Adding Layers

Adaptive Reuse in Tensta Centrum

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Adding Layers
Adaptive Reuse in Tensta Centrum

An examination of re-designing an old school building and adaptive reuse as a sustainable option for the structures of the million program era.

The idea of Office Spaces for the City District Administration in combination with Public Spaces for the citizens together form Tensta’s New Town Hall.
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Research & Background

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Backström & Reinius
Adoptive Reuse
The CDA advocates a demolition of the school to make room for a new office building on the site. A new building next to the school could be equivalent but this option would probably take longer time. In this case, a new city plan has to be developed for building in another area of the site and make major changes in the use of land plan.

The project examines a way to reuse the school building, and instead of demolishing, add a new layer on top for the citizens of Tensta. The rationality of the school building and its measurements makes it suitable for a transformation into office spaces. The new space would be the citizens of Tensta’s new “living room”, a hovering glass box that puts Tensta Centrum on the map. Together with new office spaces for the City District Administration it would work as a catalytic effect for the area.

The project has evolved during the semester through interviews and discussions with experts and professionals in Tensta. The project is meant to highlight the current problems of these areas and hopefully bring up the discourse around the topic.

In Stockholm today it is mainly the suburbs that really are in need of redevelopment and densification. About 80 percent of Stockholm’s population lives in the suburbs and many of these areas are falling into decay. I have been living in Tensta for the last three years and I daily pass through Tensta Centrum. The Centre has in somewhat a bleak tone over it; buildings are torn down, stores are closing and buildings are left abandoned due to high rental costs and environmental-health problems.

Tensta Centrum needs to be further developed and renewed to meet today’s needs and demands of a city centre. There is a big lack of job opportunities and functional facilities.

The project takes its starting point from the current situation of the City District Administration (CDA) office, Spånga – Tensta. Today they are housed in temporary facilities in Lunda Business Park outside Tensta Centrum. The CDA’s office building was earlier located at Tenstagången 55 (prop. Bränninge 7). The building was erected in 1969 and demolished in 2008 because of long-standing problems with sick-building symptoms in the environment that were not relented despite several clean-ups.

The CDA have examined a number of different locations in Tensta and the most likely site so far is Kämpinge School (prop. Kämpinge 2). The site is approximately 17,500 sqm and situated east of Tenstastråket but still close to the centre. The school was built as a secondary school in 1969 and designed by the renown architects Backström & Reinius and was one of twelve schools that were built almost identically in conjunction with the city’s one million programs-building in the 1970s. The school was evacuated at the end of 2011 due to mould-and ventilation problems.

Adding Layers Adaptive Reuse in Tensta Centrum

Statement of Intent

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The CDA have examined a number of different locations in Tensta and the most likely site so far is Kämpinge School (prop. Kämpinge 2). The site is approximately 17,500 sqm and situated east of Tenstastråket but still close to the centre. The school was built as a secondary school in 1969 and designed by the renown architects Backström & Reinius and was one of twelve schools that were built almost identically in conjunction with the city’s one million programs-building in the 1970s. The school was evacuated at the end of 2011 due to mould-and ventilation problems.
The majority of the City District Administration (CDA) offices in Spånga - Tensta are housed in temporary facilities in Lunda Business Park. The office building was earlier located at Tenstagången 55 (Bränninge 7). This building was built in 1969 and demolished in 2008 because of long-standing problems with sick-building symptoms in the environment that were not relented despite several clean-ups.

The CDA offices are currently divided at different locations. The office for the individual and the family, child-care, leisure and administration is located on Fagerstagatan 15, on the outskirts of Lunda Business Park. The office for the elderly and disabled is located on Avestagatan 29 in Solhemsbackarna. The Civic Office is located at Tenstagången 49 and an office of family support is located at Hjulsta Backar 17. These offices are a bit too inaccessible and should be under the same roof to cooperate with the rest of the administrative office.

The total area of the above premises is 4464 square meters with approximately 22 sqm per employee. Rental rates for the above premises are today 6.2 million, which means 1400 per square meter and year. The contracts have a term of 3 years, with the possibility of a 3-year extension.

The CDA is in need of an integrated headquarter located in Tensta center where the need for social support is most criticized. According to the city management office recommendations the surface of usable floor area (BRA) must not exceed 20 square meters per employee. Together with the public space of 200 sqm that the Civic Office needs, the total need of space is approximately 4200 sqm for the administration’s 200 employed. After the demolition of the office building in Tensta, the CDA was investigating the possibility to raise a new building on the site. PEAB got the land allocation and were ready to build. This building would be designed in a spectacular way with the aim to be a part of the city’s project Järvalyftet from an architectural point of view. The offices would in this plan occupy 6-7 narrow floors on a site with an area of only 774 square meters. On top of the office floors there would be built another 6-7 floors for apartments. This narrow office building would demand for a lot of floors and would not be optimal in terms of efficiency and safety, given that the stairwells and elevators are likely to be shared with the residents.

However, the investigation showed that rental rates would almost be doubled compared with the CDA’s rental budget and that the administration would not be able to hold its total budget in balance. In a protocol from June 2009, the City District Committee stated that the CDA should conduct a return to Tensta Center. At the same time the committee reckoned that it was very important to contain the costs for premises and ensure a minimized cost for the relocation.

The CDA have examined other locations in Tensta and the most likely site so far is Kämpingeskolan (Kämpinge 2). The site is approximately 17,500 sqm and situated east of Tenstastråket but still close to the centre. The school was built as a secondary school in 1969 and was one of the twelve schools in the city of Stockholm that were built almost identically in conjunction with the city’s one million programs-building in the 1970s. The school was evacuated at the end of 2011 due to mould and ventilation problems.

The CDA advocates a demolition of the school to make room for the new office building on the site. A new building next to the school could be equivalent but this option would probably take longer time. In this case, a new city plan has to be developed for building in another area of the site and make major changes in the use of land plan.

From “Förslag till inriktningsbeslut om nytt stadsdels-kontor i Tensta i kvartetet Kämpinge 2”, Spånga-Tensta stadsdelsförvaltning, strategiska staben.
Tensta is a rare multi-layered and complex suburb west of Stockholm. The area is mostly characterized by the residential housing development of the late modernist period, also known as the Million Program Era 1967-75. Today 6,000 homes are intermingled with graves from the Iron Age, rune stones, one of Stockholm’s most ancient churches with a famous Baroque chapel, a former military training field from the early 1900s and an area of single family houses built in the period 1910-1960. Around Spånga church are some remaining parts of the cultural landscape but except that hardly nothing.

The district of Tensta was planned to house 16,000 people and today there are about 19,000 people living in the area of which about 90% have a foreign background, making Tensta a very segregated area in Stockholm municipality. Many of the residents have roots in the Middle East and North Africa. This means that the collective memory in many ways is shattered, but also the emergence of tensions and conflicts around questions like “Whose History?” And “whose heritage”? The population has increased in number despite the fact that no new apartments have been added. Tensta together with Rinkeby’s residents have the minimum space standards in Stockholm. 

The turnover of tenants in Tensta has declined dramatically in the recent years, which has positive effects on the stability of the area.

Tensta is dominated by residential housing and there are few working places. The nearest workplace area is Lunda Business Park. In the centre there are, shops, a large car park, Tensta Art Gallery, Tensta Culture Organization, two subway entries etc. A number of schools are scattered throughout the district and Tensta Upper Secondary School is located in the extension of Tenstagången.

City planning of Tensta is very consciously and consistently performed in its planar structure with its free standing slab block structures and traffic separation according to the ideals of its time. In the southern part the settlement merely consists of 2-3 floors. Small tower blocks in 3-4 levels occur, as well as a small number of terraced houses in the eastern part. To the area’s natural qualities counted bright well-planned homes, mature greenery, playgrounds, high parking standard, well-maintained buildings, proximity to recreational areas and good communications. But as in most areas of this time there are a lot of elements that need to be refurbished and renewed. As in many other developments of the Million Program, the construction process was industrialized, new standardized building components, and new materials were used in building Tensta. The result was the single largest housing development of the Million Program Era in Sweden.

Svenska Bostäder owns a third of all homes in Tensta. A lot of dwellings are owned by Familjebostäder AB and Wihlborgs bostäder AB. About 20 percent of the housing consists of co-operative apartments.

The new building is most likely to adapt to this grammar and be a natural part of the urban system. But at the same time it is important that the new building could be able to express something new and unique to promote advances to the area.
Site Aggregation

- Ross Tensta Gymnasium
- Tjänsta Upper Secondary School
- Erikslund
- Playground
- Creative Call
- Johanna Tysk Office
- Tensta Library
- Tensta Church
- The Kurdish Association
- Tensta Shopping Mall
- Tensta Centrum
- Livstycket
- Knowledge and Design Centre
- Women's Center
- Kämpinge School
- Secondary School
- The Islamic Culture Organization
- Turkish Mosque
- Tensta Market-place
- Outdoor market
- Tensta Konsthall
- Tensta Art Gallery
- Blå Huset
- Tensta Youth Center
- Tensta Community Center
- Tensta Träff
- Tensta Culture Organization
- Tensta School of Architecture
- Preparatory courses in Architecture
The Site in Layers

Architecture
The district has a north-south arrangement for high- and low-rise developments with an east-west orientation of the buildings. The repeating building types have few variations within the arranged rectangular pattern. A central route with public service and institutional activities follows through the strict order of settlement.

Infrastructure
The separation of functions creates levels that are found in all grades of public spaces and provides a protected urban movement.

Metro line
The station and the blue line was inaugurated in 1975

Topography
The district consists of an artificial topography of its own, positioned in interstices between the earlier natural highest points.
2 Nodes

Tensta city centre is based on the central pedestrian passage Tenstagängen. At each end there are two school buildings that form two strong west- and east nodes. The western node consists of Tensta upper secondary school and the eastern node by Kämpinge secondary school. A reactivation of the site Kämpinge 2 would reinforce the original plan of Tensta and keep the extension to the east of the main passage.

Morphology

The district’s grammar is expressed in a characteristic overall approach where each part has its conscious place. The most central grammatical expression of this diverse and consistent urban system is its levels, rigidity and order. The artificial levels are also to be found in the architecture such as the access balconies characteristic alignment and the grouping of buildings with the same number of floors. Even the separation of functions creates levels that are found in all grades of public spaces and provides a protected urban movement.
3 Possibilities

I started to zoom in on three interesting and possible sites for the project along the main passage Tenstagången; Bränninge 1, Bränninge 7 and Kämpinge 2. In common of all these sites are that they are today more or less unused and located in the direct connection to Tenstagången and the city centre. These sites have been hotly debated and targets for several studies and architectural competitions over the last years. Each site has its own conditions, restrictions and possibilities. By an examination of each site I got information regarding future planning, political interests and contextual problems, but also a deeper understanding of Tensta city centre as a whole.
Bränninge 1 The city district administration was previously localized at this site. The building that was built in 1974 gave environmental and health problems. Owner Real Estate Department was not able to overcome these problems despite repeated renovations. Finally the building was demolished in 2008.

The site is located at Tenstagången 55 and is today an undeveloped site. The plot is 774 sqm and has a prime location in Tensta Centrum, directly north of Blå Huset and in direct connection to Tensta Shopping Mall and the main passage Tenstagången.

Bränninge 7 The site is approx. 3000 sqm and is currently totally occupied by the oversized garage that blocks the views and the entry situation into Tensta Centrum. The Conservatives have submitted that the garage should be demolished. They stated that the garage is not built for the times we live in and that it is an unattractive feature of the townscape. A new garage can be placed underground so as to allow for housing, parks or the expansion of businesses in Tensta Centrum. The site should be used in a better way. The plaza west of the garage called Taxingeplan is currently an almost unused public area, centrally located in Tensta and have the potential to develop into an interesting space. The plaza is not very welcoming and is dominated by the large parking garage, parking lots and loading areas.

Kämpinge 2 The site is located at Tenstastråket 12-16. The plot is 17,569 sqm. Today there is an empty school and gymnastics building on the site. The school was built in 1969 but the premises must not be used without a major renovation and rebuilt ventilation. The school has been classified in yellow category. The yellow classification means that the buildings have a positive effect on the townscape and / or have some historical value. The classification does not require that the school is preserved. That is, the classification does not affect the choice of alternatives for remodeling or for new construction on the site. The local plan says that the land may be built for general-purpose such as school, private school, hospital etc.

A 16-story building with 214 student residences proposed construction in Tensta Centrum. The location of the building is the property Brönninge 1- where previously Spånga-Tensta administration building was located.

Private developer

Winning proposal of the open architectural competition for a sports hall and plaza on the site. 2004/2005

An architectural firm has developed a concept sketch for rebuilding the school. Level 1 and 2 could be turned into student flats.
I ended up with the last alternative site Kämpinge 2, located at the far east of Tenstastråket 12-16. The plot is 17,569 sqm and today there is an empty school and gymnastics building on the site. The site is a current target for the City District Administration’s new office building and therefore particularly interesting as a base for the project. The CDA advocates a demolition of the school building to make room for a new office building. The school was built in 1969 but the premises must not be used without a major renovation and rebuilt ventilation. The school have been classified in yellow category. The yellow classification means that the buildings have a positive effect on the townscape and/or have some historical value. The classification does not require that the school is preserved. That is, the classification does not affect the choice of alternatives for remodelling or for new construction on the site. The local plan says that the land may be built for general-purpose such as school, private school, hospital etc.

The area is well defined by the street Tenstastråket to the west, a wooded slope to the north and a parking lot in the south. The schoolyard is limited in size and consist of a flat asphalt area with shrubs adjacent facades. Outdoor stairs and walls are made out of concrete.
Kämpinge School

Kämpinge School is one of the standardized school facilities Järvafältsgruppen designed for southern Järvafältet. The school has a cohesive architectural design, and is well preserved to the exterior. The buildings are characteristic of future school buildings with a repeating window composition and unadorned geometric shapes. The brick facade differs from the other schools in Rinkeby-Tensta, which is dominated by concrete element technology.

Kämpinge School consists of a classroom building and a gymnastics building. The classroom building is oriented in an east-west direction with the gymnastics building located east of the main building.

Admission: Red painted metal doors with an upper glass section and plate covered bottom. Over the three main entrances are large flat canopies lined with grey, folded sheet metal and wooden ceilings, supported by two metal legs.

The classroom building is built around three courtyards of which the central has been overbuilt. The main entrances are facing north, but there are also entrances from the south. The building has a loading dock on the west end.

Backström & Reinius took a leading position in the 1940s Swedish architecture with residential building as the central task. Their first joint project was a resident in the block Tegelslagaren at Södermalm, Stockholm. The red brick facades with bay windows in teak emphasizes shapes and materials in contrast to the future prevailing functionalist ideals with smooth plaster facades and long ribbon windows.

In the 1950s came the office to deal with bigger projects. In Vällingby centrum they worked with planning and designed the civic building Trappan and the cinema Fontänen among commercial buildings and youth club. The architects also designed town houses for the Board of Vattenfall. The firm planned Farsta Centrum and designed all the stores around the square, a very time typical and distinctive creation. They also designed residential housing in Farsta. In central Stockholm the firm has worked with several well-known buildings as the fifth tower at Sergelstorg, Åhléns city and PK huset. In the 1970s they designed the retirement home in Nockeby, Pauvres Honteux and the last project in 1981 an infirmary in the same facility.

Backström & Reinius adopted the functional in housing planning and with a sense of space and light transmission as key words practical, bright and cosy apartments in small areas were created. The designs are characterized by strong will of design, attention to detail, color, and materials importance. They tell themselves, “We have always viewed architecture as an art, where it comes to searching for logical natural solutions; finding the core of every construction task and give this a poetic, often light and playful expression.”

Source: Stadsmuseum (Subject to errors)
Adaptive Reuse deals with the issues of conservation and heritage policies. Whilst old buildings become unsuitable for their programmatic requirements, as progress in technology, politics and economics moves faster than the built environment, adaptive reuse comes in as a sustainable option for the reclamation of sites. In many situations, the types of buildings are most likely to become subjects of adaptive reuse include; industrial buildings, as cities become gentrified and the process of manufacture moves away from city political buildings, such as palaces and buildings which cannot support current and future visitors of the site; and community buildings such as churches or schools where the use has changed over time.

Adaptive reuse is seen as an effective way of reducing urban sprawl and environmental impact. By reusing an existing structure within a site, the energy required to create these spaces is lessened, as is the material waste that comes from destroying old sites and rebuilding using new materials. Through adaptive reuse old, unoccupied buildings can become suitable sites for many different types of use.

Criteria for adaptive reuse
While the process of adaptive reuse is a decision often made purely by companies establishing a particular brand or presence, there are often criteria for deciding whether a building should be conserved and reused or just demolished for the area it occupies. Some of these determining criteria include;

- The societal value of a given site; that is, the importance to the community of the use of a site by community members or visitors.
- The potential for the reuse of a particular site; the physical damage sustained to the site and its support of future use, the character of the existing site in terms of the proposed reuse.
- The historical importance of the site; in terms of both the physicality of the street-scape and the area, as well as of the role of the site in the community’s understanding of the past.
- The natural ecological conditions of the site; whether the site is suitable climatically or can support the proposed environmental work needed in the site.

There has been much debate on the economic possibilities and viability of adaptive reuse as different corporations and companies seek to find sustainable ways to approach their corporate or retail sites. There are many outcomes that affect the economic return of adaptive reuse as an avenue to a company’s use of a given site. Factors such as the reuse of materials and resources as well as a lesser need to involve energy, both in terms of labor and machine powered, can effectively decrease the monetary funds needed for companies to establish sites. However, there can be hidden costs in reusing old buildings such as; the unknown contamination of older sites, decay and disuse affecting the usability of a building as well as the possible need for modification of an older building to fit current and future building codes.

With each project, the economic costs differ from project to project and some professionals go as far as to assert that new build is always more economical, and renovation is universally more expensive, due to their own involvement with adaptive reuse projects. Others claim that the return on investment is enhanced when using an older building, because of the savings involved. One Canadian developer claims that reusing buildings generally represents a saving of between 10-12% over building new. In terms of profitability, there are also the assertions that adaptive reuse projects often have an uncertainty to their profitability, that newer developments lack. When looking for funding to build, these considerations must be addressed.

With many heritage sites on the agenda for government agencies, there are, a number of financial incentives provided in order to increase the use of older sites in many countries. In the provinces of Canada, some municipalities offer financial encouragement for heritage development such as, the City of Waterloo who waived the development charges for the Seagram Lofts that have been estimated to be around $700,000. Governing bodies also benefit from the reuse of once abandoned sites as once occupied; they generate tax revenue and therefore often recover the initial investment.

Adaptation advantages
With the debate of adaptive reuse as a sustainable avenue in the development of key sites, there are many advantages to using certain sites for redevelopment. Some of these advantages include the site’s location; in many cases, historical sites are often located in the centers of large cities due to the spatial development of a given area, these buildings can often be heritage-listed and therefore sold as an entity, rather than just for the land that they occupy, which the new tenants then have to retrofit the building for their particular purpose. Older buildings also often have a specific period character through the detailing and joinery of their constructed eras that newer or reconstructed developments lack, in certain cases, such as the hospitality industry; the grand character of a site can influence the feel of their building and are used for maximum potential to enhance the site’s physical attractiveness to a client.

Adaptive reuse refers to the process of reusing an old site or building for a purpose other than which it was built or designed for. Along with brownfield reclamation, adaptive reuse is seen by many as a key factor in land conservation and the reduction of urban sprawl. However adaptive reuse can become controversial as there is sometimes a blurred line between renovation, facadism and adaptive reuse. It can be regarded as a compromise between historic preservation and demolition.
Methodology & Design Process

Idea of Design
Program Areas Synopsis
Design & Aesthetical Manifestation
Positioning
Site & Context Analysis
5 Steps to Add & Reuse
Program Diagram
Structure
New Spatialities
A Continuous Space
Materials
The aim of the project is to design a building with pronounced identity and a character of its own - both exterior and interior - in interaction with a large park on the roof. An innovative building that strengthens the center of Tensta as an attraction. A landmark when it is about architecture, design and content.

The City District Administration is in need of an integrated headquarter located in Tensta center. The CDA have been advocate a demolition of the school building to make room for the new office building on the site where the need for social support is most criticized. The project examines a way to reuse the school building, and instead of demolishing, add a new layer on top for the citizens of Tensta. The rationality of the school building and its measurements makes it suitable for a transformation into office spaces. The new space would be the citizens of Tensta’s new “livingroom”, a hovering glass box that puts Tensta Centrum on the map. Together with new office spaces for the CDA it would work as a catalyzer for the area.

The separation of the two volumes clarifies the program and the contrasts of materials aims for an abstraction of the visualized object. The new volume cantilevers the existing building and creates an outdoor space underneath where new spatial qualities emerges and the composition, the old vs the new, together creates Tensta’s new Town Hall.

The new added volume floats over the school building and separates itself, only pillars and circulation points touches the ground without interfering with the existing building’s structurally order and aesthetical manifestation. The new volume would work as statement of our time and the two volumes together creates a composition of void and solid mass and the tenisty in between.
The idea with the building is that it should have two different programmatic layers that meet the needs of Tensta today. One part should contain flexible office spaces for the CDA that could be transformed to suit different activities in the future. The other part should be independent the office program and dedicated to the public with large open spaces.

It is important that a new building in Tensta would be extrovert and transparent for the citizens. The building should interact with the surrounding streets and extend to outdoor areas.

The rationality of the school building and its measurements makes it suitable for a transformation into office spaces. The school building is renovated and rebuilt to meet the modern standard of flexible office spaces that also could be transformed to suit different activities in the future. The flat roof of the building is converted to large green terrace that would work as a mixed-use area for interaction between professionals and the public.

Above there is a new space that would be the citizens of Tensta’s new “living room”, an open space that could offer service, information and entertainment. The new space is separated from the existing building below and independent from the office spaces. The idea with the program of the building is that it should have different visual programmatic layers and together with new office spaces for the CDA it would work as Tensta New Town Hall and catalyst for the area.
The position of the new volume has to subordinate itself to the existing building not to destroy the qualities of the existing building. The volume is rotated 90 degrees not to overshadow the court-yards of the school building. The position of the hovering volume creates interesting outdoor spaces and a natural entrance situation underneath. The volume partly protects the new roof terrace from sun and rain.

The added volume separates itself not to interfere with the existing school buildings structurally order and aesthetical manifestation. A void in between would enhance the visual perception of a building with different programmatic layers, “form follows function”.

The size of the added volume is depending on the structural grid of the school building. The open courtyards enable structural elements touch the ground without interfering with the existing building.

Positioning
The site of Kämpinge 2 is well defined by its surroundings. The pedestrian path Tenstastråket enters the site from the west and in its extension passes the north facade of the school building. This is the primary entrance situation to the site. The new volume cantilevers the space and reinforces the entrance. South of the school building there is a flat parking lot. The schoolyard is limited in size and consists of a terraced asphalt area with shrubs adjacent facades. Outdoor stairs and walls are made out of concrete.
The exterior of the existing school building is kept intact while the inside is transformed to meet the new program and today’s standard. The two courtyards at each side of the building is replaced with structural glazing to blur the boundaries between inside and outside. The glass maximizes the transparency and the amount of daylight in the building. The flat roof of the existing building is converted to a green urban park that offers the citizens of Tensta a large green area overlooking Tensta.

The structural system for the new volume is made out of tapered pillars and a central elevator core. The pillars are positioned to take down the loads outside and in the open court-yards of the school building. The elevator core helps to stabilize the construction. The new volume floats over the existing building and is rotated 90 degrees not to overshadow the school building. The hovering volume creates an interesting outdoor space that partly protects the terrace from rain and sun. Photovoltaic panels are distributed on top of the new roof to reduce the energy consumption. The rainwater is transferred to a water storage tank below.

1. The exterior of the existing school building is kept intact while the inside is transformed to meet the new program and today’s standard.

2. The two courtyards at each side of the building is replaced with structural glazing to blur the boundaries between inside and outside. The glass maximizes the transparency and the amount of daylight in the building.

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4. The structural system for the new volume is made out of tapered pillars and a central elevator core. The pillars are positioned to take down the loads outside and in the open court-yards of the school building. The elevator core helps to stabilize the construction.

5. The new volume floats over the existing building and is rotated 90 degrees not to overshadow the school building. The hovering volume creates an interesting outdoor space that partly protects the terrace from rain and sun. Photovoltaic panels are distributed on top of the new roof to reduce the energy consumption. The rainwater is transferred to a water storage tank below.
The horizontal design and proportions of the school building is transferred to the new volume to create a harmony between the two objects. The horizontality of the new volume reinforces the perceived object as a stiff and light construction.

The new volume should be self-sufficient. Photovoltaic panels are distributed on top of the new roof to reduce the energy consumption. Rainwater is transferred to the core and down thru a shaft to a water storage tank.
Program Diagram

Plan 4
Citizens space, Civic Office, conference, exhibition & restaurant. Tot. 1800 sqm

The new space should be read as a large contiguous room. The horizontality of the space leads the eyes towards the windows and the overlooking view of Tensta. The servant spaces are gathered in the middle, leaving the rest of the plan spacious and the glazed facade uninterrupted. This space should be the citizens’ living room with flexible areas for events, exhibitions, study etc. In the south there is a restaurant and in the north the new Civic Office.

Plan 3
Roof Terrace
Tot. 2300 sqm

The roof of the existing building is converted to a large green urban park. A mixed use area where the public and professionals can interact. Large concrete tiles create islands and paths that fade in the greenery. The hovering volume above creates an interesting outdoor room underneath. The plane mirrored ceiling partly protects the terrace from rain and sun.

Plan 2
CDA office spaces
Tot. 2300

The second floor contains office spaces for the CDA. In the middle of the plan there is an open circulation area with views over the atrium. A semi-private communication area around the courtyards and smaller private areas along the facade with possibilities of internal communications between the rooms. Internal staircases are located in the courtyards manages the internal vertical communications.
Plan 1

Public Entrance & CDA office spaces
Tot. 2300 sqm

You enter the building from the north and into a generous lobby space. The entrance hall has the logic similar to a skyscraper, with the elevators straight ahead at the south end of the space. In the middle of the space there is an atrium, characterized by the tilted structural pillars and the mirrored ceiling above. The vertical elements lead the eye up towards the new volume. Courtyards and office spaces surrounds the entrance hall.

Plan 0

Archive and Servant spaces
Tot. 1300 sqm

The plan contains servant spaces for the whole building. The floor uses the original layout of corridors and escape routes. The earlier bomb shelters at each end of the building serves as archive spaces. In-between there is a row of functions such as; goods reception, storage spaces, receiving kitchen, recycling and the freight elevator.
Structure

The new volume floats over the existing building and separates itself, only pillars and circulation points touch the ground. The primary structural system holding up the new volume is made out of reinforced steel pillars and a central elevator core. The pillars are positioned to take down the loads outside and in the open courtyards of the school building. The tapered pillars lean towards each other and are stabilized in pairs. The elevator core works as a large space frame and helps to stabilize the construction. The core is clad in frosted glass to contain a light expression.

The hovering volume is based on a thin slab construction and is made out of two steel frames separated by thin pillars in the facade. The volume has a smooth surface to contrasts the old building's brick facade. The cladding is made out of structural glazing with a mirror film that reflects the sky during daytime and opens up the volume in the evenings. The bottom of the volume consists of reflective aluminium facade tiles that mirror the surroundings.

Axonometries in 3 steps showing the new structure in relation to the existing school building

Right: Cross Section
Perspective
New Spatialities

New spatialities are created between the old and new structure. The added volume on top reaches down to the ground by tilted pillars that refracts the light and forms interesting and complex spaces. The emerging voids within and outside the building becomes as important as the physically built object.

You enter the building from the north and into a generous lobby space. The entrance hall have the logic similar to a skyscraper, with the elevators straight ahead at the south end of the space. In the middle of the space there is an atrium, characterized by the tilted structural pillars and the mirrored ceiling above. The vertical elements leads the eye up towards the new volume. Courtyards and office spaces surrounds the entrance hall.
The roof of the existing building is converted to a large green urban park. A mixed use area where the public and professionals can interact. Large concrete tiles create islands and paths that fade in the greenery. The hovering volume above creates interesting outdoor spaces underneath. The new volume partly protects the terrace from sun and rain. The bottom of the volume creates a large plane ceiling and is made out of aluminium panels that mirror the surroundings.
A Continuous Space

By keeping the ceiling and the glazed facade uninterrupted the new space is to be read as a large contiguous space. To enhance the horizontally and the openness of the space, none of the walls are full height, only the glazed core and staircase touches the ceiling. The horizontality of the space leads the eyes towards the windows and the overlooking view of Tensta.

The servant spaces are gathered in the middle, leaving the rest of the plan free and spacious. This space should be the citizens’ living room with flexible areas for events, exhibitions, study etc. In the south there is a restaurant and in the north the new Civic Office.

Top: Interior Restaurant Space Photomontage
Right: Assembly of Materials Photomontage
To further enhance the clarity of the space, each function is addressed by different materials. The layout of walls and materials together creates a contrasted and easy readable space. The new space is a playground for literal and phenomenal transparencies with contrasting materials. The relations between void -mass, heavy -light soft -hard is standing next to each other and in the Civic Office a large marble wall hangs from the ceiling, defying gravity.
Drawings

Site Plan
Plan 0
Plan 1
Plan 2
Plan 3
Plan 4
Sections
Detail
Plan 3   Scale 1:200

Adding Layers
Adaptive Reuse in Tensta Centrum

Portfolio Thesis Project
Wall construction
- Insulated reflective glass panels (Schüco structural glazing systems)
- Floor convector
- Extruded polystyrene

Floor construction
- Floor covering of stone tiles 20 mm
- Screed 20 mm
- Separating layer (1 mm plastic sheet) 280 mm
- Reinforced concrete topping 250 mm
- Extruded polystyrene 20 mm
- Aluminium profiles (suspended ceiling system) 50 mm
- Aluminium sandwich panel (Reynobond mirror panel) 10 mm

Roof construction
- Rubber mat 100% Recycled 13 mm
- Separating layer (1 mm plastic sheet) 150-350 mm
- Extruded polystyrene laid to falls 1:60
- Profiled metal sheeting
- Steel primary cellular beams
- Aluminium profiles (suspended 50 mm ceiling system) 20 mm
- Acoustic panels
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