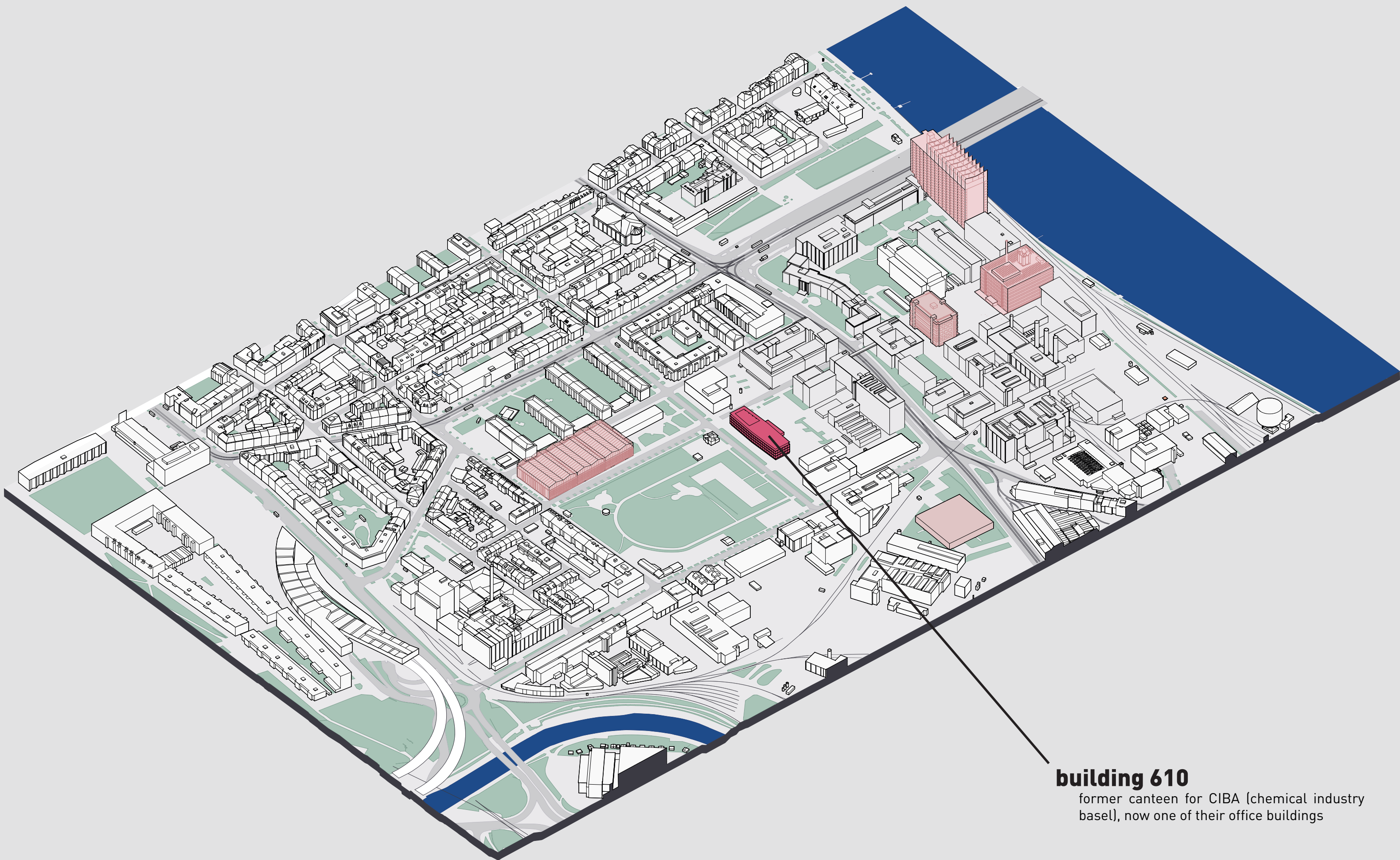


re-use  
C I B A  
diplom  
F S 2 0

**JilKugler**

project  
studio  
anne  
lacaton



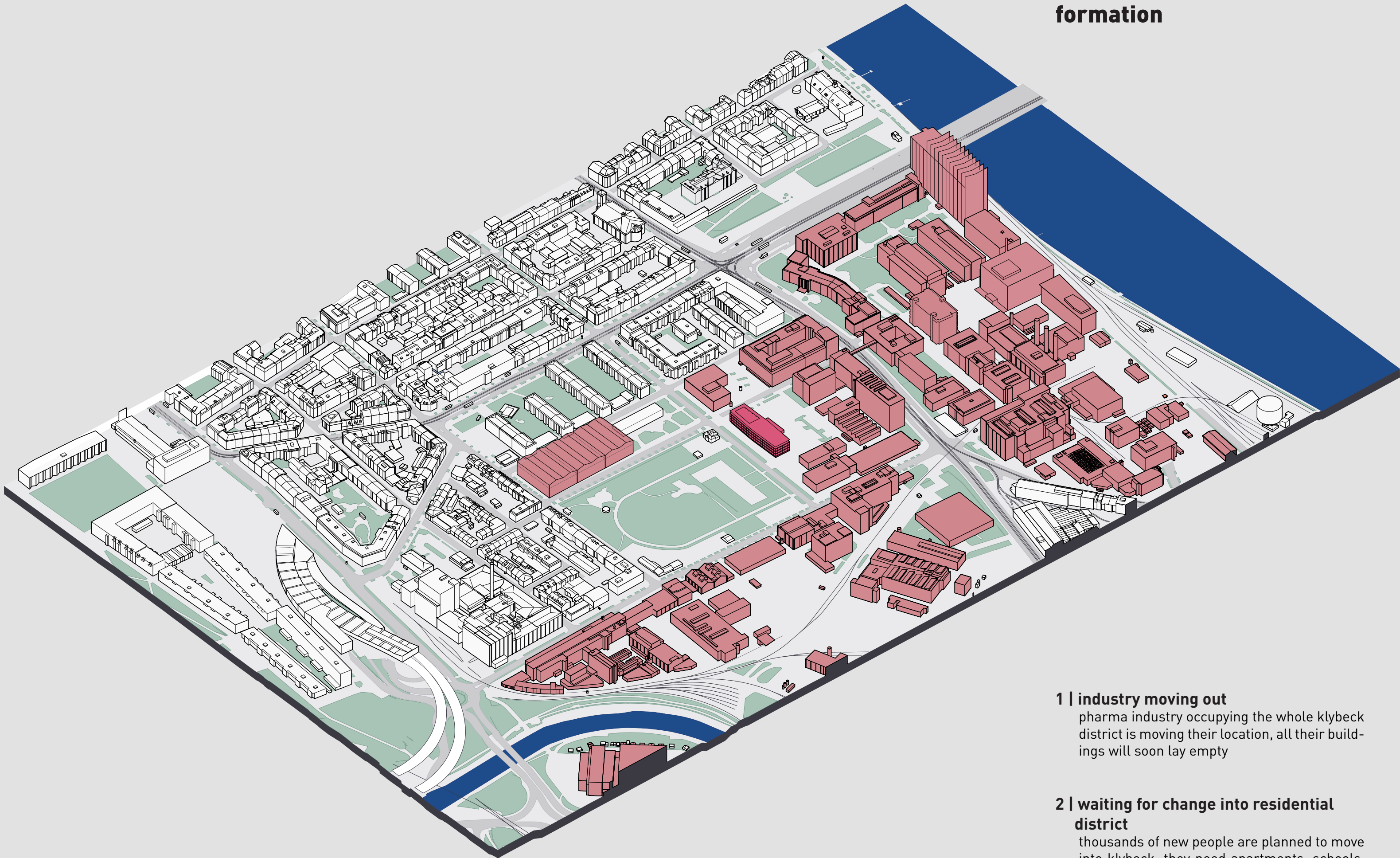


**building 610**

former canteen for CIBA (chemical industry  
basel), now one of their office buildings



## Klybeck, a district in transformation



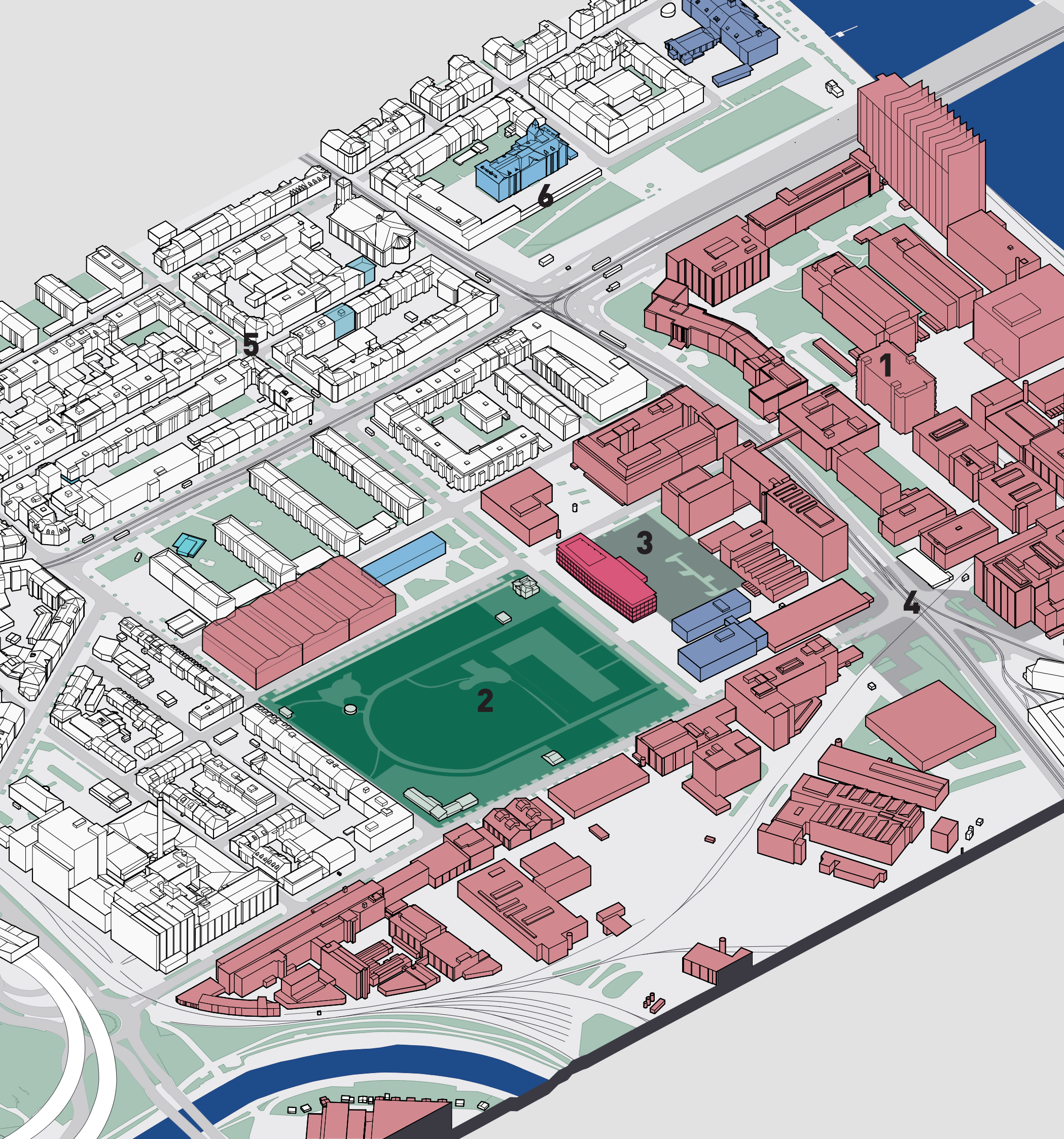
### 1 | industry moving out

pharma industry occupying the whole klybeck district is moving their location, all their buildings will soon lay empty

### 2 | waiting for change into residential district

thousands of new people are planned to move into klybeck. they need apartments, schools, shops, etc.





## building 610 - strategic location in klybeck

- 1** | former pharma industry moving out, area waiting to transform into residential district
- 2** | directly at the only park in the district
- 3** | parking lot in courtyard could provide public outside space desperately needed in klybeck -> great potential for public function in building 610
- 4** | close to new public transportation hub but also in second row, ensuring safety and quiet
- 5** | neighbouring existing residential district
- 6** | existing school network offers possibility for synergies, sharing sport halls or after-school programs for kids





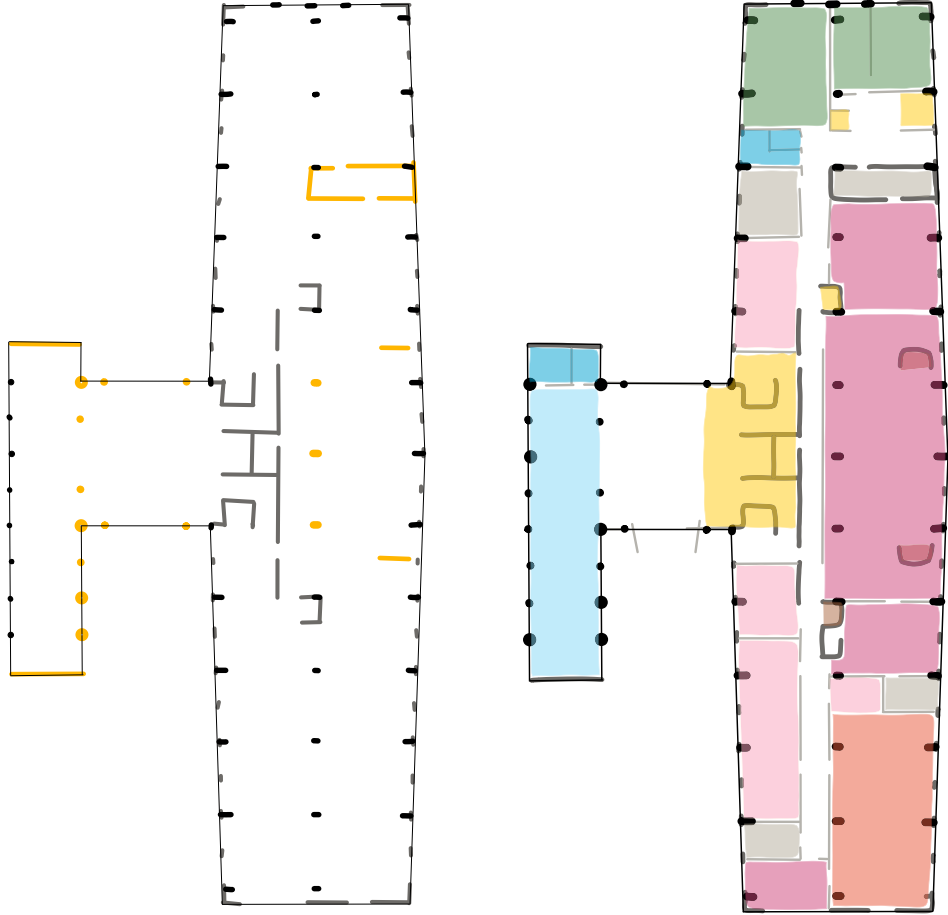


analysis  
groundfloor

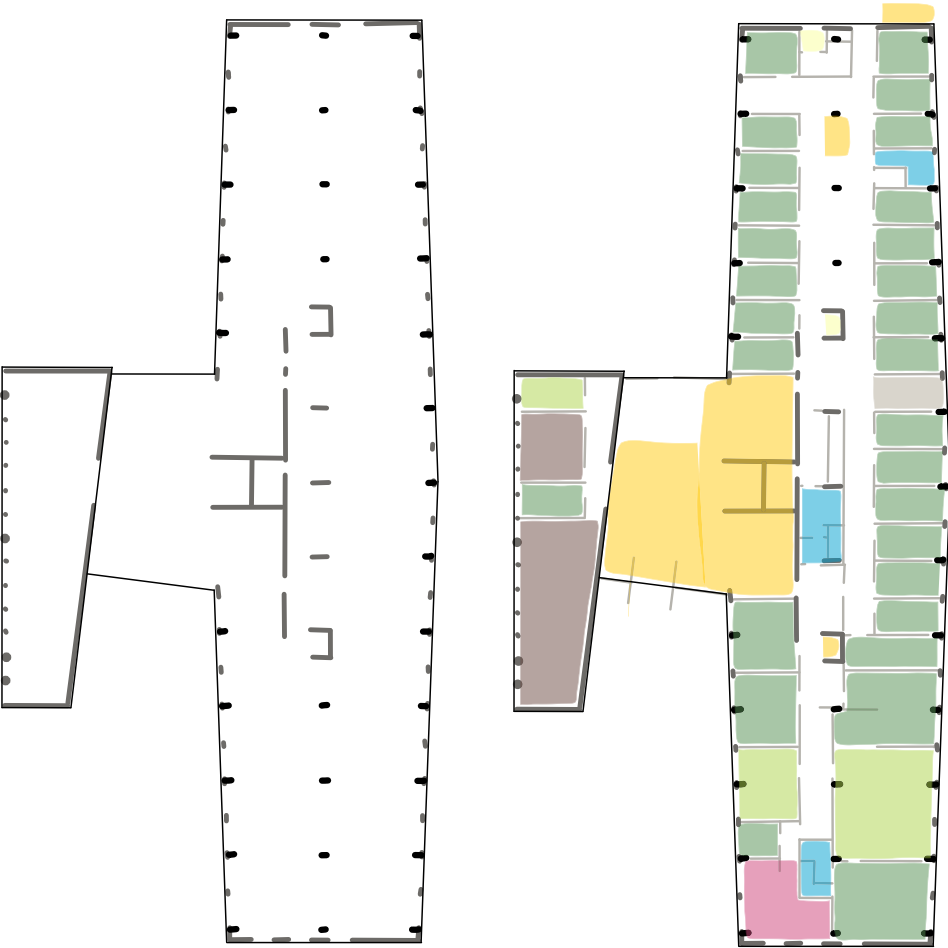
building 610 provides good  
structure for re-use

- kitchen
- dining
- office
- seminar
- cleaning
- changing room
- toilet
- technology
- storage
- circulation people
- circulation goods

1955



1982/2014

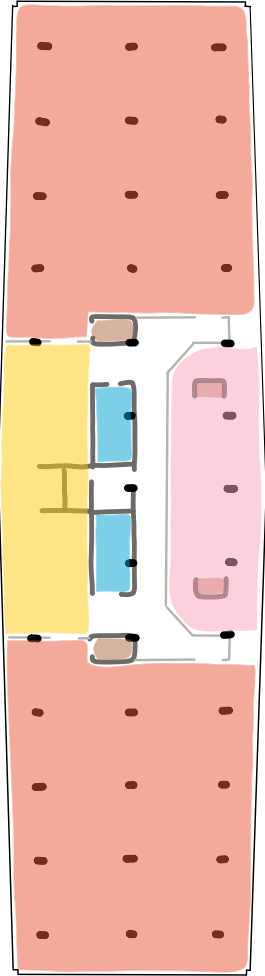
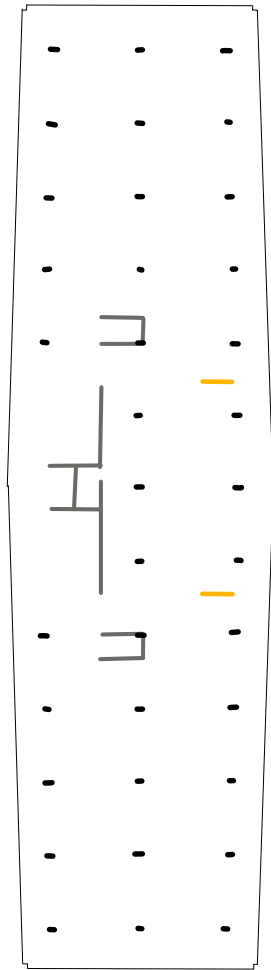


built in 1955 as canteen for CIBA workers,  
the building changed into offices starting  
from 1982.



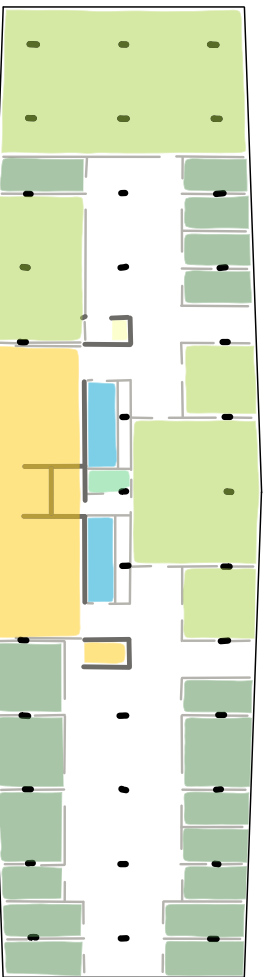
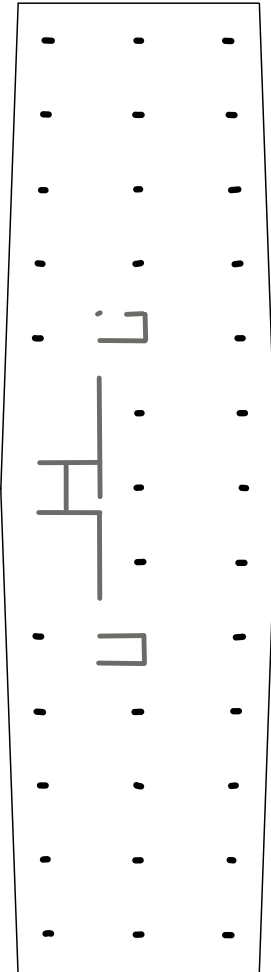
analysis  
first floor

1955



big and small spaces possible with few structural changes

1982/2014

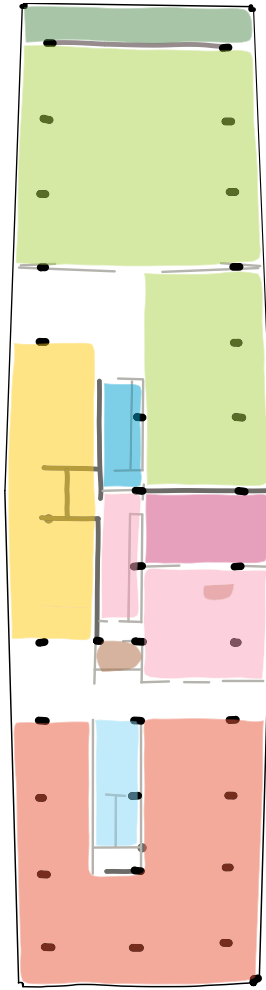
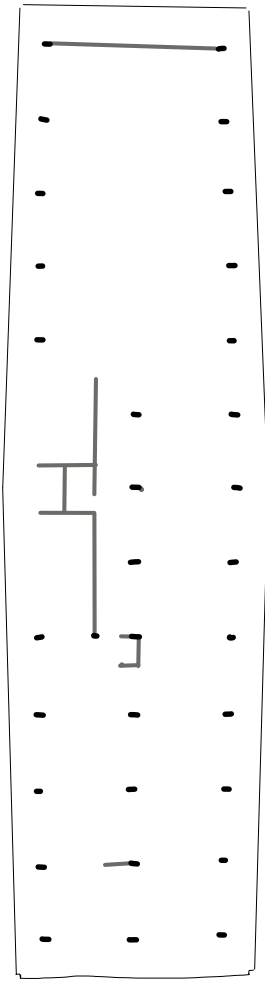


- kitchen
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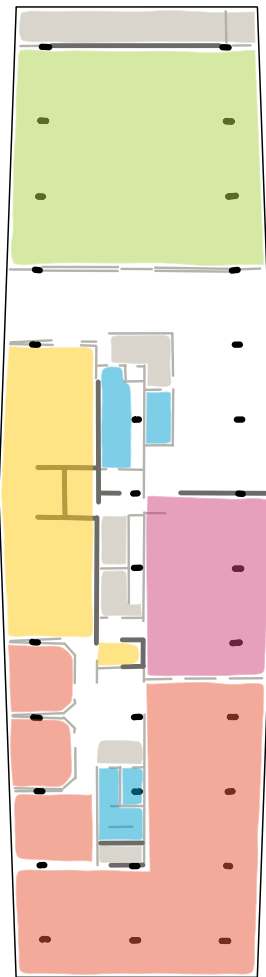
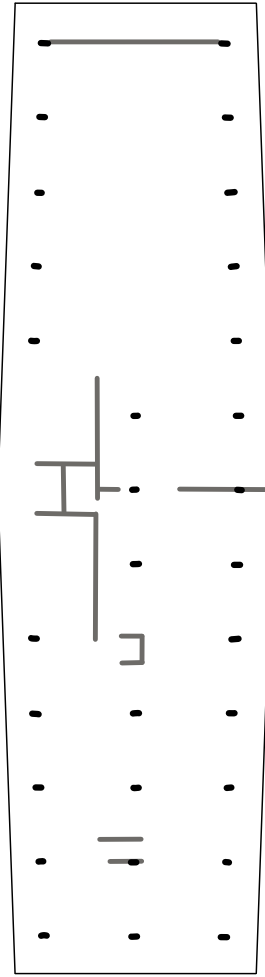


1955



re-usable aula and kitchen,  
potential for public use

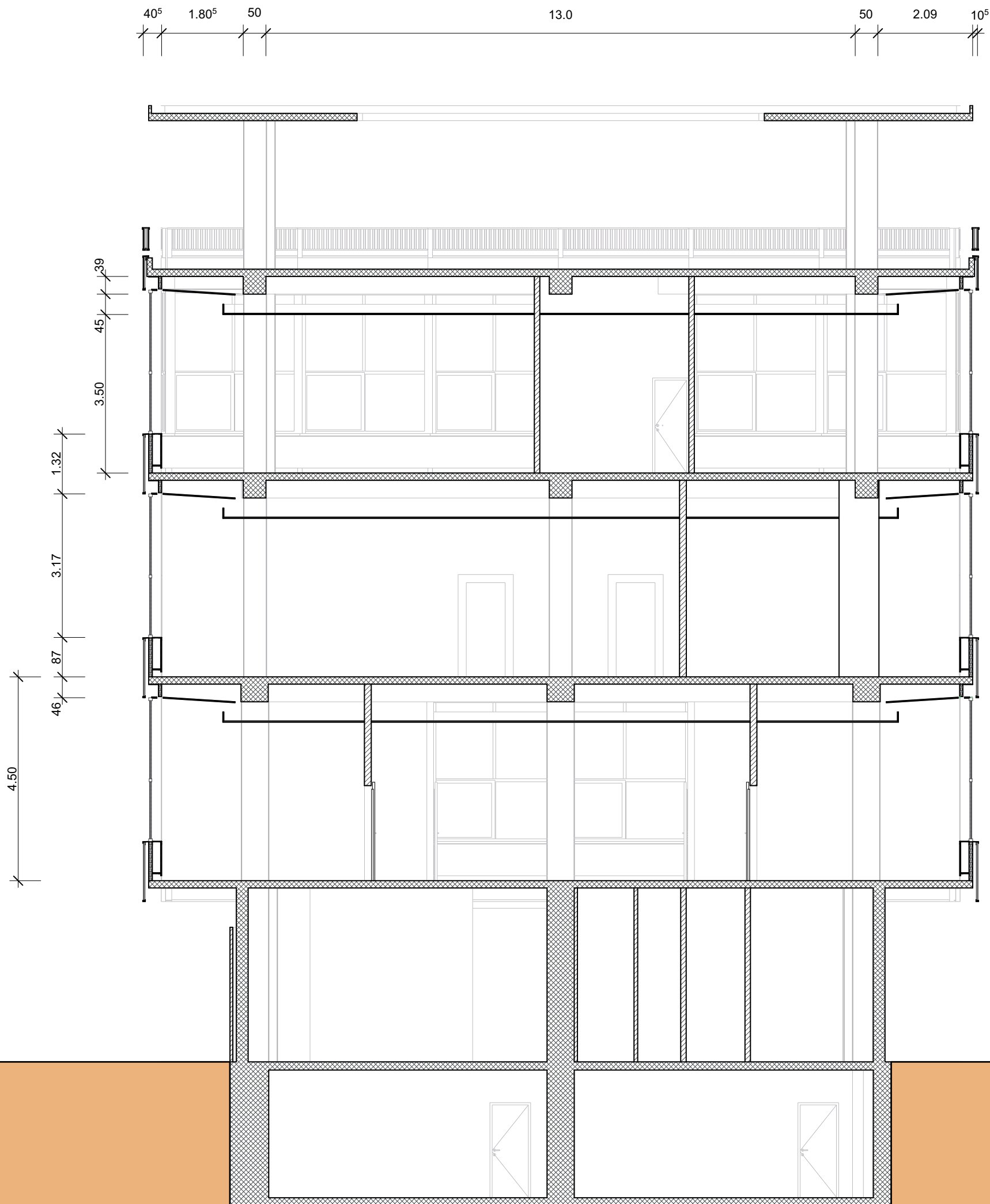
1982/2014



built in 1955 as canteen for CIBA workers,  
the building changed into offices starting  
form 1982

- kitchen
- dining
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- technology
- storage
- circulation people
- circulation goods

- transformation shows that structure can provide both big spaces and small units
- only very few changes at the main structure necessary
- existing aula and industrial kitchen on the 3rd floor have big potential for a new public function
- central circulation with two staircases and one elevator



**attractive spaces thanks to large floor- and window-heights**

**built in 1955 as canteen for CIBA workers, the building changed into offices starting form 1982**

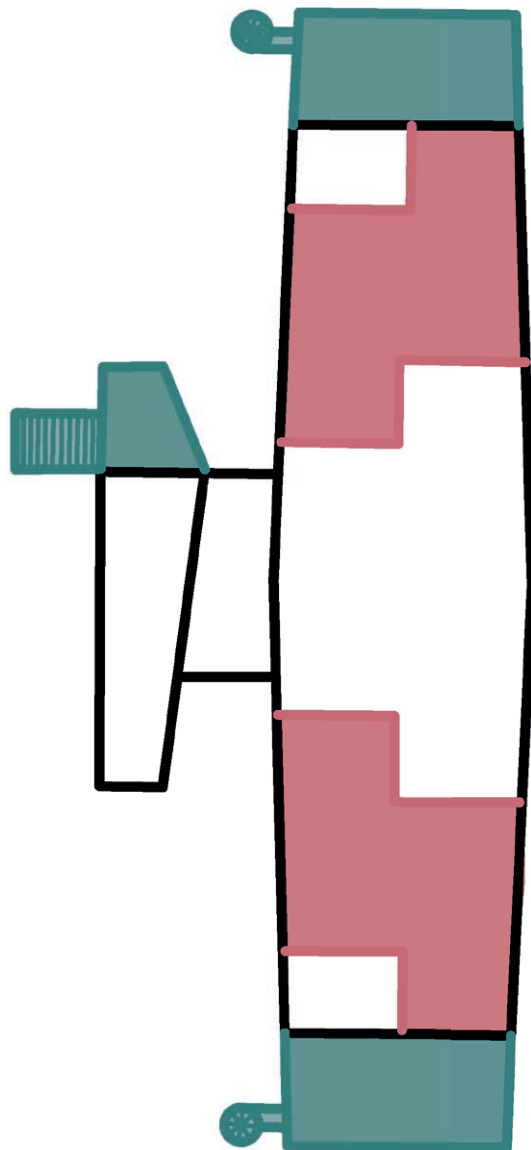
- transformation shows that structure can provide both big spaces and small units
- only very few changes at the main structure necessary
- existing aula and industrial kitchen on the 3rd floor have big potential for a new public function
- central circulation with two staircases and one elevator-
- floor height of 4.5m
- 3m high windows, letting a lot of light inside, making the space really attractive and receptive for re-use



**how can building 610 transform together  
with the klybeck district?**

**building 610 optimal for re-use into school**

- strategic location at the park in klybeck, demanding rather public function
- existing building good for re-use, few structural changes necessary
- extending and sharing existing school network



**transform into a school**  
**teach autonomy through architecture**

**update only where minimally needed**

**providing more through doing less**  
**use resources for extensions,**  
**providing diversity in (learning) spaces**

**re-use as much as possible**



transform into a school  
teach autonomy through architecture

**building is transformed into a primary school for 12 classes. frontal teaching becomes only one equal part in the learning landscape, giving students freedom in choice of their method, space and learning partner, which challenges them to become autonomous.**

update only where minimally needed

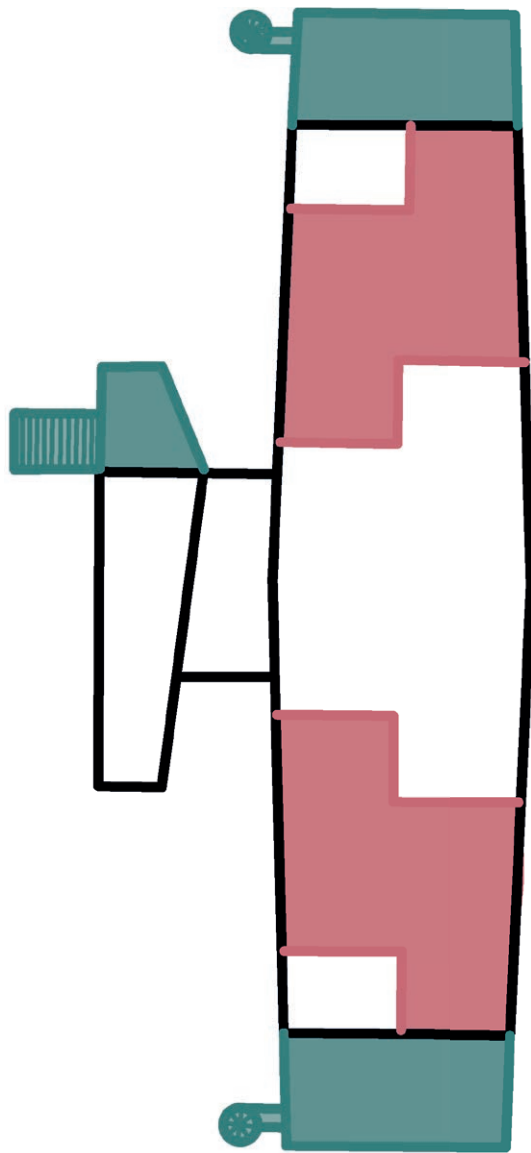
**update facade and floor composition in the minimally needed core classroom and workspaces. only 50% of building surface has to be updated.**

providing more through doing less  
use resources for extensions,  
providing diversity in (learning) spaces

**instead of updating the whole building, the resources can be used for the wintergarden extension, additional staircases and a second entrance. this provides more diversity in (learning) spaces, circulation and in climatic zones in the building.**

re-use as much as possible

**re-use means taking the existing structure and spaces serious, seeing them as potential. enrich the new through its old self.**



# 1 | transform into a school

teach autonomy through architecture

update only where minimally needed

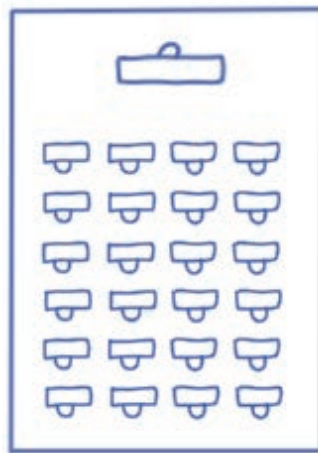
providing more through doing less  
use resources for extensions,  
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re-use as much as possible



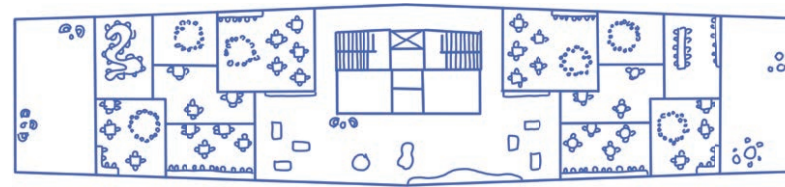
# teaching methods define teaching spaces

how we were taught



**frontal teaching method resulted in standardized classrooms**

how we will teach in building 610



**child-oriented education:** freedom in choice of method, space, partner

**dramaturgy of class :** frontal teaching is only one sequence of many others, going on in parallel

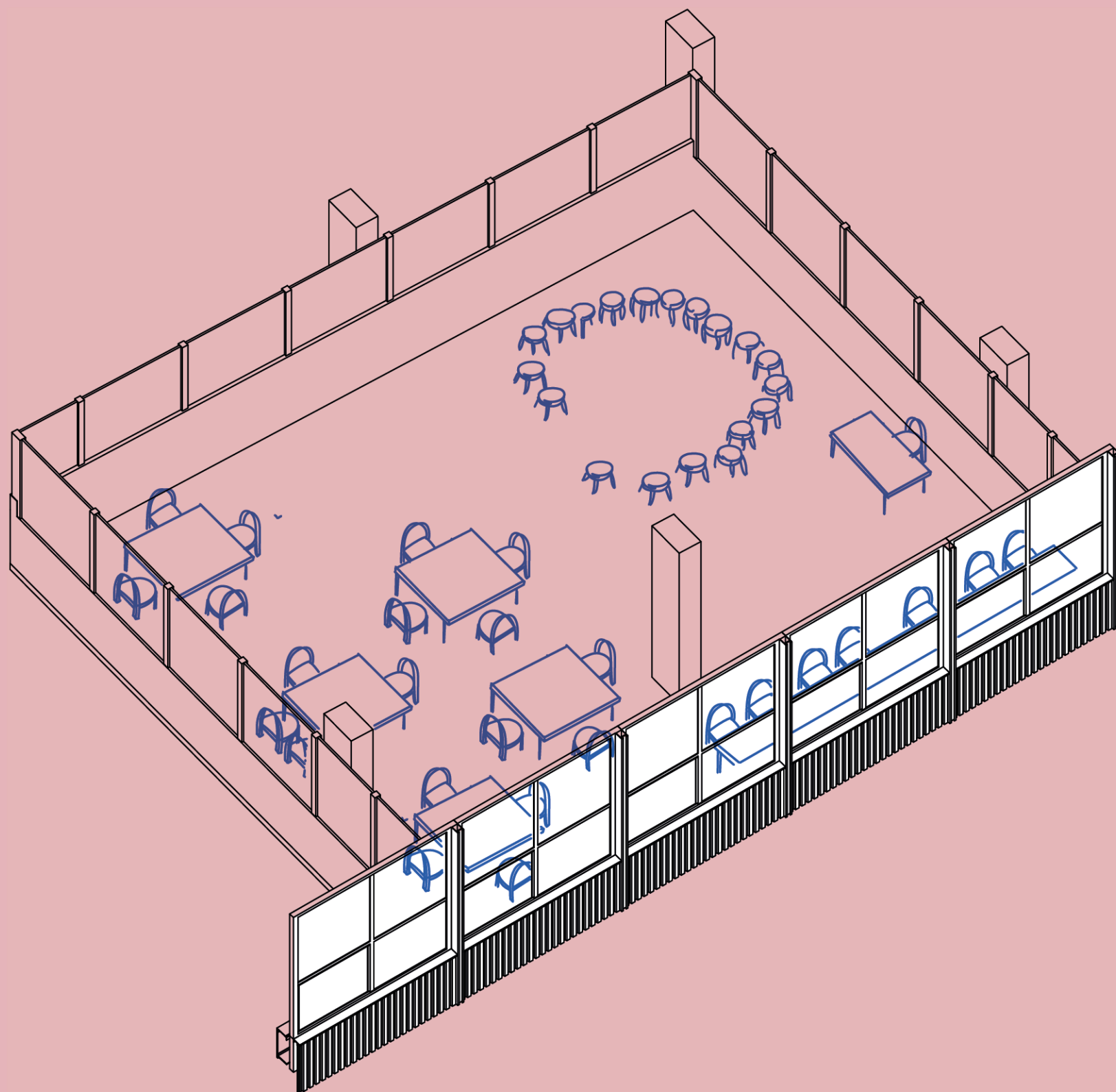
**learning landscape**

**diversity in space**

**in between spaces for informal learning**



## teaching spaces and method in building 610 depending on class year



### 1. and 2. year

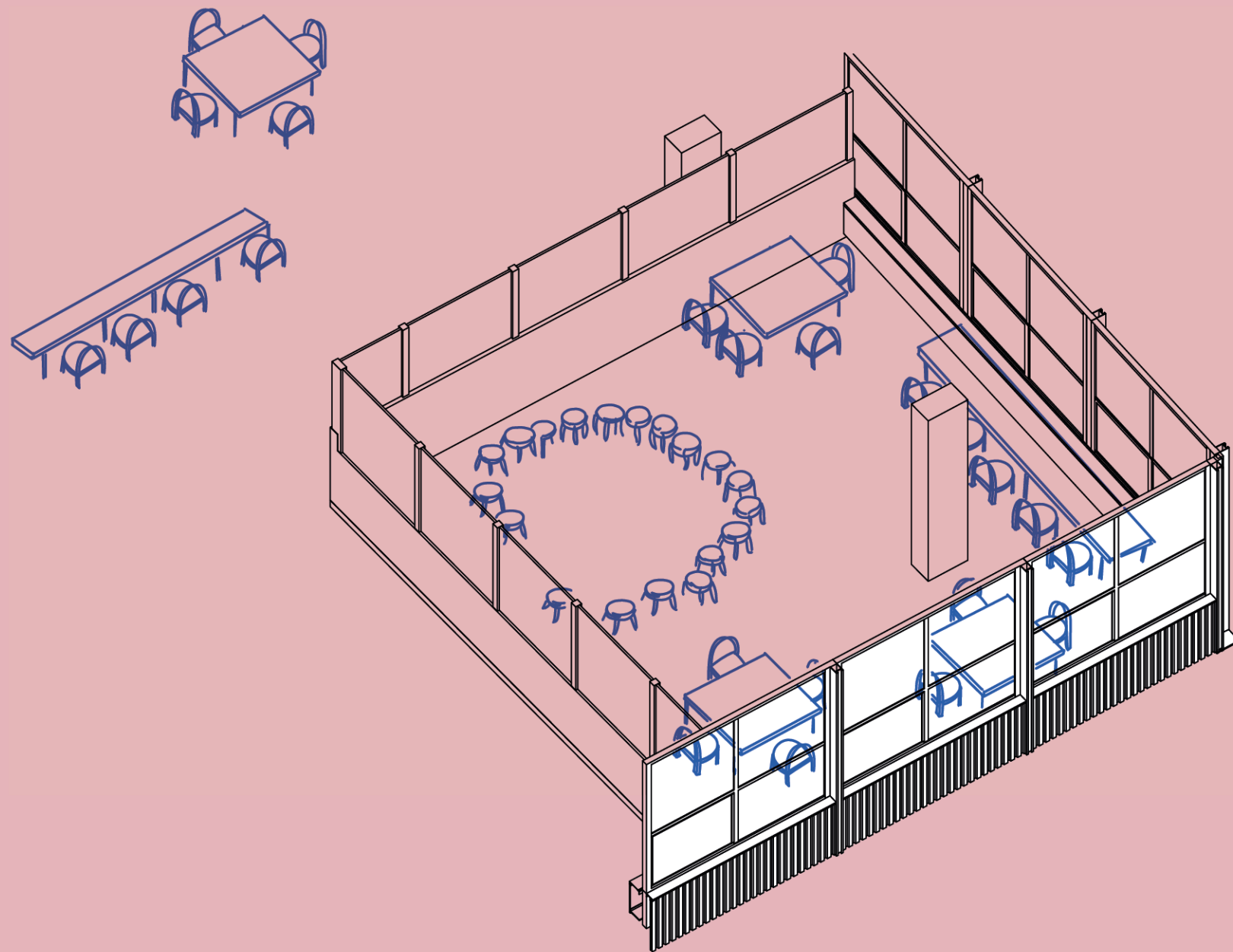
**Inside:** input circle, 24 workplaces, teachers desk

---

- students are new to school so they need guidance -> everything in one space, so teacher is always close
- room is divided into different spaces: students can choose where and with whom to work
- circle is home base, where teacher presents new inputs/topics, before students work individually



## teaching spaces and method in building 610 depending on class year



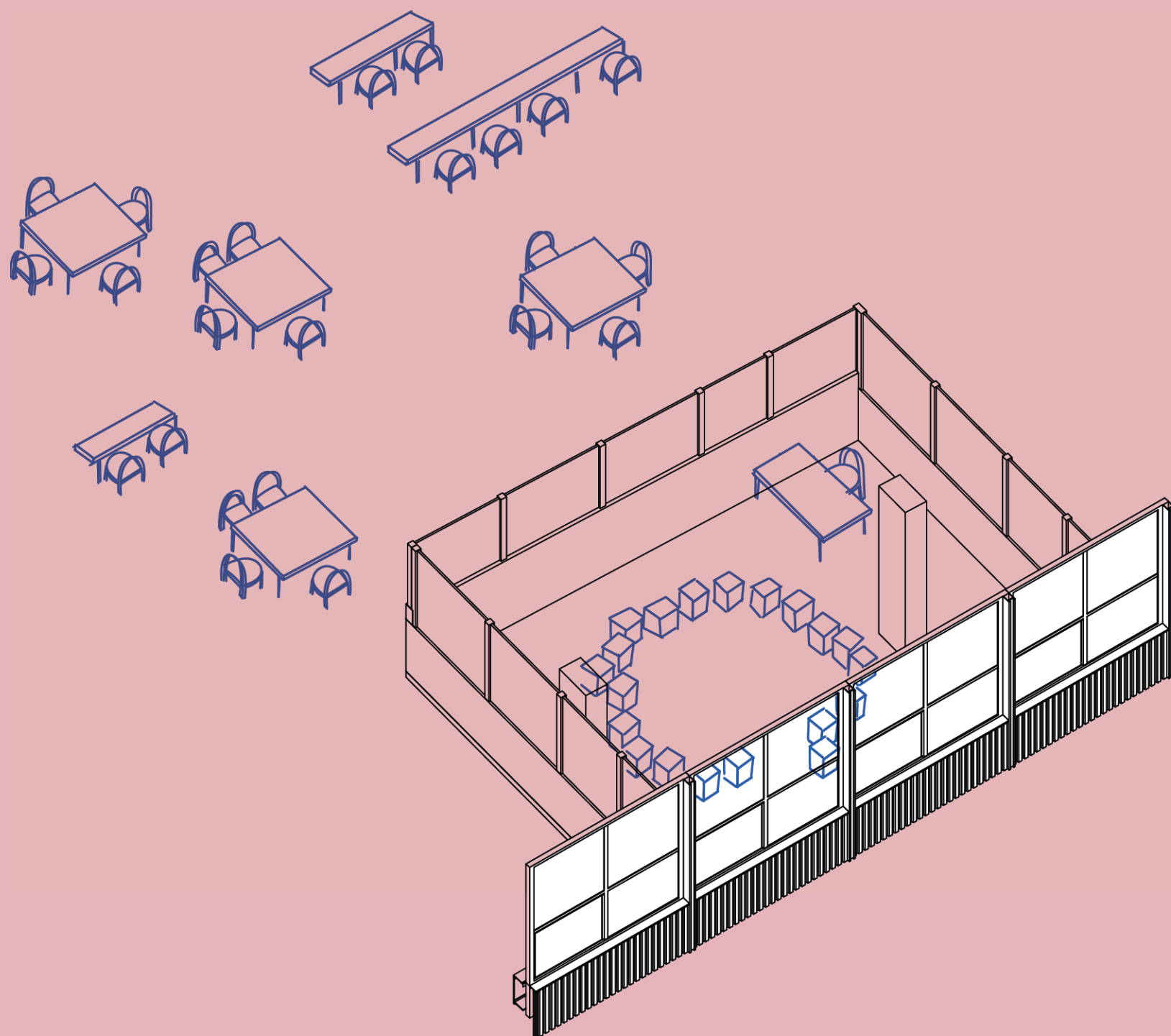
### 3. and 4. year

**Inside:** input circle, teachers desk, 16 workplaces

**Outside:** 8 workspaces, group and individual

- students get used to the system and can have more freedom in choosing their learning environment -> also outside their classroom
- still some workplaces in the classroom for students needing more assistance

## teaching spaces and method in building 610 depending on class year



### 5. and 6. year

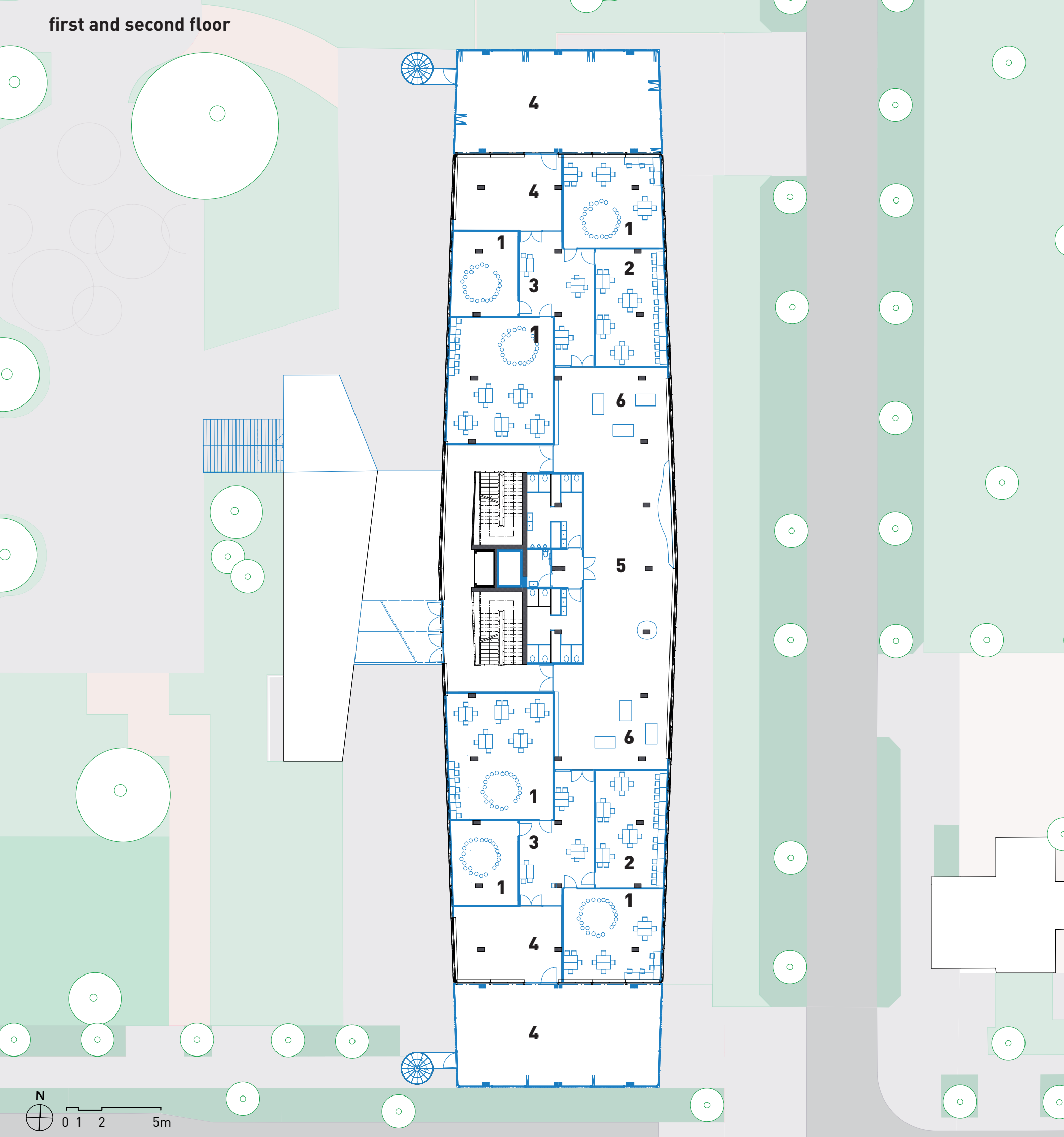
**Inside:** input circle, teachers desk

**Outside:** 24 workspaces, group and individual

- students only come to their classrooms for short inputs or to get material and help
- students can choose any space in the building to work in
- learning is as much about the subject as it is about social competences and autonomy



first and second floor



## teaching spaces in building 610

### 1 | classrooms

size and layout according to year of student

### 2 | workspace

individual and group workplaces for students to choose freely, providing the minimally needed workplaces outside the classroom

### 3 | hallway / group room

in winter, hallway transforms into group workspace during class, to provide every student with a fixed, more classical workplace

### 4 | additional learning spaces

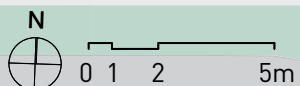
providing a diversity of learning spaces and classrooms, so that students can choose the environment best suited for them to study in. some free to appropriate, others already proposing alternative learning scenarios for students

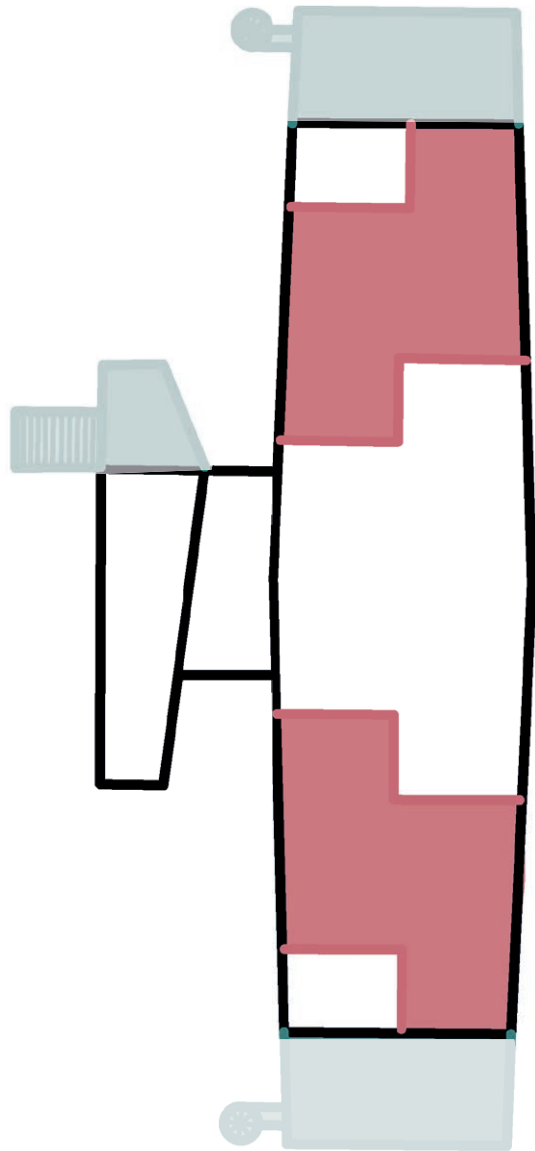
### 5 | common open spaces

possibility for big group course, discussing or playing. connects both sides of the school floor

### 6 | wardrobe

furniture serving as wardrobe and sitting space. 1 and 2 year students separate, having a dedicated space for each students next to their classroom for easier use





transform into a school  
teach autonomy through architecture

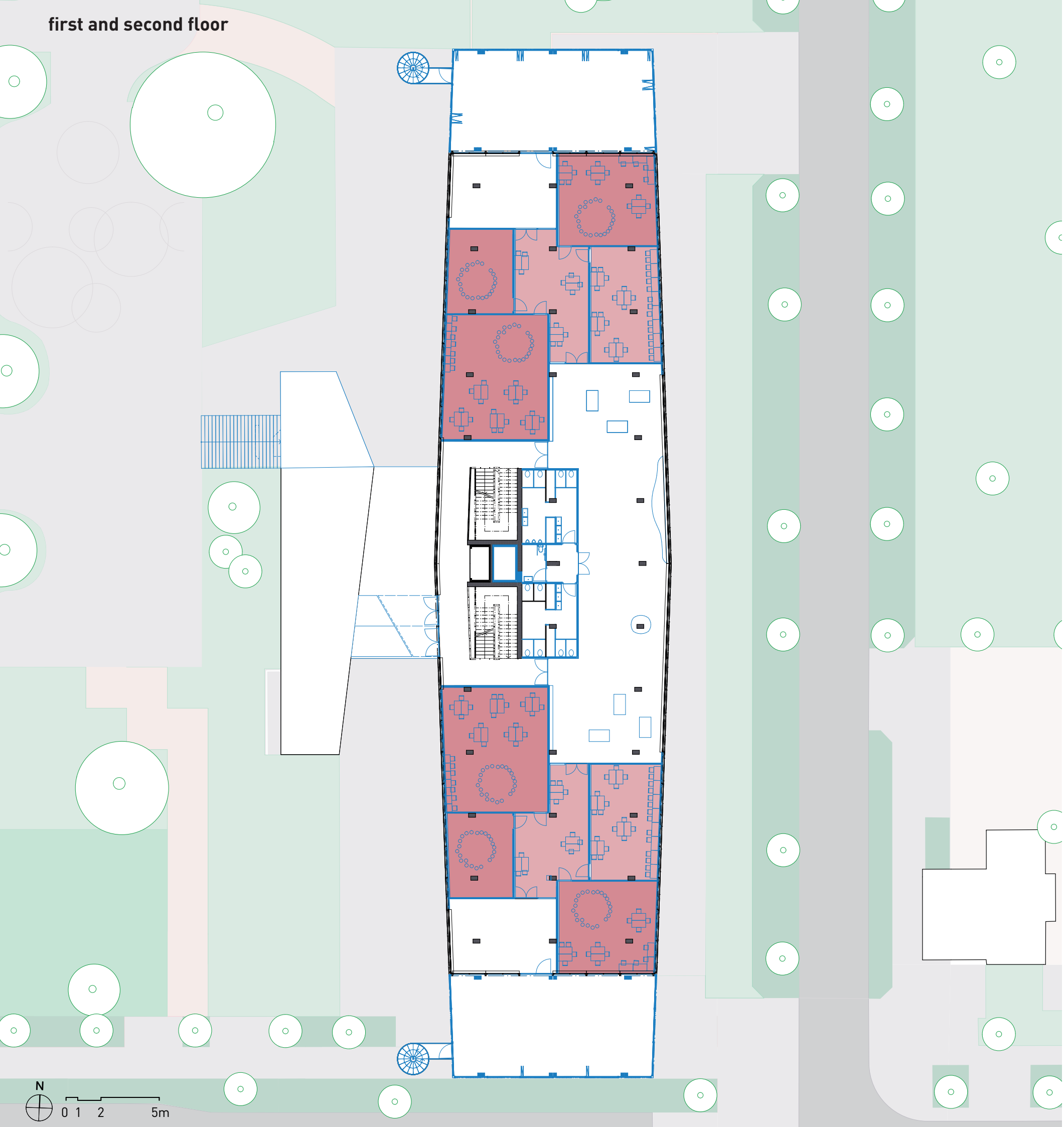
## **2 | update only where minimally needed**

providing more through doing less  
use resources for extensions,  
providing diversity in (learning) spaces

re-use as much as possible



first and second floor



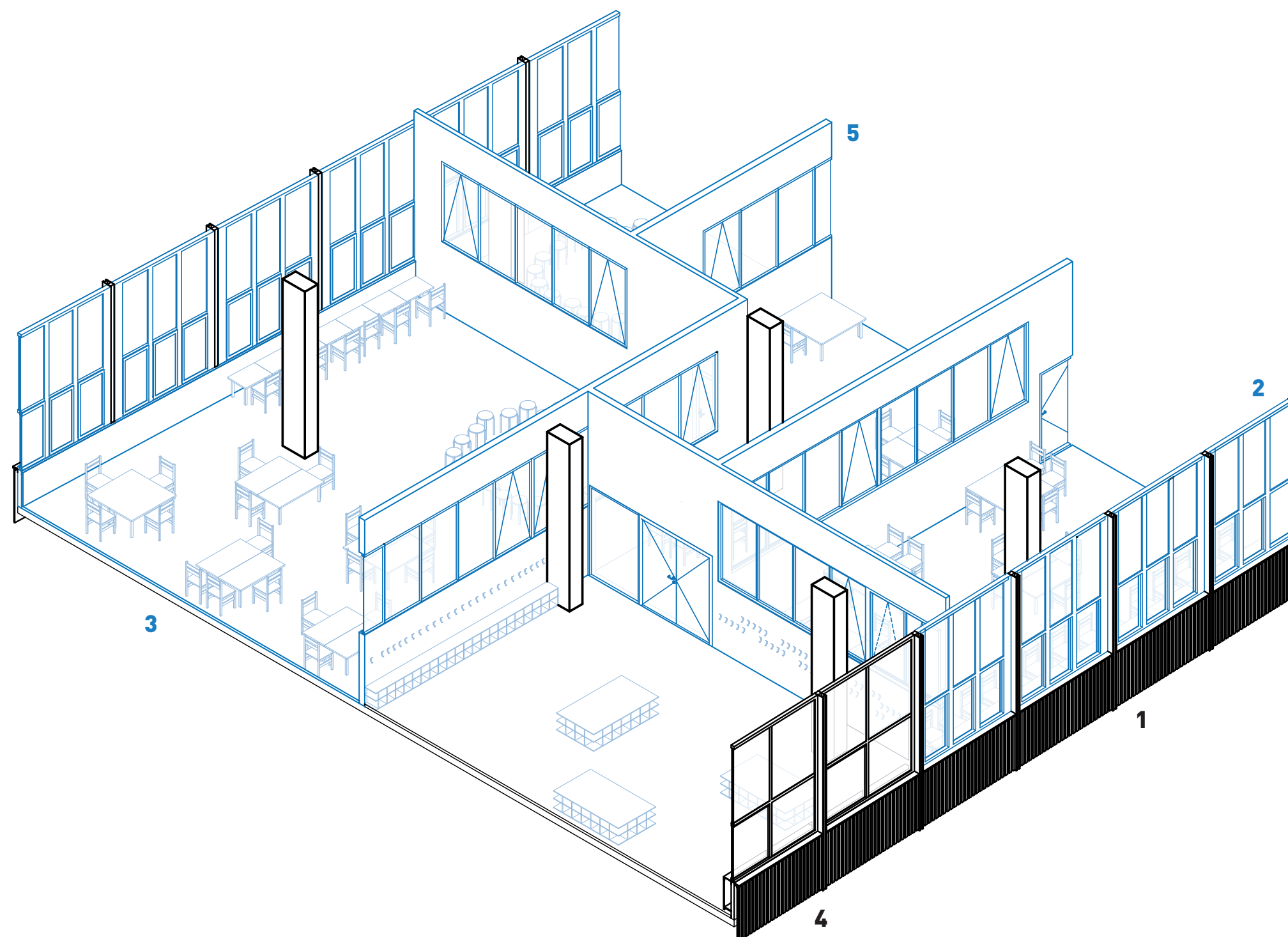
**minimally needed core class-rooms and workspaces have to be updated**

**core spaces   existing   new**

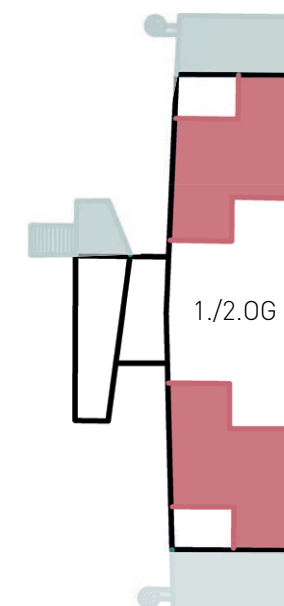
**update necessary to fulfil climatic, regulatory and ecological requirements**

- controlled temperature all year (around 21°C)
- fresh air: natural and technical ventilation controllable by humans
- natural light for good work environment
- good isolation and heating system, to minimize energy losses
- accessibility and escape routes for everyone, everywhere

## Update window panels and floor in minimally needed core spaces



— existing — new



### 1 | facade re-use

in the minimally needed core spaces, the facade pillar structure and corrugated metal panels can be re-used to minimize the new material needed

### 2 | update window panels

window panels are exchanged for triple glassing and more isolation in the minimally needed core spaces

### 3 | new floor composition

in the minimally needed core spaces a floor heating is added

### 4 | keep complete facade

in the additional learning spaces, the existing facade is kept as is

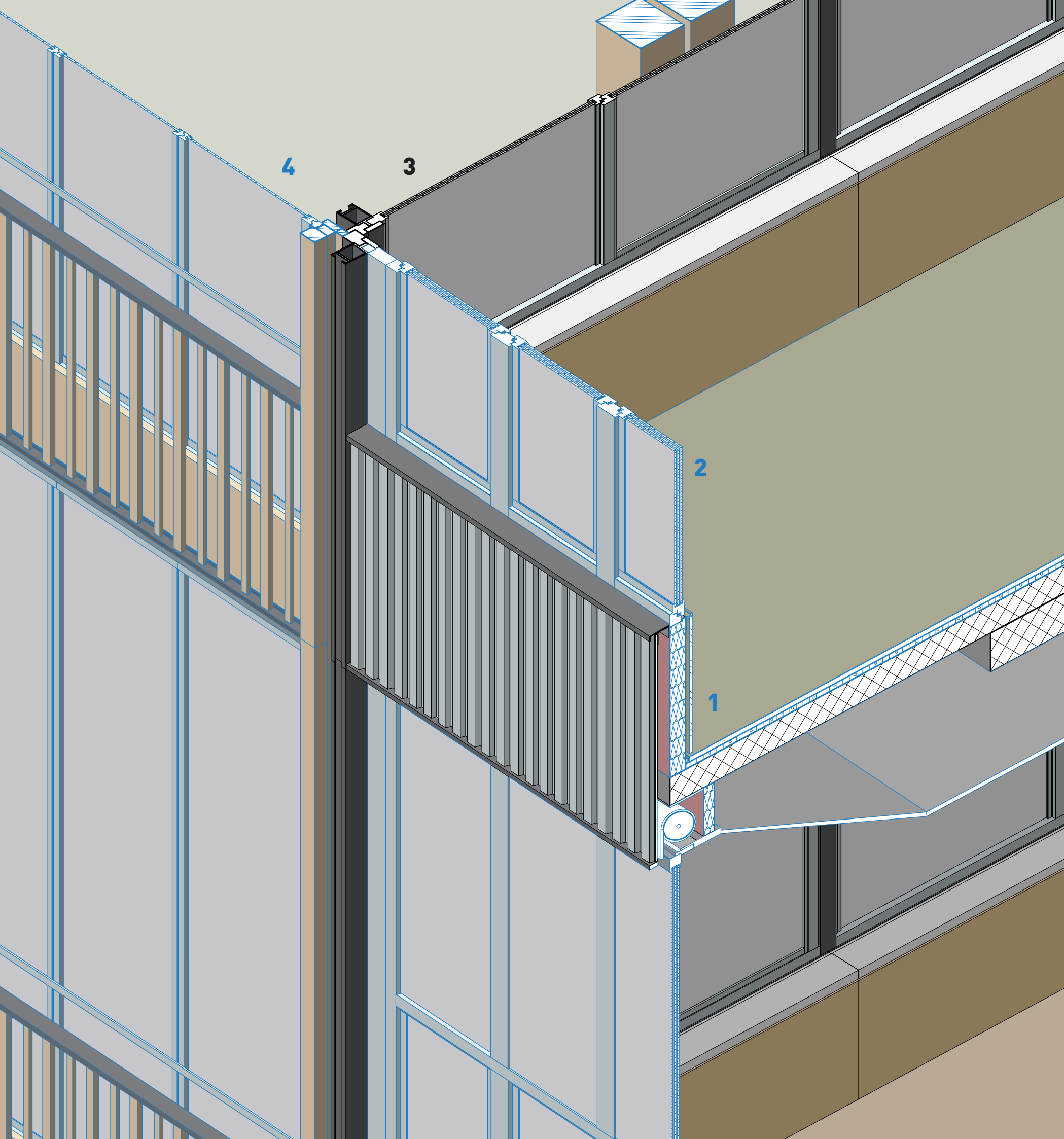
### 5 | division walls

windows, starting at 1.60m, bring cross ventilation and bright inside spaces

updates only where minimally necessary - just 50 % of the building surface







# existing and updated construction in detail

## 1 | floor composition

linoleum covering	5 mm
dry screed	25 mm
separation layer	0.2mm
footstep sound isolation, floor heating	30 mm
concrete ceiling	160 mm

## 2 | facade panel new

triple heat protection glass	50 mm
U-value	0.97
g Value	0.55
windowsill inside, wood	20 mm
airspace inside	60 mm
frame extension, wood isolated	94 mm
airspace	80 mm
metal plate	10 mm
corrugated metal panel	30 mm
U-value	0.283

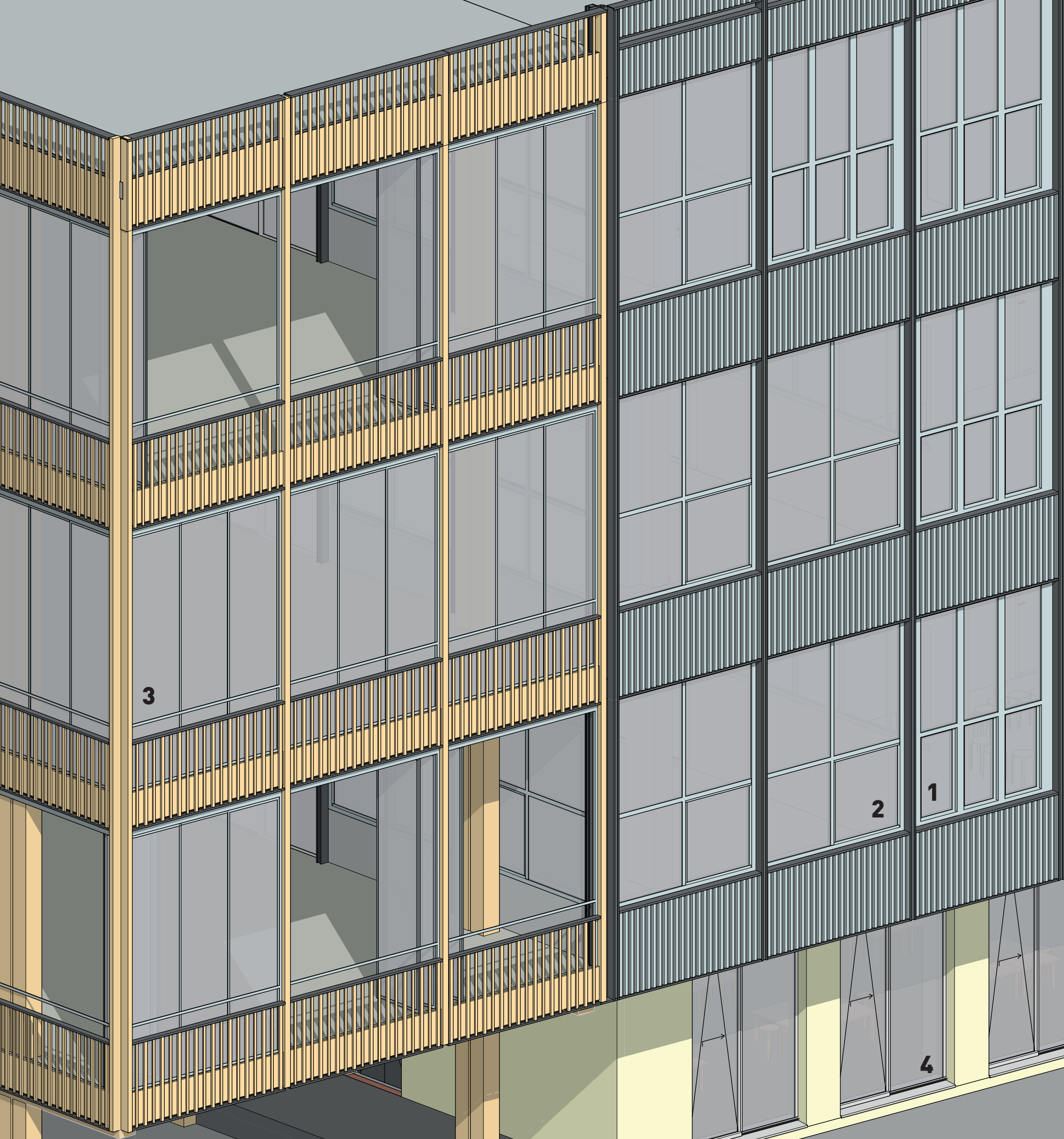
## 3 | facade panel existing

double insulating glass	50 mm
U-value	2.7
g Value	0.65
windowsill inside, wood	20 mm
(radiator beneath windowsill)	185 mm
frame extension, isolated	80 mm
air space	80 mm
metal plate	10 mm
corrugated metal panel	30 mm
U-value	0.75

## 4 | wintergarden extension

single glassing, sliding window	10 mm
U-value	5.16
g-Value	0.8
wood frame railing	60 mm
airspace	80 mm
concrete wood composite ceiling	140 mm





## different window panels and constructions display inside spaces on the facade

### 1 | classrooms

require smaller grid than the former canteen and smaller casements for students of all age to be able to open the windows easily by themselves

### 2 | secondary spaces

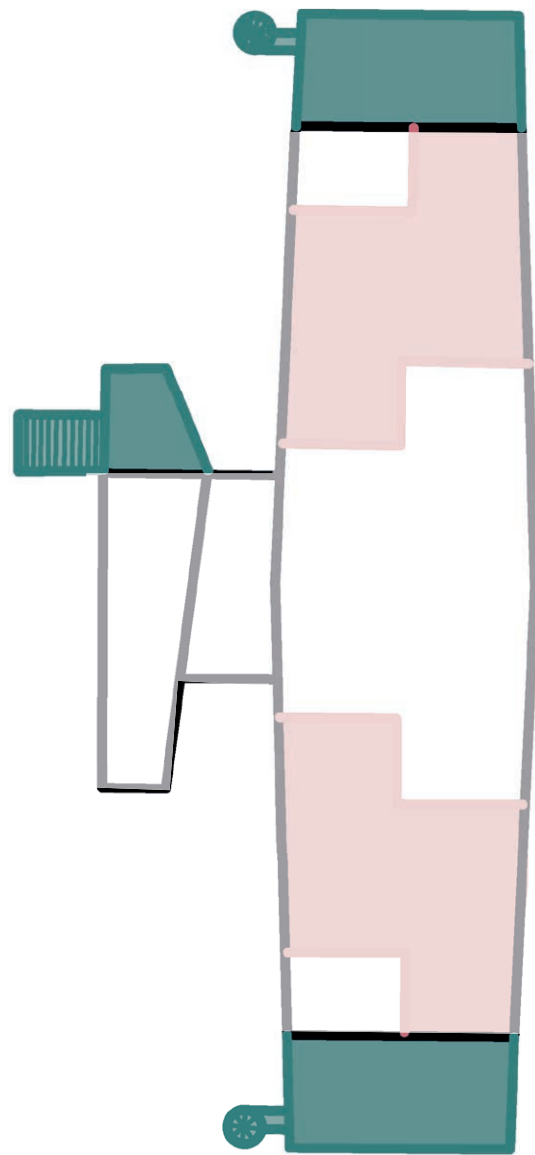
existing windows tell story of transformation and of what was before

### 3 | wintergarden extension

foldable single glassing windows can be completely opened and add another climatic option to the school

### 4 | ground floor

updated windows down to the floor to give more connection and accessibility from / to the surrounding



transform into a school  
teach autonomy through architecture

update only where minimally needed

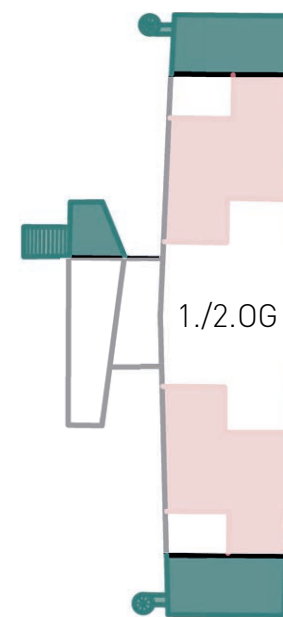
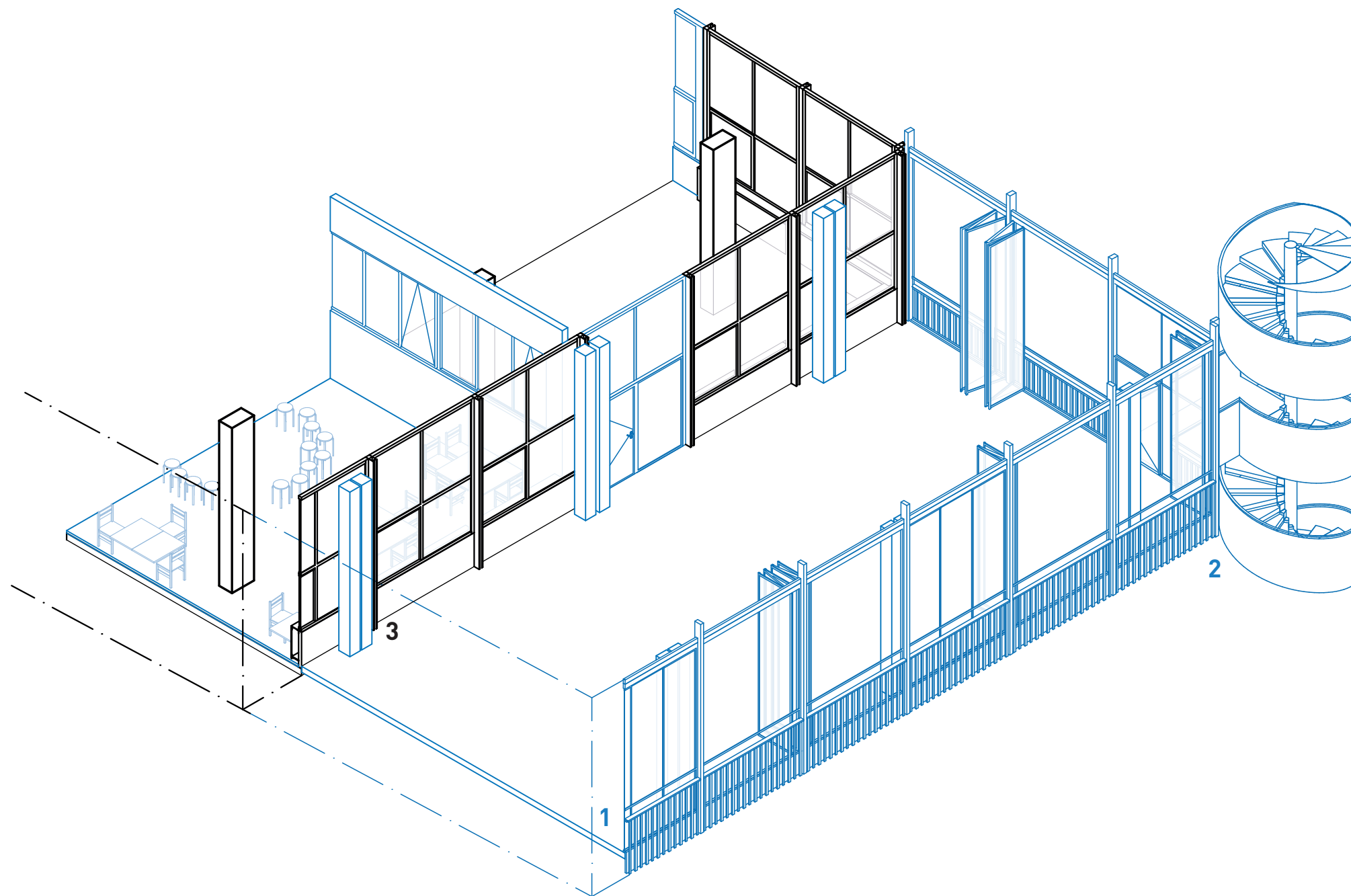
### **3 | providing more through doing less**

use resources for extensions,  
providign diversity in (learning) spaces

re-use as much as possible



through minimal update the resources can be used for wintergarden extensions and additional staircases



provide diversity in (learning) spaces and movement throughout the school

### 1 | wintergarden

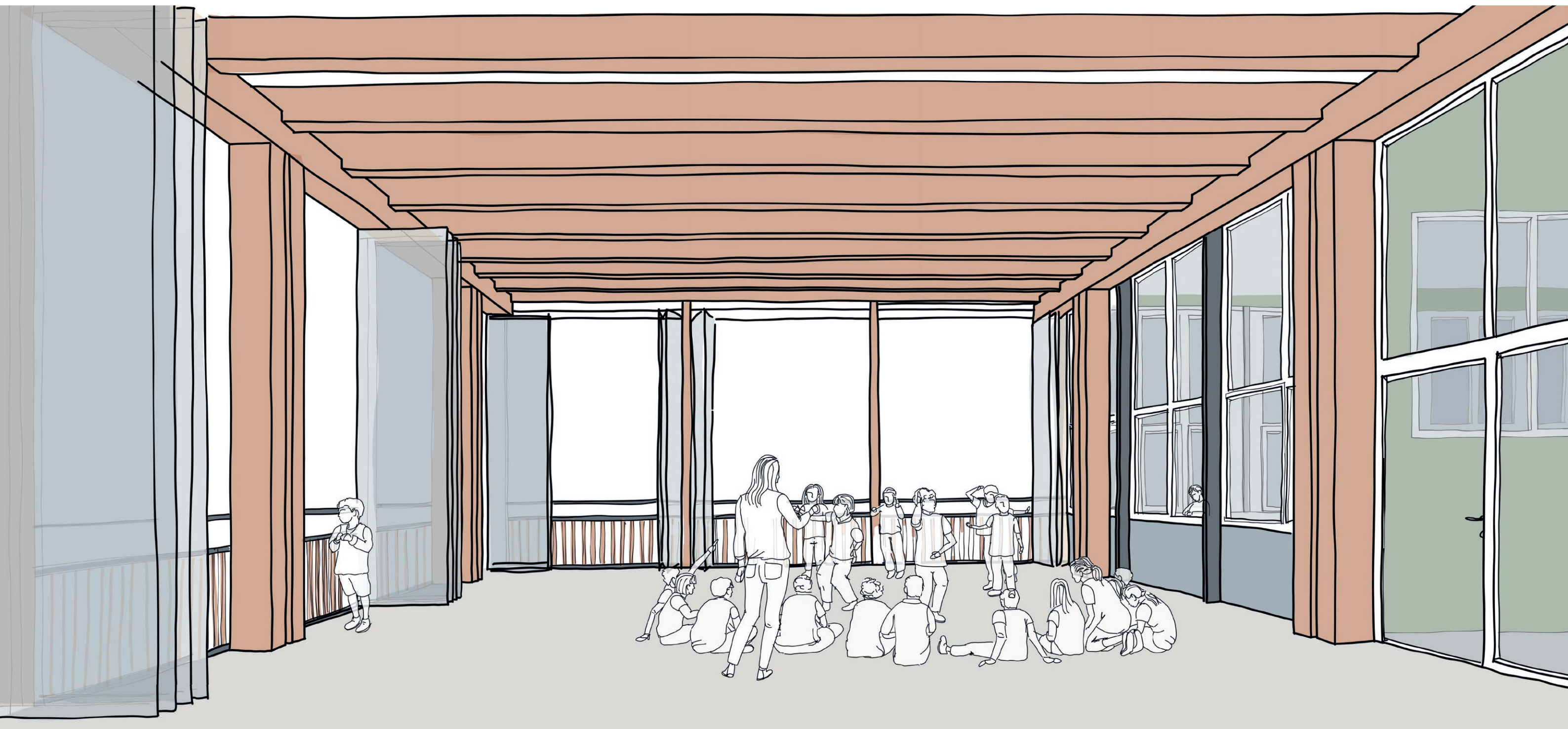
providing an open(able) space and an additional climatic zone for students or classes to use freely, giving more diversity to the learning landscape

### 2 | staircase

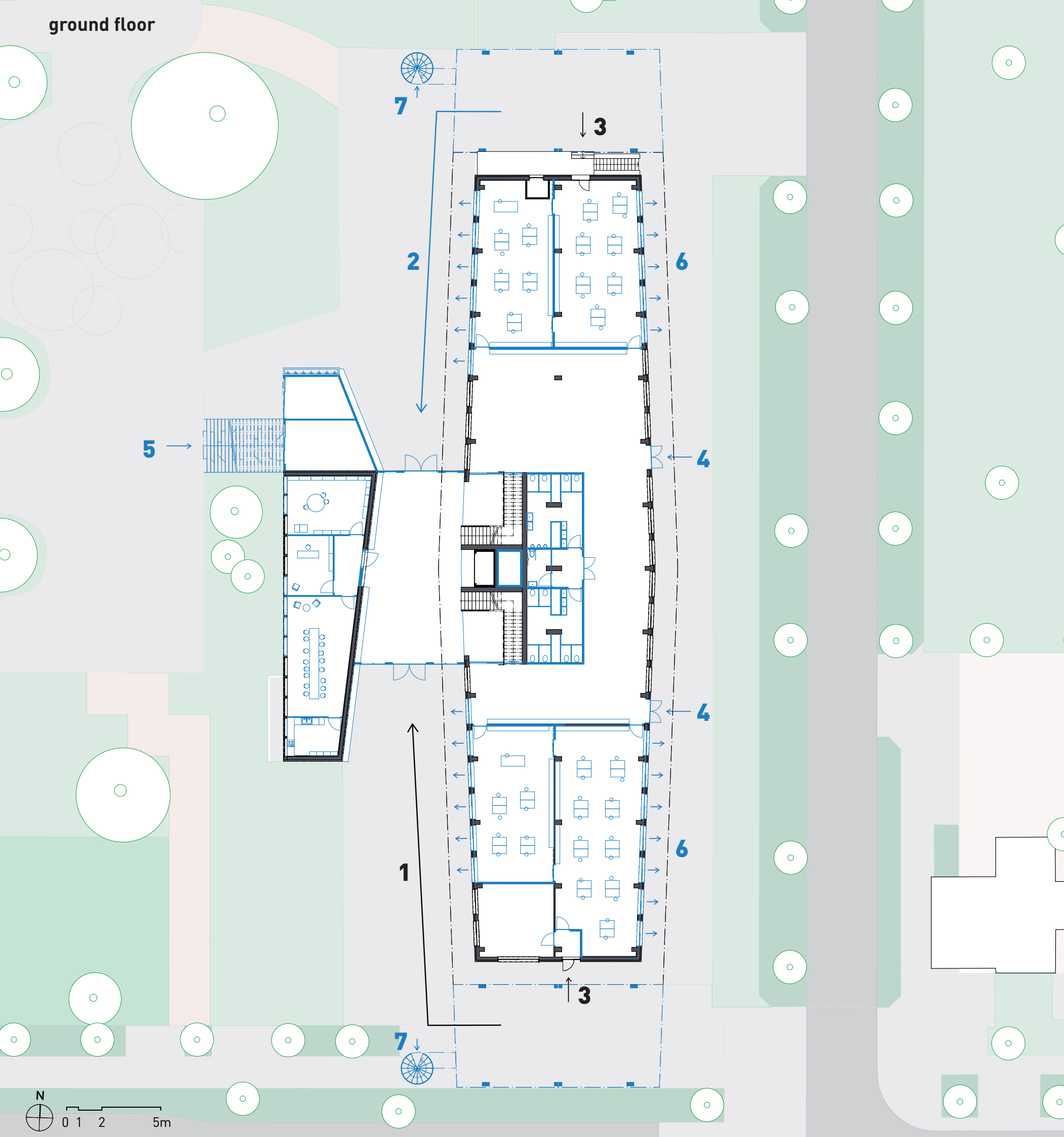
give more freedom and possibilities in vertical movement throughout the school

### 3 | inside facade

re-use the former outside facade as new inside facade. metal panels were removed to ensure connection to new structure







**entrance building extension and additional staircases allow for more accessibility on the ground floor**

**1 | existing main entrance**

**2 | entrance extension**

allow access from both sides of the school through a second main entrance

**3 | existing secondary entrances**

**4 | secondary entrances new**

additional entrances allow to use the ground floor by the neighbourhood outside school hours, while keeping the school floors inaccessible to the public

**5 | terrace staircase**

entrance building roof becomes terrace, connecting the first floor directly with the courtyard while creating more outside space for the students

**6 | ground floor window update**

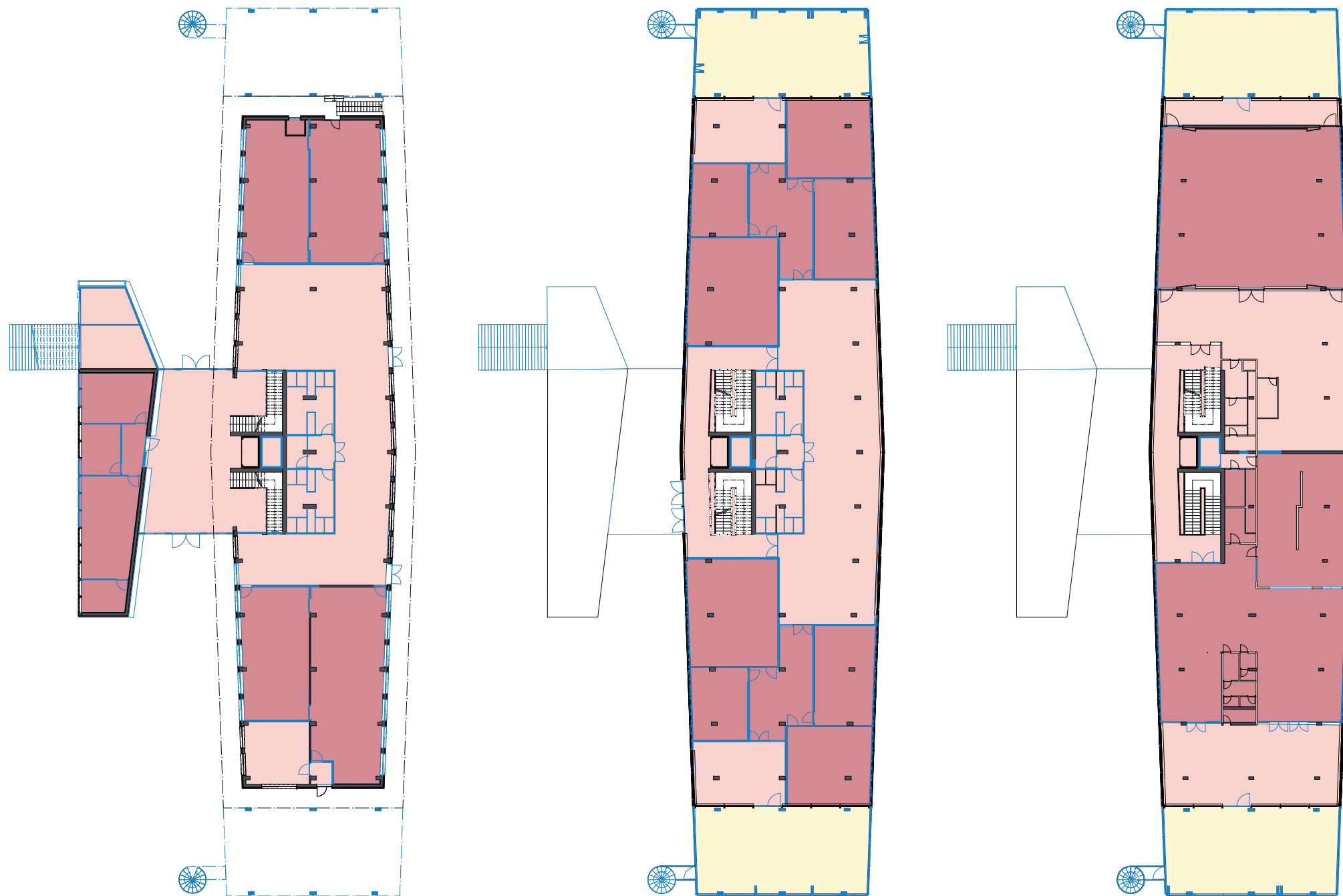
workshops get updated windows, going all the way to the floor, not only providing more light but also access and interaction with the outside space

**7 | wintergarden fire stair**

providing more possibilities of vertical movement throughout the school building while helping to fulfil fire safety regulations



**different degree of change in the building results in different climatic zones, minimizing its energy demand**



#### **heated core spaces**

the spaces with updated facade and floor can maintain the required 21°C all year round

#### **naturally heated secondary spaces**

secondary spaces with existing facade do not require heating during most times of the year. either people move a lot in them, only stay for a short while or because they only provide additional (learning) spaces. the big windows provide a lot of solar gains, heating the inside naturally. the existing radiators can be used if absolutely necessary. these spaces provide the second inside climate for the students to choose

#### **wintergarden climate**

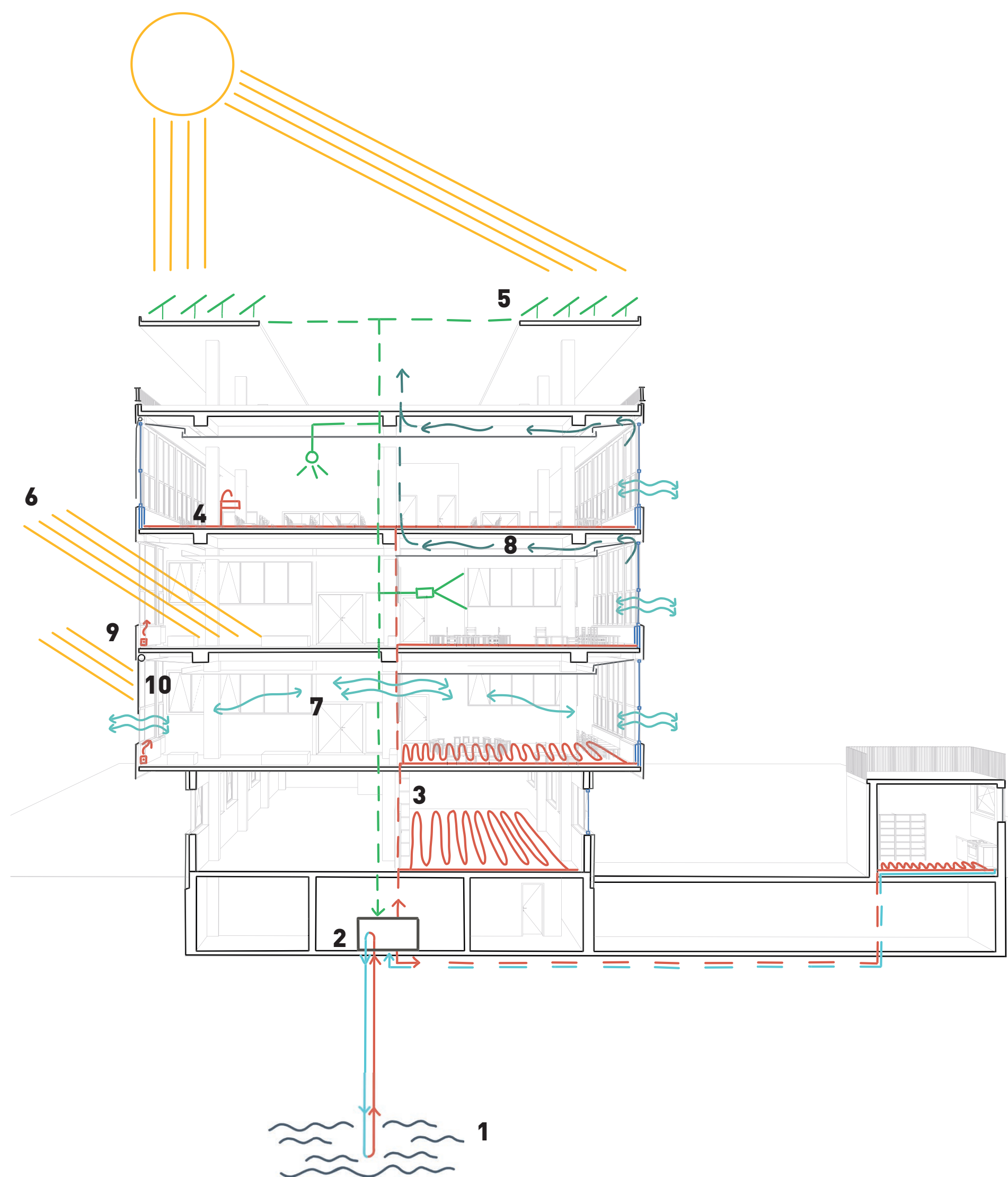
the wintergarden extension provides a third climatic zone. with all its windows open, it can become almost an outside classroom in summer. in winter it heats up naturally through solar radiation, helping to isolate and reduce the heating demand of the building.

#### **building as a teacher**

experiencing seasons and different climates in the building, which are closely connected to its energy/heating demand, the building can teach students about sustainability and the environment through their daily experiences.



**covering 95% of energy demand self-sufficiently through renewable sources thanks to different climatic zones**



**1 | groundwater probe**

basel has really warm groundwater (up to 18°C!), perfect to use as natural heat resource

**2 | heat pump system**

exchanges heat from groundwater so that it can be used for the floor heating (30°C) in the minimally needed spaces **(3)** and for the warm water supply (60°C) **(4)** of the building

**5 | PV**

80% of the roof surface covered with monocrystalline solar modules at 15°angle, which supplies the heat pump system, the light, the appliances and the technical ventilation

**6 | solar gain**

through the big window surface (60% of the facade) the solar gains can be used during a big part of the year to heat the updated additional spaces in the building

**7 | natural cross ventilation**

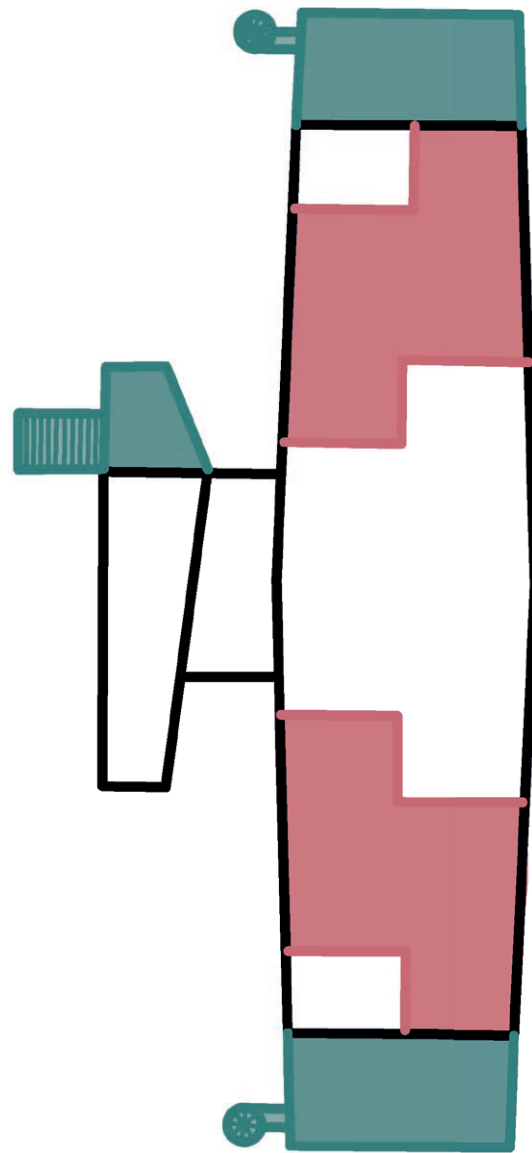
the window division allows every student to let fresh air into their workspace. openable windows in all classroom walls allow for cross ventilation through the whole building in summer

**8 | technical ventilation system**

for the specific and strict requirements of a school the existing ventilation system (originally used for the canteen) can be easily re-used when needed

**9 | existing radiator**

in all spaces which are not updated, the existing radiator heating underneath the window is preserved to be used only if absolutely necessary (winter, no sun for days)



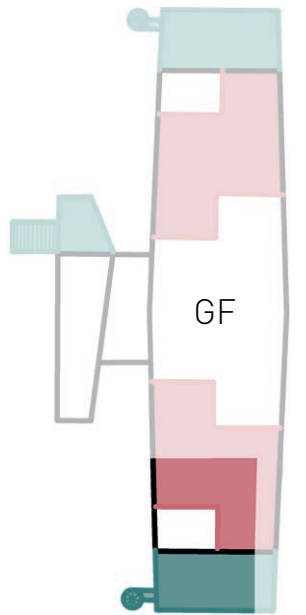
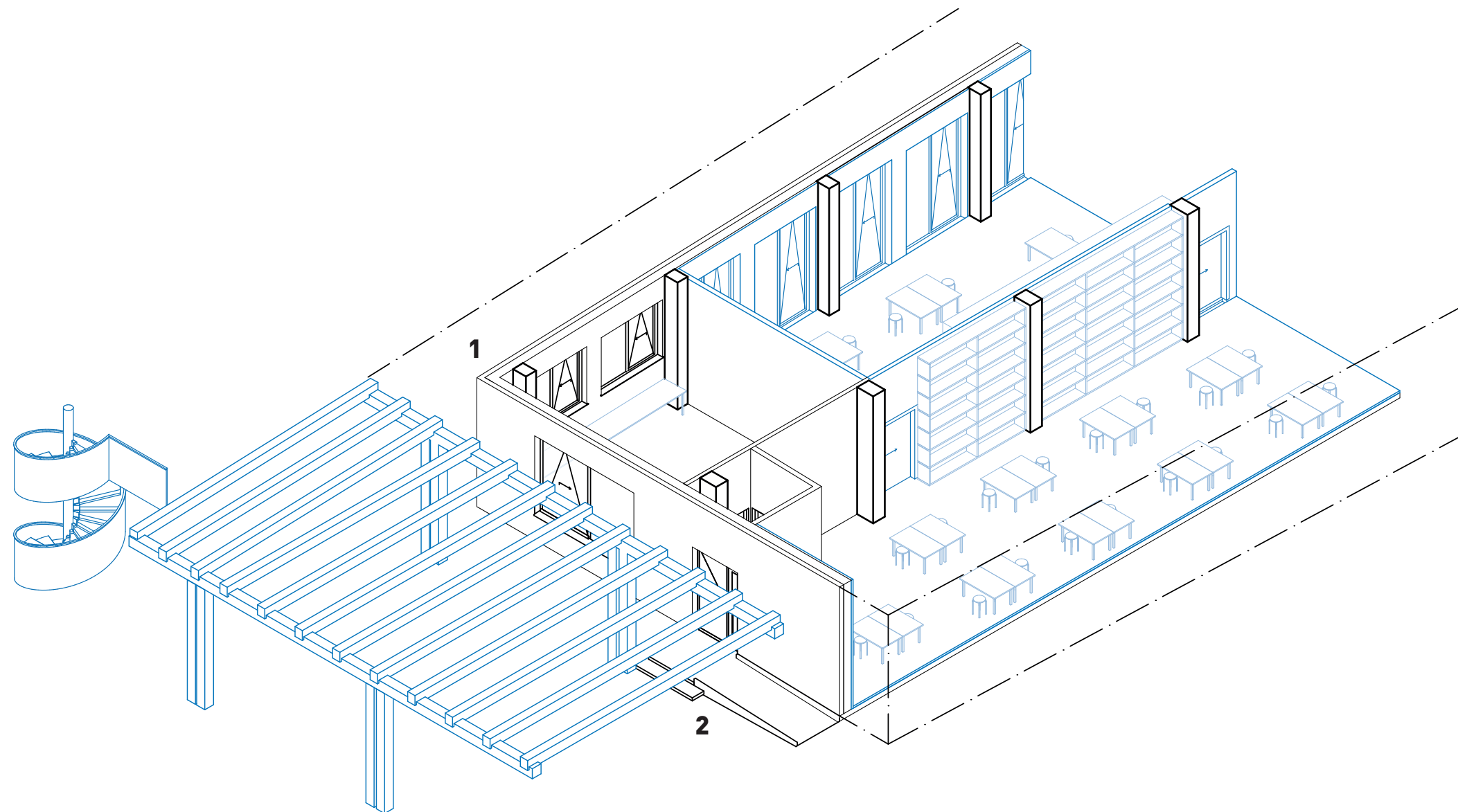
transform into a school  
teach autonomy through architecture

update only where minimally needed

providing more through doing less  
use resources for extensions,  
providing diversity in (learning) spaces

## **4 | re-use as much as possible**

## enriching the new building through existing structures



re-use means taking the existing spaces and structures seriously, seeing them as potential, not obstacle. therefore: re-use as much as possible

### 1 | kiosk

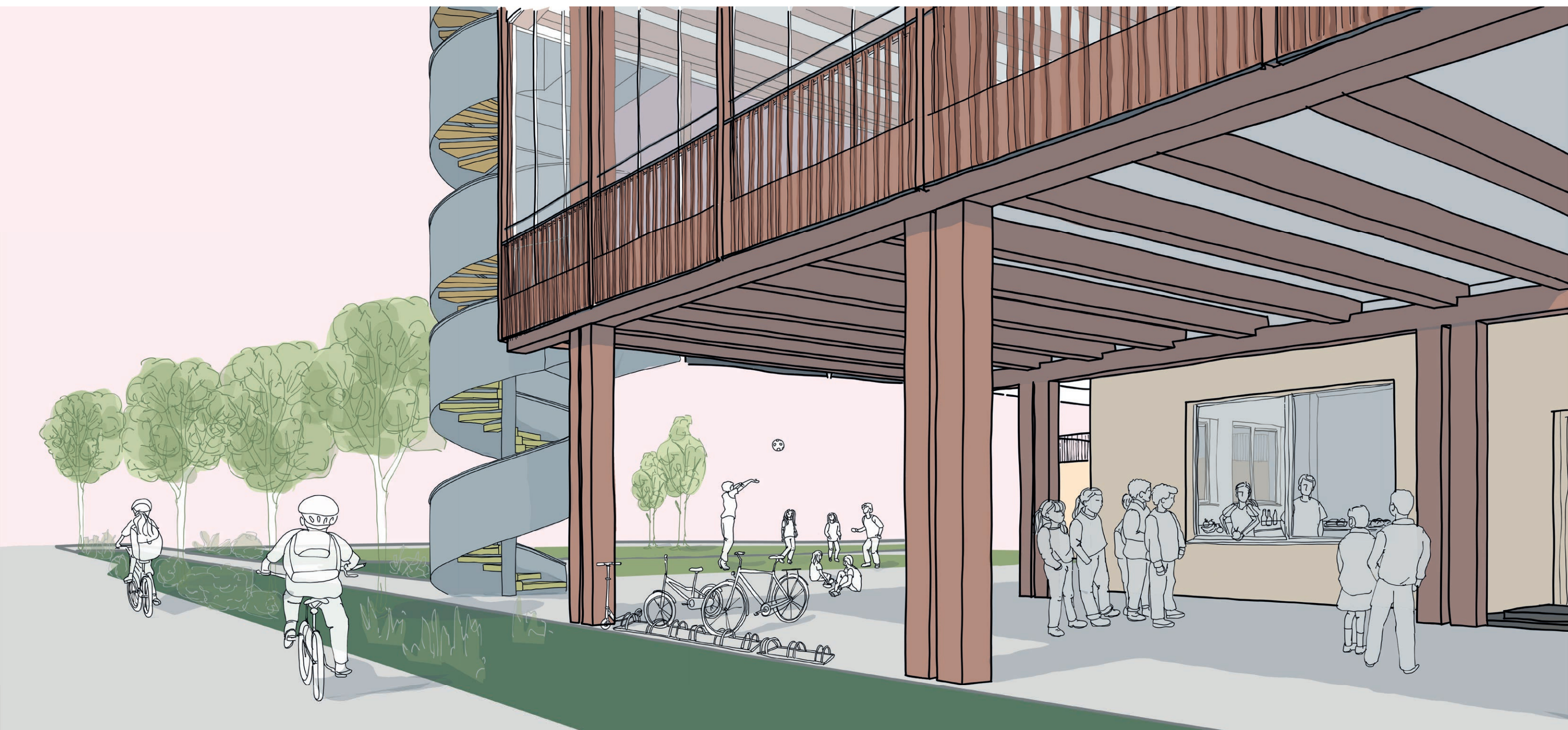
re-use the existing kiosk to serve as student managed kiosk during the week and to provide snacks for workshop participants or park-goers on weekends

### 2 | side entrance

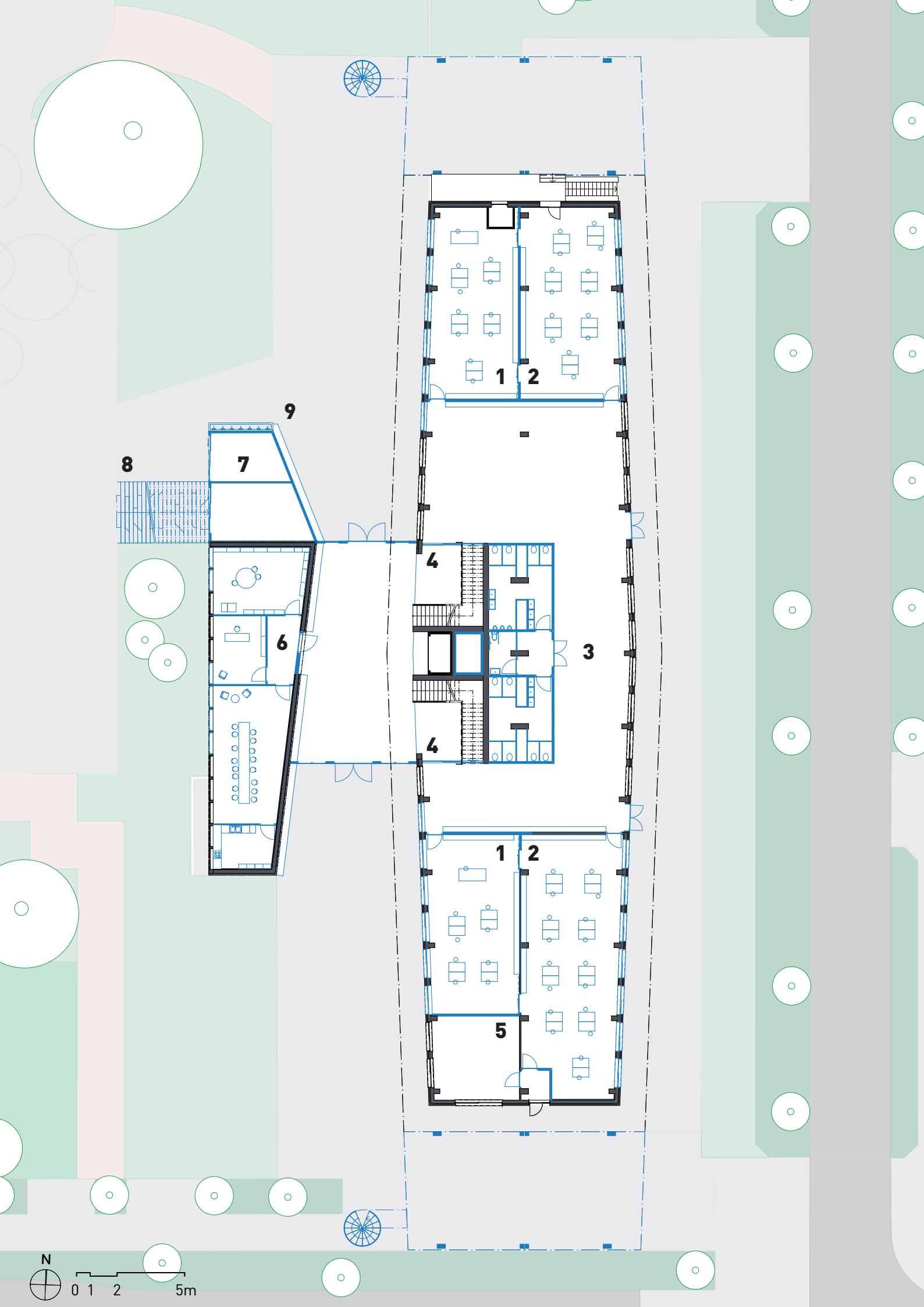
leave additional possibility to access the workshop space, helping to use the ground floor for community program on weekends without interfering with the school

- industrial kitchen on the third floor used for schools lunch service
- existing aula on third floor re-used for events









## ground floor

### 1 | 2 | workshops

classrooms for arts and crafts lectures. **1** and **2** used during class, **2** can become separated space for weekend courses for/by the neighbourhood

### 3 | open workspace

additional workshop space free to use by students or classes or the neighbourhood

### 4 | separation

door closed on weekends so school floors are not accessible to the public

### 5 | kiosk

existing kiosk serves as student managed kiosk during the week and provides snacks for workshop participants or park-goers on weekends

### 6 | teachers space

kitchen, meeting and break room, head teachers office, copy room and archive

### 7 | second entrance

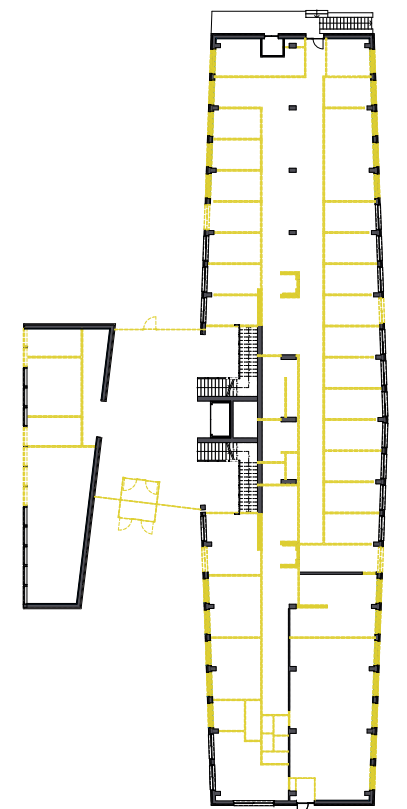
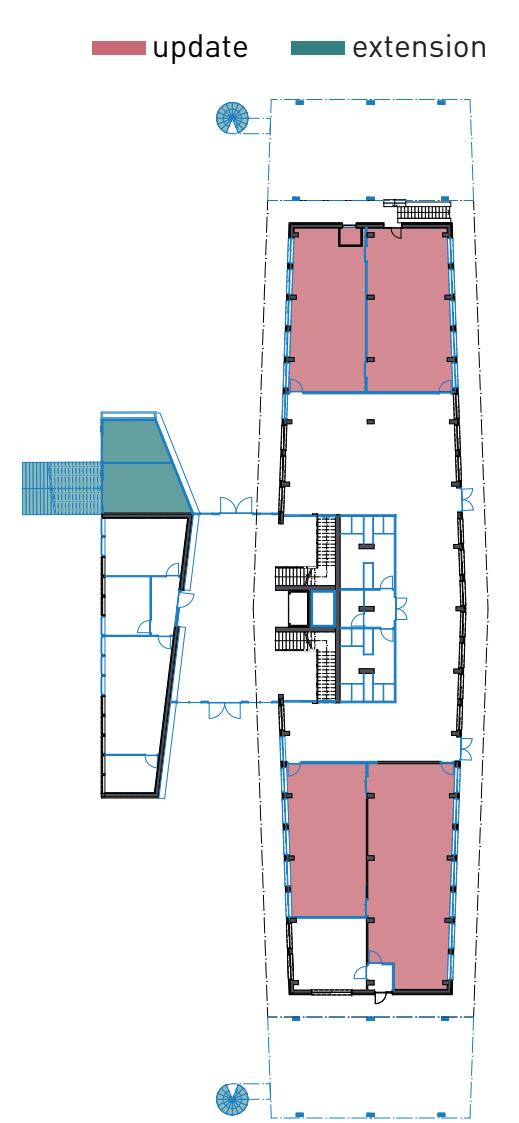
small extension forms second entrance and can be used as storage for toys, gardening tools and for the ground keeper

### 8 | terrace stair

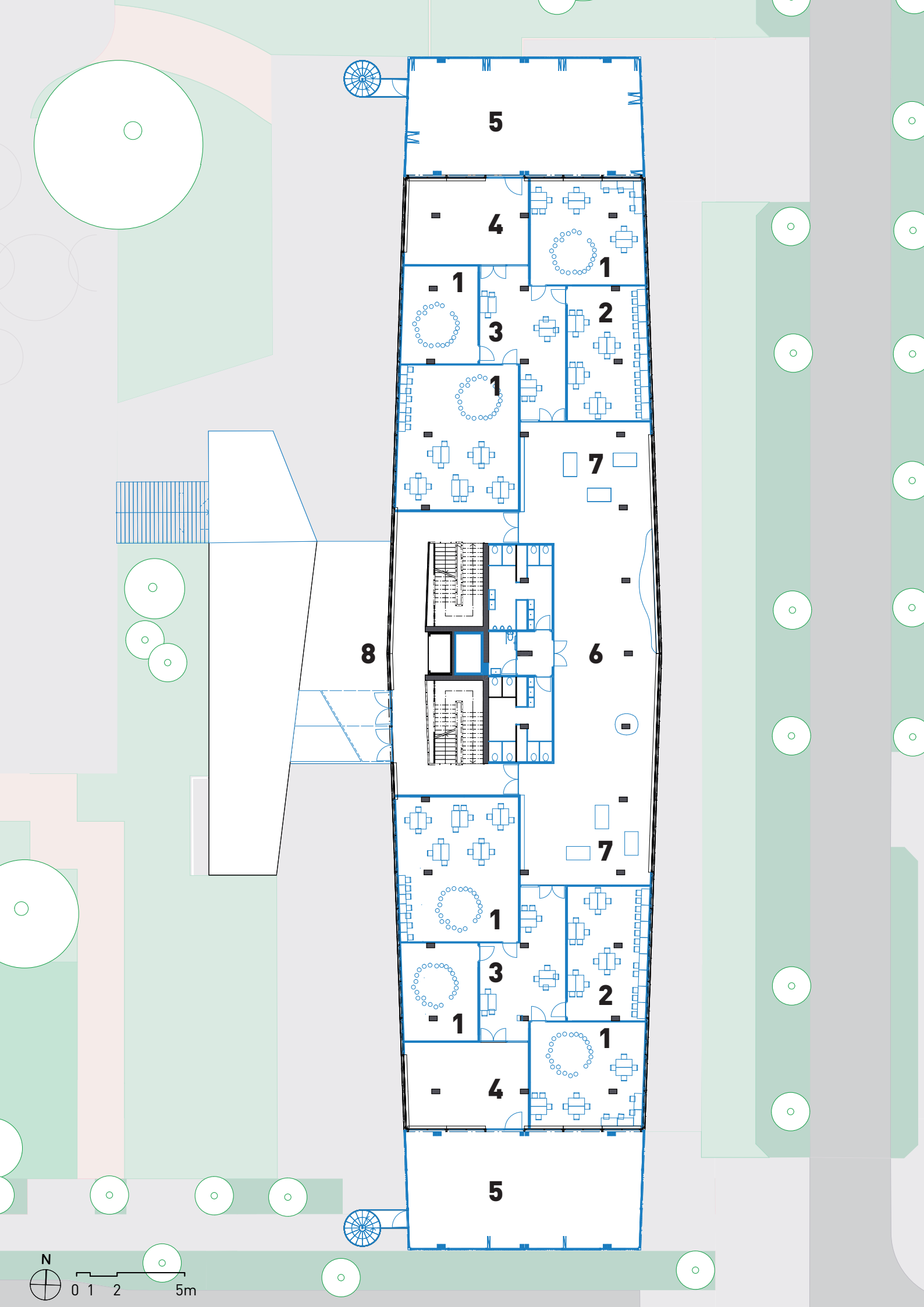
big stair both for sitting during breaks and for accessing the courtyard from the new roof terrace

### 9 | fountain and bench

making the entrance to a common meeting place of the school



— existing — demolished



## first and second floor

### 1 | classrooms

according to year of student

### 2 | workspace

individual and group workplaces, providing the minimally needed workplaces outside the classroom

### 3 | hallway / group room

in winter, hallway turns into group workspace during class, to provide every student with a fixed workplace

### 4 | additional learning spaces

providing a diversity of learning spaces, so that students can choose the environment best suited for them to study

### 5 | wintergarden extension

open(able) space, free for students or classes to appropriate. third climatic zone in the school, easily controllable through all around sliding windows

### 6 | common open spaces

possibility for big group course, discussing or playing. connects both sides of the school floor

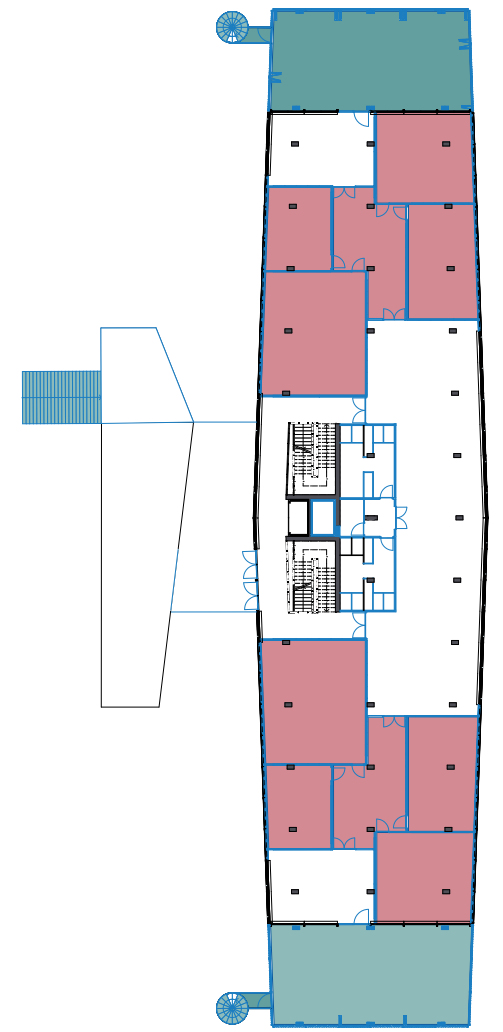
### 7 | wardrobe

furniture serving as wardrobe and seating. 1. and 2. year separate next to their classroom for easier use

### 8 | terrace

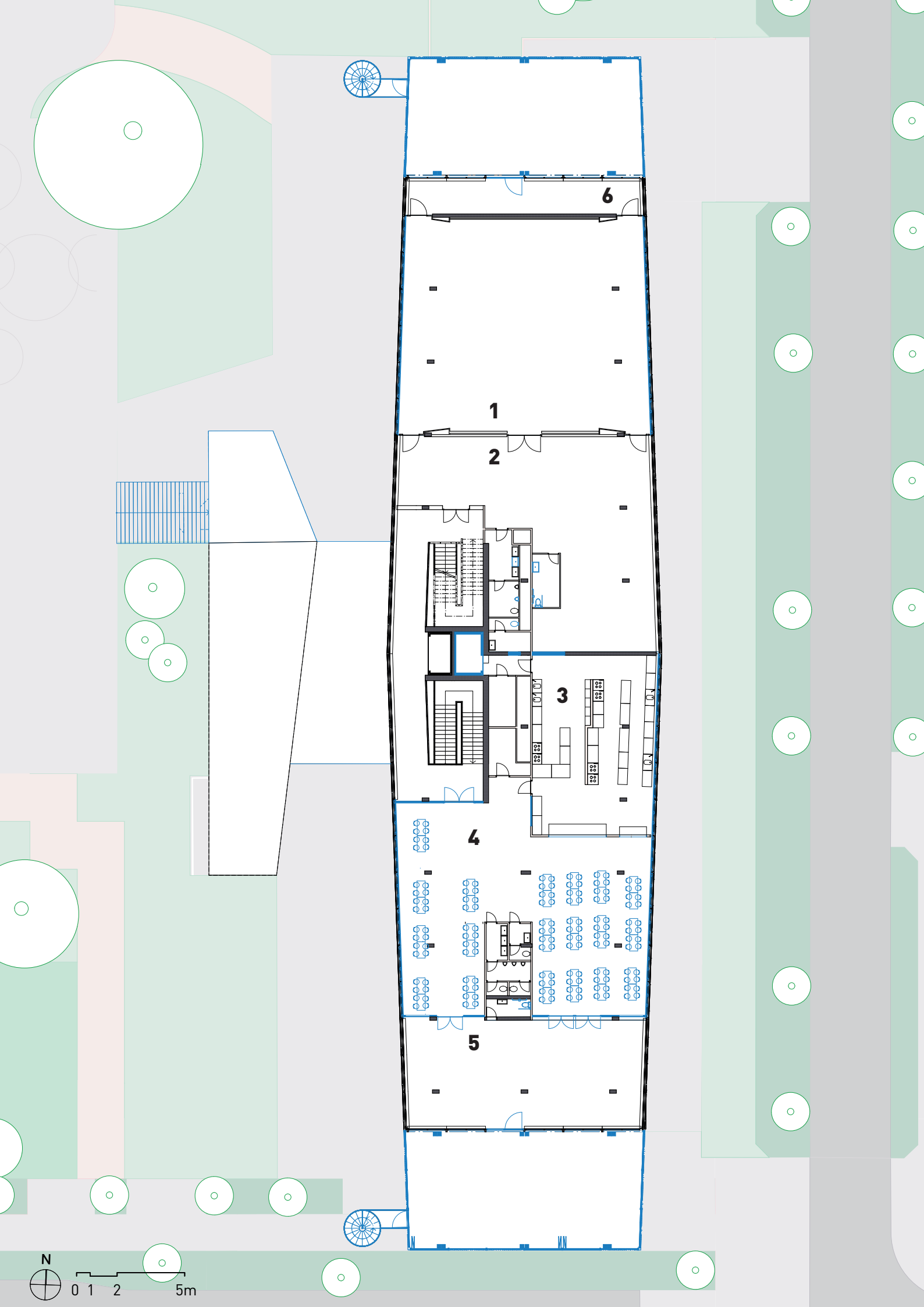
roof of the entrance building accessible from first floor, serving as additional outside space and connection to courtyard

update extension



existing demolished





## third floor

### 1 | aula

existing aula can be used for concerts, plays or assemblies

### 2 | entrance

events in the aula require a big entrance area, which could also serve as wardrobe space or apero area during the events

### 3 | kitchen

existing industrial kitchen is preserved for lunch time service

### 4 | mensa

150 seats can be provided in the updated, heated area, which is enough for 50% of all students and teachers

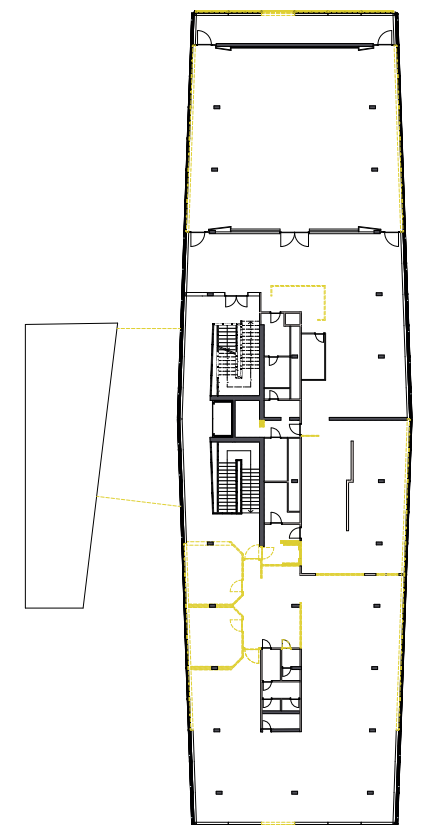
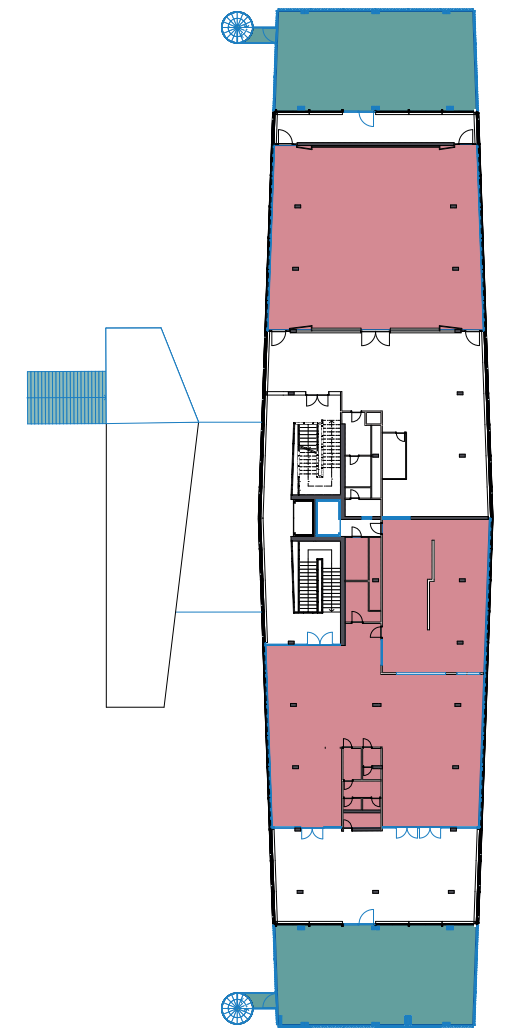
### 5 | additional seating

can be used for mensa, but also for classes if needed

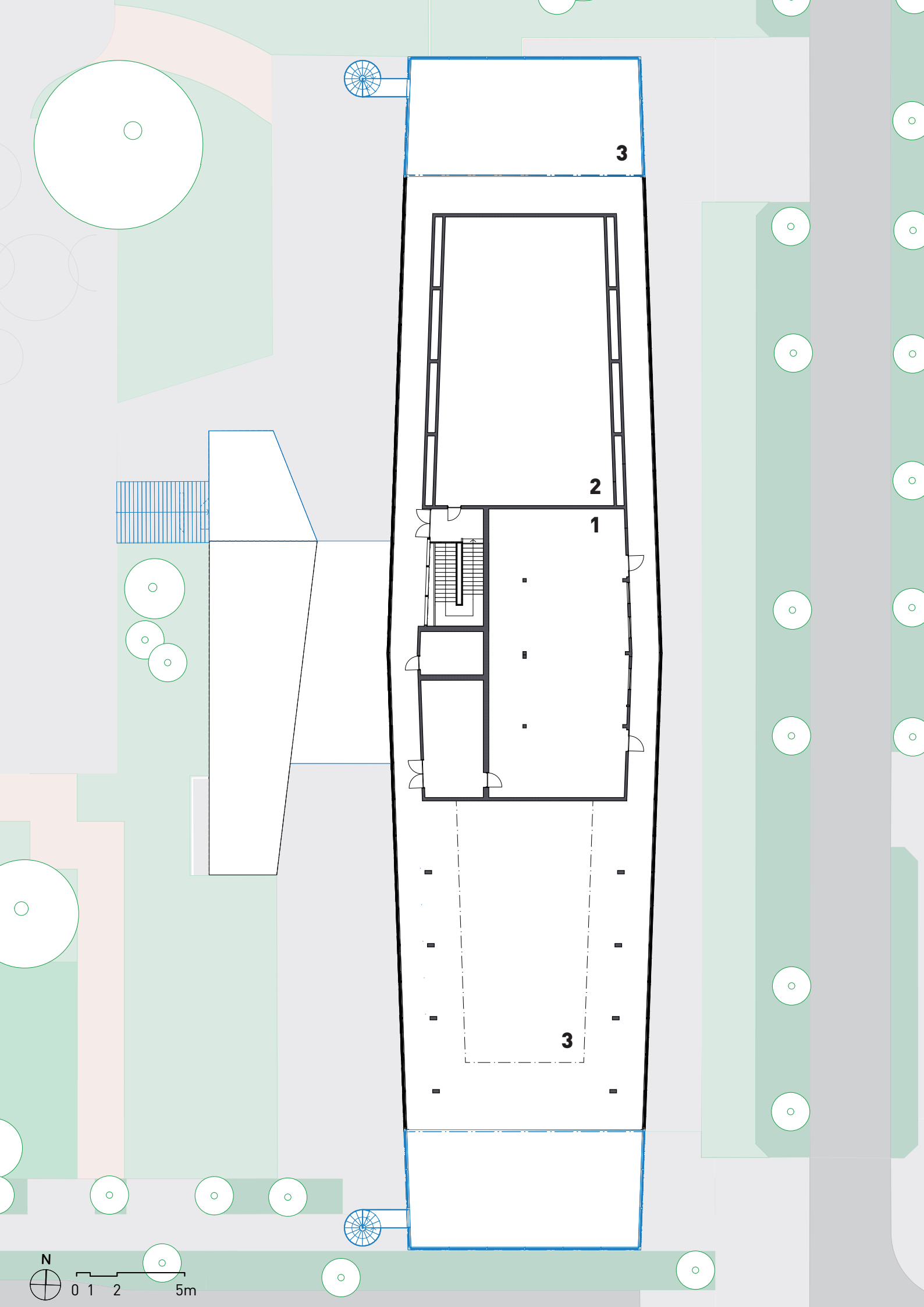
### 6 | chair storage

existing space is reused together with the aula

update extension

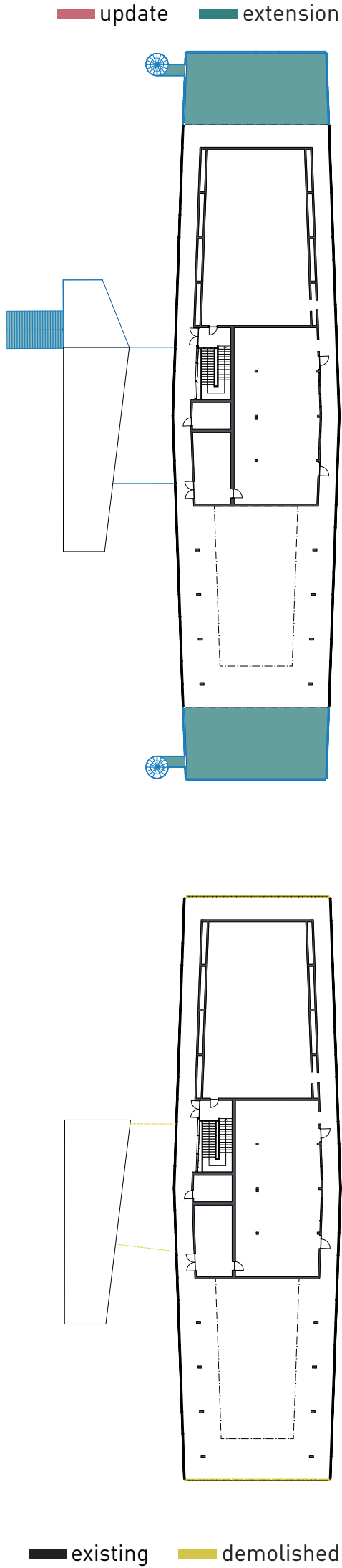


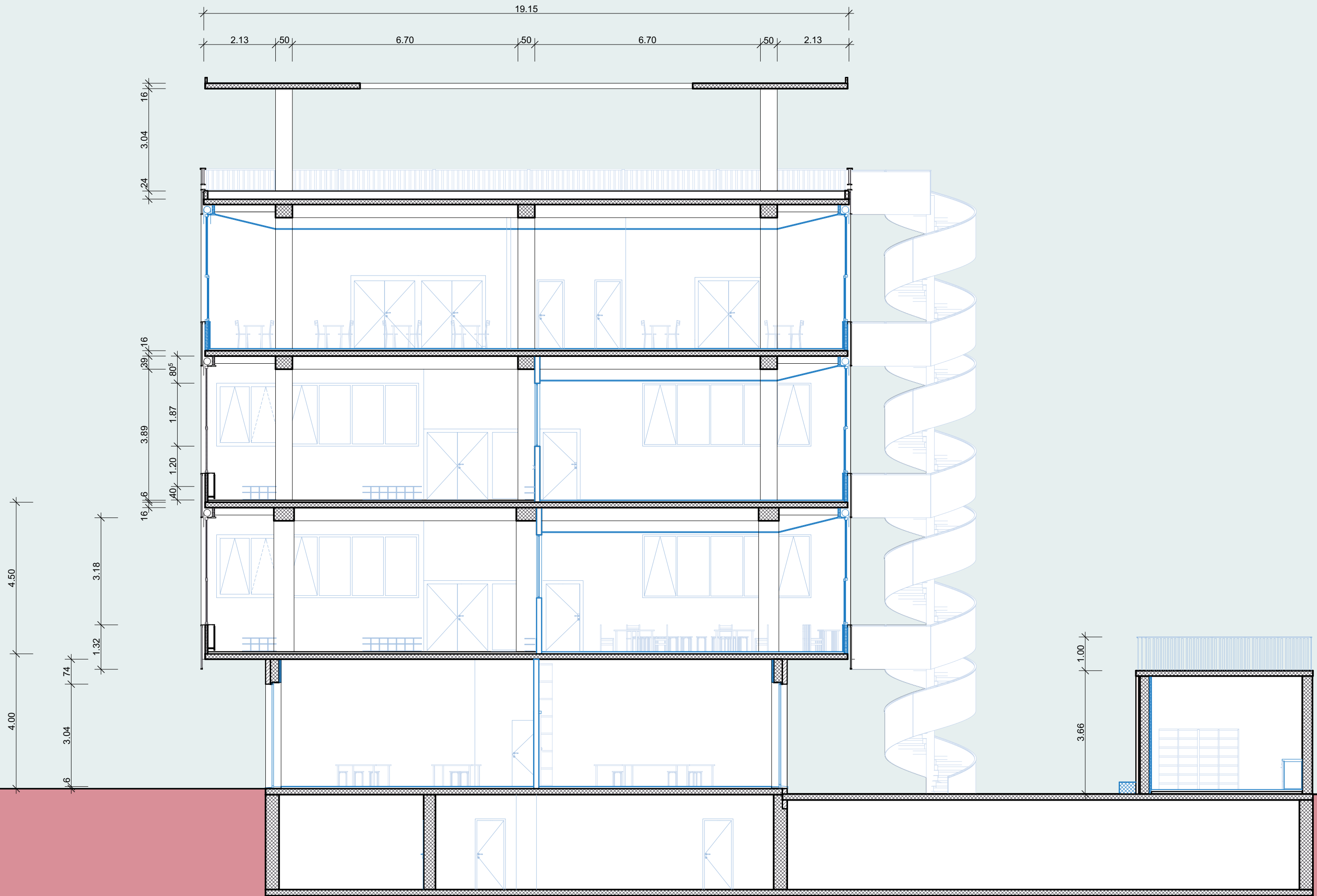
existing demolished



top floor

- 1 | technical facility**  
existing rooms for heating and ventilation can be kept
  - 2 | aula roof**  
aula on 3. floor is 1 1/2 stories high, protected by a enclosed space
  - 3 | roof terrace**  
extended with wintergarden roof, accessible and freely usable by students
- solar panels**  
the roof of 1/2/3 is covered with solar panels to self-sufficiently cover the energy demand of building 610









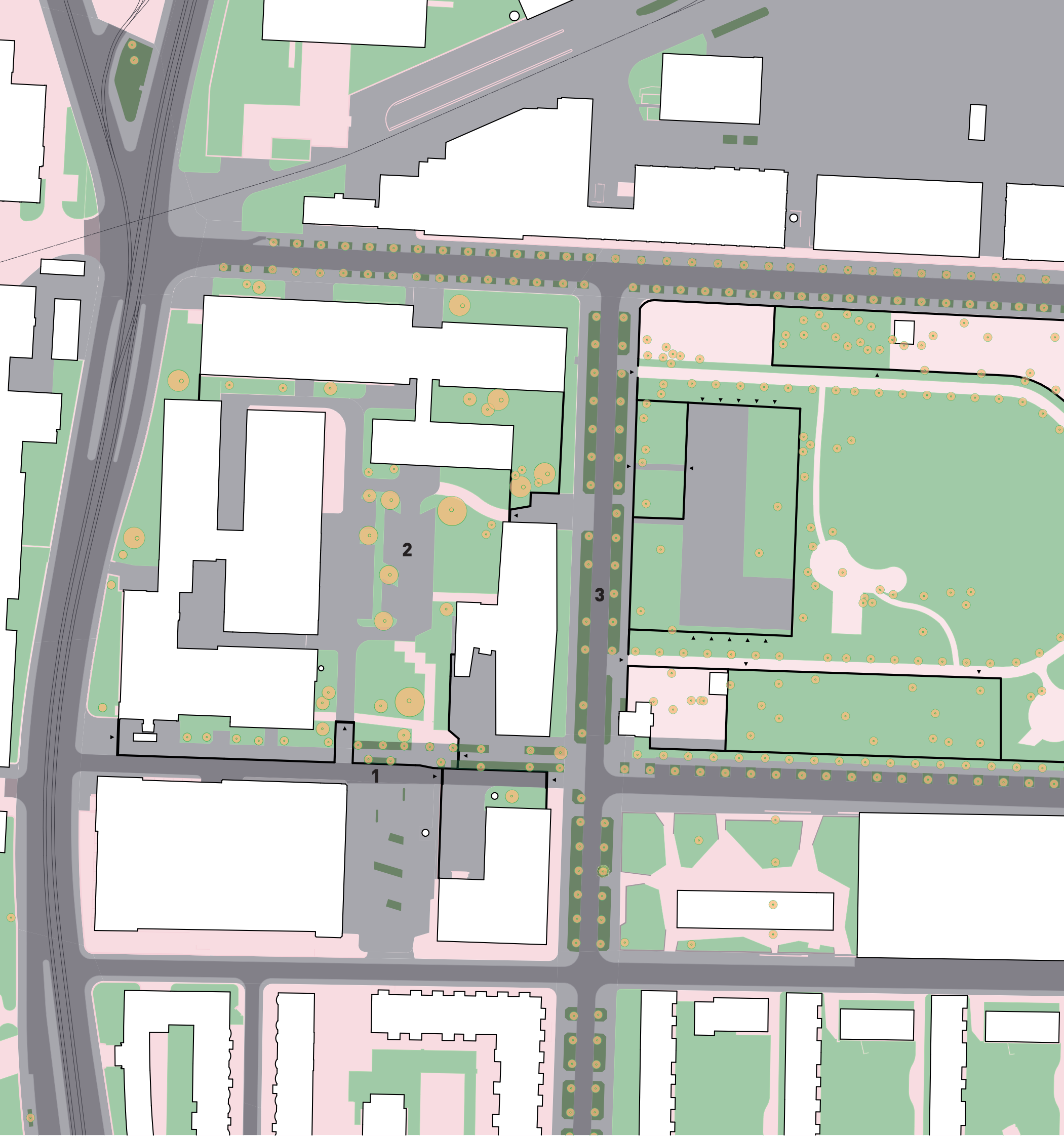
transform into a school  
teach autonomy through architecture

update only where minimally needed

providing more through doing less  
use resources for extensions,  
providing diversity in (learning) spaces

re-use as much as possible

## **5 | change inside transforms outside**



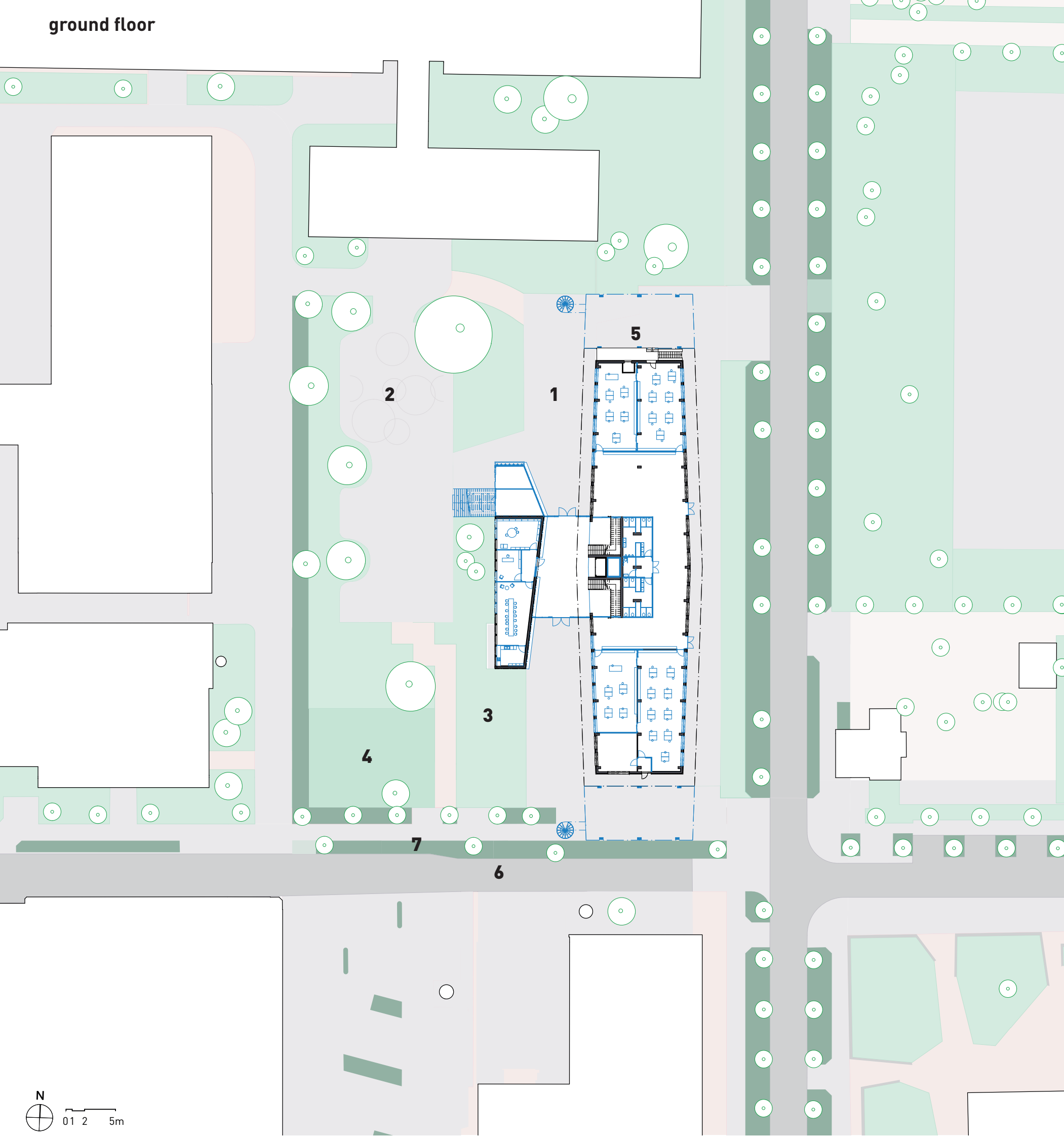
**before: limited accessibility due to fences and thinly sectioned surrounding**

**1 | privatized street**  
west-east street on south side of building 610 can not be used by public because access to pharma buildings is strictly regulated and enclosed

**2 | parking courtyard**  
courtyard only used as parking for the surrounding pharma buildings

**3 | compartmentalized public space**  
width of street area very compartmentalized. space which is actually usable by pedestrians becomes unnecessary limited, making for an unattractive public space

ground floor



## parking lot transforms into school courtyard expanding klybecks public space

### 1 | access circulation

hard surface surrounding the school to ensure accessibility from all sides for everyone

### 2 | sport fields

former sealed parking lot is transformed into “sport fields” with basketball hoops, ping-pong tables and space for soccer or other games

### 3 | open grass fields

providing as much unsealed surface as possible for relaxing or playing. could be further developed by students

### 4 | garden

student garden to learn about plants through physical interaction and care

### 5 | delivery

existing delivery ramp and service elevator to the basement stay usable for kitchen or school supply deliveries

### 6 | public street

former private street south of building 610 is opened, allowing more connections in klybeck

### 7 | soft enclosure

higher plants help to softly enclose the school from the still functioning car connections and the new street

