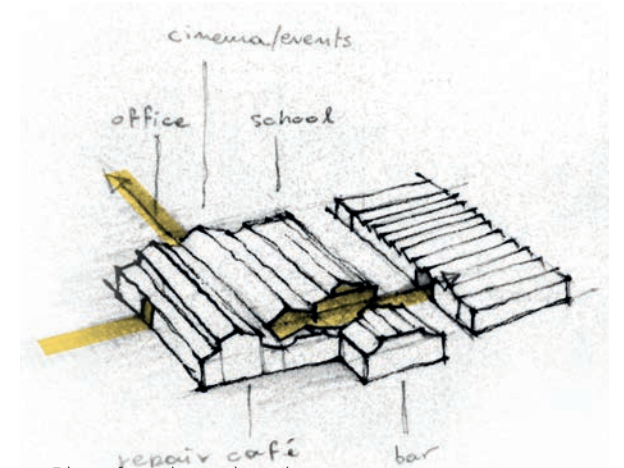


RELATION OF THE LOAD BEARING STRUCTURE AND THE NEW ELEMENTS

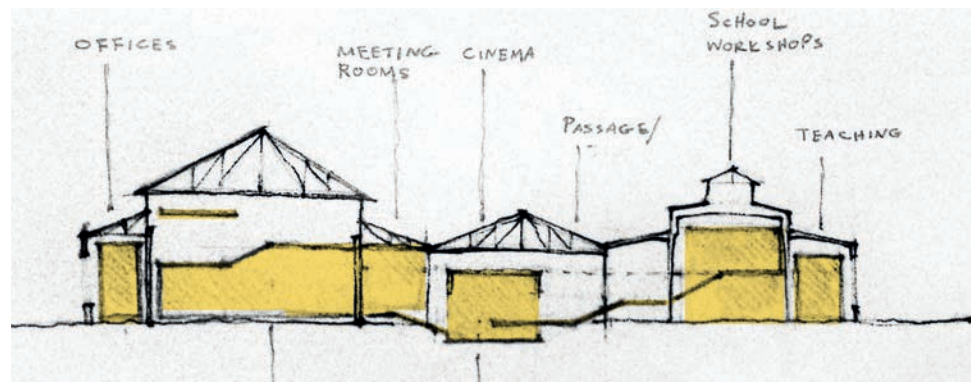
Auditorium / lecture hall could be a box floating under the industrial ceiling, leaving a corridor on one side, that will lead to the atrium.



Exploit double height where possible, make the best use of the heated volume



Place functions along important connections



Designing a neighbourhood inside the M-verkstad.

SITE AND SURROUNDINGS

EXTENDED GREEN SPACE

The green space between the SKF headquarters building and M-verkstaden is extended towards the latter, by gradually using grass pavers

START UP

Temporary and permanent rentable office spaces of various sizes can be adjusted according to needs and provide maintenance costs.

REPAIR CAFE

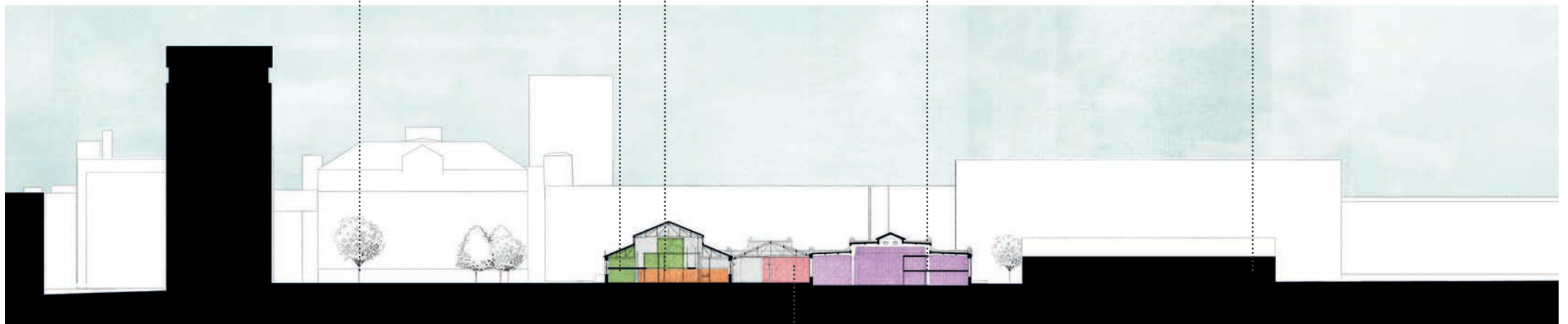
A place where people can bring things to repair with the help of technical school students, and a meeting point for the different start up office occupants

WORKSHOPS

Open during afternoon, users can get help by the technical school students.

R-FABRIKEN

In the municipality proposal it is transformed into a retail centre.



SECTION A-A

Scale 1:1000

CINEMA / LECTURE HALL

At short distance from the entrance to the SKF quarter, two medium sized lecture halls are placed, so that they can be used by the school and the start up businesses (lectures, seminars) and function as a cinema hall during the night and weekends.

RECYCLING SPOT

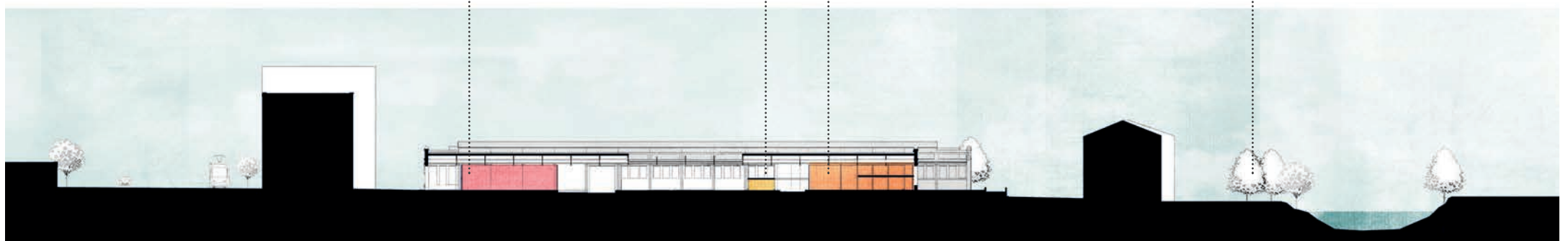
Next to the technical school a recycling spot can collect unwanted material, such as bicycle parts, pipes, wood, and metal waste to provide the technical school with material for training.

BAR / MUSIC STAGE

Placed along the internal street and next to the central atrium, it can extend its seating area towards the adjacent outdoor platform.

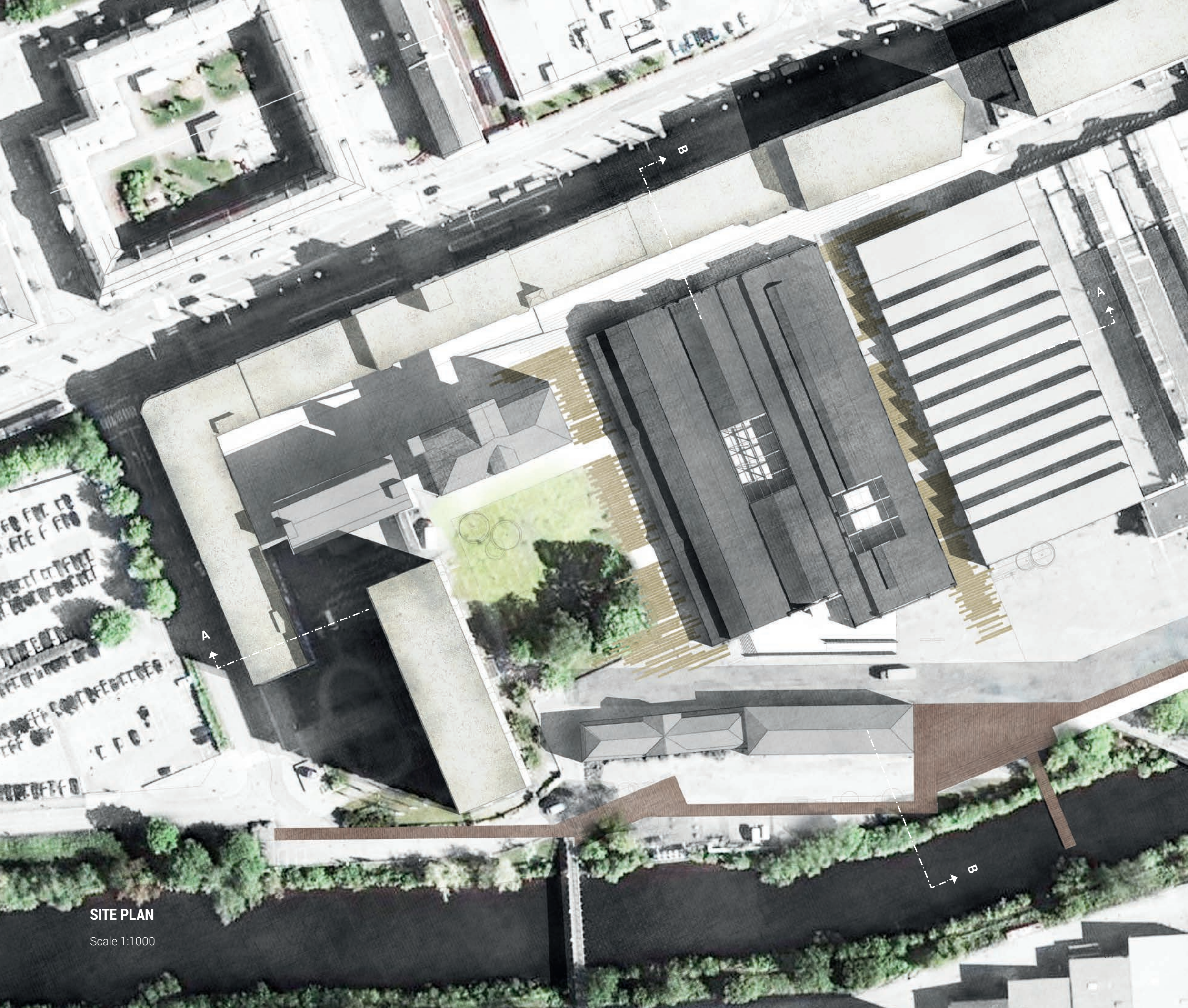
RIVER SÄVEÅN

A wooden deck is placed along the north bank of the river for cycling and walking.



SECTION B-B

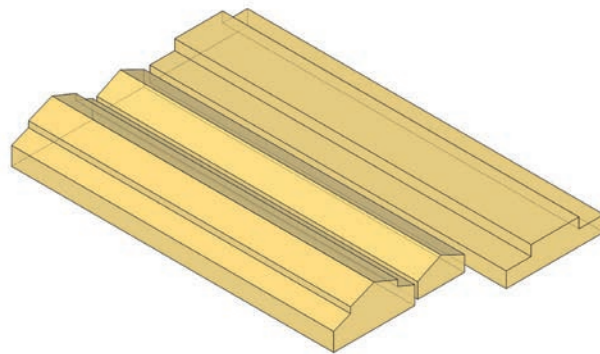
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SITE PLAN

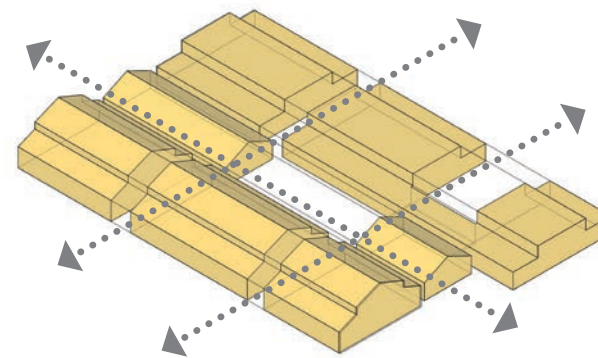
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DEVELOPING THE BUILDING DESIGN CONCEPT



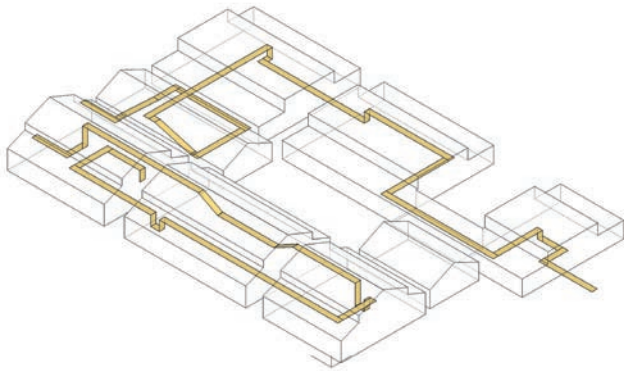
1

The new intervention is placed inside the existing structure and masonry walls, highlighting the difference between old and new.



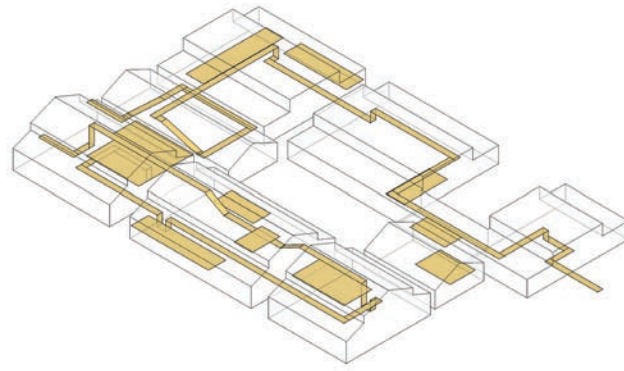
2

The idea of an internal neighbourhood cuts out slices of the initial volume and creates streets and atria inside the existing industrial shell.



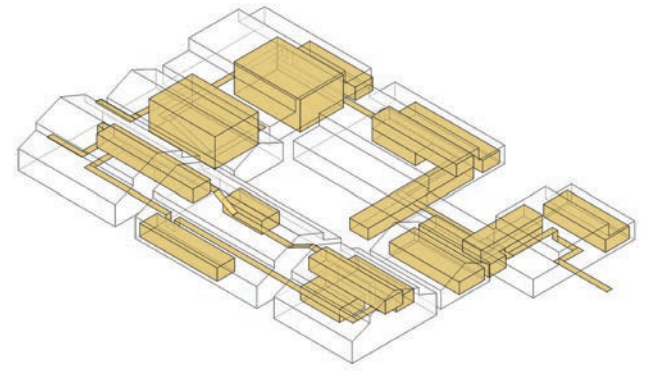
3

A movement path runs the building's length and reaches all floors.



4

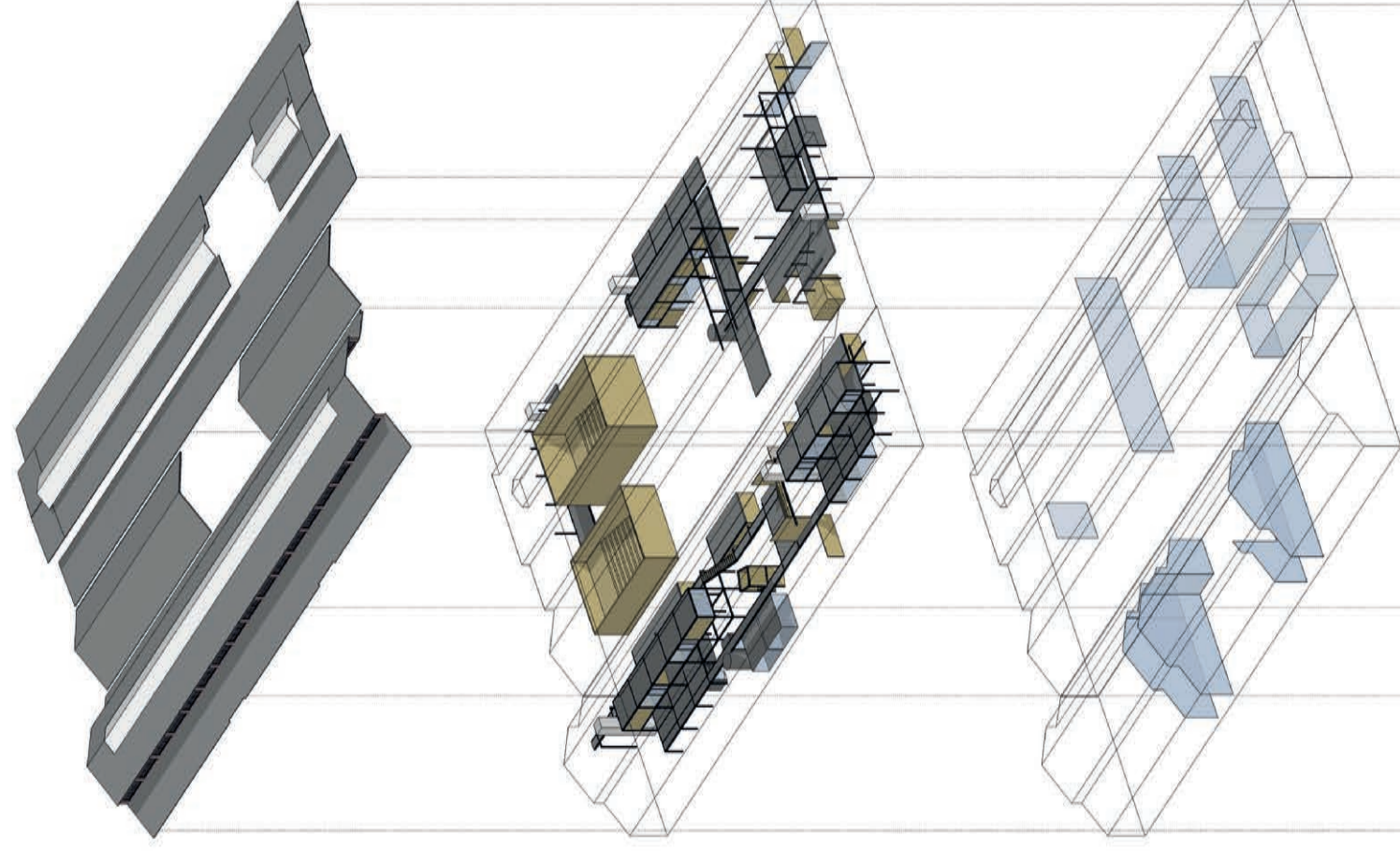
Platforms on different levels are scattered along the movement path to host different functions.



5

The initial volume is broken down to many smaller boxes and rooms connected to the path.

ADAPTATION IN THE INDUSTRIAL SHELL



REDESIGNED ROOFS

The roofs are redesigned and parts of them are opened to create internal atria, with more natural light and variations of spatial qualities.

ADDED STRUCTURE

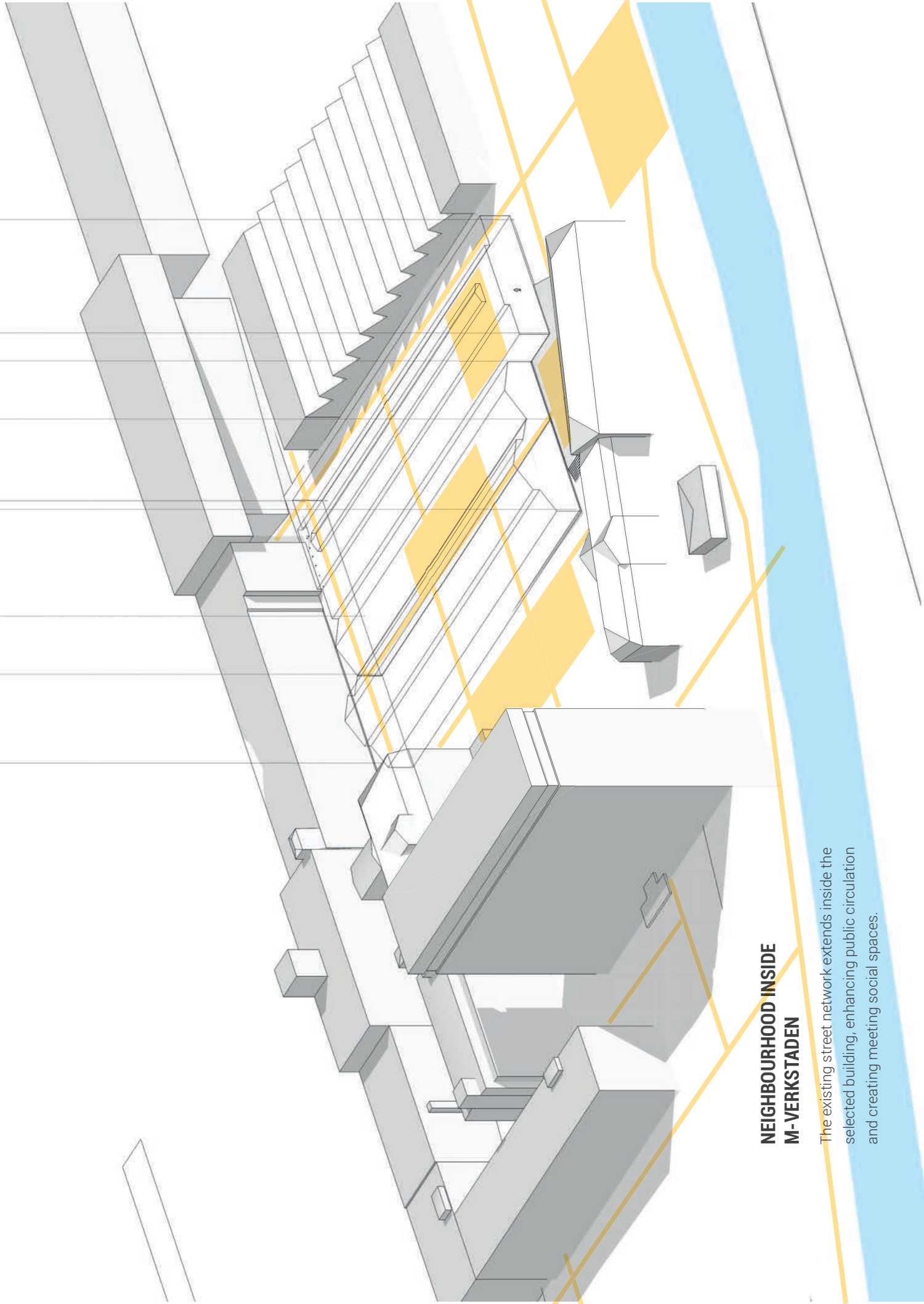
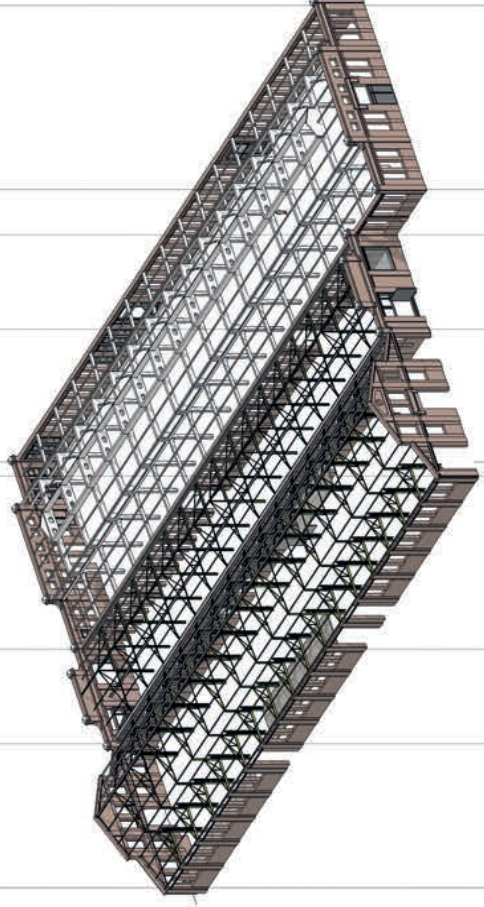
A metal frame that runs throughout the M-verkstad, offers an adjustable framework for a variety of spaces and functions

CLIMATE ZONES

Glass walls create separate climate zones so that each function can be heated independently but still allow transparency among them.

PRESERVED STRUCTURE AND MASONRY

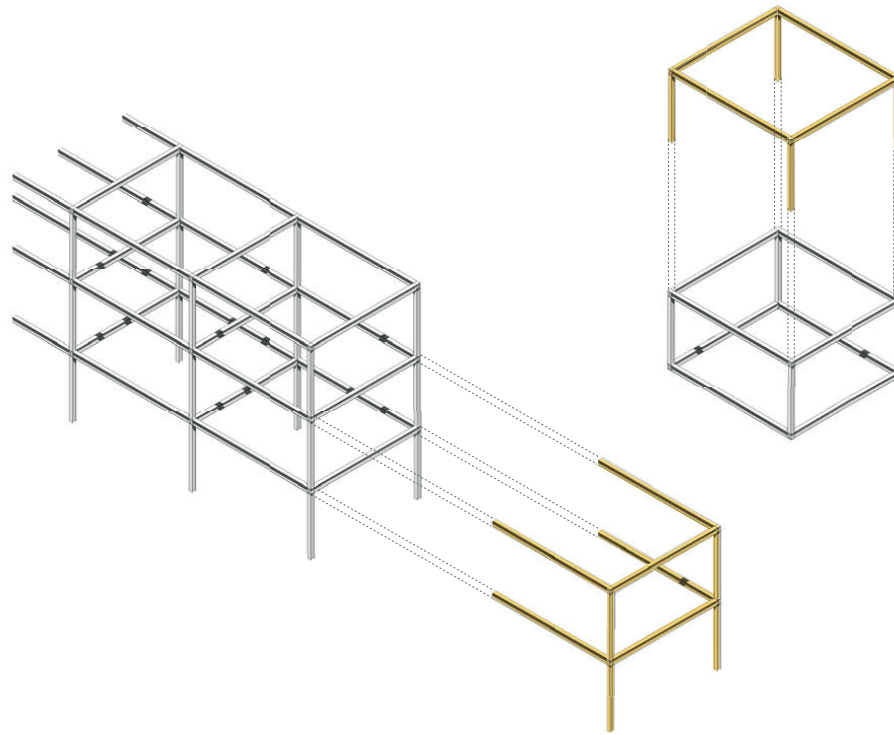
Brick walls, the load bearing structure and selected additional volumes are preserved, while the original typological elements are restored.



NEIGHBOURHOOD INSIDE M-VERKSTADEN

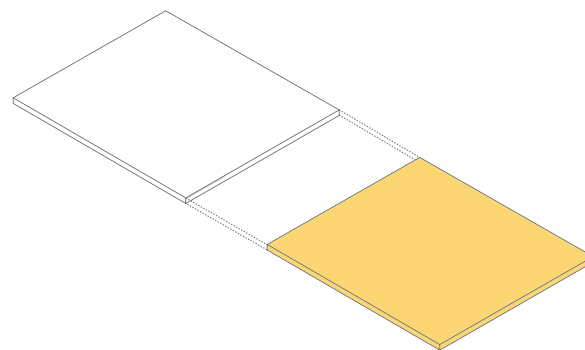
The existing street network extends inside the selected building, enhancing public circulation and creating meeting social spaces.

THE FRAMEWORK



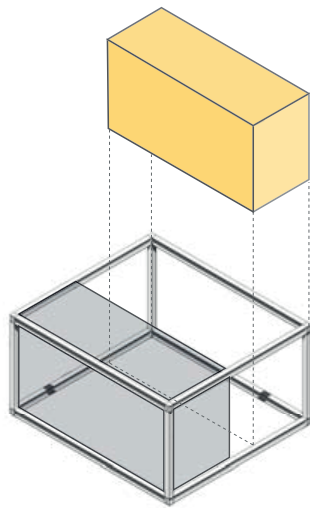
STEEL FRAMES

A 3d grid that gives the potential to expand according to the future needs, both in length and in height (where the shell height allows it). Moreover, if needed it can be disassembled and installed in other parts of the building.



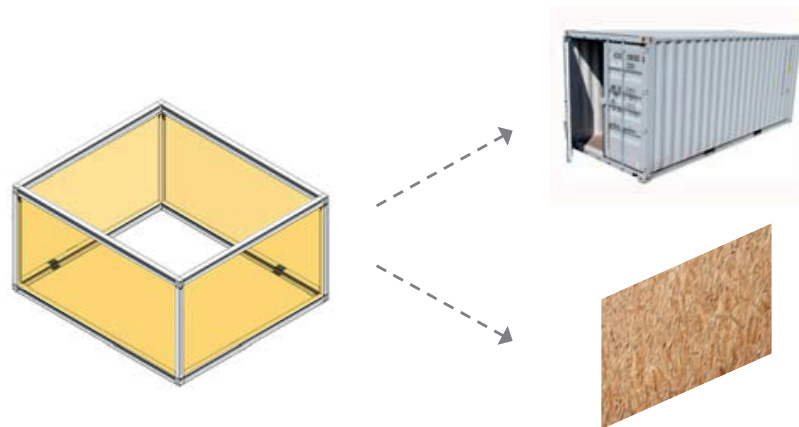
PLATFORMS

Like the steel 3d grid, the platforms can also be extended or reduced in length if needed, so that parts can circulate around the building to cover different capacity needs in different times.



CLOSED ROOMS

The 3d grid is designed as a set of modules to make maintenance, assembly and replacement easier and cost effective. The dimensions correspond to the dimensions of a container box (20ft or 40ft).



MATERIALS

Reusing in material and renewing the building stock is a sustainable approach towards the environment. Therefore, the grid is designed to welcome the possibility of reusing materials that already exist around the area and can be bought cheap, for example containers. Since they will be used inside the heated zone, no further heat insulation of those rooms is necessary.

As an alternative, the wood from the roofs of M-verkstaden that will be removed, can be recycled and reused for the interior walls and office partitions.

Moreover, the soon to be demolished structures in the quarter, could provide with additional building material.

PERSPECTIVE SECTION



SECTION A-A

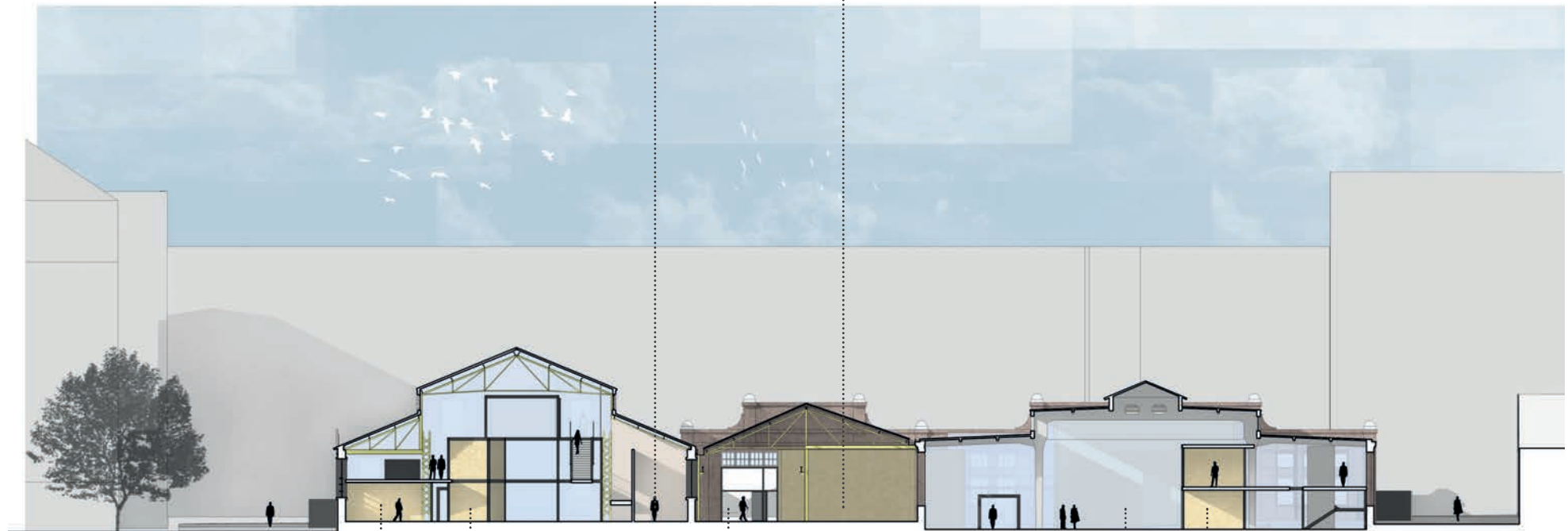


PRESERVED ADDITION

Although not of particular architectural value, a later addition is reused as a reminder of the former industrial function

INTERNAL ATRIUM

Opening up part of the roof creates an atrium in the middle of M-verkstaden, strengthened by the street which connects the north and the south entrances. It can also be used by the workshop users for open air activities when the weather is good



SECTION B-B

Scale 1:400

BOOKABLE OFFICES

Smaller office rooms that can be rented daily

MEETING SPACE

An angled volume hosts sitting places for short business meetings over the repair cafe

STREET AXIS THROUGH THE BUILDING

The user or the passer-by can enter from the north side of the SKF quarter and quickly reach the south part through this street, that is also connected to the repair cafe, the workshops and the atrium

MACHINE WORKSHOP

It is placed centrally and invites workshop users to experiment, but is also used by the technical school students

ARTS & CRAFTS WORKSHOP

It can be used with paying a symbolic fee and receiving help from the students of the technical school. The tools can be used by both functions

GROUND FLOOR PLAN

0 1 2 5 10





Image 36. Perspective view of the workshop area

SECOND FLOOR PLAN

0 1 2 5 10

B

30.58 m

D

14.53 m

C

24.00 m

A

D

C

A

93.00 m

10.00 m

B

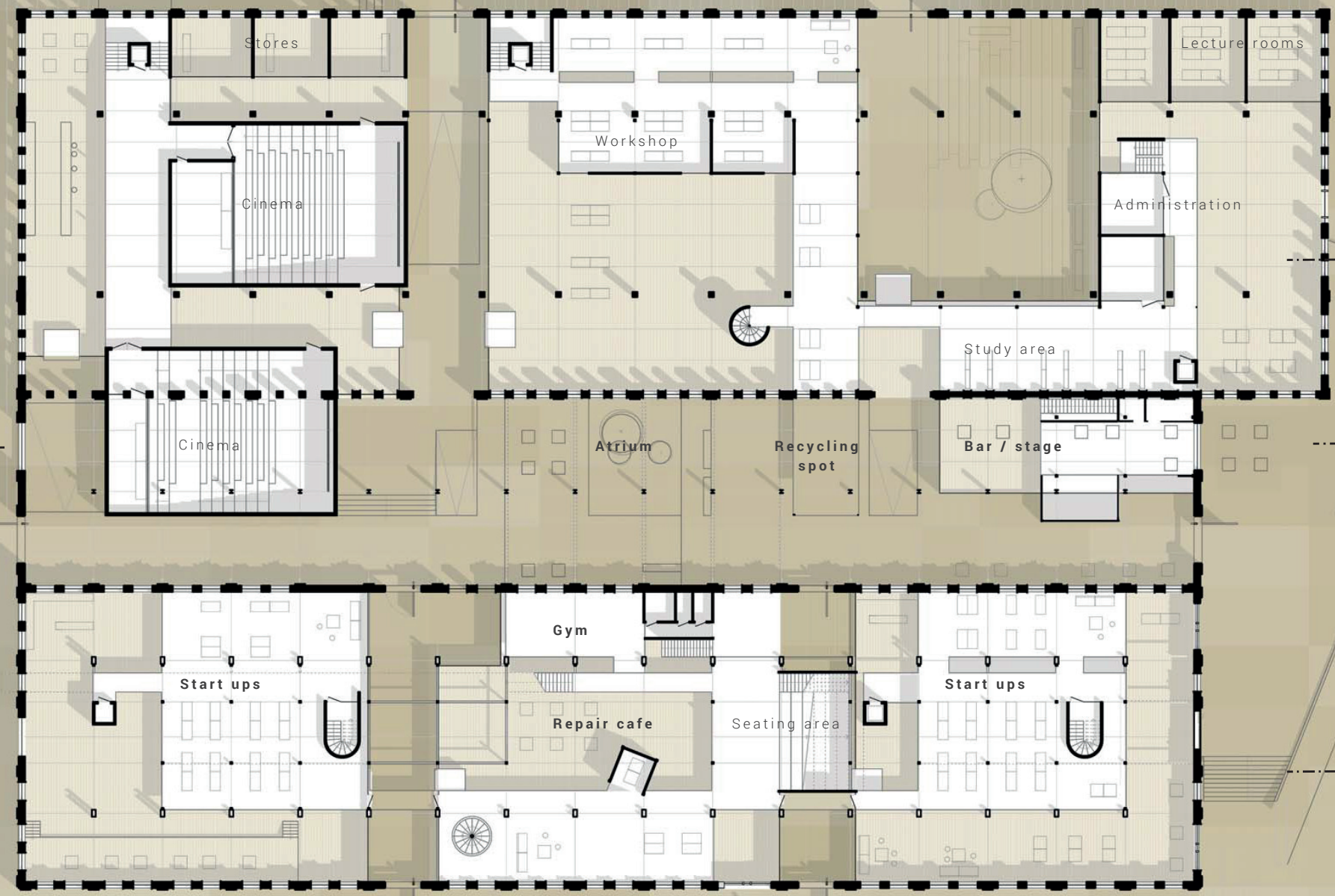
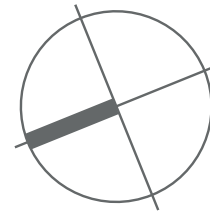




Image 37. Perspective view of the start up businesses area

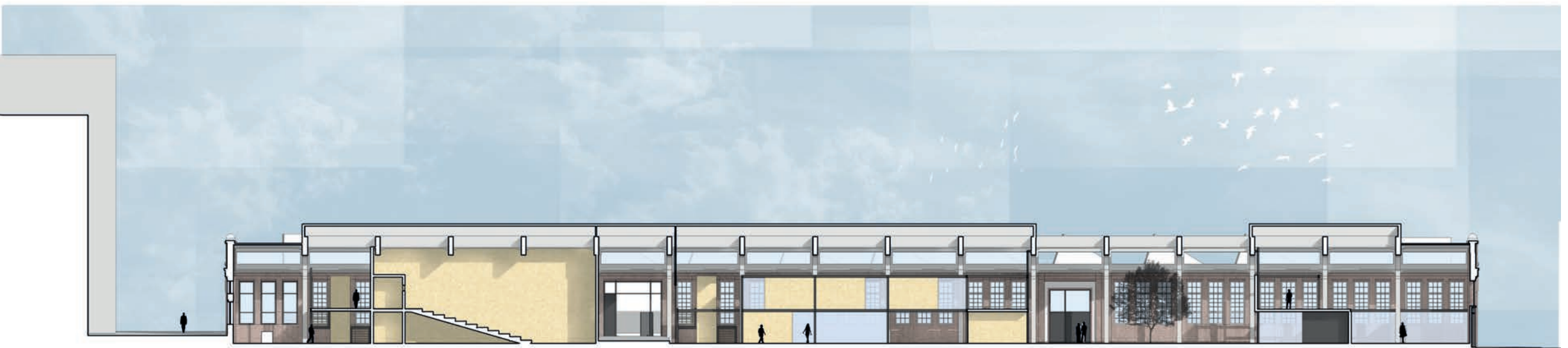
THIRD FLOOR PLAN





SECTION C-C

Scale 1:400



SECTION D-D

Scale 1:400



EAST FACADE

Scale 1:400



WEST FACADE

Scale 1:400

Image 38. The central atrium is created by removing part of the roof in Building C





ELEVATIONS



Image 39. Doors and window openings that were found heavily altered and were distorting the typological sequence of the facade are redesigned. The original proportions are reinterpreted with the use of metal frames

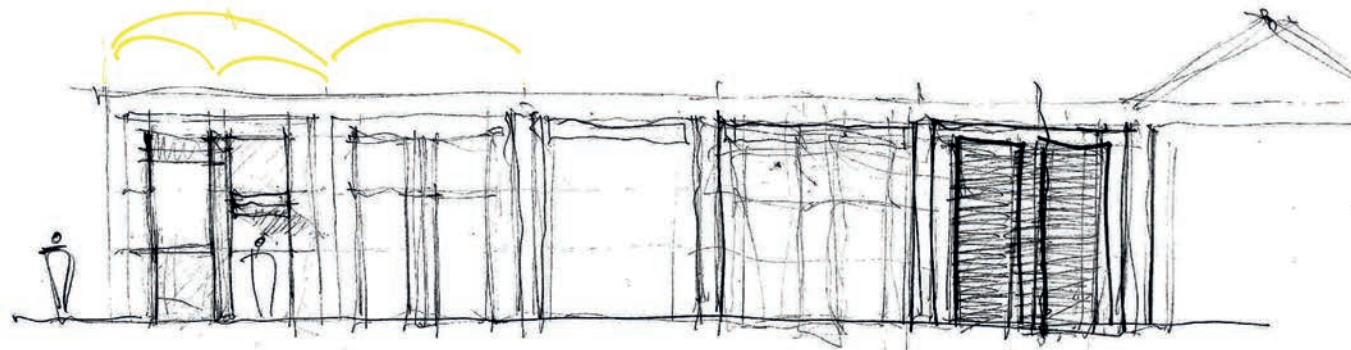


Figure 24. It was observed that what defines the typology and the rhythm of the facade is not the distance between the thicker brick pillars, but its subdivision, the distance between every window. Thus it was decided to highlight this distance.

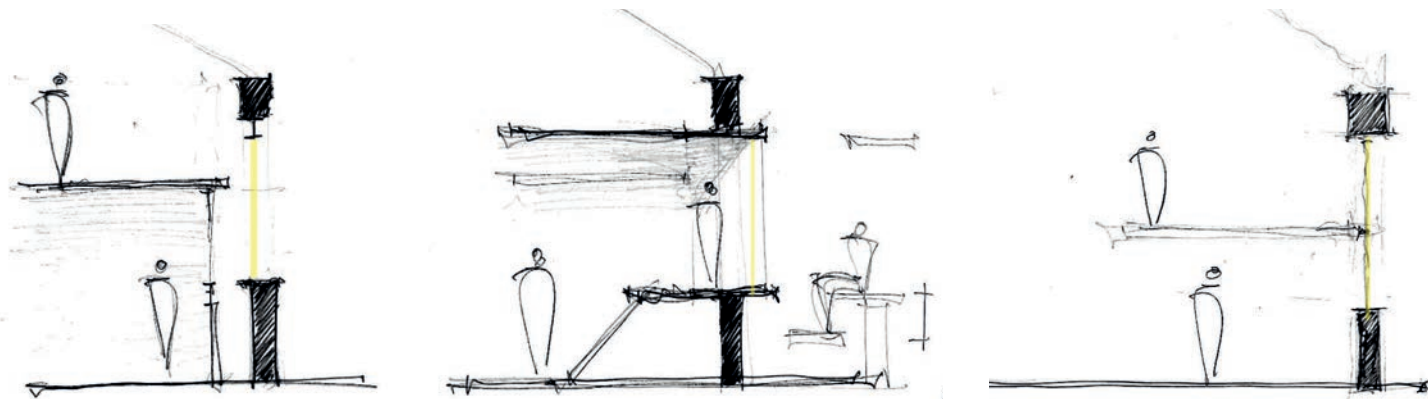


Figure 25. Different window types according to the function inside. From up to bottom, the internal floor stays inside the envelope (a), the internal floor penetrates the envelope (b), and the internal floor divides the window in two parts (c)

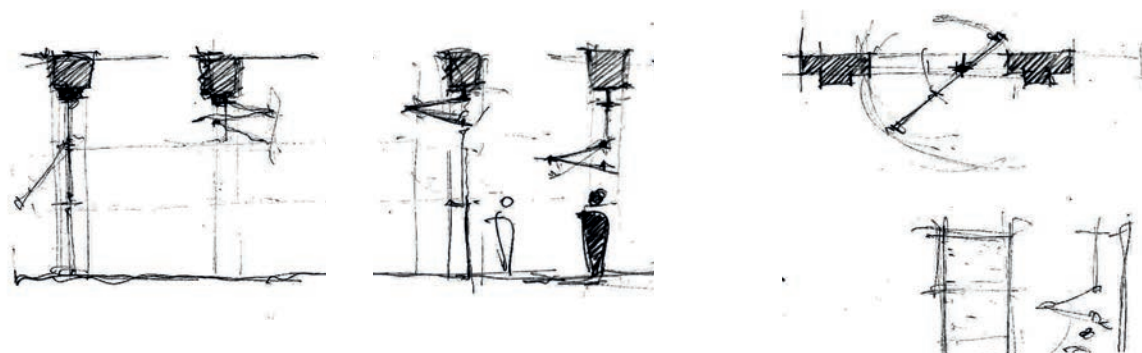
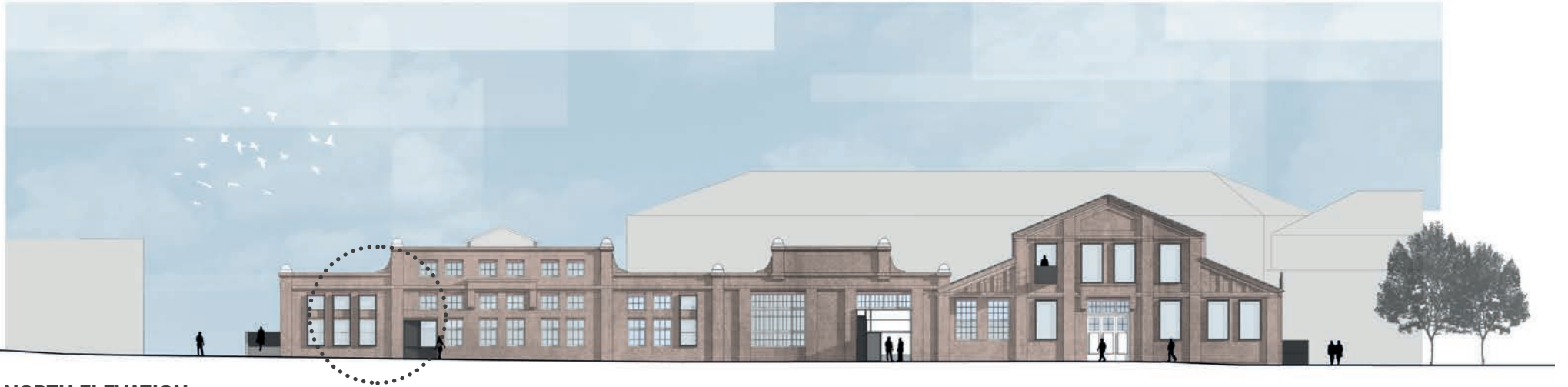


Figure 26. Different ideas about possible window and door structures to fit the masonry wall and highlight the industrial feeling of the place.



NORTH ELEVATION

Scale 1:400



SOUTH ELEVATION

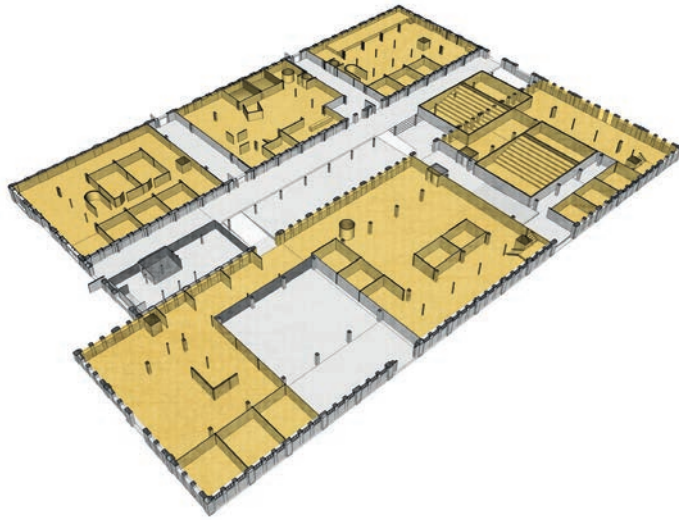
Scale 1:400

Image 40. The central atrium is created by removing part of the roof in Building C



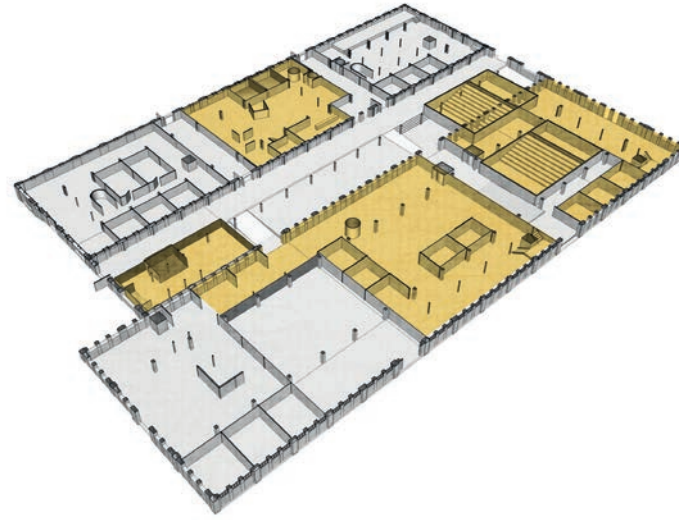


ACTIVITY DURING THE DAY



WORKING HOURS [MON-FRI, 08:00-17:00]

The start-up section and the cafe in between are active, as well as the technical school, which also uses the workshop facilities. The big lecture halls can be occupied by either the start up section for presentations, by the technical school for lectures, or they can be rent for seminars to external users.

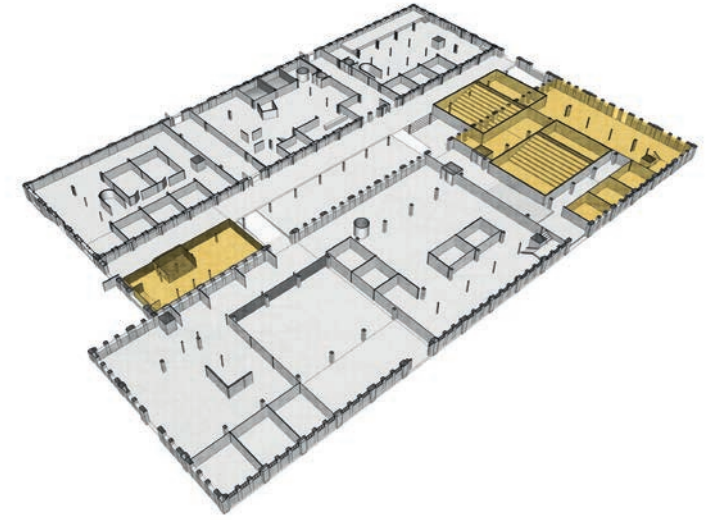


EVENING HOURS [MON-FRI, WEEKENDS 17:00-21.00]

During late afternoon and evening, the cafe can still work even after office working hours, as informal meeting spaces are rare during that time in the area.

The workshop can attract people who can spend their afternoon creatively. At the same time, students of the technical school who might have to work for their assignments might provide help to the afternoon users of the workshop.

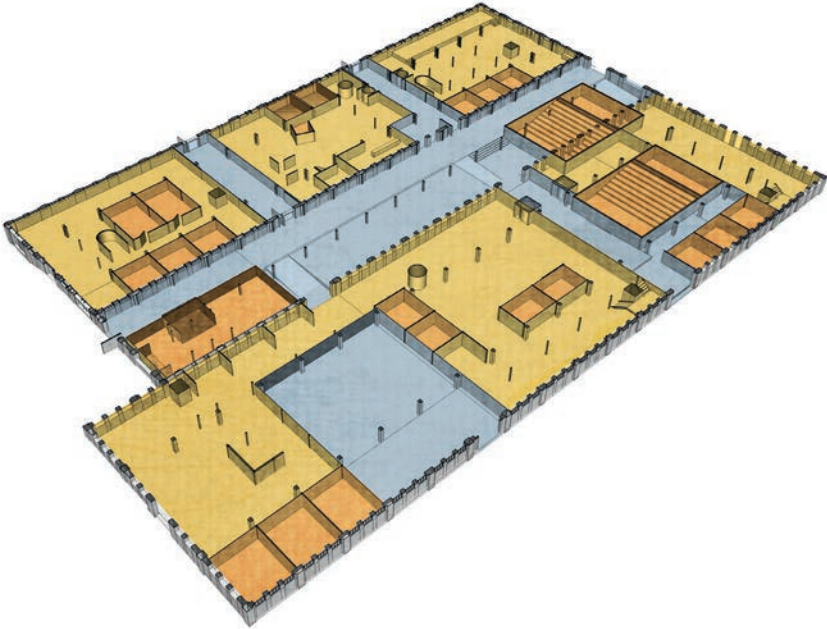
During weekends, the lecture halls can be transformed into medium sized cinema halls, which can attract people from other suburbs of eastern Gothenburg as well. At the same time, the bar close to the river will be opening.



LATE EVENING [19:00-03:00]

After the closing of the workshop, the cinema halls and especially the bar can stay open until late. Placed in opposite sides of M-verkstaden, they activate different sides of the SKF quarter, but at the same time are well connected through the internal atrium. Therefore, the inside of the SKF quarter is kept relatively busy and safe.




CLIMATE AND ACCESSIBILITY



TEMPERATURE DIAGRAM

There are three thermal zones in the proposal; A heated zone, a semi-heated one and a controlled temperature zone.

The atria and the public streets that go through the building, have the natural outside temperature. The indoor spaces that are framed by the masonry walls in general have an intermediate temperature, while the closed boxes have a controlled indoor climate.

-  Not heated zone
-  Intermediate temperature zones
-  Individually controlled temperature

Conclusions and reflections

REFLECTION

The aim of this thesis was to investigate how the principles of adaptive reuse could be formulated in a transformation project, given a specific site. In this context we tried to shape and answer our main question: “How can a part of the SKF industrial premises be adaptively reused to serve non industrial functions in a sustainable way and in a changing context?”. The final material was the outcome of research and analysis, filtered through our personal reflection and taking into consideration the aspects of social sustainability.

It was quite clear from the beginning of the thesis that we wanted to work on a transformation project, but also to find out more about what is adaptive reuse and how following this process can add more value to a project.

The research part had to be carried out in a critical way, as the term “Adaptive reuse” was difficult to define, and is often confused with the definition of a transformation process. The reference projects were crucial in guiding the theoretical research. At the same time, both the projects that are included in this booklet and many similar ones that were also studied served as a toolbox for adaptive reuse. Reflecting on the tools used in each case study helped us evaluate how important, relevant or successful each tool could be in our own intervention.

The most important result of our research and analysis was the programming in which the goals, strategies and criteria were formulated in a common proposal. As it is suggested earlier in the booklet, even with the functions being decided, there can be different configurations on how they can be placed according to the main objectives. In our case, the guiding objectives were activation, connectivity and enhancement of social sustainability, as our site analysis suggested that those fields were challenging or even problematic. It was always obvious to us that the programming part could result in different design solutions, but in the context of this master’s thesis we chose to select only one of the many possible ways in which this project could be shaped and provide a design proposal.

Therefore, the design proposal should be seen as a design alternative. Given more time, the project should be further expanded, studying even more alternatives. Since the proposed modular steel framework implies the flexibility and expandability of the intervention, the formulation of a toolbox that supports itself the argument of the flexible structure should be considered. This toolbox can include structural elements with modular dimensions that, when combined, can result in different configurations of the layout.

We argue that the design concepts of the creation of a neighbourhood and the reinvention of a production line can be easily visualised and understood by the users. They can shape the new era of M-verkstaden, providing a stable but at the same time dynamic framework, that is connected to the building’s past and the contemporary needs of the surrounding community. Furthermore, we found that many adaptive reuse projects with similar issues seemed to make use of a unifying concept that can bind everything together as well as a strong social framework that can promise the viability of the project, even if investments are not that high. Both in the case studies and in our project, it is the design of the process that can guide the viability of a proposal.

DISCUSSION

As part of the broader context of Gamlestaden, we believe that the quarter should interact and give something back to the area. For this purpose, we placed functions that would not only address the medium to high income inhabitants of the city, but also the lower income people in Gamlestaden and offer them the opportunity to enjoy a vibrant city environment, while covering their needs. At the same time, we wanted to contribute to a 24/7 active and inviting environment and enable connectivity wherever we believed was important, but also missing or undermined.

Reflecting on the existing plans, it became clear that the commercial spaces proposed in the municipal master plan are not addressing but some of the currently lacking services in Gamlestaden; the line of thought of the developers side clearly suggests that only the exploitation of the SKF quarter as a highly commercial zone will justify the investment for its transformation. As an effort to place this project in a realistic framework, we do not object to this plan. Instead, we try to use this thesis as an argument to prove that the diversification of the functions will not only make the commercial ones more viable, by inviting different groups of people that can be potential customers, but it will also limit the retail area to more rational proportions .

At the same time, a multifunctional character for the SKF quarter is important, as the objectives set in our programming section (activating, inviting and connecting), could only partly be fulfilled by the commercial functions that are officially proposed.

One comment that was given to this project suggested that “an adaptive reuse project usually works better, when the risks are higher and the lack of ideas bigger”. This is exactly what we believe is the case for our site; the solely proposed commercial function indicates a lack of ideas that would make the quarter both viable for the community and profitable for the investors, while if the main decision makers (the municipality, TK Development company and SKF) do not agree on a final proposal soon, the risk of demolition will threaten the - soon to be vacant - buildings of SKF quarter.

This thesis is suggesting, through the process of adaptive reuse, alternative ways to invest, focusing on overlapping facilities, social sustainability as a capital itself and with minimising financial risks through an implementation in steps, as it is supposed that profit might be a major concern of both the development company and SKF.

The main arguments of our thesis against a proposal that

would challenge social viability in favour of the economical one, are that the implementation of the project will be in stages and that the more profitable functions will be placed first. In this way, the process will be tested and evaluated in order to avoid any risks on every stage and the more social, but less profitable functions will be placed when there will already be an income and an established visitors' force to the building.

In order to answer the research question and propose a sustainable solution, we addressed both the economical and the environmental aspects of sustainability, but mainly focused on the social one.

In economical terms, we tried to provide activities that would prove viable and attract people to invest and establish profitable businesses in the SKF quarter. At the same time, reusing in material and renewing the building stock is a sustainable approach towards the environment, which is reflected on the chosen structural materials.

Social sustainability, our main focus, is a term difficult to be described, but in this project it was interpreted as creating equal opportunities to leisure, recreation, work and education through the proposed functions. Furthermore, access to green space and meeting places for all population groups were addressed. The latter is very important, since currently most meeting spaces do not address all groups and not spread in the area. Moreover our transformation project is promoting the users' ability to continue the evolution of a building, which is the key to a successful re-adaptive process.

We believe that this thesis should be part of the current discussion about the future of SKF and Gamlestaden, as it does not contradict, but tries to complement the development of the area by proposing a different scenario. A scenario that is not aiming to propose a final and definitive outcome, but rather an alternative process for the future of the SKF quarter. It is the process rather than the outcome that should be examined in a continuously changing context in order to ensure the viability not only in the SKF case but in any redevelopment project.

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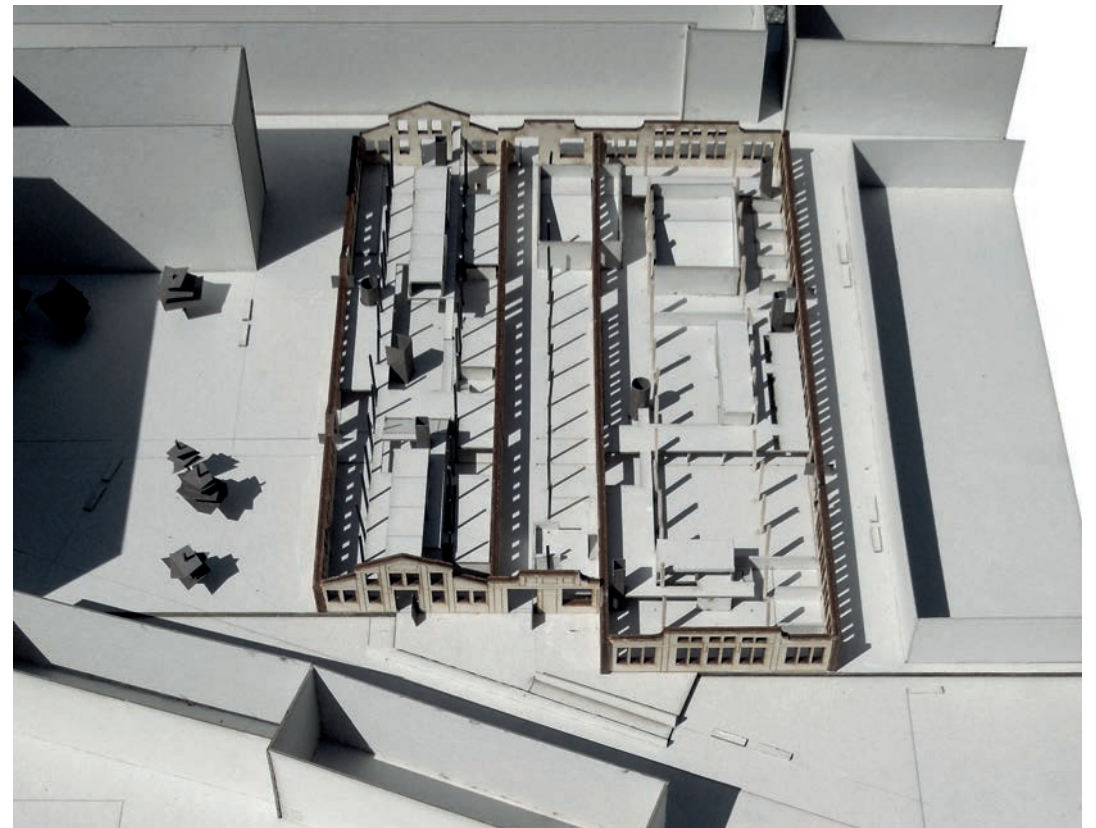
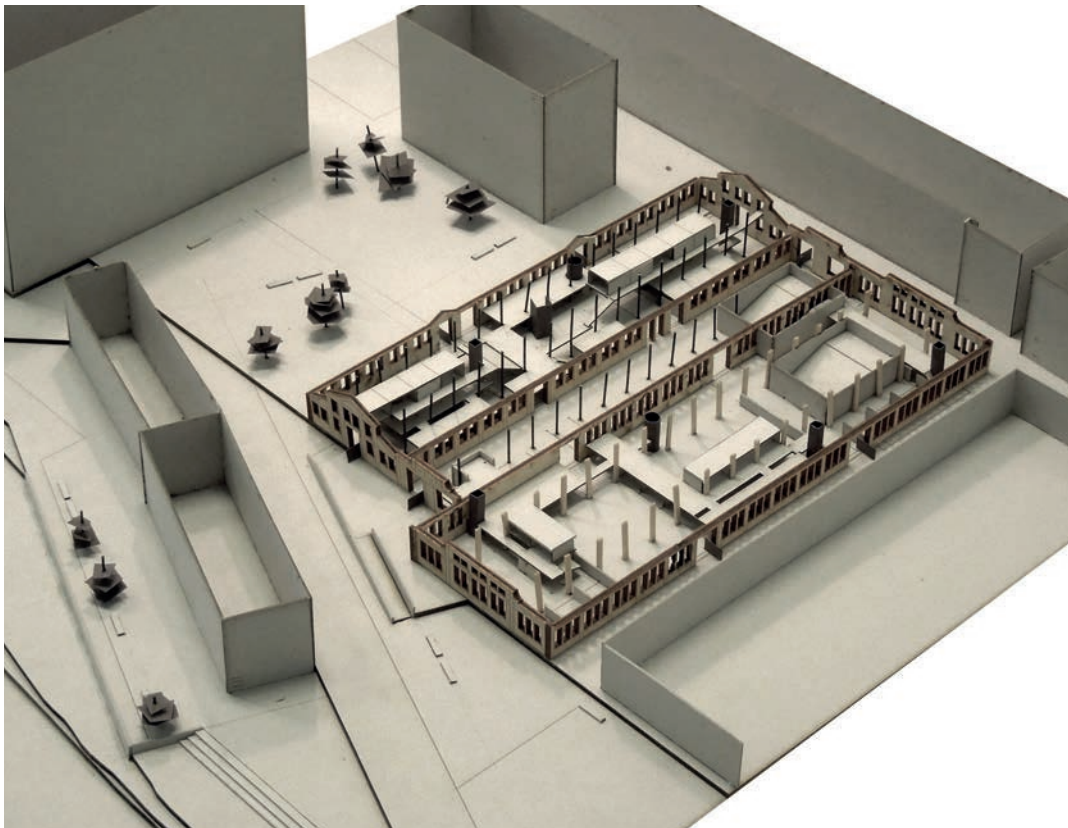
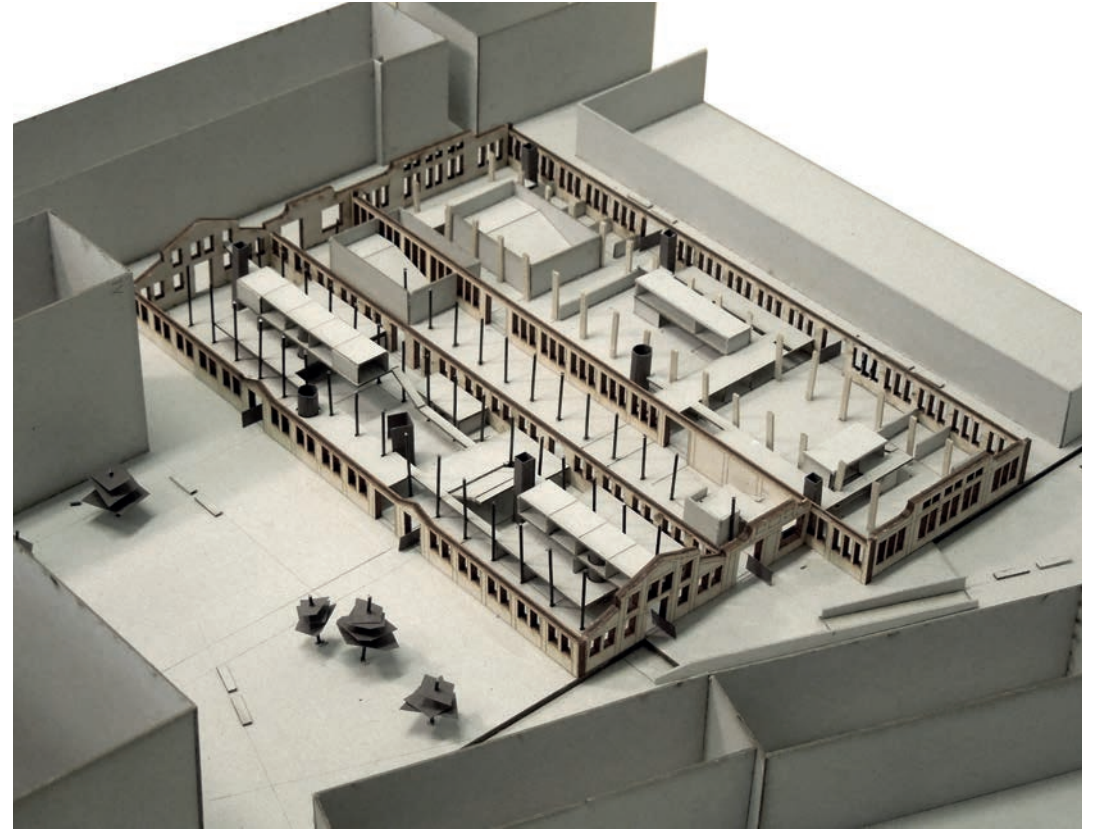
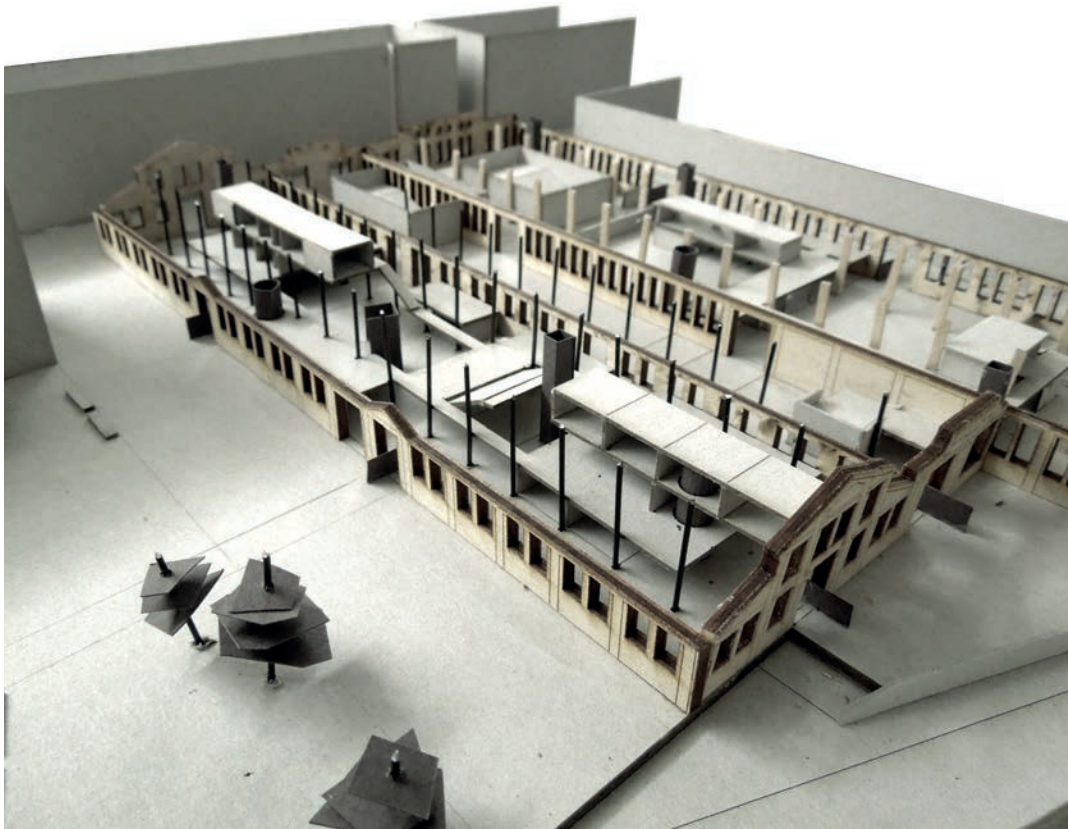
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Appendix

MODEL PHOTOS

Scale 1:400



DRAWINGS OF THE EXISTING CONDITION



EAST ELEVATION



WEST ELEVATION

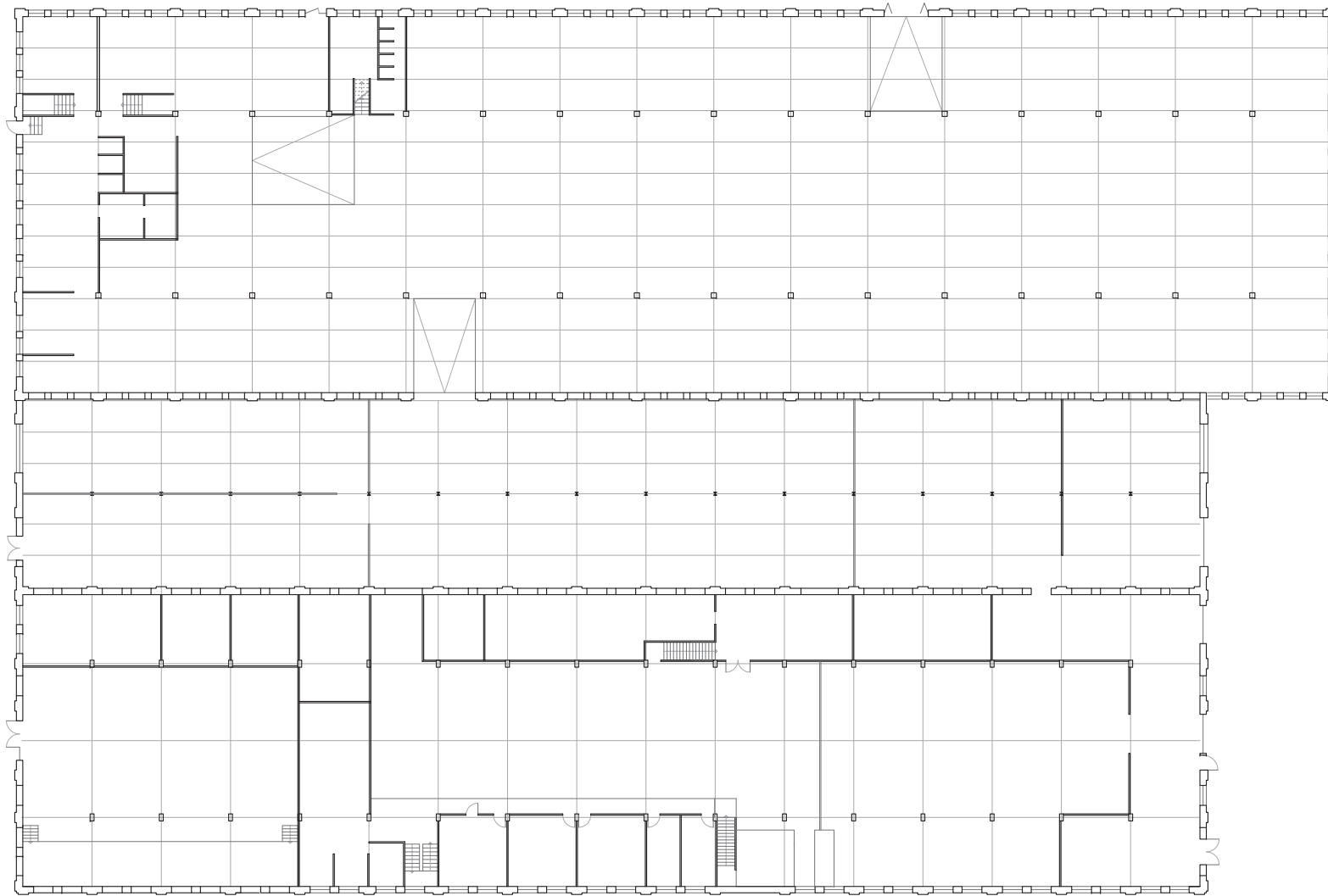


NORTH ELEVATION



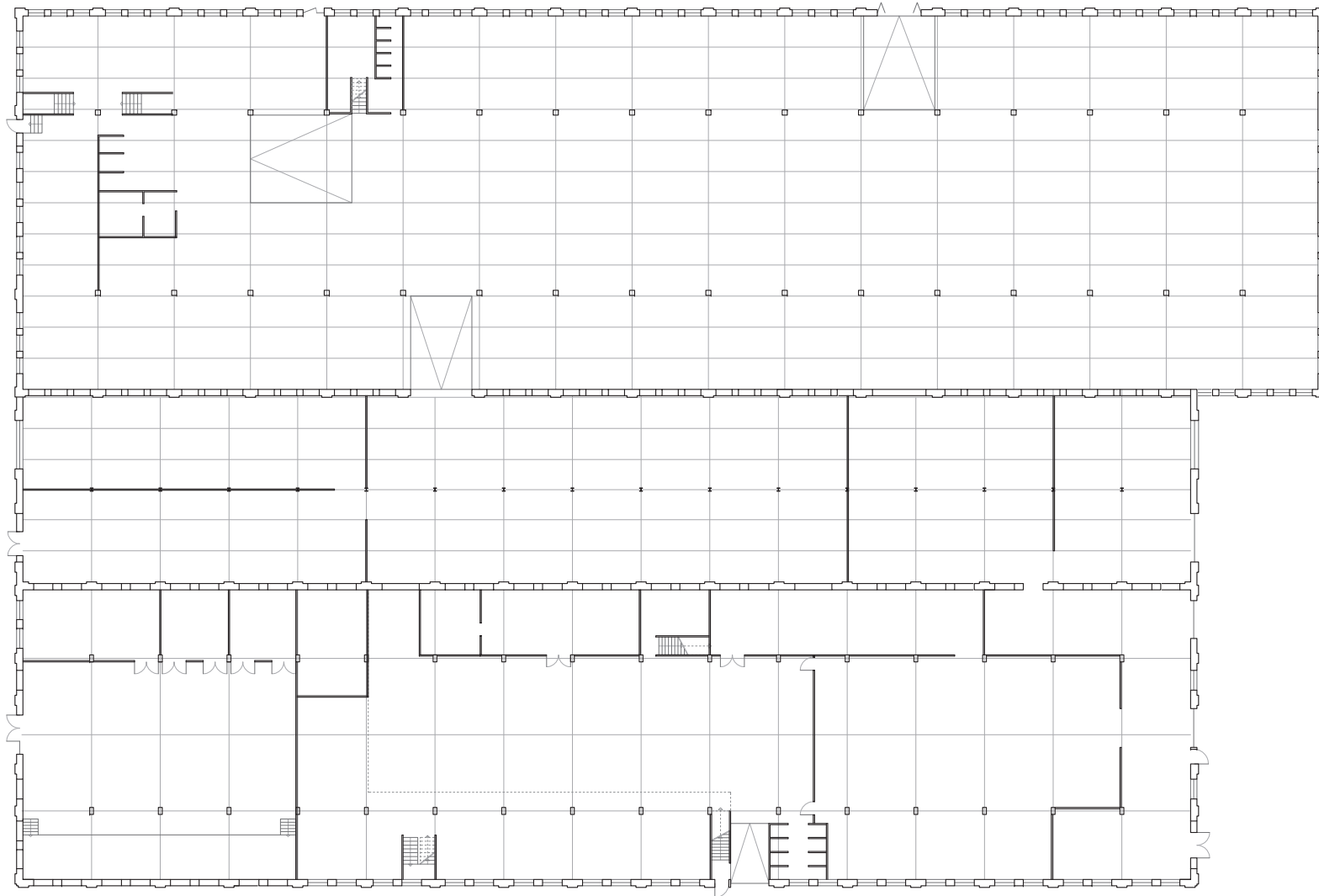
SOUTH ELEVATION

Scale 1:500



GROUND FLOOR PLAN

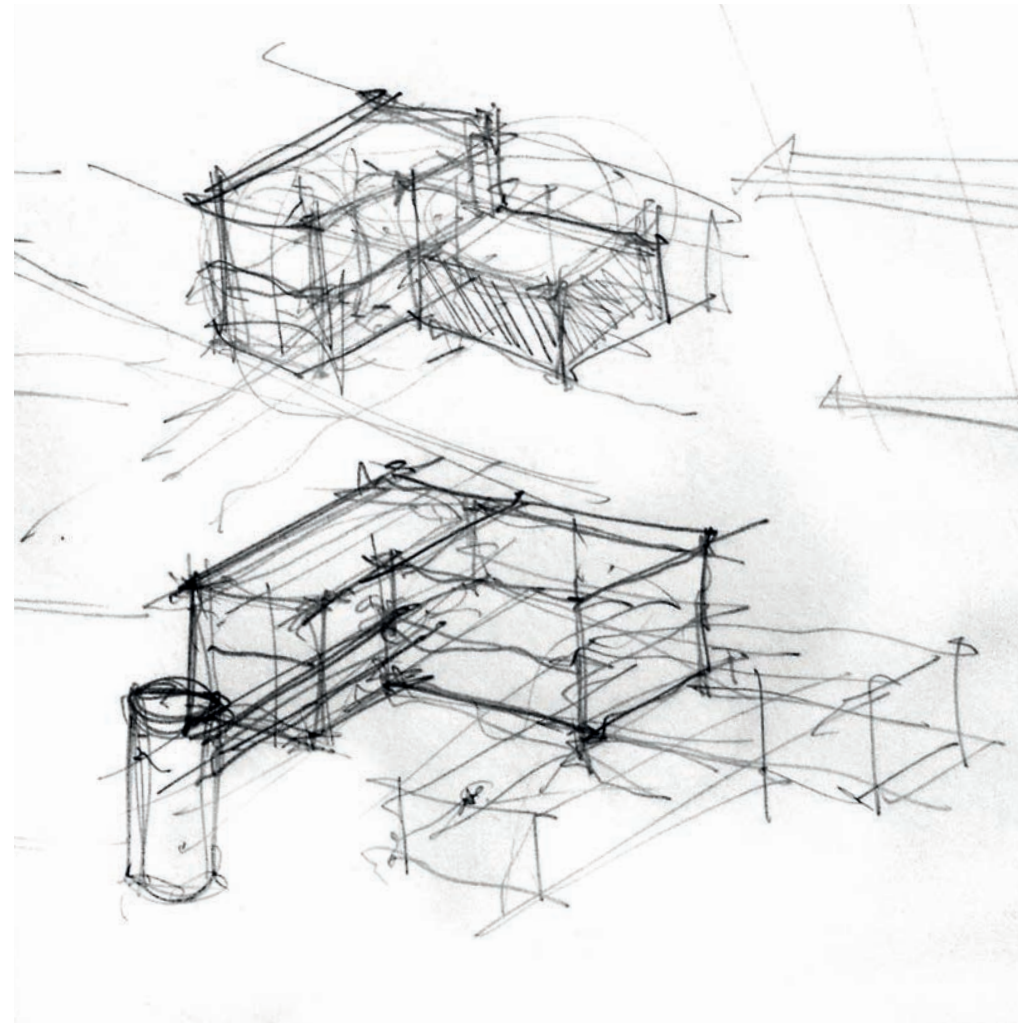
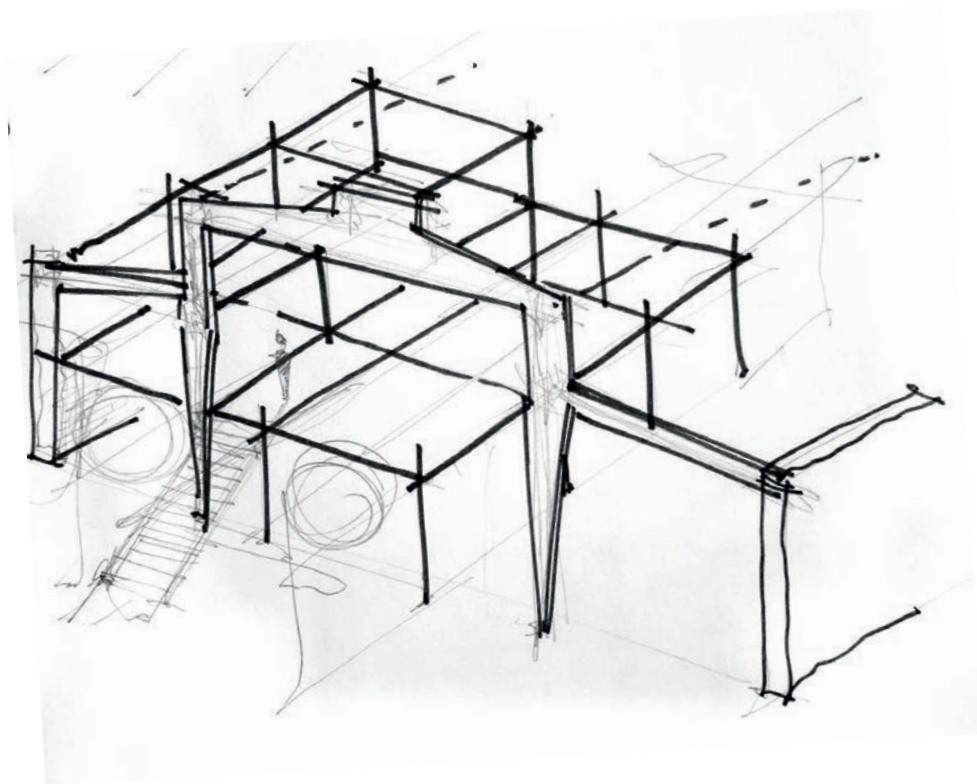
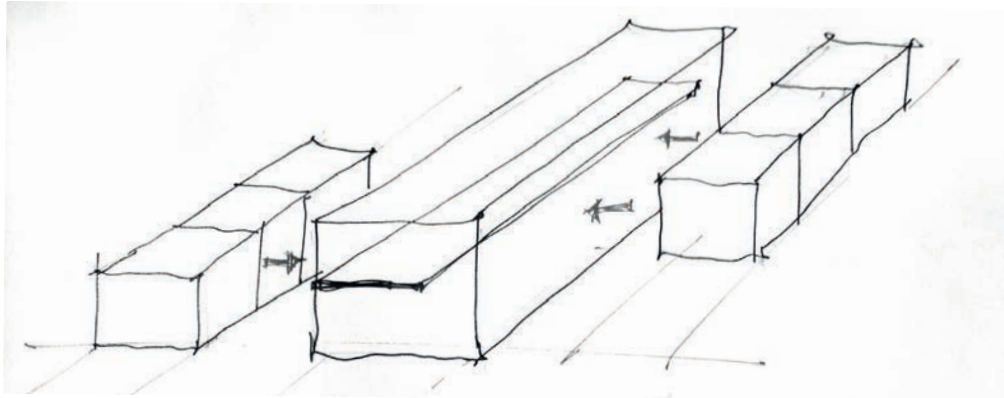
Scale 1:500



FIRST FLOOR PLAN

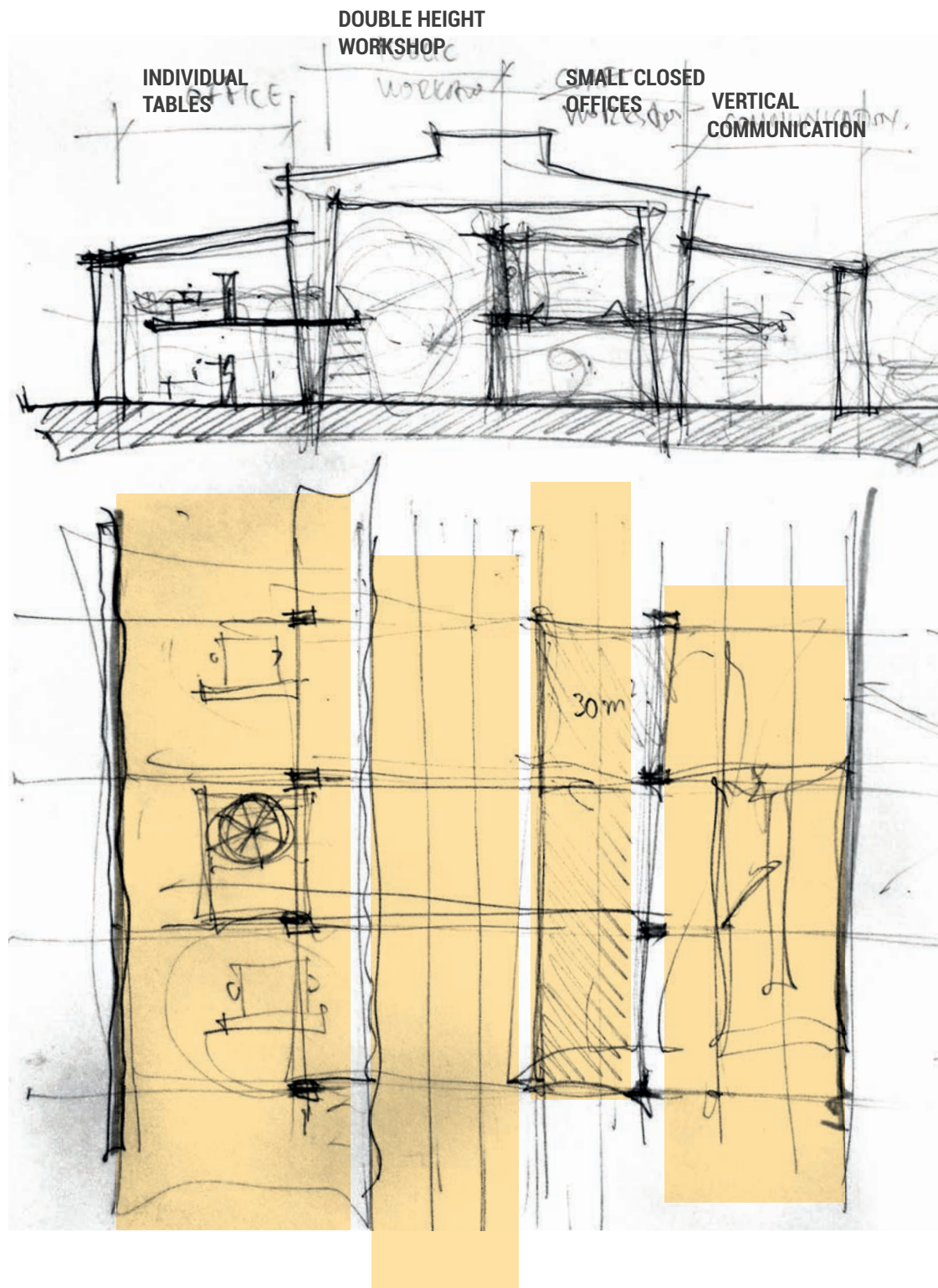
Scale 1:500

PROCESS SKETCHES



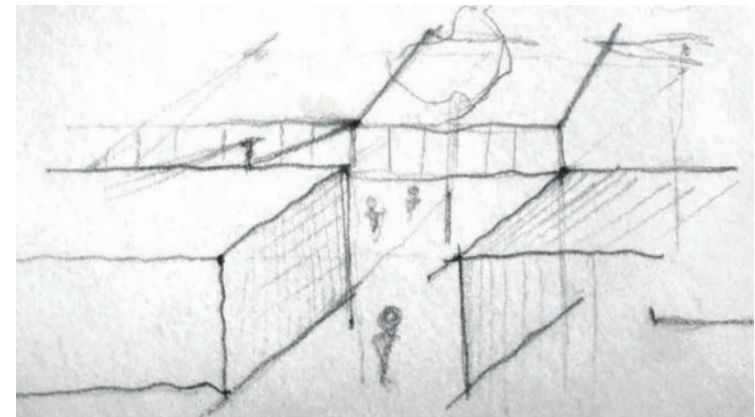
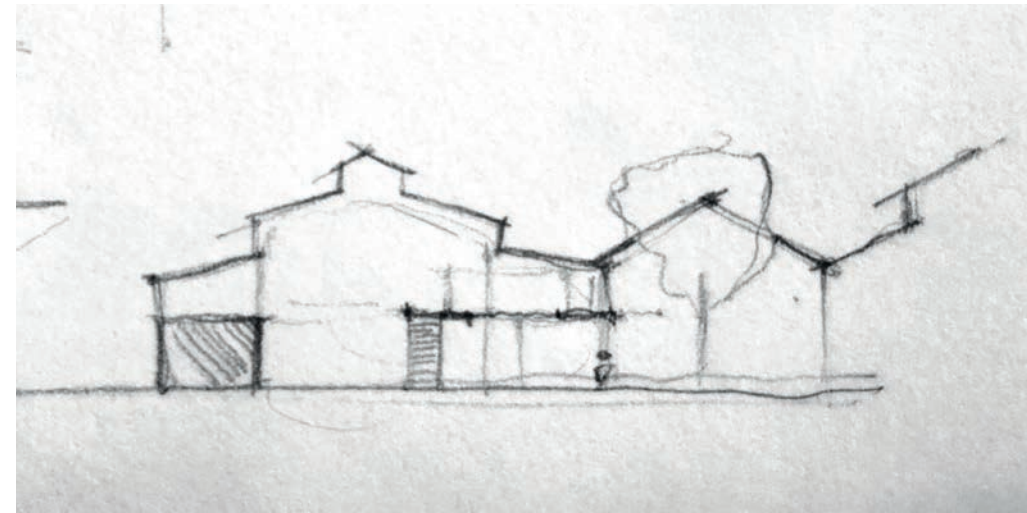
A 3D GRID UNDER THE LOAD BEARING STRUCTURE

Since we want adaptability for the unknown future needs of the selected functions, an adjustable 3D grid might be easier to help the users expand, add, or remove space. Its nature can also fit the structural division of the industrial buildings.

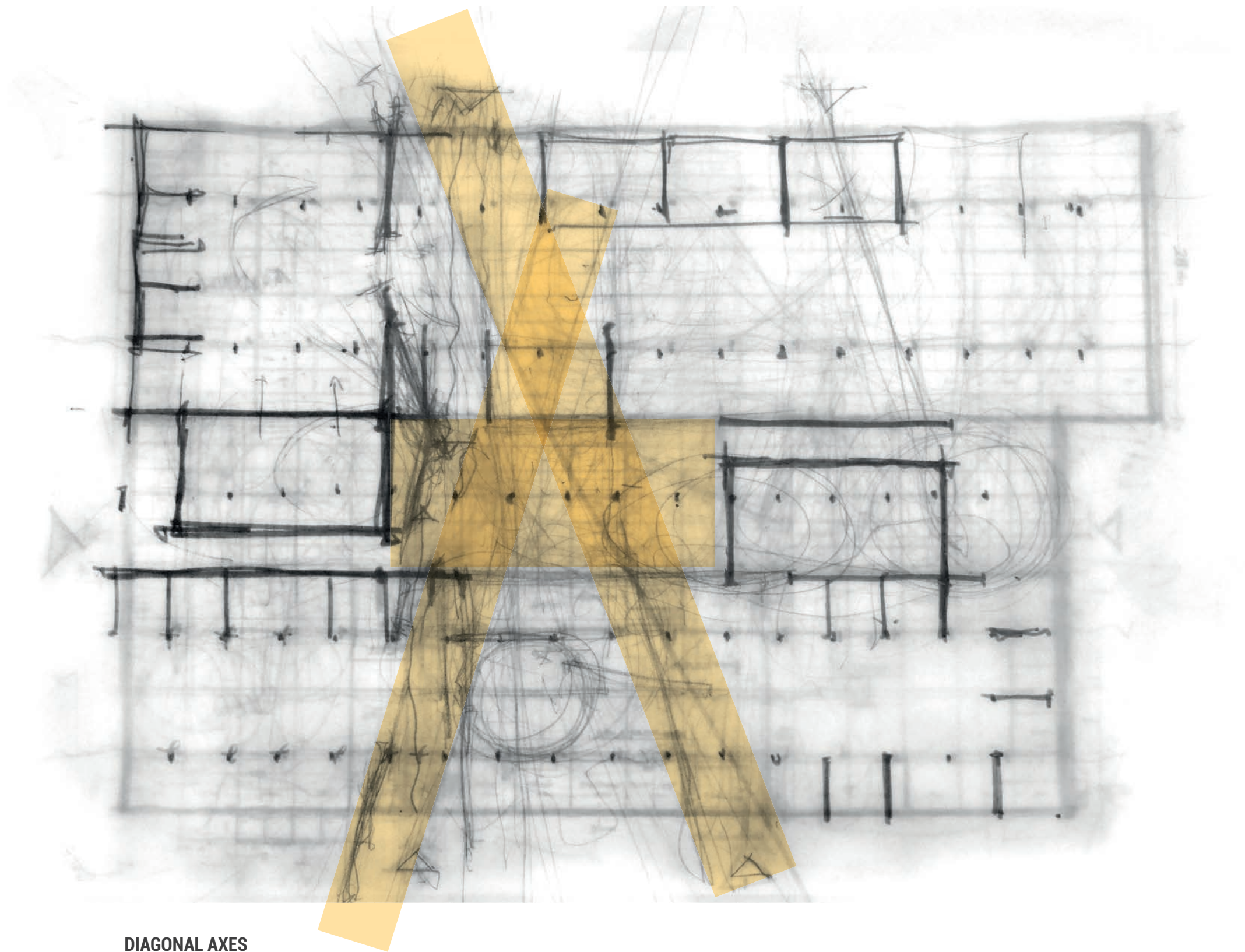


ZONING OF THE DIFFERENT AREAS OF THE WORKSHOPS

Similar zoning could be applied to the school and the Start-up businesses, to provoke transparency and communication in many different ways.

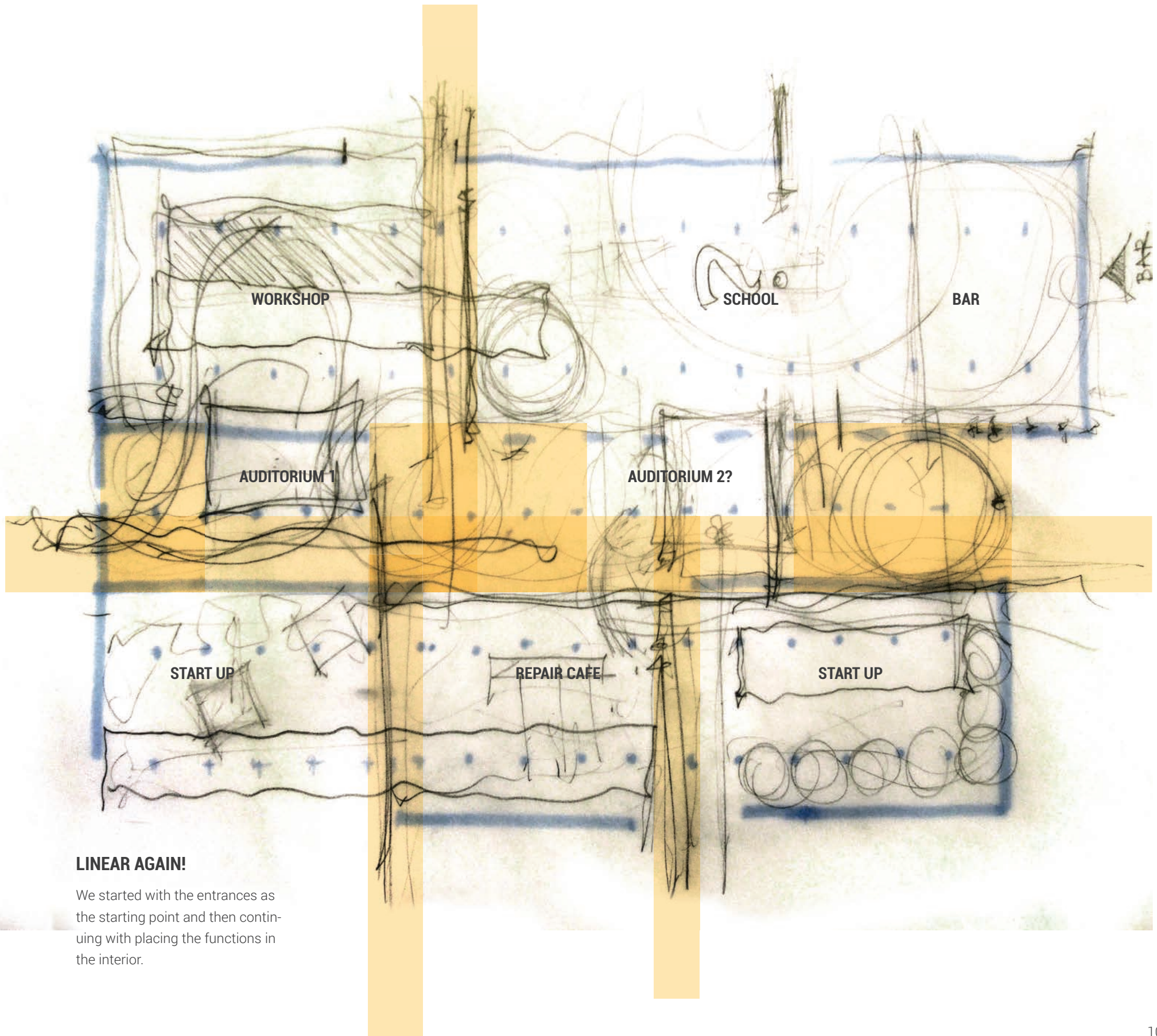


Small openings in between closed offices can provide vies to the atrium or the open air public corridors.



DIAGONAL AXES

Effort to break the linearity the load bearing structures imposes, by two diagonal axes that connect the original entrances with the central atrium.



LINEAR AGAIN!

We started with the entrances as the starting point and then continuing with placing the functions in the interior.

The project was presented on June 4, 2015, as part of the Master Theses Exhibition at Chalmers University of Technology.

Final seminar critics: Kristina Olsson (White Arkitekter AB) & Emilio Da Cruz Brandao (Chalmers Architecture)

Public presentation and master theses censor: Sophia Vyzoviti (University of Thessaly)

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SKFuture adaptive reuse in the SKF quarter in Gamlestad, Göteborg

Former industrial buildings, although often seen as urban holes, can become redevelopment nodes through adaptive reuse, a process that goes even further than the usual transformation concept.

SKFuture focuses in a design proposal that will bring new, revitalizing functions into M-verkstad - one of the most impressive buildings inside the SKF quarter in Gamlestad, Gothenburg - while keeping its unique architectural qualities and industrial heritage values. In this way, M-verkstad can transform into a social intersection that will also connect the city to the neighbouring river landscape.

Issues such as viability, connectivity, social sustainability and heritage values are discussed and eventually shape the core of the proposal, which is extensively based on the analysis of the area's current challenges and potential, municipal plans as well as adaptive reuse reference projects.



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