



Arkitektur- og designhøgskolen i Oslo
The Oslo School of Architecture and Design

DIPLOMA PROGRAM SPRING 2018

Diploma candidate: Une Tangen Rekstad

Institute: Arkitektur

Main supervisor: Marius Nygaard

Second supervisor: Catherine Sunter

External supervisor:

Company cooperation:

Title of project: INFILL
Student Housing in Tøyen

PRE-DIPLOMA

SPRING 2018

UNE TANGEN REKSTAD

STUDENT HOUSE

CONTENTS

Student housing situation in Oslo.....	1
Student accomodation.....	2
Thesis / Research question.....	3
Site.....	4-6
Refrence: Student Housing in Sørhauggata.....	7-11
Refrence: Moholt Timber Towers.....	12-17
Refrence: Hauskvartalet.....	18-24
Program.....	25
Submitted Material.....	26
Schedule.....	27-29
Sources.....	

STUDENT HOUSE

STUDENT HOUSING SITUATION IN OSLO

Oslo is the home of 74.000 students. It has the greatest offer of studies in Norway, which is natural for a capital. However, the city's student accommodation is poor. The beginning of each semester reveals a crisis in the capacity of student housing in Oslo. This results in many new students traveling far to accept their education spot in Oslo, or living with friends or family for some time before accommodation becomes available. There are about 8000 student accommodation units in Oslo. This means that there are approximately 8 students competing for each bed. The different offers of student housing cater towards different needs and budgets. There are larger apartments for families, small apartments for a single person or couple, and dormitories within collective units where you share the kitchen and bathroom with others.

Studies done by SSB (The bureau of statistics) show that not every student wants to live in student housing, and the current waiting list for student housing in Oslo is only 3000 students. Most students choose to rent privately, and it is hard to pinpoint one reason for this.

Most students rent accommodation, with only 8 percent of students in Norway owning their apartment. This is in comparison to 21 percent of people in the same age group who are not studying. Renting is a reasonable way of living while studying, when the decisions of the future are often blurry and unclear. Do I want to live in Oslo after getting my degree? Will I fall in love with someone from a different place? Will I move back to my hometown? Where and when will I get job offers? The questions are many, and one possible reason why so few students commit 100% to the city in which they study.

STUDENT HOUSE

STUDENT ACCOMADATION

New student housing projects in Norway are financed by government grants and loans funded by the Housing Bank. These grants are usually, but not always, given to a Student Welfare Organisation (studentsamskipsnad).

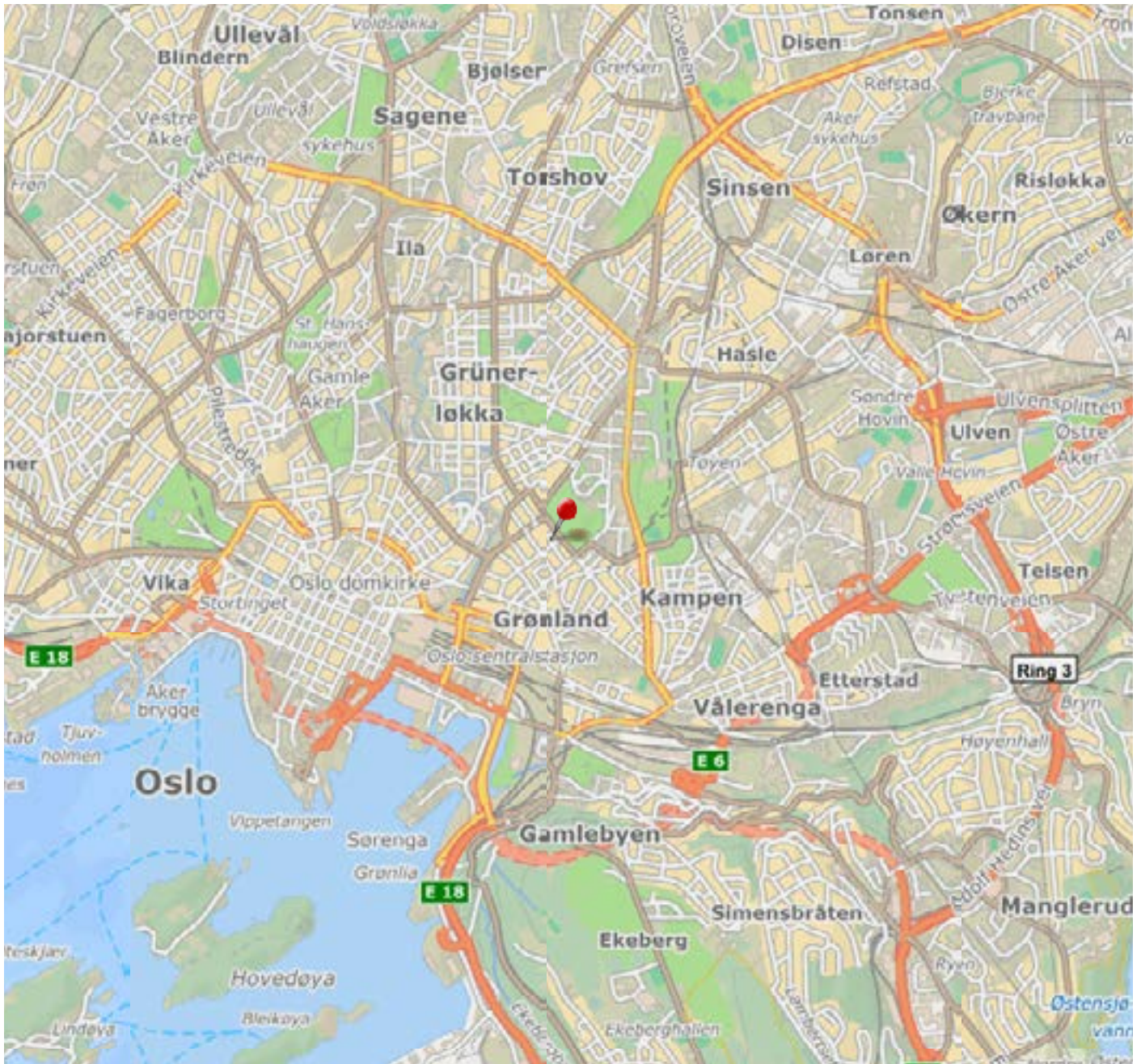
The student housing "market" in Norway is very pressured. The demand is high and the ever-increasing shortage of student residencies has resulted in a regulatory dispensation. It exempted, for example, a greater number of student housing from the accessibility requirements in bathrooms, as well as the sound insulation requirements (TEK 10 and TEK 17). This dispensation came into force in 2012, when the share of student housing needing to be universally designed went from 100% to 20%. This gives student housing as a typology the opportunity to be more exploratory in design and construction than regular residential projects.

The Norwegian Consumer Council recommends that student housing should have its own regulation in the Planning and Building Act, exempting it from regular housing projects. In the future this could give even greater potential for a quicker growth of student housing. However this should be balanced with ensuring that the new housing does not provide a lower standard of living.

On average, a student lives in a student house in Norway for 18 months before moving to another student house or elsewhere. This temporality is a key factor in why one can be freed from the current regulations in the Planning and Building Act.

STUDENT HOUSE

SITE



The site is an infill-site situated in Herslebsgate in Tøyen in Oslo, currently regulated for housing. The surrounding apartment buildings make up a "bygård" with an inner courtyard for all of the residents. The site is located in immediate proximity to the botanical garden, tramlines and the river. Although this is a very central site in Oslo, the context of the buildings in the area are mostly residential.

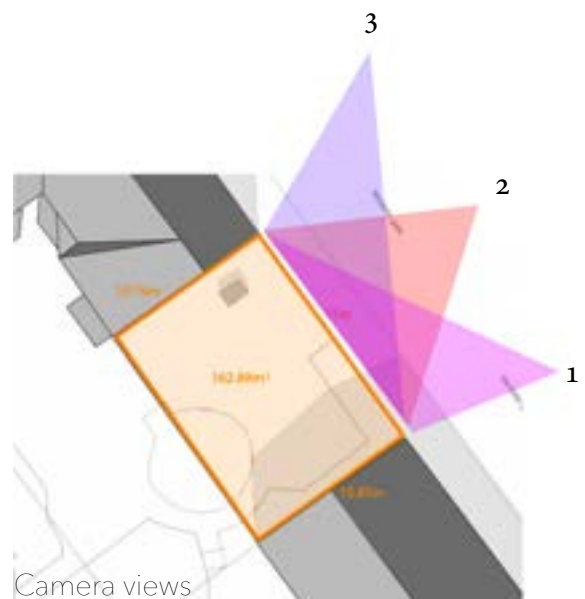
STUDENT HOUSE

SITE



STUDENT HOUSE

SITE



STUDENT HOUSE

THESIS / RESEARCH QUESTION

In this project I wish to address the current lack of student housing in Oslo.

I wish to explore designing a student housing project within an urban infill site using pre fabricated timber elements as an innovative, quick, economic and repeatable construction method.

I also wish to explore how the exemptions from the regulations in the planning and building act can be used to design good homes for students, where they can study in peace as well as have a social life.

STUDENT HOUSE

REFERENCE: STUDENT HOUSING IN SØRHAUGGATA

Key Info:

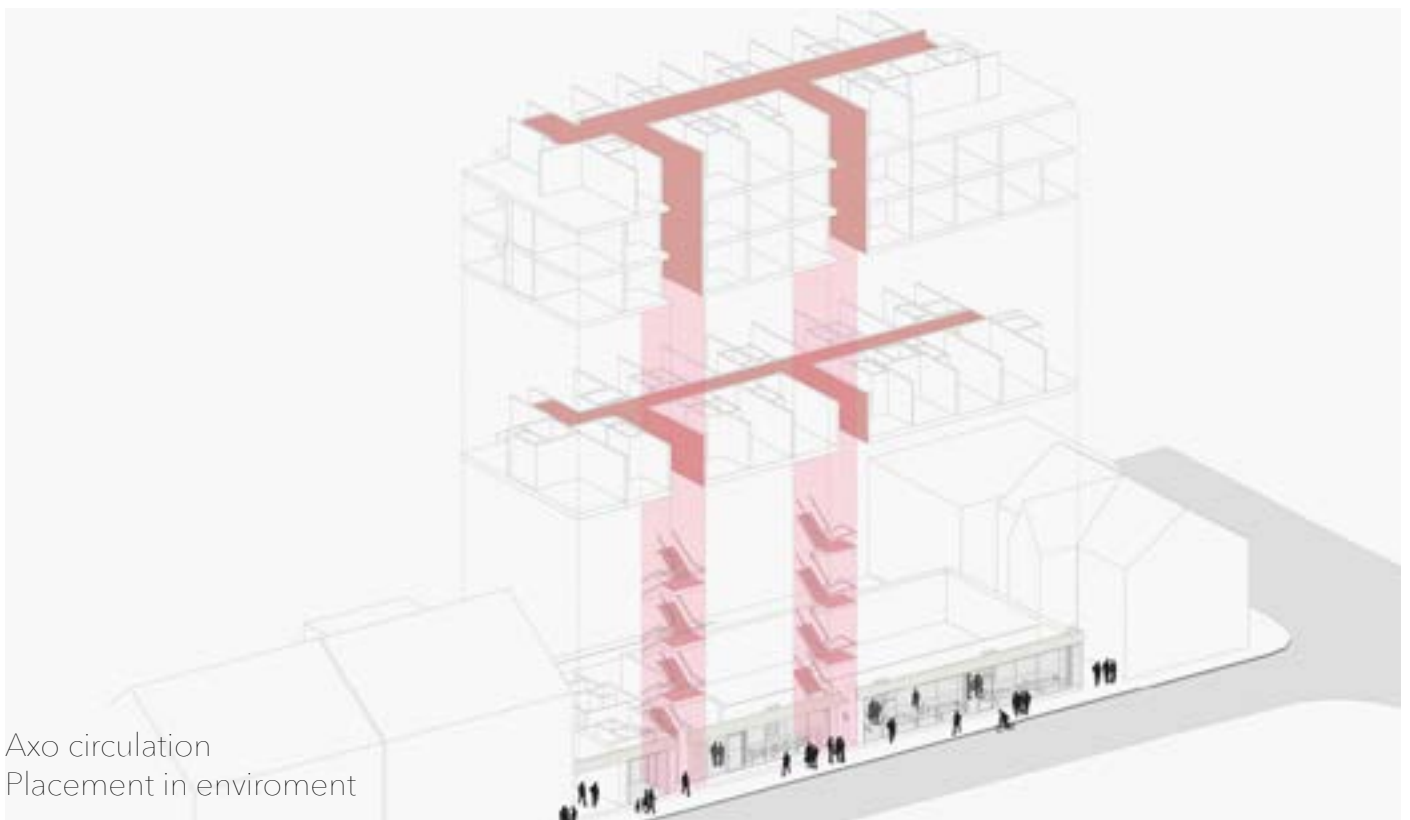
Project: Student housing

Architects: Helen & Hard

When: 2015

Where: Haugesund, Norway

Infill



Axo circulation
Placement in enviroment



Situation

STUDENT HOUSE

REFERENCE: STUDENT HOUSING IN SØRHAUGGATA



Cross section



Street



"To preserve the scale of the adjacent buildings, two staircases divide the street elevation in three parts. In addition to providing a social meeting place on each floor, the staircases bring light and activity through the facade into the building."

STUDENT HOUSE

REFERENCE: STUDENT HOUSING IN SØRHAUGGATA



STUDENT HOUSE

REFERENCE: STUDENT HOUSING IN SØRHAUGGATA



Key numbers:
 Gross Area 2560 m²
 Residents 91
 Units 74
 Apartment size 16 m²
 Ground floor Public
 Time, construction 8 months

STUDENT HOUSE

REFERENCE: STUDENT HOUSING IN SØRHAUGGATA

Personal comment as to why i chose this as a reference

Obviously, this project fulfill the three criteria I wish to work with in my diploma. it is an infill project, it has the same program, and it uses CLT as construction.

I think the infill is smart and well done. The street Sørhauggata has lots of different typologies, still making the street as whole look cohesive. This new project is larger both in plan and in hight than the rest of the buildings in the street. The architects solves this with a set of tools i like. First, they split up the elevation into three bodies, making it less massive and more in line with the streets scale.

The hight of the project is a factor i never can seem to agree with myself about. At one time i find it to be too tall, steeling the entire street. At other times I agree with the hight because of the moves that has been done to justify it; at each end the roof is lowered to meet its neighbors. The elevation of the windows on the street side is also put in a delightful, "thoughtfully random" way, that makes the large facade less dominating.

On the ground floor, there is a public program. I think that the architects will use this as an argument if the hight comes into discussion. At the times i agree with the hight, I agree with this as an argument also. But at the times i do not agree, this seems like a cheap argument to me.

All in all, i like this project very much. Even though i disagree with the hight (sometimes), it sits well in the street facade. I also like the moves that have been done towards the back of the building, lowering it and making a courtyard i think is beautiful.

STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS

Key Info:

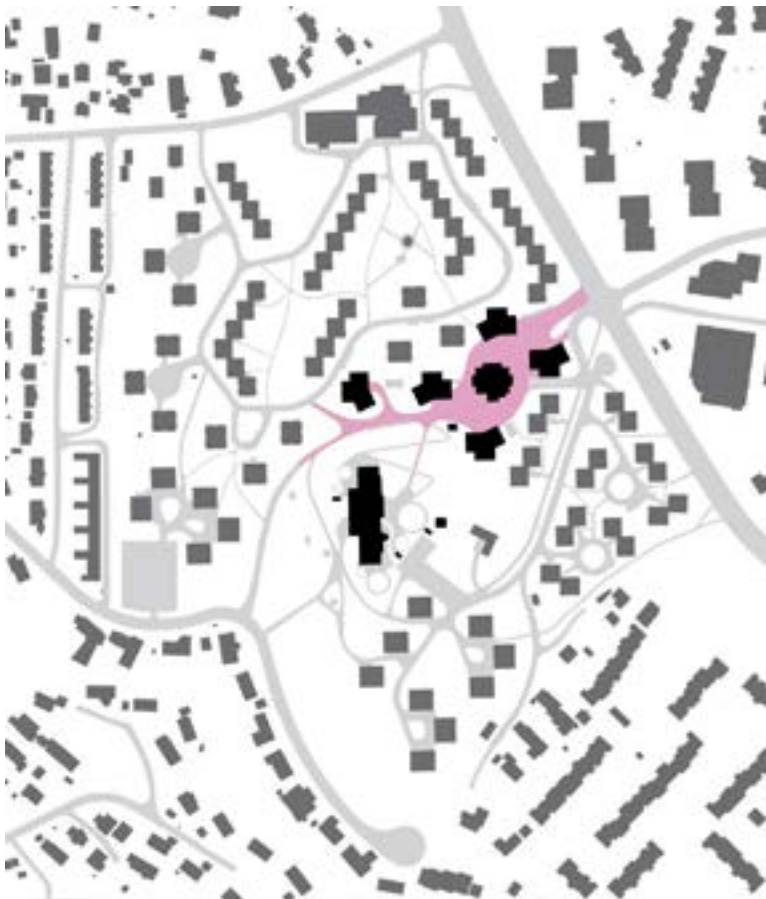
Project: Student housing

Architects: MDH

When: In construction (2015-)

Where: Trondheim, Norway

Cross laminated timber construction



STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS



Aerial view

STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS

Plans of building B, The northernmost building of the five towers



Ground floor plan
Shared spaces
The basement and ground floor levels are made in reinforced concrete cast in-situ.



Typical floor plan
Private spaces & shared facilities
From the first floor to the 9th floor the entire structure consists of prefabricated CLT-elements

STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS



"The five towers are 9-storey high buildings with a height of 28-metres. The basement and ground floor levels are made in reinforced concrete cast in-situ. From the first floor to the 9th floor the entire structure consists of prefabricated CLT-elements. Elevator shafts and stairwells are also constructed in CLT. Both inner and outer walls are structural."

Key Numbers:

Buildings	5 towers	á 9 floors
Dorms	632	
Gross Area	ca 20.000 m ²	
CLT used	5600 m ³	
Collectives	40	
Dorms / Kitchen & shared area	15	(one collective) 13 m ² / dorm
Couples appartements	4	33-55 m ²
Studio appartements	24	16 m ²

STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS



Interior of shared space



Interior of a dorm



The approach to building with CLT was to take advantage of the finished surface of the CLT elements and expose as much as possible of the CLT element system by developing a robust and honest detailing concept. The joints of the structural elements are revealed as part of the aesthetics of the interior.

STUDENT HOUSE

REFERENCE: MOHOLT TIMBER TOWERS

Personal comment as to why i chose this as a reference

One of the reasons i chose this as a reference, besides the obvious similarity in both program and construction that i wish to explore, is that despite its huge scale, this project is one i could relate to as a home. The exposed timber inside in both ceilings and walls welcomes you.

I think the use of timber should have been explored more also in the furniture. Maybe they could have been integrated in the construction.

I think more effort could have been made designing the public ground floor. Maybe it is the grand scale of the project that demands more than a different material to communicate the publicness. My project does not have a public program, but it has one that i wish to share with the immediate neighbors.

I like the details made in the CLT construction in the staircases, with these cut outs. However, the playful move makes it a bit less "home" for me. I realize i will need to study what "home" really means. The floors and the colors in the stairs, makes me think of an institution like a school or hospital.

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET

Key Info:

Project: proposed Urban ecological residential project, Cultural programs

Architects: Eriksen Skajaa Arkitekter

When: 2015

Where: Oslo, Norway

Urban ecological residential project. Emphasis on affordable, urban housing. Part of the "vulkan cultural strip", **Collective** living.



Cultural strip. Illustrated by Tuvalu Arkitekter

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET



Illustration of proposed regulation plan
by Gaia Arkitekter



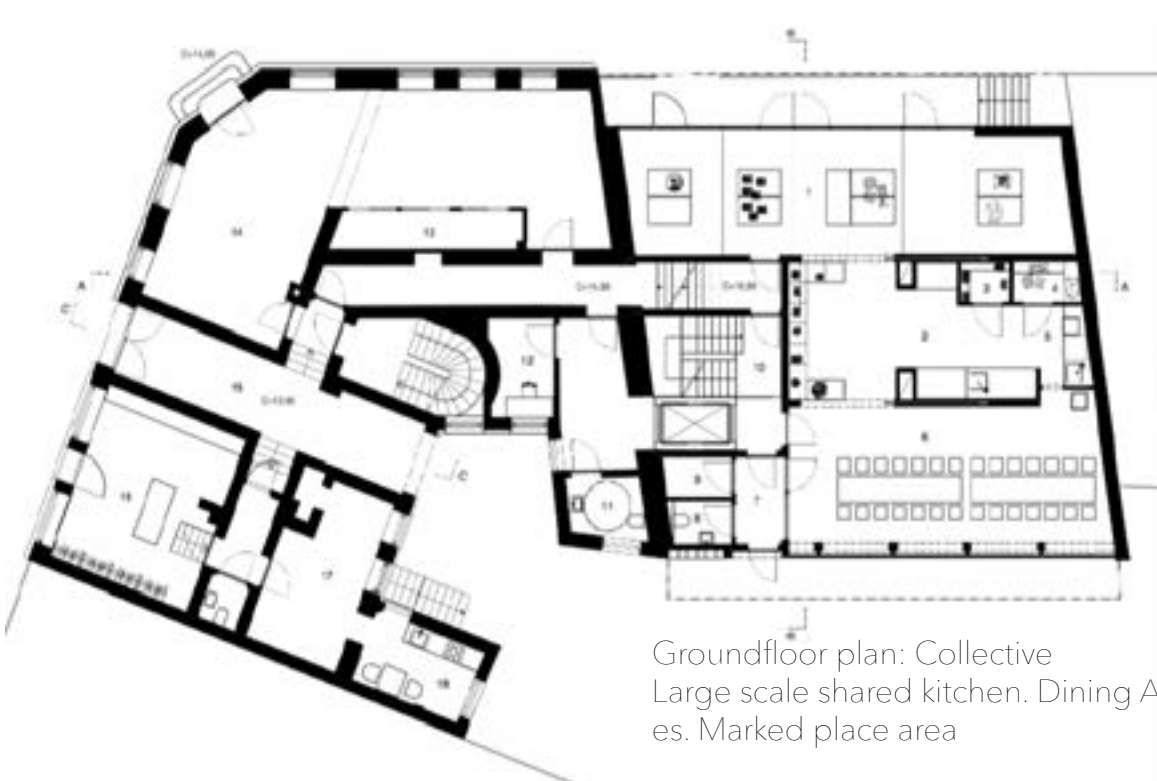
Illustration of life in the block
by Esben Titland

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET



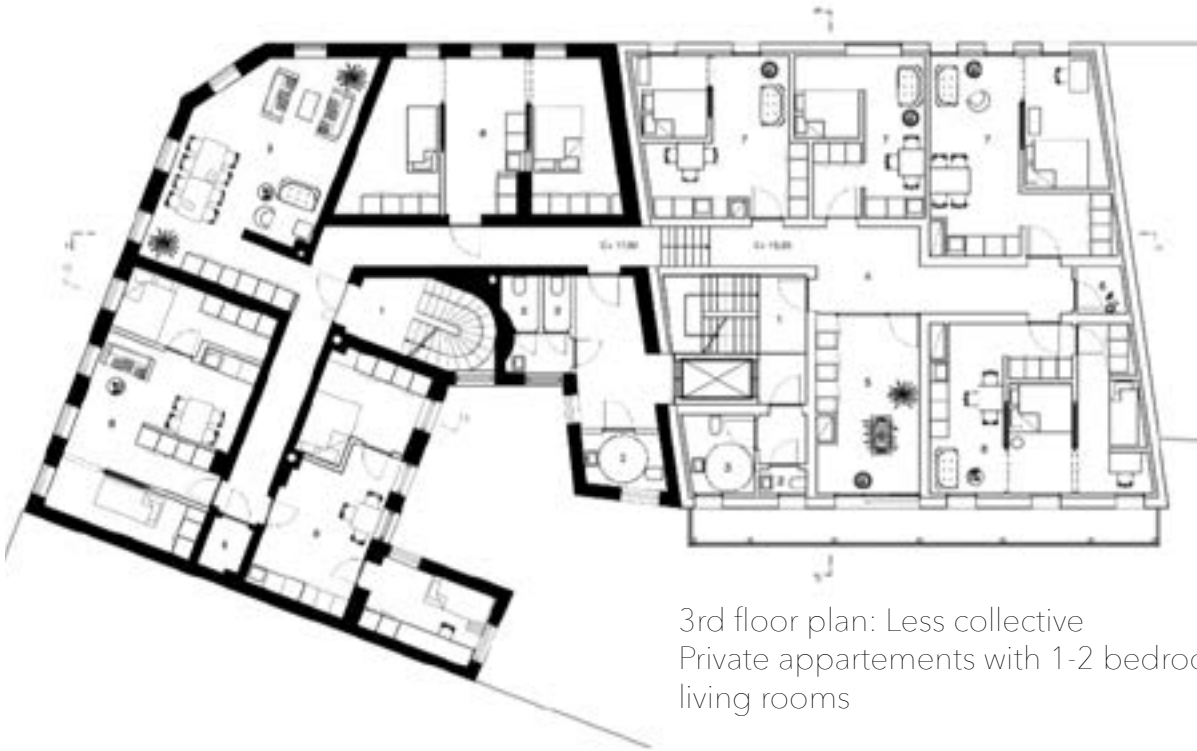
Basement plan: Collective Storage, Laundry room, technical room. Bicycle workshop. Practice rooms. **Big shared bath** including saunas, hamham, dressing room, cold and warm culp, showers.



Groundfloor plan: Collective Large scale shared kitchen. Dining Area. Store venues. Marked place area

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET



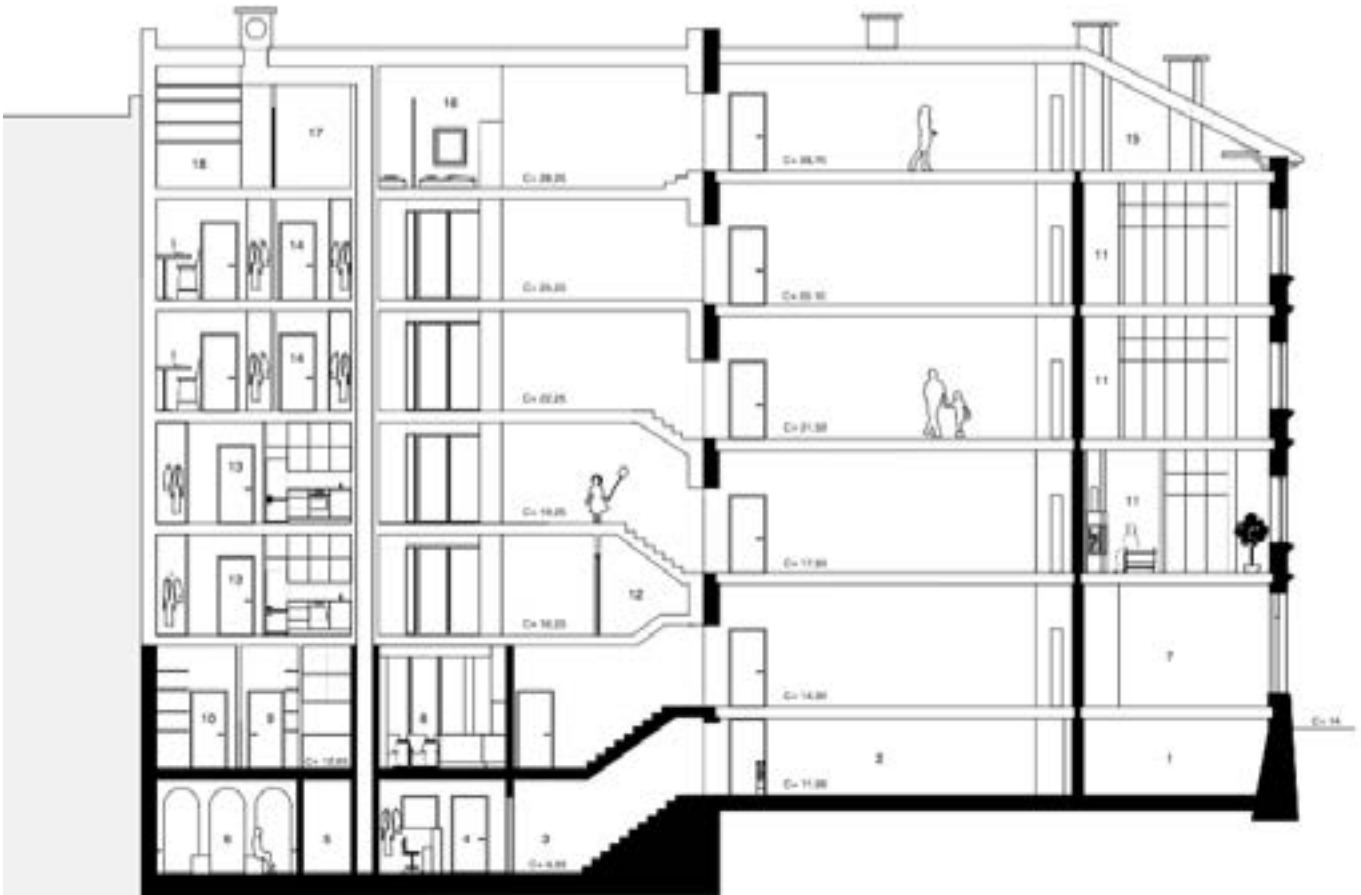
3rd floor plan: Less collective
Private appartements with 1-2 bedrooms. Shared living rooms



Loft plan: Collective
Shared office/work spaces. Dormitory with 11 beds

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET



Long section showing the connection between the two bodies

Key numbers Brenneriveien 1

Gross area	1521 m ²
Area accomadation	412 m ²
Area commercial	147 m ²
Area shared	194 m ²
Beds	36 (+11 loft)
M2 pr bed	26

Key numbers Hausmannsgate 42

Gross area	1566 m ²
Area accomadation	336 m ²
Area commercial	132 m ²
Area shared	108 m ²
Beds	33
M2 pr bed	22
work places	9

STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET



STUDENT HOUSE

BYØKOLOGISKE BOLIGER I HAUSKVARTALET

Personal comment as to why i chose this as a reference

This project is perhaps chosen more for the convincing report Eriksen og Skajaa has written about it, than the drawing material itself. It is a critique of the way the housing market works in Oslo today and gives the municipality this report as a tool to achieve their goal of a varied demographic citizen group also in the city centre.

The shared and public programmes are well justified and drawn out. It describes such a richness in this community, and i long for more illustrations of this. The illustration by Esben Titland is beautiful, but i am missing a more precise image of what living here could mean.

I like the plans of the first floors. It really shows the collectiveness they describe in their report, and also provide private spaces. This make me really believe in this project. On the rest of the plans, and especially the loft, some doubts comes in. For example in the dormitory, why not really embrace the collectiveness of this building. This could be a new space for networking and friendship building, but ends up a rather boring space where communication across inhabitants seems like something one wants to avoid, but not manage completely.

It is something about scale in this, and many other projects with shared programs i see, that i don't understand or agree with. Shared spaces are often colossal. I understand the desire to fit many in one room at once, but this collides with the desire to keep it "homely". The big rooms, such as the shared living rooms in this projects 3rd floor plan, has an institutional feel to it for me. Collectiveness does not necessarily mean putting every inhabitant in the same program at all times. Using this living room as an example (all though it deffently is not the worst i have seen) I think it would be advantageous to separate or at least have the opportunity to separate this big space.

STUDENT HOUSE

PROGRAM

The program is student housing

Emphasis will be on pre-fab timber construction, temporary living and shared spaces

A shared first floor with the possibility and encouragement for the whole block to be included in this program

5 private units (ca 12 m²) per floor from 1st floor and up
each room containing

Bed

Storage

Space to work

Toilet

Each floor (minus private unit = ca 90m²) containing

Entrance

Living room

Kitchen

Dining area

Shared roof terrace of maximum 162m²

STUDENT HOUSE

SUBMITTED MATERIAL

Urban Situation:

Situation plan

Map

Situation model (urban block) 1:200

In relevant scale (1:200 / 1:500 / 1:1000)

Building

Plans

Sections

Important details

in relevant scale (1:100 / 1:50)

Sketch material:

Process book

Sketch models / photographs

STUDENT HOUSE

SCHEDULE

Januar 2018			Februar 2018		
M 1	Nyttårsdag	1	T 1		collect, arrange and date sketches of the phase
T 2			F 2		
O 3			L 3		
T 4			S 4		
F 5			M 5	Phase2: Sketch project. Sketching of programs in volume	
L 6			T 6		
S 7			O 7	Collective / private	
M 8	Semester start	2	T 8		
T 9	Diploma Reviews		F 9	Neighbourhood/ building	collect, arrange and date sketches of the week
O 10	Diploma Reviews		L 10	Entrance, Infrastructure, Aesthetics, Courtyard	
T 11	Diploma Reviews		S 11		
F 12	Diploma Reviews		M 12		7
L 13			T 13		
S 14			O 14		
M 15	Phase1: Explore (site, volumes.	3	T 15		
T 16	Get background material to start building site model		F 16		collect, arrange and date sketches of the week
O 17			L 17		
T 18	Tonsil surgery		S 18		
F 19	some planned sick days		M 19		8
L 20			T 20		
S 21			O 21		
M 22		4	T 22		
T 23	Building sit. model. Start Volume studies		F 23		collect, arrange and date sketches of the phase
O 24			L 24		
T 25			S 25		
F 26			M 26	Review 1: Finished sketch project	9
L 27			T 27	Phase3: Develop project towards preliminary design (forprosjekt)	
S 28			O 28		
M 29		5			
T 30					
O 31					

STUDENT HOUSE

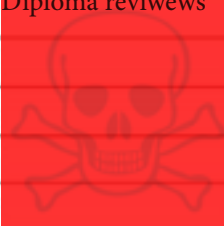
SCHEDULE

Mars 2018		April 2018	
T 1	Phase3: Develop project towards preliminary design (forprosjekt)	S 1	Første påskedag
F 2	collect, arrange and date sketches of the week	M 2	Andre påskedag 14
L 3		T 3	
S 4		O 4	
M 5	10	T 5	
T 6		F 6	collect, arrange and date sketches of the week
O 7		L 7	
T 8		S 8	
F 9	collect, arrange and date sketches of the week	M 9	15
L 10		T 10	
S 11		O 11	
M 12	11	T 12	collect, arrange and date sketches of the phase
T 13		F 13	Review 3: Finished detailed design
O 14		L 14	
T 15	collect, arrange and date sketches of the phase	S 15	
F 16	Review 2: Finished preliminary design	M 16	Presentation models 16
L 17		T 17	
S 18	Phase3: Develop project towards detailed design	O 18	
M 19	12	T 19	
T 20		F 20	collect, arrange and date sketches of the week
O 21		L 21	
T 22		S 22	
F 23	collect, arrange and date sketches of the week	M 23	17
L 24		T 24	
S 25	Palmesøndag	O 25	
M 26	13	T 26	
T 27		F 27	collect, arrange and date sketches of the week
O 28		L 28	
T 29	Skjærtorsdag	S 29	
F 30	Langfredag	M 30	18
L 31			

STUDENT HOUSE

SCHEDULE

Mai 2018	
T 1	Drawing and graphic layout finishing
O 2	
T 3	
F 4	
L 5	
S 6	
M 7	19
T 8	
O 9	
T 10	Kristi himmelfartsdag
F 11	
L 12	
S 13	
M 14	Submit around this date 20
T 15	Digital presentation and rehearsals
O 16	
T 17	Grunnlovsdagen
F 18	
L 19	
S 20	Første pinsedag
M 21	Andre pinsedag 21
T 22	
O 23	
T 24	
F 25	
L 26	
S 27	
M 28	22
T 29	
O 30	
T 31	

Juni 2018	
F 1	
L 2	
S 3	
M 4	Diploma reviews
T 5	
O 6	
T 7	
F 8	
L 9	
S 10	
M 11	
T 12	
O 13	
T 14	
F 15	
L 16	
S 17	
M 18	
T 19	
O 20	
T 21	
F 22	
L 23	
S 24	
M 25	
T 26	
O 27	
T 28	
F 29	
L 30	
T 31	

STUDENT HOUSE

SOURCES

Student Housing in Oslo:

<https://studenttorget.no/index.php?show=5665&expand=3797,5665&artikkelid=12612>

SSB: Folke- og boligtellingsen. Studenters bosted og boforhold, Harald Utne

<https://www.ssb.no/bygg-bolig-og-eiendom/artikler-og-publikasjoner/i-et-bitte-lite-rom-paa-loftet>

Student Housing:

Evaluering av byggtekniske krav til studentboliger, by Implement Consulting Group & Direktoratet for Byggkvalitet 2015

Tracing a Timber Breakthrough– the introduction of CLT to the student housing market in Norway, by O.K. Flindall & M. Nygaard, Wood/Be/Better, Oslo School of Architecture and Design, Oslo, Norway

<https://www.forbrukerradet.no/vi-mener/2015/fpa-bolig-2015/flere-studentboliger-ble-en-aktuell-kampsak-for-forbrukerradet-fra-sommeren-2012/>

Student housing in Sørhauggata:

http://www.helenhard.no/projects/srhauggata_student_housing

Moholt timber towers:

<https://mdh.no/project/moholt-student-housing-towers/>

<https://www.archdaily.com/803810/moholt-timber-towers-mdh-arkitekter>

Hauskvartalet

Byøkologiske boliger i Hauskvartalet, rapport published by Kulturhuset Hausmania, Brukere av Hauskvartalet and Eriksen Skajaa Arkitekter 2015

