



**THE NEST**  
**WATERSPORTBAAN - SPACE & ADAPT**

Climate Design &  
Sustainability

KULeuven - Departement Architecture  
2021

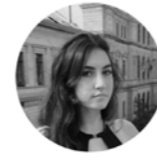
Julia Ceuppens, Luna Coesens, Luca Colonna-Cesari, Isabeau Coussement, Dzinh De Blende

## TEAM & CONTENT

### 1. TEAM & RESPONSIBILITIES



**Julia Ceuppens**  
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3D modeling



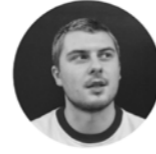
**Luna Coesens**  
r0702954  
Vision and concept



**Dzin De Blende**  
r0717508  
Graphics



**Isabeau Coussement**  
r0701191  
Decisions and graphics
















**Luca Colonna-Cesari**  
r0708323  
Captain and graphics

### 2. FUNCTION

- ateliers
- student housing
- restaurant
- gym

### 3. BASIC DATA

 housing: 1700m <sup>2</sup>	 terraces: 880m <sup>2</sup>
 ateliers: 1800m <sup>2</sup>	 restaurant: 260m <sup>2</sup>
 terraces: 880m <sup>2</sup>	 sanitary: 240m <sup>2</sup>
 amount of roof surface: 660m <sup>2</sup>	
 amount of rain-water collected:	
 studenthousing: 49 persons	
 amount of bike parkings: 28 bikes	
 people using the plot during the day (atelier): 850	
 people using the plot during the day (studenthousing): 300	
 people using the plot during the night: 220 persons	

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# 1. GENERAL OVERVIEW

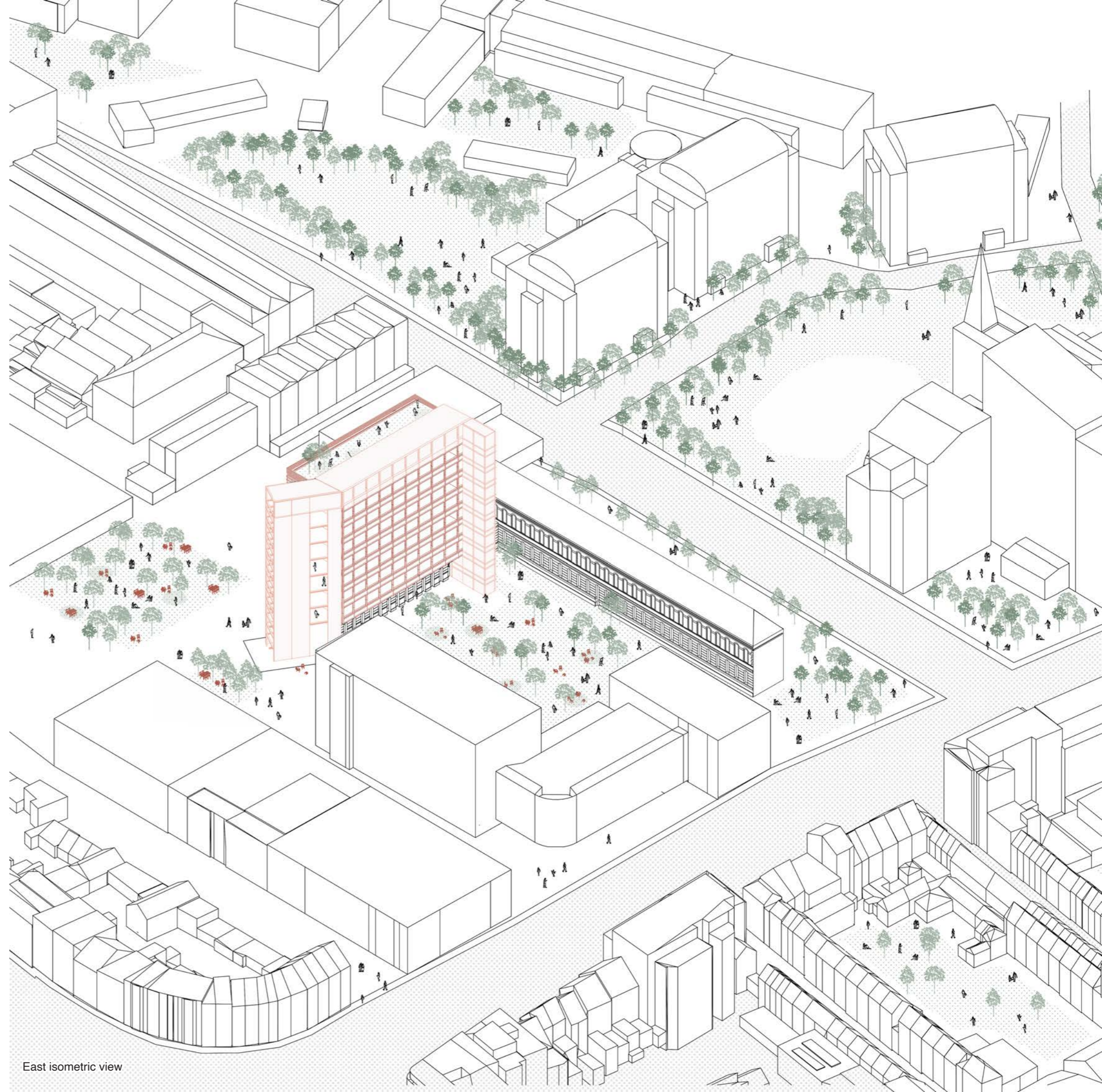
Our project, The Nest, lays its focus on the school site of the watersportbaan. When analysing this part of the site we realised there is a need for a better way to create learning spaces. This site consists of seven different schools that are scattered between empty, useless space and have no coherence. This makes navigating the site very confusing and intimidating. The current school buildings are limiting the ever changing and evolving education system by being fixed in its layout. We designed a building with a smart grid that permits and even thrives on this change.

By keeping all of the load-bearing elements on the side of the building, the interiors can be separated into endless layouts making various functions possible. The structural properties of our trusses are maximized by creating small cantilevers that can then be used as terraces. The trusses we utilize to create this span are purposely oversized to provide enough sun shading on the terraces. They also allow space to hide the technics.

The function of the building was decided by collaborating with SoGent, who was already working on a new masterplan for the chaotic school site. We concluded that the old gym building could have a better potential since it has a favorable location on the site and was ready to be demolished. We chose to keep one gym and add a social restaurant on the ground floor. This restaurant can be a uniting element for the schools and the rest of Watersportbaan site, it opens up to a sheltered outside space and the adjacent garden. The second floor and up are flexible studio spaces that in 20 years can be transformed into student housing.

The elaborated staircase contains communal relaxing spaces connecting the building to and over the roof. This staircase is intentionally separated from the rest of the building so the circulation can work as an independent space which allows autonomy of every floor. We implemented an extensive green roof to foresee water infiltration and thermal control, as well as providing an extra educational space for the children of the campus.

The Nest provides a sheltering space for all kinds of people and functions at the heart of the school site, making the site more approachable for the students and inhabitants. Our building is intended to be a landmark of the Watersportbaan, showcasing a sustainable and adaptable future.



East isometric view

## 2. THE CITY

### Ghent

Ghent is the capital of the East Flanders Province and the third largest city of Belgium. It's the country's second largest municipality by number of inhabitants. The metropolitan area, including the outer commuter zone, covers an area of 1,205 km<sup>2</sup> and has a population of about half a million people. Ghent is filled with historic architecture ranging from a medieval castle to art deco buildings; but is also constantly expanding with bold new projects. Now the city is a popular university city, Ghent's own university established in the early 19th century.



### Watersportbaan

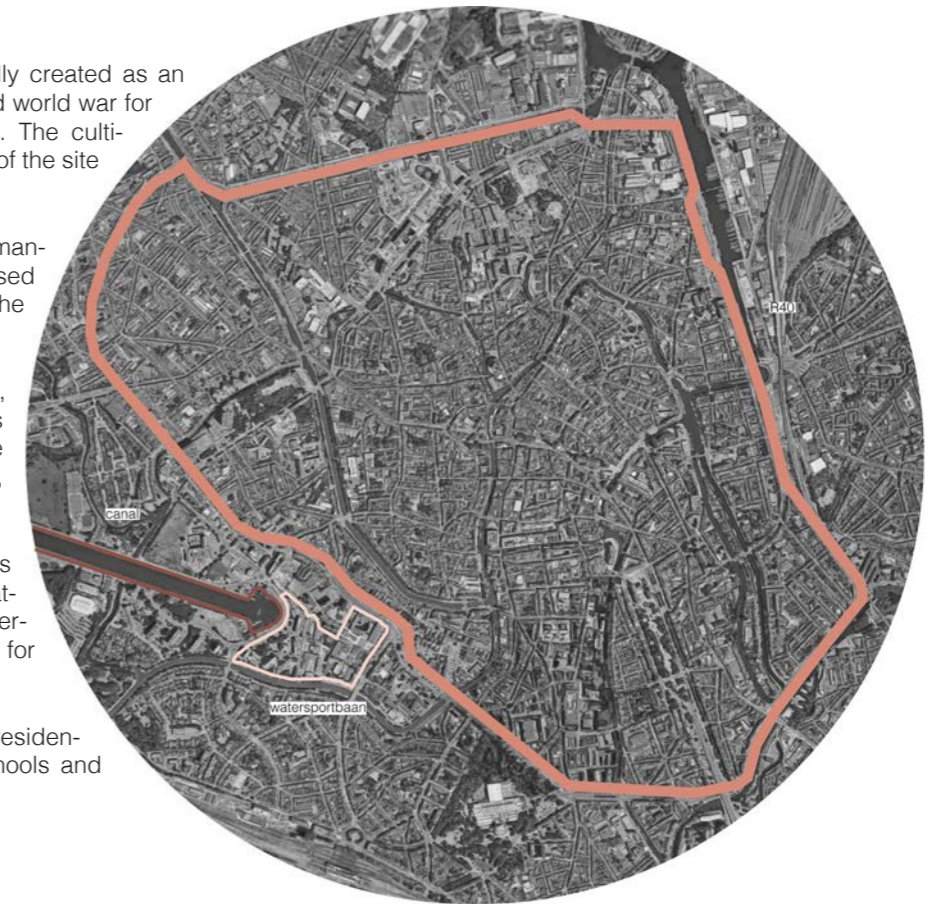
The Watersportbaansite was originally created as an urbanisation project after the second world war for the European rowing championship. The cultivated soil was used to make the rest of the site ready to be build upon.

The area is recognisable by the man-made water way. This canal was used for rowing competitions, this explains the site's name.

The site's border connects to the R40, also known as the ring of Ghent. This is a very important connection to the city centre as well as the highway, making the site accessible.

With our project we want to use this connection to our advantage by creating an impactful building on this intersection; thus making our intentions for the site visible from afar.

The site currently exists of large residential buildings, individual houses, schools and parks.



### landmark

Ghent has a lot of iconic architecture that helps to create a cognitive map to navigate the city. When a certain part of the city has a landmark, people are more eager to visit. The watersportbaan lacks a proper landmark that reflects what the site is about.

It is our goal to create a landmark of sustainability and adaptability that sets the tone for the other new buildings on the Watersportbaan.

We want to make an impact to the site, putting the watersportbaan on the map as a progressive borough that is worth leaving the city centre for.

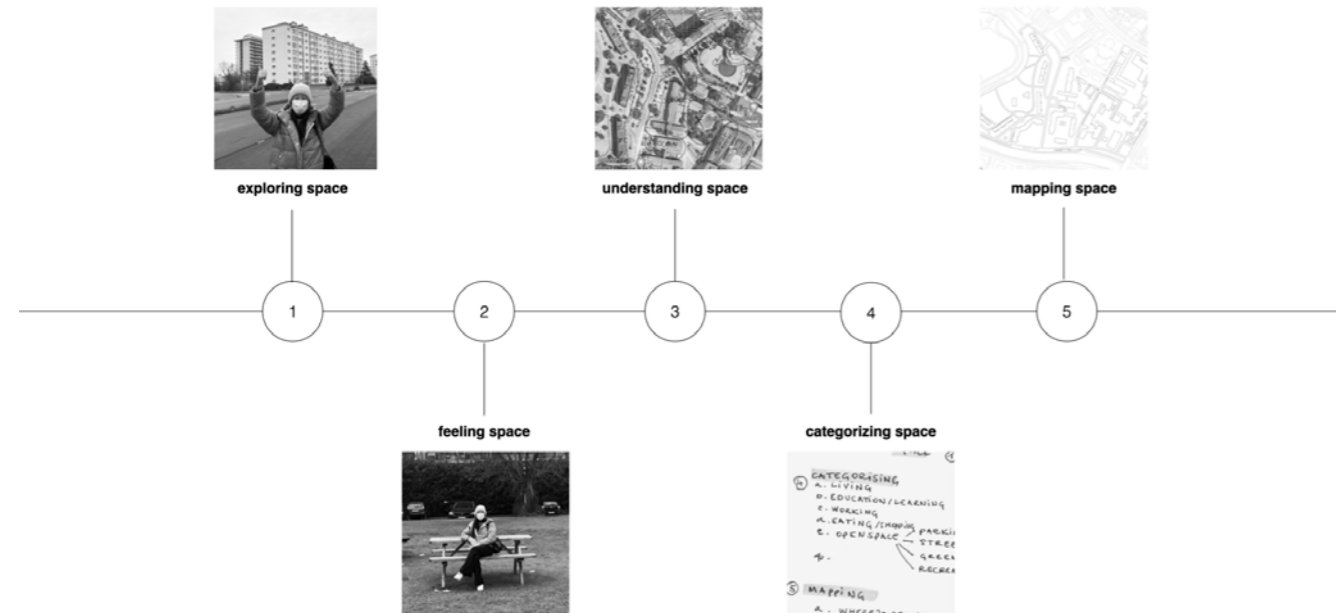
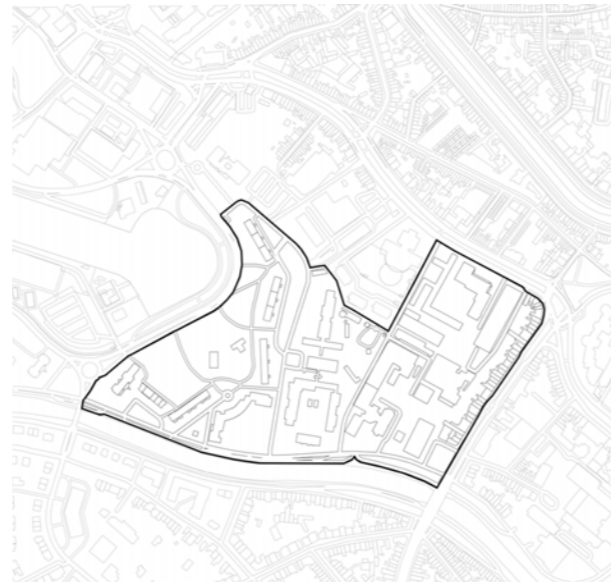
# 3. THE URBAN VILLAGE

## A. ANALYSIS WATERSPORTBAAN

On our first visit to the site, we tried to map the open and closed spaces of the location. By mapping all the functions we could get a better understanding of the used space.

You can essentially define Watersportbaan as a self functioning island. The site includes amenities like schools, living and resting spaces, shops, mobility, ...

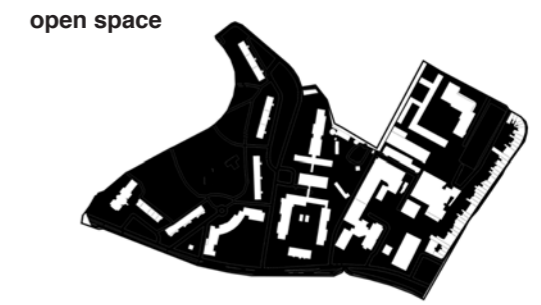
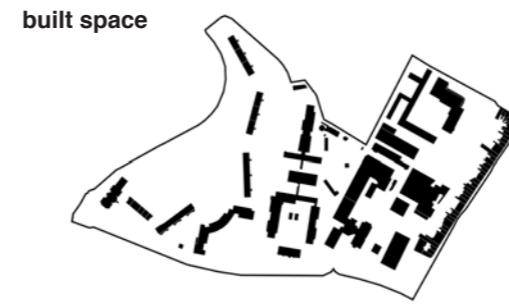
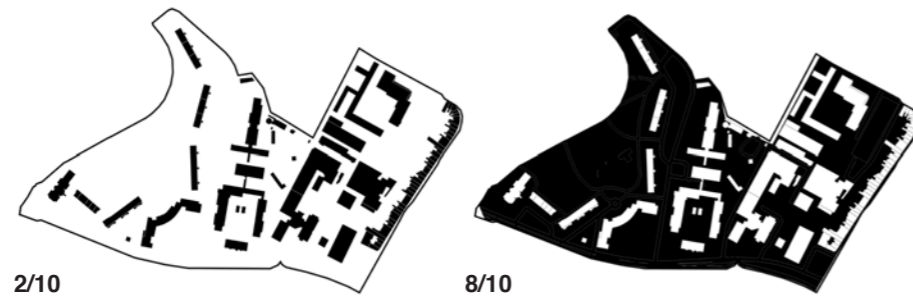
Mapping all those spaces gave us an idea which spaces are already useful and which spaces needed some work to function as a livable city.



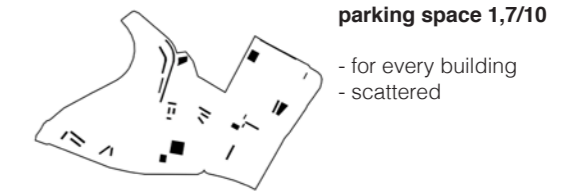
### built space versus open space

Mapping the built and living spaces was the start of our analyses of the location. The site consists of a lot of green spaces.

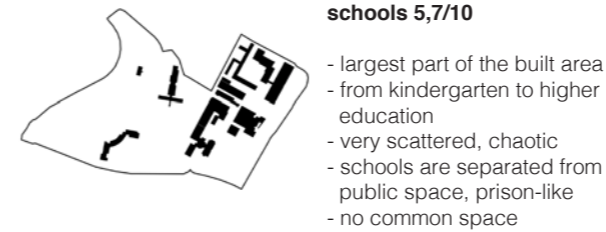
In this case the green areas miss a lot of qualities.



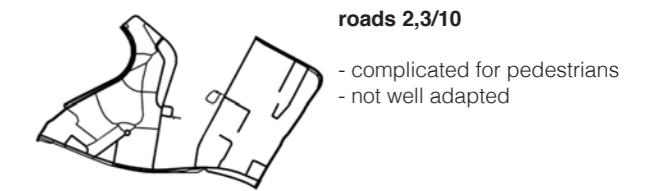
**living space 2,7/10**  
 - located at the borders  
 - grouped, big, old, not appealing blocks



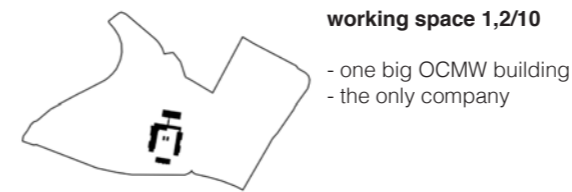
**parking space 1,7/10**  
 - for every building  
 - scattered



**schools 5,7/10**  
 - largest part of the built area  
 - from kindergarten to higher education  
 - very scattered, chaotic  
 - schools are separated from public space, prison-like  
 - no common space



**roads 2,3/10**  
 - complicated for pedestrians  
 - not well adapted



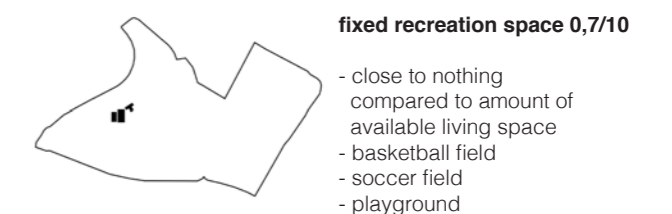
**working space 1,2/10**  
 - one big OCMW building  
 - the only company



**green areas 5,3/10**  
 - not appealing  
 - not human scaled  
 - fairly large area



**shops 0,4/10**  
 - no supermarket  
 - pharmacy  
 - laundry shop  
 - doctor  
 - nursery



**fixed recreation space 0,7/10**  
 - close to nothing compared to amount of available living space  
 - basketball field  
 - soccer field  
 - playground

## B. ANALYSIS SCHOOLSITE

### interconnection

There is already a lot of interaction between the different schools. This interaction now only takes place in indoor spaces and not in shared outdoor spaces.

It is necessary to investigate what common needs the schools, the neighbourhood and visitors have, in order to combine this in a collective building with outdoor spaces.



- |  |                                   |
|--|-----------------------------------|
| 1 Bollekensschool kleuter + kinderopvang | 7 Freinet Middle school           |
| 2 Bollekensschool lager                  | 8 adult education centre          |
| 3 KASK HoGent                            | 9 kinderdagverblijf De Petterfiet |
| 4 het Spectrum                           | 10 demolition                     |
| 5 het Kwadrant                           | 11 Academy of Fine Arts           |
| 6 de Wingerd                             | 12 external use                   |



### entrances

On the school site, all the buildings are semi-public, and so is almost all of the outside area. The site could provide more public green areas for the neighbourhood instead of keeping them for the school-users only. There are also many entrances to the site, but not every entrance is that accessible or well visible. The connections between the different buildings also aren't optimal. Some good signalisation and recognition points are needed.



### shared functions

The school site already offers various functions for the neighbourhood to use, such as a gym and classrooms. But eating facilities are minimal, both for students and for the neighbourhood. More food facilities could create interaction on the site, and attraction to the site by outsiders. Covered outdoor seating areas are also scarce, so this could be improved as well.



## C. A COLLABORATION WITH

SoGent is a city development company that concentrates on restructuring parts of Ghent to make better living, learning, leisure and working spaces. We approached them since they had been working on a masterplan for this part of the Watersportbaan village. As we had previously analysed ourselves, SoGent found the current chaotic status of this part of the school site is in need of improvement. After explaining our visions for the site we concluded that making **a new design for the old gym site (image 3) could be a good addition to their masterplan.**

We tried to implement their restrictions and needs so the project could be feasible but still leave room for ambition. We had regular calls with Dirk Goossens, a leader in the project, updating them on our progress on the project. This collaboration gave us a great insight to the work it takes to create a realistic masterplan.

### 4 locations, chosen by SoGent



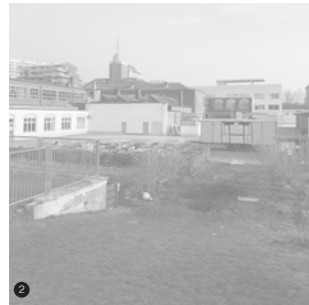
#### Outdoor space kindergarten

- reorganization kindergarten
- making daycare more visible
- public playground
- connecting schools with the neighbourhood



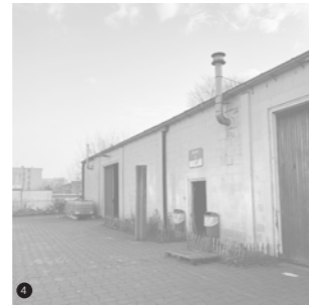
#### The old gym

- creating interaction between schools
- social restaurant
- meeting place



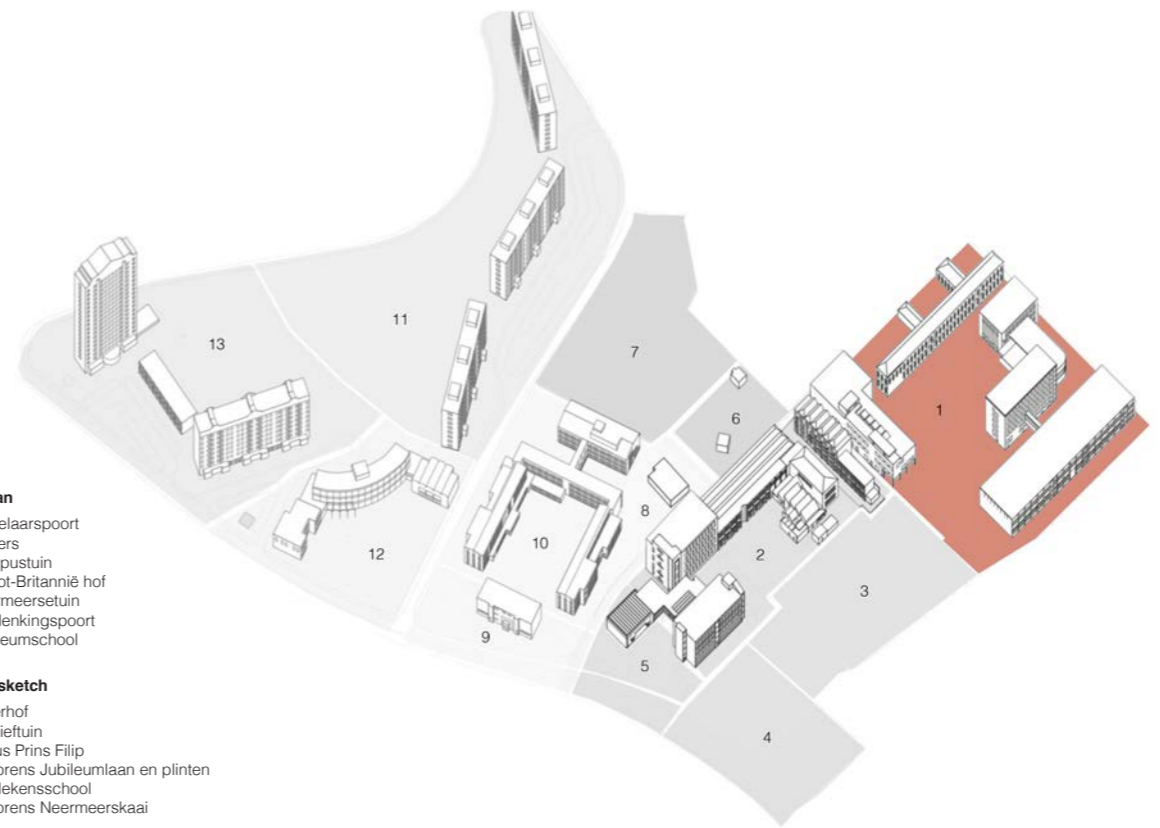
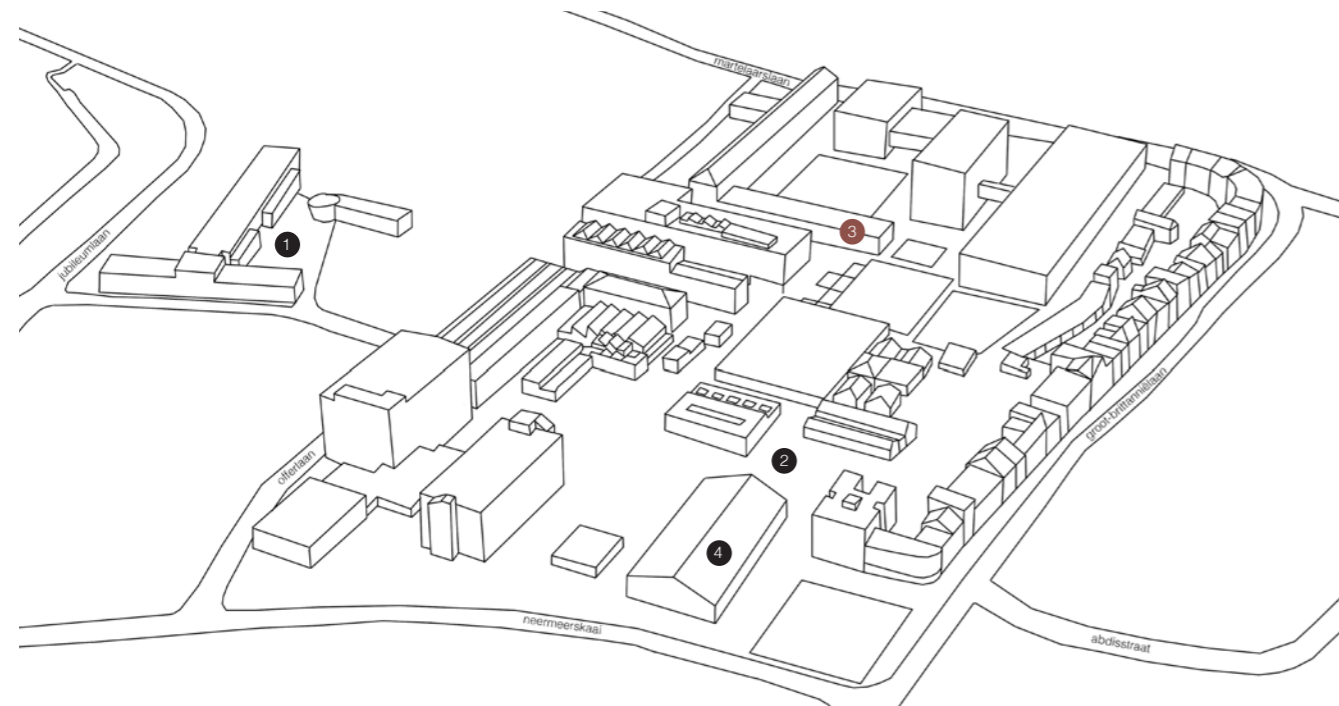
#### inbetween spaces

- more sports fields
- more green space
- making a vegetable garden
- creating wadi's



#### Youth movement building

- stripping the building
- creating a better view from the street side
- temporary sports hall awaiting demolition

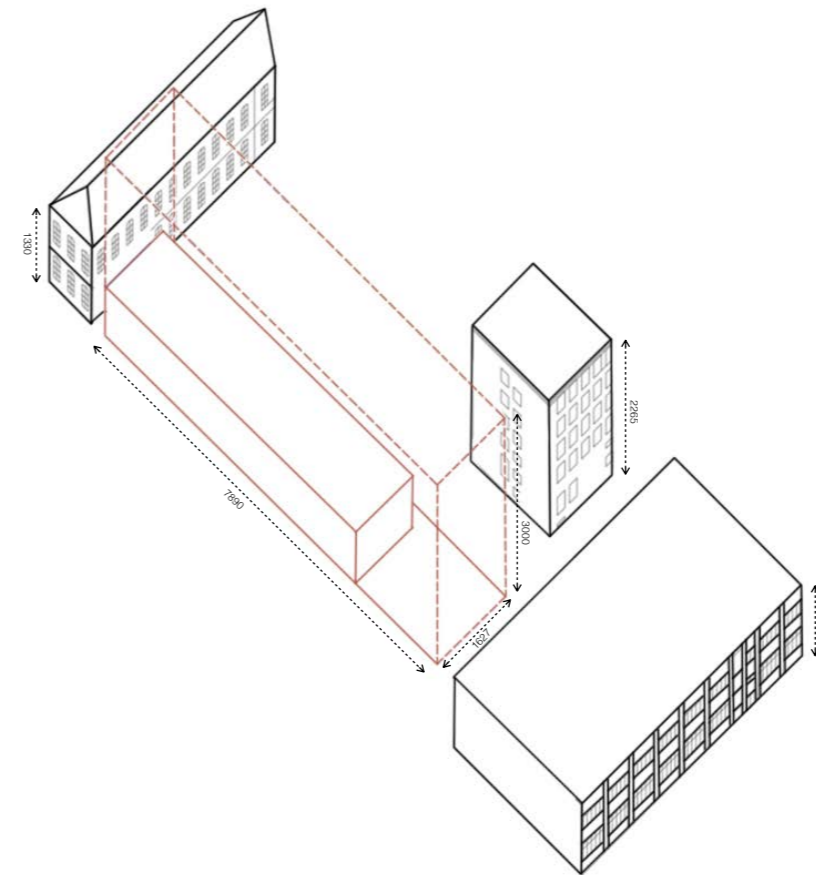


#### lay-out plan

1. De martelaarspoort
2. De Ateliers
3. De Campustuin
4. Het Groot-Britannië hof
5. De Neermeerskaai
6. De Herdenkingspoort
7. De Jubileumskool

#### structure sketch

8. Het Offerhof
9. De Archieftuin
10. Campus Prins Filip
11. Woonstorens Jubileumlaan en plinten
12. De Bollekensschool
13. Woonstorens Neermeerskaai



SoGent provided us with the building conditions previously decided by Ghent; We applied these conditions to our building, creating a substantiated project that is mindful of the already decided urban planning. Respecting these demands helped us to create a building that fits seamlessly into the vision for the rest of the site.

building conditions SoGent	
The Nest	Indicative
Max area	1.284m <sup>2</sup>
Max volume	38.511m <sup>3</sup>
Max storeys	8m (4m per bouwlaag)
Max building height	30m
Max footprint	1.000m <sup>2</sup>
Max GFA	3.500m <sup>2</sup>
Max volume	15.000m <sup>3</sup>

## D. THE AMBITIONS ON DIFFERENT SCALES

### goals on the scale of the Watersportbaan



#### green space

We want to provide a better visual and physical connection to the nearby green spaces of the site.



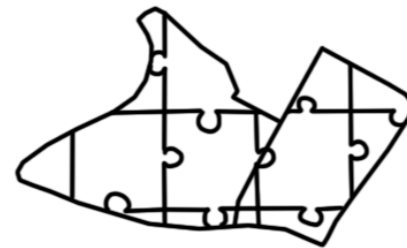
#### flexibility

We want to create flexible spaces which are adaptable in use and can stand the test of time.



#### legible

We want to make a more legible village, making it easier to navigate.



#### cooperation

We want to create a building that endorses cooperation between different groups of people from all parts of Ghent.



#### heritage

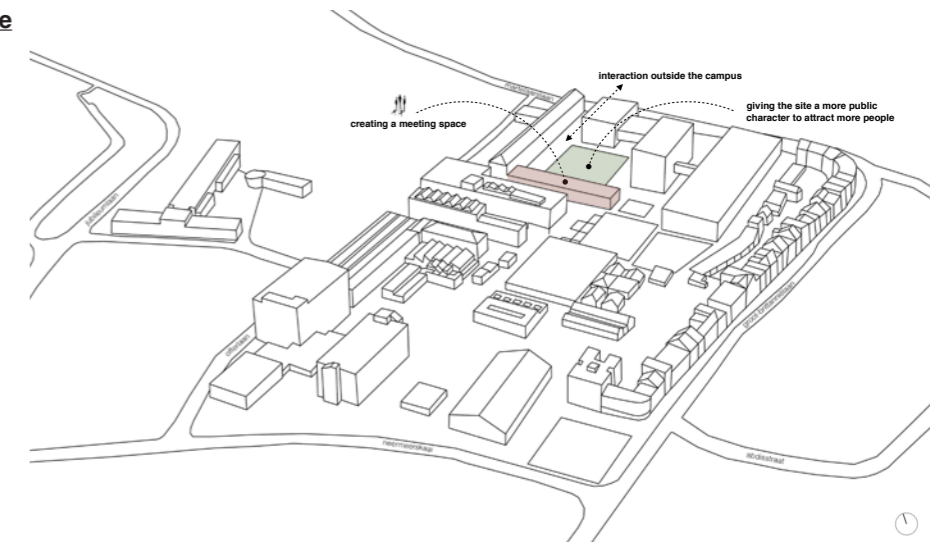
We want to respect the existing characterful buildings on the site, keeping the site recognisable and approachable.



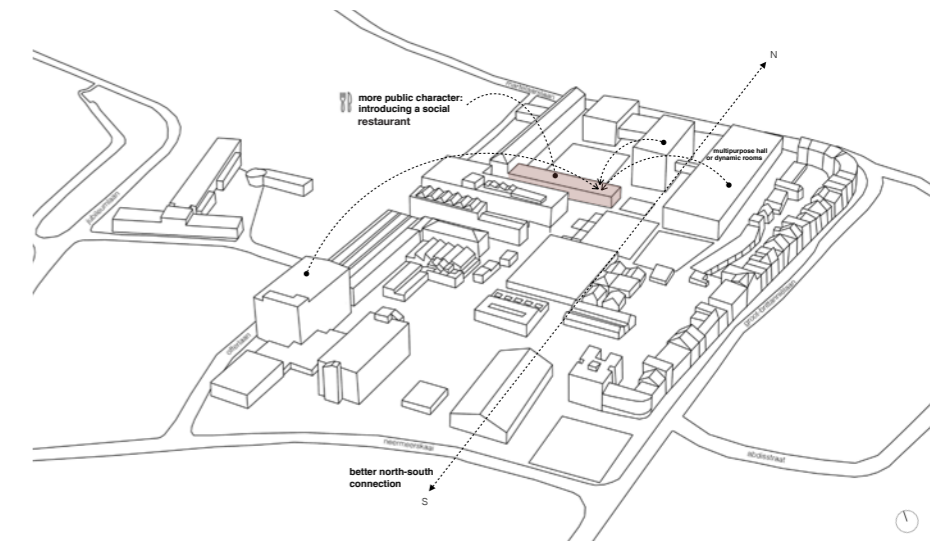
#### community

We want our building to stand in connection to the rest of the community, involving the people in the village.

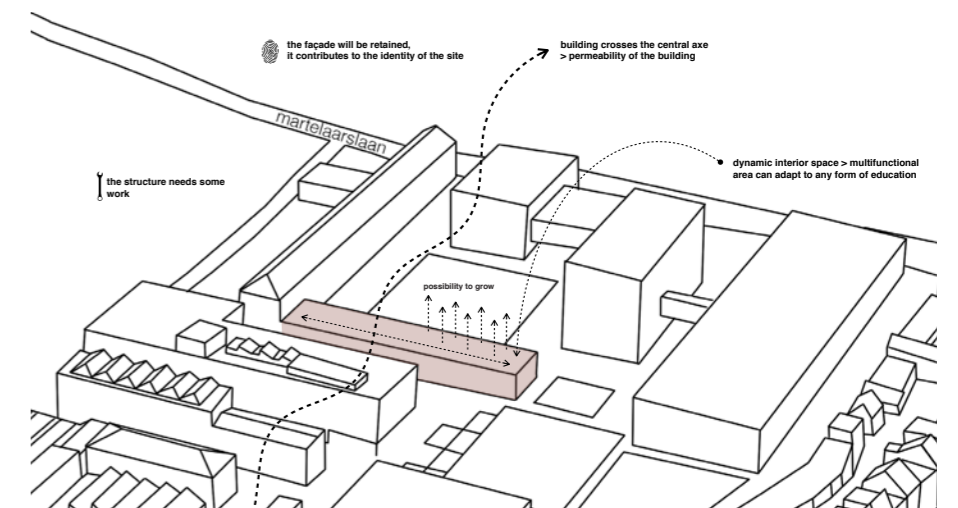
### goals on the scale of the schoolsite



### goals on meso scale



### goals on micro scale





## 4. THE BUILDING

### A. INTRODUCING THE NEST



#### ambitions for the building

##### adaptability

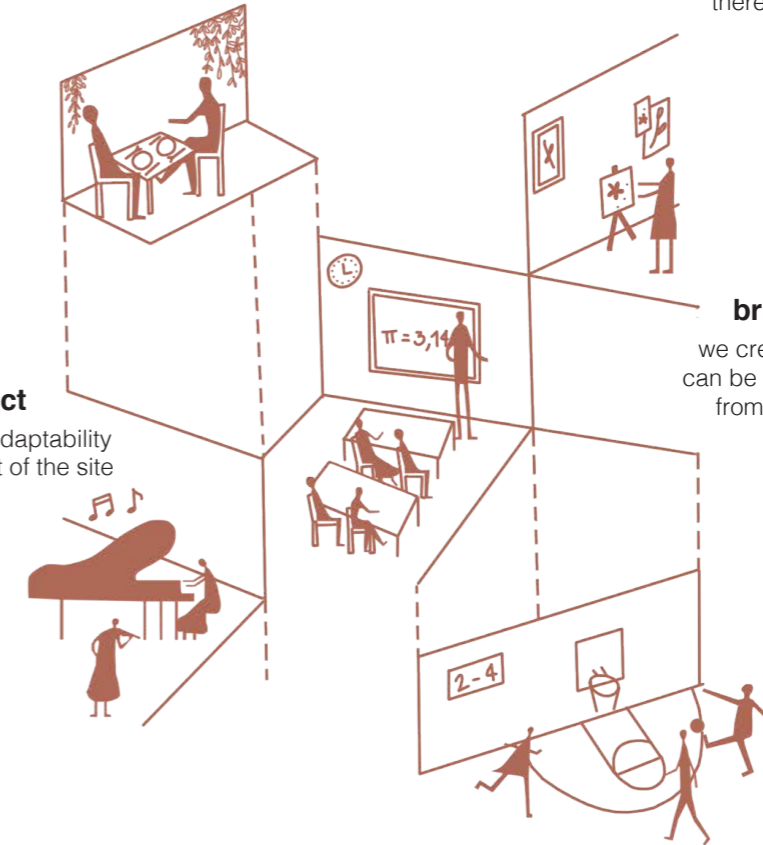
our building is a showcase of adaptability as it is adaptable in the present as well as in the future

##### grow in the future

the structure allows our studio's to be converted into student housing when there is need for

##### create an impact

we want to showcase the adaptability and set the tone for the rest of the site



##### bring people together

we created communal spaces that can be enjoyed by all kinds of people from inside and outside the site

##### mixed functions

having mixed functions in our building makes sure there is always something to do and see

##### dynamic space

our building has adaptable studio's that can easily be used for various functions

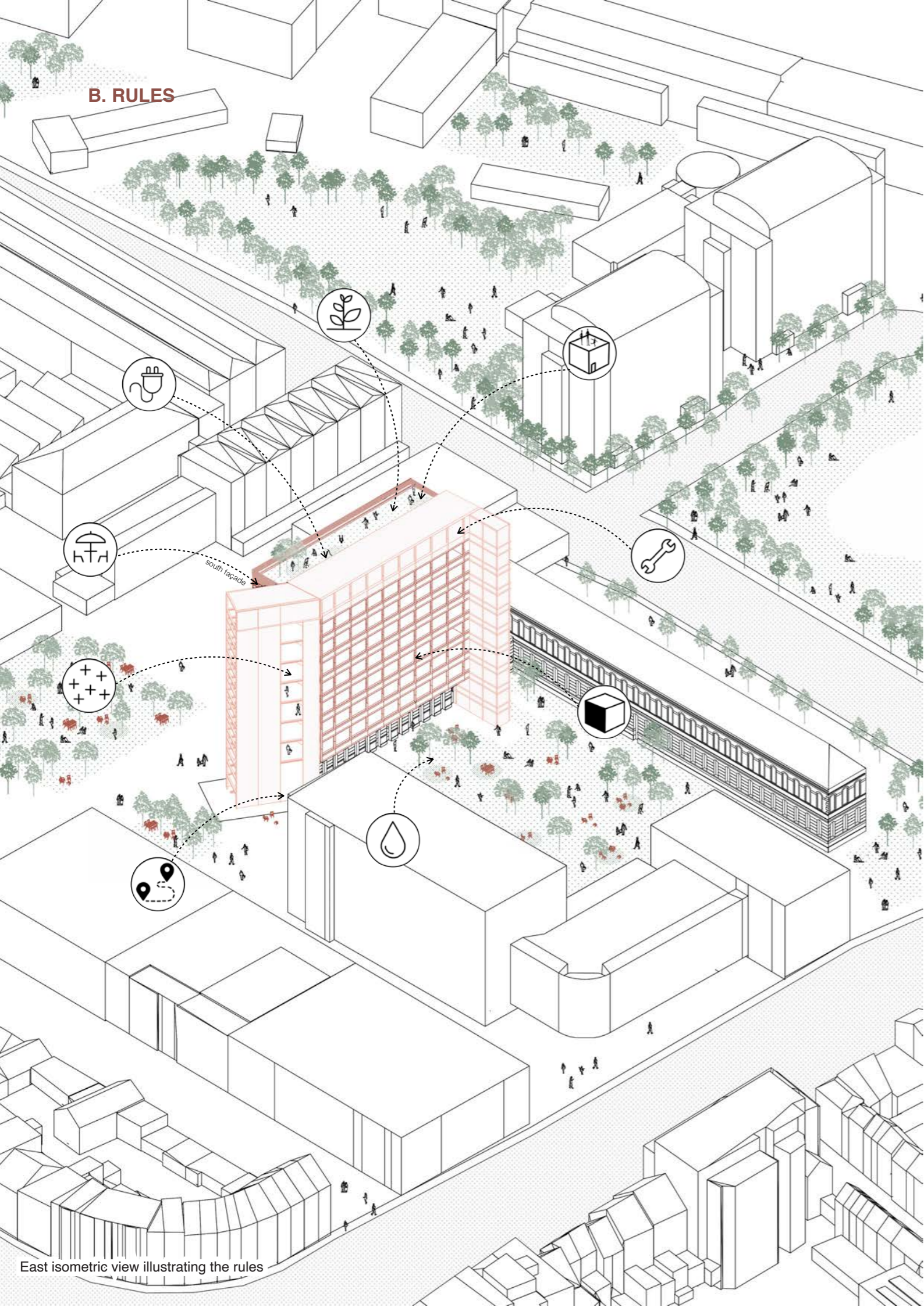
We designed The Nest as the new heart of the Watersportbaan school site and entrance to the adjacent campus. The Nest is placed next to the ring road of Ghent which makes it the first impression for visitors and becomes the landmark to the new sustainable and adaptable Watersportbaan site.

Our building is an inviting space where all kinds of people can come together to learn, work and relax. It gives students of the seven schools, as well as people from outside of the campus a chance to collaborate and learn from each other in adaptable spaces, created with bold, sustainable, locally sourced materials. The Nest respects the surrounding heritage while







also being modern and approachable through the bold colors of the facade, and by using the older building as a permeable plint to make a connection between school and green space.

We wanted to respond to the ever changing education system by designing a smart grid that permits and even thrives on this change because of the adaptable wall system and independent circulation structure. We think The Nest will be a great representation for the Watersportbaan to the people of Ghent.

**B. RULES**



**rules given by the urban team to all teams**

-  adaptable nature > our seasons quarter: integrate plants in the facades
-  adaptable needs > multiple functions in one building are needed
-  every building provides a collective space with shared tools for gardening, repairing stuff, working on bikes, ...
-  outdoor space > every living unit has a balcony/terrace
-  all roofs are accessible for the public, the buildings are owned by the people
-  every group makes 1 rule for other groups to apply

**rules given by each team**

-  adaptable structure  
> provide a structure where the program can change in the future
-  adaptable waste management  
> every team should have a compost room so food team can use this compost.
-  adaptable waste management  
> every building provides a waste collection room.
-  adaptable rainwater management  
> every new road has a ditch next to it that helps spread and divide rainwater on site
-  > every building provides a safe space to store shared bicycles on site
-  adaptable privacy  
> every team uses small, adaptable solar panels in windows

**rules given by the urban team**

- modularity: use a fixed grid in multiples of the dimension 60cm.
- floor to floor heights should be 4 or 8 meters in order to have a flexible interior.
- use public space to grow food.
- provide food for other buildings.
- make food on site and send it to other teams
- analyse why the buildings don't work now.
- opened up groundfloor is desired
- recycle materials on site and suggest other teams to use them.
- every building has a water tank on the roof
- 50% of the roof will need to be available for water collection
- storage water on site and send it to other teams
- provide weather-protected bike parkings
- the entire site is barrier-free for disabled people and people with bikes.
- use low tech principles to gain solar heat
- store the energy produced on site

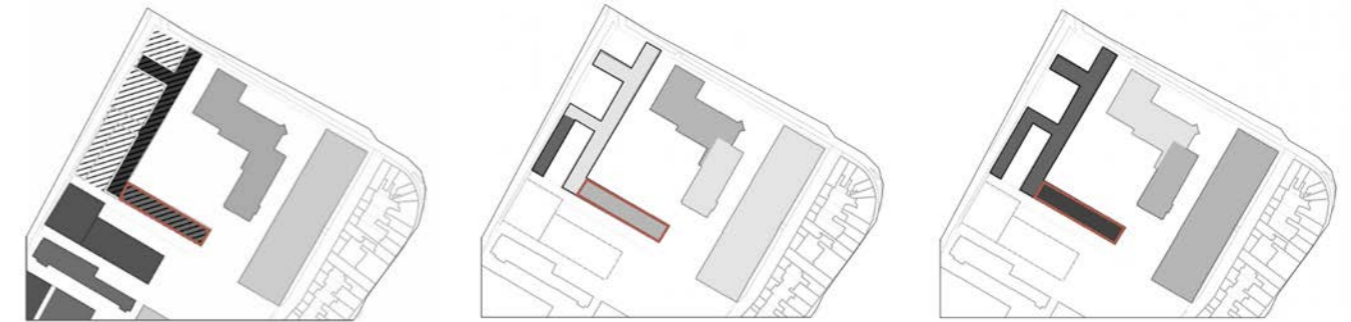
East isometric view illustrating the rules

### C. EXISTING SITUATION



This old gym building is barely used by the surrounding schools because of the outdated infrastructure and doesn't fit into the new masterplan for the campus. We thought this building had more potential because of the central position on the site.

### D. IDENTITY OF THE SITE



#### identity

- protected
- valuable with strong identity
- determining factor for the identity of the site
- less value
- little value
- to demolish
- architectural heritage

#### building condition

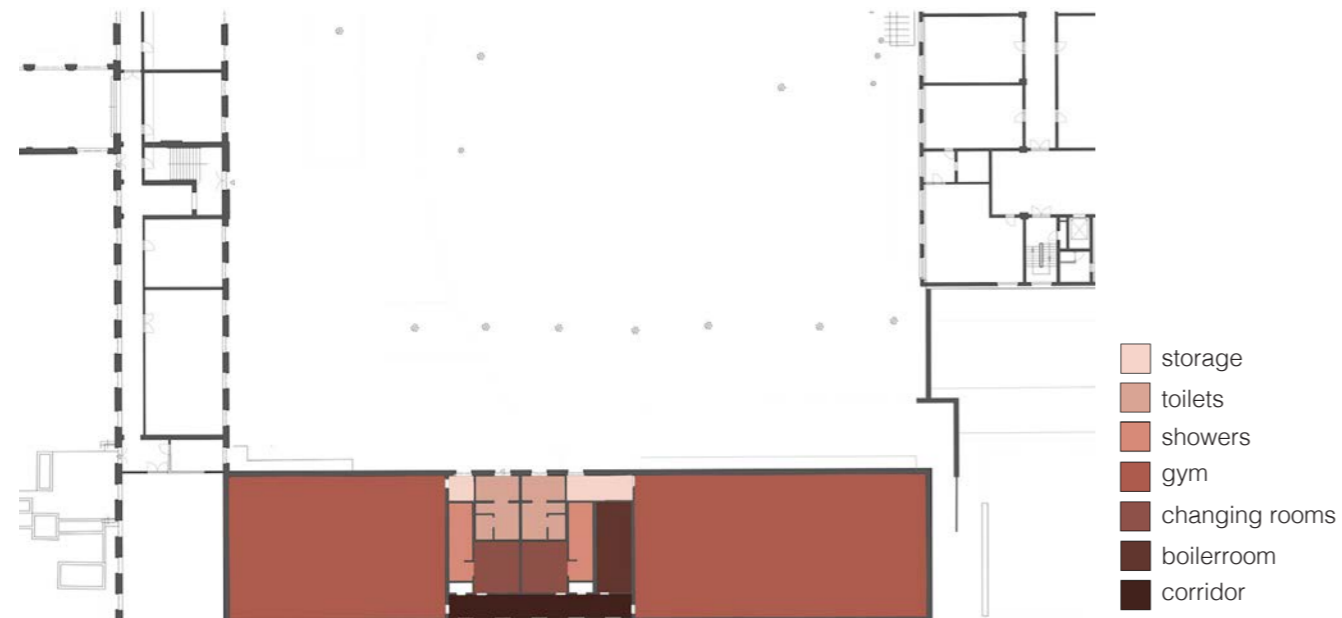
- very bad condition
- bad condition
- moderate good condition
- very good condition

#### structure condition

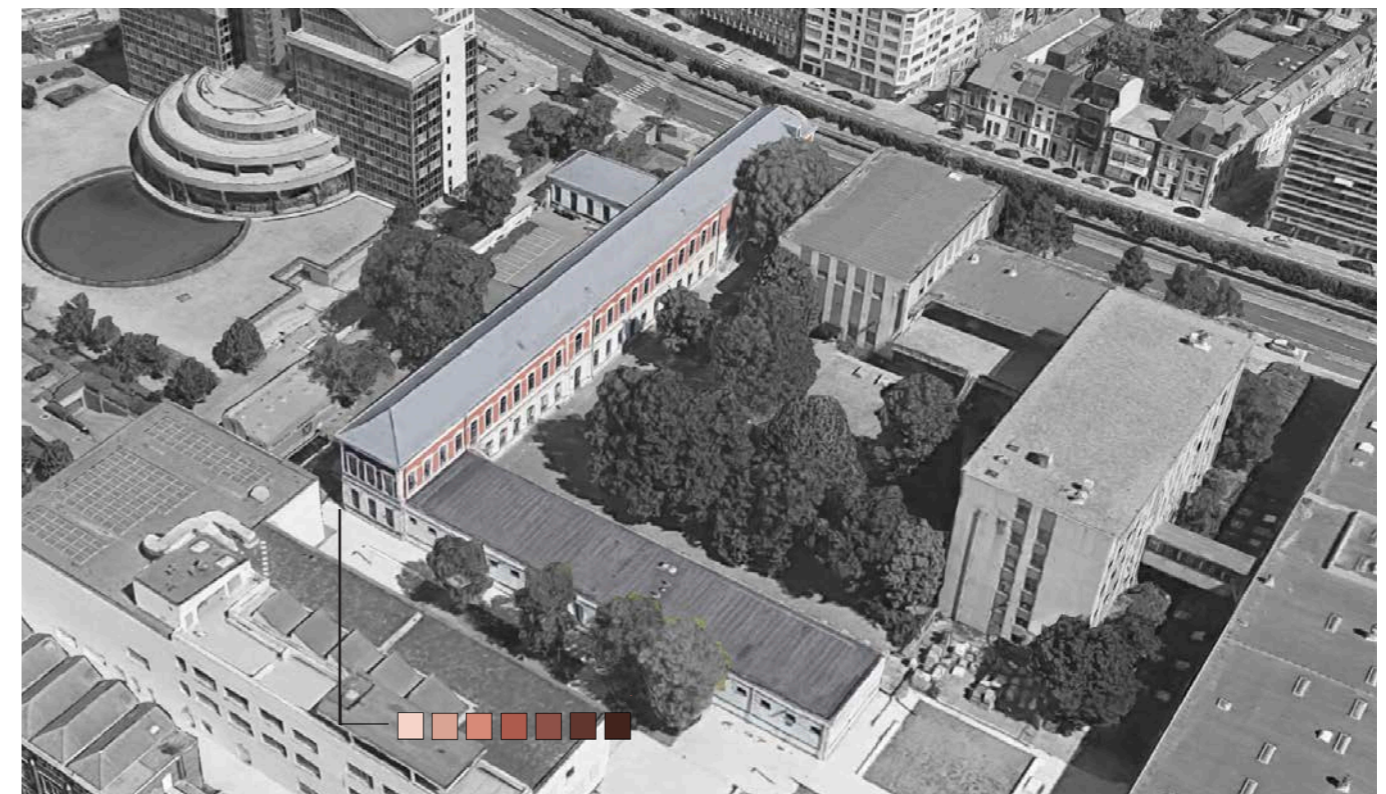
- very bad condition
- bad condition
- moderate good condition
- very good condition

We decided to keep the original facade of the old gym building since this has a character full appearance and works as a recognisable element. A new structure is added inside since the original structure is not in a good condition anymore. The building respects the surrounding heritage while also being modern

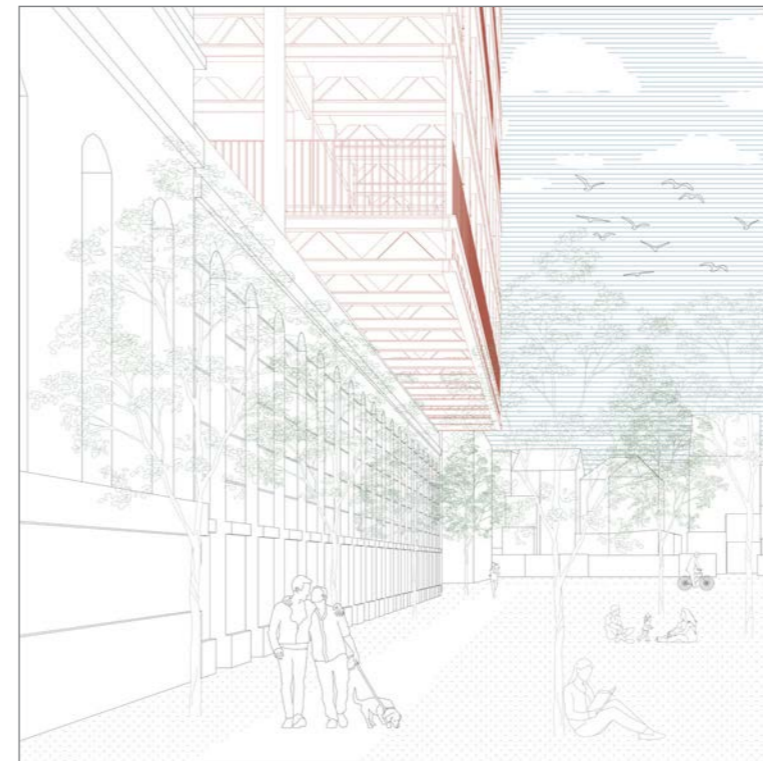
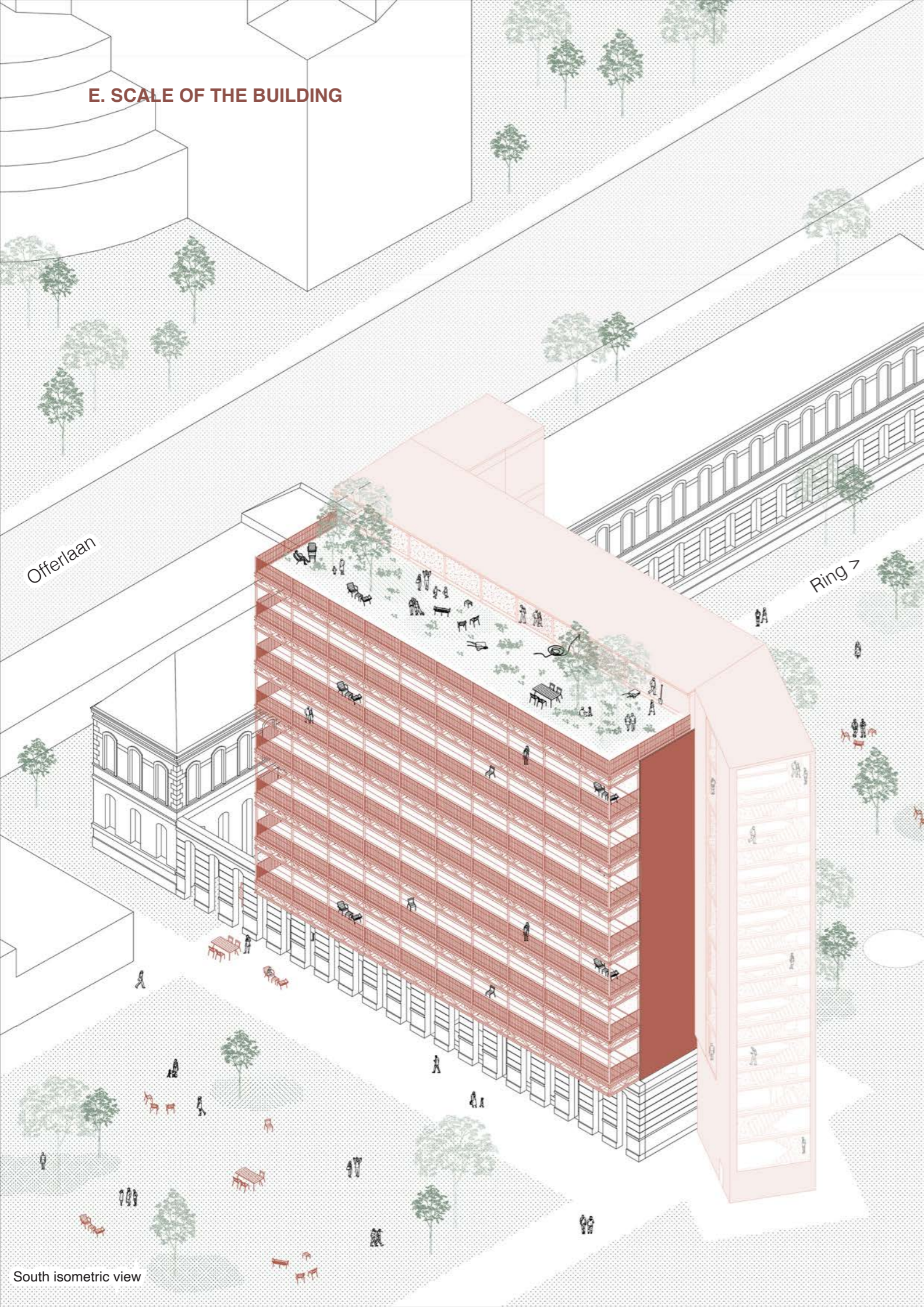
and approachable through the bold colors of the facade. The colour and rhythm of the facade is a contemporary interpretation of the adjacent school building's red brick facade. We use the older building as a permeable plint to make a connection between school and green space.



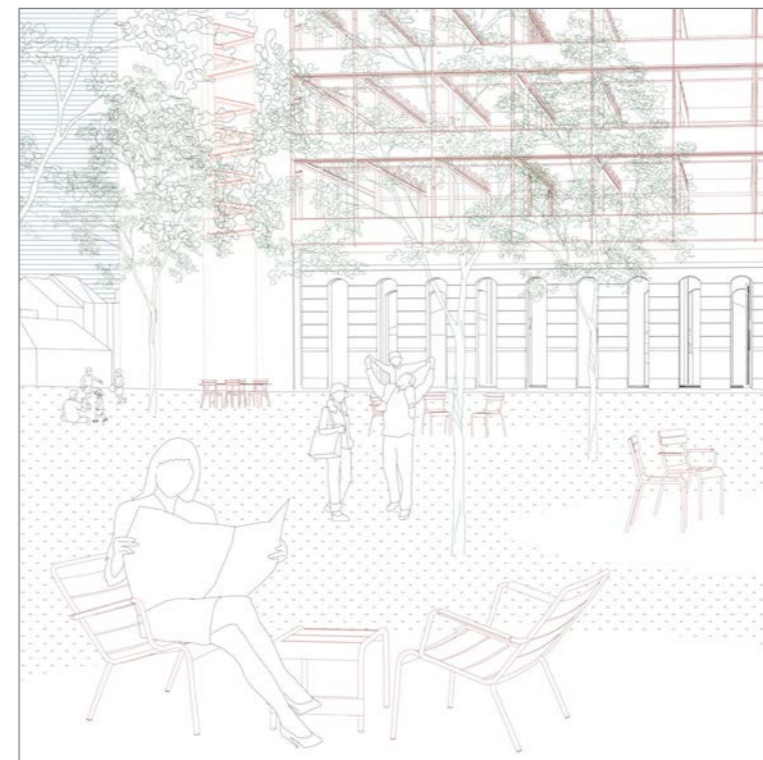
Floorplan existing gym building



## E. SCALE OF THE BUILDING



Entering the site from the Offerlaan



Entering the site from the Ring

By keeping all of the **load-bearing elements** on the side of the building, the interiors can be separated into endless layouts making various functions possible, creating an adaptable building. The structural properties of our trusses are optimized by creating small cantilevers that can then be used as terraces.

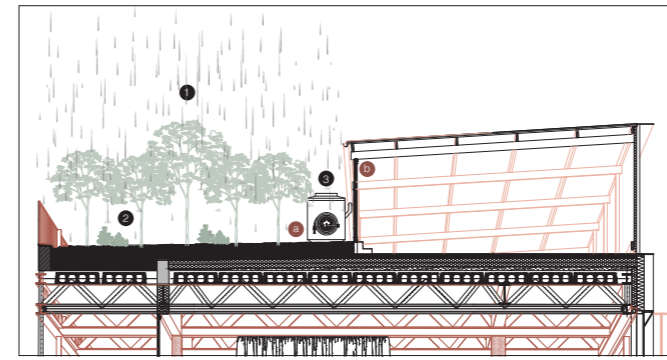
The trusses we utilise to create this span are purposely oversized to provide enough sun shading on the terraces. They also allow space to hide the technics. We created a steel building that can be modified for another use without the requirement of big replacements.

Our goal is to turn the studio spaces into student housing when there is a need for this in the future. Building this way is long lasting, highly recyclable, and flexibly reusable.

The Nest will assure **a welcoming feeling** to all visitors of the Watersportbaan site. This is achieved by opening up the plint which allows more permeability to the rest of the site.

The building can function as an intermediate stop or a final destination while discovering the rest of the site's building.

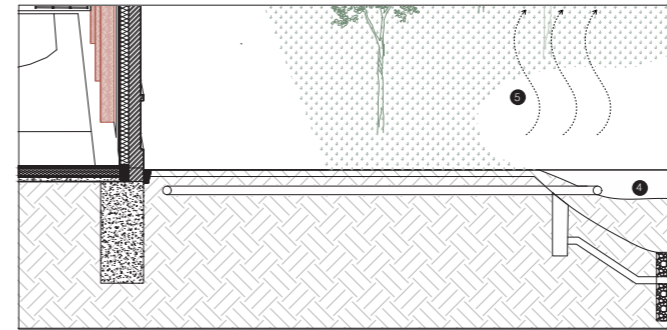
section AA'



**evapotranspiration**

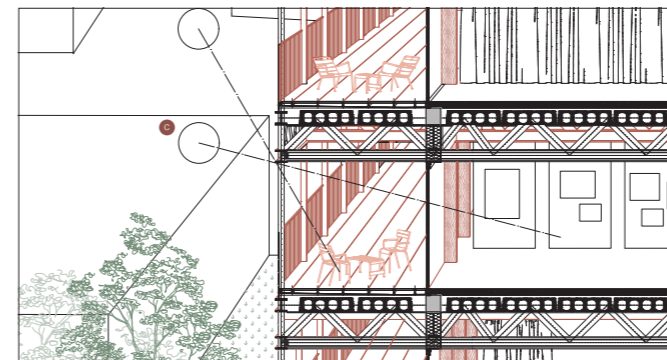
Using a combination method to reduce the heat-island effect by temporarily storing the rain during heavy rainfall, and then slowly discharging it to a drain at a regulated flow rate.

- 1 rain falls on the roof
- 2 the roof cools down by evapo-transpiration of the moisture in the green plants
- 3 a reservoir (\*) collects a part of the water that can later be used to water the plants
- 4 excess water gets collected in the wadi's
- 5 water evaporates, the cycle restarts



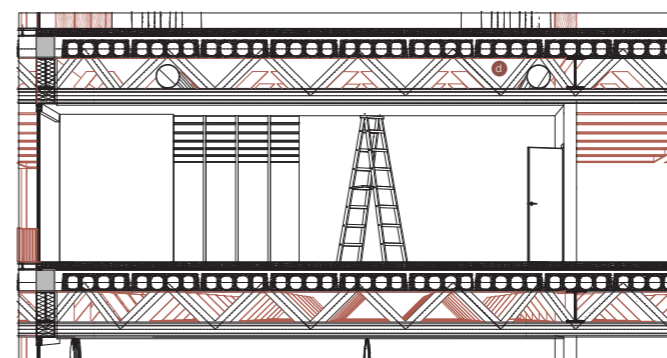
**(\*) reservoir**

- 1 The **garden hose** is connected to a reservoir that contains a pump that is connected to a salt water battery. The salt water battery is more environmentally friendly than normal batteries because of the safer and easier recycling.
- 2 This battery stores the energy obtained by the adaptable **solar panels** in the windows of the roof shed.



**sun shading**

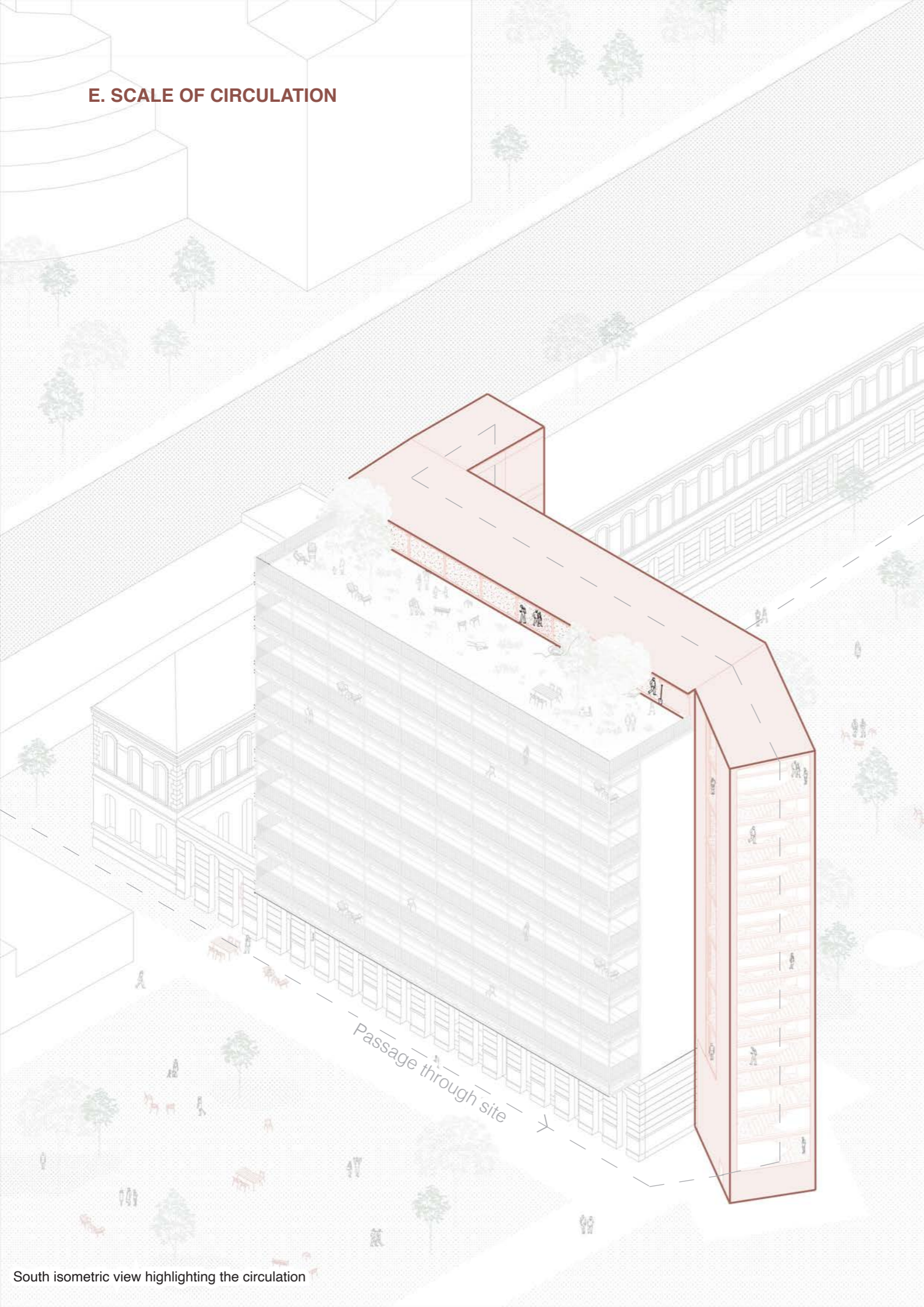
- 1 The oversized trusses are large enough to work as sun shading in the summer for the studio spaces or student rooms on the south facade. This way there is no need for an extra shading system that would have to be replaced over time, making this a more smart and durable shading solution. In the winter, the sun can reach into the rooms allowing the users to enjoy additional warmth. On the north side the fins works as sun shading.



**technics**

- 1 Another advantage of the large trusses is that there is space to implement the floor system and hide the ducts. Concentrating these functions into the trusses makes for a clean and thought out design.

## E. SCALE OF CIRCULATION



View from the green rooftop



Entering the hallway from the circulation/communal space

The circulation, distinct by shape and color, wraps over the building, resulting in a covered area on the roof that continues the path. This space, which accesses the extensive green roof, can also be used as an educating and storage space.

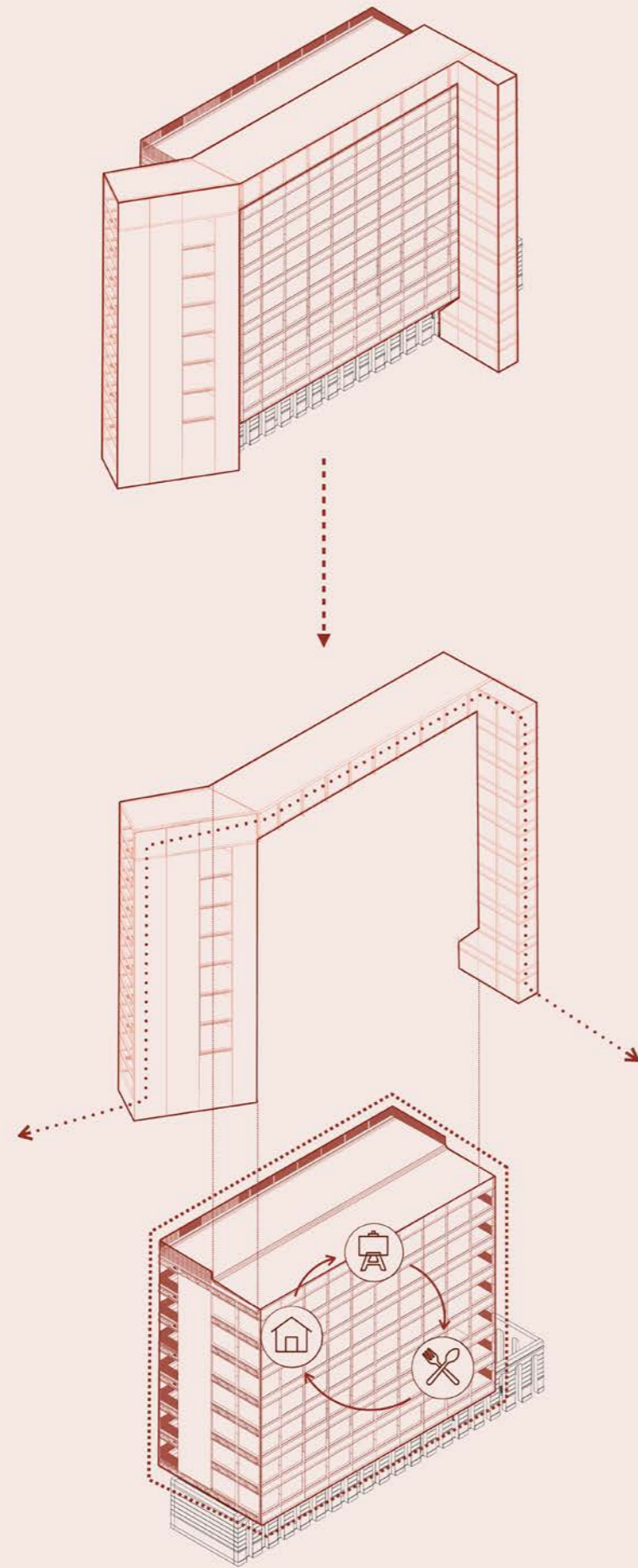
**The extensive green rooftop** is an integral part of the building and the passage through the site giving an overview of the Watersportbaan. The passers-by can see children working in the garden or enjoy the view.

While the building's floors function separately, attracting different people with different interest, **the circulation volume also connects** these users by offering communal spaces.

One floor could be used as a workshop space for toddlers while the floor above could be used as exhibition for art students. The circulation volume provides the opportunity for these groups to interact.

By implementing communal relaxing spaces to the staircase we increase the chance of encounters by visitors

The circulation, distinct by shape and color, wraps over the building, resulting in a covered area on the roof that continues the path. This space, which accesses the extensive green roof, can also be used as an educating and storage space.



## adaptability over time

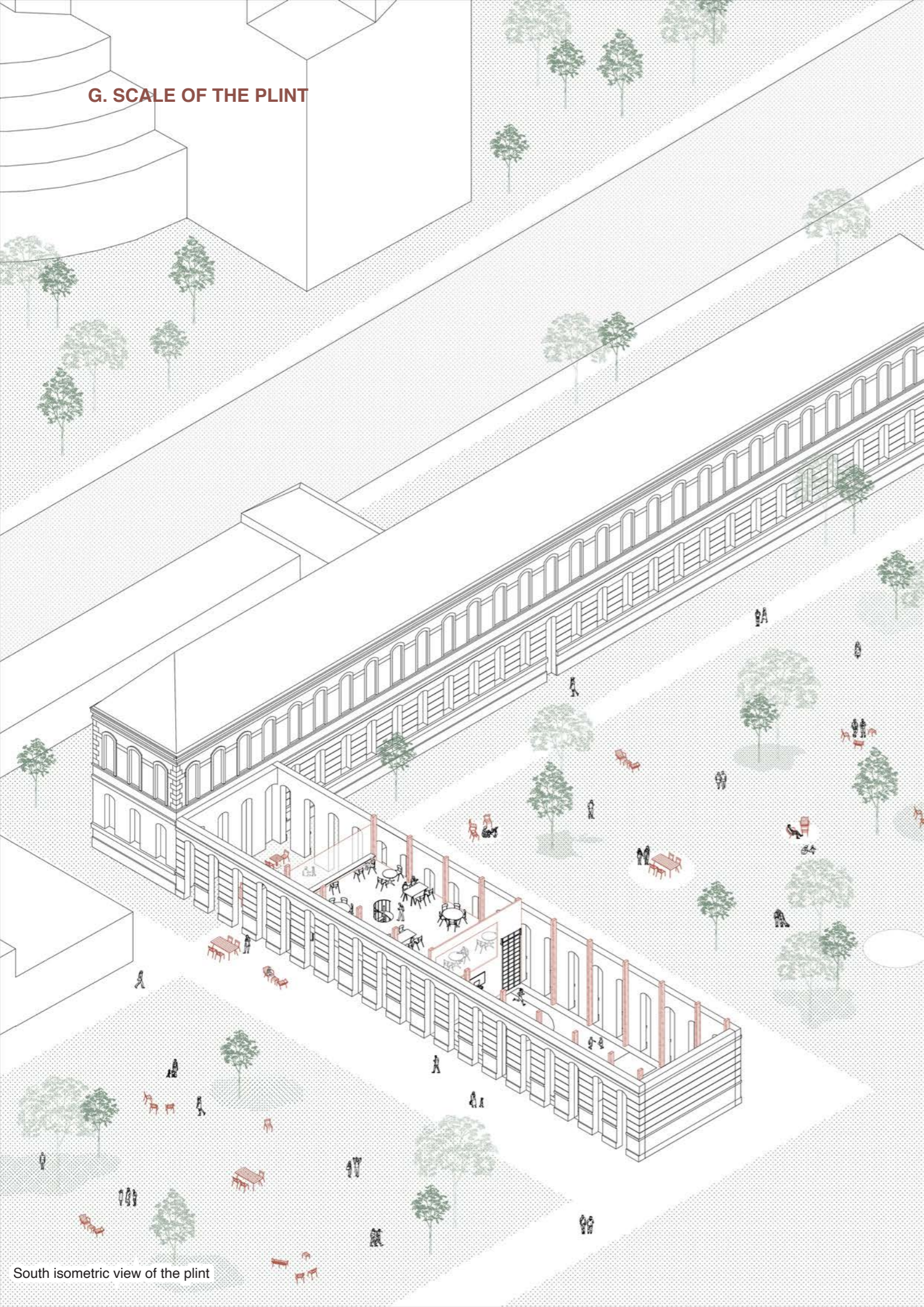
The staircase on the south side can be accessed by anyone, outsider, student or resident. It serves as a communal area, even when the building evolves to a more private setting. It makes it possible to reach the public rooftop, which gives a great overview of the Watersportbaan site.

By positioning the main circulation on the outer side of the building, it works individually from the rest of the activities happening on the inside. Atelier sessions, workshops, and the student houses maintain their privacy.

The two staircases are connected by a broad hallway, which allows the users to move easily from one side of the building to the other. On the roof, this hallway serves as an open workshop space and toolshed.

When keeping future scenario's in mind, the floors can be adapted freely without having to take in to account the circulation as it works independently.

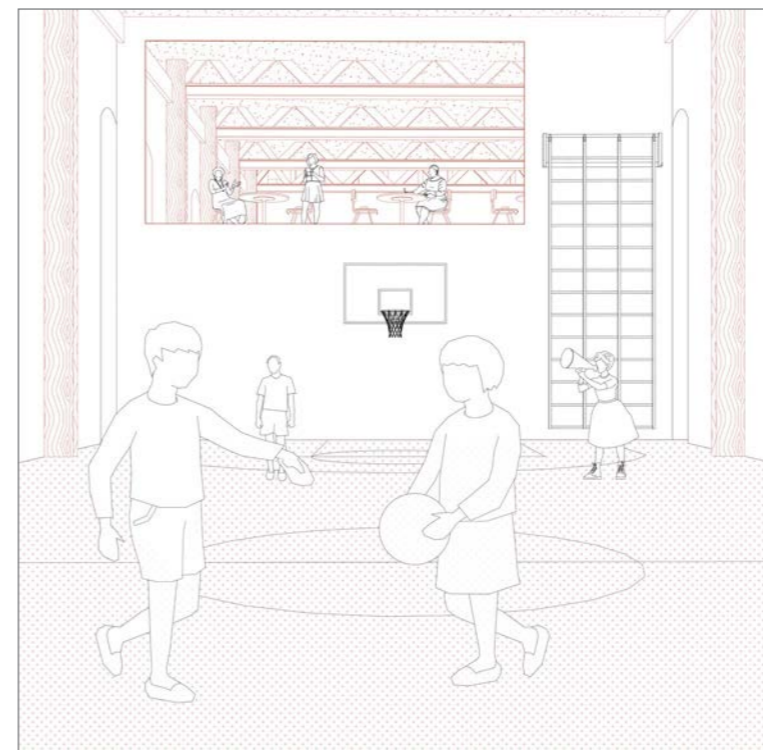
**G. SCALE OF THE PLINT**



South isometric view of the plint



View from the restaurant into the patio



View from the gym into the restaurant

The Nest will act as a central meeting point on the school site. For the ground floor we wanted to keep one of the two **gyms** of the original building and add a **social restaurant** on the other side.

This **restaurant** can be a uniting element for the schools and the rest of Watersportbaan site, it opens up to a sheltered outside space and the adjacent garden. These outside spaces can be used together with the social restaurant to allow outside dining. This way we increase the capacity of the restaurant and add to the ambiance of the site.

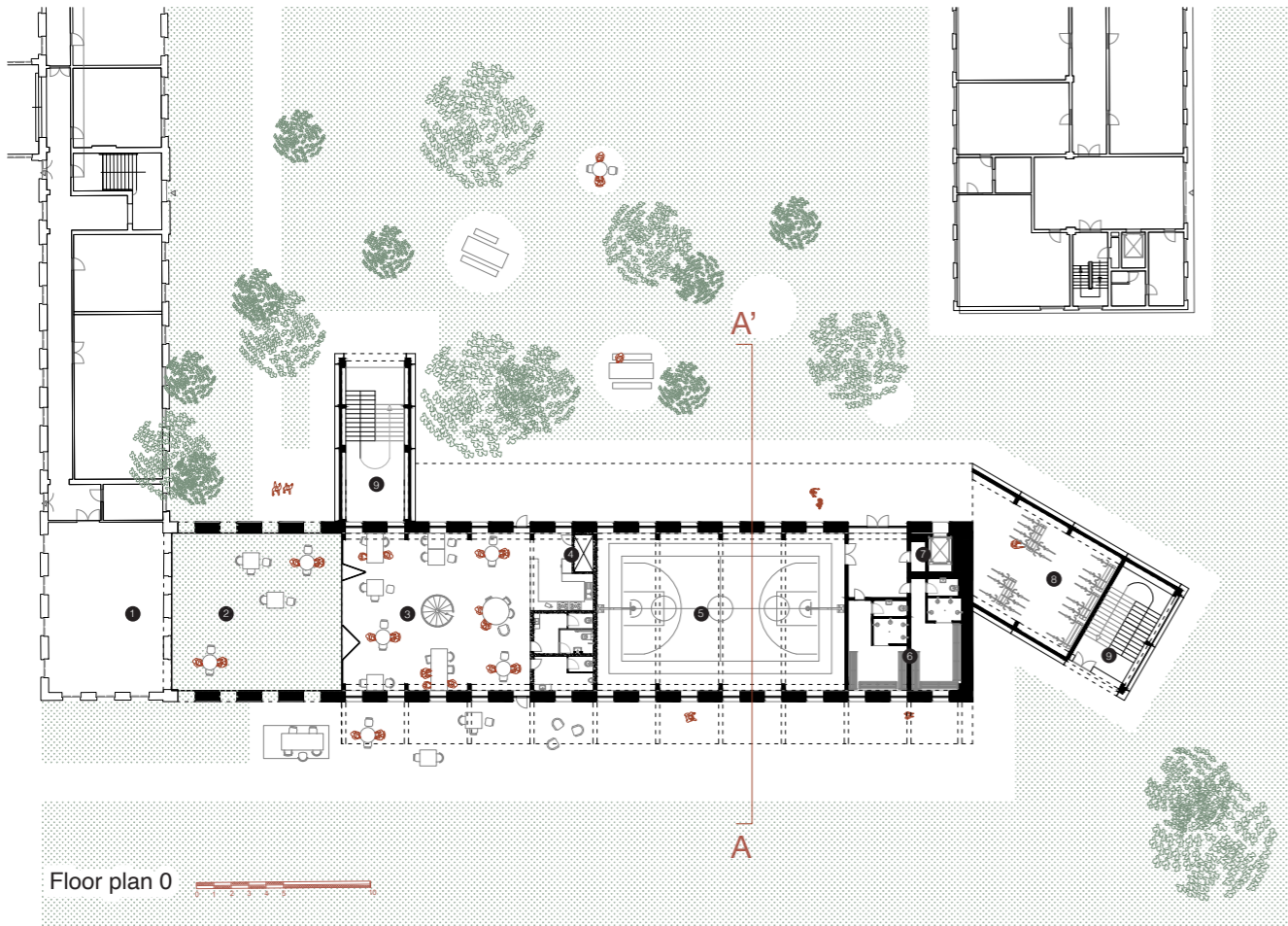
For the outdoor spaces we decided to use the iconic Luxembourg chairs, as our site's public furniture. Providing free seating for the visitors encourages appropriation of the site. This concept is already adapted in other parts of Ghent like Zuidpark and Coyendanspark. Giving these chairs the same shade of red as our building adds to the recognizability of The Nest.

Making the **new gym** visible from the restaurant gives parents a chance to watch their kids play and also motivates other visitors to take up a new sport. It also connects the school site and its students with the residents of the surrounding neighborhoods. The plint operates as an intersection between educational purposes and recreational purposes. It's a meeting point between the students and the locals.

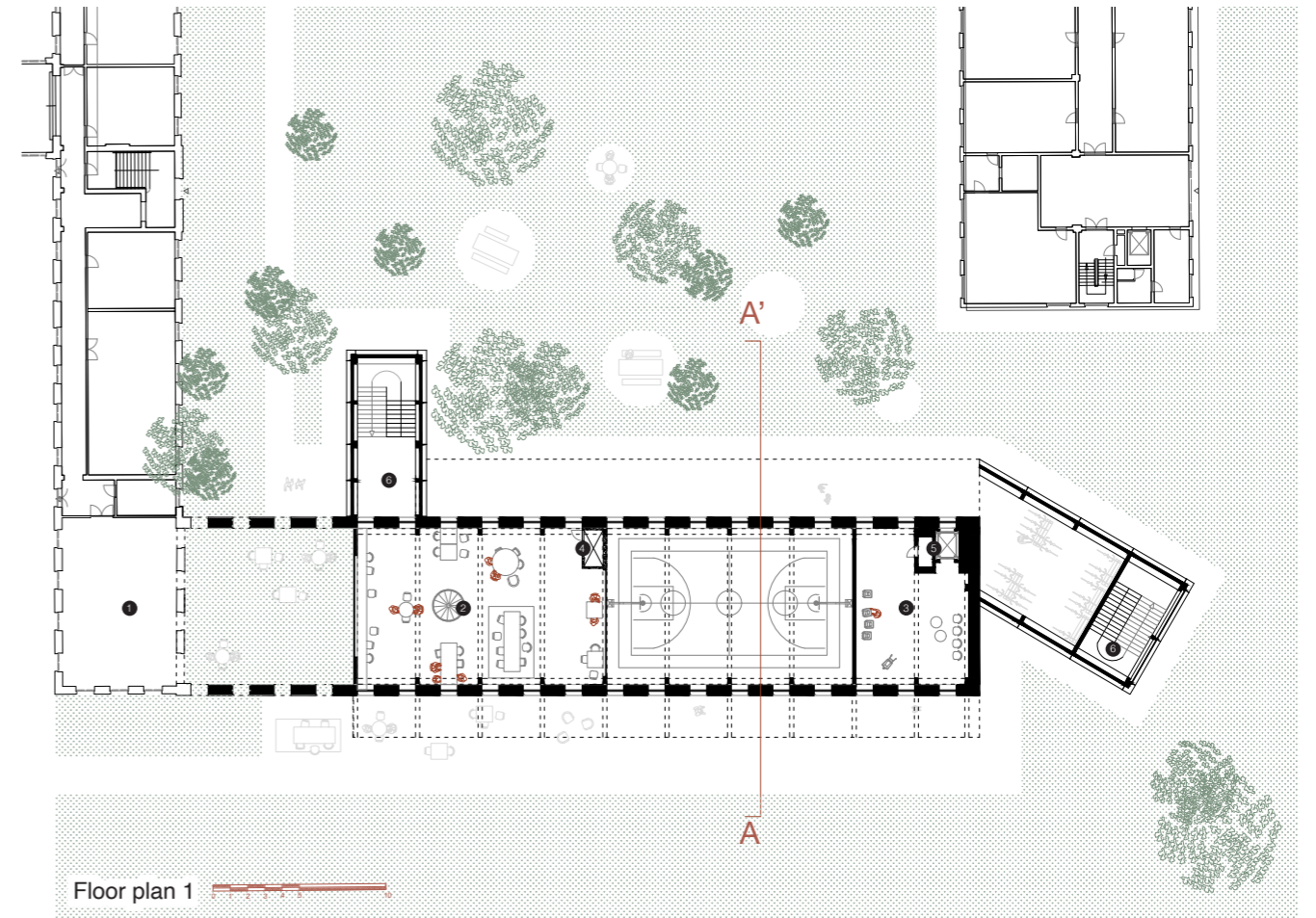
Another benefit is the opportunity to utilise this connection to organize all kind of events, making it adaptable in use.



Floor plans plint



- 1 Entrance Spectrum school
- 2 Patio
- 3 Social restaurant
- 4 Technical shaft
- 5 The Gym
- 6 Dressing rooms
- 7 Elevator
- 8 Bike storage
- 9 Staircases

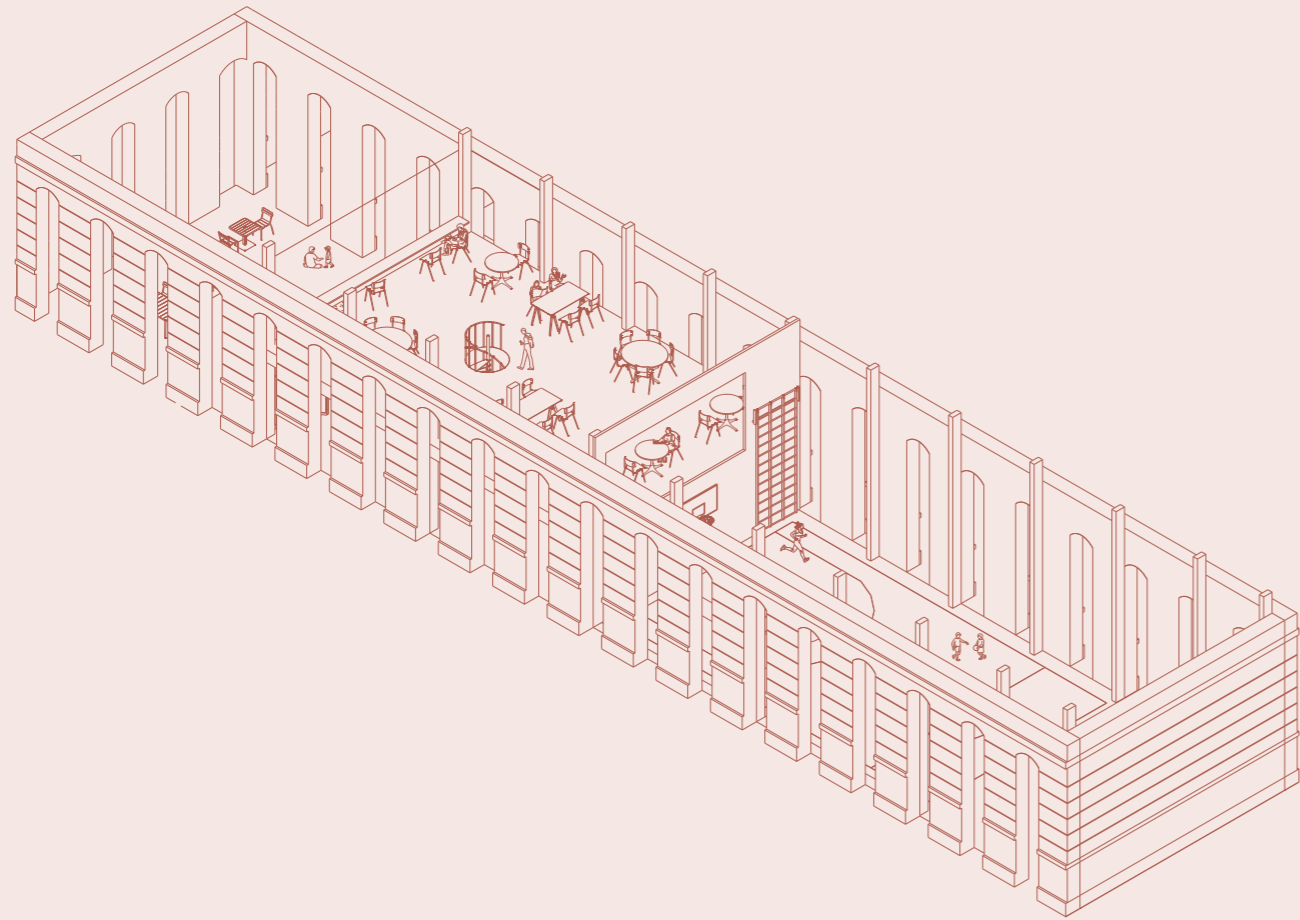


- 1 First floor Spectrum school
- 2 Social restaurant
- 3 Storage
- 4 Technical shaft
- 5 Elevator
- 6 Staircases



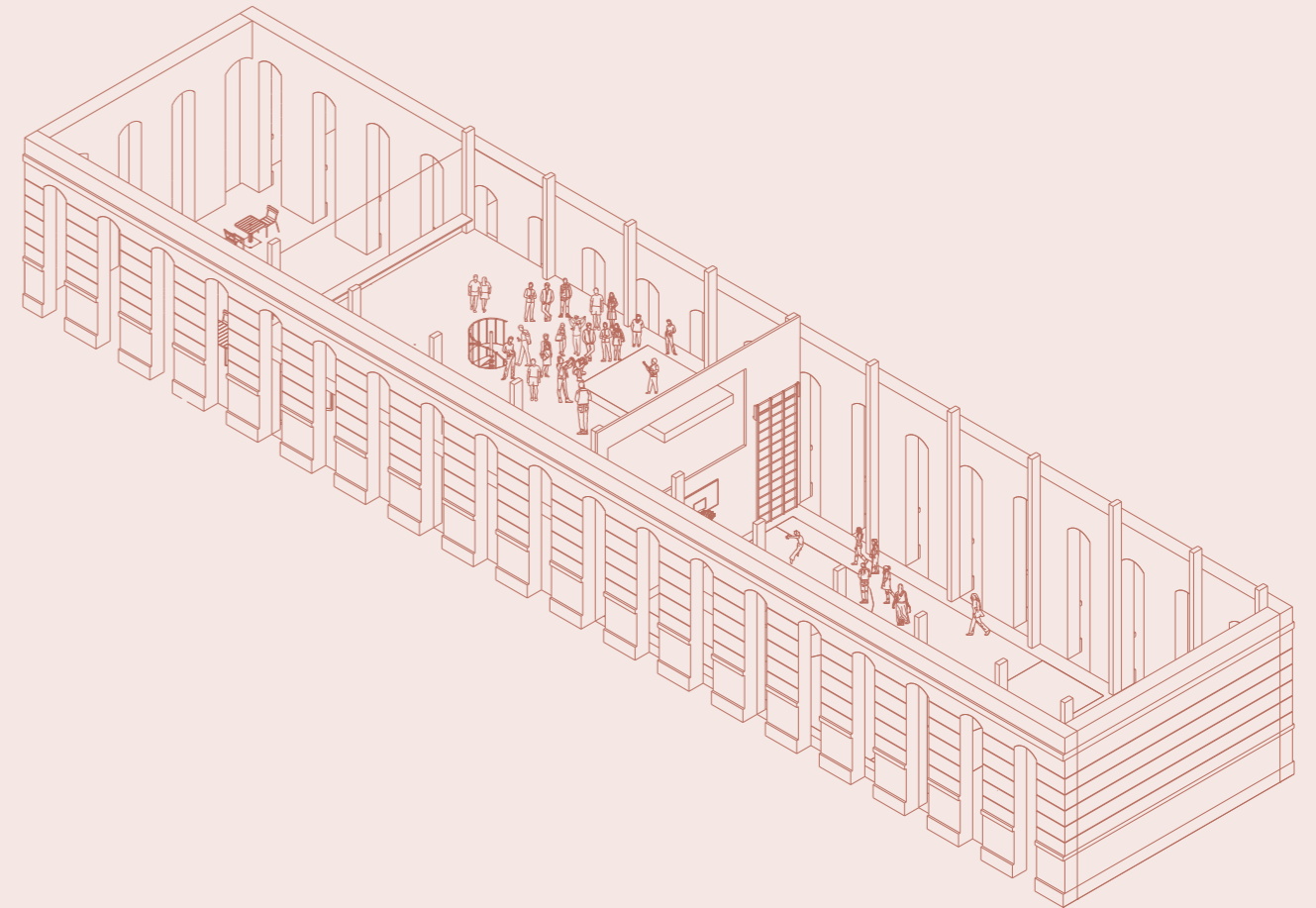
## adaptability over time

The plint can be a space for many events because of its large open spaces. The restaurant can be transformed to house various scales of events by just moving the furniture around. The Nest can become an exiting place during the day and night, creating a new social meeting space.



**daytime**

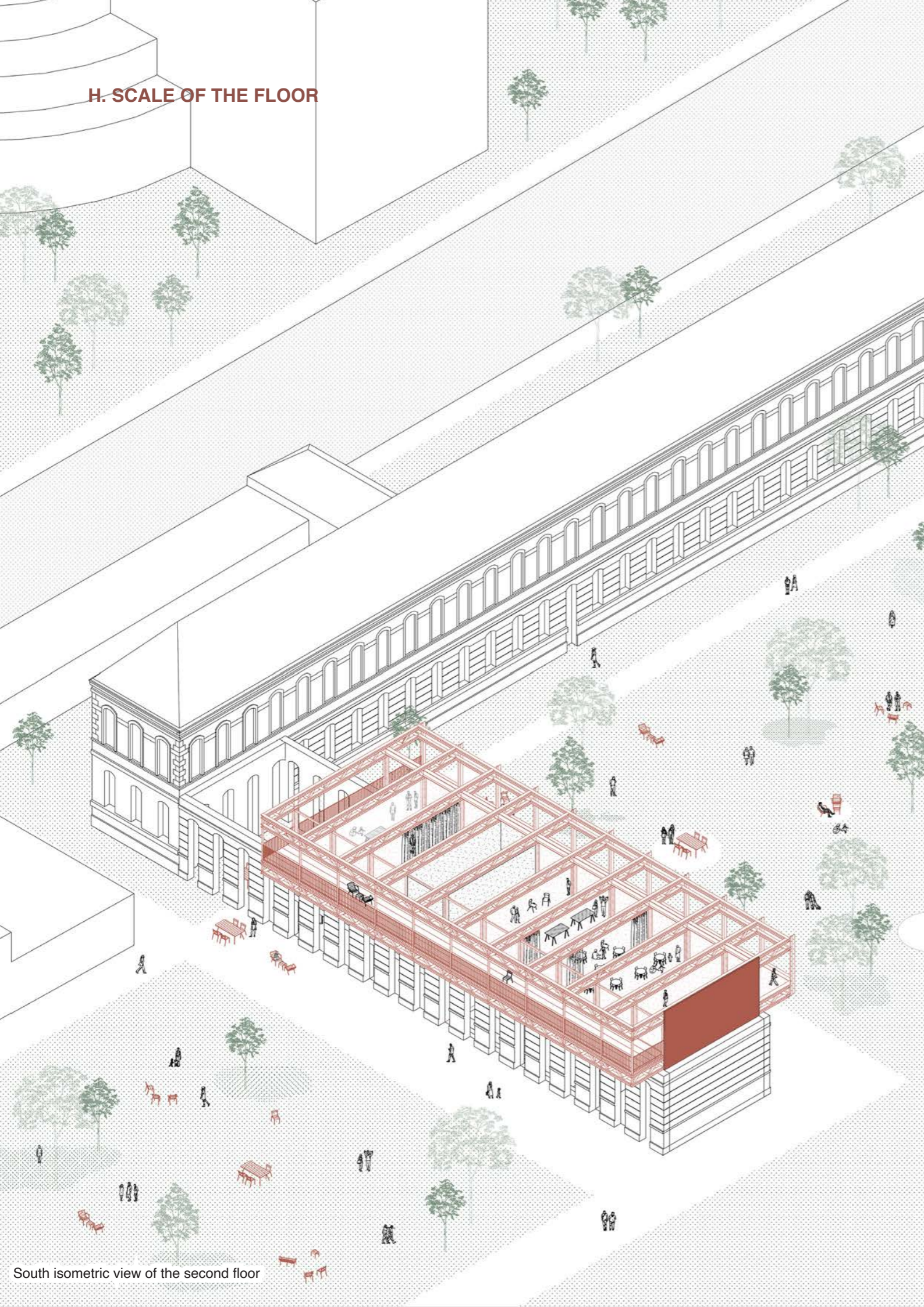
- restaurant
- gym



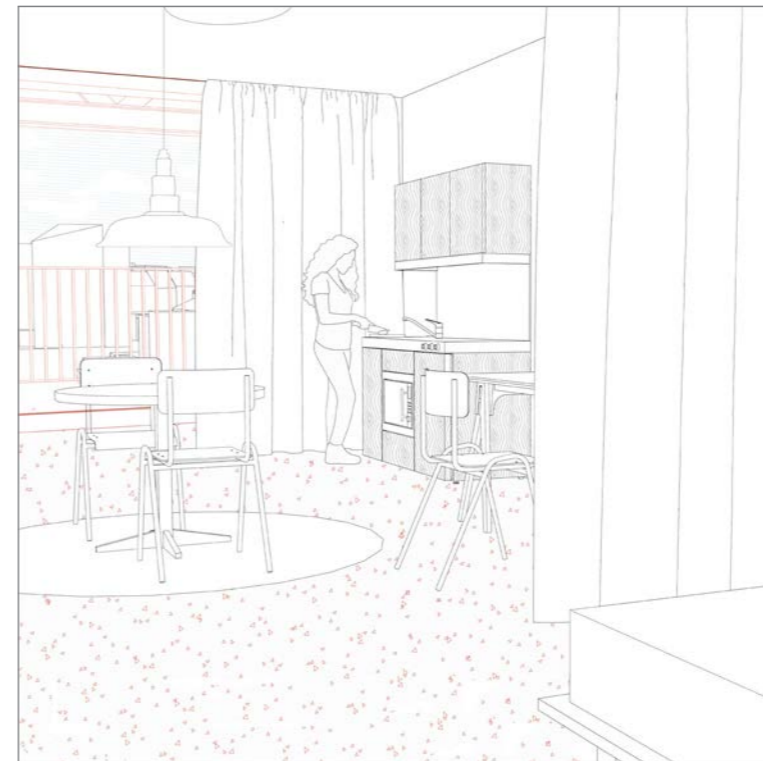
**nighttime**

- social restaurant
- eventhall

## H. SCALE OF THE FLOOR



South isometric view of the second floor

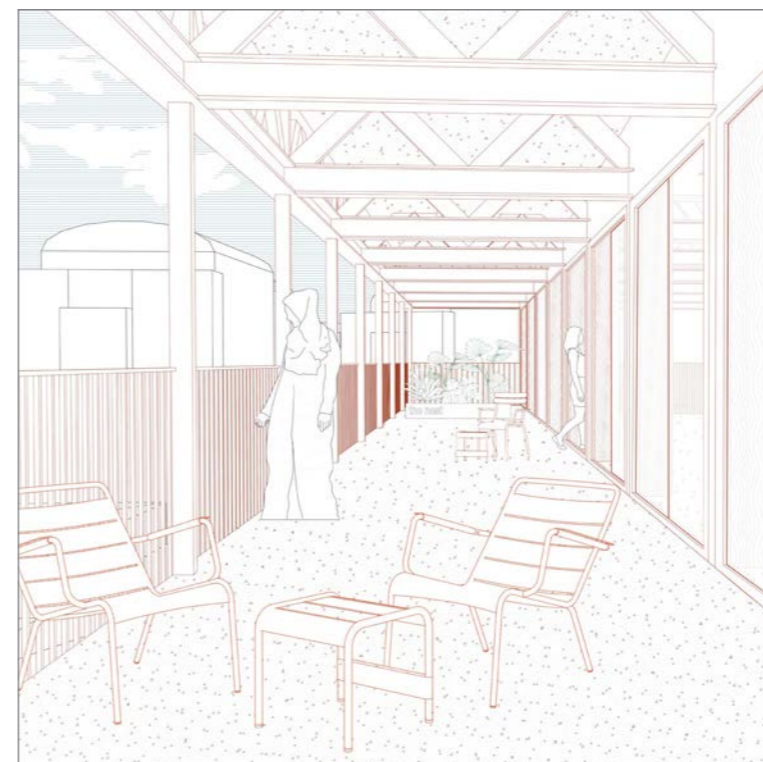


Layout for a student room

The adaptability on the scale of the floor is evident in the **adjustable layout**. We decided to work with an open floor plan for the studio spaces that are separated by movable JuuNoo walls; this provides the opportunity to change the layout over time, adapting to the changing needs of the site.

**The fixed sanitary core** is placed in a way that is favorable for both these functions. The circulation continues via a hallway on the north side of the building making sure each atelier space or student home is individually accessible. This encourages various groups to work on the same level, providing opportunities for collaborations.

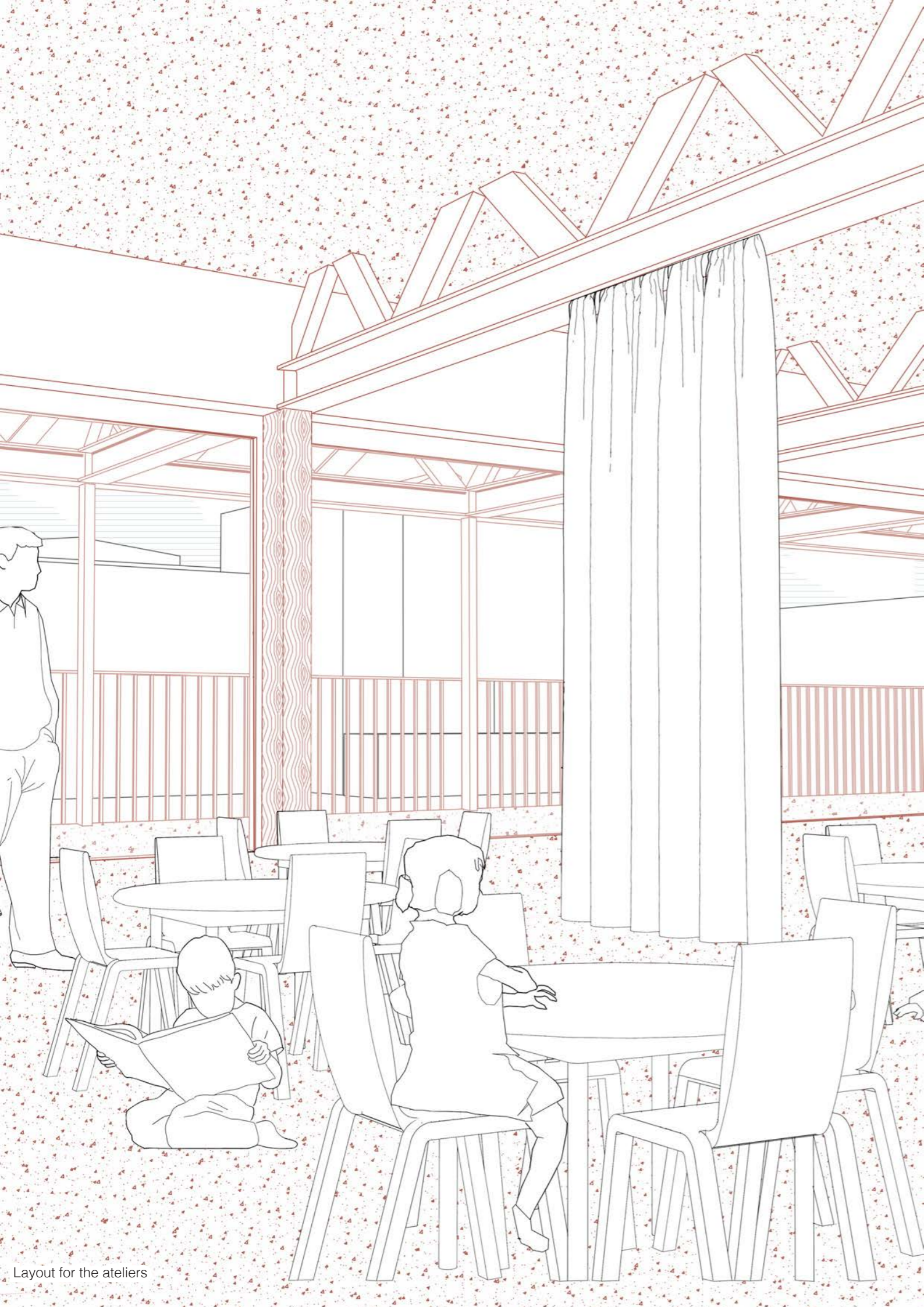
The building will essentially be arranged as **educational ateliers** to gradually change into **student housing** as the need for it grows.



View from the terraces

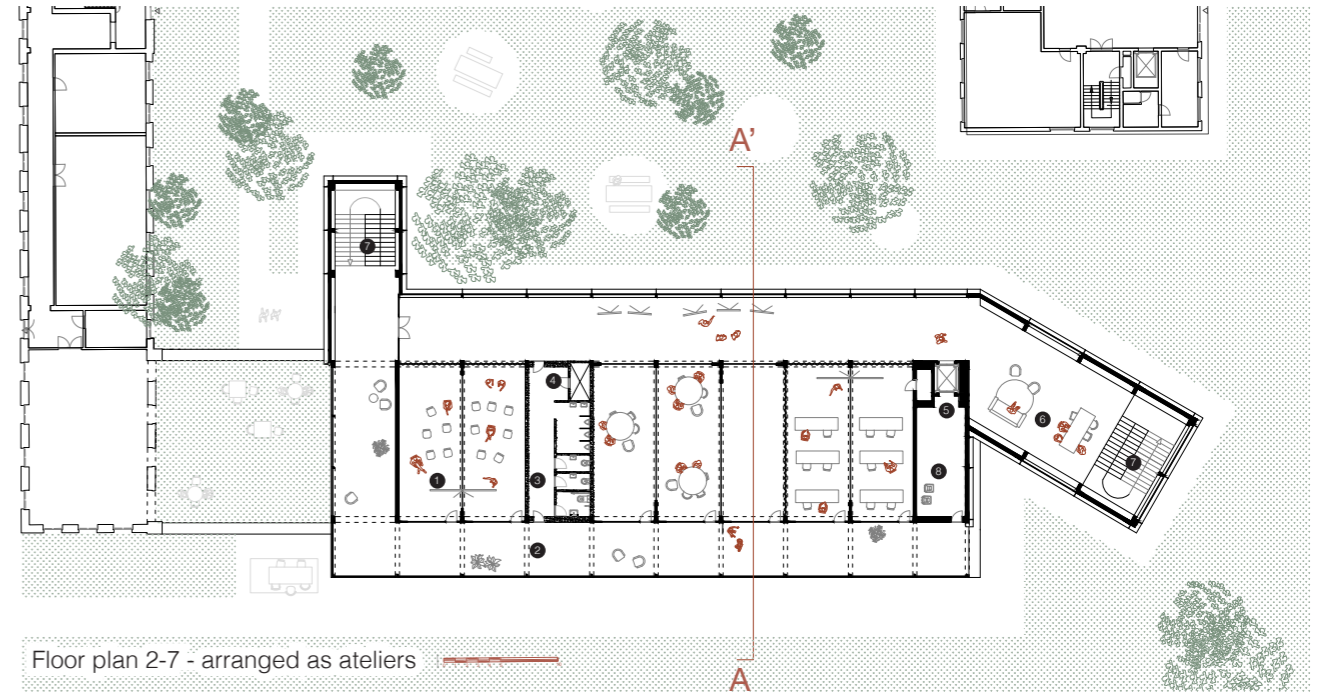
**The terrace** is one big connections which also motivates more connection between the student rooms or ateliers.

The terraces are 3,6 meters wide which makes it in space and use.



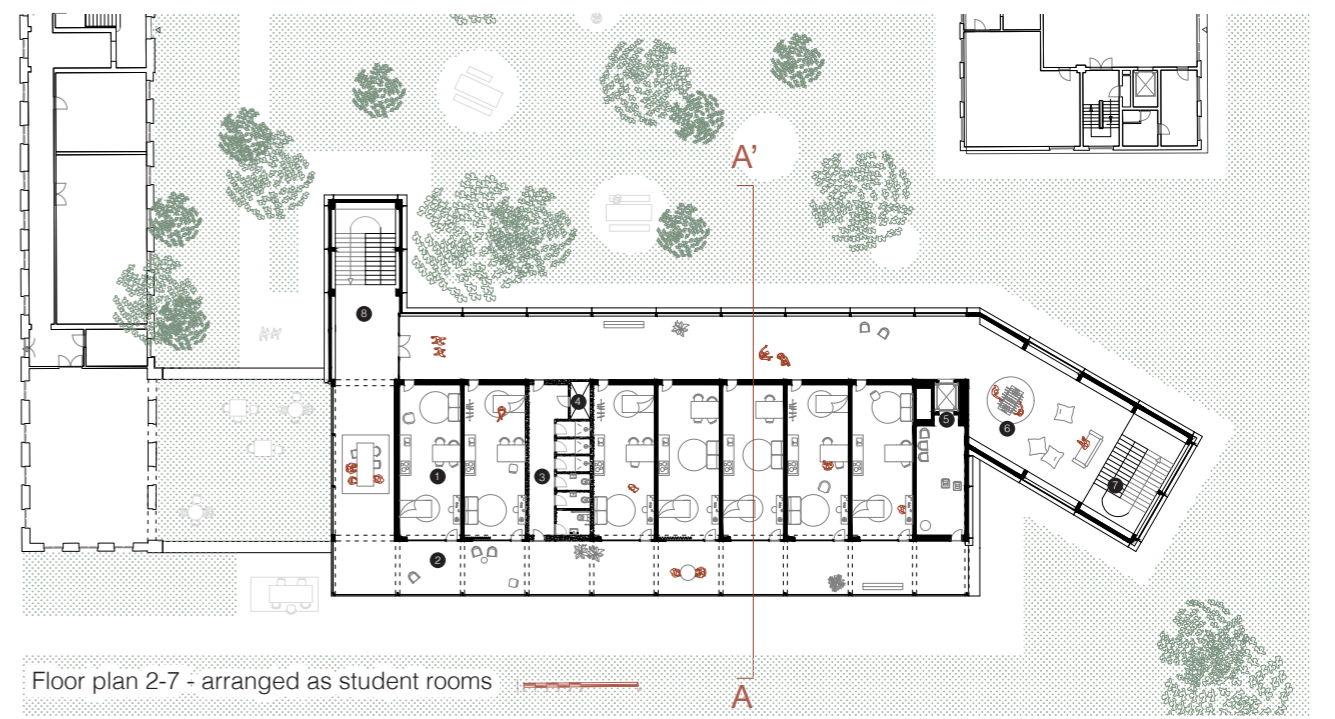
Layout for the ateliers

Floor plans 2-7



Floor plan 2-7 - arranged as ateliers

- 1 Ateliers
- 2 Terrace
- 3 Sanitary core
- 4 Technical shaft
- 5 Elevator
- 6 Communal space
- 7 Staircase
- 8 Storage space



Floor plan 2-7 - arranged as student rooms

- 1 Student rooms
- 2 Terrace
- 3 Sanitary core
- 4 Technical shaft
- 5 Elevator
- 6 Communal space
- 7 Staircase
- 8 Storage space

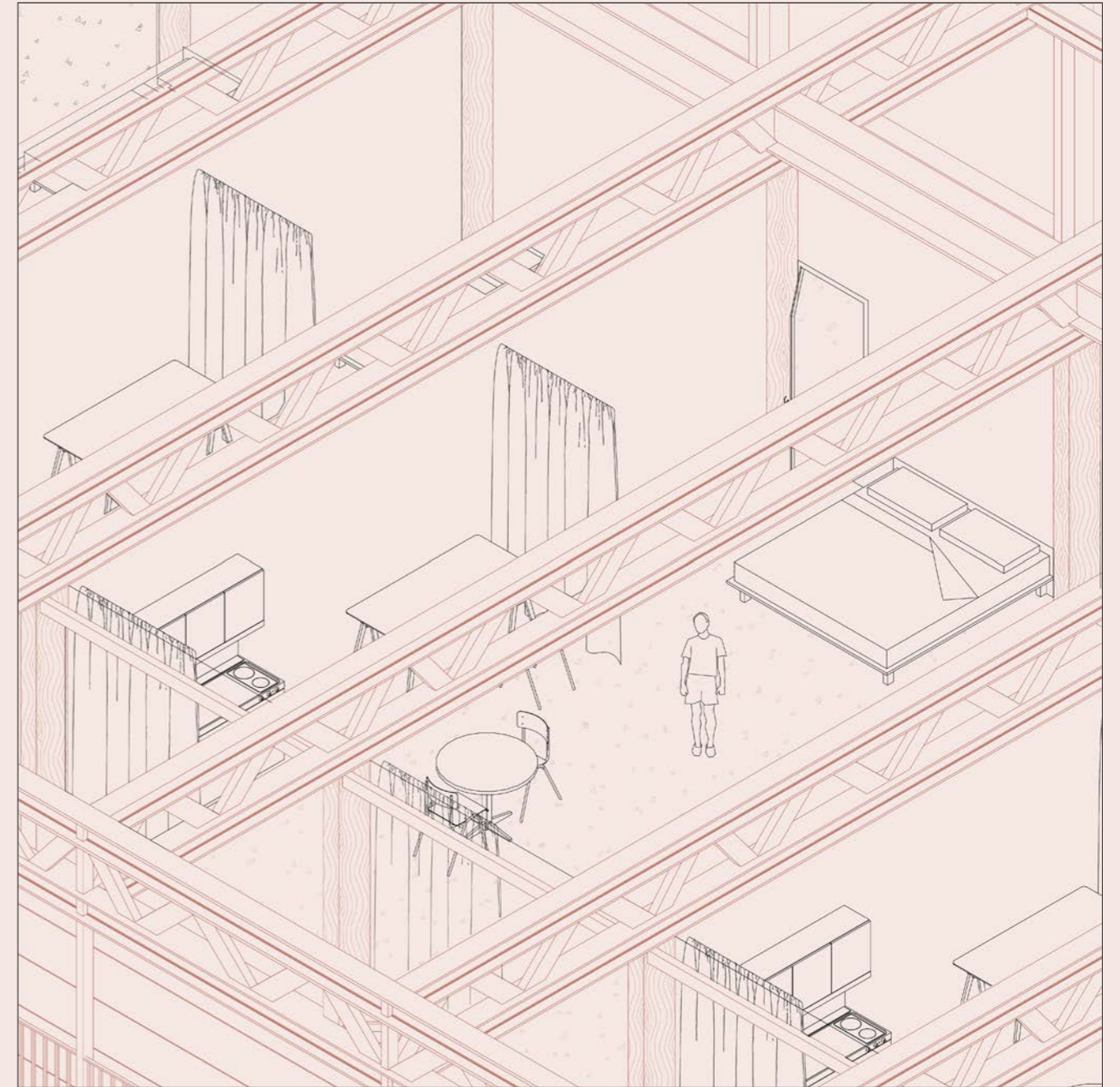


## adaptability over time



### educational ateliers 2021

Curtains and removable panels allow the ateliers to be adapted to the needs of the students and teachers. The floors can be used as big open spaces, or are divided into more intimate spaces. Curtains hang from rails attached to the steel trusses.

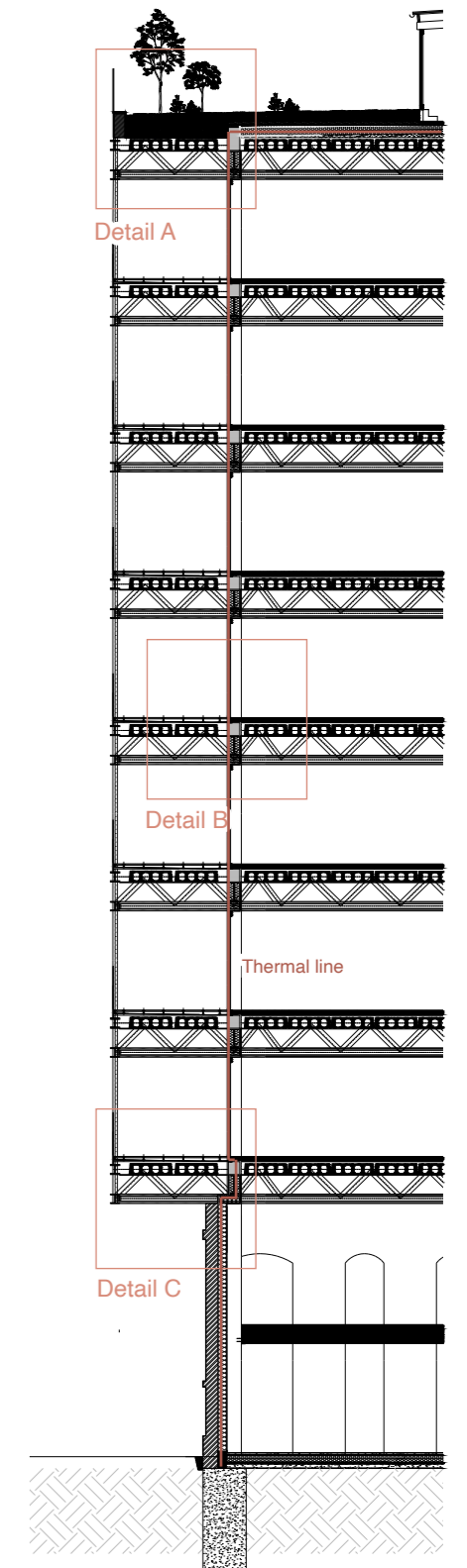
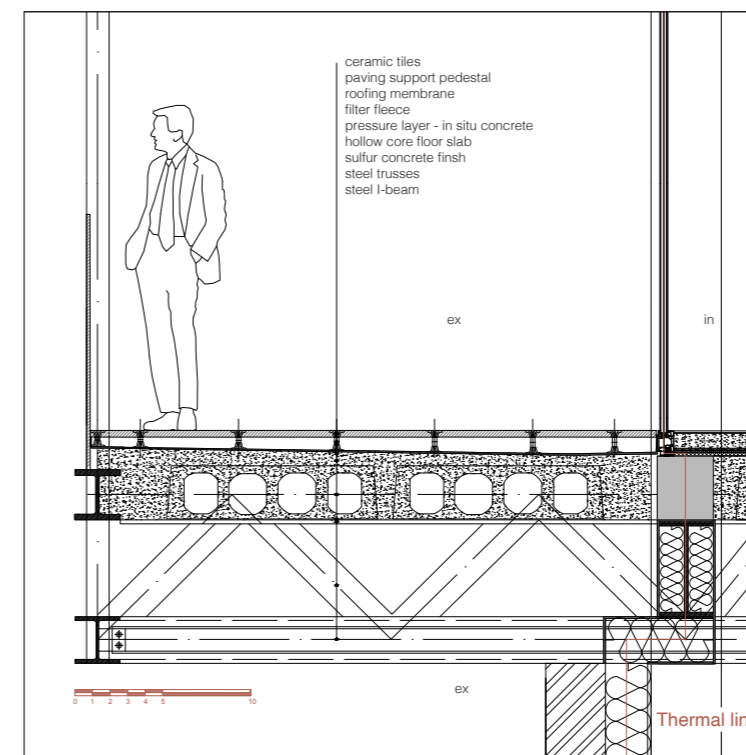
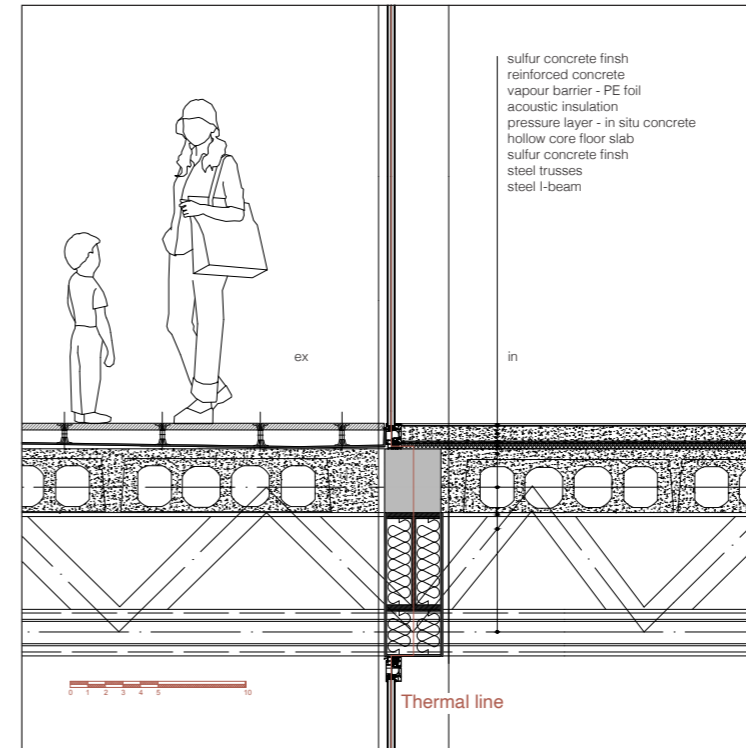
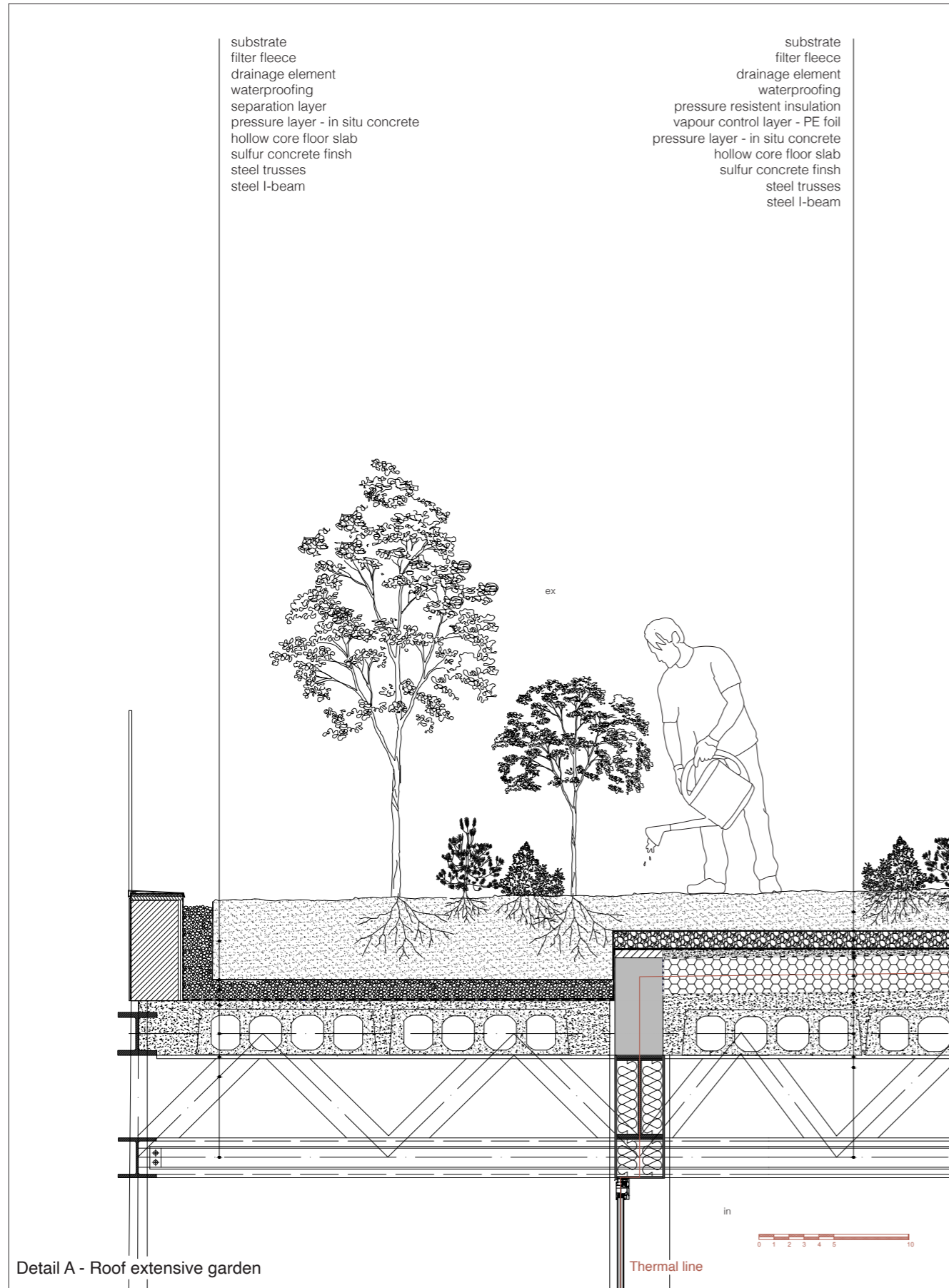


### student housing 2040

In the future, the student rooms are divided by rented JUUNOO walls, placed in between the wooden columns. The curtains are reused to make separate spaces in the dorm itself.



# I. SCALE OF THE DETAIL



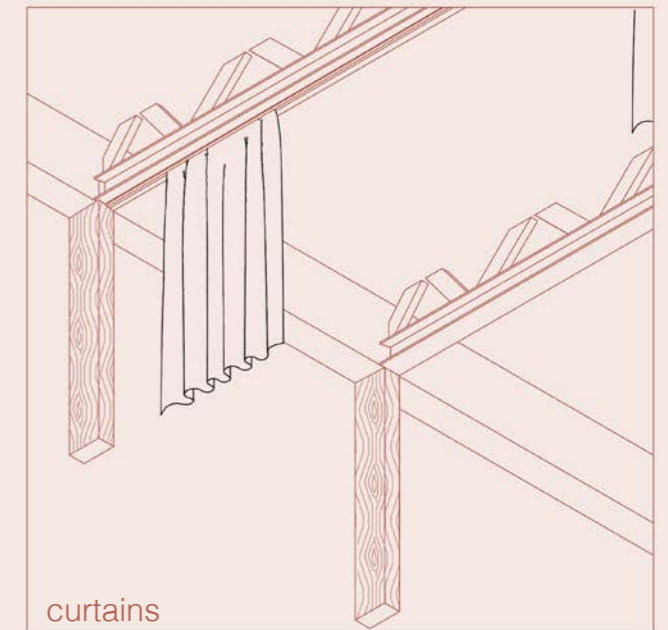
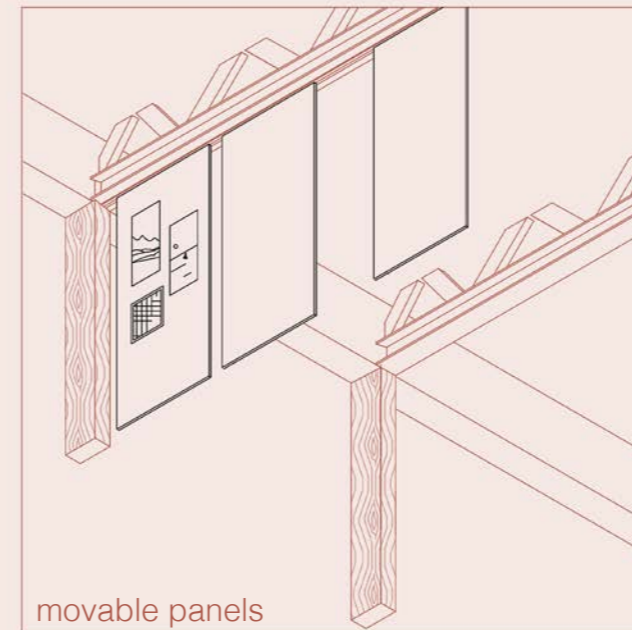
# adaptability over time

With JuuNoo, the adaptation of the interior spaces can therefore lead to less construction waste or less adaptation costs. The framework is constructed from a series of extendable metal uprights, each provided with a bottom and a top rail; these rails click into each other and are then filled with insulation and finished off.

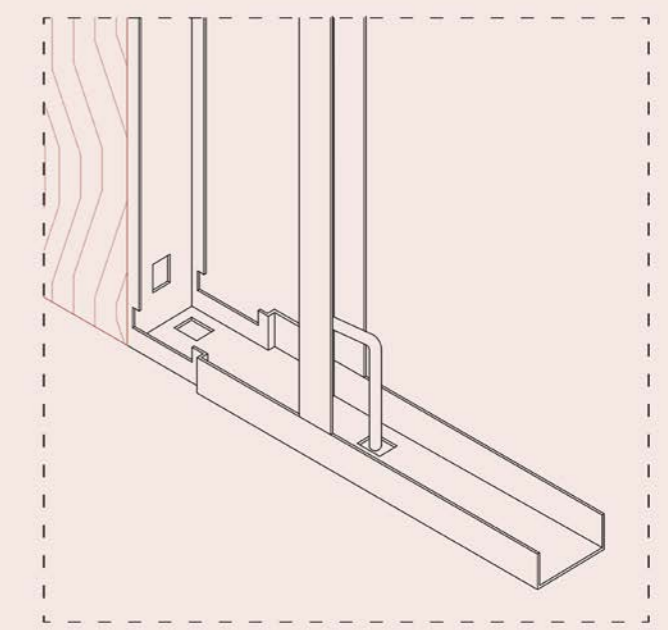
These elements can be build up and teared down relatively quick without damaging the elements, this result in a fully circular system. Smooth and error-free construction is guaranteed by the simplicity and the limited number of parts. When there would be no more need for the walls the company guarantees to buy back the system to ensure the walls won't go to waste.



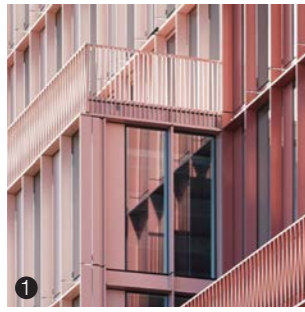
## educational ateliers 2021



## student housing 2040



## J. LOCALLY SOURCED



**facade: powder coated aluminium**



### aesthetically

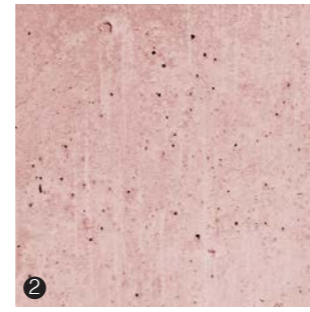
- warm colored coating to emulate adjacent building
- domestic appearance

### ecological

- removable coating
- protection from corrosion and oxidation
- 90% of aluminum gets recycled
- reflecting pigments offer reflection of solar radiation

### adaptable

- resistant against intensive use
- long lasting



**floor finish: sulfur concrete**



### aesthetically

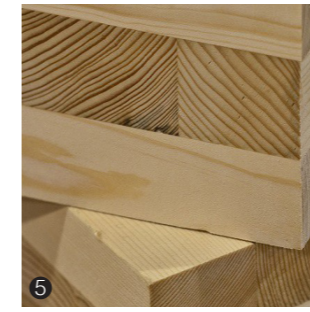
- relatively new which shows off the circular properties
- is easily mixed with pigments

### structural

- almost same performance as conventional concrete in a temperature range up to 85°C
- only used for aesthetic purpose since it's not structural

### ecological

- created by replacing water and cement with sulfur
- fully circular material
- less CO2



**columns: cross laminated timber**



### aesthetically

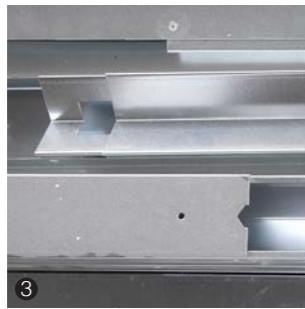
- warm, domestic feel
- visibility of our sustainable vision

### structural

- wood works good on compression
- fire resistance of several hours
- noise control for airborne

### ecological

- wood is the only major building material that grows naturally and is renewable
- light carbon footprint because of CO2 storage
- reduced waste by precision cuts



**inner walls: Juunoo system**



### aesthetically

- seamless walls which gives a finished look
- variety of very shapes and colors
- fits perfectly in a certain space

### ecological

- the walls can be placed and repositioned endlessly
- the company has a buys-back policy
- avoids construction waste
- circular way of building

### adaptable

- not a big effort to rearrange a floor
- fast and easy reversible and adaptable



**trusses and beams: steel**



### aesthetically

- painted red for fire safety
- bold eye-catcher

### structural

- steel works good on tension
- more resistant against weather conditions
- lightweight

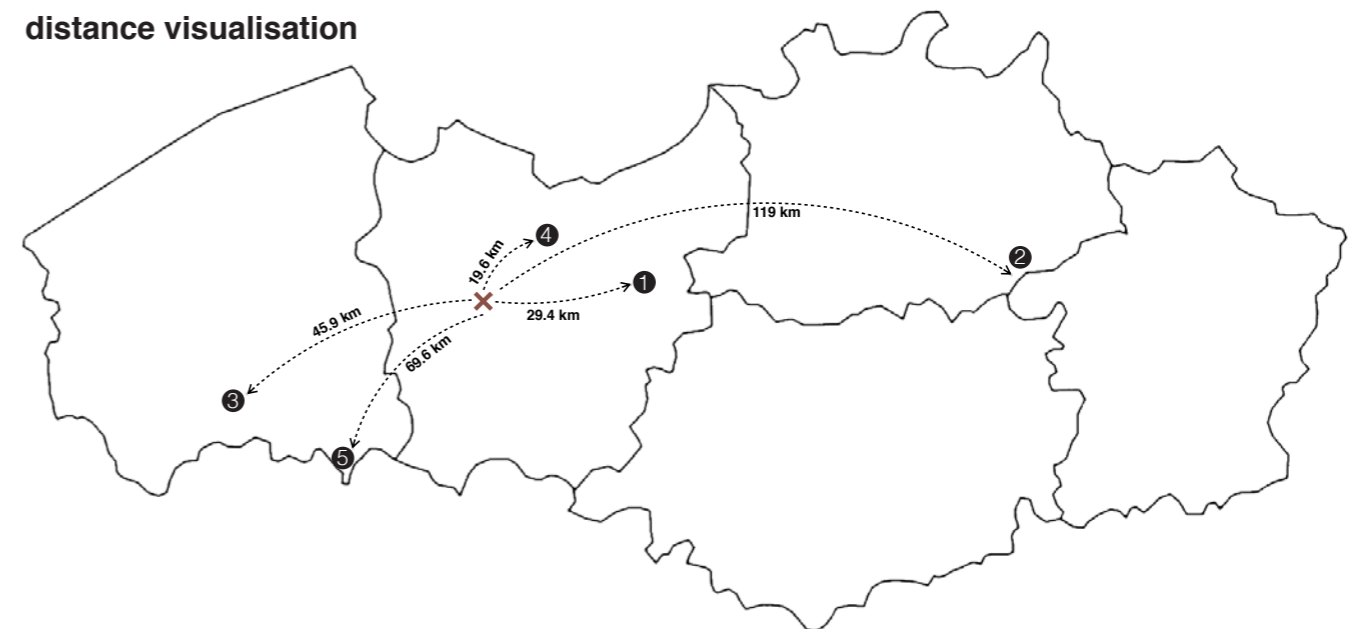
### ecological

- recycled easily
- steel is a local resource, ArcelorMittal Ghent

### adaptable

- bold and durable materials
- steel is a long-lived construction material

## distance visualisation



- 1 Metallics Van Cauteren, Zele
- 2 De Bonte, Laakdal
- 3 ArcelorMittal, Gent
- 4 Juunoo, Zwevegem
- 5 Laminated Timber Solutions, Moorslede

By using locally sourced materials and systems we can reduce our environmental impact of the construction. we would like to see more builders do their part by educating themselves, and even more important, by investing in healthier, low-carbon materials.

We want to be an effective agent for change by designing with green materials made by industries that are trying to do the right thing.





## THE NEST

Our project, The Nest, lays its focus on the school site of the watersportbaan. When analysing this part of the site we realised there is a need for a better way to create learning spaces. This site consists of seven different schools that are scattered between empty, useless space and have no coherence. This makes navigating the site very confusing and intimidating. The current school buildings are limiting the ever changing and evolving education system by being fixed in its layout. We designed a building with a smart grid that permits and even thrives on this change.

By keeping all of the load-bearing elements on the side of the building, the interiors can be separated into endless layouts making various functions possible. The structural properties of our trusses are maximized by creating small cantilevers that can then be used as terraces. The trusses we utilize to create this span are purposely oversized to provide enough sun shading on the terraces. They also allow space to hide the technics.

The function of the building was decided by collaborating with SoGent, who was already working on a new masterplan for the chaotic school site. We concluded that the old gym building could have a better potential since it has a favorable location on the site and was ready to be demolished. We chose to keep one gym and add a social restaurant on the ground floor. This restaurant can be a uniting element for the schools and the rest of Watersportbaan site, it opens up to a sheltered outside space and the adjacent garden. The second floor and up are flexible studio spaces that in 20 years can be transformed into student housing.

The elaborated staircase contains communal relaxing spaces connecting the building to and over the roof. This staircase is intentionally separated from the rest of the building so the circulation can work as an independent space which allows autonomy of every floor. We implemented an extensive green roof to foresee water infiltration and thermal control, as well as providing an extra educational space for the children of the campus.

The Nest provides a sheltering space for all kinds of people and functions at the heart of the school site, making the site more approachable for the students and inhabitants. Our building is intended to be a landmark of the Watersportbaan, showcasing a sustainable and adaptable future.