

Made in Oslo

Production School in Brenneriveien

Analysis and reflections

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Oslo School of Architecture and Design

Spring 2020



AREA + SITE





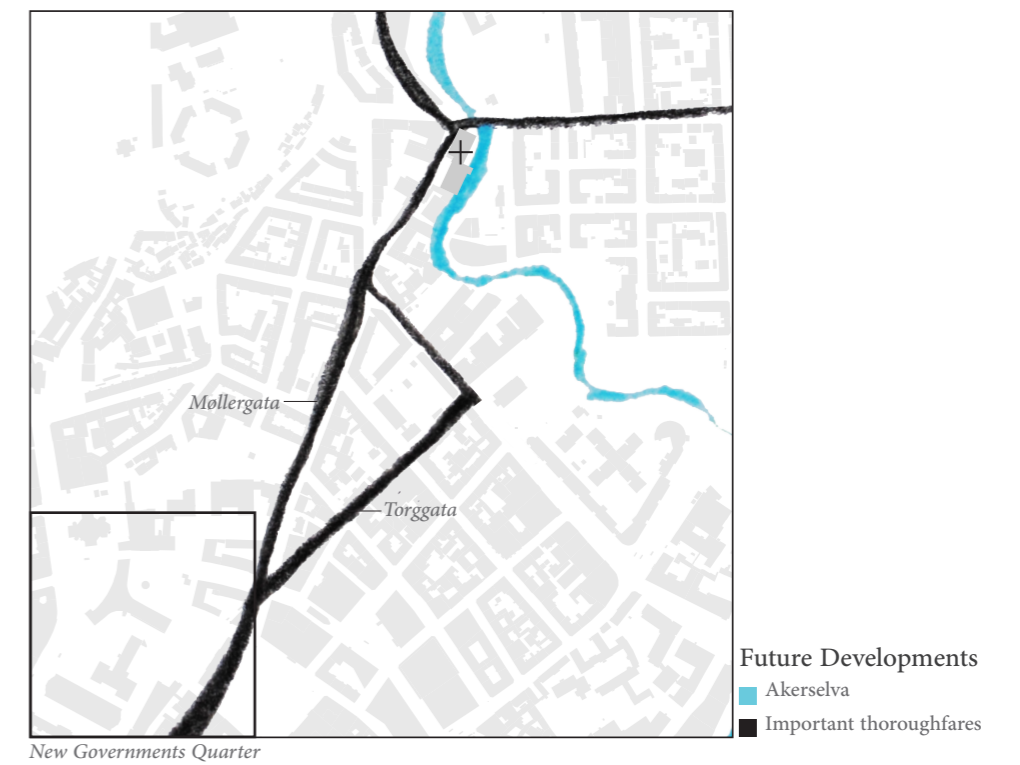
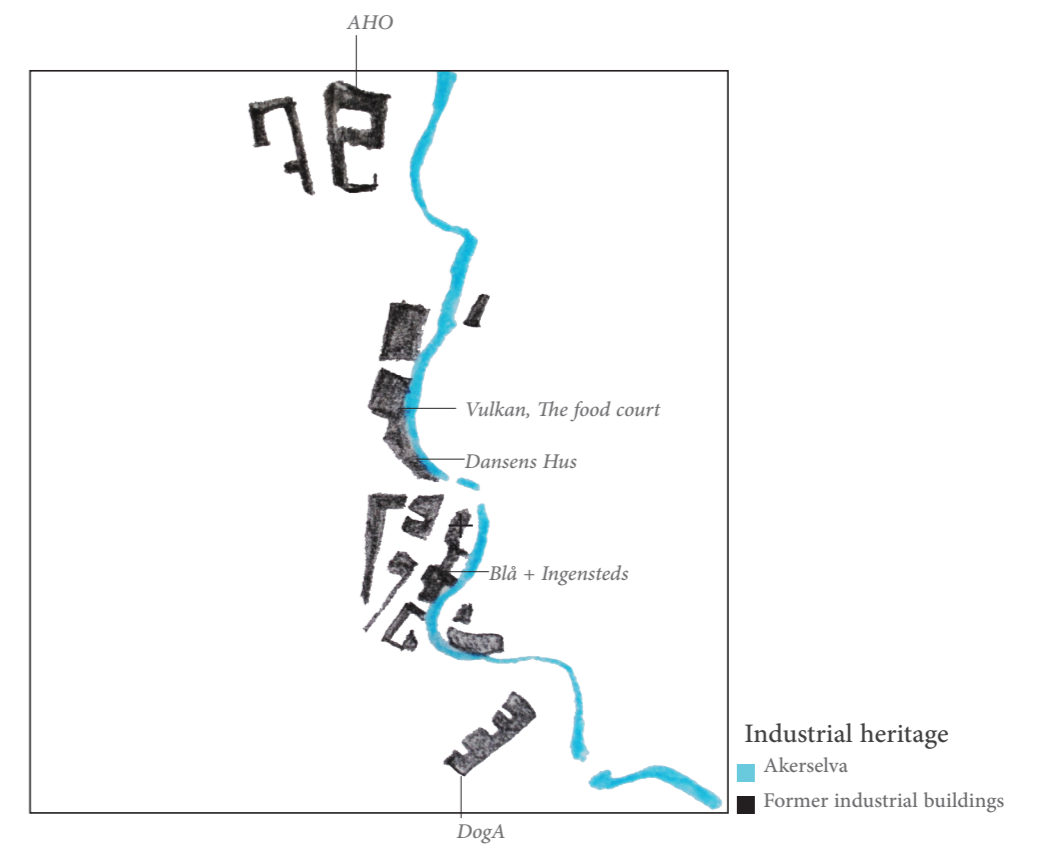
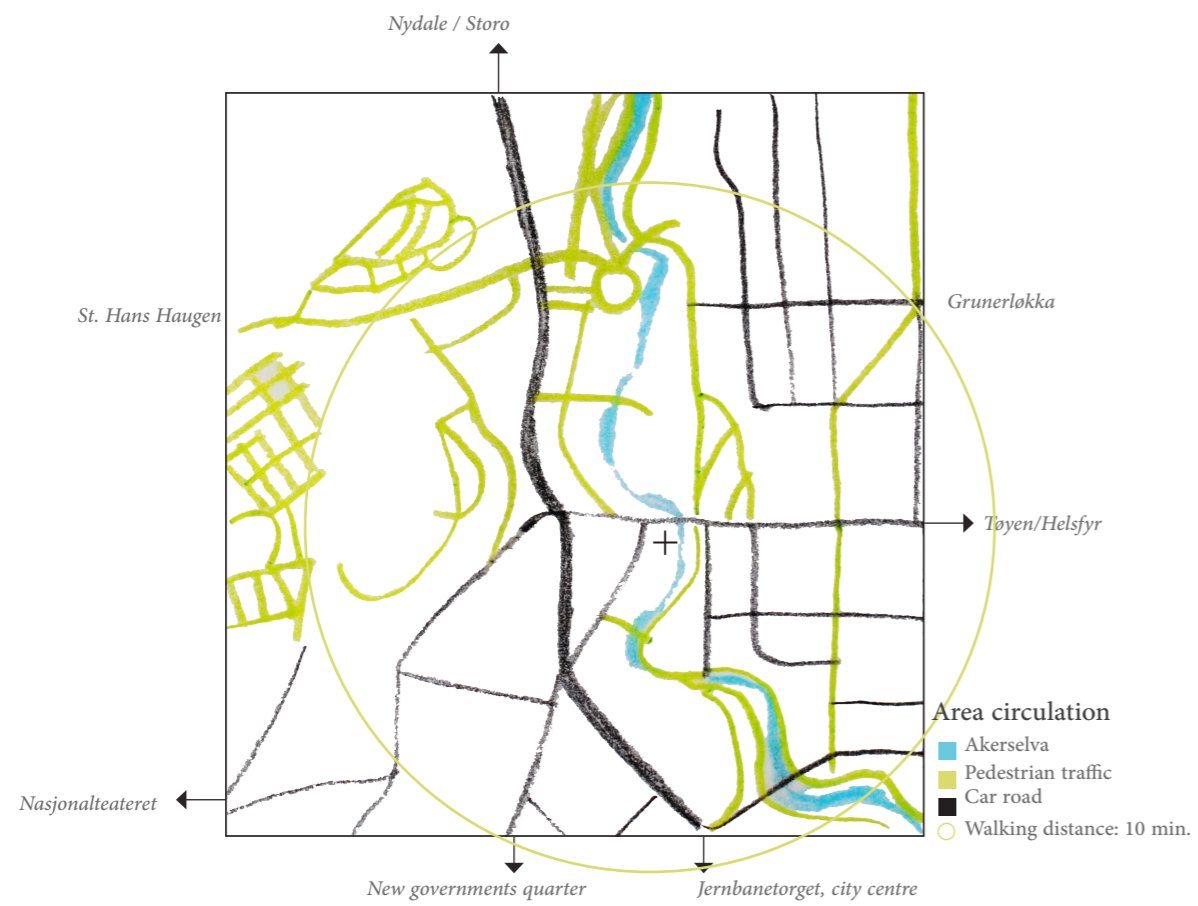
THE AREA OF BRENNERIVEIEN

Early phases of the project included thorough mappings of Oslo, these mappings and findings are documented in the prediploma. The first mapping we did was one of all former industrial sites in central Oslo. We also mapped current productions in Oslo, as well as upper secondary schools and dropout rates. This led us to focus on the areas of Akerselva, Grünerløkka and Grønland, before finally settling on a soon to be demolished building in Brenneriveien 11 along Akerselva.

Akerselva river is a significant part of Oslo's landscape, and it played a decisive role in the industrialisation of the city. As with most urban rivers, it's banks were the sites of heavy industrialization in the late 18th century. However, Akerselva is nothing like the great Rhine or Mersey, it is narrow and winding, filled with violent falls and strong currents. This feature of physical geography made the river unusable for transport of goods, thus the riverside industry doesn't really engage and form the river. Instead, the industrial buildings seem to create a barrier protecting the tranquil river from the busy city surrounding it.

The same juxtaposition of recreation and production is also a defining characteristic of Brenneriveien. The street currently houses cafés, nightclubs, an art school, galleries, offices and smaller industrial spaces. The architecture is mainly 18th century industrial brick architecture.

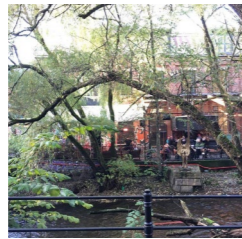
The surrounding area has lately been the site of major urban developments, and Brenneriveien 11 is currently set to be replaced by a major student housing block. Furthermore, the forthcoming rebuilding of the Government's Quarter will strengthen Brenneriveien as an important axis between the city centre and Grünerløkka.



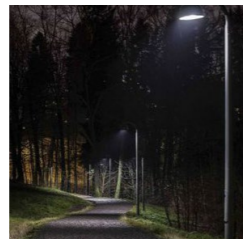
■ The walkway along Akerselva



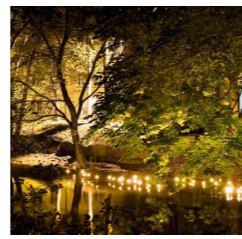
Vegetation + trees 1910



Vegetation + trees 2015



Dark walkway

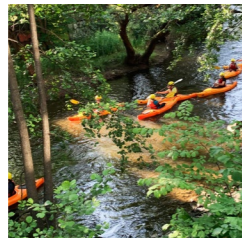


Ebelangs light festival

■ The river



Hydro power



Kayaking



Salmon fishing

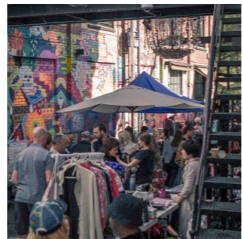
■ The productive street



Production



Street art

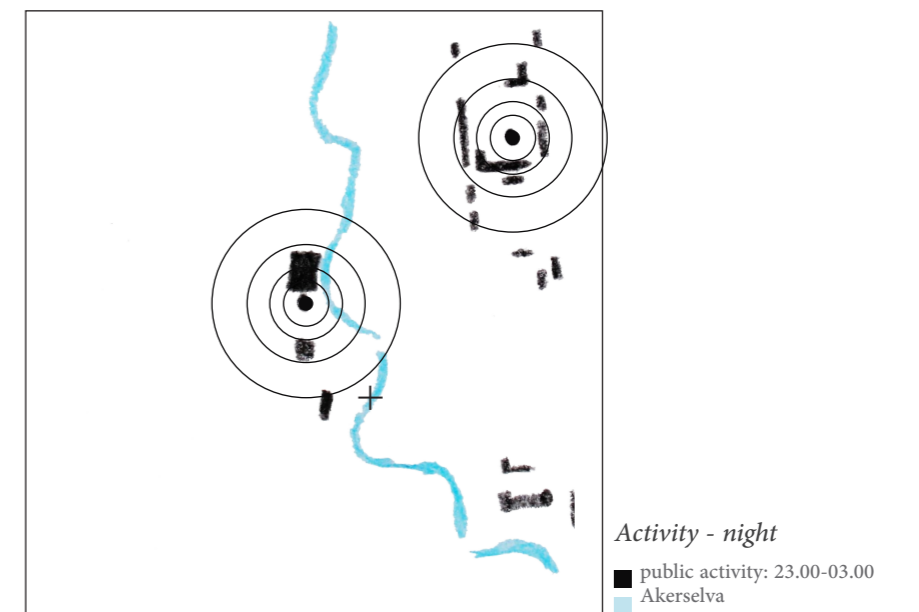
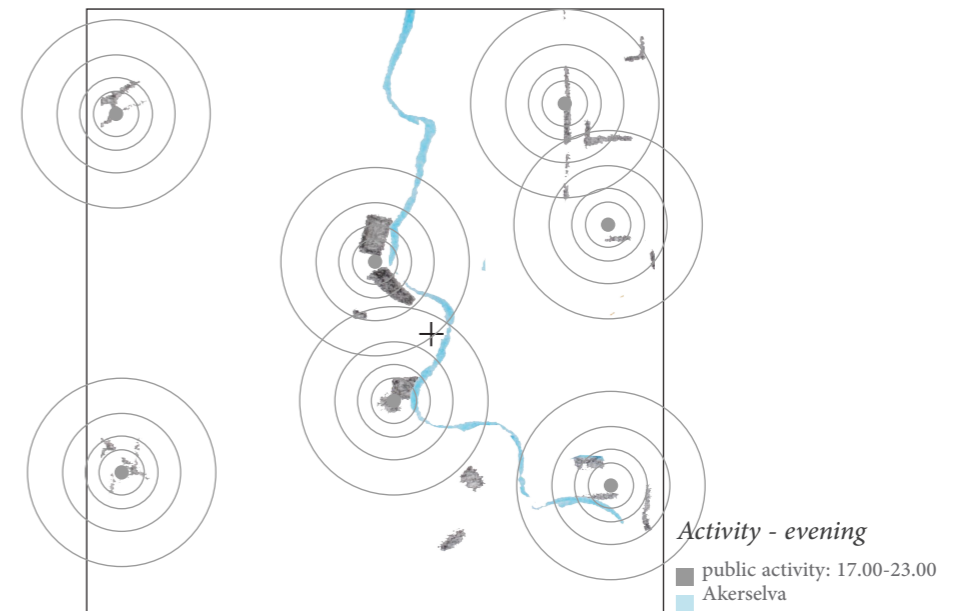
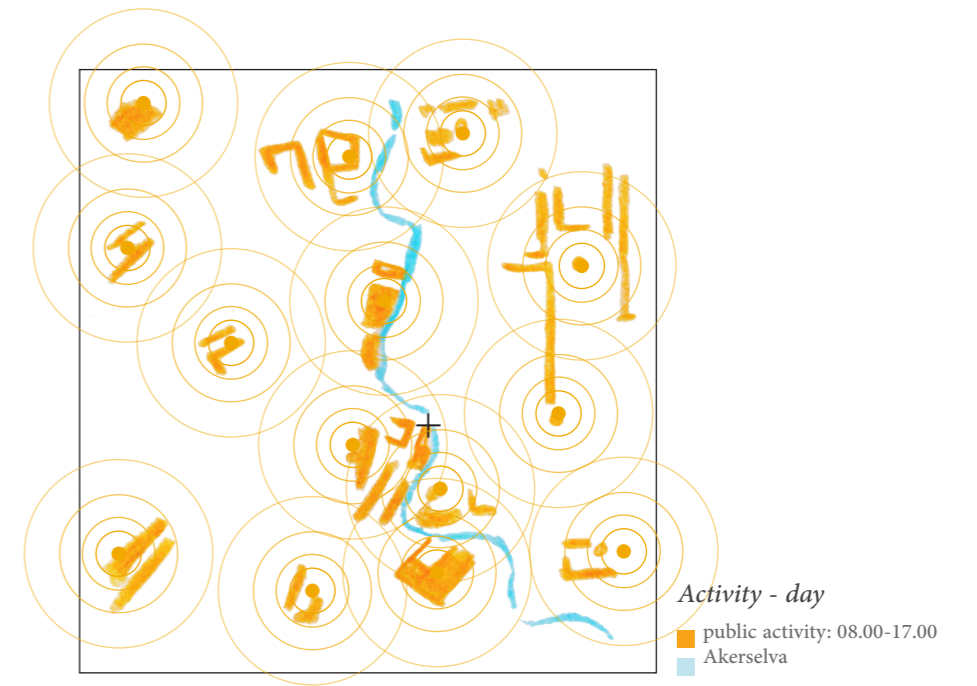


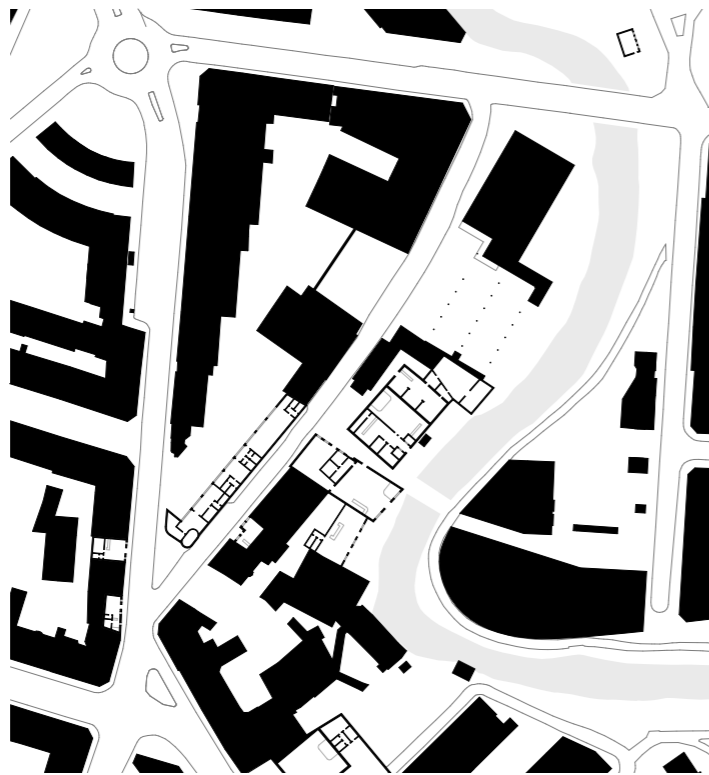
Creative production + art school



Ingensteis + Blå







Nolly map of Brenneriveien

- Public
- Private
- Akerselva



Façades

Current sun conditions in Brenneriveien



March 22. 09.00



March 22. 12.00



March 22. 15.00



March 22. 18.00



June 22. 09.00



June 22. 12.00



June 22. 15.00



June 22. 18.00



December 22. 09.00



December 22. 12.00



December 22. 15.00



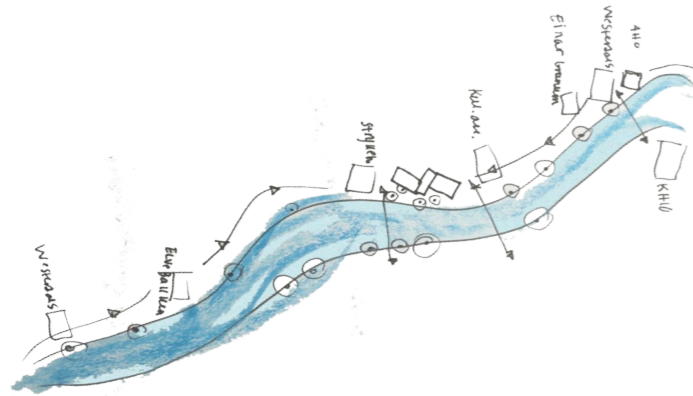
December 22. 18.00

REFLECTIONS + ANALYSIS

The Brenneriveien Area

Qualities:

-The juxtaposition of green recreational areas, and the late 1800's industrial architecture



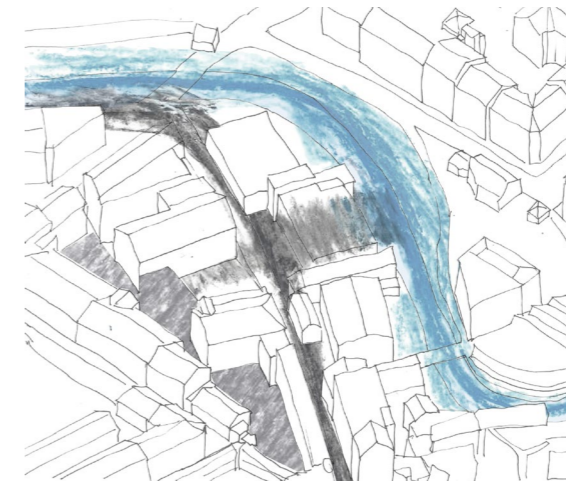
-Brenneriveien is already a creative and cultural hotspot. Thus any new intervention should encourage cooperation with these actors.

-The site contains important traces of important epochs in Oslo's history. From an agricultural economy, to an industrial society, and today's knowledge based economy.



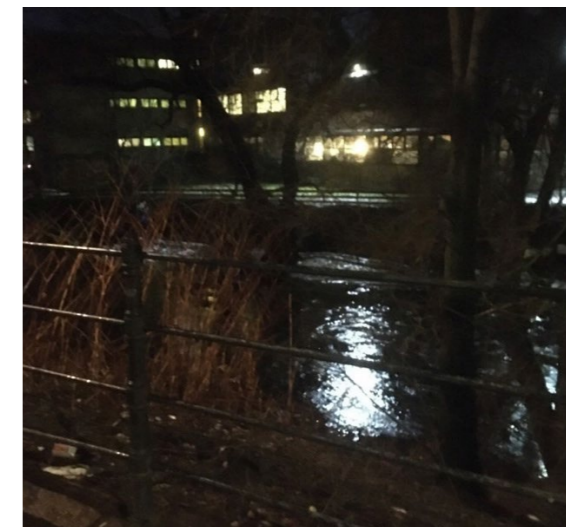
Potentials:

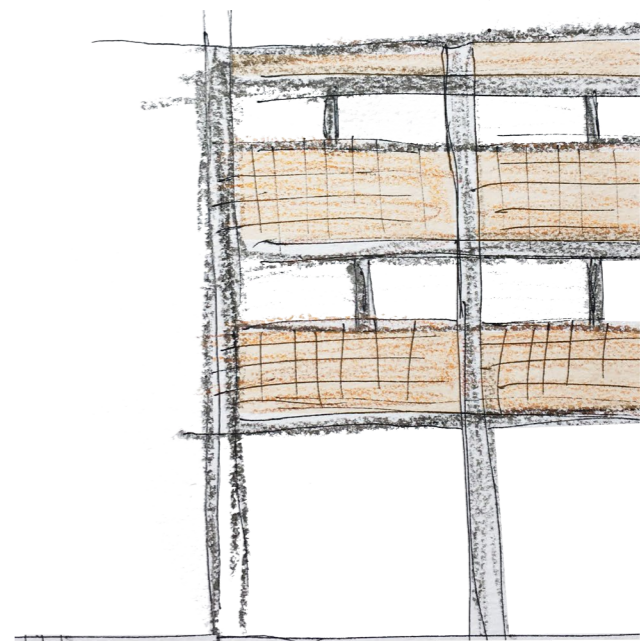
-The intersections of the recreational landscape, and the productive city should be explored



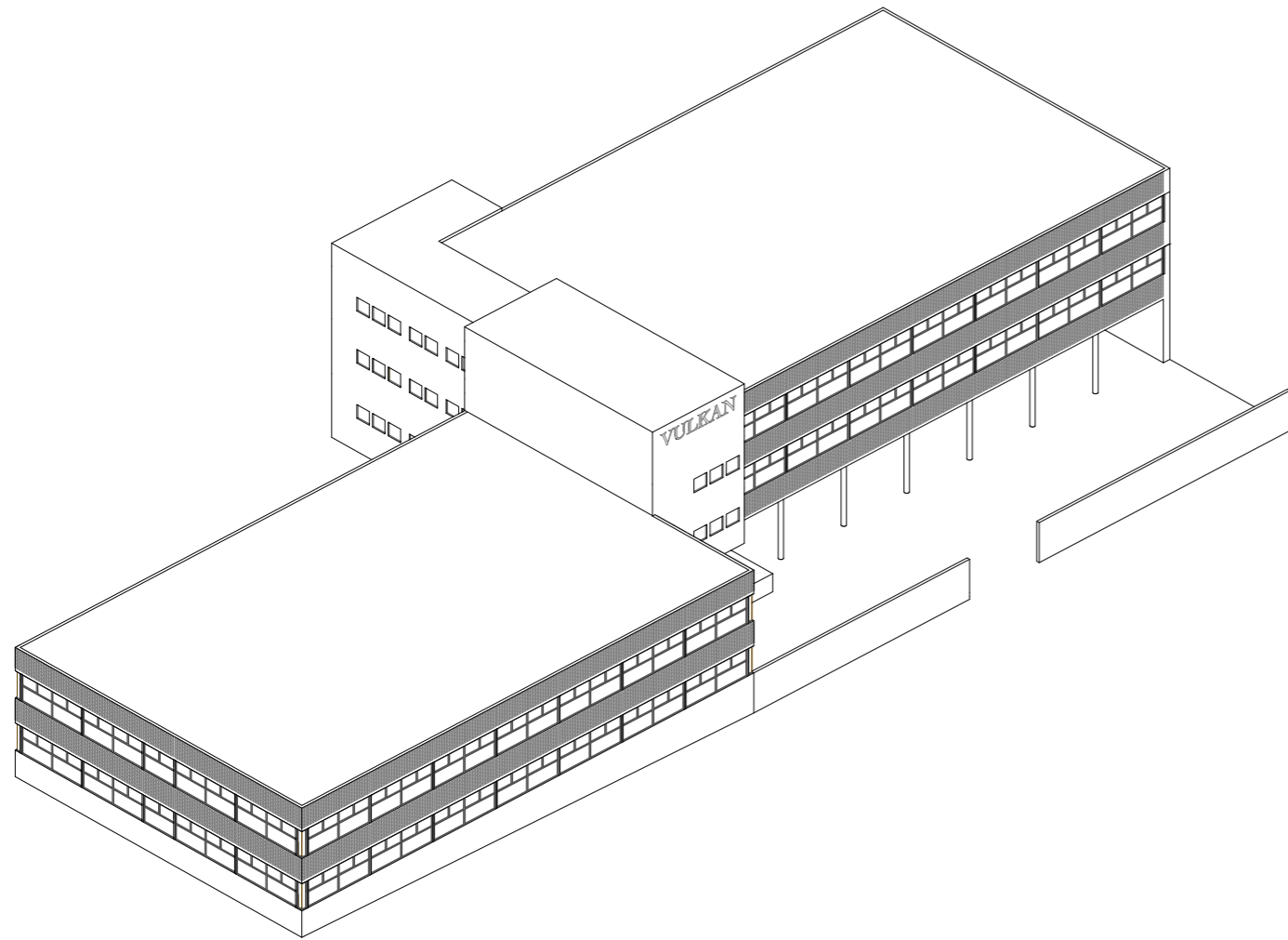
-There seems to be a mismatch between architectural expression and program in Brenneriveien. A key characteristic of the prevailing industrial architecture is the heavy and closed façades. This creates a barrier between the extroverted programs, and the public city.

-The area might be perceived as unsafe due to poor lighting. The main lightsource towards the river are floodlights, presumably to discourage theft.





THE BUILDING



Brenneriveien 11 was designed by Norwegian architect Harald Hille in 1967, to serve as a warehouse for Vulkan Foundry. However Vulkan ceased operations only one year later in 1968, and Brenneriveien 11 was re-purposed for various small scale industrial ventures. Since the late 1980's the building has mainly been used as office spaces and storage.

The building is divided into two separate wings, connected by a central core, with a total area of 3 800 m². The southern wing is raised above ground, providing sheltered loading docks, and the terracotta facade blends nicely with the surrounding 1890's industrial brick architecture. Hille used a standard prefabricated structural system of steel beams and columns, topped with a porous concrete slab. Lateral support is provided by a top layer of in situ concrete. Moreover, during our research we discovered that the architect actually designed the building twice, using two different variations in structural systems.

Owner 1967: "Vulkan Jernstøberi og Mekaniske Verksted"

Owner 2020: "SIO", Foundation for Student Life in Oslo

Program 1967: storage hall

Program 1969-1980: Production facilities a variety of industries and smaller factories.

Program 1980-2020: Since 1980 and the de industrialisation the building has been rented out to a variety of different businesses like, production companies and film producers. All offices vary in scale and because of the buildings simple structure it has been possible divide and open spaces after whats required from the tenants. The site has also been rented out for private car-parking.

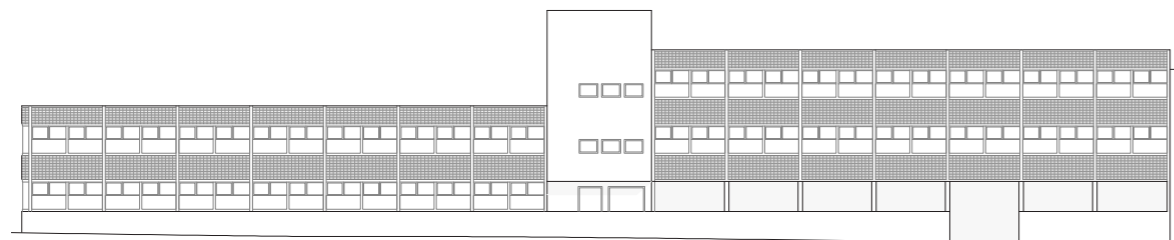
Program 2020- : SIO now owns the building and they want to tear down all existing building mass and build a brand apartment block for student-housing



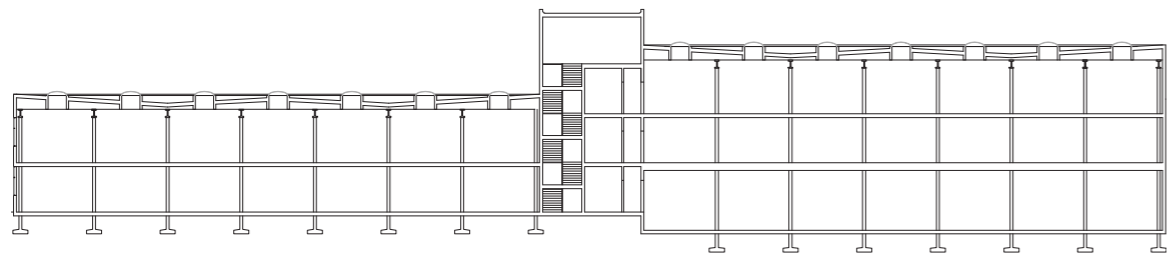
Facade 2020 1:500



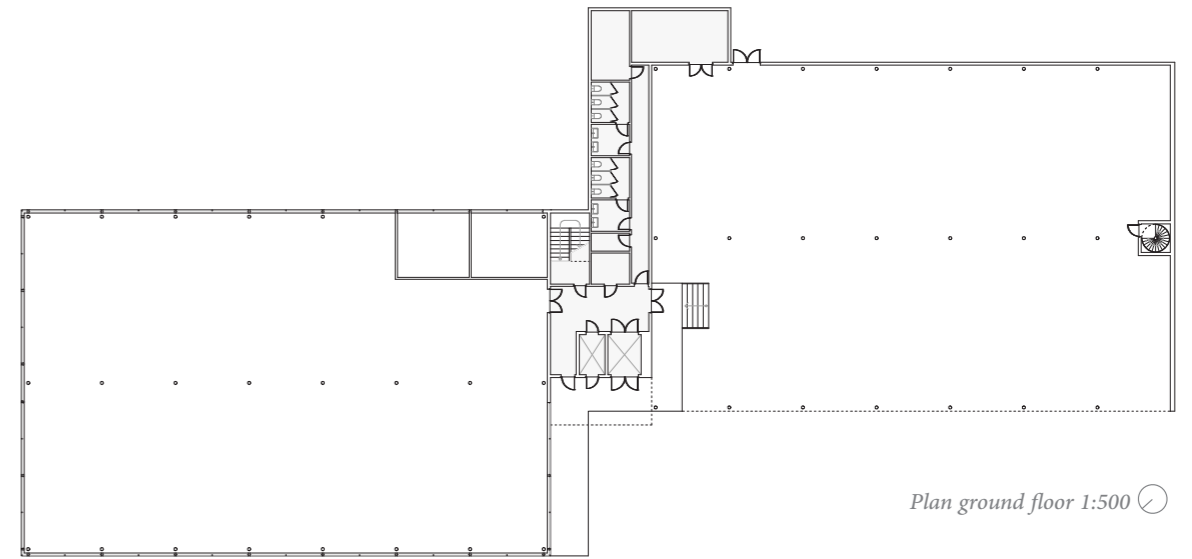
Facade 2020 1:500



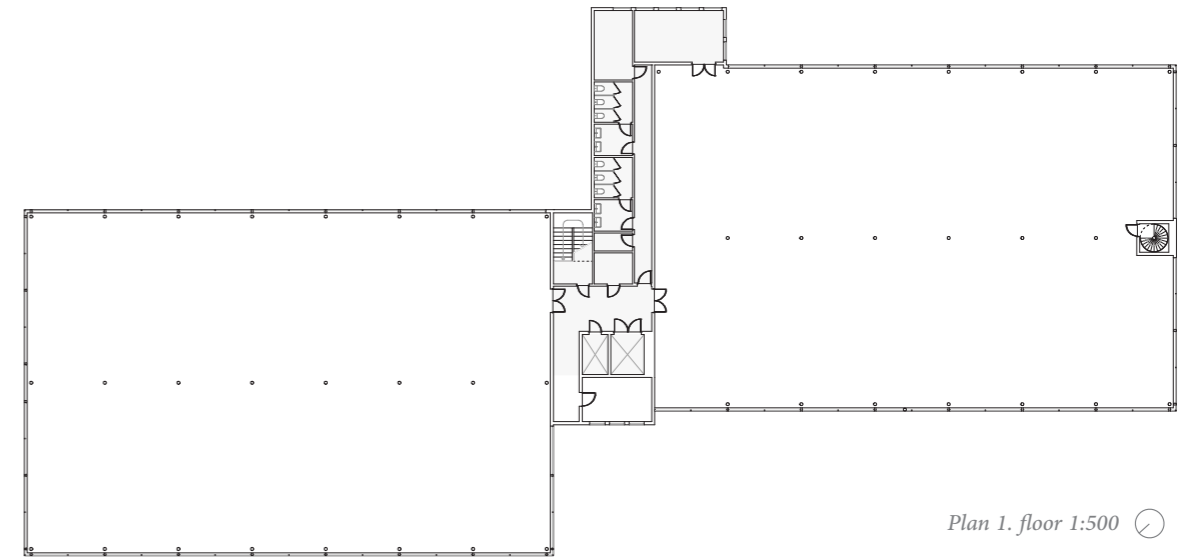
Facade 1967 1:500



Section 1967 1:500



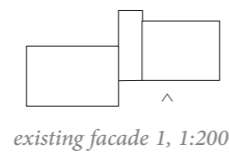
Plan ground floor 1:500



Plan 1. floor 1:500



Added elements in western facade
Graffiti, Flood light, Front sign, light post

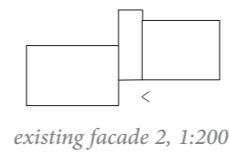


existing facade 1, 1:200

Technical condition of western facade
The original terracotta and concrete has no visible damage. All windows are intact.

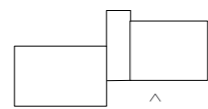
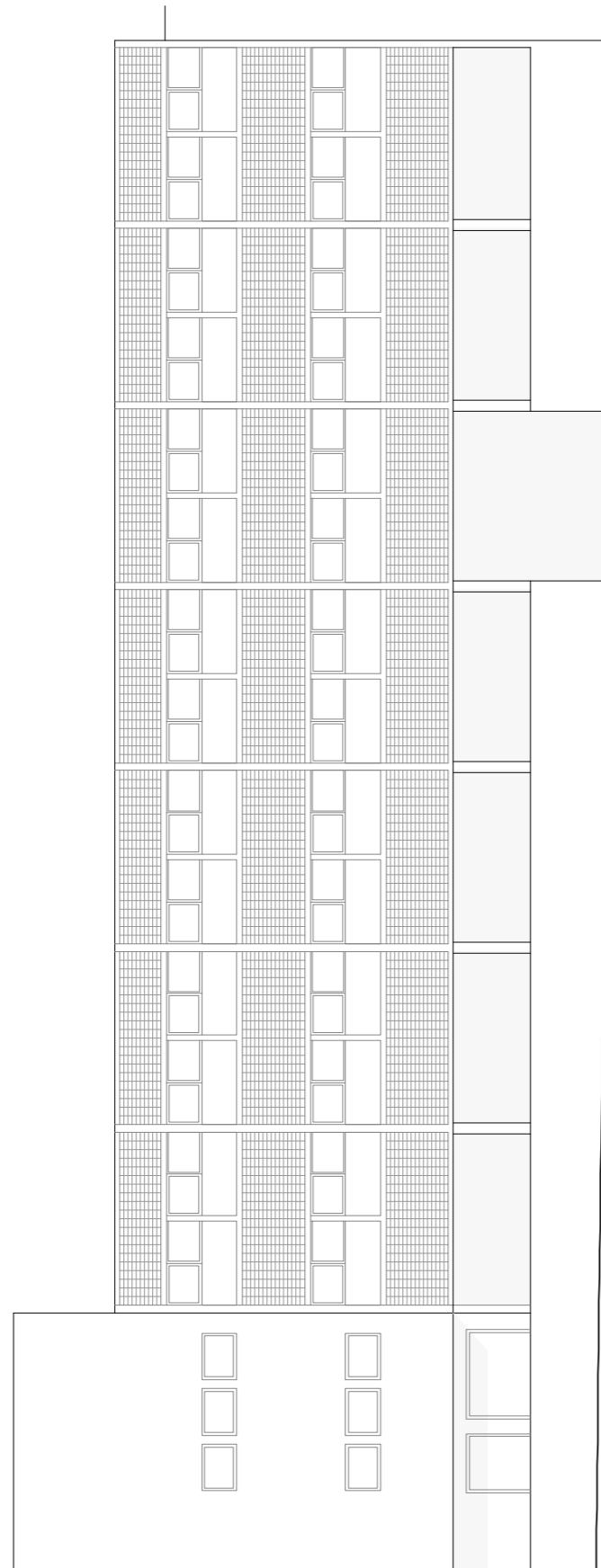


Added elements in southern facade
Anextensiveentrancefordeliveryofgoods,Concrete ramp, flood light,corrected steel roof over entrance. Interior steel grating in all windows.

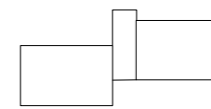
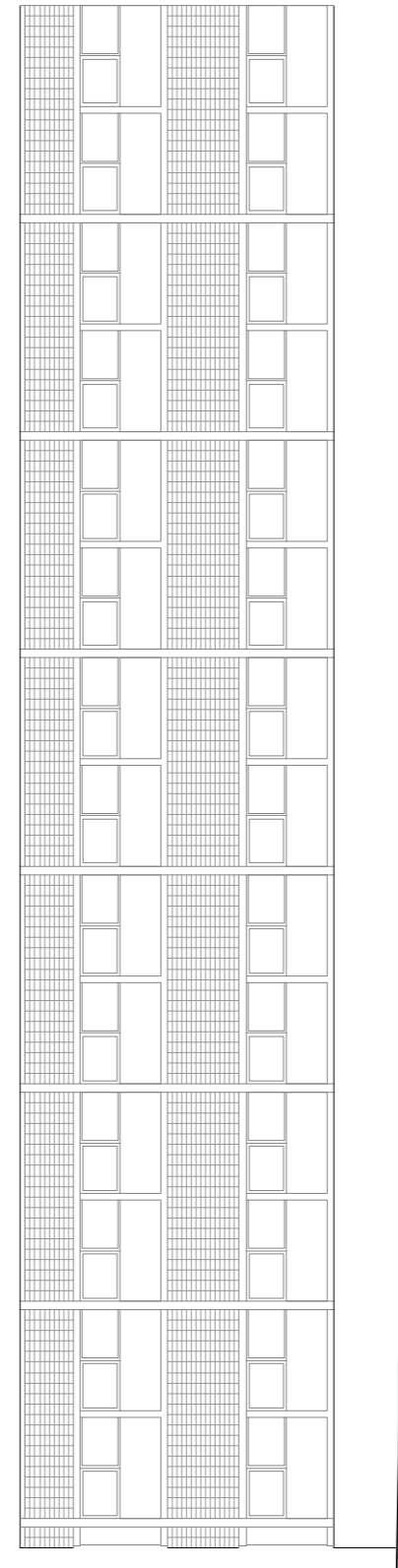


existing facade 2, 1:200

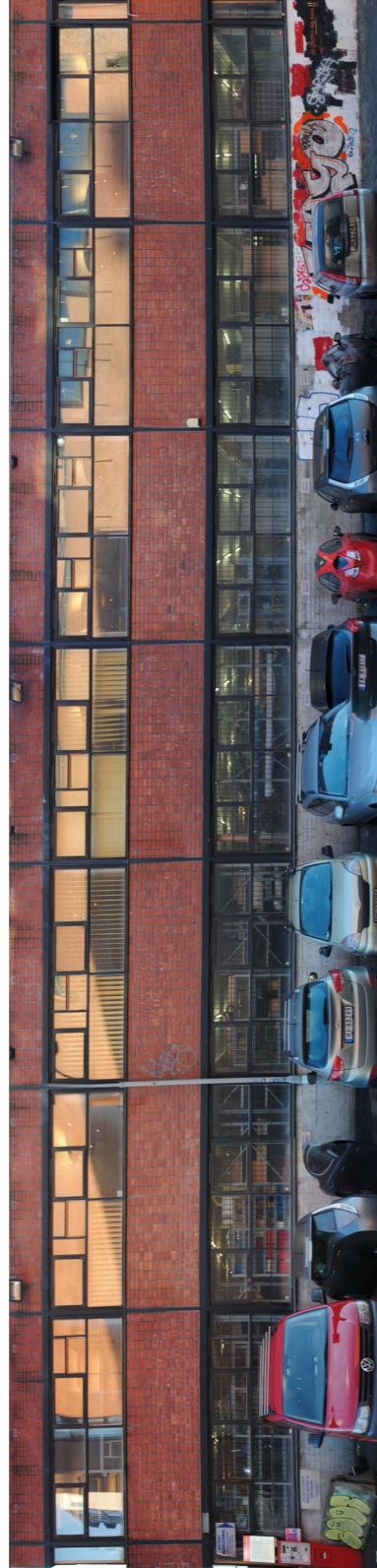
Technical condition southern facade
The original terracotta and concrete in the facade has no visible damage. All windows are intact. Some damage and crack in ramp.



Original facade, year 1967, 1:200

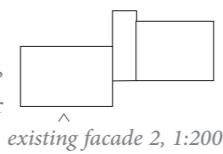


Original facade, 1967, 1:200



Added elements in western facade

Interior steel grating in all ground floor windows, graffiti, flood light, parking machine, gutter, car parking



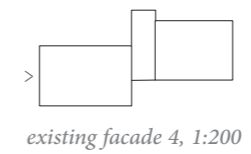
Technical condition western facade

The original terracotta is in good condition. Growth of moss in upper parts of facade has caused cosmetic changes.



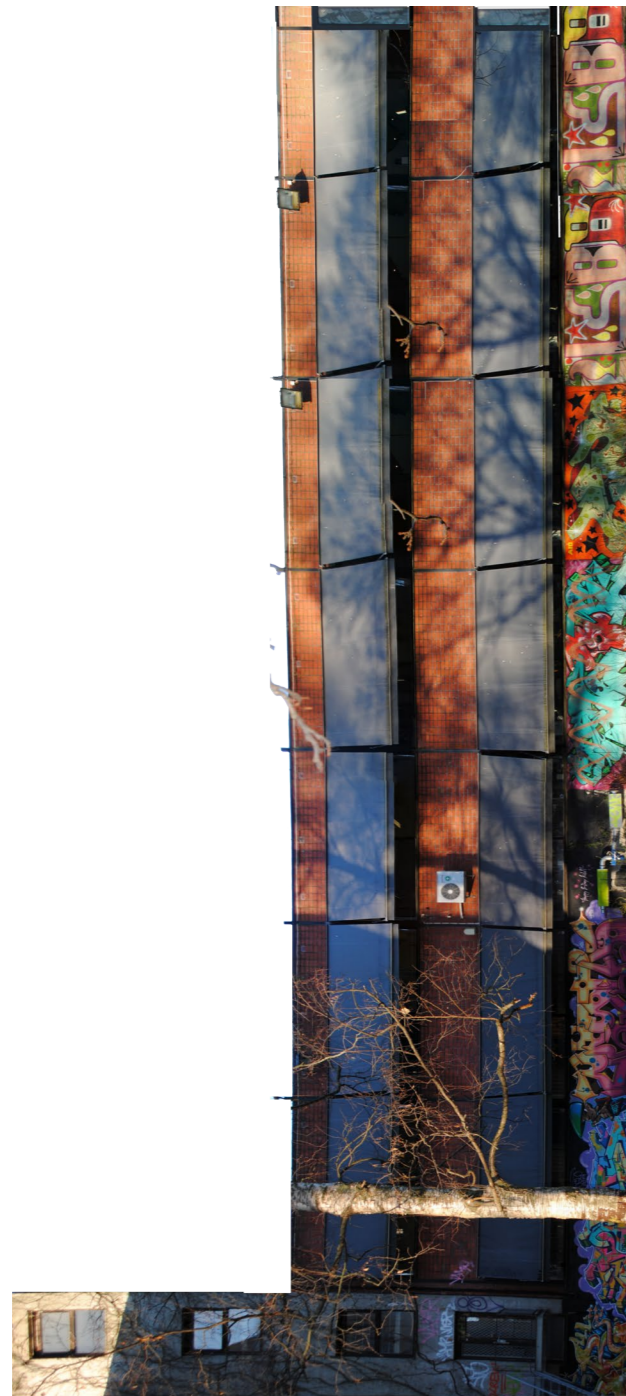
Added elements in northern facade

Ventilation, graffiti, Interior steel grating in windows on ground floor.



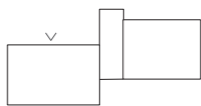
Technical condition northern facade

The original terracotta and concrete in the facade has no visible damage. All windows are intact. Some damage and crack in ramp.



Added elements in eastern facade

Interior steel grating in all ground floor windows, graffiti, flood light, parking machine, gutter, car parking



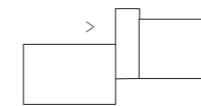
existing facade 5, 1:200

Technical condition eastern facade

The original terracotta and concrete is in good technical condition. All windows are intact

Added elements in northern facade

Graffiti, flood light, a planted vine that climbs the concrete facade.



existing facade 6, 1:200

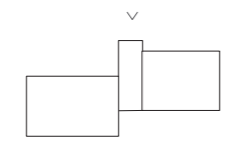
Technical condition northernr facade

The original concrete in the facade has no visible damage. Growth of moss underneath some windows has caused some cosmetic changes.



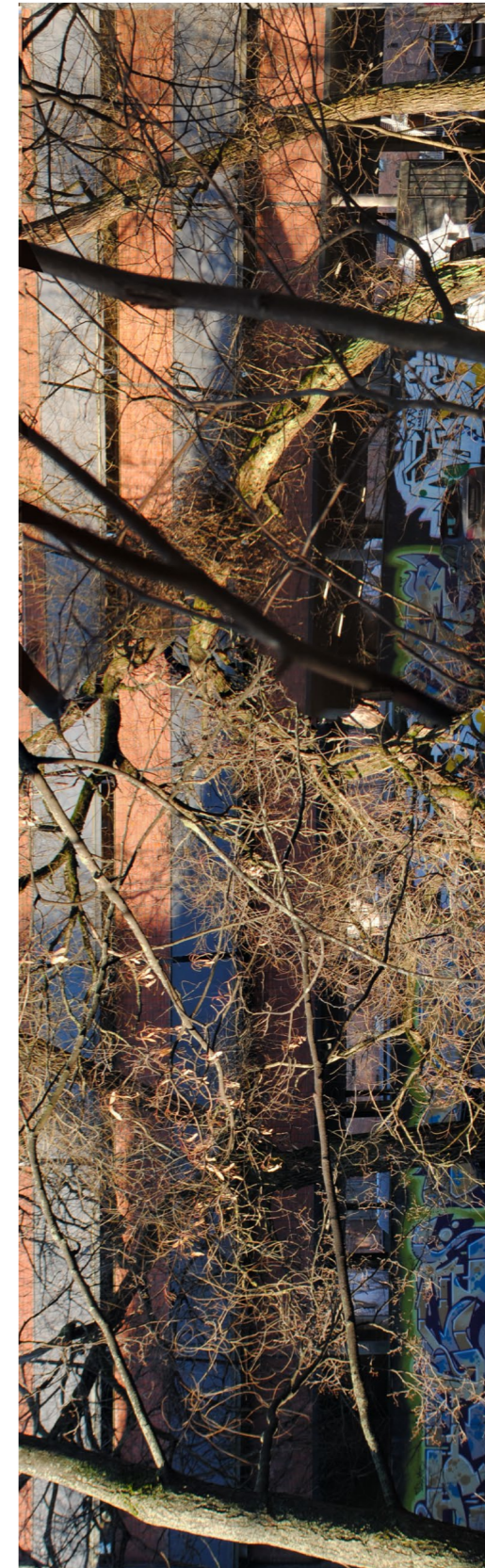


Added elements in eastern facade
Graffiti, awnings over all windows,

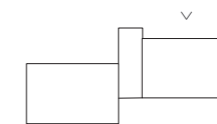


existing facade 7, 1:200

Technical condition eastern facade
The original concrete is in good technical condition. All windows are intact

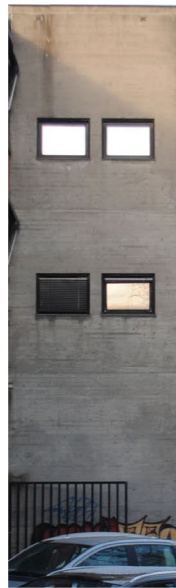


Added elements in eastern facade
Graffiti, awnings over all windows.

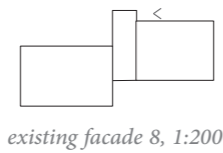


existing facade 8, 1:200

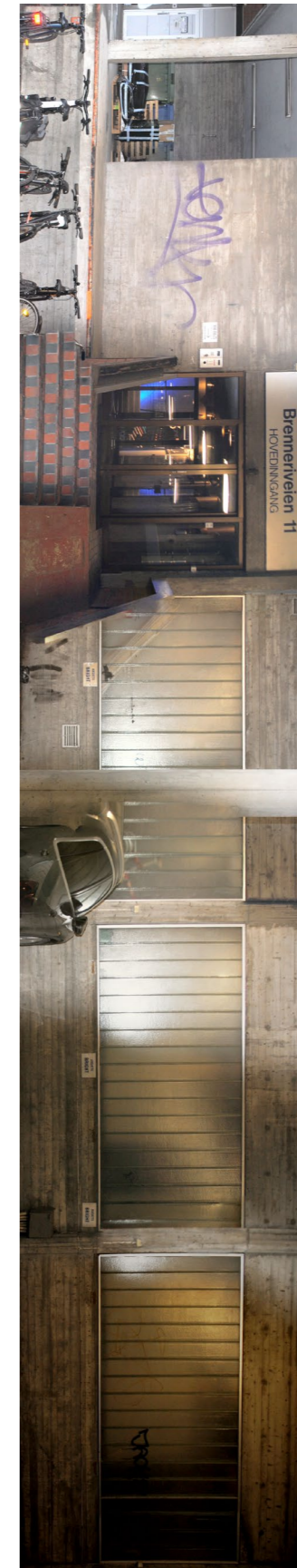
Technical condition eastern facade
The original terracotta and concrete in has no visible damage. Growth of moss in the upper parts of facade has caused some cosmetic changes. So me damage and crack in concrete ramp.



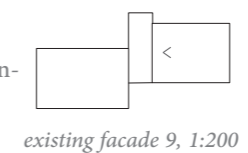
Added elements in southern facade
Graffiti



Technical condition southern facade
The concrete in the facade has no visible damage. Growth of moss in the upper parts of facade has caused some cosmetic changes. Some damage and crack in concrete ramp.



Added elements in southern facade
Graffiti, signs, sliding door. Awnings over all windows, bike parking, sockets for EV charging.



Technical condition southern facade
The original concrete is in good technical condition. All glass blocks are in good condition.



view from Brenniveien



view from Brenniveien



front facade



back facade



Exterior Materiality



pre-cast concrete column



in-situ concrete + vine



terracotta tiles + awnings



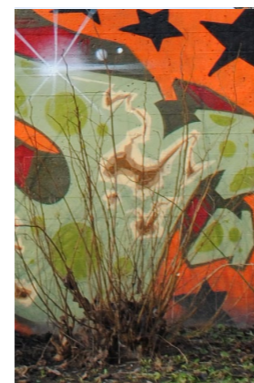
cut concrete in door-frame



concrete overhanging roof



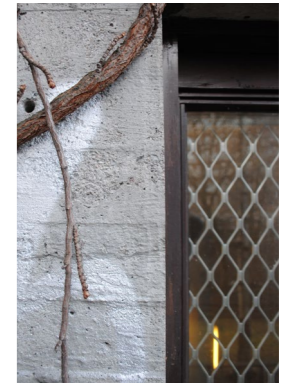
proflit glass



graffiti



terracotta tiles



in-situ concrete + door



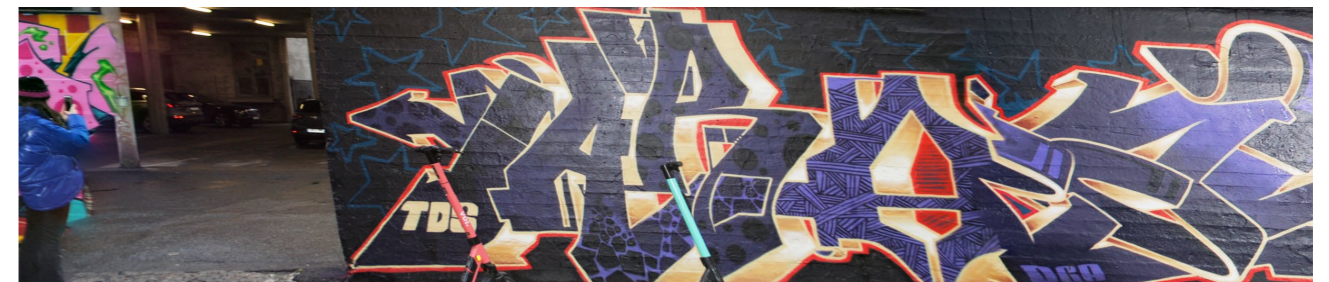
facade 5



facade 2



facade 5



facade 1



facade 8



facade 1



facade 6



facade 7



The Vegetation in Brenneriveien11

The area at the site facing the river appears lush with a wild and rich vegetation. This green belt follows the whole river from Bjørvika all the way to Frysja. The trees are of many different species, with large crowns that envelope the building and the river. The vegetation has been allowed to grow without human intervention, resulting in a natural and calm river landscape. This is in stark contrast to the urban and more noisy street in the opposite side of the building.

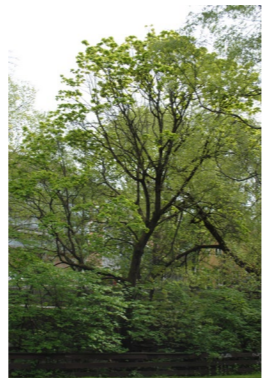
The green belt also spills over to the facade. Light vegetation is growing along its foundation, and vines are covering large parts of the central core. We find the nature to be a unique characteristic for the site that complements the old factory building. Therefore we want to let the nature continue to grow freely, allowing the urban and recreational landscapes to co-exist.



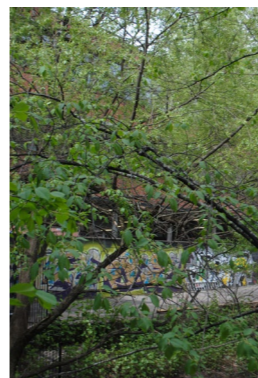
tree: 1



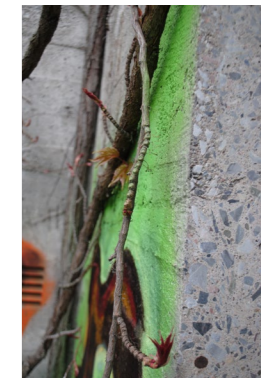
tree: 2



tree: 3



climbing plant facade 6



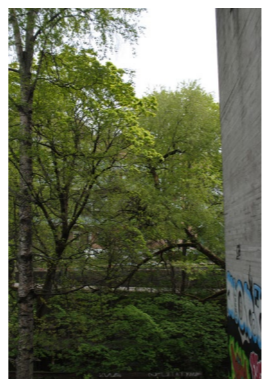
climbing plant facade 6



tree: 4



tree: 5



tree: 5



climbing plant facade 6



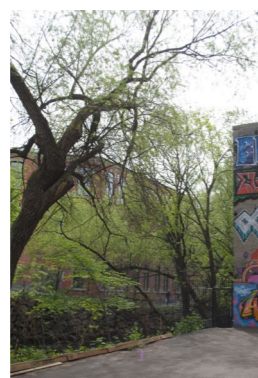
climbing plant facade 6



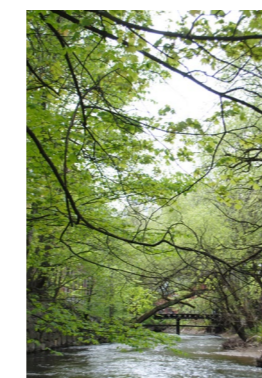
climbing plant facade 6



tree: 6



tree: 7



lower vegetation front facade



lower vegetation front facade



lower vegetation front facade

INTERIOR - EXTERIOR

Views and sight-lines from interior to exterior. The play between the industrial and the recreational became of great significance to the project.

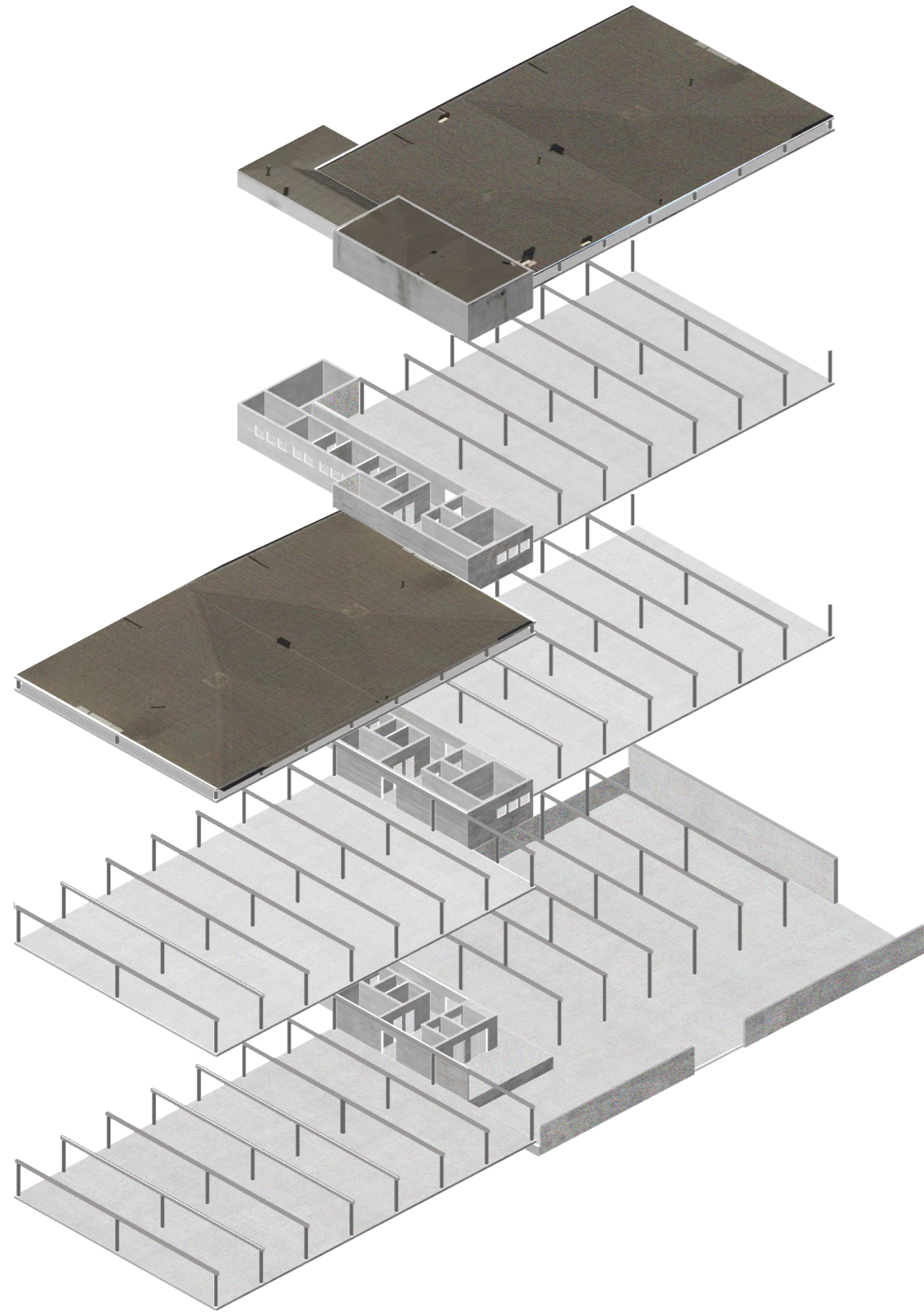


view from ground floor to river

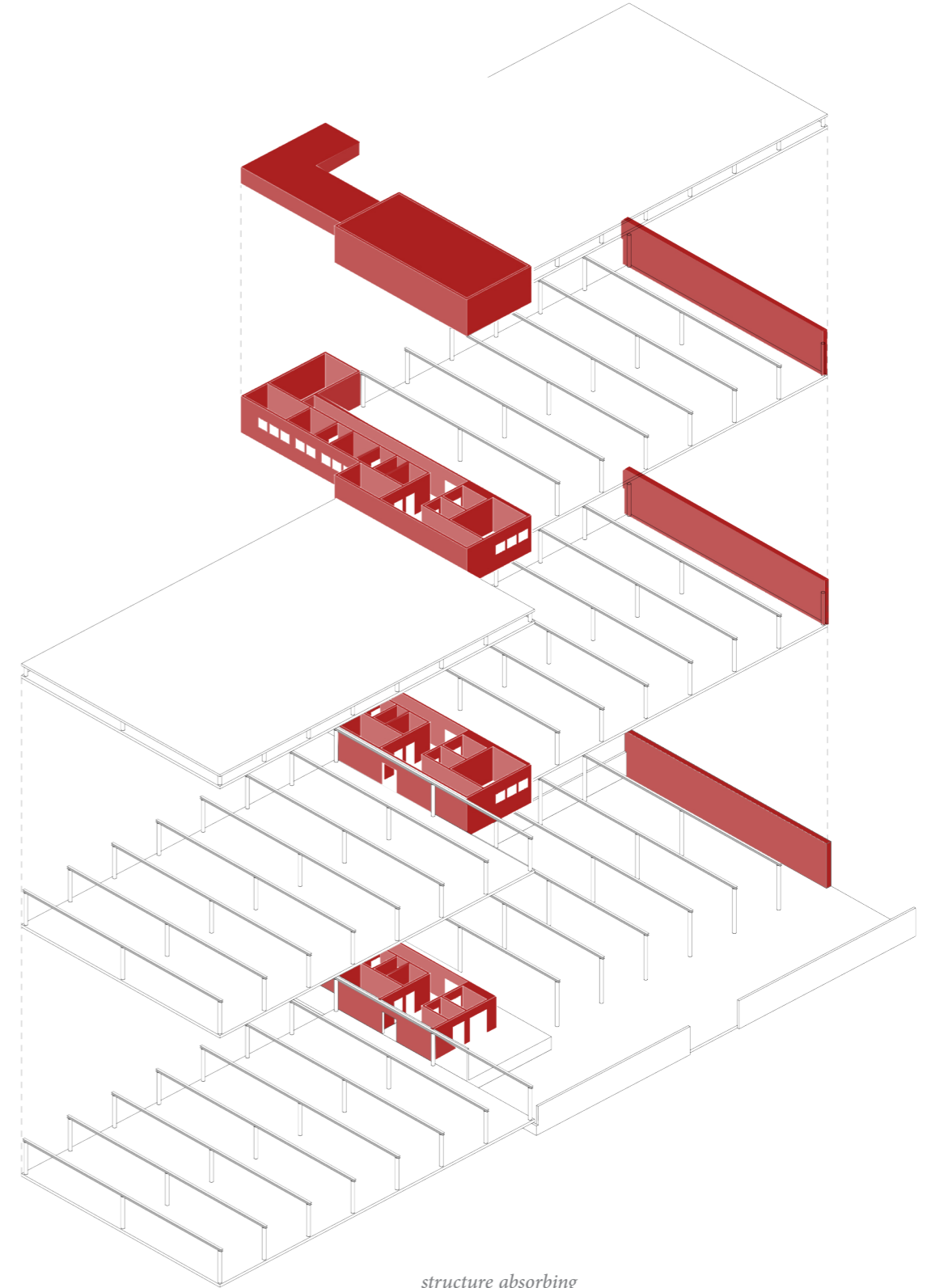


roof top view 3. floor towards Grunerhagen

Construction



structural materiality



*structure absorbing
lateral forces*

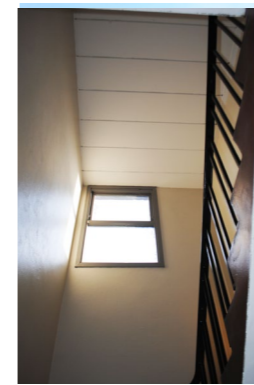


ground floor - storage



1. floor - office space

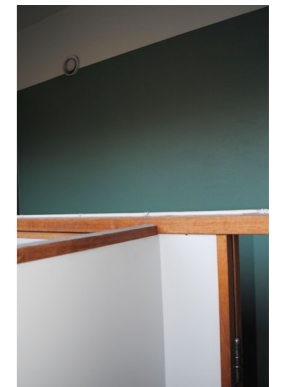
Interior Materiality



pre-fab concrete ceiling, in-situ concrete wall and stair



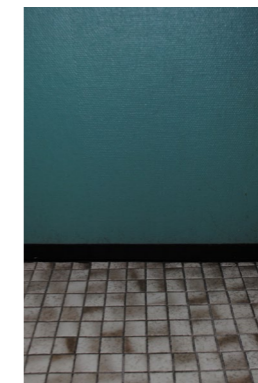
in-situ concrete wall



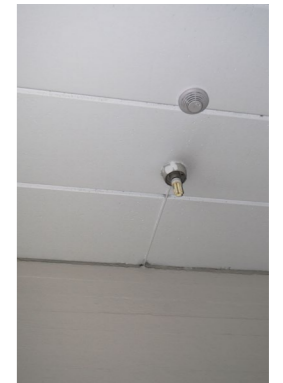
partition walls in toilet



painted steel beam



tiles + wall colour in bathroom



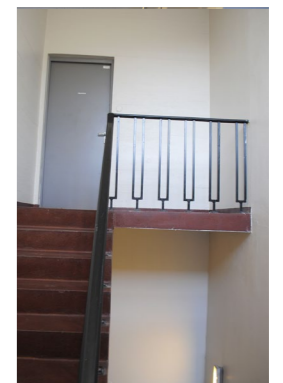
pre-fab concrete ceiling in-situ concrete wall



load bearing steel beam covered with fire isolation



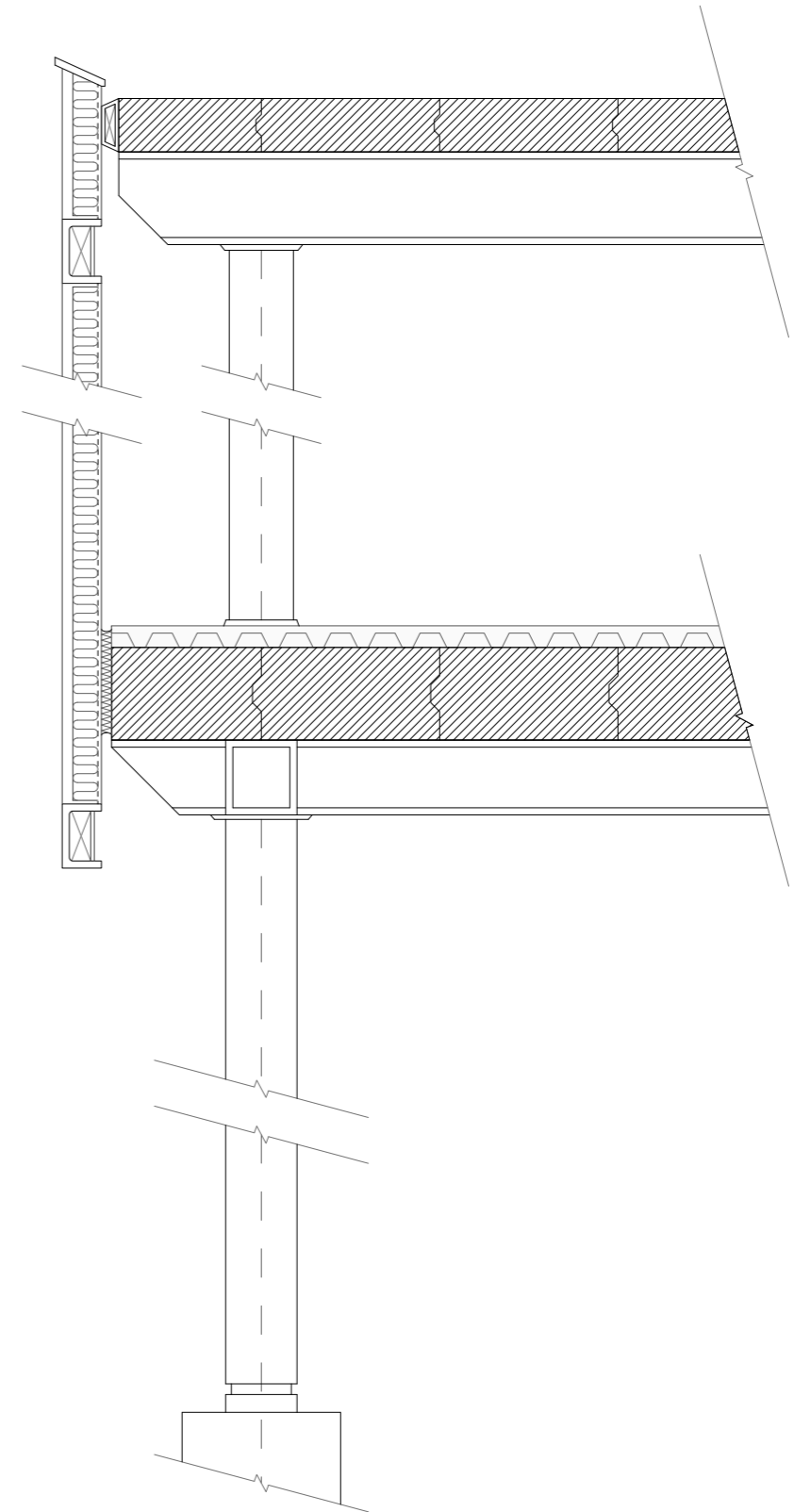
view from toilet



in-situ concrete stairway with steel railings

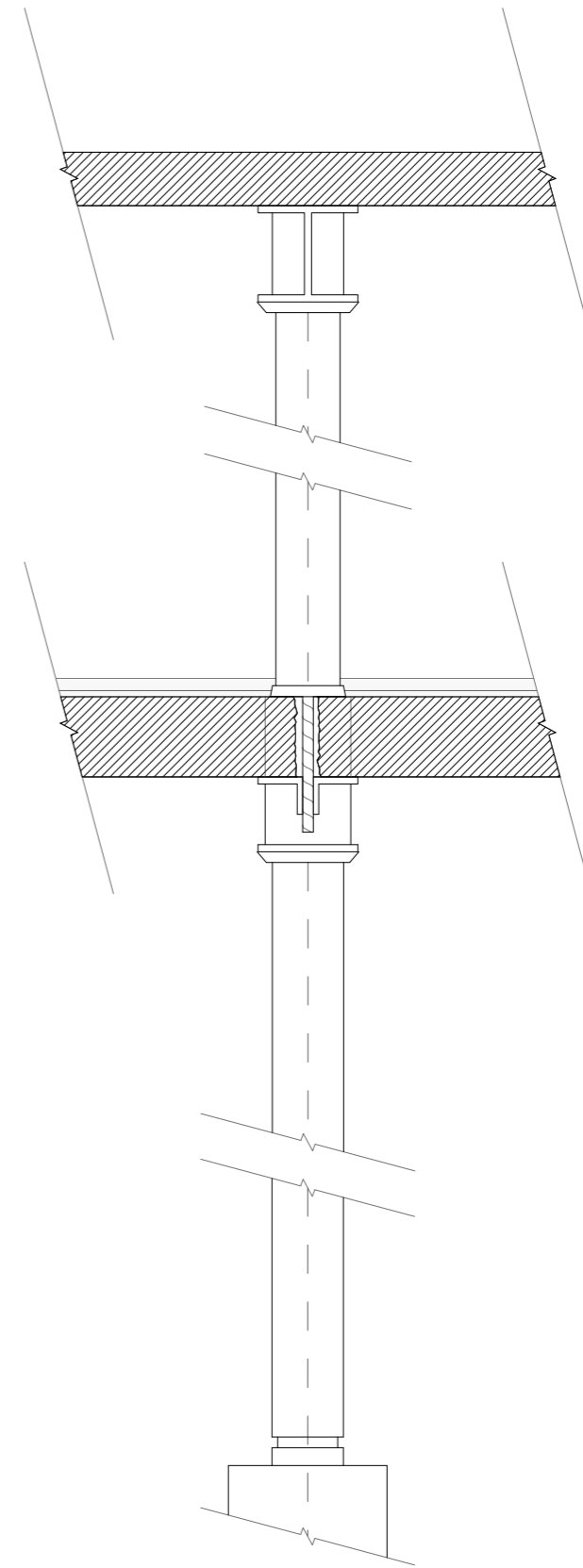


outer wall

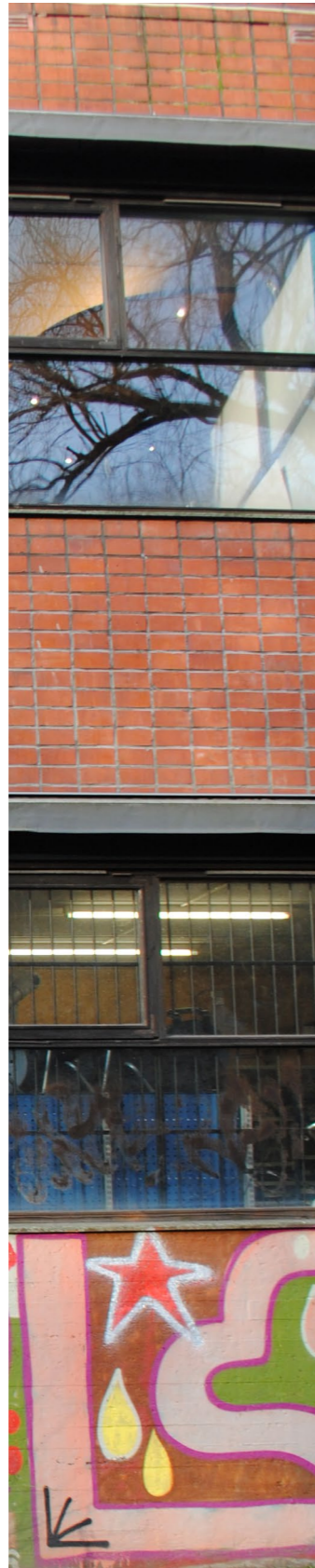




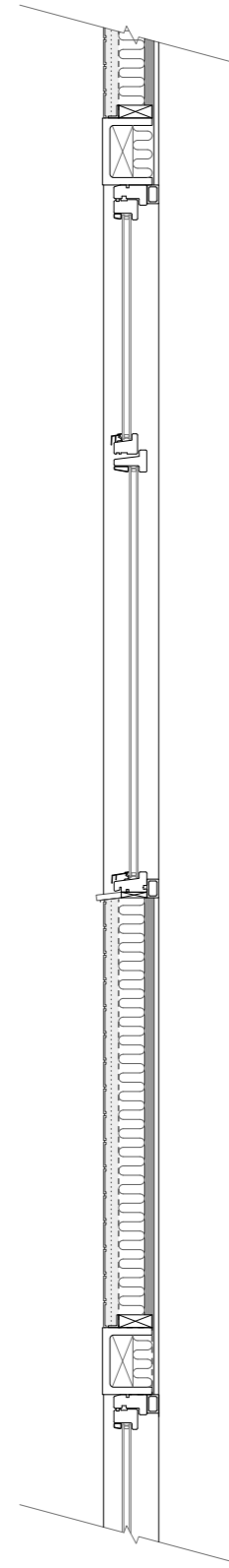
ground floor - storage



structural detail



outer wall



original facade detail

REFLECTIONS + ANALYSIS

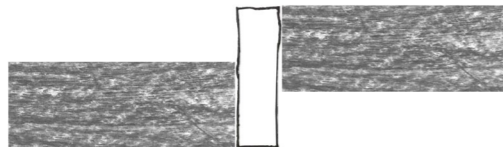
the building

Qualities:

The structure is open, modular, and adaptable



There is a natural division in the building



Original, industrial, and robust materiality



The open ground floor that connects street with the river

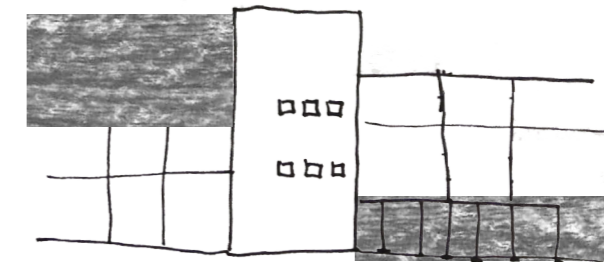


The repetitive facade serves as a blank canvas, allowing street artists as well as local fauna to lay claim on the building

Potentials:

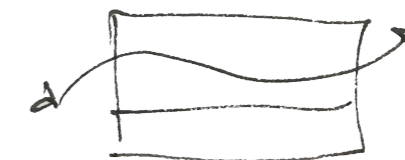
The repetitive structural system creates a spatial monotony within the building. We see a potential in

We are also looking at the possibility to expand the volume, in accordance with the structural logic of the building.



As with the larger context of Brenneriveien, the façades appear quite closed. Thus a central challenge is making the building more extrovert.

Improve indoor climate, regarding light and air quality.





THE PROGRAM

•
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productional education - 1960



productional education - 2020

THE PRODUCTION SCHOOL

To address our desire to reintroduce manufacturing into the city, we have settled on creating a production school in central Oslo. A production school is an alternative to upper secondary education. The school's target group are young student between the ages of 16 and 25 who have dropped out of either vocational or study-related education programs. Many of these teenagers need motivation and guidance to find a new way into either continued education or work.

There are currently three production schools in Norway. Hyssingen, located in Bergen, Hjeltnes Produksjonsskule in Hardanger, and Namsos Produksjonsskole. The Production School pedagogy focuses on learning through practical work and production instead of traditional theoretical teaching: learning by doing. The theoretical curriculum is integrated into the practical production and all production should generate income for the operation of the school. With this method, the overarching goal is to create a practical learning environment for personal growth. This will encourage and qualify each student to start and complete general and vocational education, or to enter into the labour market.

Today in Norway, there are approximately 13 300 people between the age of 16 and 21 that are not in any form of job or education. The Vocational schools have the highest number of drop-outs, where only 58 % of the students complete their degree within five years. The percentage of students dropping out is particularly high in the study programs concerning food preparation, handicraft, and construction.

During the semester, we discovered that we had a great surplus of square meters that could be utilized by a different program. Therefore we decided to include production offices and ateliers for local artists and manufacturers.

REFLECTIONS + ANALYSIS

the program, production school

As our prediploma more thoroughly explains, the task of this diploma is to create a production school. The programmatic research led us to the conclusion of said qualities and potentials.

Qualities:

Diversity of productions and workshops

Learning through production

Produce and sell goods and services

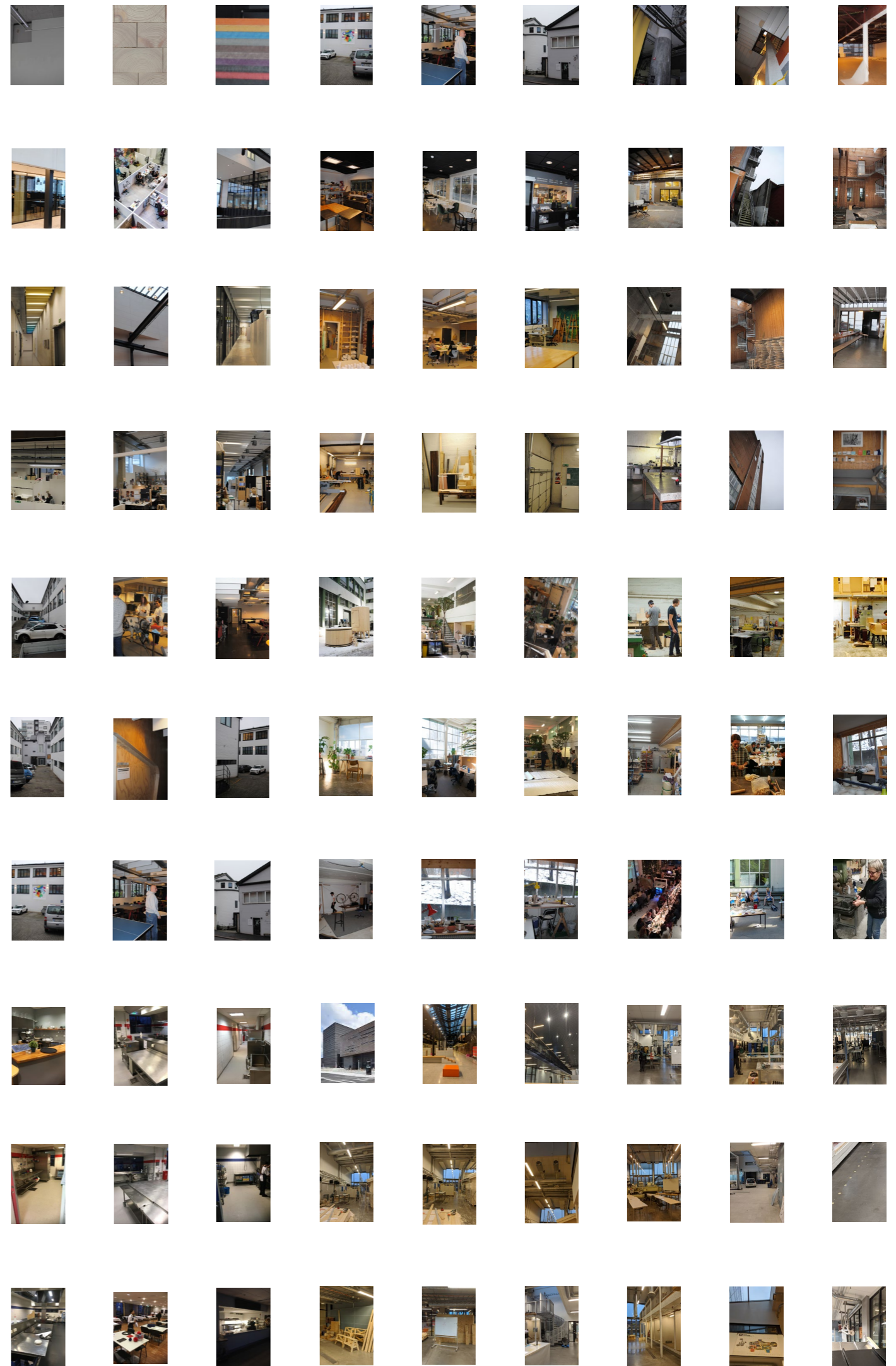
Small number of students

Potentials:

More public functions + activities

24 hour use of workshops and school facilities

Integration with the already established creative industries in Brenneriveien



BRENNERIVEIEN 11
















Production School

Production Office

General areas:









-  kanteen
-  flexible event space
-  spaces for socialisation
-  classrooms
-  market space
-  toilets
-  bicycle parking
-  "green" recreation space
-  sales area
-  office space

workshops:

- | | |
|--|--|
| <p>Food</p> <ul style="list-style-type: none">  bakery  restaurant kitchen  scullery  out door kitchen  ice-cream factory  public restaurant  public cafe  green house / fields | <p>Building</p> <ul style="list-style-type: none">  wood workshop  metal workshop  concrete workshop  building hall  3D lab + CNN |
|--|--|

Original program

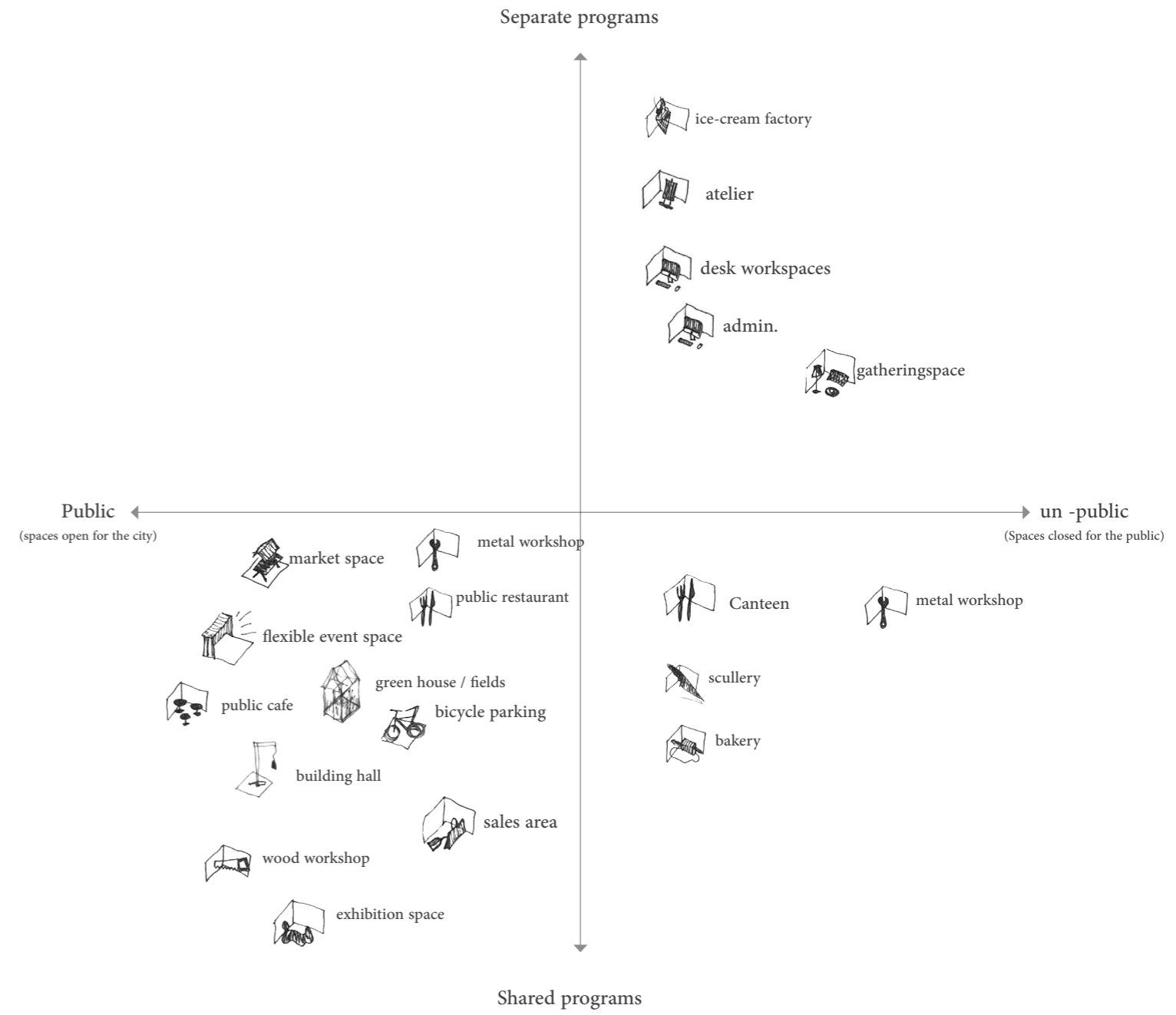
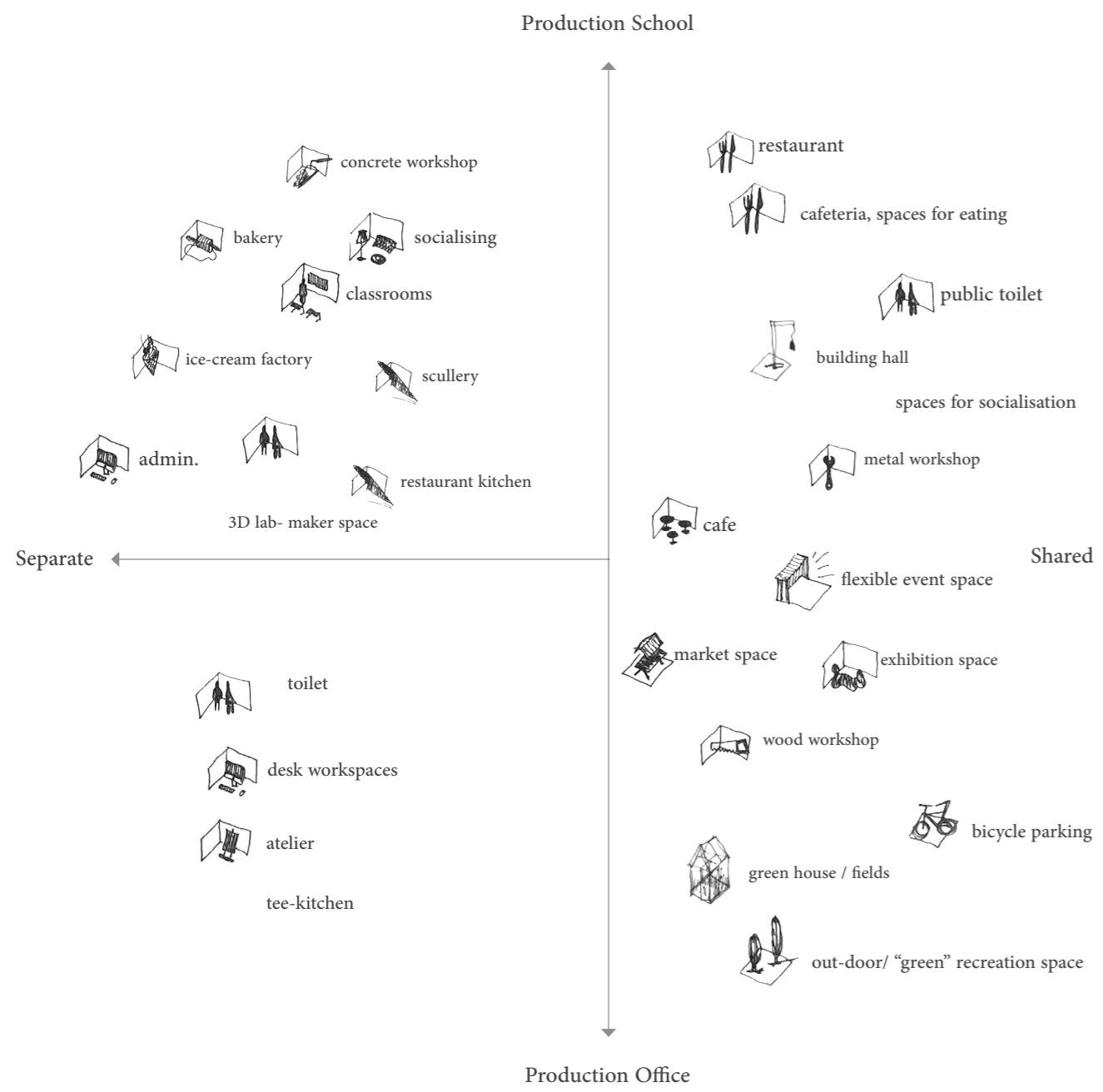
workshops:

-  wood workshop
-  building hall
-  atelier
-  exhibition space
-  office space
-  green house
-  public cafe
-  public restaurant

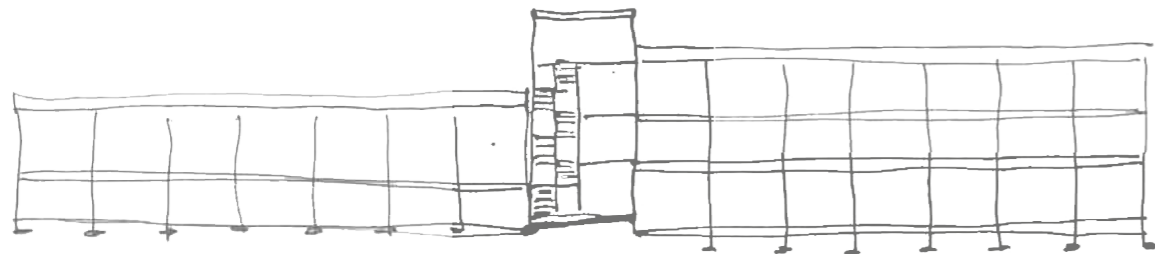
general areas:

-  kanteen,
-  flexible event space
-  spaces for socialisation
-  meeting rooms
-  toilets
-  bicycle parking
-  "green" recreation space
-  tee-kitchen

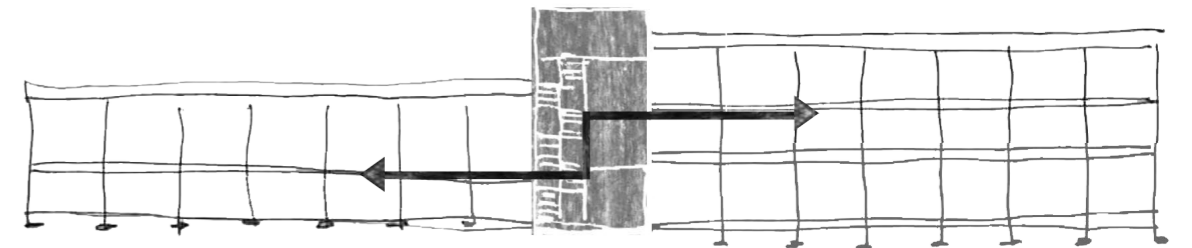
Added program



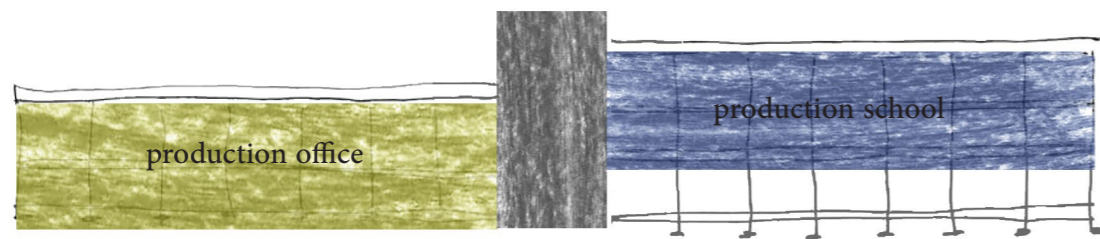
ORGANISATION
the production school



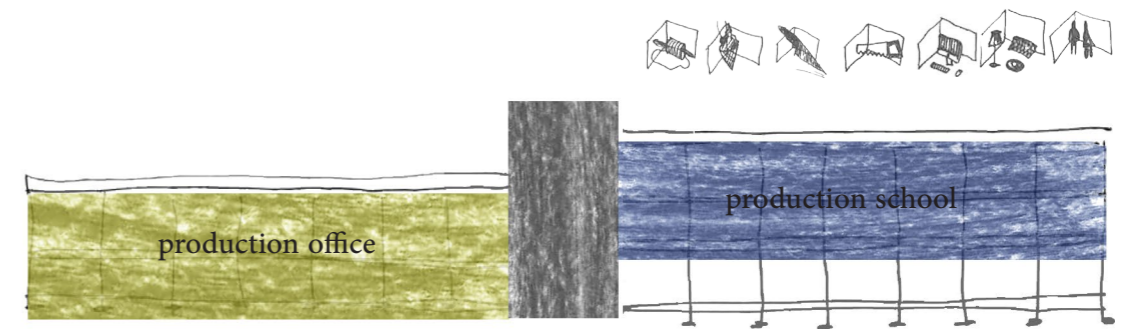
Current building



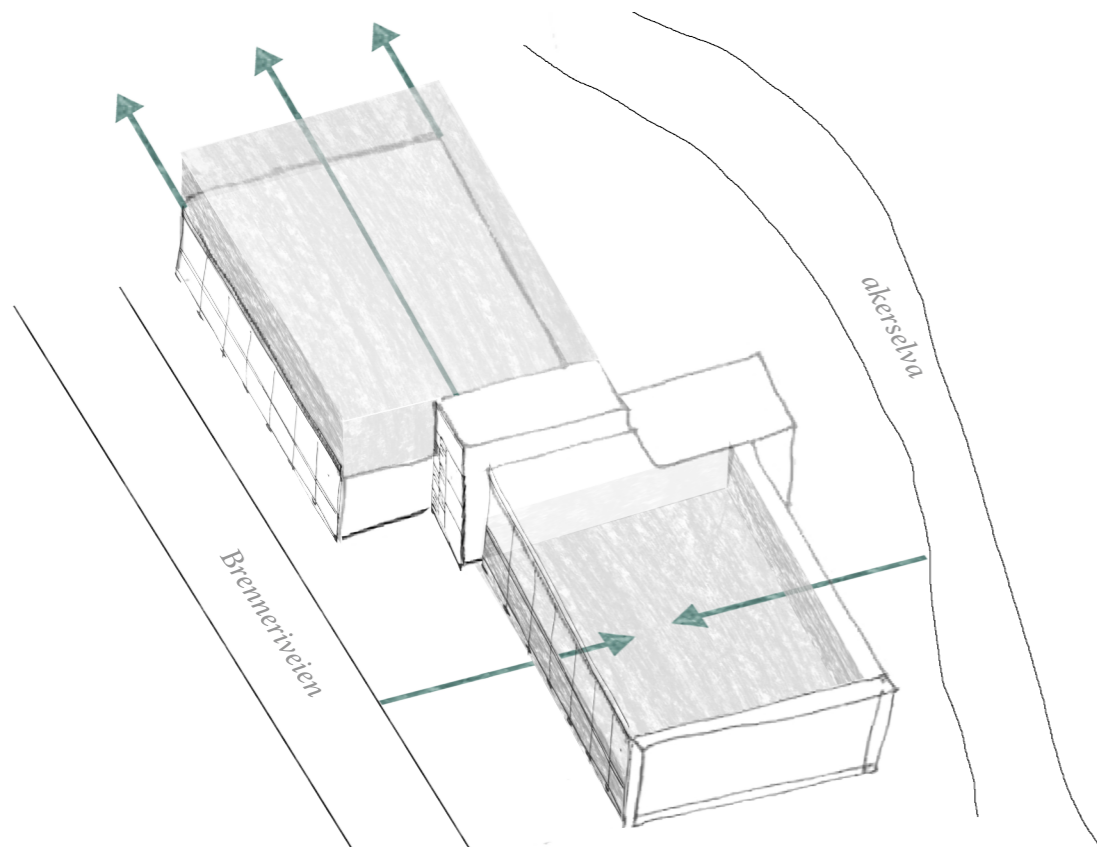
The concrete core connects and separates the building into two wings



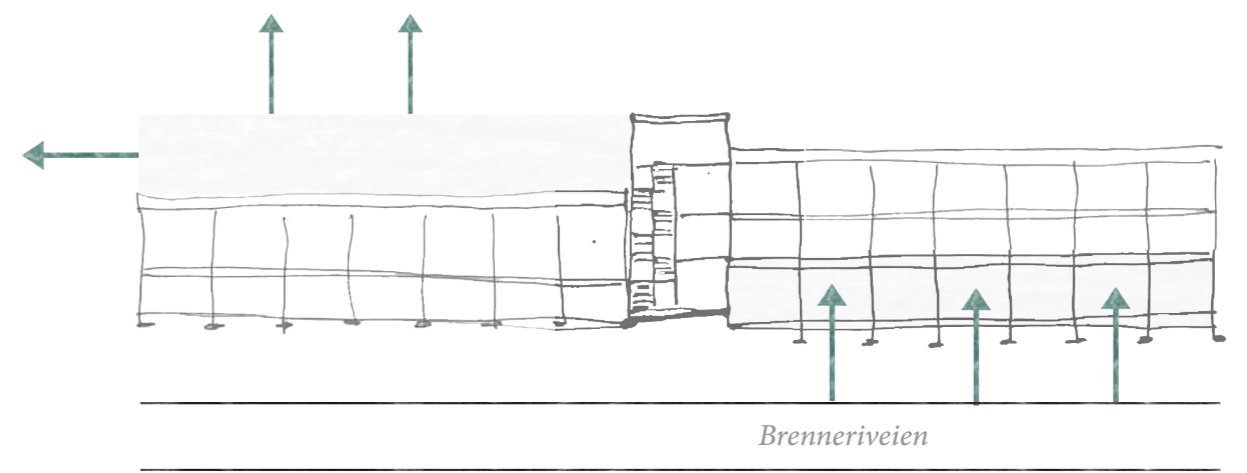
Early mappings led us to locate the school in the southern wing, towards the creative institutions in Brenneriveien



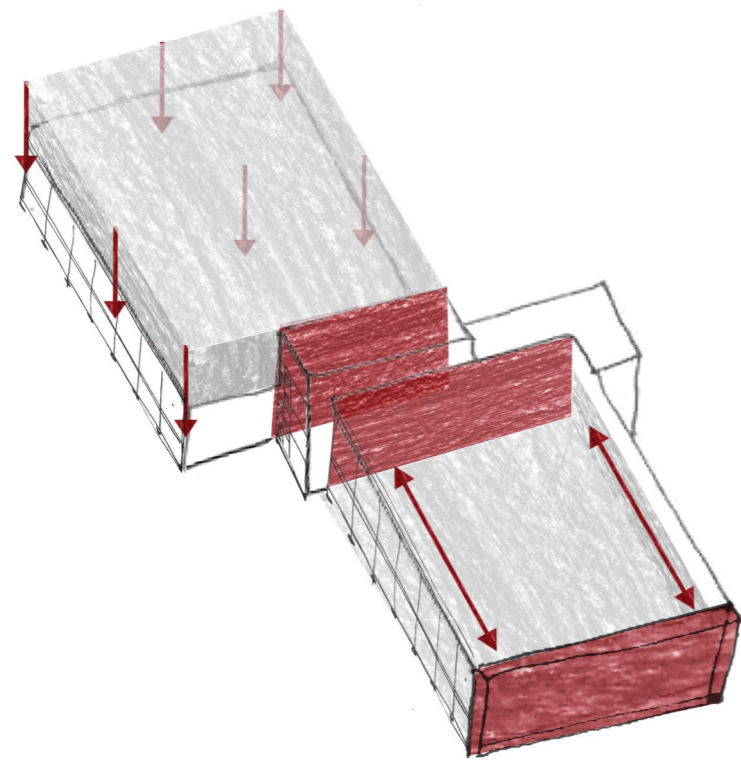
Distribution of the programs categorised as separate for the production school and the production office.



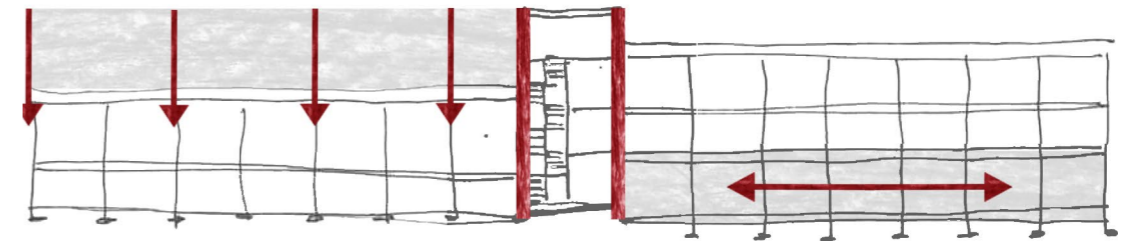
Attract attention, and invite people in



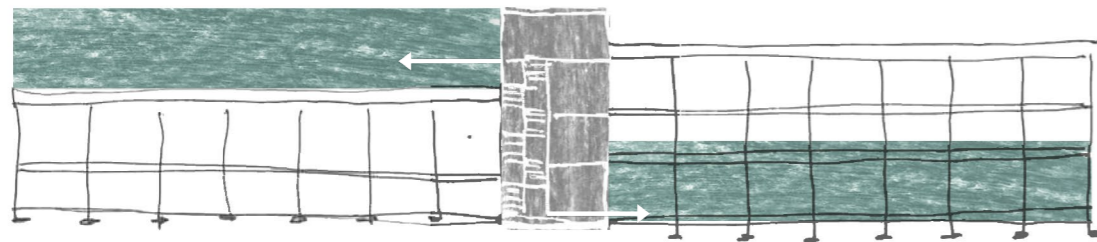
Attract attention, and invite people in



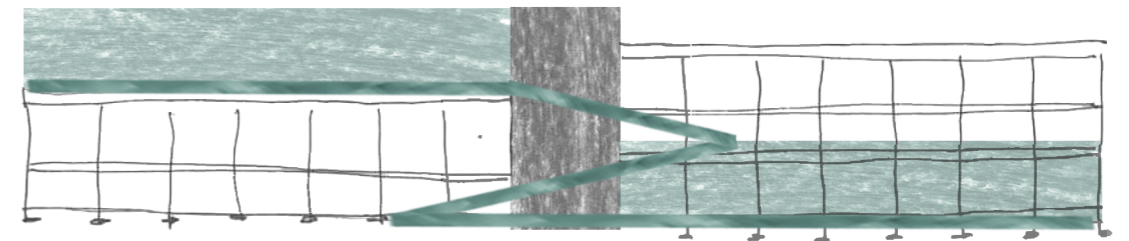
Current structural stability



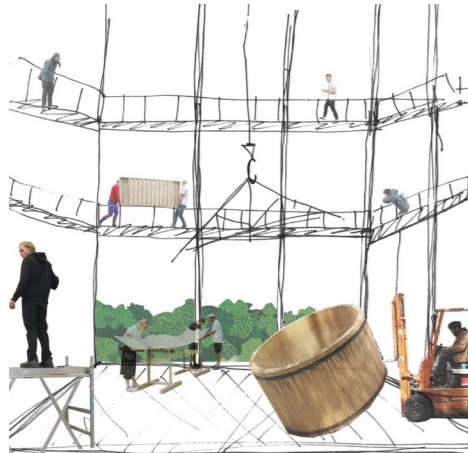
Capacity for increased structural loads in the northern wing, strong lateral stability in the southern wing



New public functions placed in added volume



A new circulation connect the new public programs



The project hall daytime, 09.00-16.00: building, gatherings, lessons, exhibitions, markets



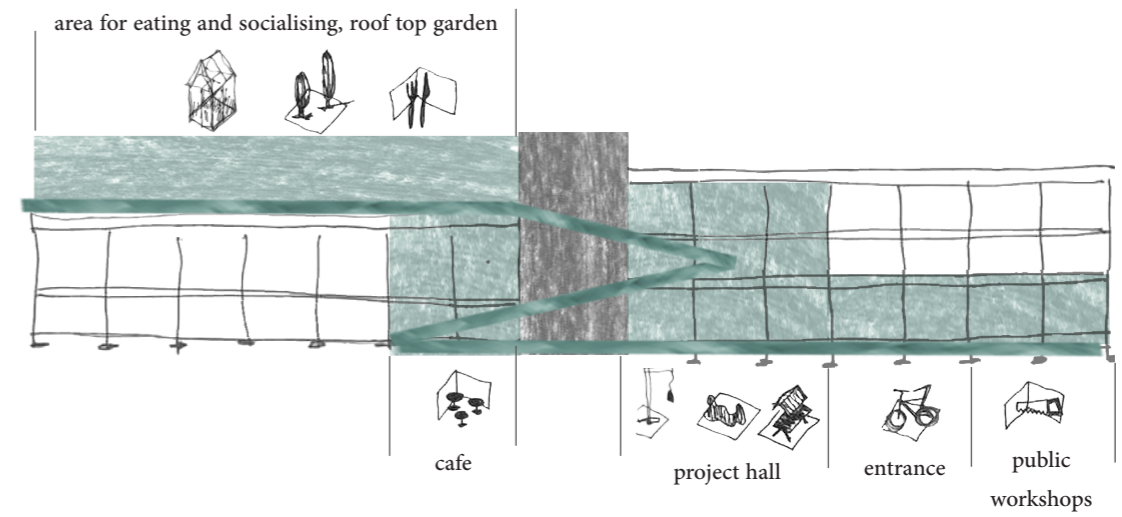
The project hall night, 16.00- 24.00: events, concerts, building courses, food courses,



The roof top at daytime 09.00-16.00: canteen, socialising area for the school and the production office



The roof top at night 16.00-24.00: public restaurant run by school students



Distribution of functions within the public program: project hall, entrance, public workshop, cafe, restaurant and green houses

Sources

- <https://en.wikipedia.org/wiki/Akerselva> (06.02.20)
- Norsk Teknisk Museum. (2019), Ida Lützow-Holm http://industrimuseum.no/70_grunerbrua (03.02.20)
- Norsk Teknisk Museum. (2019), Dag Andreassen, http://industrimuseum.no/37vann_tekst (04.02.20)
- Norsk Teknisk Museum. (2019), Dag Andreassen, http://industrimuseum.no/67_nedrefoss_intro_tekst (04.02.20)
- Store Norske Leksikon. (januar 2020), Knut Dørum, https://snl.no/norsk_industrihistorie (04.02.20)
- Oslo Byleksikon, <https://oslobyleksikon.no/index.php?title=Brenneriveien> (06.04.20)
- LPO Architects, <https://lpo.no/prosjekter/vulkan-omradeplan> (02.02.20)
- Brenneriveien 9. <http://brenneriveien.no/>
- Aftenposten, Øystein Aldridge <https://www.aftenposten.no/oslo/byliv/i/P9OBJ/dette-kan-bli-byens-nye-kultur-stripe>
- SHIO (2019) <https://www.sio.no/5741/brenneriveien-11> (02.02.20)
- Miljøforeningen Akerselvas Venner (2019) <https://www.akerselvasvenner.no/2019/01/09/brenneriveien-11-na-er-det-opp-til-byradet/> (02.02.20)

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- page 20- photographer: Jahn Fredrik Solberg, Oslo Museum, 1947. picture found in page: <http://oslobilder.no/OMU/OB.FS0085>
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- page 36- Oslo Elveforum, https://usercontent.one/wp/www.osloelveforum.org/wp-content/uploads/2017/11/Brenneriveien_ny1.jpg