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1329802

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CAGED BIRD

A free bird leaps
on the back of the wind
and floats downstream
till the current ends
and dips his wing
in the orange sun rays
and dares to claim the sky.

But a bird that stalks
down his narrow cage
can seldom see through
his bars of rage
his wings are clipped and
his feet are tied
so he opens his throat to sing.

The caged bird sings
with a fearful trill
of things unknown
but longed for still
and his tune is heard
on the distant hill
for the caged bird
sings of freedom.

The free bird thinks of another breeze
and the trade winds soft through the sighing trees
and the fat worms waiting on a dawn bright lawn
and he names the sky his own

But a caged bird stands on the grave of dreams
his shadow shouts on a nightmare scream
his wings are clipped and his feet are tied
so he opens his throat to sing.

The caged bird sings
with a fearful trill
of things unknown
but longed for still
and his tune is heard
on the distant hill
for the caged bird
sings of freedom.

Maya Angelou

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INTRO

Motivated by the poor state of Berlin's secondary schools and the growth in population due to various factors I decided to design a secondary school in Berlin. My old secondary school was in the media at that time and still is because it is falling apart. Generally Berlin schools are at a poor state. I left Berlin beeing 16 when I went to a boarding school in England. I have also been to a school exchange to France when I was 16. I realised every school in other countries I had visited was greater than the one I went to in Berlin. Wanting to change that I started thinking about what matters to me now, but mainly what used to matter to me back then, when I still went to school. In my German secondary school I remember my art room. It was on the 5th floor and the only room I liked because it had good lighting and a balcony. During our small breaks we used to go outside and looked down at the schoolyard.

At the school I went to in France we had a great gym. It was huge and modern compared to the rest of the school and was often used for other school events.

In England, boarding was private, however the school was a state school. Therefore no private money was used for the school building parts. The school's main facilities are on the groundfloor and the first floor.

Everything was located around the inner cloister garden, however we were only allowed to enter this particular garden for special events. The school had a great campus. A lot of grass, trees and green areas- perfect for a revision outside.

At university in Weimar, where I did my Bachelor's degree we had a great refectory, with an outside area near the Ilm park. After lunch we always went to the park to play frisbee and chill. These are aspects regarding the space itself, however there are other differences. In Germany the students had a fixed classroom whilst in England the rooms were given a subject and the students went from room to room. Lessons in England lasted longer and classes were smaller. The assembly hall was a very important area seeing that it brought a lot of people together which lead to a great team spirit. I think the whole idea of identifying yourself with the school was of great value and did not exist at my German school. I remember that at least once a week the entire school gathered at the assembly hall. Sometimes special events were discussed but often we had visitors and speakers telling us something they had experienced in life and motivating us.

Starting with the research for a location by focusing on forecasts regarding the rise in student figures as well as the already existing secondary schools a property right next to the river „Spree" in Berlin's district „Kreuzberg" was chosen for the design.

From that point on the research started to take a turn towards the concept of education itself. Comparing educational systems from different countries as well as researching alternative approaches to education such as „Waldorf" and „Montessori" lead to the idea of involving pedagogues, teachers and students themselfs. With an online survey I asked questions regarding several factors such as schoolyard/campus, natural lighting, corridors, clusters and other aspects. The answers helped me to strengthen my concept and resulted in a structuralistic design which offers a great way of natural lighting and an ideal campus area on many levels- terraces. However the survey also changed my opinion on the topic of the inclusion. Before starting my thesis I had the firm conviction that inclusion would decelerate other students in their learning process. Now I personally have realised that education has to be considered differently. It is not only about grades, future business man and in the end, making money. It is much more about values such as respect, caring and compassion and in my opinion inclusion is a great way of reinforcing these values.

Fig. 1 school-class

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To understand educational architecture today, one has to look at the continuous evolution of education itself. The following broad overview shall help to understand the strong connection between political, economical and cultural aspects of society and their educational system. A connection that is continuously contemporary. From the Egyptian age, where education had the sole purpose of serving the political leaders to ancient Greece, where education's purpose was to educate the warrior, be it mentally, and physically until today, where one may argue we are forming a "modern warrior " for the technological warfare.

KNOWLEDGE

PAPYRUS
3300 BC

PRINTING
≈1450

EDUCATION

PER ANKH
2000 BC

GYMNASION
≈500 BC

SCHOLARS

SHANGXI
2300 BC

*** CONFUCIUS**
551 BC

SOCRATES
410 BC

AUDITORIUM MAXIMUM
1784

INDOCTRINATION

CONVENT
≈700

ALTE SCHULE
1300

J. LANCASTER
≈1800

KATEDRALSKOL
1805

Vgl. Meuser (2014) (S.10 -28)

TEACHERS

POLYTECHNICAL INST. VIENNA 1817

BAUHAUS DESSAU 1926

NEW TRIER WEST HIGH SCHOOL 1965

HEIMDASLADES SKOLE 2001

USASAZO SECONDARY SCHOOL 2004

NATURAL LEARNING

PESTALOZZI 1800

KINDERGARDEN 1840

VALDEMARSKOLE 1912

MUNKEGAARD SKOLE 1956

INDIVIDUAL LEARNING

CASA DEI BAMBINI/MONTESSORI 1902

WOONARA PARK PRIM. SCHOOL 2005

EXPERIMENTAL LEARNING

KARL VOLKMAR STOY 1844

LEARNING BY DOING 1896

HANS SCHAROUN 1962

HARTMUT VON HENTIG 1974

BEXLEX BUSINESS ACADEMY 2003

The school itself finds its origin in the Egyptian temple. Education during that time had the purpose of passing on knowledge to future public servants of policital and religious leaders. The educational space was located in front of the temple's library- not a coincidence, rather the outcome of the evolution of writing, seeing that the stone tablet was replaced by clay tablets and **papyrus**. A fundamental milestone which made hieroglyphics easy to handle. It can be said, that to some extent, the hieroglyphics lost some of their clarity, due to the fact that writing became a medium that needed a generality. This generality was to be learned- the school as an institution was born.
The „school of writing" basically just taught the students how to copy the existing documents. These schools already had professions such as teachers and a principal. Through the Nile this combination of temple, scriptorium and library spreads throughout North Africa, half Asia and Europe. Copying a text finds its ideal field of application in convent schools.

With Johannes Gutenberg's invention of **printing** in medieval Europe the scriptorium itself becomes dispensable. The idea of an overall building including all sectors of the commonwealth was practically impossible. The only alternative was to divide the different sectors. At the beginning of the second century B.C. the Egyptian temple was separated: The school was moving away from the executive and the sanctuary and placed next to the infirmary. Teachers and medical practitioners were now working together. The new ideology was that a sound mind and a sound body find there common home, the so called „**per-ankh**".

The Greeks refine this ideology. They colonized in city states, constantly in conflict with each other. To be physically and mentally fit, was the only way to win a war and to survive. Their search for proper training facilities lead to the emergence of the Olympic Games. These temporary games then evolved into a permanent modification: the **Gymnasion**. The main aspect of this gymansion was the „palaestra", the ancient Greek wrestling school: A yard surrounded by columns, where the students were not only physically, militarily and artistically educated, but also sexually. The students were naked during their lessons, as they were seen as neuter by society. The yard was enclosed by halls, baths, changing rooms and colonnades.

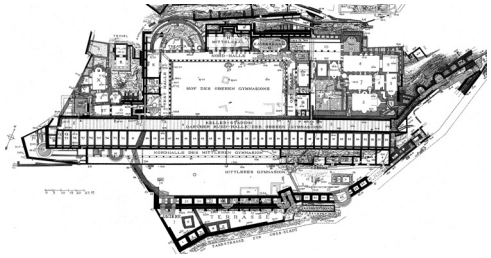

Fig. 2 reconstruction of the gymnasion in Pergamon

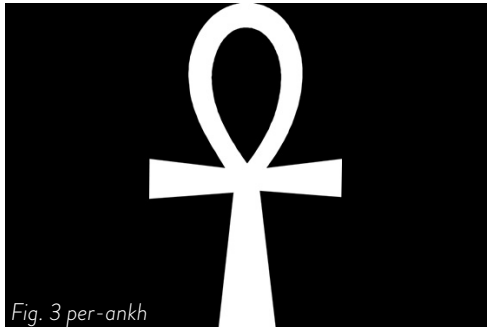

Fig. 3 per-ankh

From the last millennium before Christ on new methods of farming come into being and make China's former slaveholder society become obsolete. Politics get stuck which leads to the breakdown of the Zhou dynasty. Kong Qui, famous in the Western world under the name **Confucius**, is born right into this time of decay (*551 B.C.). He makes a career as a construction as well as a justice minister but is also obliged to go into exile various times.

Due to his upbringing in chaotic times Confucius preaches tidiness - better said the love for the order of things. His pupils see the importance he gives to education for which they make a school for masters out of his house in Qufu when he dies in 479 B.C. In the same year they also amplify the temple to honor Master Kong.

The academic spirit is broadened to the whole country which makes this period of political struggles also a period of more and more scholar presence.
Temple schools arise around 200 B.C. also outside of the Chinese command zone. The spirit spreads across half of the world whilst the teaching methods and the idea of a campus are perceived globally.

The highlight of China's school is of course to be found in the capital: In 1784 the Guozijan school receives its Pyong. The **auditorium maximum** of the imperial college allows the reception of hundreds of listeners. The library continually stays modest. The knowledge store never exceeded its evidence vault.

When the battle call „education for all" is heard for the first time in China, the school, necessary for this demand, is developed long ago and is constructed tens of thousands of times. It sees the light of day in Europe where still back in the high Middle Age every fifth person is able to read and write. Similarities between Europe and Asia are found in the fact that at least the teacher lives in the school and that he usually holds his lessons in the same big room not far from the sacred sites. It is simply the context which is not comparable between the two. Whereas in Asia the role of Confucius is sacred, bringing teaching into close relation with religion, teachings in Europe give the monotheistic answer of a „God" which leaves little space for tin gods. Plato & Co bring this idea to perfection by emphasizing our ignorance and the realization which we have to aspire and to therefore question everything.

The Chinese derive an archetype from the lecture of the Masters, not to say that they invented it!
Legend says that the starting shot already took place in the 23rd century B.C. in today's province of **Shangxi**. Events are told to have happened around the Yellow River and the empire's capital Puban. It is assumed that officials who were considered worthy by their emperor were sent to the finishing schools of the capital city. Shun, the last primordial emperor, is said to have sent his young public servants there so they would learn from the old.
The abruptly begun exchange of experience will, if so, have happened orally.

Still in the seventh century some **convent** schools firstly emancipate into cloisters of schools. Early Italian examples are the Montecassino or the Squillace (Vivarium) which are followed by examples like the New College (1380) and the All Souls College (1438), both located in Oxford. They are built of thick exterior walls of various meters representing certainty towards the out- and protection towards the inside. Emperor Karl the Great reconstructs his residence in Aachen in order for it to become his own school. He accelerates the foundation of various other buildings which leads to his title of the Great in the first place. Hereby the ecclesiastic education is broken down as now Europe's formation sprawls much more on the loose than Asia's.

As before population exploded it is now the knowledge supply which does - especially the technical disciplines. Rich inventions are taking place on an undefinable scale. A subject which is particularly demanding though is one which first began to be taught at university in the middle of the 19th century: psychology. This discipline acts on the assumption that each individual goes through an obstinate development, whereas before the pupil was considered to simply be a disdainful purchaser of what was taught. This new perspective is directly discrediting the old school.

Since the 13th century the subjects are diverging more and more. This is the case especially with the applied arts and natural sciences. Soon they are becoming a subject for themselves and the **Polytechnic Institute** which Josef Schemerl constructs in 1817 in **Vienna** is an early example of this development.

Fig. 6 Rudolf von Alt, View of St. Charles Church and the Polytechnic Institute in Vienna

With the **Bauhaus** from Walter Gropius, which in 1926 began to train designers, the professional learning even rises up to an aesthetic idea. Functionalism and form try to satisfy the specific requests. Therefore there shall never be the room associated to a certain subject as a school adds up from various sections. In any case it becomes bigger because the special inventory eats up space which is cost-efficient only by an increase of pupils. [1]

Fig. 4 Confucius

1 Vgl. Meuser (2014) (p..10 -28)

In 1840 the former Pestalozzi student Friedrich Fröbel founds the first **kindergarten**. According to him this place is exactly what its name promises for it to be. At the same time the exploding cities of Europe are turning into centers of epidemic.

It is primarily the Italian reform pedagogue **Maria Montessori** who approaches didactics.

As a psychiatrist she found out that it is only curiosity which is given by nature and that all the other abilities have to be learned. However, not everyone learns at the same speed nor through the same method. It is the responsibility of the teacher and the householders to help pupils to learn to „do it themselves".

Fig. 7 Casa dei Bambini

Maria Montessori stands for an individual learning plan which does not depend on the student's age.

The **Casa dei Bambini** which she opened in the Roman workers' district San Lorenzo in 1907 resembles a big flat which only consists of nurseries. All doors are constantly open and the house has different stations where each individual can experience something at their own pace.

In 1844 Karl Volkmar Stoy firstly brings together theorists, teachers in training and normal pupils at the University of Jena. The event is a pedagogic workshop which half a century later is brought to perfection by the American John Dewey who is known world wide by his slogan **„Learning by Doing"**. He founds the Laboratory School at the University of Chicago which addresses all ages. It is soon visible what the modification of teaching methods necessitates: mutable blackboards, dividing walls and platforms as well as a lot of space.

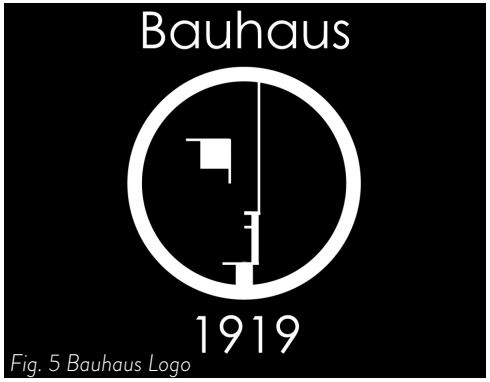

Fig. 5 Bauhaus Logo

Fig. 8 Montessori

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GER

~Age 6: Primary School (Grundschule)

~Age 11: Secondary School Level I
(between 5th and 10th grade)
(Haupt-, Real-, Gesamtschule, Gym.)
examination: Mittlerer Schulabschluss

~Age 16: Secondary School Level II
(between 11th and 13th grade)
(Gesamtschule, Gymnasium, Fachoberschule) examination: Abitur or Fachabitur

After the Abitur, students can either go to university or start a profession as an apprentice. An apprenticeship includes visiting a vocational school.
With a „Fachabitur", meaning a graduation with a main emphasis on a specific topic, not all university subjects can be studied and not all universities can be visited.

Facts
The age varies between the different federal states. Nine to ten years of school education are compulsory. German pupils have to repeat class if their grades are not sufficient. [2]

2 bildungsexperten (2016) [online]

GB

Age 5: play school or kindergarden

Age 8: 4 years of Primary School

Age 12: 5 years of comprehensive school
examination: GCSE

Age 17: another year of study
examination: A-Level

After the A-Level examination students can go to university or an advanced technical school or start a profession as an apprentice. Getting into an elite university such as Cambridge or Oxford mainly requires the students to have finished their A-Level exam at a very expensive private elitist grammar school.

Facts
Englisch pupils do not repeat the class, they are dragged along with the class. [3]

2 moltke (2016) [online]

HKG

Age 3-6: kindergarden

Age 6: 6 years of Primary School
(exams: each of the last three years)

Age 12: lower grades

Age 17: senior grades
(divided into so called „Bands", referring to their academig prestige „Band 1" being the most prestigious)
examination: HKALE

THE HKALE (Hong Kong Advanced Level Examination) is equivalent to the british A-Level graduation. After the lower grades one can decide not to go to the senior grades. To be granted to a university though the students have to pass the HKALE.

Facts
More than 20% of HongKong's overall expenditure is spent on schools and higher education.

FIN

Age 4-7: pre primary [4]

Age 6: 6 years of basic education in a comprehensive school

Age 13: 3 years of basic education

Age 16: either 1 year of additional education and another 3 years of upper secondary general school, or 3 years of vocational institutions and apprenticeship training

After the upper secondary general school students can take matriculation examinations to enter universities. After the apprenticeship training they can get a polytechnic degree.[5]

Facts
Finland's education system is totally free. Compared to i.e. British schools there are no inspections, tests uniforms or fees. Finland attracts and retains high-quality candidates by **setting the bar for teachers very high.** [6]

4 justlanded (2016) [online]
5 stat.fi (2016) [online]
6 independent (2016) [online]

WALDORF

number of schools in Germany: 232
motto: admit the child in awe, raise it with love and release it into freedom.
perception of the child: every child is an independent and talented being, with individual potentials and skills and a willingness to learn in its nature.
basic principal: holistic education through developing the child's intelectual, creative, artistic, practical and social skills.
class teacher: central figure in education, teaches at least throughout the first 8 years of education (main lessons), the class teacher defines the teaching content, seeing that there are no textbooks.
parents are strongly integrated into the everyday school life. Commitment is expected.
school fees are a 6-8% of the family's net income- paid 13 times per year.
school is independently operated.
The number of students per class is relatively high
no grade retention (Sitzenbleiben)
science features: hands-on experience and learning through own cognitions using own perception and observation
2 **languages** from first grade, 1 more starting in fifth grade, all **degrees** recognized in Germany are possible

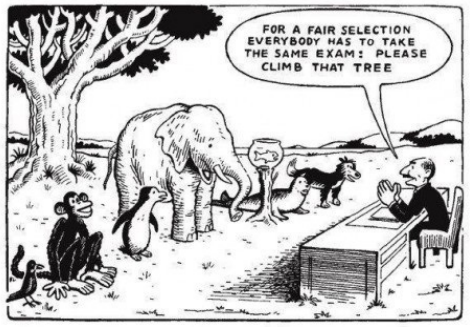

Fig. 9 Montessori Comic

music and art features: eurythmy, dancing expression of emotions and sounds, important aspect of the Waldorf education. Choir also major importance.
specific practical education: environmental education: cherish and harvest, beekeeping, sheep farming | **handiwork**: tailor, spinning, bookbindery | **craft**: wood, metall, stone
main lessons (block) and subject teaching
little **homework**
internships are very important, 9th grade: agricultural, 10th grade: surveying, 11th grade: social, 12th: industrial
performance evaluation: from grade nine and onward: optional certificate with grades | evaluation based on individual development, individual „epoch notebook" (Epochenheft), participation in school performances
prominent alumni: Michael Ende (German writer), Ferdinand A. Porsche

MONTESSORI

225 primary & 156 secondary schools
motto: help me to do it myself.

perception of the child: children are architects of themselves. Every child's personality is respected. Every child is considered a precious individual.
basic principal: Every child has a native urge to learn. They learn due to their own motivation and are not compared to each other.
teachers are observers and interpreters of the children and their behaviour. They are lending support if necessary.

parents are integrated into the concept. Commitment is expected.

school fees only at private schools and guided by the family's income.
independently operated, private or public

The number of students varies between 18-26 students per class
no grade retention (Sitzenbleiben)

science features: exercise materials for cosmic schooling. Goal is to understand coherences in the different study fields.

Fig. 10 Waldorf Comic

all **degrees** recognized in Germany are possible

specific practical education: very important, varying between schools
main lessons subject teaching and individualized instruction (Freiarbeit)
no **homework**
internships varying between schools, different requirements

performance evaluation: mainly without any grades, some schools choose to introduce grades in fourth grade and onwards | the evaluation is made using a so called „Izel-Tabelle", a table for information regarding the development- and learning-process.

prominent alumni: Larry Page (one of the inventors of Google), Prince William-Duke of Cambridge, Thomas Alva Edison, Heike Makatsch (German actress), Anne Frank, Friedensreich Hundertwasser [7]

7 tutoria (2016)

Fig. 11 open air sky

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Fig. 12 „Die Klasse drinnen und draußen“

Fig. 13 Laborschule Bielefeld

SCHÜTTE

In 1929 Wilhelm Schütte had already been dealing with the innovative idea of a class inside and outside- „Die Klasse: drinnen und draußen“.
In Frankfurt on the Main he introduced his experimantal pavillon which already included all essential elements: The class itself becomes an open air class („Freiluftklasse“) by opening the surrounding flexible walls. The natural lighting comes from two sides. The furniture is moveable. Each area is equal.
With the „Sonderschule Floridsdorf“, a special needs school, W. Schütte's concepts became reality. Built between 1959 and 1961 the school consists of noisy and silent class sectors, two sided lighting and flexible walls of the classrooms. These flexible walls do not exits anymore due to renovation.[8]

VON HENTIG

The concept of open learning areas was greatly influenced by the „Laborschule Bielefeld“ and the pedagogical approach to an alternative learning method by Hartmut von Hentig.[9] The school was designed for teachers to experience hand on learning methods, an equivalent to the experience medicine students gain from practicing in a clinic- „right at a person's sickbed“. The number of students was regular but the idea was to experiment with certain liberties. Problems can be approached directly and can inspire the entire educational system. On the one hand „symptoms“ can be systematically examined and on the other hand different and alternative solutions can be approached. The aim was to show what was possible when the typical boundaries and approaches were neglected to a certain extend. Differences are seen as an opportunity not as a „fault of the system“. The students should come togehter from all social classes disregarding their talents. Without selection, grade retention and, except at the graduation, any grading at all. Learning should be mainly linked to experiencing. Another conceptual feature is that students should learn from a young age how to deal with collective issues in a reasonable manner. The school is seen as a microcosm, a small society with its citizens and modes of behaviours conducted by the aspiration „never again a second 1933“. [10]

8 oegfa (2016) [online]
9 Kühn (2009)
10 netschool (2016) [online]

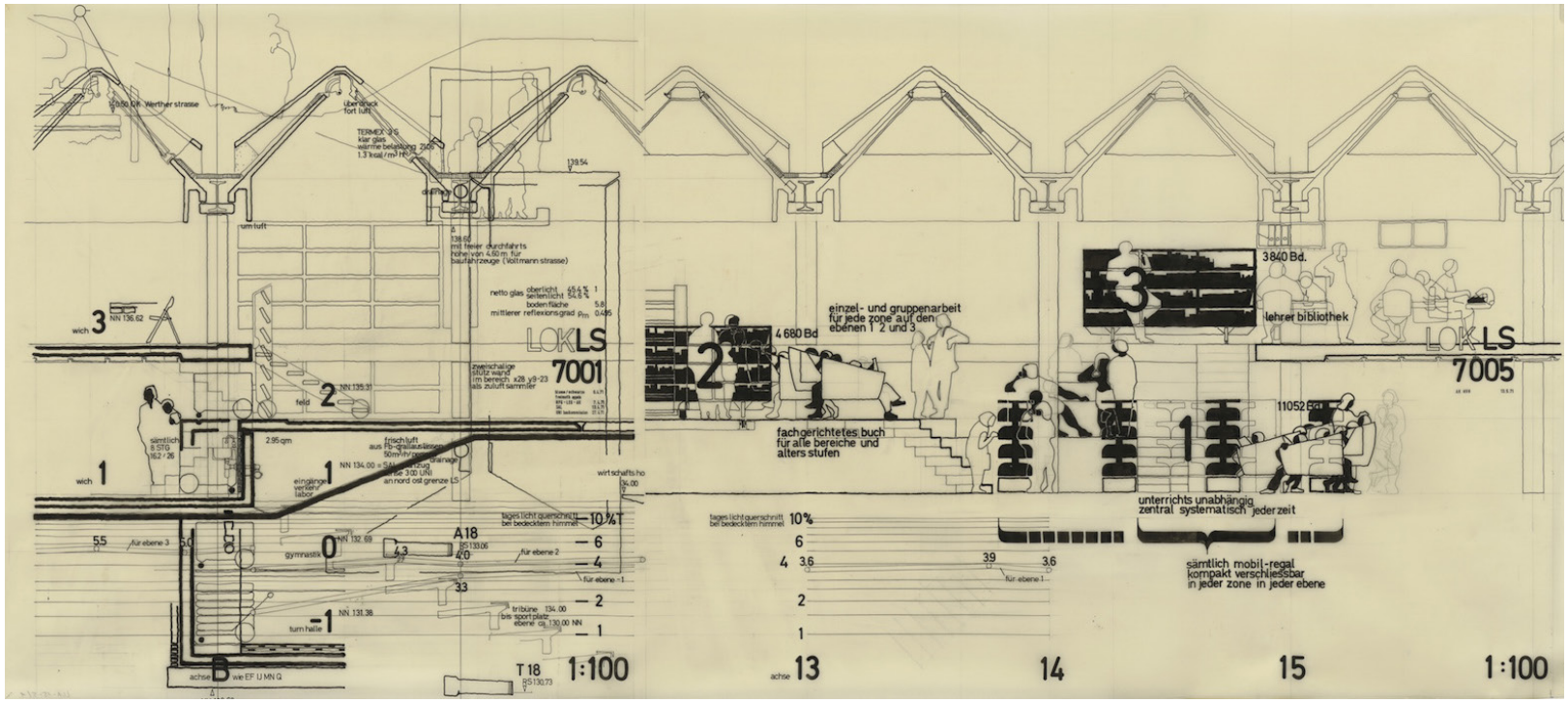

Fig. 14 Section Cut Laborschule Bielefeld

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With the interview I tried to find answers to my concept ideas but also to get a different perspective and a new approach.

I found out that the views and opinions are very different, regarding the age of the person interviewed and their connection to education. Teachers for physical education have a different view compared to a Dr in pedagogy or a young person that just finished his/her studies in the field of comparative education. However, it is not that the older the wiser, obviously that can be the case, but new and fresh different approaches are also very useful. Let us not forget the student himself. What does he think? I tried to capture the arguments and ideas and implement them into my design.

INTERVIEW

I have taken the most interesting answers and ideas and put them into an order regarding an overall topic. The answers can be assigned to the candidate using the highlighted abbreviation.

CANDIDATES

DR UTE MARIA BEESE (UMB)
degree:
work: remedial teacher, teacher
field:orthopedagogy, vocational school

BENJAMIN SZYMANCZYK (BS)
degree: MA social pedagogy
work: Jugendheim Marbach gGmbH
field: intercultural pedagogy

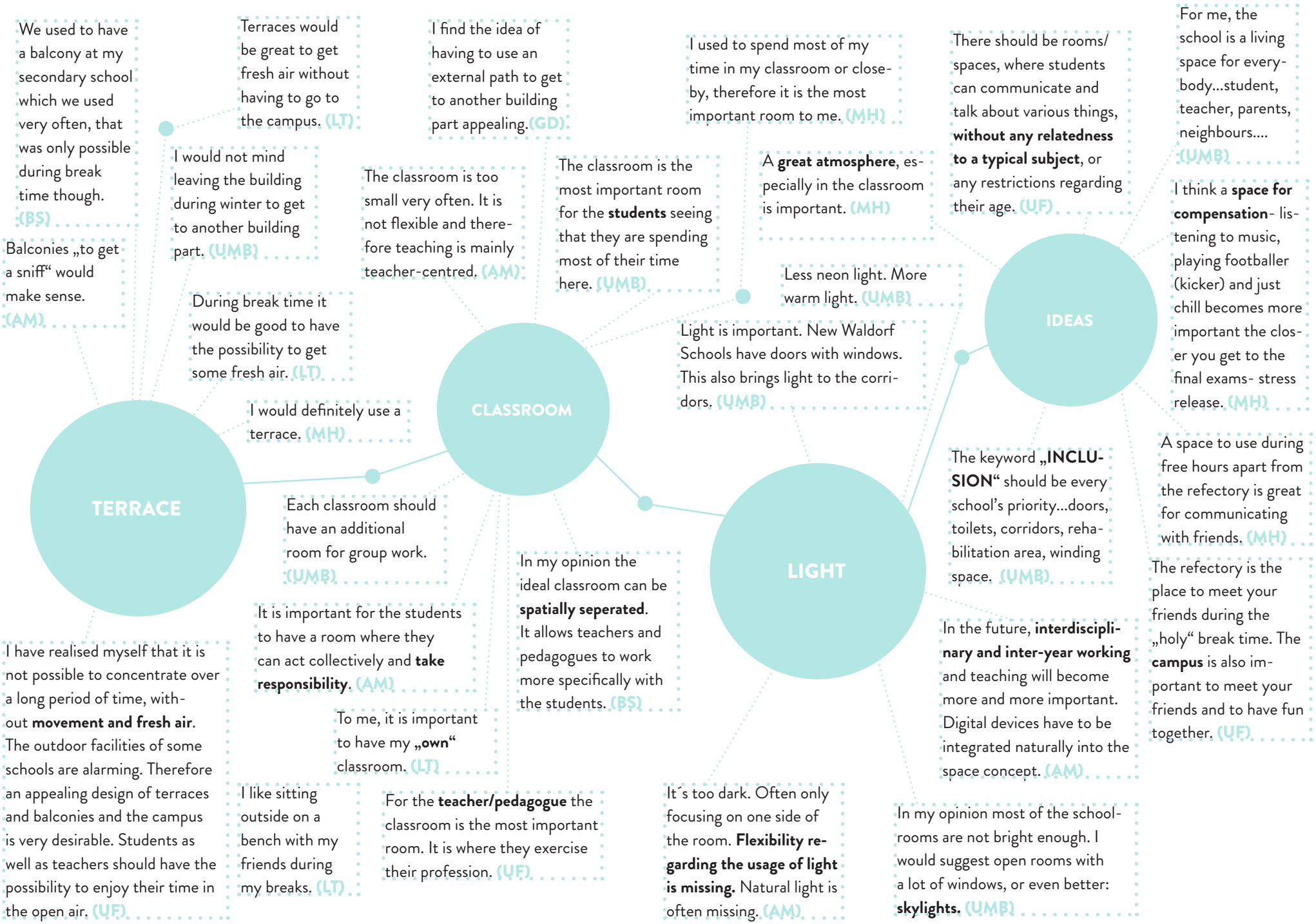
ULRIKE FEINDT (UF)
studies comparative education
field: pedagogical work with children, teenagers and adults

AILEEN MOECK (AM)
studies at the Copenhagen Future Studies Institute
field: innovation and consulting

GREGOR DOSKOCZYNSKI (GD)
teacher
work: vocational school
field: physical edu. & health promotion

MATTHIS HEINRICH (MH)
just finished his Abitur in Berlin
wants to become an actor

LARA TUECKMANTEL (LT)
student in 10th grade
at the Rheingau Gymnasium


We used to have a balcony at my secondary school which we used very often, that was only possible during break time though. (BS)
Terraces would be great to get fresh air without having to go to the campus. (LT)
I find the idea of having to use an external path to get to another building part appealing. (GD)
I used to spend most of my time in my classroom or close-by, therefore it is the most important room to me. (MH)
There should be rooms/ spaces, where students can communicate and talk about various things, **without any relatedness to a typical subject**, or any restrictions regarding their age. (UF)
For me, the school is a living space for every-body...student, teacher, parents, neighbours.... (UMB)
I would not mind leaving the building during winter to get to another building part. (UMB)
The classroom is too small very often. It is not flexible and there-fore teaching is mainly teacher-centred. (AM)
The classroom is the most important room for the **students** seeing that they are spending most of their time here. (UMB)
A **great atmosphere**, es-pecially in the classroom is important. (MH)
I think a **space for compensation**- lis-tening to music, playing footballer (kicker) and just chill becomes more important the clos-er you get to the final exams- stress release. (MH)
Balconies „to get a sniff“ would make sense. (AM)
During break time it would be good to have the possibility to get some fresh air. (LT)
Less neon light. More warm light. (UMB)
Light is important. New Waldorf Schools have doors with windows. This also brings light to the corri-dors. (UMB)
IDEAS
CLASSROOM
TERRACE
I would definitely use a terrace. (MH)
Each classroom should have an additional room for group work. (UMB)
The keyword **„INCLU-SION“** should be every school's priority...doors, toilets, corridors, reha-bilitation area, winding space. (UMB)
A space to use during free hours apart from the refectory is great for communicating with friends. (MH)
The refectory is the place to meet your friends during the „holy“ break time. The **campus** is also im-portant to meet your friends and to have fun together. (UF)
In my opinion the ideal classroom can be **spatially seperated**. It allows teachers and pedagogues to work more specifically with the students. (BS)
LIGHT
It is important for the students to have a room where they can act collectively and **take responsibility**. (AM)
In the future, **interdisciplin-nary and inter-year working** and teaching will become more and more important. Digital devices have to be integrated naturally into the space concept. (AM)
I have realised myself that it is not possible to concentrate over a long period of time, with-out **movement and fresh air**. The outdoor facilities of some schools are alarming. Therefore an appealing design of terraces and balconies and the campus is very desirable. Students as well as teachers should have the possibility to enjoy their time in the open air. (UF)
To me, it is important to have my **„own“** classroom. (LT)
I like sitting outside on a bench with my friends during my breaks. (LT)
For the **teacher/pedagogue** the classroom is the most important room. It is where they exercise their profession. (UF)
It´s too dark. Often only focusing on one side of the room. **Flexibility re-garding the usage of light is missing.** Natural light is often missing. (AM)
In my opinion most of the school-rooms are not bright enough. I would suggest open rooms with a lot of windows, or even better: **skylights.** (UMB)

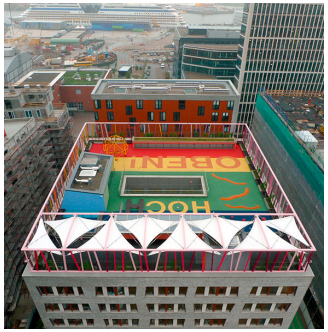
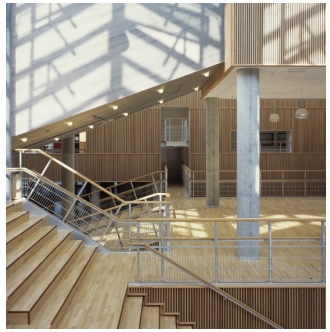


Fig. 15 Some of my first references



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- **Which districts are expecting a high rise in student figures in which kind of school?**
- **What measures are adopted regarding Berlin‘s future education?**
- **What kind of schools are planned, and where?**
- **How can a future school be accessable regarding Berlin‘s infrastructure?**
- **Which properties are suitable and why?**

Based on information and statistics offered by the **„Senatsverwaltung für Bildung, Jugend und Wissenschaft“** of Berlin (senate administration for Education, Youth and Science) the current circumstances as well as predictions regarding the Berlin schools were analysed.

Fig. 20 Berlin district arms

BERLIN DISTRICTS

After the German reunification in 1990 the districts („Bezirke“) of Berlin were kept the same until Berlin was divided into 12 districts due to an administrative reform in 2001.

The newly formed districts are:

Bezirk Mitte
Bezirk Friedrichshain-Kreuzberg
Bezirk Pankow
Bezirk Charlottenburg-Wilmersdorf
Bezirk Spandau
Bezirk Steglitz-Zehlendorf
Bezirk Tempelhof-Schöneberg
Bezirk Neukölln
Bezirk Treptow-Köpenick
Bezirk Marzahn-Hellersdorf
Bezirk Lichtenberg
Bezirk Reinickendorf

BERLIN RINGBAHN

The building of the Berlin Ringbahn (circular railway) started in 1850. The plan was to connect the different railways seeing that their terminal stations were widely spread over Berlin, which made it very inconvenient to transfer to another train. From 1928 onwards the Ringbahn was “electrified“ step by step. Even though the railway was greatly damaged during the Second World War it was brought back into service in 1946 and served as the junction line between the now divided East and West until the 13th of August 1961. The Berlin Wall lead to the disconnection of the railway and a separate reorganisation in the sectors. The western part was scarred by strikes and decay, whilst the eastern part was continuously enlarged. The western operators withdrew the service of the western Ringbahn after a strike in 1980. With the delegation of rights to the BVG (Berliner Verkehrsgesellschaft) in 1984 the Ringbahn was partly reopened in 1993. On the 16th of June 2002 the gap between the stations „Westhafen“, „Gesundbrunnen“ and „Wedding“ was closed- the so called „Wedding Day“, ambiguous for the district’s name „Wedding“ and the joining.[11]

11 Jung (2004)

Fig. 21 Berlin districts and circular railway | scale 1:30.000

STUDENT FIGURES

The average number of students per **Gymnasium** (secondary school offering the „Abitur“- the eligibility to apply to university) was 757 students per Gymnasium in 2014.
The design is guided by this average number of students. Each year (5-12) will consist of 4 classes with an average student number of 24 students per class. This will lead to an overall student number of 768 students.

The map on the right is showing the Gymnasiums close to the Ring. It can be seen that some areas have quite a few schools close to each other, whilst other areas, such as the southern riverside of the Spree have none at all...

School Name	2015/16	14/15	13/14
Alexander-von-Humboldt-Gymnasium	650	659	639
Anne-Frank-Gymnasium	786	813	857
Archenhold-Gymnasium	704	700	685
Emmy-Noether-Gymnasium	880	883	811
Gebrüder-Montgolfier-Gymnasium	823	826	793
Gerhart-Hauptmann-Gymnasium	728	660	633
Askanisches Gymnasium	593	620	607
Eckener-Gymnasium	716	739	751
Georg-Büchner-Gymnasium	537	557	560
Luise-Henriette-Gymnasium	647	647	686
Paul-Natorp-Gymnasium	757	718	686
Rheingau-Gymnasium	668	638	613
Robert-Blum-Gymnasium	694	656	615
Rückert-Gymnasium	716	726	738
Ulrich-von-Hutten-Gymnasium	808	821	812
Arndt-Gymnasium Dahlem	758	754	778
Beethoven-Gymnasium	878	905	889
Dreilinden-Gymnasium	488	488	495
Droste-Hülshoff-Schule	855	855	855
Fichtenberg-Oberschule	757	734	743
Goethe-Gymnasium Lichterfelde	749	786	789
Gymnasium Steglitz	879	919	985
Hermann-Ehlers-Gymnasium	499	501	534
Lilienthal-Gymnasium	723	701	719
Paulsen-Gymnasium	576	598	613
Schadow-Gymnasium	1163	1061	991
Werner-von-Siemens-Gymnasium	864	865	871
Willi-Graf-Gymnasium	536	571	631
Carl-Friedrich-von-Siemens-Gymnasium	466	520	475
Freiherr-vom-Stein-Gymnasium	800	817	874
Hans-Carossa-Gymnasium	1122	1039	1049
Kant-Gymnasium	711	696	679
Lily-Braun-Gymnasium	670	666	682
Bertha-von-Suttner-Gymnasium	1129	1173	1156

Fig. 22 Table of Secondary Schools (Gymnasien) and student figures

secondary schools close to the „Ring“-Gymnasium in Berlin
location proposals
chosen location

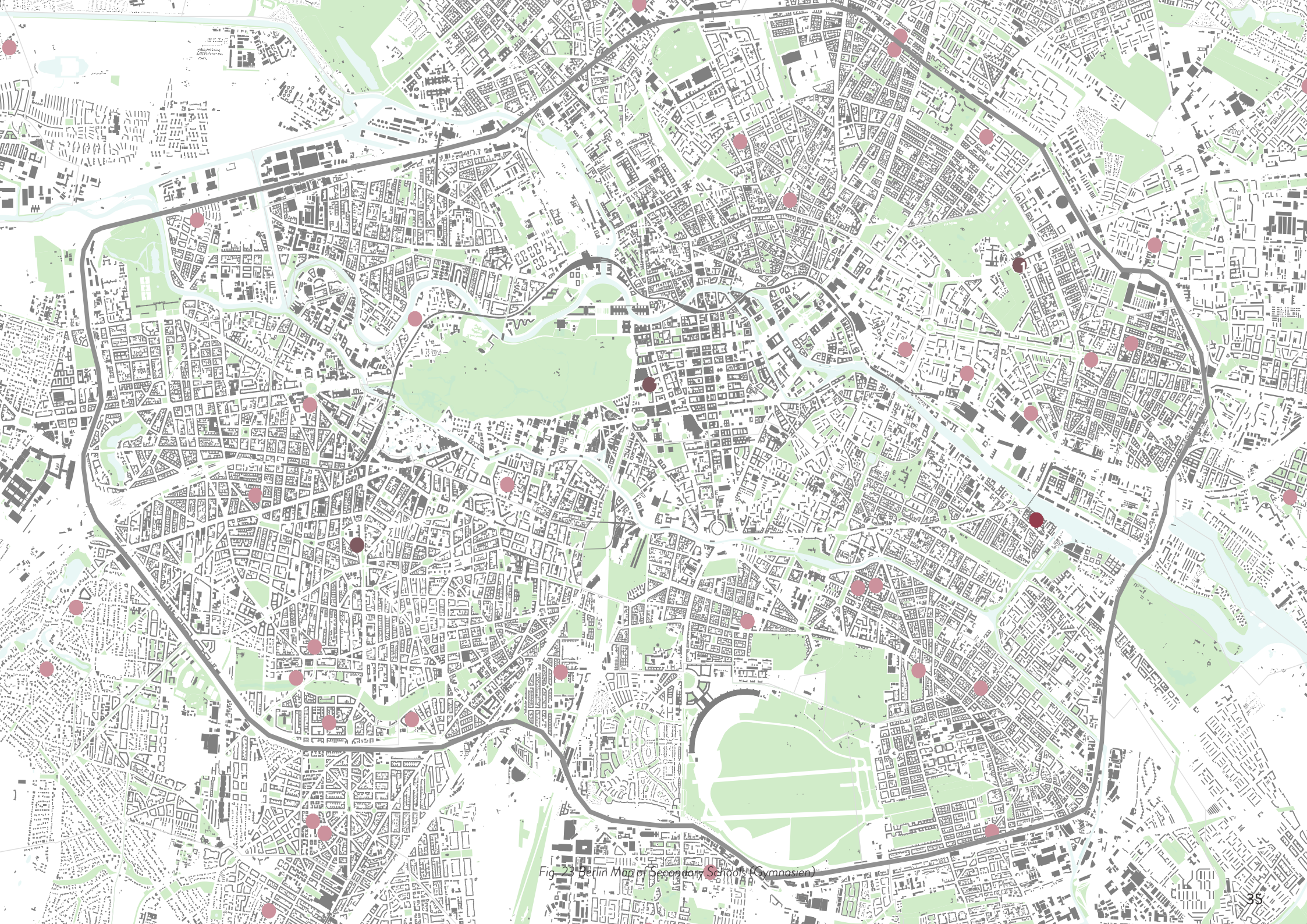

Fig. 23 Berlin Map of Secondary Schools (Gymnasien)

STUDENT FIGURES

In Berlin's annual report „Blickpunkt Schule" by the Senatsverwaltung für Bildung, Jugend und Wissenschaft (senate administration for education, youth and science)[12] from 2015/16 forecasts are made for the rising in student figures relating to the population. In the table on the right it can be seen that the number of students in the district Friedrichshain-Kreuzberg will rise from 21.691 students in 2015/16 to approximately 25.380 students in 2024/25. A rise by 17%.
Overall the number of students in Berlin is forecasted to rise from 301.927 in 2015/16 to 376.960, a rise by 25%.

12 Senatsverwaltung für Bildung, Jugend und Wissenschaft (2016)

FUTURE DEVELOPMENT OF STUDENT FIGURES BY DISTRICTS

A) Absolute Zahlen

	IST	Modellrechnung								
Bezirke	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Mitte	25.162	25.780	26.400	27.140	27.720	28.380	29.170	29.870	30.400	30.970
Friedrichshain-Kreuzberg	21.691	21.940	22.190	22.750	23.190	23.650	24.290	24.790	25.110	25.380
Pankow	30.763	31.810	32.740	33.850	34.970	36.050	37.360	38.390	39.160	39.760
Charlottenburg-Wilmersdorf	24.961	25.430	25.730	26.240	26.890	27.640	28.390	29.160	29.650	30.090
Spandau	20.888	21.380	22.020	22.690	23.560	24.460	25.460	26.340	26.990	27.550
Steglitz-Zehlendorf	28.298	28.720	29.110	29.280	29.620	30.180	30.730	31.290	31.820	32.270
Tempelhof-Schöneberg	27.227	27.720	28.030	28.470	29.040	29.640	30.460	31.070	31.560	31.980
Neukölln	25.558	25.590	25.780	26.220	26.670	27.250	27.910	28.550	29.030	29.530
Treptow-Köpenick	20.101	20.720	21.240	21.910	22.820	23.860	24.810	25.740	26.480	27.130
Marzahn-Hellersdorf	20.908	21.520	22.220	23.140	23.930	24.700	25.580	26.320	26.800	27.130
Lichtenberg	22.777	24.260	25.540	26.810	28.060	29.290	30.640	31.740	32.670	33.550
Reinickendorf	25.802	26.160	26.650	27.450	28.320	29.150	30.090	30.900	31.590	32.230
Sonderschulen[1)]	7.791	7.640	7.560	7.650	7.880	8.170	8.520	8.850	9.270	9.390
Berlin	301.927	308.670	315.210	323.600	332.670	342.420	353.410	363.010	370.530	376.960

Fig. 24 forecast, rising student figures Berlin

B) Prozent

	IST	Modellrechnung								
Bezirke	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Mitte	100%	102%	105%	108%	110%	113%	116%	119%	121%	123%
Friedrichshain-Kreuzberg	100%	101%	102%	105%	107%	109%	112%	114%	116%	117%
Pankow	100%	103%	106%	110%	114%	117%	121%	125%	127%	129%
Charlottenburg-Wilmersdorf	100%	102%	103%	105%	108%	111%	114%	117%	119%	121%
Spandau	100%	102%	105%	109%	113%	117%	122%	126%	129%	132%
Steglitz-Zehlendorf	100%	101%	103%	103%	105%	107%	109%	111%	112%	114%
Tempelhof-Schöneberg	100%	102%	103%	105%	107%	109%	112%	114%	116%	117%
Neukölln	100%	100%	101%	103%	104%	107%	109%	112%	114%	116%
Treptow-Köpenick	100%	103%	106%	109%	114%	119%	123%	128%	132%	135%
Marzahn-Hellersdorf	100%	103%	106%	111%	114%	118%	122%	126%	128%	130%
Lichtenberg	100%	107%	112%	118%	123%	129%	135%	139%	143%	147%
Reinickendorf	100%	101%	103%	106%	110%	113%	117%	120%	122%	125%
Sonderschulen[1)]	100%	98%	97%	98%	101%	105%	109%	114%	119%	121%
Berlin	100%	102%	104%	107%	110%	113%	117%	120%	123%	125%

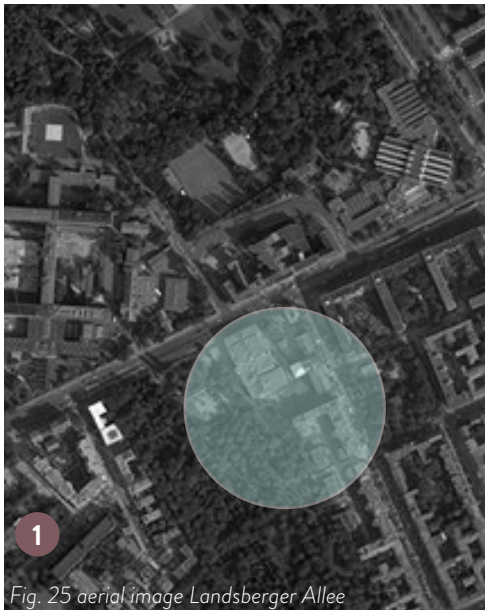

Fig. 25 aerial image Landsberger Allee

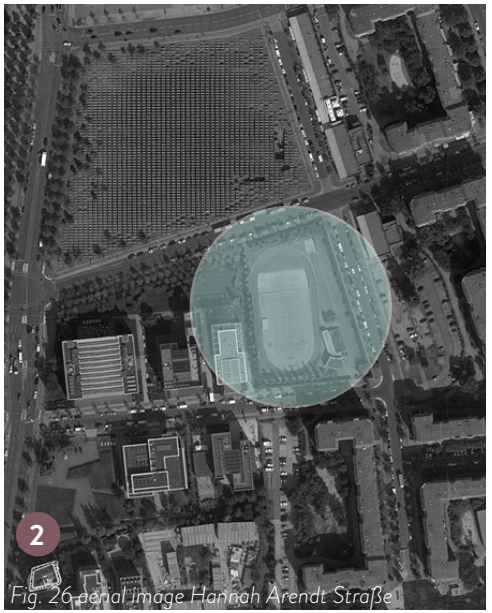

Fig. 26 aerial image Hannah Arendt Straße

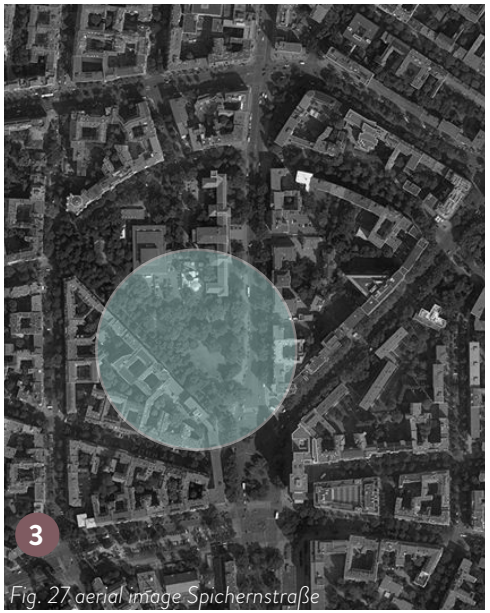

Fig. 27 aerial image Spichernstraße

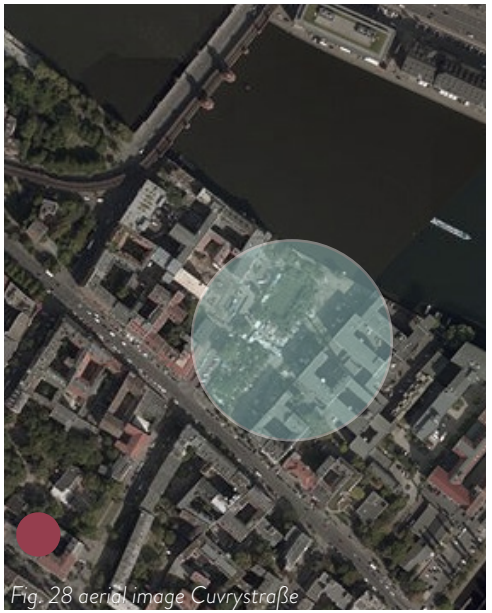
Fig. 28 aerial image Cuvrystraße

LOCATION PROPOSALS

Finding the location was primarly based on the forecasts regarding the rise in student figures. Other factors played an important role. In the end four locations were chosen based on the forecasts, the amount of other „Gymnasien“ in that area, the property size etc. One could argue that the chosen location right next to the Spree, a historic and media-hyped property might be better off with more tourist hot spots and public spaces. I think it is a great opportunity for an urban approach to designing schools and bringing school and education to the people, making them perceive, communicate and interact with it.

Fig. 29 view onto the propoerty from the opposite riverside of the Spree

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Fig. 30 aerial view of the area

Fig. 31 collage of articles about the Cuvryproperty

about | discussion

The so called Cuvrybrache is a property located in one of the best real estate positions of Berlin's district Kreuzberg with 10.000 square meters right at the bank of the river Spree and a view over the bridge Oberbaumbrücke and the TV tower. It is a place of particular social significance. Since many years there have been protests against a building construction and it has been asked to make this land available to Berlin's people for creative purposes. The corner of Schlesische Straße and Curvystraße has emerged into a tourist attraction due to its grown club culture and gastronomy. At night they sit in the bars and restaurants, drink beer and cocktails and enjoy the numerous international gastronomy.

1579 the exploitation of the topography of Kreuzberg's terrain begins with the application of a dairy farm by the magistrate of Cölln. Extended to various economic building, a distillery of hard liquor, a brewery, studs for cattle-breeding and a wind mill since 1648 by mayor Bartholdy and his son, in 1771 Daniel Itzig acquires the compound. Born in Berlin but of Polish origin he was considered rich and odious as, in accordance with the king, he supplied the Prussian coin with substandard impressions. In 1799 his luxurious property which dispersed until the Köpenicker Straße is sold due to bankruptcy by an inheritor. For a long time it is a freckle for dairying and a summer resort located outside of the city walls and in the possession of the family Mendelssohn Bartholdy: "Imagine the densest, chilliest shadows of patriarchal chestnut, linden and plane trees", speaks Lea Mendelssohn Bartholdy 218 years ago to her fiancée of her summer delight. "High arched access balconies; friendly round places and cute houses of lust; add to this a small, comfortable and rural residential building, around which grape-vines, mulberries and peach trees entwine […]." After her inheritors sold the summer resort to a "good honest man" who "at the most will sell individual parts of lawns from it", in 1826 Heinrich Andreas de Cuvry begins to divide up and to sell his acquired territory: to a landlord, a sugar heater, to the coppersmith and mill manufacturer Heckmann, at last also to the train station Görlitzer Bahnhof. 1839 the street Schlesische Straße receives its name; the "Grüne Weg" (Green path) which leads through the garden "Cuvrys Garten" down to the river is called Cuvrystraße from 1858 onwards. With the expansionary development and industrialisation the remaining craft producers and the country houses must finally give way to new streets and tenements. At the bank of today's Cuvrybrache a castle alike double swimming bath invites to gender separated refreshment between 1895 and 1922 having cost 100.000 D-mark which makes it the up to now most expensive one of its kind in Berlin. In 1910 the area of today's Cuvrybrache is made up of the allotments Schlesische Straße 33/34 and Cuvrystraße 50/51 – used for booths or storages, as an entry on the city map reads; in any case not firmly under roof - back then apparently also an interspace and temporary arrangement.

From 1933 the owner of the terrain is the beer- and spirit concern Kahlbaum-Schultheiß, from 1940 until 1943 the "arianised" whole sale for coal C. Wollheim. A freezer store for the island city whose thick bunker wall fragments still exist today is buried close to the river bank during the post-war period. After the possession by a container establishment of the inland water vessel corporation and numerous speculative real estate companies the culture project YAAM begins his work in the 90s and constructs one of the first beach bars of the city right there. When this bar has to give way to the shopping mall "Cuvry- Center" in 1998 the district Friedrichshain-Kreuzberg militates against it and the right for planning is given to the senate administration for city development after resident protests. After the bankruptcy of the investors the waste land becomes a playground and project space for artists. The "Neue Spreespeicher" with offices, restaurants and an underground car park, another time a five star hotel and currently the Cuvry yards, cooperative and rented apartments including a day-care centre and a supermarket arise. In 2012 the Solomon R. Guggenheim foundation and the motor-car enterprise BMW want to host a temporary project about the life in large cities on the property. Thereby some fear a further upgrading of the district and demonstrate against it – until the project is moved to Prenzlauer Berg due to threats of violence. Homeless, refugees and dropouts begin to settle on the property in a village made of wooden huts and tents.

Fig. 32 the Cuvry-Favela

After a fire in September 2014 the residents must enforcedly leave their housings and the police locks the property in order to avoid their return. Shortly after "Germany's first favela" is cleared and secured. The silent scenery for the flattened bald field which is secured by a metal fence displays two monumental graffiti which are emblazoned over the waste land since 2007 and which are an emblem of this contested place. In December of 2014 the Italian street artist Blu decides to blacken his wall paintings when he finds out that right next to it there will be constructions. It was supposed to be a statement against the gentrification. „In a way, it is a ‚fuck you' gesture towards the city", says the English original. During the night the firewall is firstly painted anew in a way that only the middle finger of the figure's hand remains. Meanwhile however the wall is completely black. The wall paintings at Cuvrystreet originated in 2007 in line with the Graffiti-Festival Backjump which was organised by the Kunstraum Kreuzberg. The online platform change.org had claimed to put these wall paintings under monument protection. The endless history of the Cuvrybrache will soon come to an end. This had been the case often in the two past decades.

After long negotiations between investor and Senate soon there will be construction on the real estate of Kreuzberg's Cuvrystraße. What will arise, however, won't be apartments for living as wished by many for decades but offices, a hotel, restaurants and an underground car park. The reason for this final decision is a very old planning permission. The owner of the real estate Artur Süßkind had been debating the future of the property with the administration of the Senate for city development for years in order to prevent a construction that would be exclusively for commercial purposes as is it the case now. Still in 2013 the plan was to create apartments for living with an open space facing the river Spree which would be freely accessible. The debates for this came to an end – apparently due to the demand of the Senate to also provide social housing amongst the apartment constructions. As the planning permission dates back to the year 2002 and has been extended since then various times it was possible to win the debates based on this permit. Under the term "Neue Spreespeicher" two elongate buildings in the style of brick stores are now in the making. This means a significant loss for the district because it is in the urgent need of potential living space which is now wasted. Although the Senate wants to continue debating with the investor it seems as if the Senate of Berlin has missed its chance by demanding a 25% of the construction to be council flats. After the failed negotiations in the past year the administration of the Senate for city development and environment has finally changed those planning foundations in order to avoid another prolongation.

According to the new law from January 2017 onwards a planning permission lapses if the construction is not started within the first three years. An extension is now possible only three times with a prolongation time of one year. This means that on many fallow properties in Berlin there might be change visible very soon. [13]

Fig. 33 view over the Spree River

13 kreuzhainer (2016) [online]

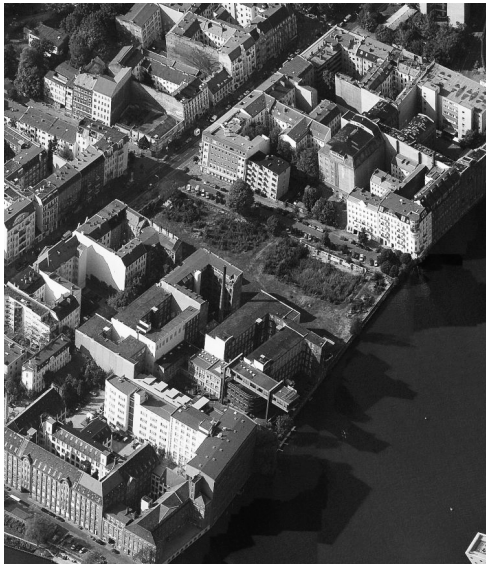

Fig. 34 eastern areal views

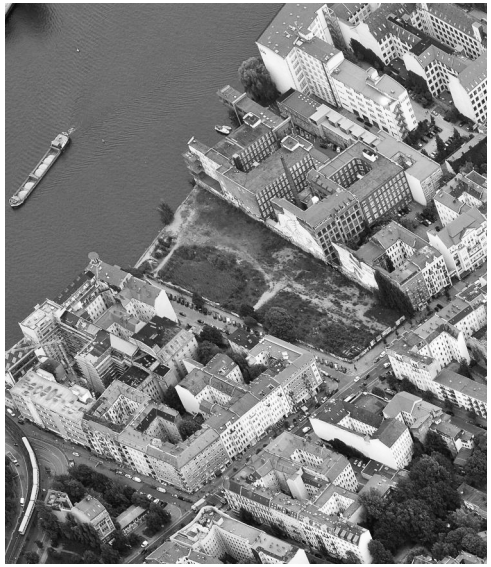

Fig. 35 southern areal views

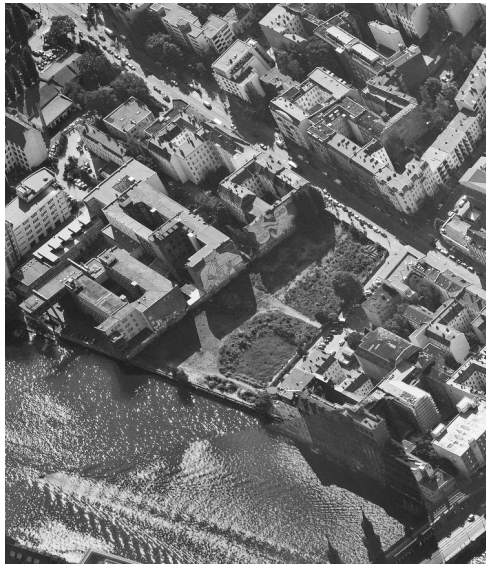

Fig. 36 northern areal views

Fig. 37 firewalls

Fig. 38 street view

Fig. 39 panorama: Oberbaumbrücke - Spree - Cuvrybrache

Fig. 40 street view Schlesische Straße

Fig. 41 street view Cuvystraße

Fig. 42 view from the Oberbaumbrücke

Fig. 43 adjoining buildings

Fig. 45 view onto the propoerty from the opposite riverside of the Spree

Fig. 46 Shadow Concept Cover

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The social life of small urban spaces
People tend to sit where there are places to sit.
recommendation: 1 linear foot of sitting space per 30 square feet. (0,3m per 2,787m²)
relationship to the street is very important
Heavy use from 12–14⁰⁰ → lunch
Street level is super important
people can be physically close to each other but keep social distance
TRIANGULATION
people get together if something is going on! • sculptures, table tennis, whatever
social de elements.
dont block the pedestrian flow → make sculpture and art usable! painting!
nature
• more trees
• street trees .. shadow, light ...
spaces
• centers
• corners
• street corners → social life of its own
• front of exit & entry → hello & goodbye spot!
people like places that are open to the action but slightly recessed ...
people that are not welcome → the undesirable → homeless .. mainly homeless and well behaved.
regularity is not seen by the people at eye level
access
• stumps → easy steps
Groups
• girl watchers
• not much mixing
• lovers / couples
• people who just stand there
enough waste bins!
seating
→ people that stir and eat attract more people .. food gets thrown all together!
small benches are socially awkward
benches should not be in isolation
people looking @ people looking @ other people ...
places to wait people
coexist!
instinctive feel of people about the number that is right for a place! → effective capacity
movable chair → feeling of choice!
visual enjoyment as a secondary use!!
→ as important as primary use!
• people do not often stop to talk in the middle of a large space
→ find stairs → edges etc.
easy steps almost down you in!
Steps & stairs
• sitting on stairs → blocking passage
physical features
• Steps ... low ... easy to go up & down + easy to sit on
• fountains, water plays → sound!
make it usable accessable!
not the ruling factor
SUN OR SHADE DOES NOT MATTER IN SUMMER
→ people tend to sit any where ...
absence of light is worse! than absence of light.
protection from the wind
Grass to sit on → planters
people like moving things → even if the position does not really change ...

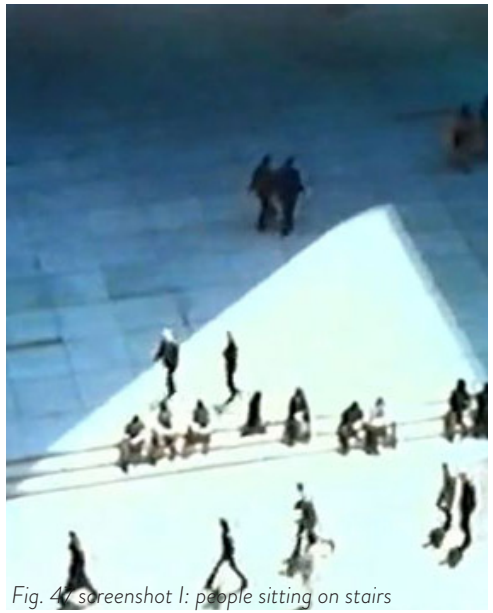


Fig. 47 screenshot I: people sitting on stairs


Fig. 48 screenshot II: „the girlwatchers“

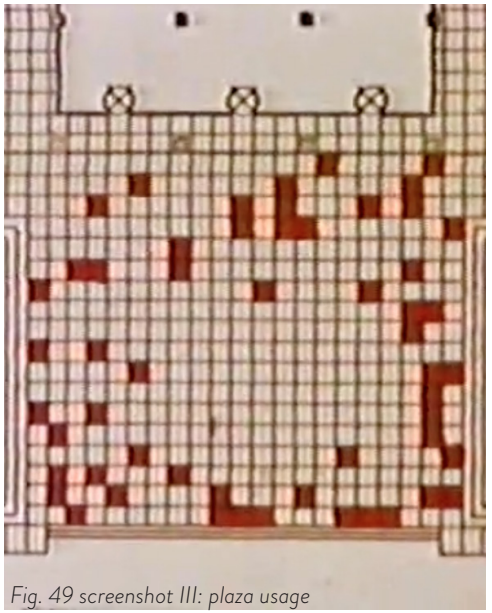


Fig. 49 screenshot III: plaza usage


Fig. 50 screenshot IV: centered object

the social life of small spaces.

To define the way in which the actual outside area, including the main campus on the ground flour and the first floor, as well as the different terraces, can be arranged, one could approach the arrangement and design by comparing it to a small urban space.
During my research I came across a documentary film from 1988 called „The Social Life of Small Urban Spaces“ by William H. Whyte and the municipal art society of New York. It is analysing different plazas across New York city. By using timelapses and different measuring methods throughout a great period of time this documentary gives us a great insight into the way people function individually and together. Obviously there is a difference between the way in which a school student behaves in a school environment and and adult in an urban environment, however there can be found a lot of similarities which definitely can be used to approach this task. Some aspects are so obvious that one can easily disregard them by simply considering them banal. One of these banal observations made by William H. Whyte and his team through this survey is the fact that people tend to sit where there are places to sit. Think of a plaza you may know as well as the amount of people using it in proportion to the available sitting area. A lot of objects are not made for people to sit. These are simply converted by the user because there is not enough sitting space available (walls, stairs, window boards, hydrants, flowerpots).
It is also often considered that the most influencial aspect regarding plazas is the sun. This survey though proves that there is no main factor guiding the people's choice of sitting. It is further more the combination of quite a few factors such as the sittable spªce, the sun and light, the surrounding noises (cars, streets, water) but also the amount of trees and shadows.
By analysing the behaviour the research divides the users into different groups.
The couples/lovers tend to sit somewhere more quite, often in the shadow, not wanting to be exposed too much. Others such as the girlwatchers, mostly a group of 3-5 men, tend to be located where there are a lot of people passing. And then there is the loner, a person which is simply looking at other people.
Furthermore it has been observed, as seen in the third screenshot, that people, be it alone or in groups, do not tend to use the center of a plaza. They locate themselves close to walls, edges, stairs and trees. This is probably a human instinct resulting from the need of feeling secure.
By giving people something to use, such as chesstables, newspapers or by exhibiting art objects it is possible to guide them through a space as well as too divide and to center an area.
People like to actively change their surrounding settings. For example, even if a chair is perfectly positioned for an intended use such as eating, reading or sunbathing - people move the chair before they sit down. 14

14 see archive (2016) [online]

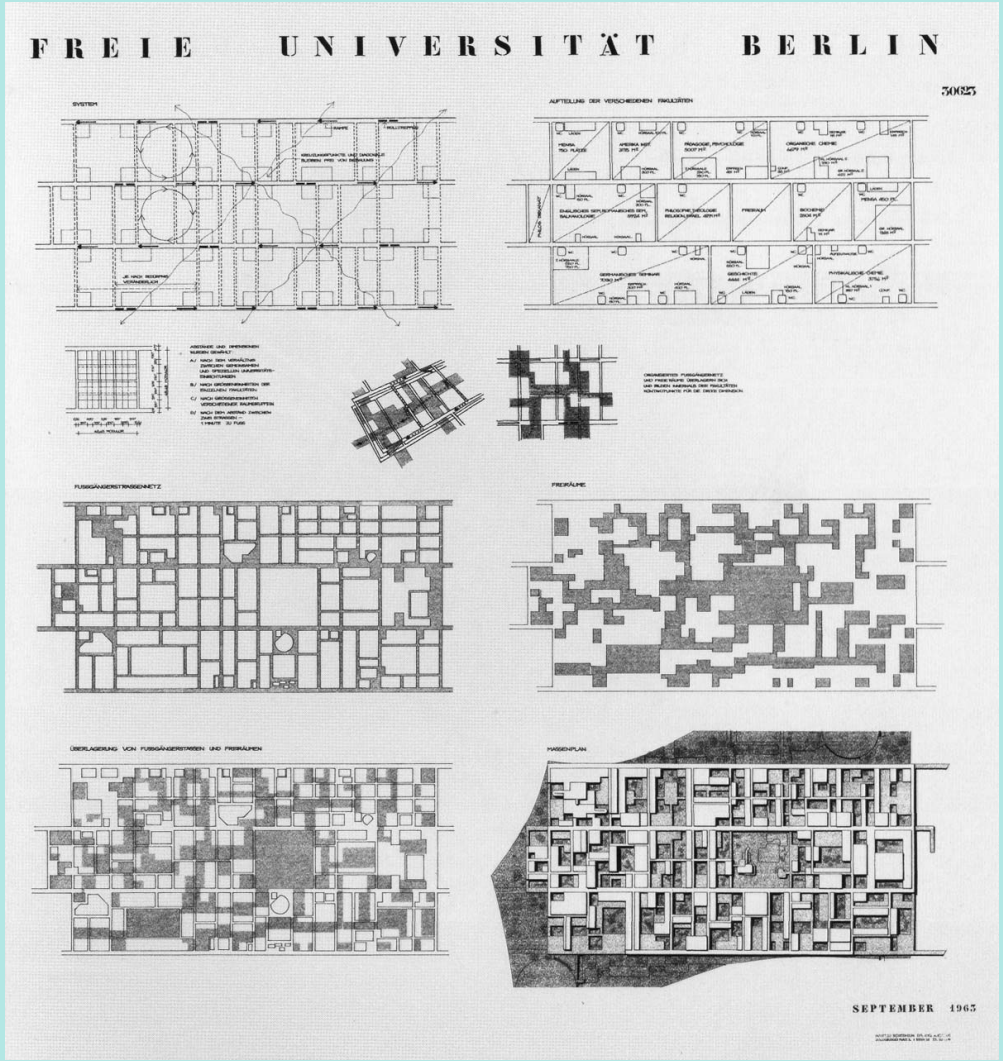


Fig. 51 drawings | plans FU Berlin

structuralism Georges Candilis

Fig. 52 FU Berlin, terrace

Georges Candilis, born in 1913 studied architecture at the University of Athens. After the Second World War he moved to France and started working for Le Corbusier in 1946 with his fellow architects Alexis Josic from Yugoslavia and Shadrach Woods from New York. Le Corbusier's technical and conceptual influence on the three architects can be seen in their works, especially looking at their design for the extension of the Freie Universität Berlin. Their architectural approach was referring to Le Corbusier's Modulor System - the foundation for the entire design. The concept was to create a grid-like room structure regarding the human proportion.
In comparison to the revolutionary urban studies by Le Corbusier, Josic, Woods and Candilis are trying to overcome the barriers of modern urban design. Their idea is to merge the inside with the outside, especially when it comes to the area facing the infrastructural space. The zones between the building itself and the city should vanish.
This idea lead to a conglomeration between different layers: the building and the city, the infrastructural space and the surrounding nature, the individual and collective space, the functionality and identification as well as the construction and complexity. Due to World War Two Germany lost 20 years of development regarding their higher educational institutions. The student figures were rising whilst the spatial progress was at standstill. The Freie Unversität Berlin was founded by professors and students in 1948 after Berlin was divided and was located in privat villas in the south-western district „Dahlem". The number of students was rapidly rising from 2140 students at the beginning to over 11000 student's in 1963 - the year of the competition.
„Dahlem" was chosen as a location due to the former plans by Althoff and Jansen for the Free State of Prussia which wanted to establish a „city of studies" at the beginning of the 20th century. In 1963 an international architectural competition was advertised for the development of the entire site. The competition included a detailed spatial programme and definition for the technical procedures of a institution for higher educational purposes. A main focus was to not only design seperate buildings but to integrate them into a superior structure which again was to be integrated into the urban environment. Spatial structures should also offer a way of expandation and flexibility - the adaptation to the dynamic and constantly changing vitality of a university. Candilis, Josic and Woods won the competition. Their design, a 2-3 storey development formed by cluster-like room structures was accessible through public streets and paths connecting the different departments. They defined the university life as a collective and individual. There concept was to divide the university into different zones for high activity, tranquility and recovery. 15

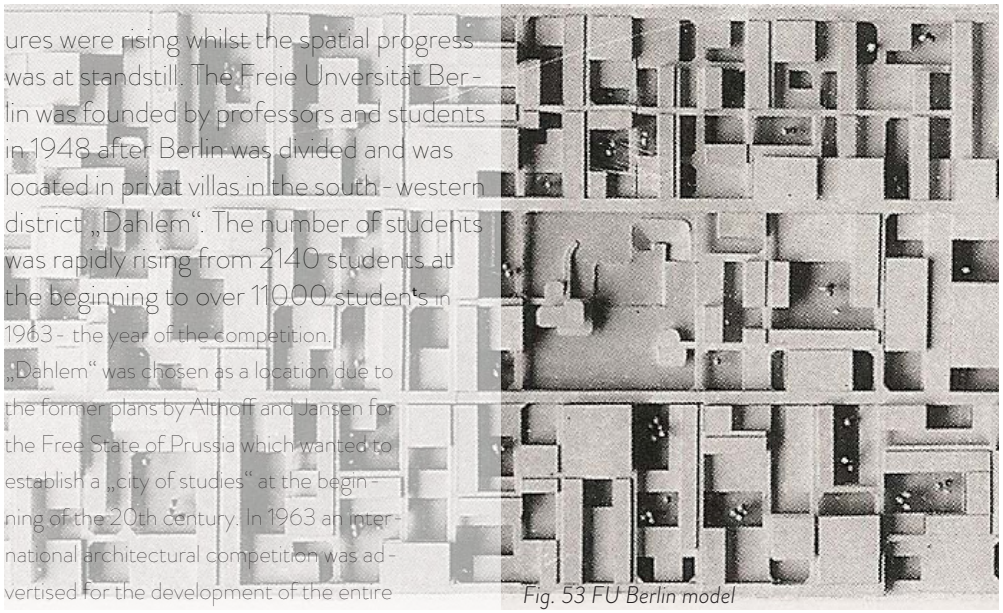


Fig. 53 FU Berlin model

15 see Kutz (p.7-12)

Beeing half Greek the structure of the greek villages and cyclades has influenced me from a young age. I remember the small plazas, the agora- full of people and life. It was the place for any event, be it the morning market or the bouzouki concerts late at night. Stairs and alleys surrounded the buildings and made the Agora accessible from all sides. As children we used to play hide and seek and if we got lost in the often deceptive structures we just had to follow the stairs, in the end we ended up where we started- the plaza. Translated into my architectural design I used this idea of a centered outdoor space which in this case was my school core located on the roof of the gym. It is the educational interpretation of the agora.

Fig. 54 Santorini

Fig. 55 terrace concept drawing

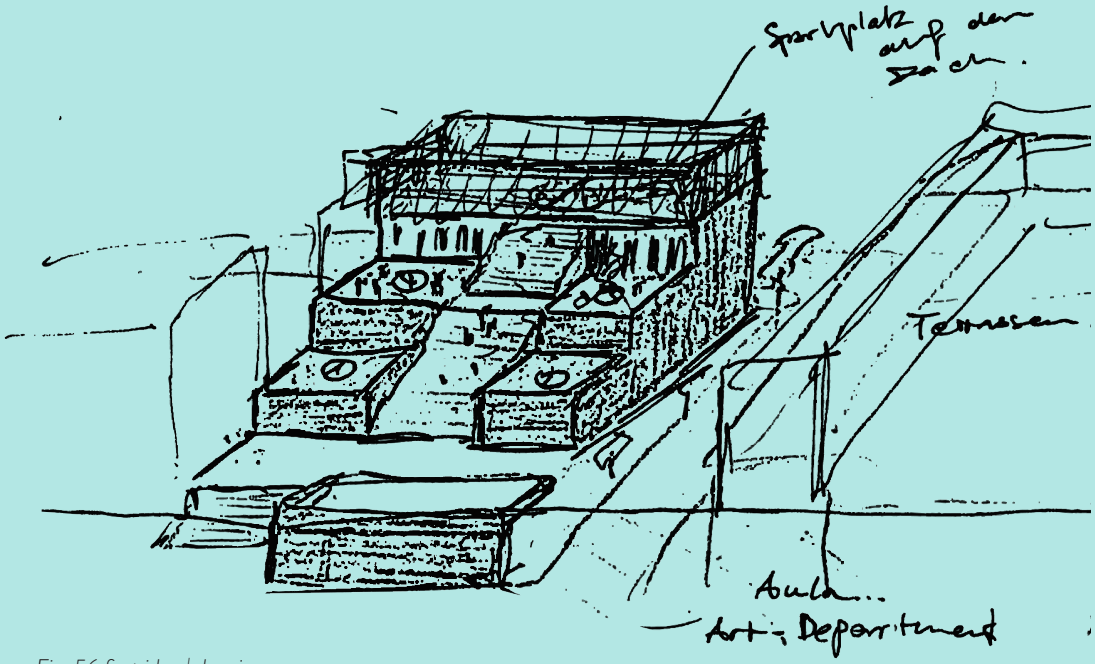


Fig. 56 first idea | drawing

My very first idea was solely focusing on the roof as a campus space. Taking this step further the different campus areas/terraces are connected through a central staircase leading from the ground level up to the 4th floor. A very linear and symmetric design. Looking back at this drawing I am still very pleased with the imaginary idea of it.
The main problem though was the way in which this design would function. After a lot of research on the necessary space programme and especially the focus on natural light and the inclusion I realised that my first approach was architecturally interesting, however from an educational and functional point of view it was difficult to implement the necessary features. Nevertheless it encouraged me to not only look at my building as a piece of architecture in an urban environment but rather seeing the whole building including the campus as a microcosm- a liveable space.
I started researching different approaches to education and realised that there is much more to it then the stereotypical view of a conservative teaching method. It was the aspect of learning something more, apart from the cumpolsory curriculum. The curriculum itself went through a lot of changes over a great period of time. Some countries are considered very conservative regarding their way of teaching, whilst others seem to be ahead of their time. I realised that there is no absolute right and wrong but further more I wanted to design a school that included aspects of different school pedagogic concepts- as conservative or modern as they may be.

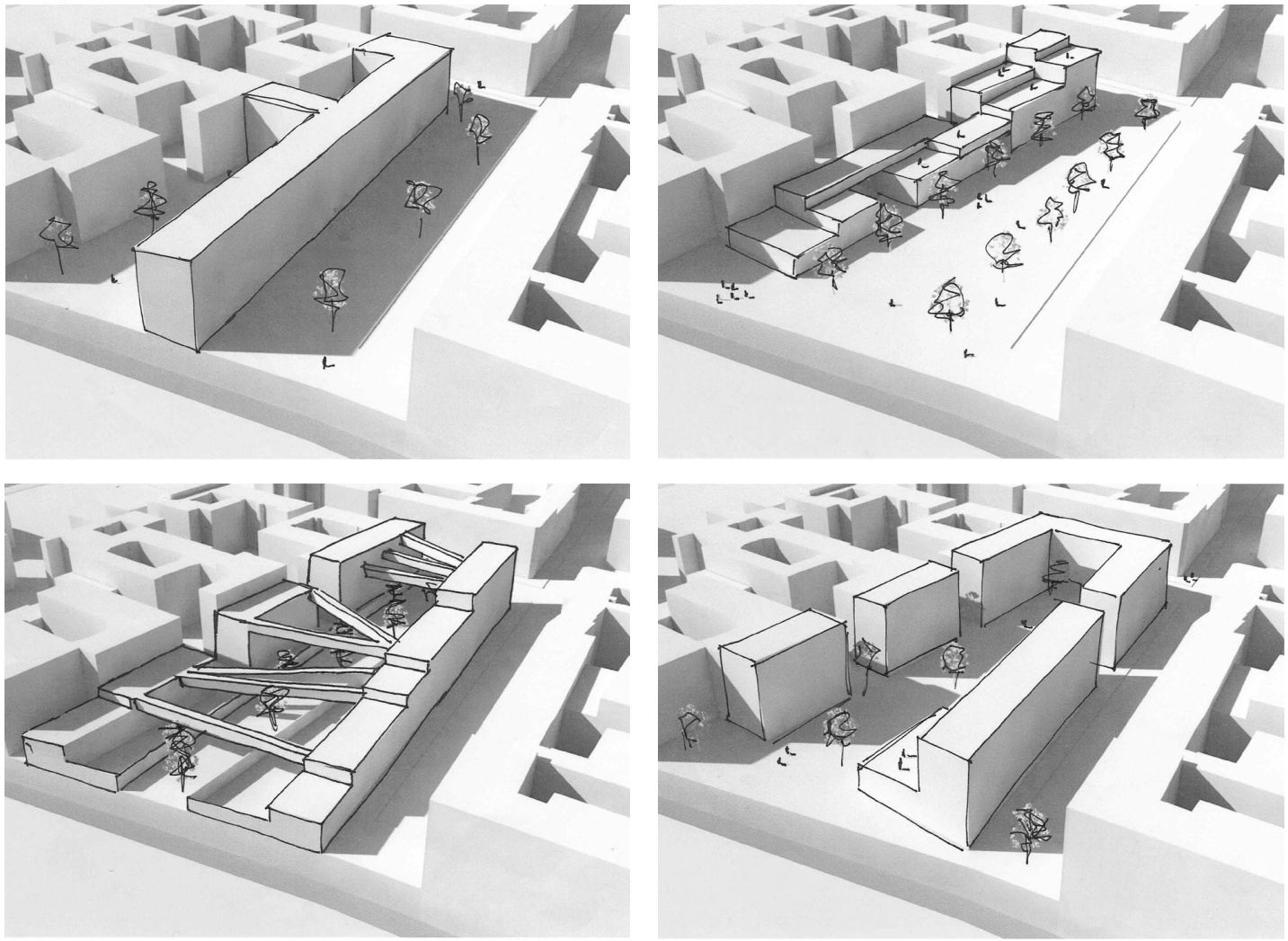


Fig. 57 first urban approaches

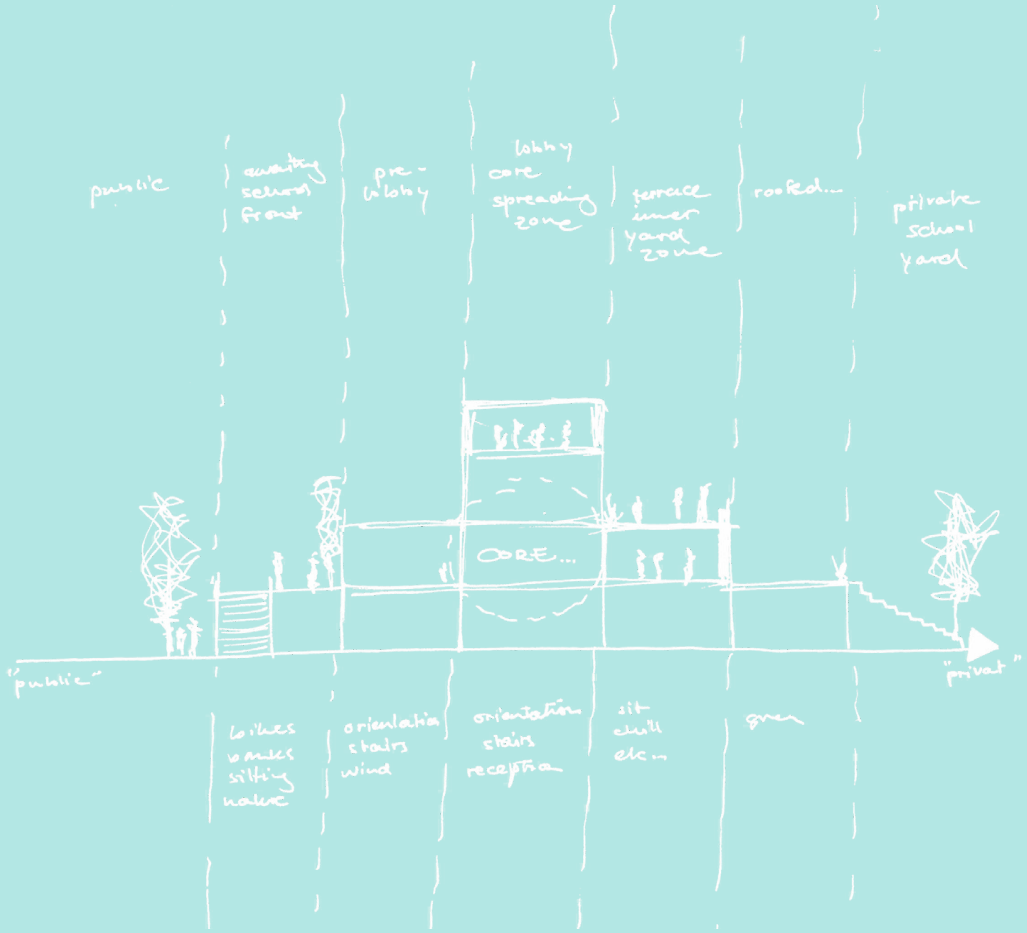


Fig. 58 concept drawing „public“ - „private“

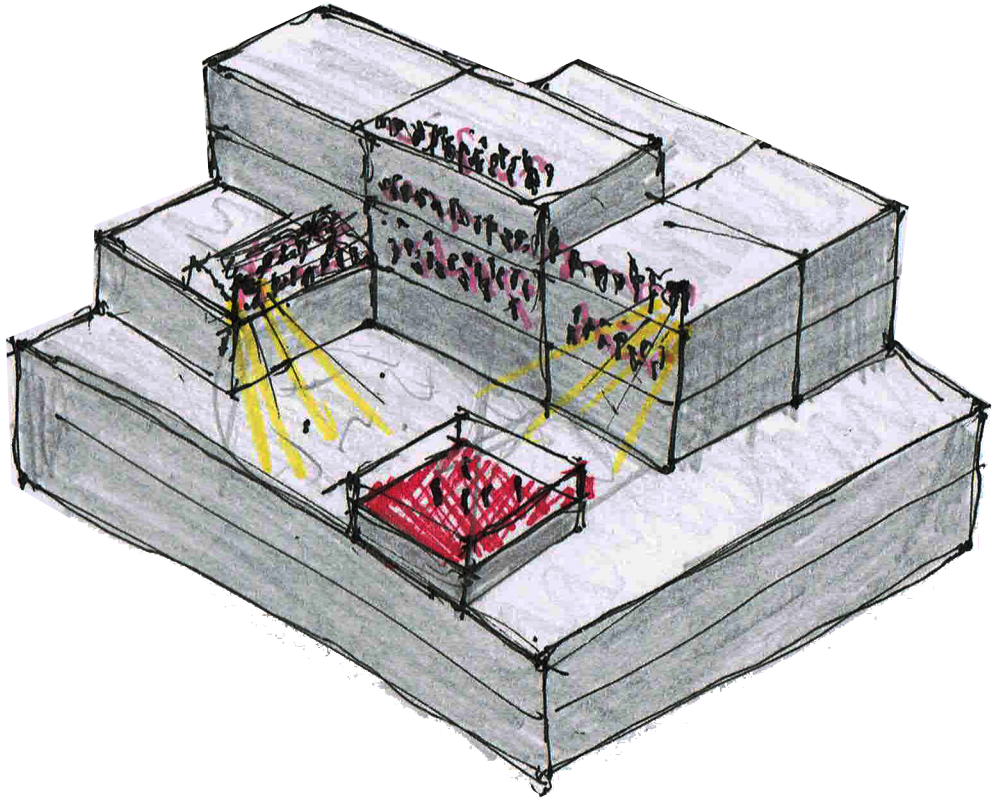
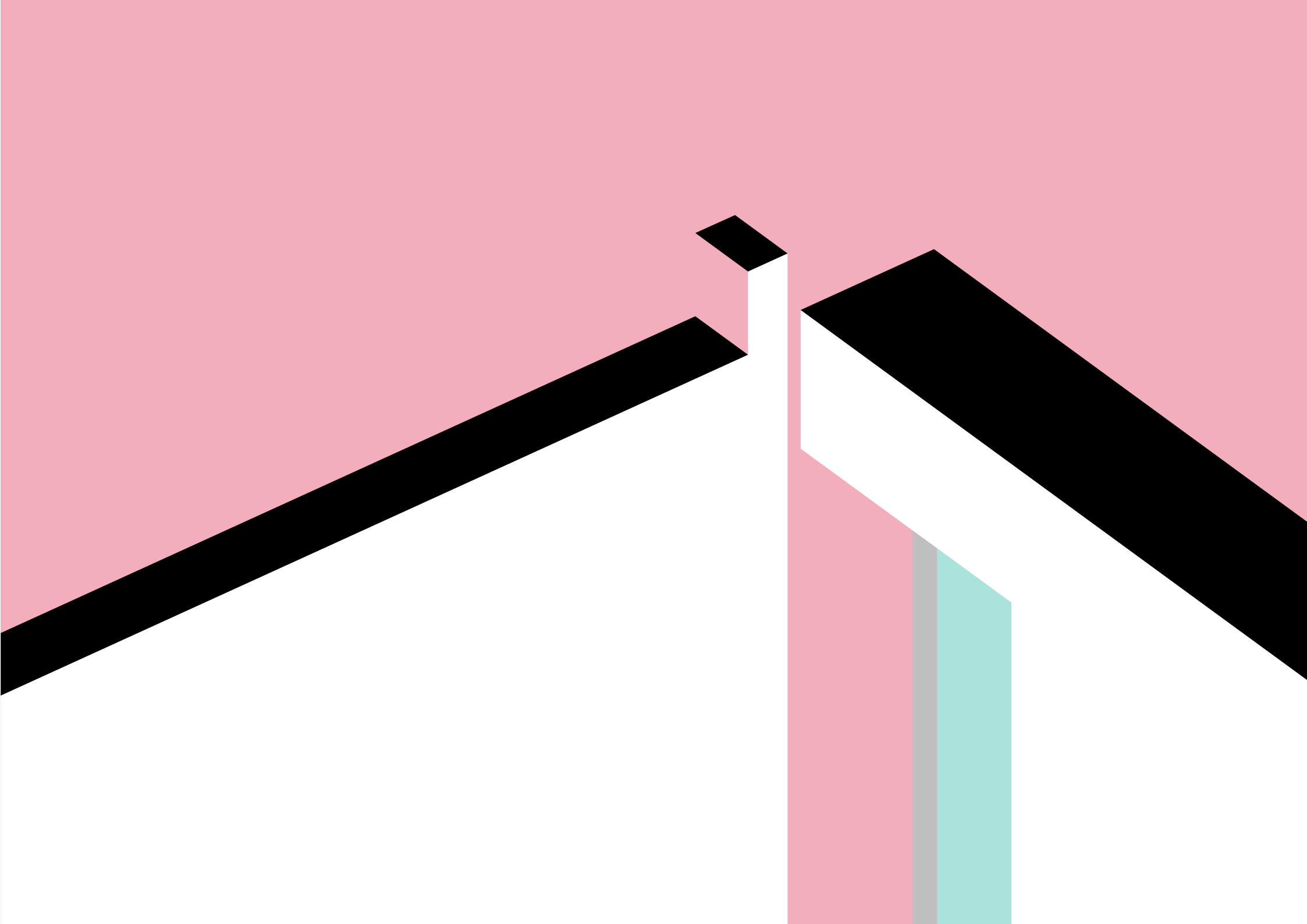


Fig. 59 concept drawing music stage



DESIGN

DESIGN 66-112

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ABOUT THE ENTRY SITUATION

- speak with surroundings
- urban integration
- SAFETY · DROPOF · BIKES
- WAIT FOR FRIENDS/PARENTS
- CHILL · GROUP SPACE

→ some border between "public" & "privat"

- roof in front?
- handicapped access! think...

entry from small side street
→ easier to spread safe, quit, less cars

assembly & refectory close to entry... potential use by others...

art & music facing north
→ good light

CLASSES

- not on groundfloor (noise, view)
- skylight ... light...
- spread classes all over... access

use the roof as a terrace... put under ground!
potential use by others... close to entry

all science together... biology, chemistry, physics

PHYSICS
BIOLOGY
CHEMISTRY

PHYSICAL
EDUCATION

MUSIC
VISUAL ART
DRAMA

ETHICS
GEOGRAPHY
HISTORY

MATHEMATICS
COMPUTER
SCIENCE

LANGUAGES

Regarding the surrounding buildings the urban structure is a classic perimeter development (Blockrandbebauung).
The urban approach was focusing on the orientation towards the Spree river. The terraces are building up from being on first level, right next to the riverside, to the fourth level on the street side. Instead of following the axes of the street the western facade is focusing on its own structure based on a straight grid of 6x6 meters starting from the eastern part of the property and the adjoining premises with their existing development. Translating the staggered arrangement of the terraces into the horizontal the idea is to form small plazas in front of the building mainly used for bycicle stands and as waiting and communication spaces.

Fig. 60 siteplan 1:2000

The terraces are adjoining the different clusters of the building. Most of the classrooms have a direct access to a terrace where the students can spend their small breaks. However there is also enough room for taking the whole lesson outside. Therefore there is no fixed furniture on the terrace itself so that the students can arrange the space according to the lesson and needs. The concept includes that whilst following the regular syllabus students take responsiblity for their classroom, cluster and terrace. Gardening Projects, Planting and aquaponic systems are a great way to experience nature. The vegetables gained can be used for the meals in the refectory.
The fifth floor is accessible but has no enclosed rooms yet. The idea is that the students can design and use this space according to their own needs- they are adding to their school themselves.
The assembly hall, the refectory and the gym are often not beeing used in everyday school life. Especially in the evening and on the weekend they should be accessible to other groups. Seeing that the „Lido“, a concert hall on the opposite street corner is closing the assembly hall, open space and music department terrace can be used for public events.
Looking at the sport facilities the gym, beach-volleyball court, canoes and climbing areas can be used for normal lessons but can also be rented out.
What I loved about my boarding school was that I was able to use the school facilities after school. Playing football, using the music equipment or revising- everything was accessible. The idea is not only to make use of the space but also to give the public, neighbours and especially parents an insight into the school life. Often parents have no idea about what their children are actually doing all day. Interaction and having fun together would promote a good relationship.

Fig. 61 axonometric drawing

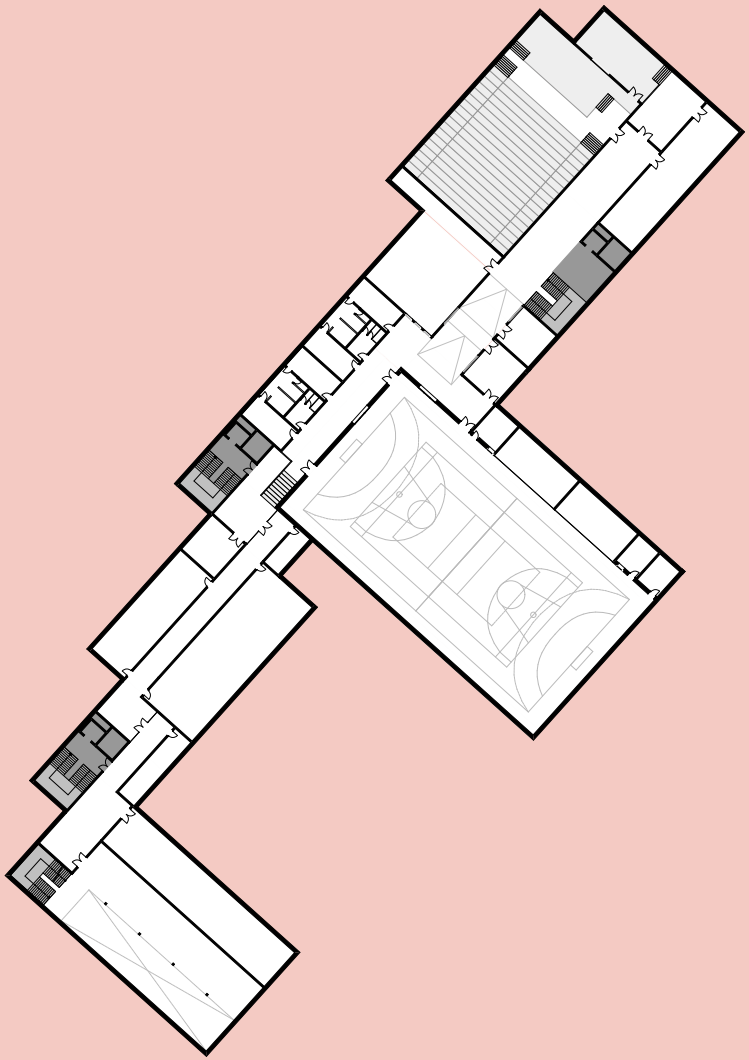


Fig. 62 basement (-1), floor plan, scale 1:1000

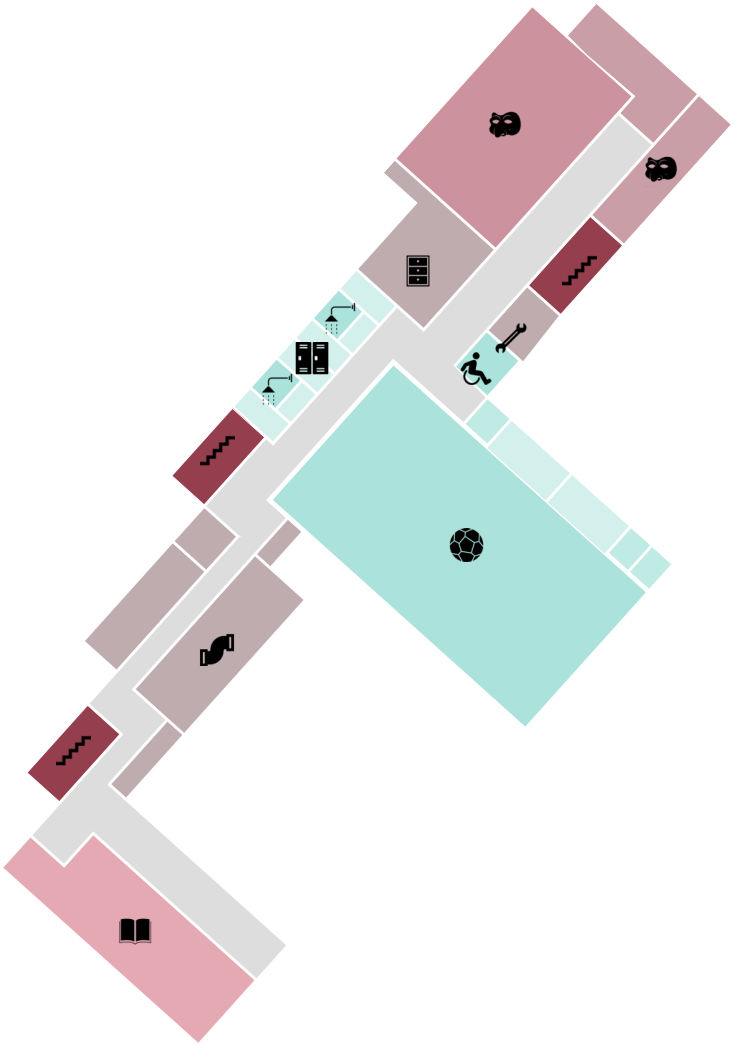
ASSEMBLY HALL
height: 7m | 500 seats | raised stage | backstage area| prop room
~479m²

STORAGE ROOM
storage chairs/tables | equipment

LOCKER ROOMS BOYS
2 x changing room | each ~23m²
1 x shower room | ~21m²
1 x toilet | ~13 m²

LOCKER ROOMS GIRLS
2 x changing room | each ~23m²
1 x shower room | ~21m²
1 x toilet | ~13 m²

LOCKER ROOM DISABILITY
changing room and toilet | ~35 m²



WORKSHOP | CARETAKER
firing furnace | tools | ~47m²

SPORTS HALL
main hall | ~990m² | height 7m
2x equipment storage | each ~50m²
1 x teachers room | 18 m²
1 x teachers room | ~16 m²
1 x storage | ~16 m²

TECHNICAL FACILITES
heating | water | server | etc.

LIBRARY
~357 m² |
book storage | heigth: 3m
learning area | height: 7m

Fig. 63 basement (-1), space programme, scale 1:1000

Fig. 64 groundfloor (0), floor plan, scale 1:1000

REFECTORY
including outside dining
receiving department | ~16 m²
storage | ~77 m²
preparation | ~112 m²
bar and dining | ~254 m²

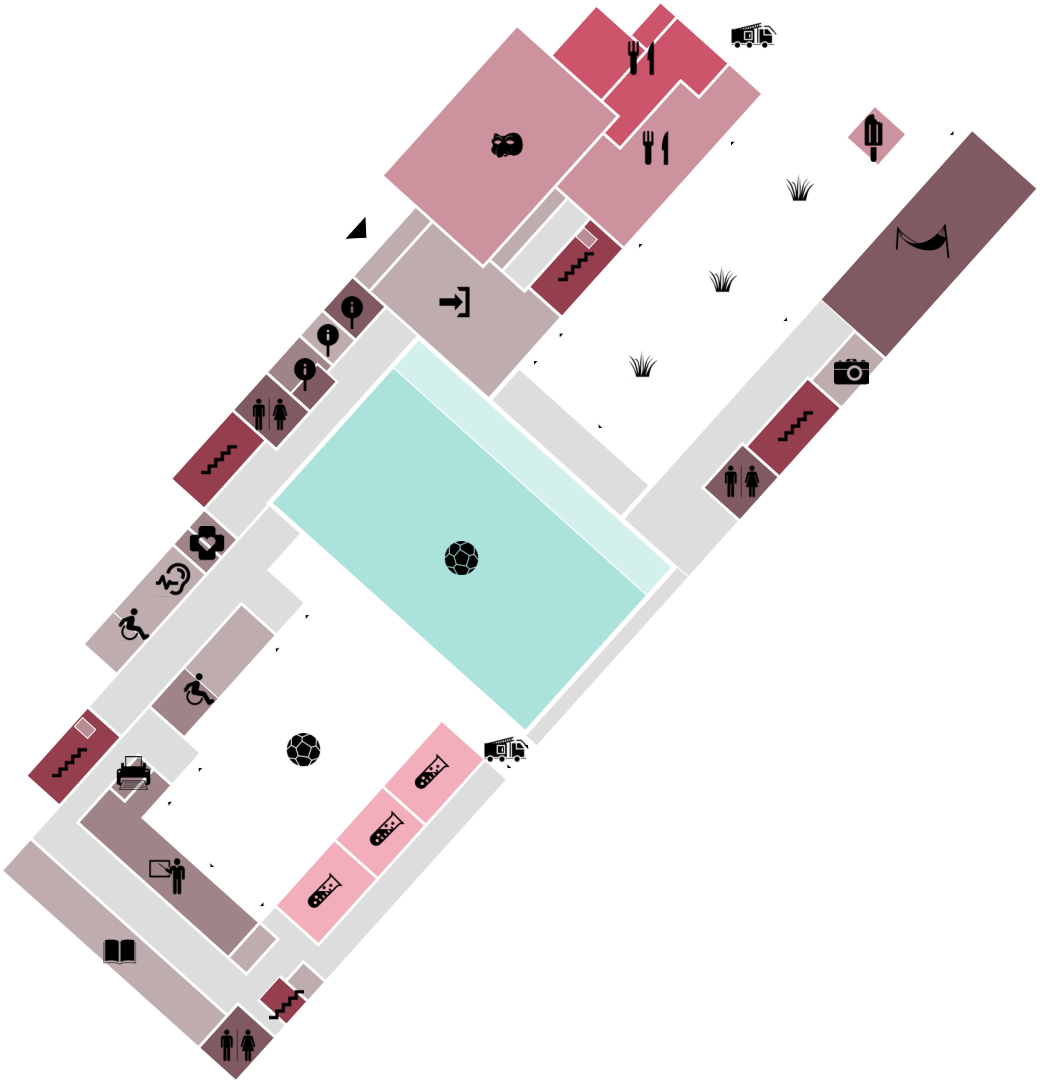
LOBBY
including open staircase | ~276 m²

ADMINISTRATION
reception | each ~33m²
vice principal | ~24m²
principal & storage | ~45 m²

HEALTH CENTER
~17m²

DISABLED CARE
including administration
speaking training | ~100m²
motion training | ~108m²

TEACHERS AREA
for approx. 60 teachers,
including printing area | ~174 m²



OPEN SPACE
stairs & sitting for indoor breaks
and events | ~345 m² | height 7m

PHOTOSTUDIO|DARKROOM
~45m²

TOILETS
boys: 3 WC´s | 3 urinals
girls: 5 WC´s | 1 disabled toilet
~48m²

CHEMISTRY
2 x teaching | ~86 m² each
1 x preparation & storage | ~70 m²

LIBRARY
~357 m² |
learning area |

Fig. 65 groundfloor (0), space programme, scale 1:1000

Entering the lobby through the Cuvrystraße the axes leads straight to the campus from which one can access the „cloister garden“ using the outdoor stairs.

Passing the stairs in the center which lead to the first floor and cloister garden a corridor passes the gym and its tribune (visible through indoor windows) and leads to the „open space“ area. Another openly desigend staircase and elevator lead all the way up to the fourth floor.

The assembly hall is located right next to the entrance so that it can be easily used by visitors. The corridor between the assembly hall and the staircase features a cloak room and leads to the refectory.

The offices, inclusion area and teachers area can be accessed using the western corridor.

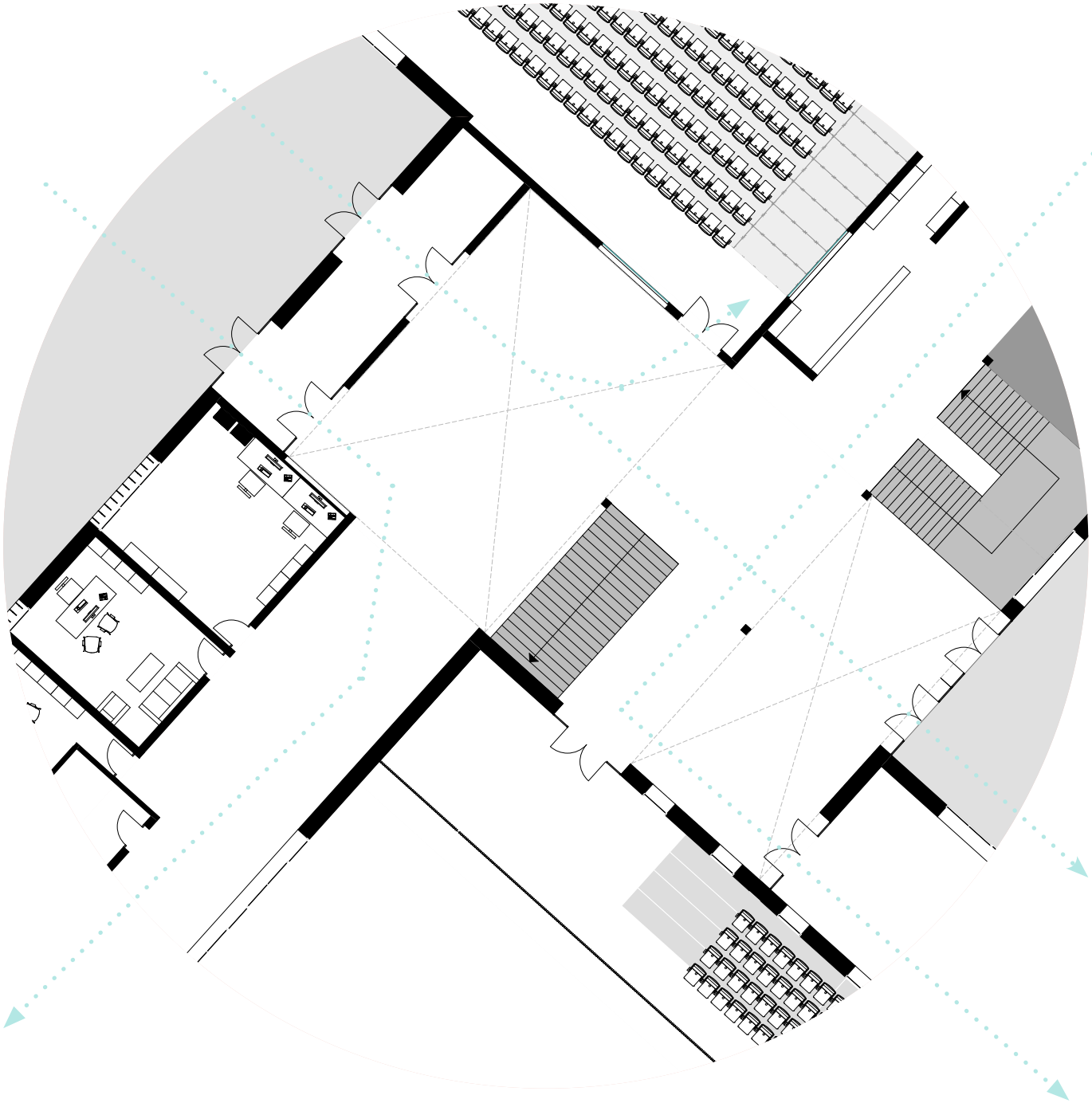


Fig. 66 lobby (0), scale 1:200

Located towards the mainstreet the library expands over the height of two storeys with an openly designed stairscase in the library itself. It is also accessible using the main staircases.

The teachers-area and terrace on the ground floor is orientated towards the schoolyard and gives teachers the possibility to prepare for their work and to take a break.
Alternative and experimental school concepts are welcome by many teachers seeing that they are not pleased with the current situation. Often the focus is solely given to the students whilst the teachers are neglected. Providing them with a suitable space will obviously affect not only them, but the entire school community.

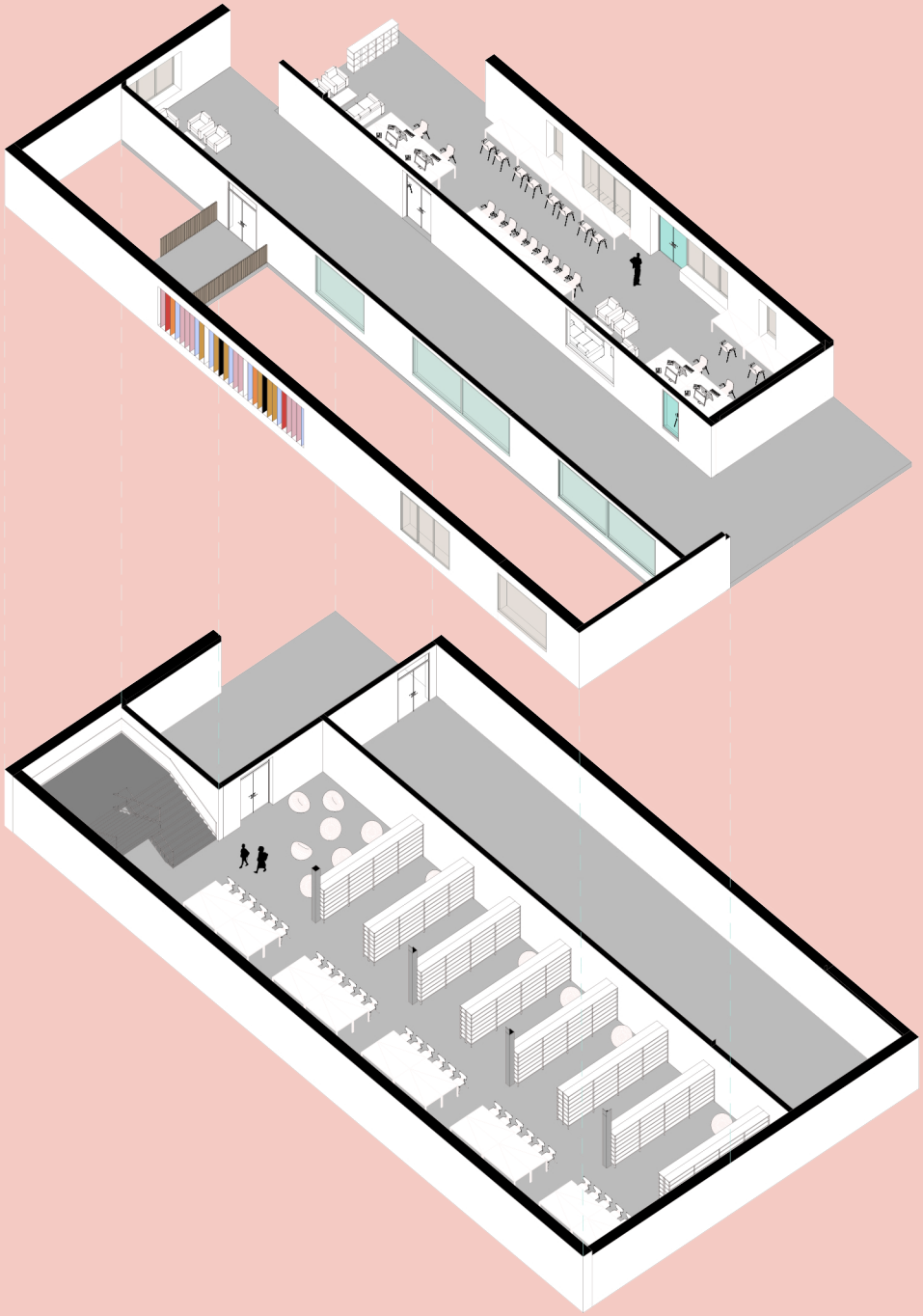


Fig. 67 axo library (-1 & 0) and teacher area (0)

Fig. 68 Perspective Lobby when entering (0)

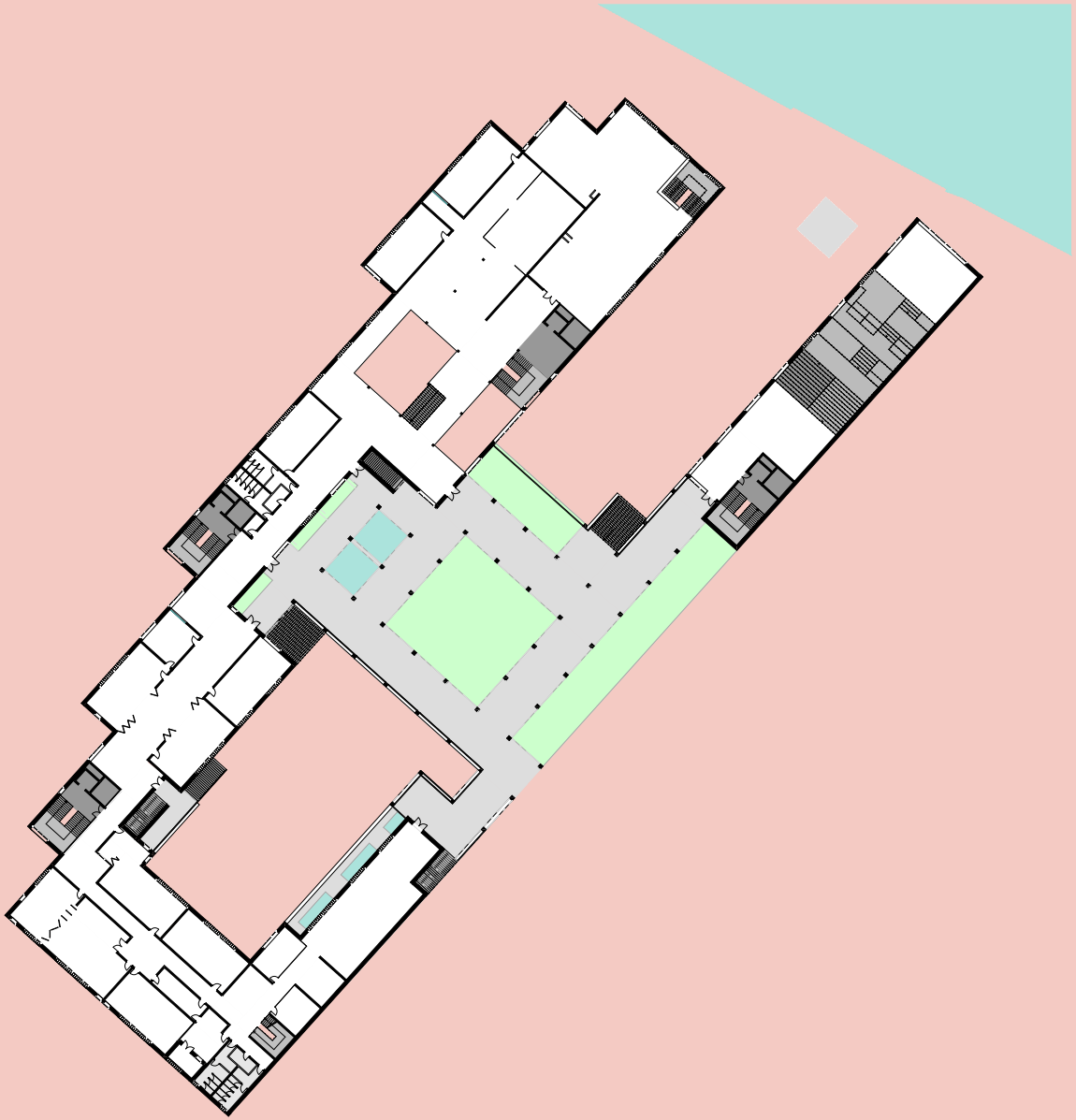


Fig. 69 first floor (+1), floor plan, scale 1:1000

GRADES 7 A & B
2 x classrooms | each ~66m²

REFECTORY
second floor for bar and dining
| ~467 m²

COMPUTER AREA
skylight, 30 seats | ~100m²

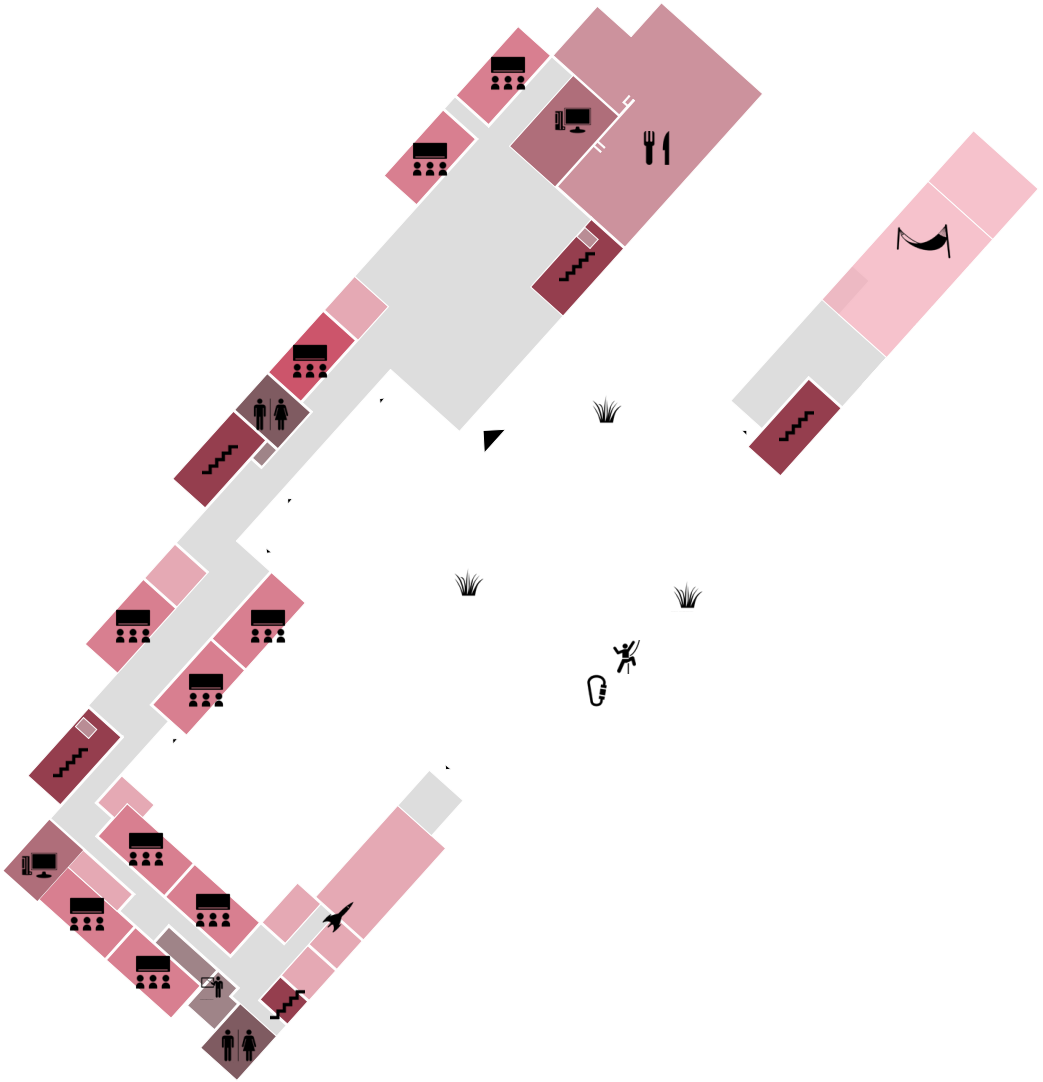
GRADES 6 D
3 x classrooms | each ~66m²
1 x group room | ~35m²

ADMINISTRATION
reception | each ~33m²
vice principal | ~24m²
principal & storage | ~45 m²

GRADES 6 A-C
3 x classrooms | each ~66m²
1 x group room | ~35m²

COMPUTER AREA II
14 seats | ~54m²

GRADE 5 A-D
4 x classrooms | each ~66m²
2 x inclusion area | overall ~47m²



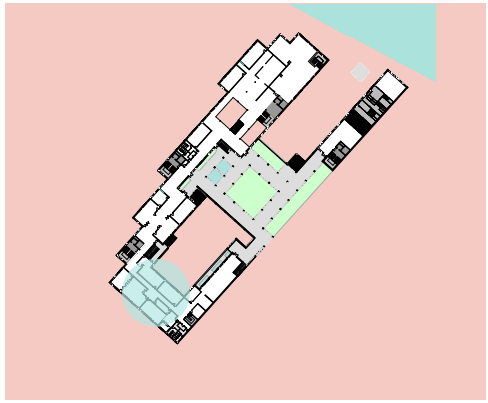
OPEN SPACE
stairs & sitting for indoor breaks
and events | ~345 m² | height 7m

CLIMBING WALL
using the adjoining wall

FUTURE PROJECT AREA
project area | ~138 m²
conference room | ~29 m²
group room | ~25 m²
discussion room | ~26 m²

TOILETS
boys: 3 WC´s | 3 urinals
girls: 5 WC´s
~48m²

Fig. 70 first floor (+1), space programme, scale 1:1000



The classic cluster consists of four classrooms. Some of them offer an additional open group area whilst others are connected to a group room or computer room through flexible walls.

The corridor is used as a common space for small breaks. Therefore students from different grades can also come together during this time.
They are furnished with comfortable sitting elements. The cluster shall serve as the point of identification for the students of the classes. Their lockers are located there, seeing that most of the classes take place in the own classroom and books should not be carried around the campus all day.

Clusters may include an additional teachers area for preparation, copying and breaks and are spread throughout the building and storeys.

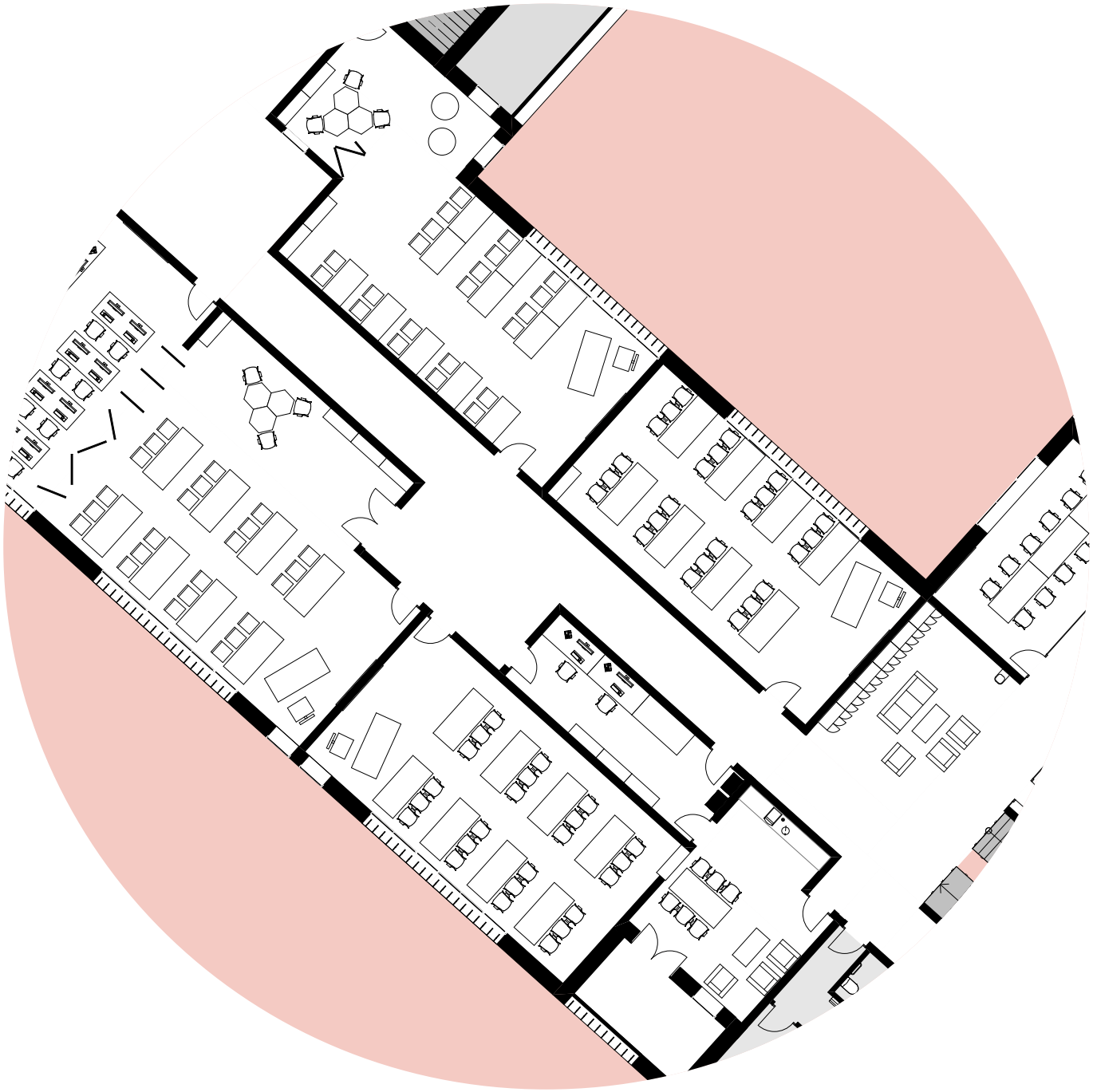
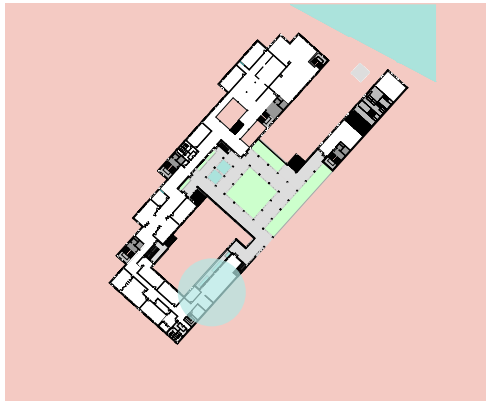


Fig. 71 cluster (+1), scale 1:200



The future project area is basically designed like a modern office. This makes sense seeing that the learning concept is quite similar compared to an office day.

The idea has been introduced in scandinavian countries where some schools do not even have any classic subjects at all. Instead they are working on projects that include aspects of different subject areas and bring them together.
Interdisciplinary links can be made and therefore learning is easier and much more fun.
Working together as a big team, splitting up into smaller groups and working individually- facets of this learning concept are translated into architecture. An open room structure, flexible furniture, conference areas and of course: couches.

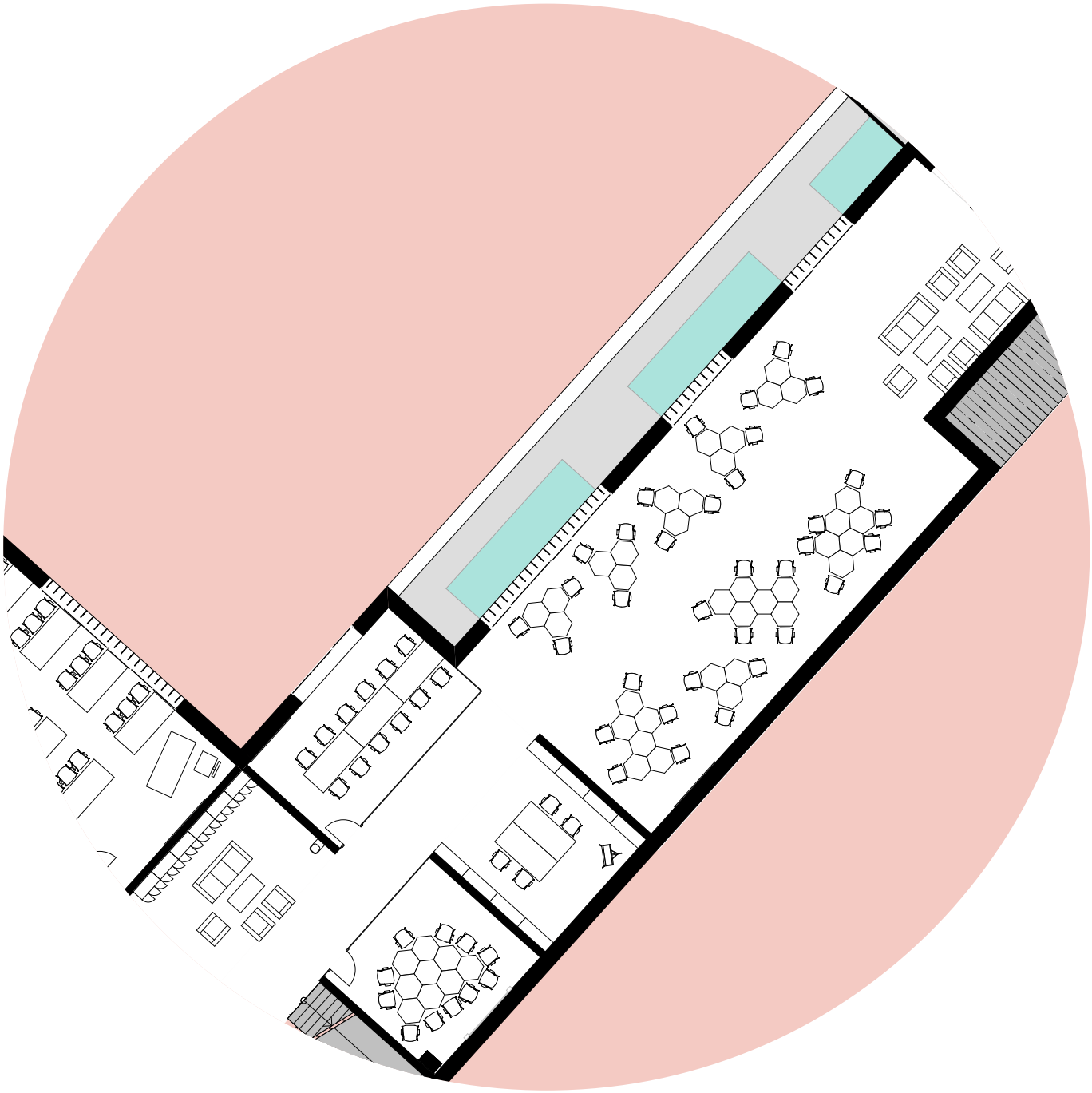
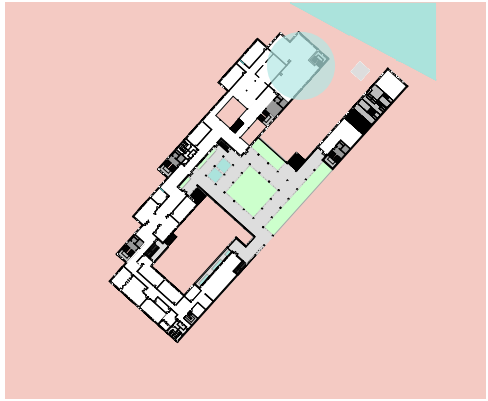


Fig. 72 future project area (+1), scale 1:200



The refectory is located right next to the assembly hall on the ground floor. On the one hand it can be reached fast and easily by students and visitors, on the other hand the view onto the river and the possibility to have lunch outside are key design aspects. The kitchen area (not shown in the axonometry) is orientated towards the street to assure a quick and easy delivery. An internal staircase leads to the second dining area on the first floor.

Whilst quite a few schools make use of catering services nowadays, the aim here is to use the products that are harvested on the gardening terraces by the students themselves and to motivate them to actively participate in the preparation of meals.

Concsious perception.

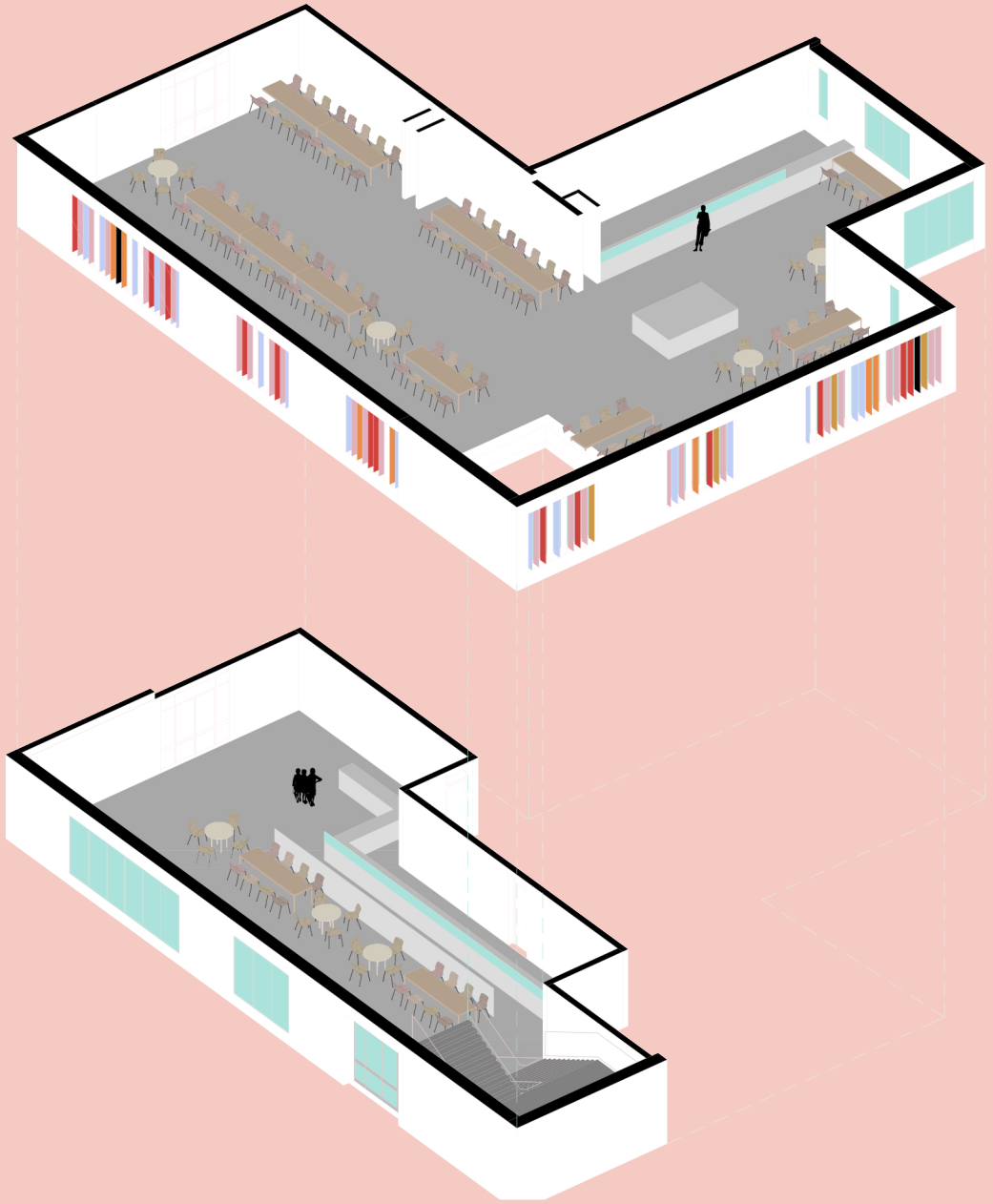
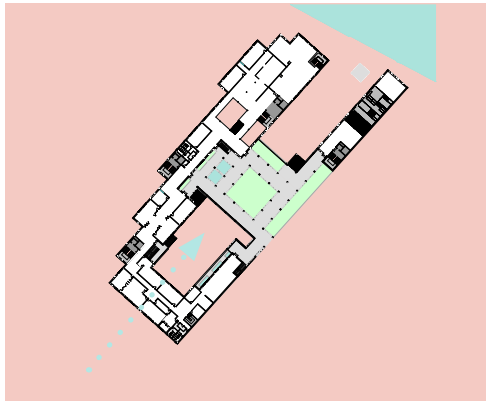


Fig. 73 axo refectory (0 & +1)

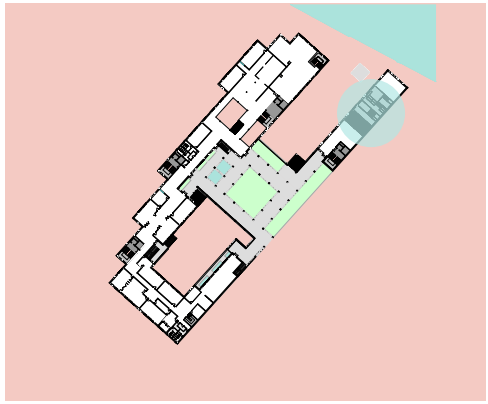


The cloister garden extends over the roof of the gym and can be seen as the outdoor core of the school.

In its center a patch of grass is surrounded by arranged columns that make the grid of six times six meters visible.
The eastern patch of grass is the area in front of the climbing wall that sprawls over the wall of the adjoining building.

The paths are partly roofed to assure that the building parts can be reached even when it is raining. The roofs serve as connecting lanes on the next storey.

Fig. 74 Perspective Cloister Garden



The open space is in the northeastern area of the property. It can be used during breaks and free periods but also serves as a stage with the river in the background.

The building part can be accessed through the schoolyard. In Example when the campus is made accessable to the public on the weekends the gates on the waterfront next to the refectory can be opened and the open space can be seperately used. Therefore the visitors do not have to pass through other parts of the building.

Fig. 75 Perspective Open Space

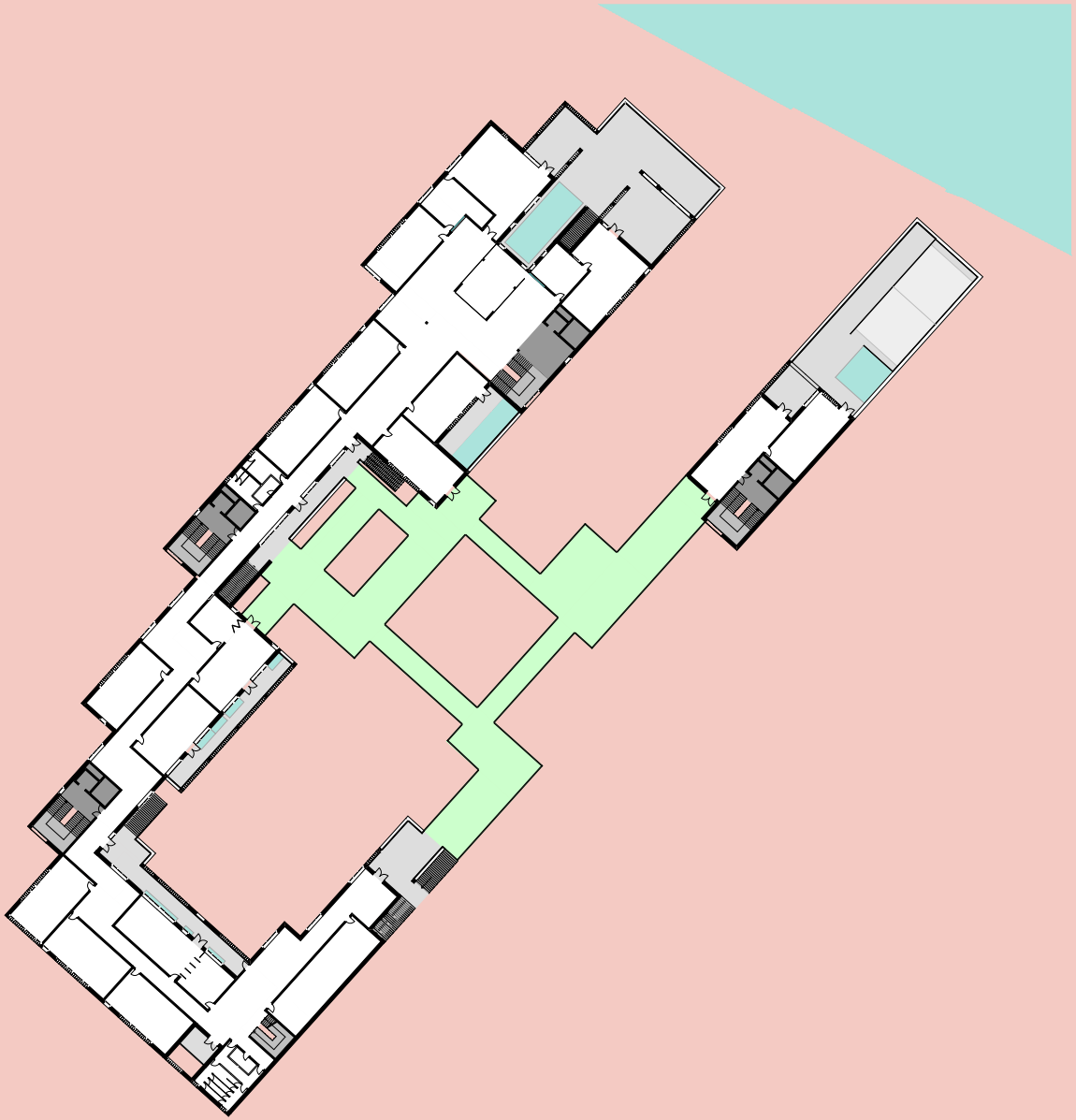


Fig. 76 second floor (+2), floor plan, scale 1:1000

GRADES 7 C-D
mxied with other grades
2 x classrooms | each ~66m²

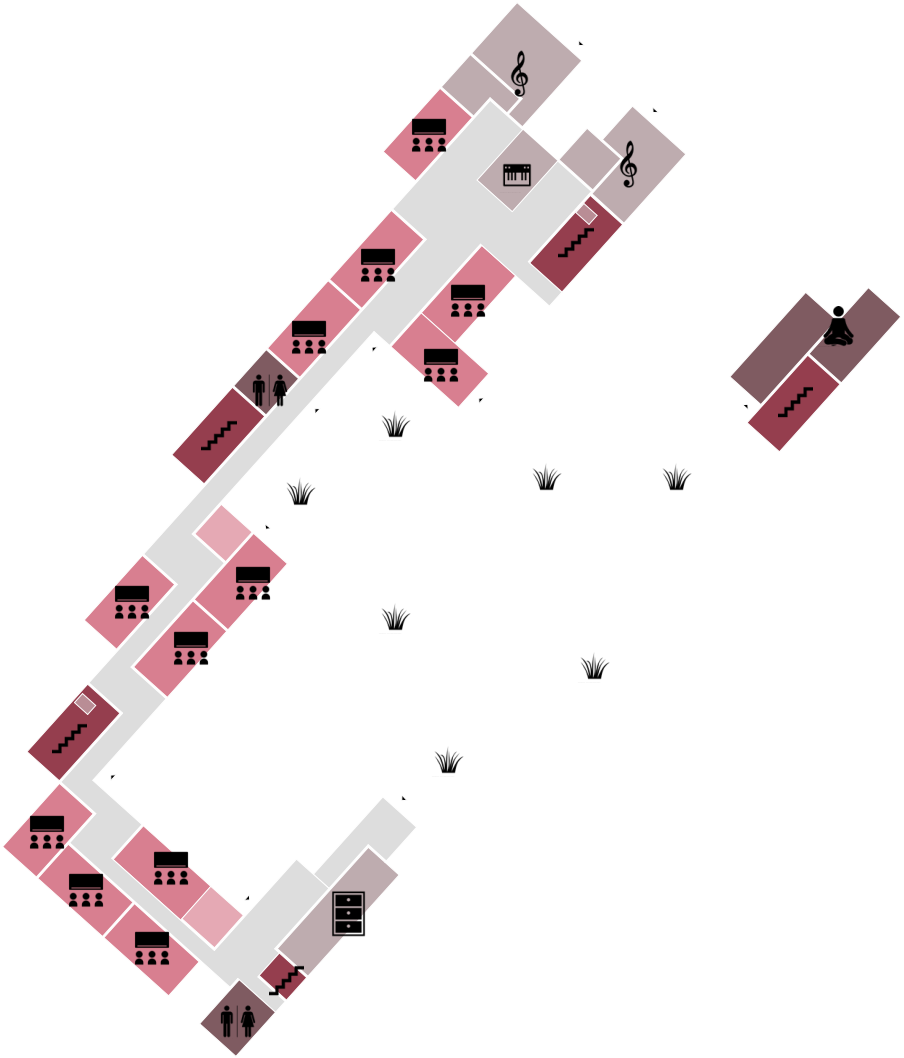
MUSIC STUDIO
software and midi | ~55m²

GRADE 8 A-C
5 x classrooms | each ~66m²
1 x group room | ~35m²

TOILETS
boys: 3 WC´s | 3 urinals
girls: 5 WC´s
~48m²

GRADES 8 D & 9 A&B
3 x classrooms | each ~66m²
1 x group room | ~35m²

GRADES 9 C&D & 10 A&B
4 x classrooms | each ~66m²
1x inclusion area | overall ~47m²



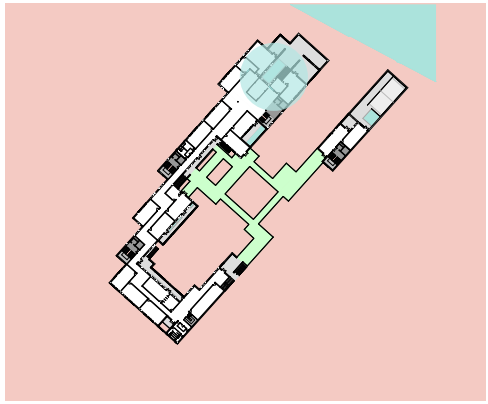
MUSIC DEPARTMENT
north orientated | light
big terrace for outdoor concert
music room I | ~110m²
music instrument room | ~41m²
music room II | ~92m²
music group room | ~33m²

REHAB CENTER
yoga | meditation | to rent
north orientated | view | terrace
~83 m² & ~68 m²

ARCHIVE & STORAGE
books | materials | maps | etc.
| ~98 m²

TOILETS
boys: 3 WC´s | 3 urinals
girls: 5 WC´s
~48m²

Fig. 77 second floor (+2), space programme, scale 1:1000



The music department is located on the second floor. The cluster is formed around a skylight which illuminates the computer area on the first floor. The music studio, which can also be used as a computer room is in the center.
The northern music room facing the street has its own group room which functions as a music equipment storage and can be accessed from the adjoining classroom whilst the second music room has a smaller group-room for individual work or private lessons.
Both main rooms lead to the big terrace on which they have their own open air area surrounded by flexible lamellae. The terrace facing the Spree river offers a great view and functions as a break area on the one hand but is designed to be used as an open air stage for any occasion. The terraces of the following storeys serve as „loges“.

Fig. 78 music department (+2), scale 1:200

Fig. 79 music department (+2), scale 1:200

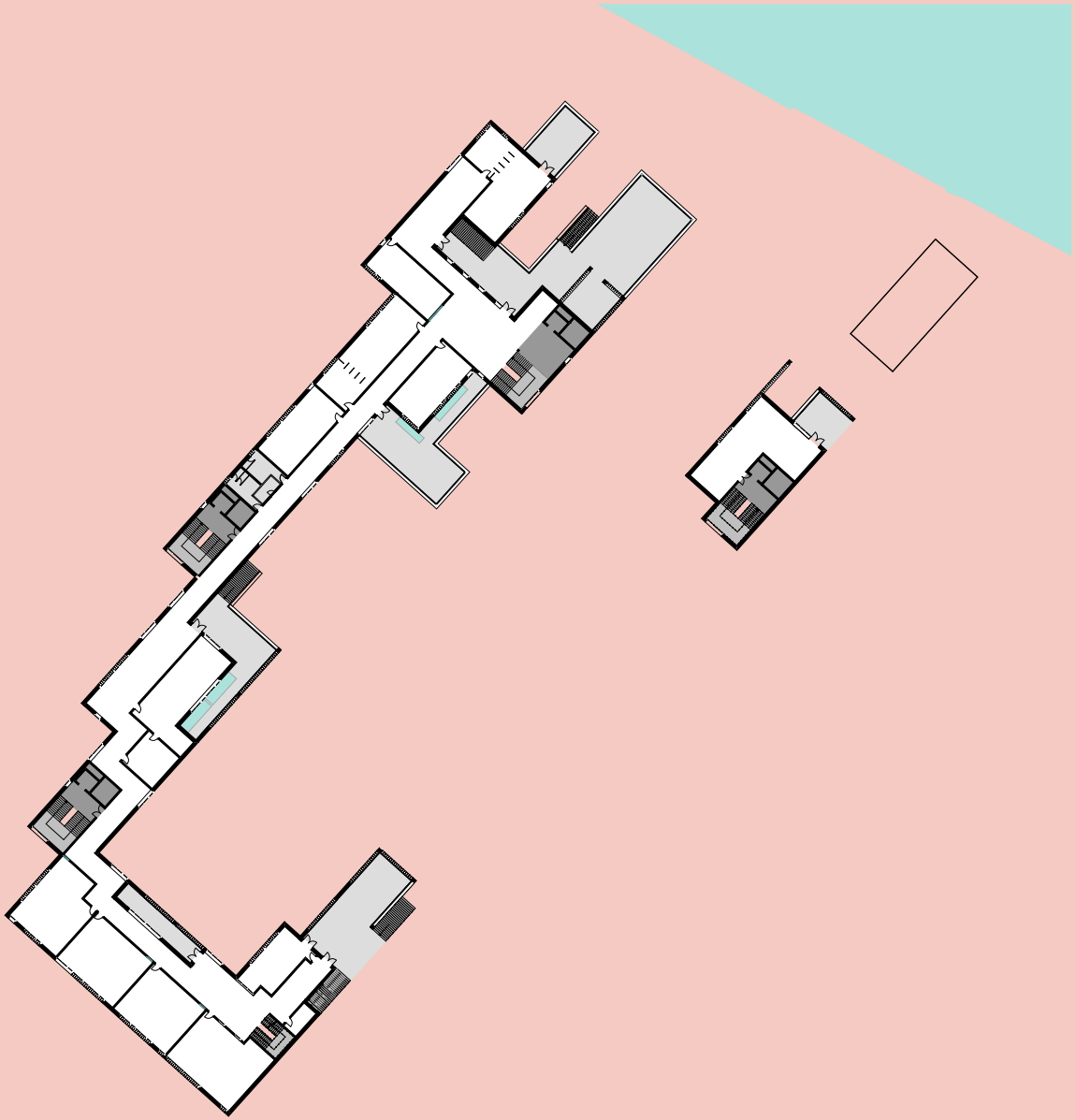


Fig. 80 third floor (+3), floor plan, scale 1:1000

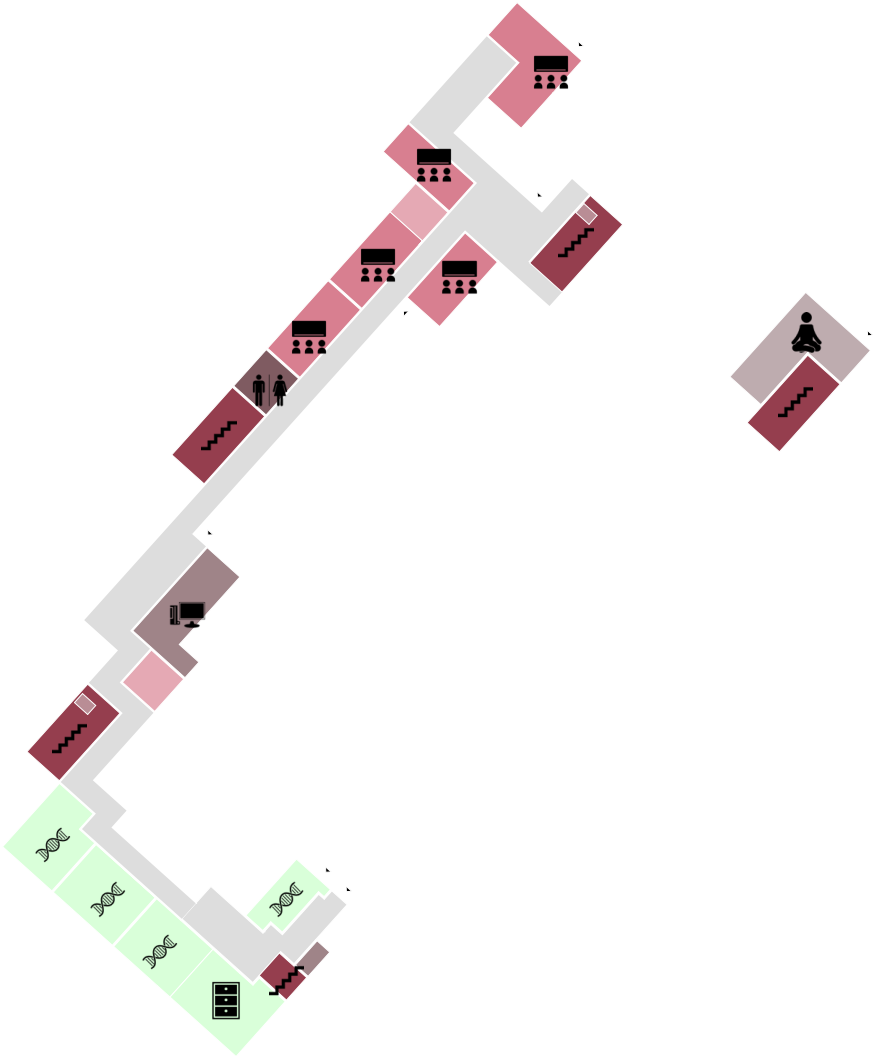
GRADE 11 A & C
including group room | ~100m²

GRADE 10 C & D
4 x classrooms | each ~66m²
1 x group room | ~30m²

TOILETS
boys: 3 WC´s | 3 urinals
girls: 5 WC´s
~48m²

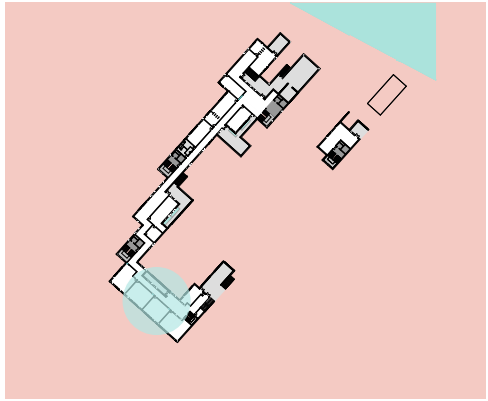
COMPUTER AREA III
24 seats | ~95m²
group area | ~33m²

BIOLOGY
big gardening terrace
garden studio | ~49m²
preparation & storage | ~106m²
3 x teaching room | each ~87m²



OPEN AREA
to be formed by students
~ 117 m²

Fig. 81 third floor (+3), space programme, scale 1:1000



The biology department on the third floor consists of three teaching rooms, a room for preparation and storage and a garden studio.

The terrace next to the gardening studio is to be actively used for hands-on experience. It can also be reached using the outdoor staircase that is connecting the second floor to the terrace of the first floor. Another outdoor staircase is leading up to the third floor.

In example students that were playing frisbee in the cloister garden after they had lunch in the refectory can easily reach the biology area using the outdoor staircases starting at the cloister garden without entering the building.

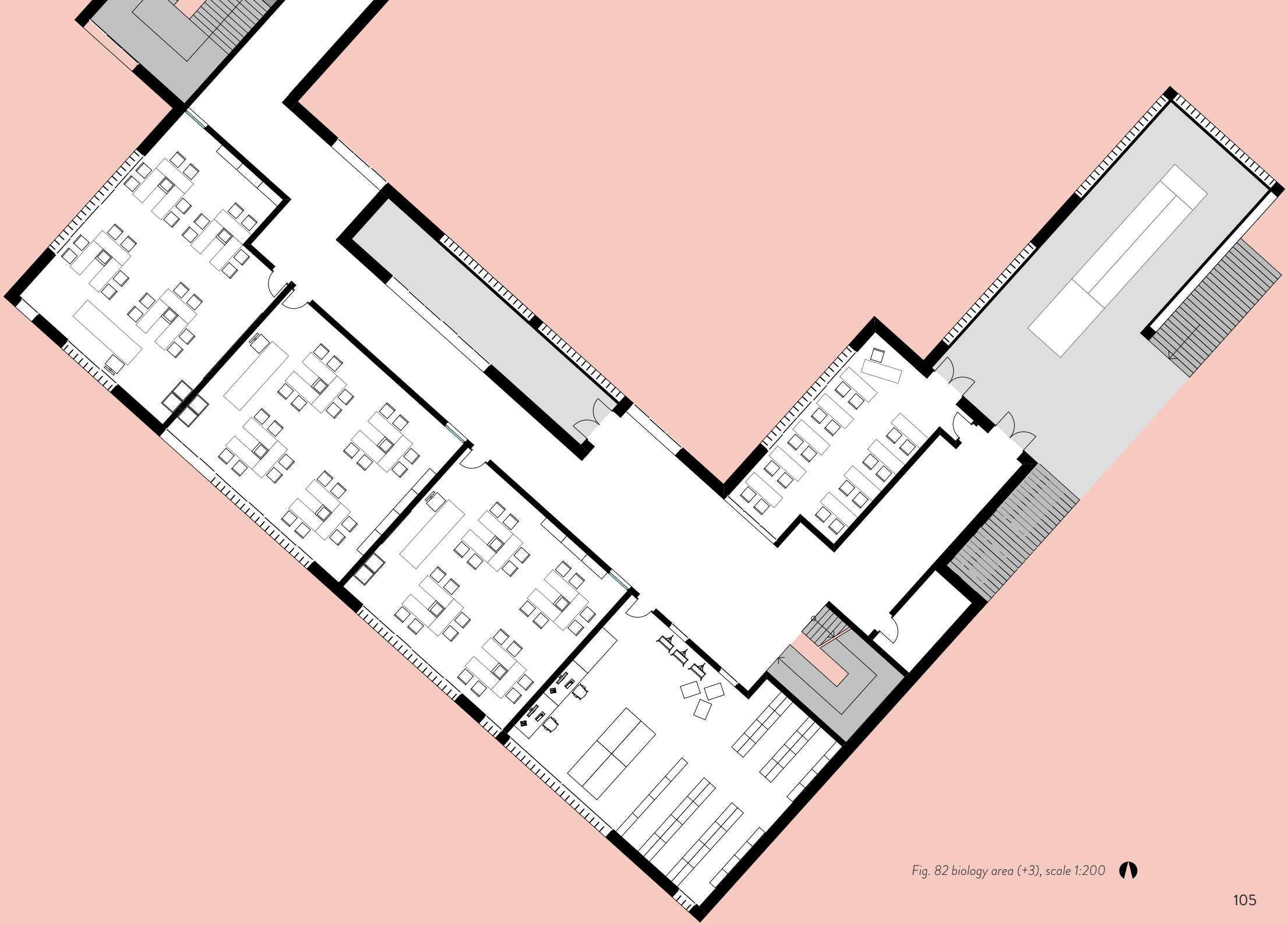


Fig. 82 biology area (+3), scale 1:200

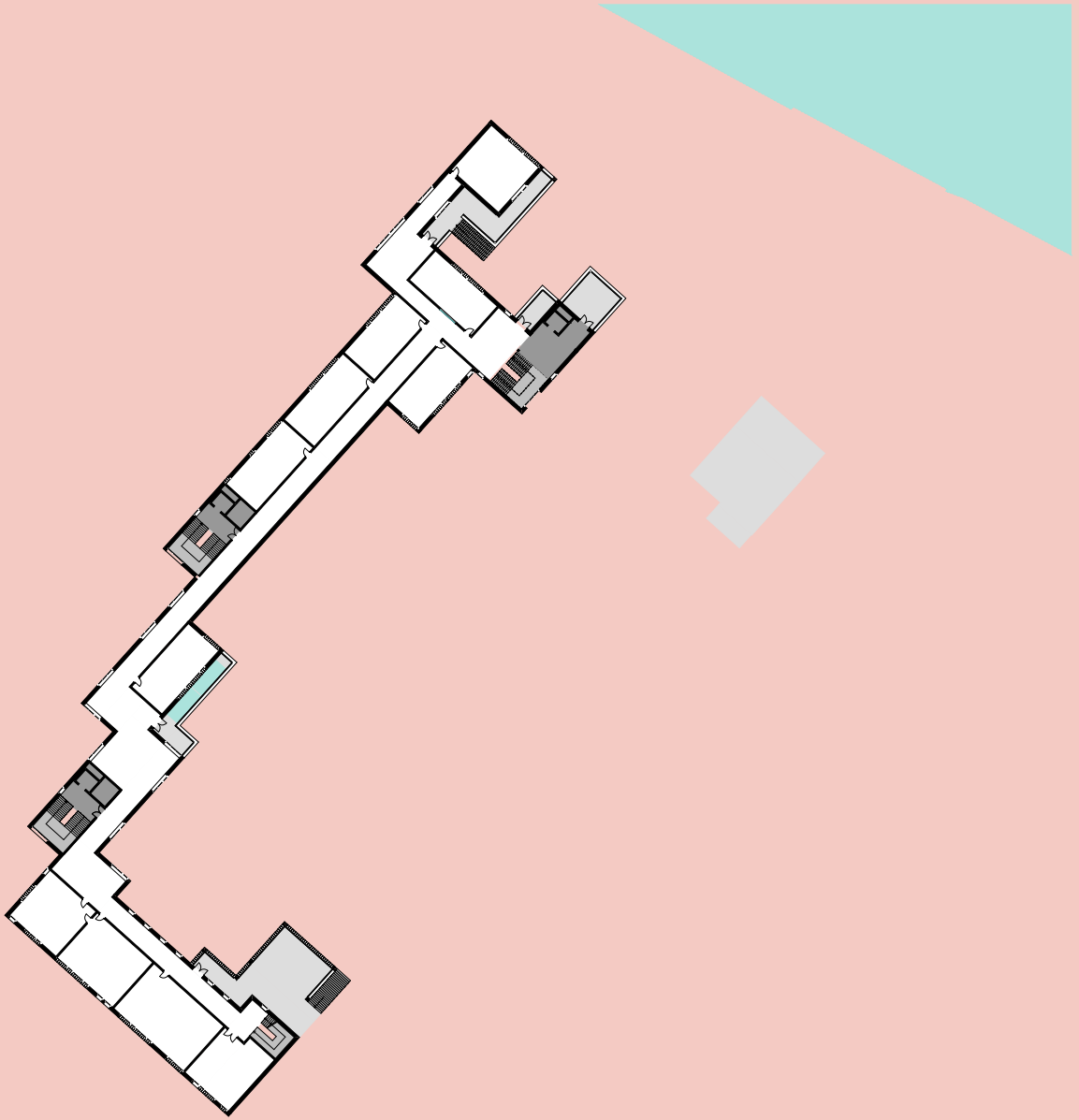
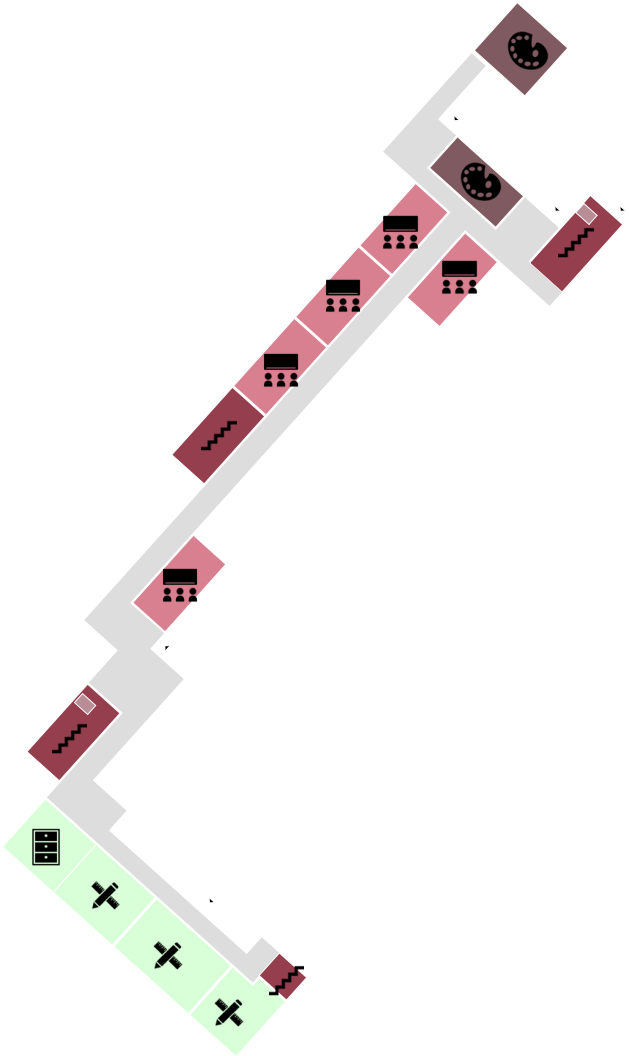


Fig. 83 fourth floor (+4), floor plan, scale 1:1000

VISUAL ART ROOMS
north orientated
room 1 | ~76m²
room 2 | ~65m²

GRADE 11 C & D
including group room | ~100m²

GRADE 12 A-D
4 x classrooms | each ~66m²
1 x group room | ~30m²



PHYSICS
preparation & storage | ~76m²
2 x teaching room | each ~95m²
1 x practical teachign | ~76m²

Fig. 84 fourth floor (+4), space programme, scale 1:1000

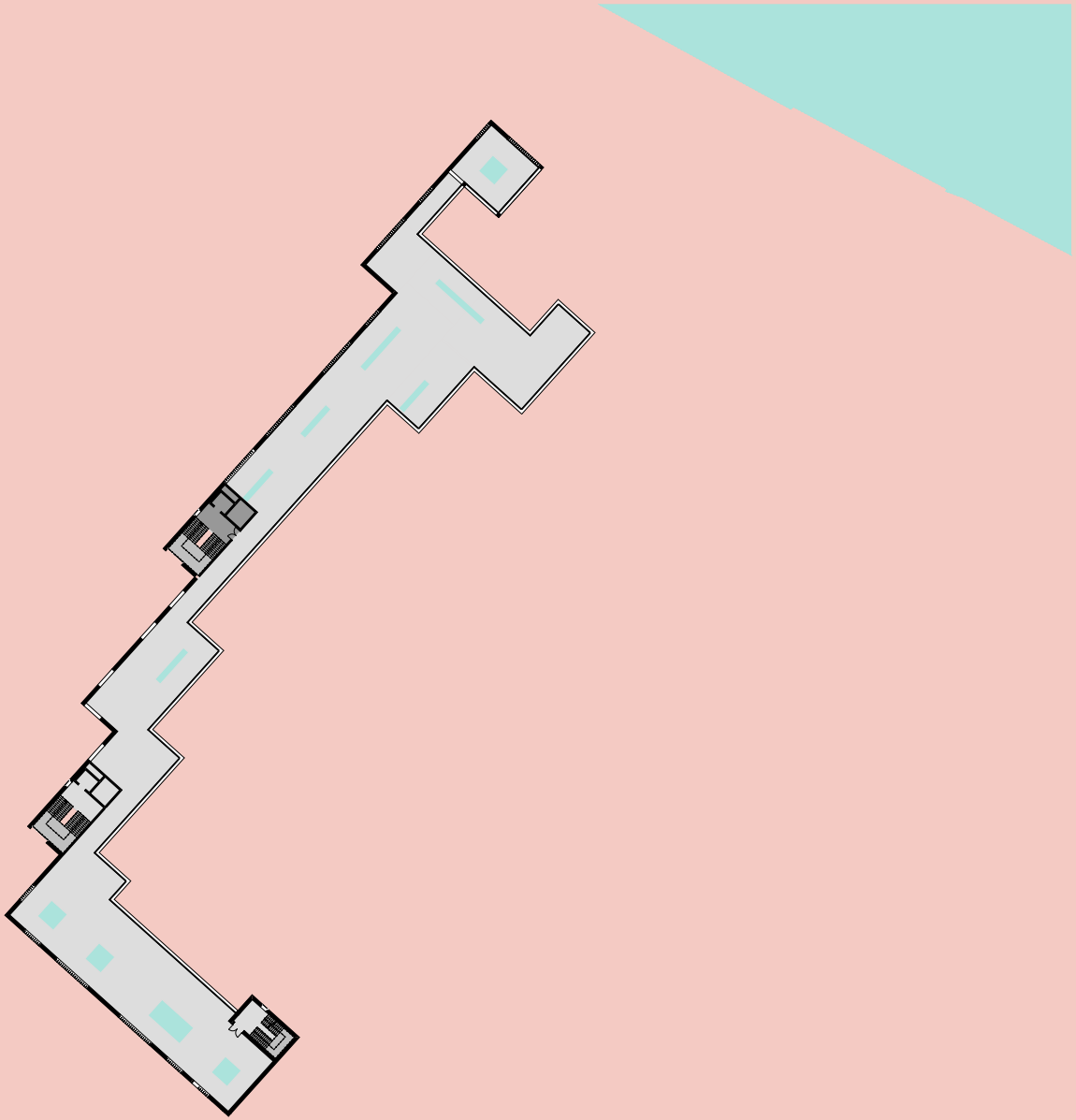
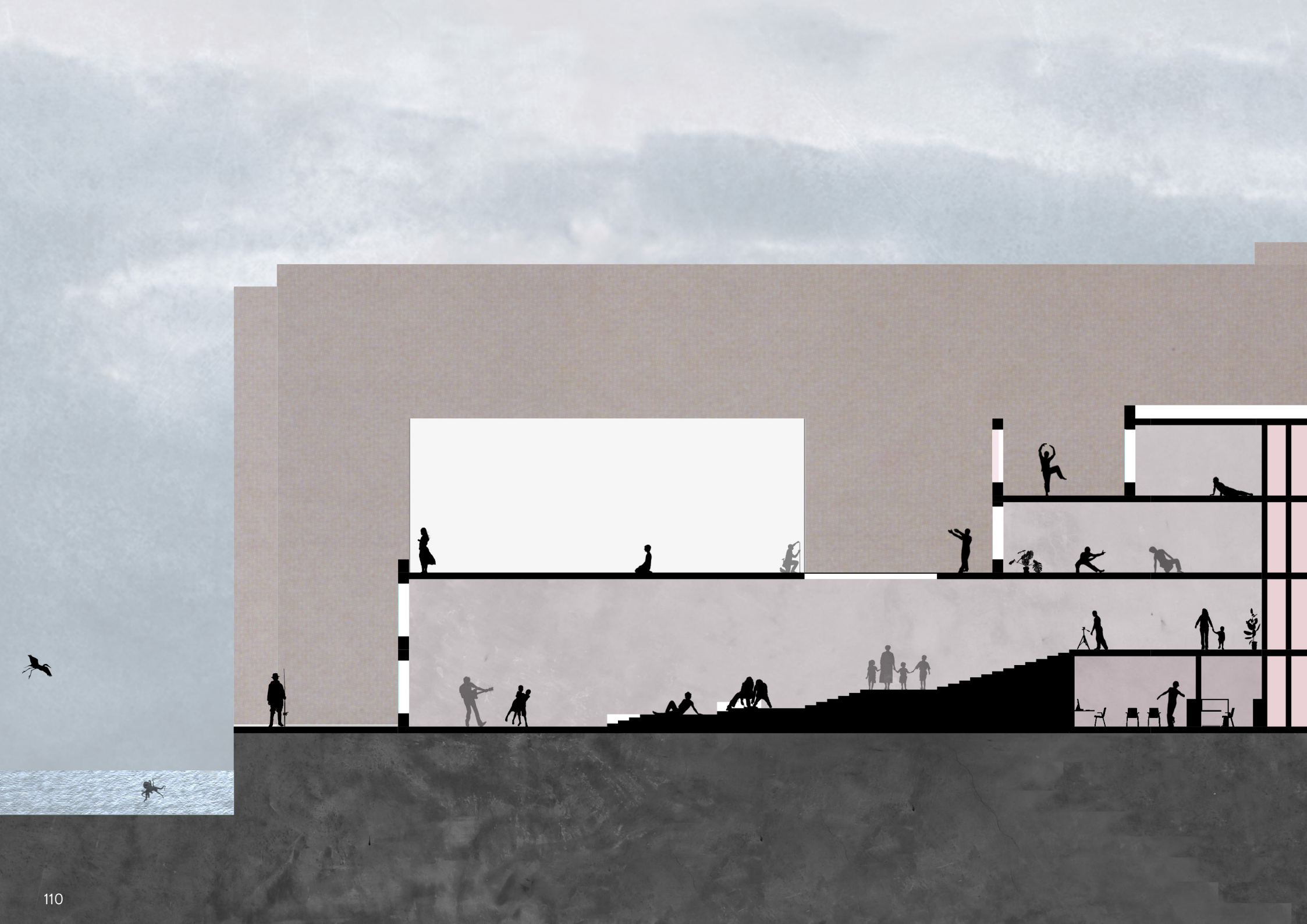
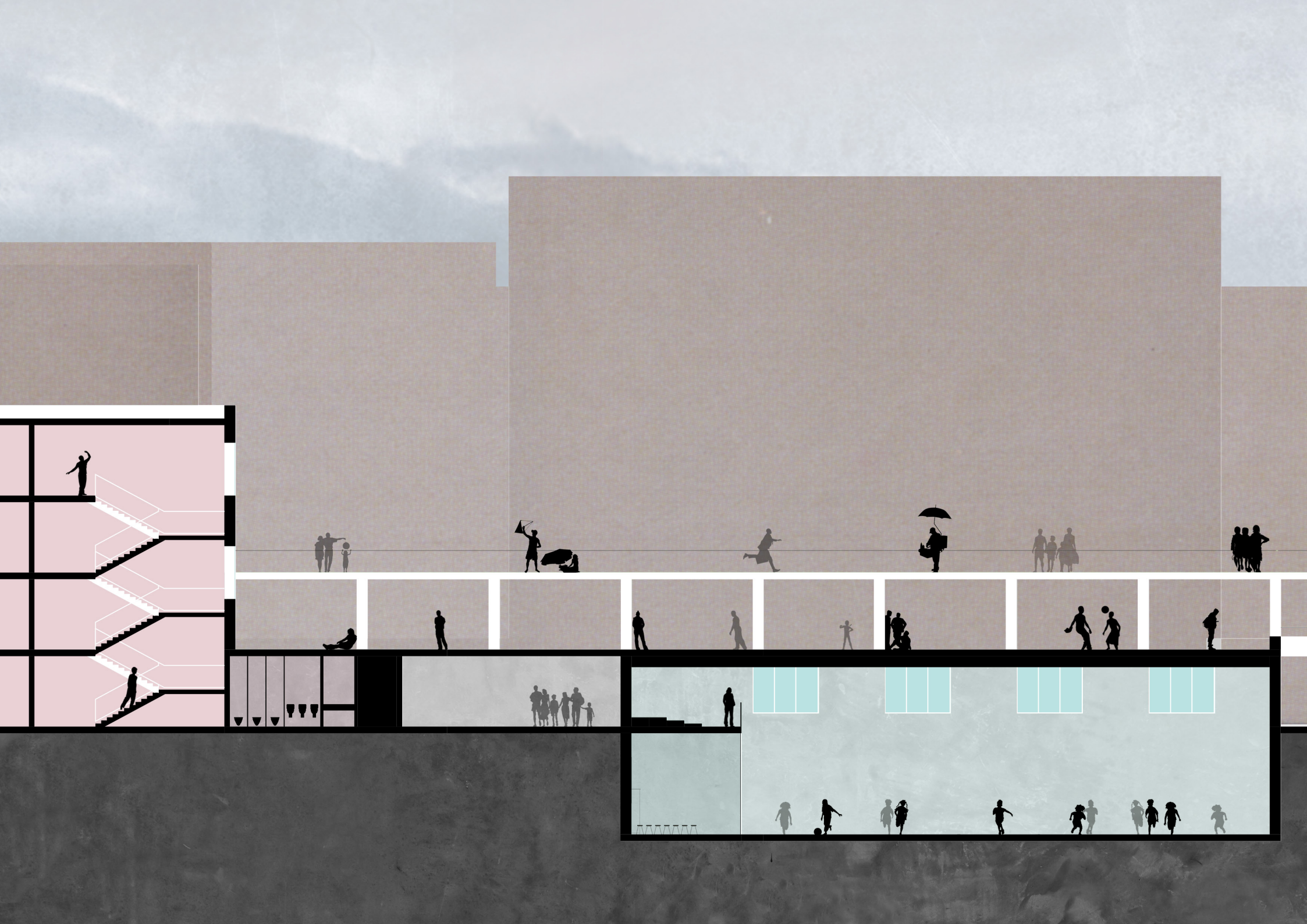
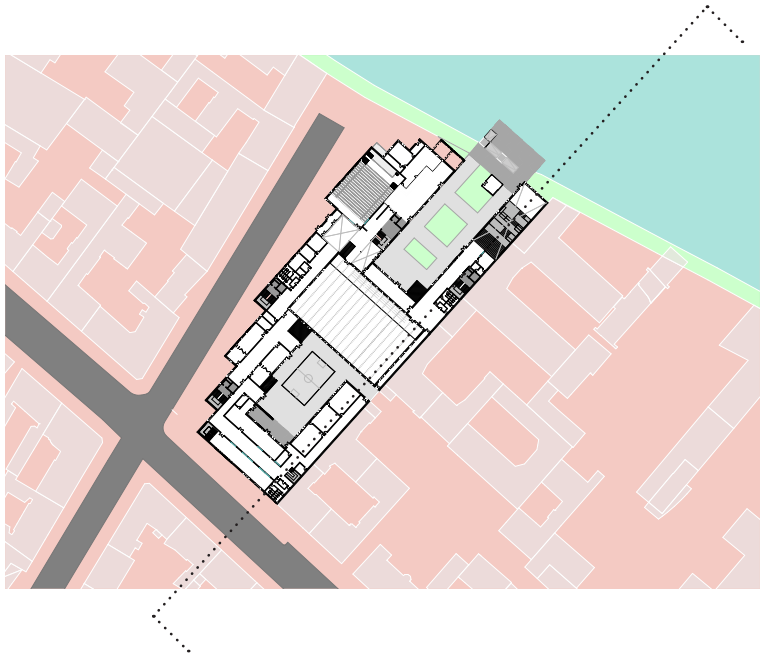


Fig. 85 fifth floor (+5), floor plan, scale 1:1000

Fig. 86 sixth floor (+6), roof, scale 1:1000







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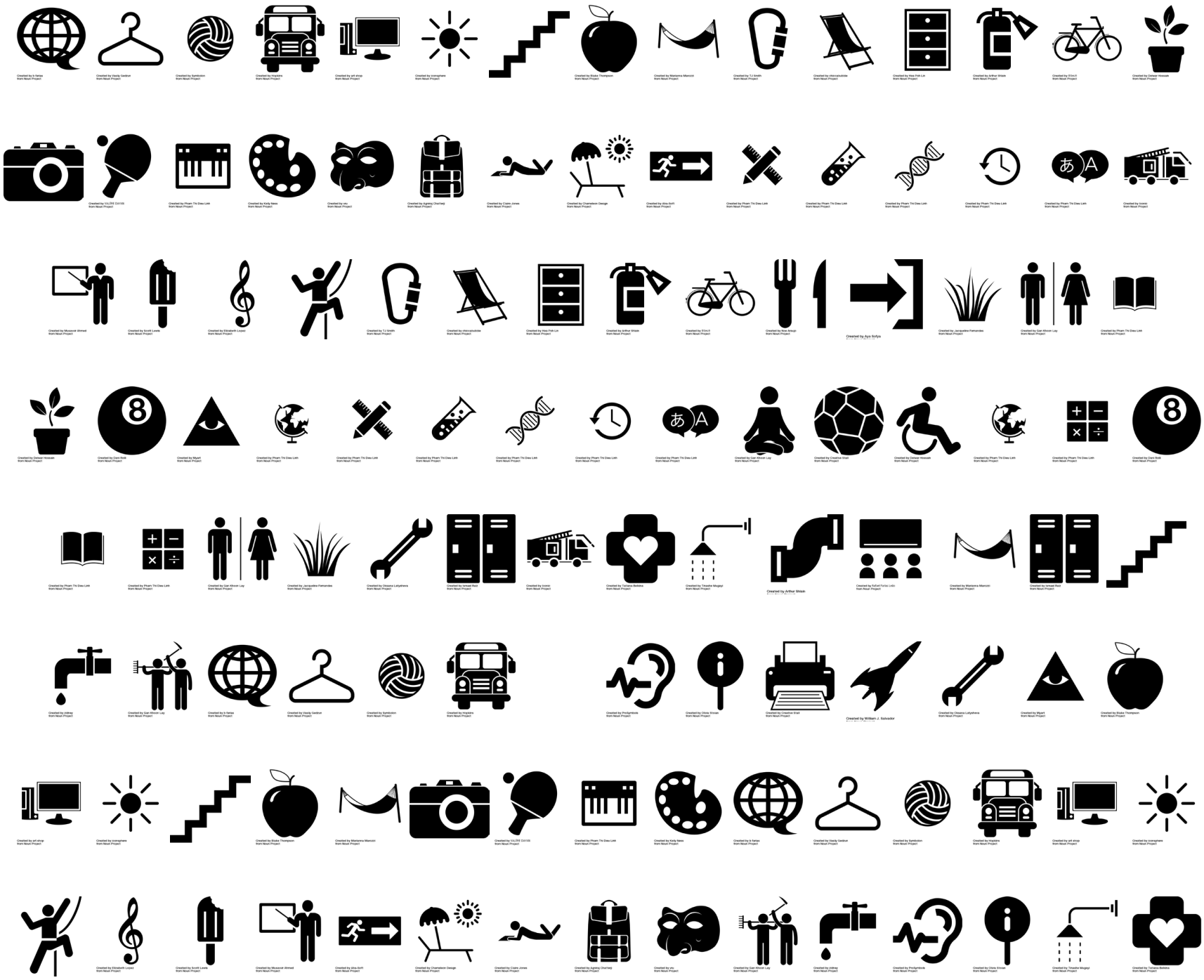

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