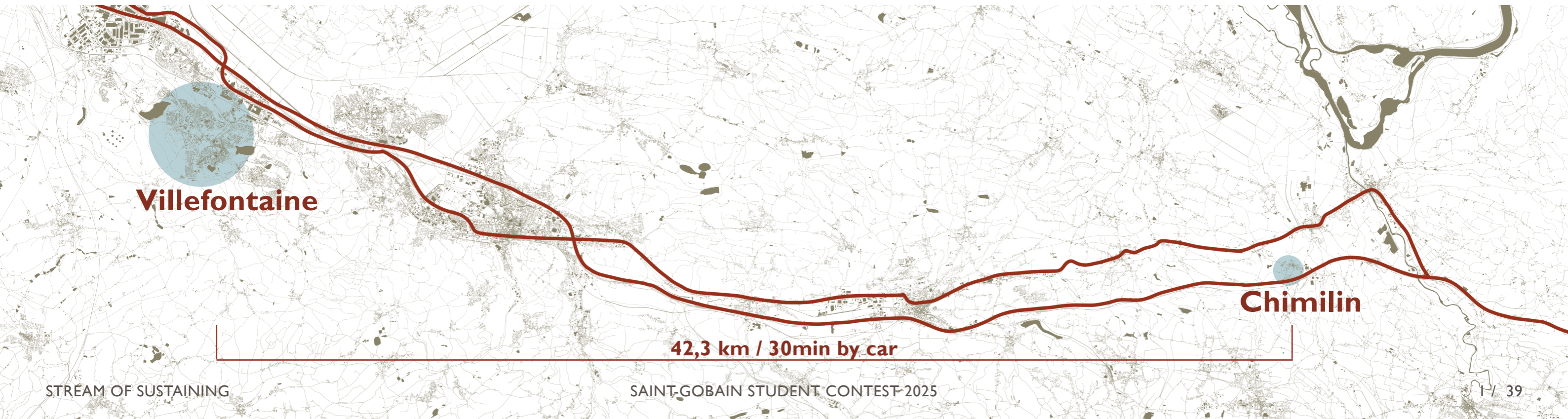


The river runs, the city flows  
– time carves both.



## Villefontaine - site B

### A PLACE FOR NEW IDEAS

Openness and natural surroundings of the site provide an inspiring context for learning. It is important that the environment supports interaction, curiosity and collaborative learning.

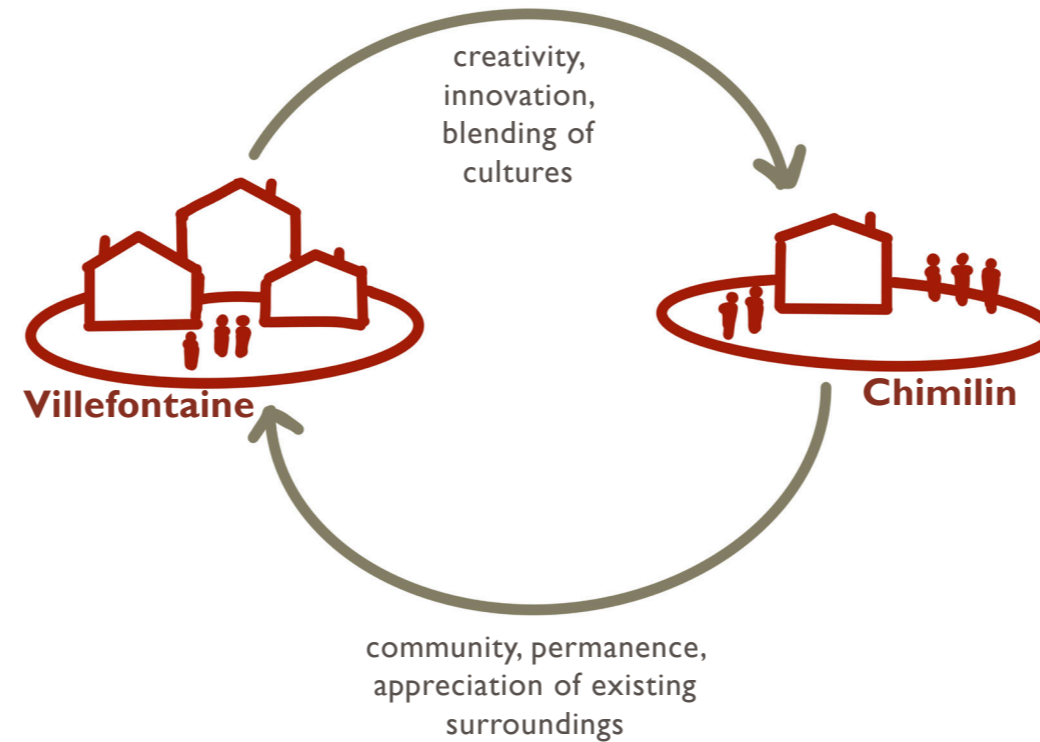
### TEMPORARY ACCOMMODATION

The site has a transient character, with users changing more frequently than in Chimilin. The environment has to embrace the fast rhythm and offer places for rest. Spontaneous meeting spots occur naturally for students, teachers and other residents of Villefontaine.

### CREATIVITY

The site offers space and a dynamic environment, where ideas and encounters encourage creativity. Intertwining creativity and technical skills, Villefontaine becomes an oasis for craftsmanship.

## MAKE USE OF OPPOSITES



## Chimilin - site A

### SENSE OF COMMUNITY

The site must cultivate a sense of community with spaces that encourage interaction, collaboration and sharing.

### SYMBOLIC BUILDING

A place that is a symbol for the people of Chimilin. It represents timeless architecture that is created by the users and their own actions.

### PROTECTING HISTORY AND ROOTS

A gathering space where stories of the past are remembered, new ones are created, and the values of all times—past, present, and future—are preserved.



## STABILITY

A strong community stands the test of time with the help of the built environment. Sustainable architecture fights against time, making building's life cycle longer and therefore creating stability.

## RESILIENCE

A community that endures change is sustainable.



## FORMING A COMMUNITY

Community forms in places where people have reasons to return. Community is strengthened by shared routines, familiar people, and connections with them. The feeling of being welcomed is formed.



## ADAPTATION

Environments that can adapt to already existing or changing elements are socially, economically and ecologically sustainable. Making use of nature in designing architecture is an important part of creating a sustainable environment for strong communities.

## POSSIBILITIES

A well-functioning built environment offers new possibilities for its users.

# SITE A CHIMILIN

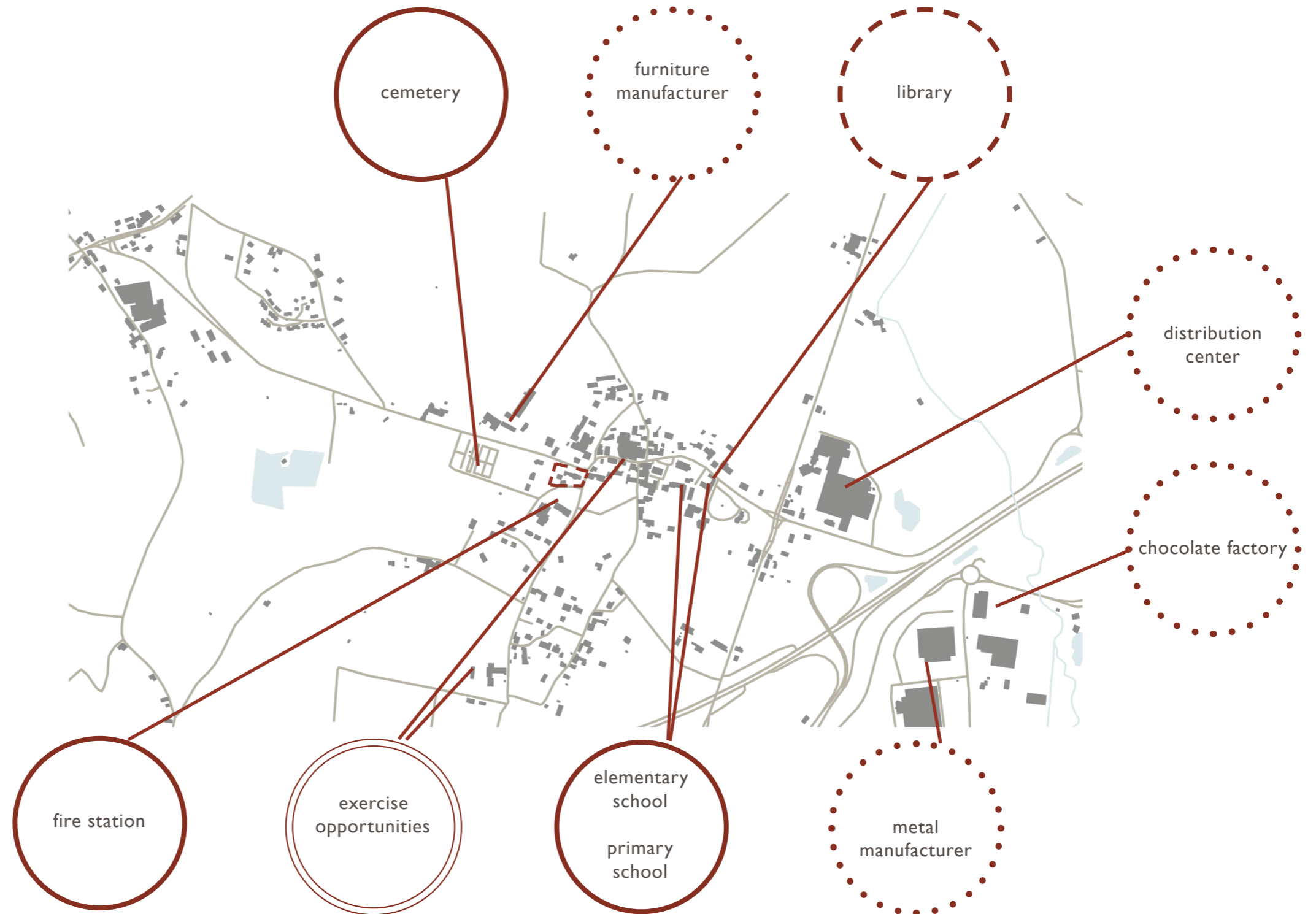


## SURROUNDINGS

-  culture & leisure
-  public services
-  sports
-  commercial and industrial activities
-  site

Nestled in the heart of the French countryside, Chimilin is a picturesque village that thrives on strong community spirit and an active local life. Despite its modest size, Chimilin boasts a wide array of associations, reflecting the rich social fabric of the village. Among these are a seniors' club, a hunting association, a blood donation society, an environmental protection group, and a table tennis club that all testament to the villagers' commitment to both tradition and progress.

Far from being a quiet or forgotten corner, Chimilin is full of life. Its residents are engaged, dynamic, and proudly connected to their heritage. The village atmosphere is warm and welcoming, with a clear sense of solidarity and shared purpose among its inhabitants. Chimilin stands as a shining example of how rural life can remain both rooted in history and alive with energy.





## RESTORATION PRINCIPLES

The renovation of the house will be approached with care and respect for its original spirit.



## INEXPENSIVE SOLUTIONS

The renovation plan is designed to be implemented on a modest budget, with the most critical tasks prioritized according to available financial resources.



## COMMUNITY STRENGTHENING

The goal of the plan is to create a space that supports a vibrant community by enabling diverse activities, both for everyday use and special gatherings.



## BUSINESS IDEAS

The building can also be used for small-scale businesses and activities, bringing in people as customers, employees, or hobbyists, helping to keep the building active and meaningful in daily life and celebration alike.

# DAMAGE ASSESSMENT

## Priority I



### RESTORATION PRINCIPLES

**Repair** whenever possible, but avoid unnecessary interventions.

**Replace** building elements only when repair is not feasible.

**Preserve** the existing identity and character of the building.

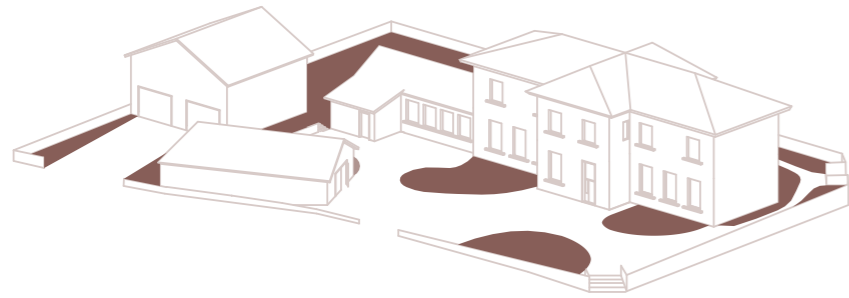
**Avoid** irreversible changes.



- 1. Damaged roof**
  - Refurbishment with products from **Adfors Saint Gobain**.
- 2. Fallen facade plastering of gutter-to-wall junctions**
  - Re-plastering with **Webercol flex Enaé Saint Gobain**.
  - Re-attachment with flexible joint to prevent corrosion.
- 3. Fallen facade plastering near asphalt**
  - Re-plastering with **Enaé**.
  - Adding a buffer material such as gravel where wall meets ground to stop water load.
- 4. Cracks in facade plastering**
  - Re-plaster with **Enaé**.
- 5. Damaged windowledge**
  - Adding a sloped metal sheet to prevent water from pooling.
- 6. Groundwork and overgrown greenery**
  - Preserving asphalt for yard's walkways.
  - Gardening and planting new greenery.
  - Re-establishing old stairs with **Chryso EnviroMix concrete Saint Gobain**.
- 7. Broken fencing**
  - Dismantle metal fencing and heighten existing fence to 1000 mm for safety.

# INNOVATIONS

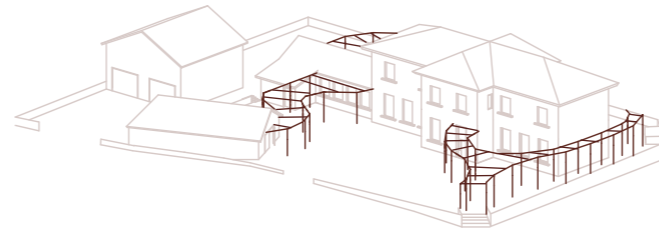
## Priority II



### YARD

The courtyard is made more inviting by removing parts of the asphalt and replacing them with patches of grass and plants.

Parking spaces for cars are designated outside the courtyard, allowing the entire area to be used by villagers for gatherings, celebrations, shared meals or even performances.

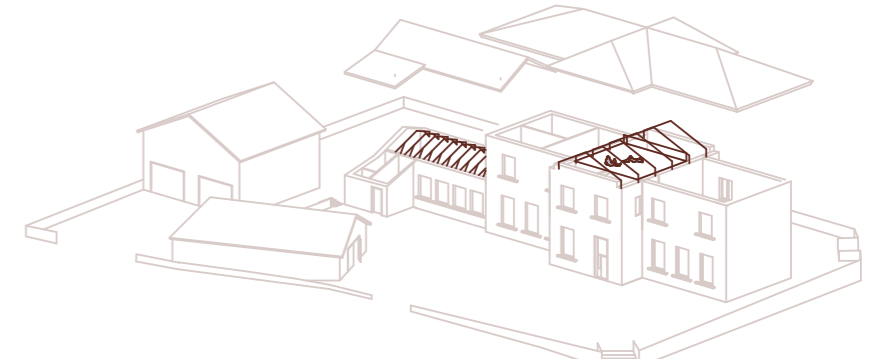


### PERGOLA

A pergola, flowing like a river, guides visitors through the different functions of the building.

Stretching from door to door and across the front-yard seating area, the structure adds a new dimension to Chimilin's identity while also creating a symbolic connection to the Villefontaine campus—honoring the old building in the process.

Climbing vines along the pergola evoke the spirit of the vineyard, casting dappled shade on pathways while allowing warm light to filter through.



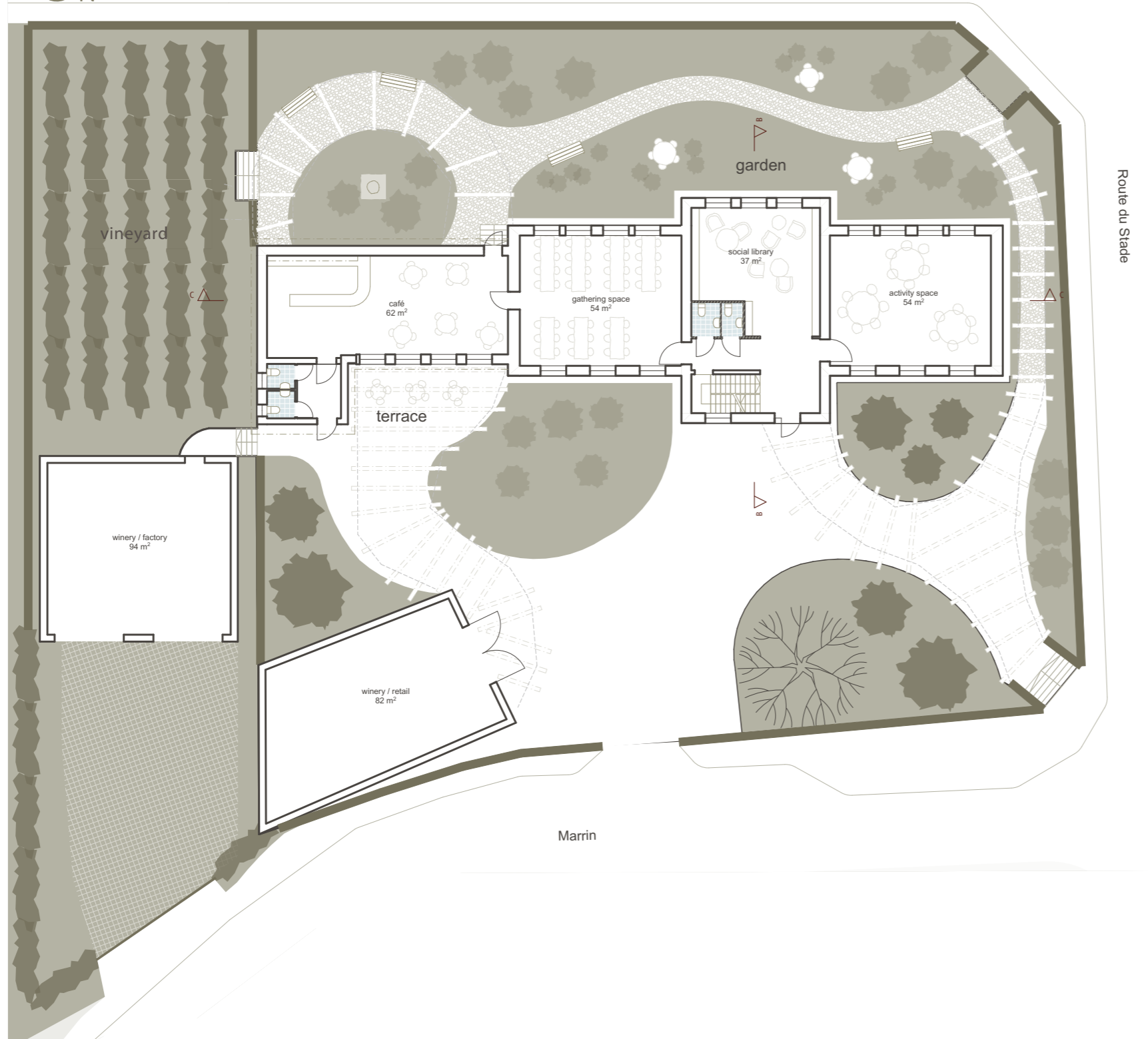
### HIGH CEILINGS

The atmosphere of the interior spaces is enhanced by opening the ceiling structure and adding roof insulation above the café and the central part of the main building. This allows for a two-level, loft-like youth area on the upper floor of the main building, and a striking, high-ceilinged café space that can also serve as a venue for important celebrations.



# GROUND FLOOR

Route de la Galifatière



## CAFÉ / WINERY

Collaboration with local winemakers, villagers interested in winemaking, and the nearby chocolate factory.



## SOCIAL LIBRARY

A place where villagers of all ages can come and spend time on their own or together with an open and welcoming atmosphere.



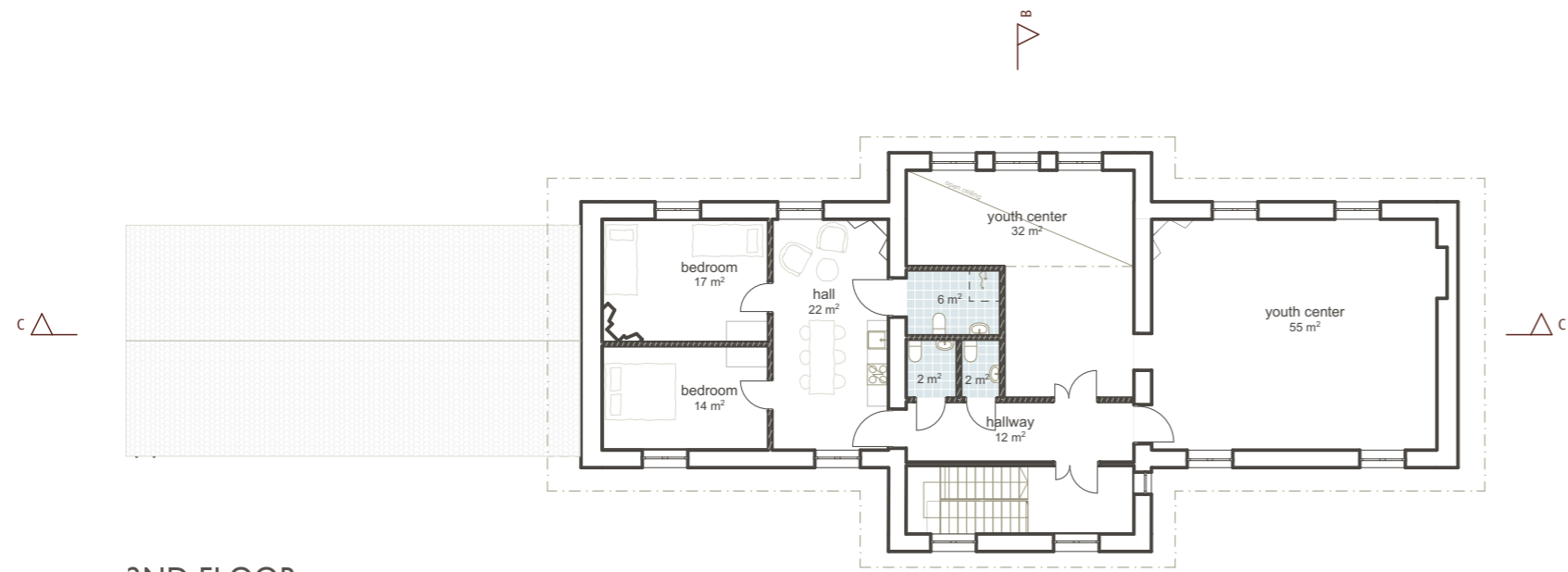
## HOSPITALITY

The house offers accommodation for Chimilin's visitors or for locals, for example during celebrations or special occasions.

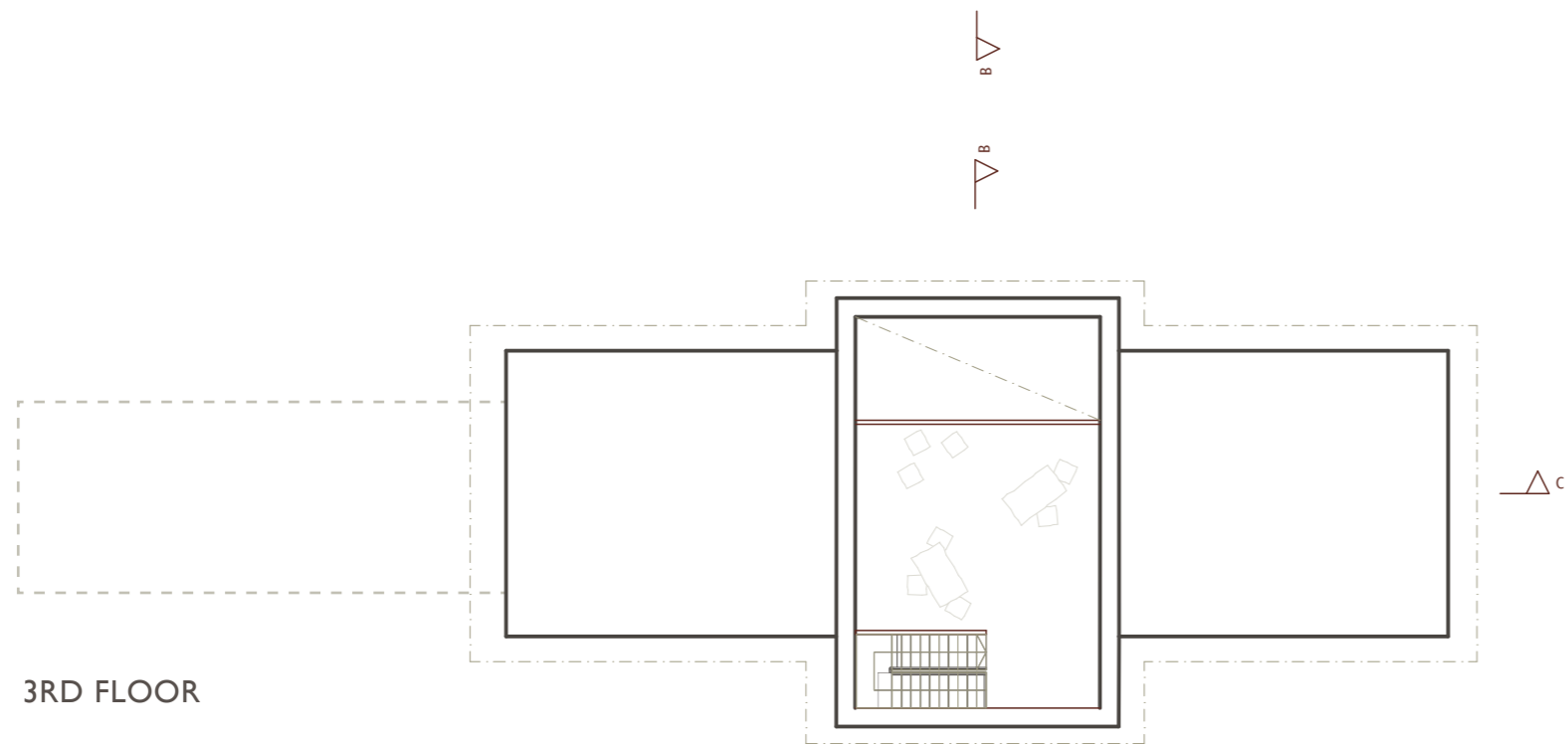


## YOUTH AND COMMUNITY SPACE

A dedicated 'second living room' for young people—connected to the everyday life of the village, encouraging activity and easily adaptable for different uses.



2ND FLOOR



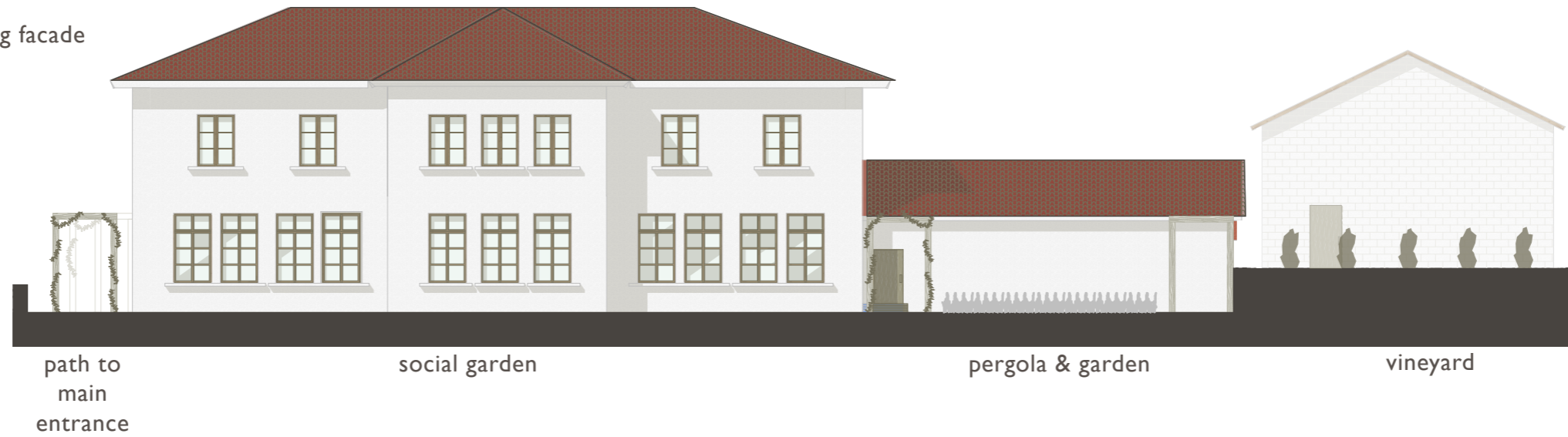
3RD FLOOR



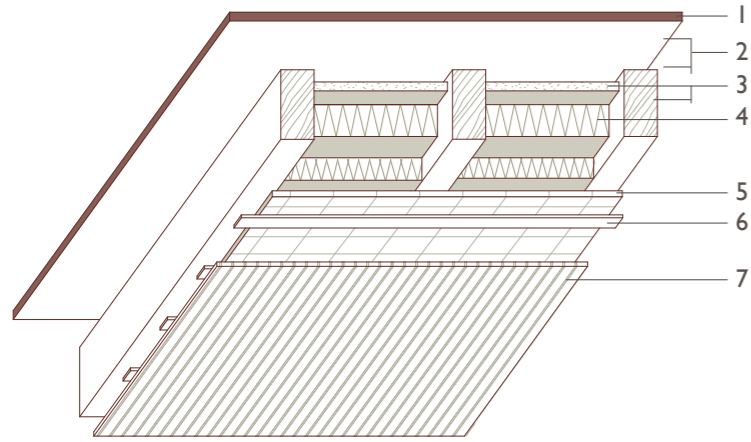
south facing facade



north facing facade

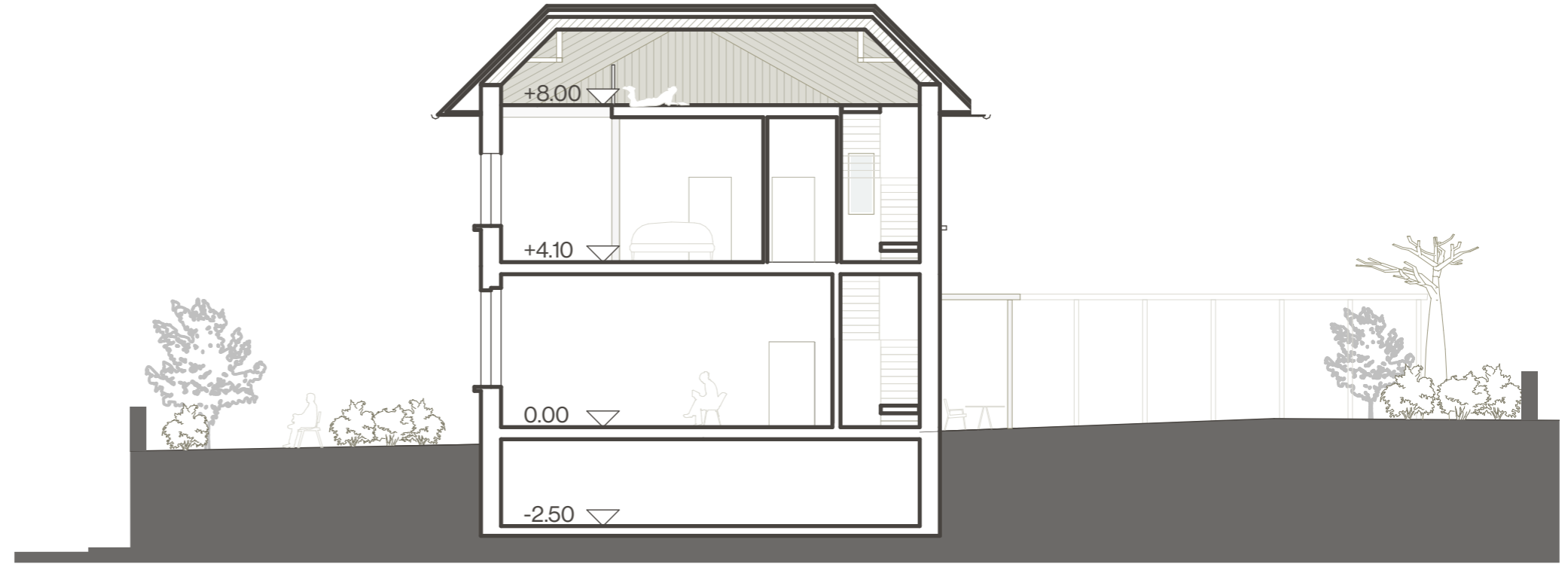


NEW ROOF



Added insulation for a better U-value. No cold bridges. Only secure moisture management solutions.

- 1 Old roofing
- 2 Air gap
- 3 **ISOVER R KL-31**  
Bearing timber structure
- 4 **ISOVER premium 33**
- 5 **ISOVER Aluliner**
- 6 Timber
- 7 Finish, wooden paneling



section B

section C



# SITE B VILLEFONTAINE



## SURROUNDINGS

-  culture & leisure
-  nature
-  public services
-  sports
-  site

Located in southeastern France, Villefontaine is a growing and youthful town of around 19,000 residents. Since its development in the 1970s, it has become known for its vibrant community, innovative spirit, and diverse urban landscape.

The city is home to the Campus de la Construction Durable, including Les Grands Ateliers, where students and professionals explore sustainable building and design. This campus draws visitors from across France, making Villefontaine a hub of architectural and environmental innovation.

Residential areas to the north from the site feature mid-20th-century apartment blocks, while the southern side of the site is dominated by single-family homes. Social housing contributes to the town's inclusivity and diversity.

With a large population of children and young families, and a wide range of schools and training centers Villefontaine places a strong emphasis on education and opportunity.

Its lively cultural life, active associations, and frequent public events create a dynamic and welcoming atmosphere. Villefontaine is a city where innovation meets community.



## DESIGN FUNCTIONS



### SHELTER

The cover works as a protective layer for buildings. It keeps rain and excess sunlight away while offering a comfortable way to move between buildings.



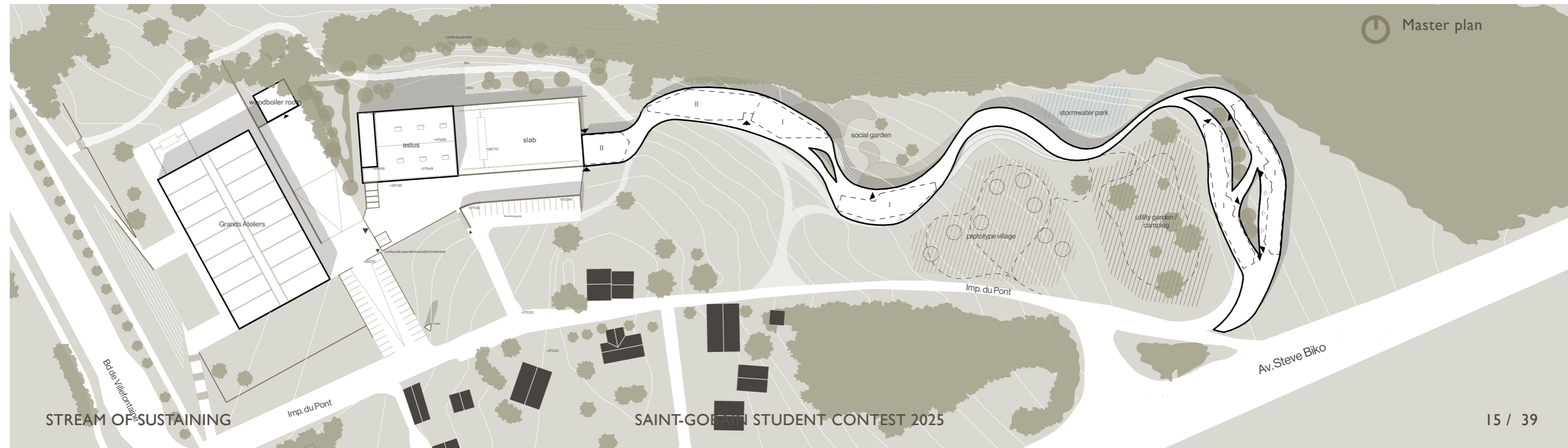
### DIVISION

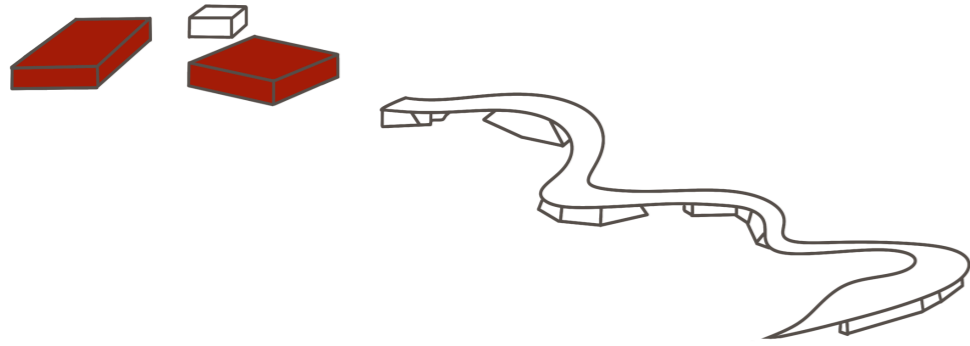
A design that functions as a dividing element throughout the whole site. A clear path through almost a field-like site is a comfortable way to enjoy nature during daily activities.



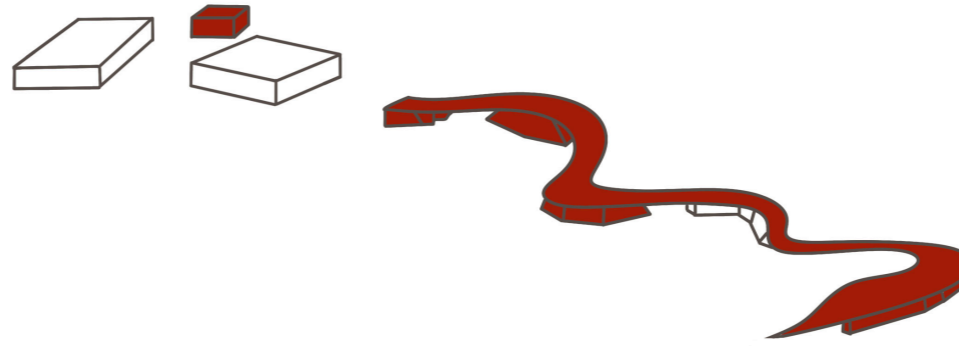
### PUBLIC NATURE

Keeping a lot of the natural environment and using it like a park creates more opportunities for the villagers to visit the site and the site serves as a public natural area for the surrounding neighborhood.

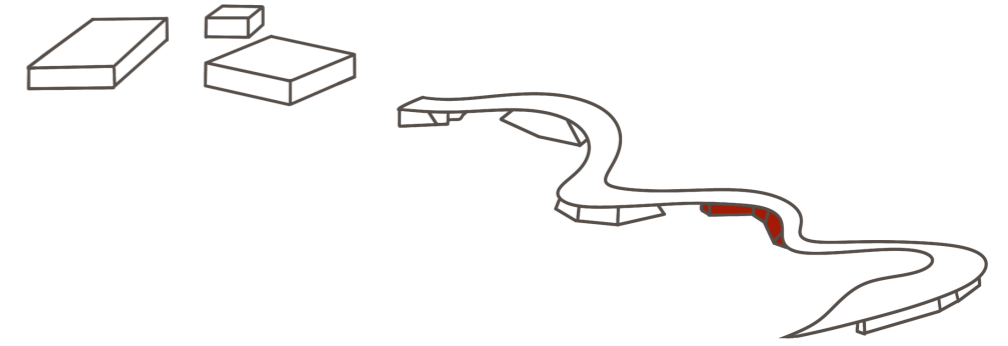




**CURRENT BUILDINGS**

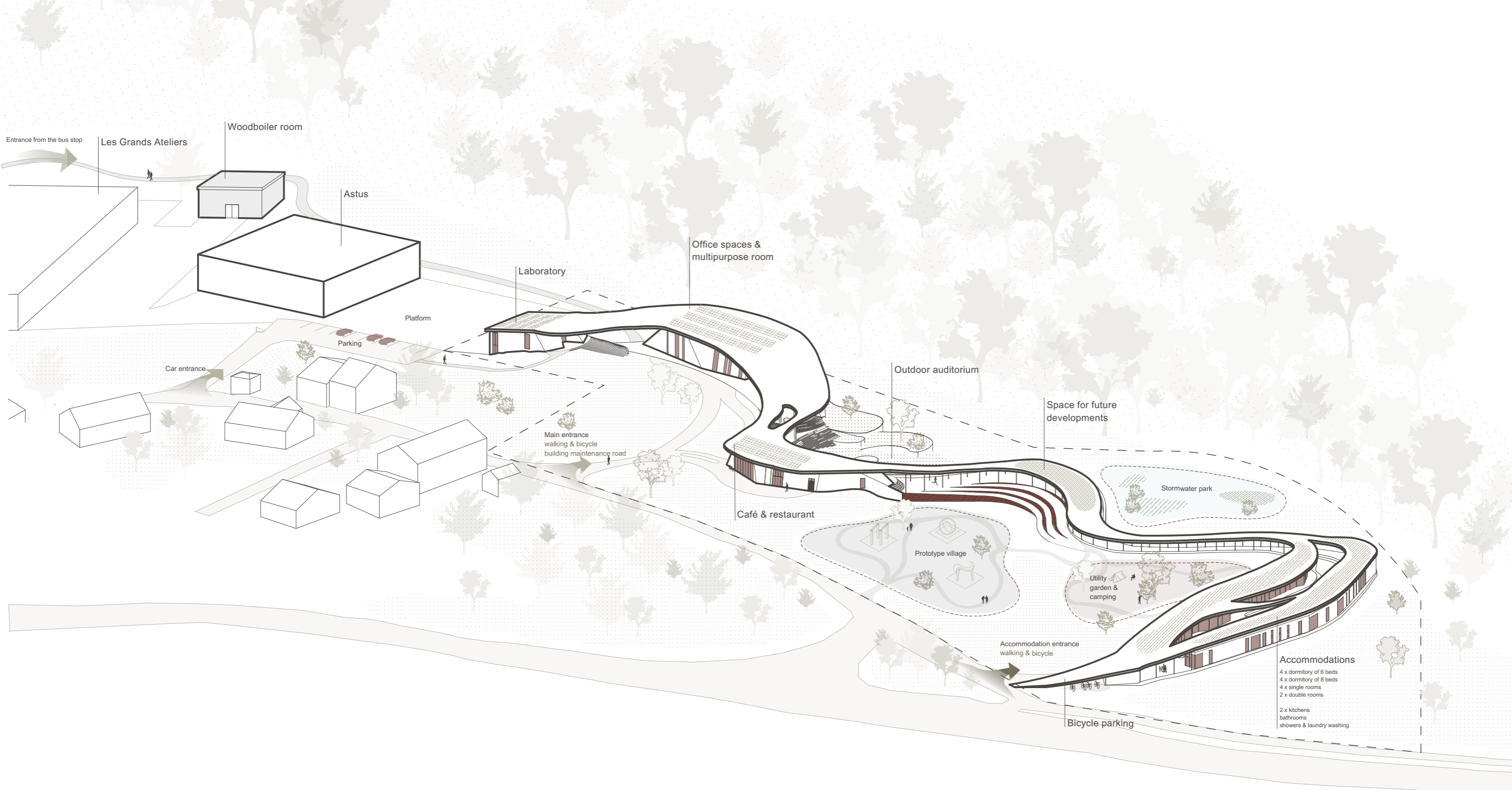


**NEW BUILDINGS**



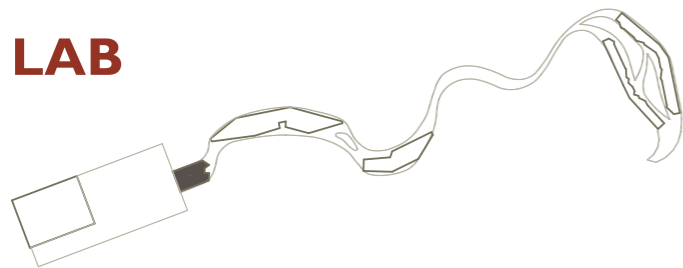
**RESERVED FOR FUTURE PLANS**





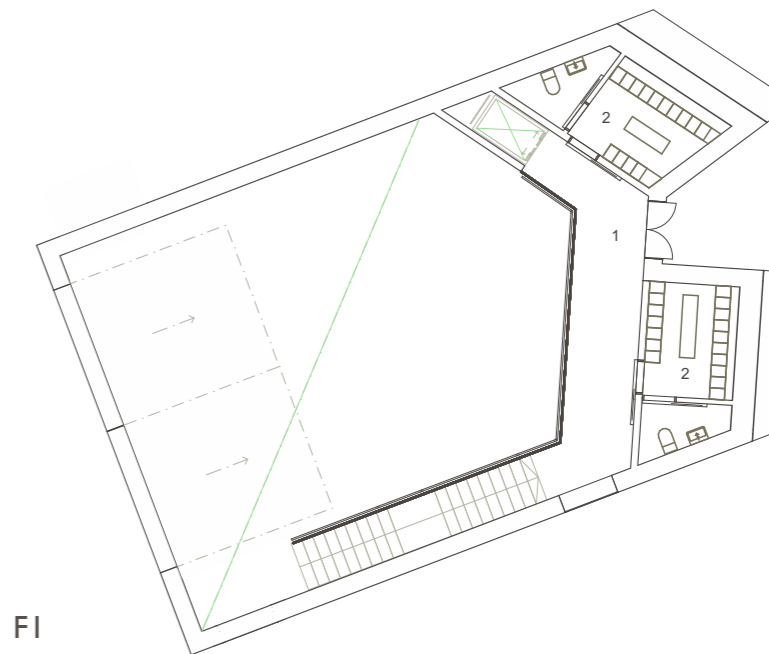
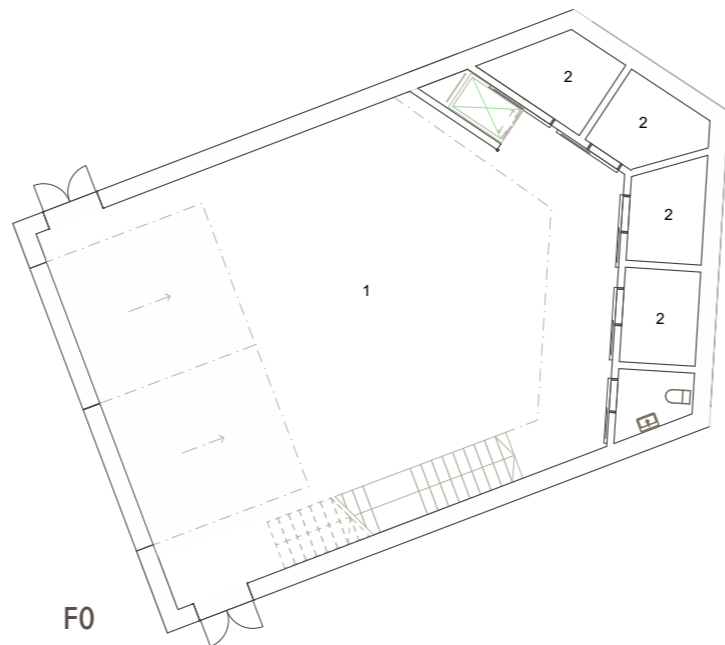
- Accommodations**
- 4 x dormitory of 6 beds
  - 4 x dormitory of 8 beds
  - 4 x single rooms
  - 2 x double rooms
  - 2 x kitchens
  - bathrooms
  - showers & laundry washing

# LAB



The laboratory is directly accessible from the platform through full-width roll-up doors. The ground floor features a high-ceilinged space that is visible from the mezzanine above. Beneath the mezzanine are the machine rooms and restroom facilities.

The second floor includes changing rooms and provides an accessible route to the parking areas via the higher ground level. The laboratory is also equipped with an elevator, ensuring accessible movement between the different ground levels.

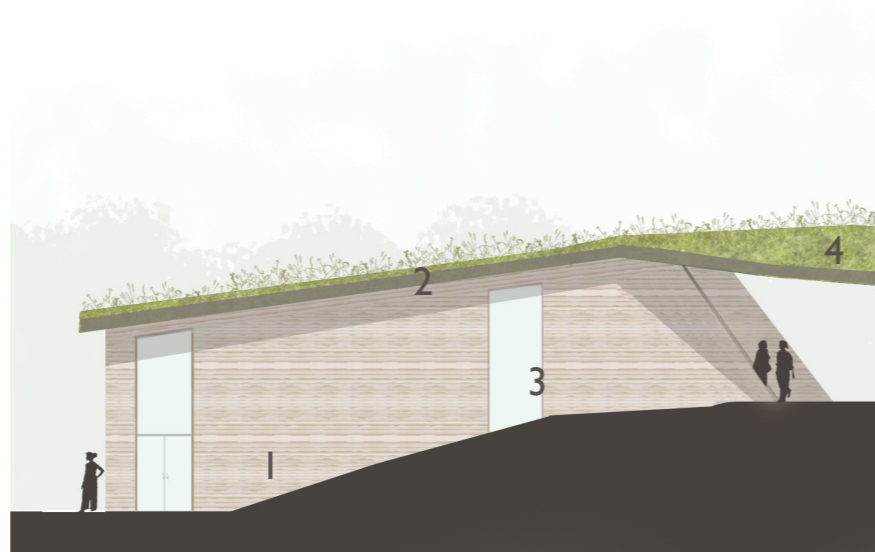


## F0 PLAN

- 1 Lab connected to the existing slab
- 2 Machine rooms

## F1 PLAN

- 1 Entrance hall
- 2 Changing rooms



## SOUTH FACADE

- 1 Hempcrete, Weber Tradical®
- 2 Green roof
- 3 Glass, COOL LITE®XTREME ORAÉ®
- 4 Wood

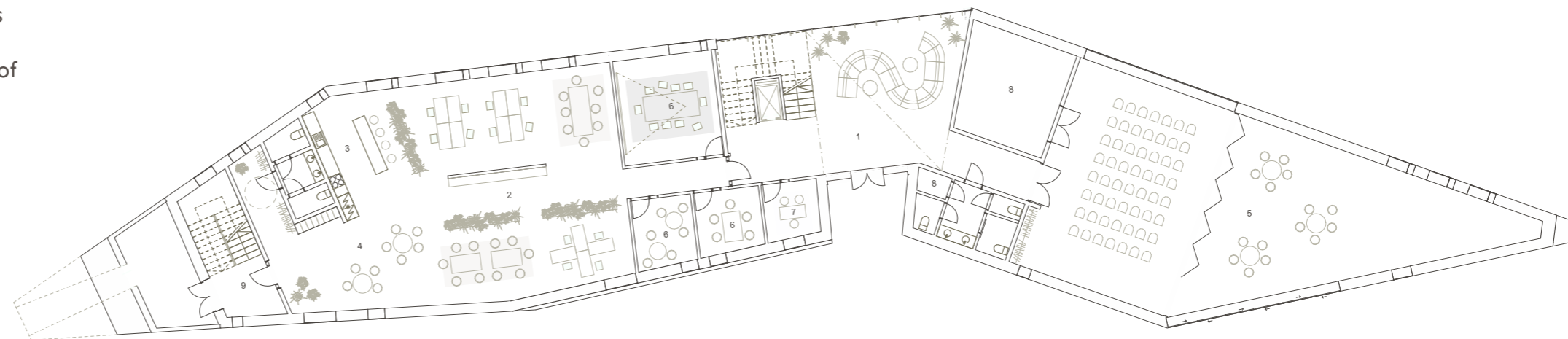


# OFFICE



The office building is located between the laboratory and the restaurant, making movement between the buildings easy and efficient. The entrance leads into a spacious lobby with a large north-facing window offering a view of the surrounding forest.

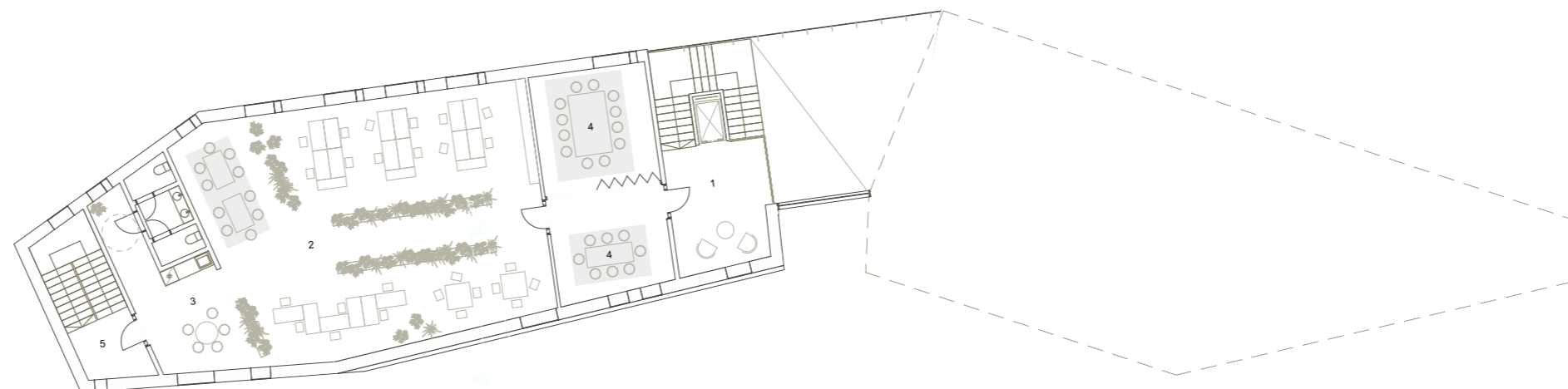
On the right from the entrance is a high-ceilinged multipurpose room, which also opens directly to the outdoors through wide sliding doors, making it ideal for organizing exhibitions and welcoming visitors. This connection allows events in the multipurpose room to naturally extend into the outdoor area.



F1

## F1 PLAN

- 1 Entrance hall
- 2 Office
- 3 Kitchen
- 4 Common Space
- 5 Multipurpose room
- 6 Meeting room
- 7 Reception
- 8 Storage space / Technical space

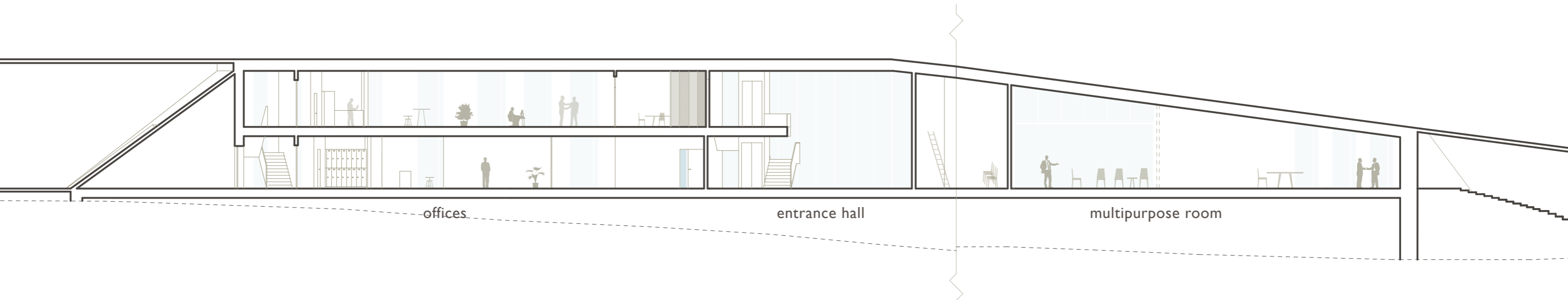


F2

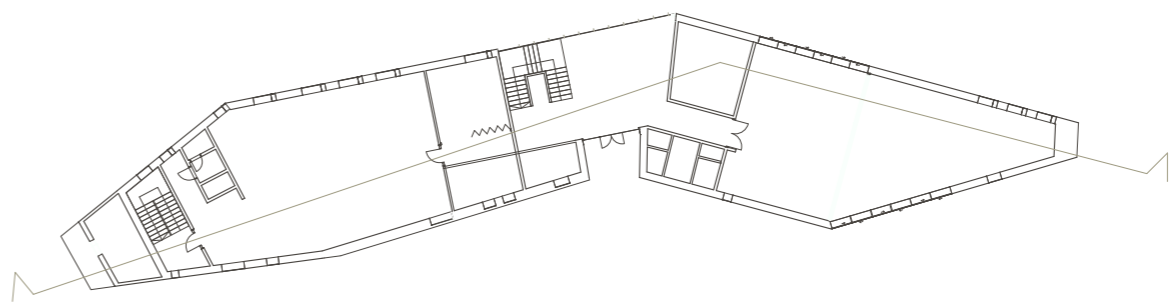
## F2 PLAN

- 1 Entrance hall
- 2 Office
- 3 Kitchen
- 4 Flexible meeting rooms
- 5 Secondary exit (fire exit)

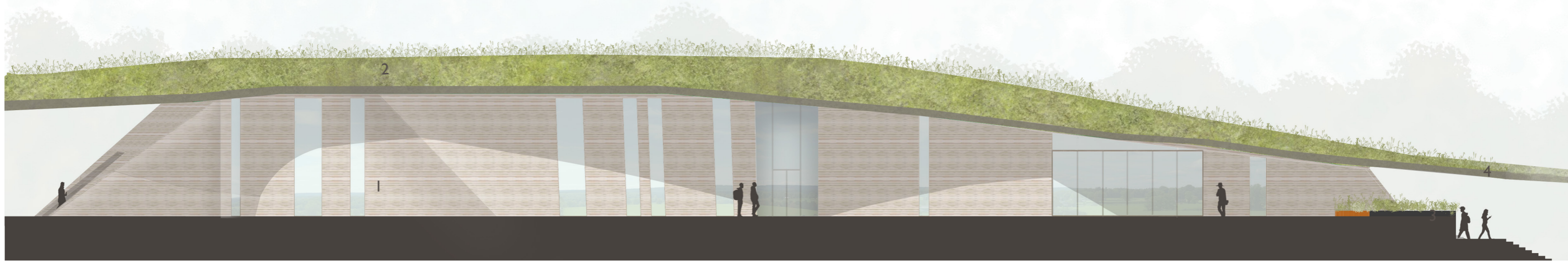
# OFFICE



The office spaces are distributed across two floors, each equipped with its own kitchenette for coffee breaks and meals. The offices are flexible and can be furnished in various ways to suit different needs. In addition to the open-plan area, there are also smaller adaptable rooms for meetings or private conversations.



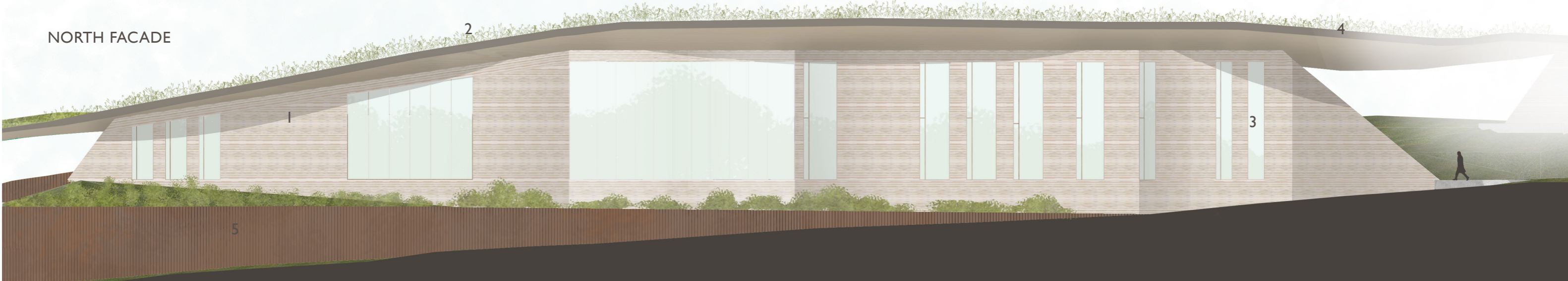
SOUTH FACADE



- 1 Hempcrete, Hempcrete Weber Tradical®
- 2 Green roof
- 3 Glass, COOL-LITE®XTREME ORAÉ®
- 4 Wood, untreated tamarack
- 5 Recycled steel panels



NORTH FACADE





Students arrange the display of their work in the multipurpose room connected to the office area. Sliding doors that open to the outside make it easier to transport the works and guide visitors through the upcoming exhibition.

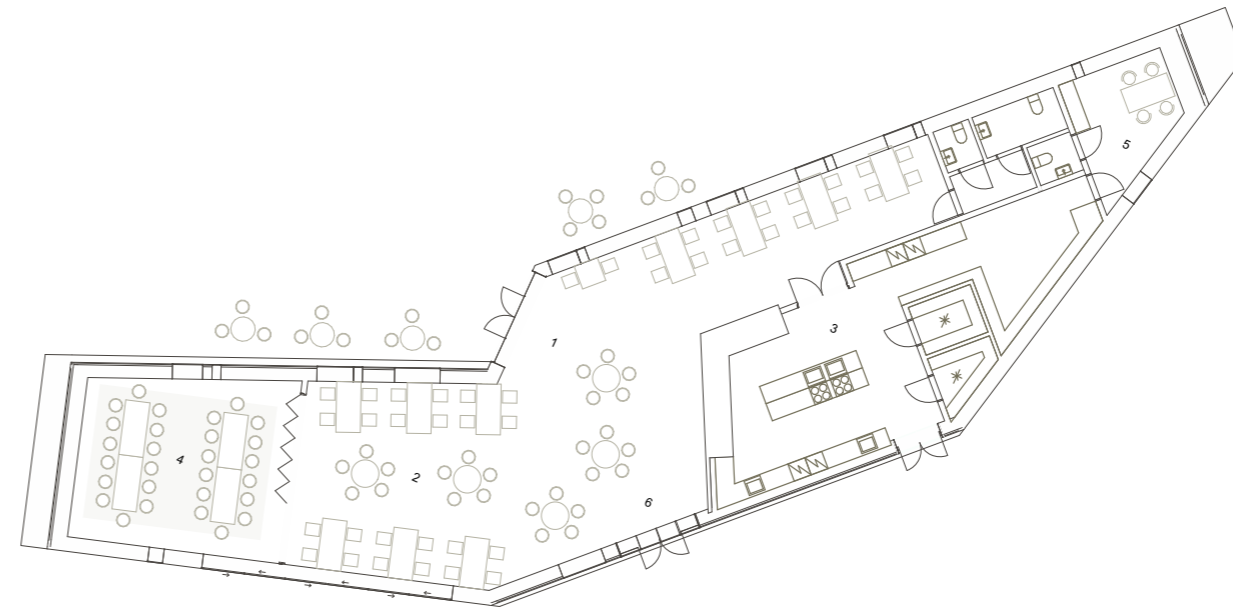
# RESTAURANT



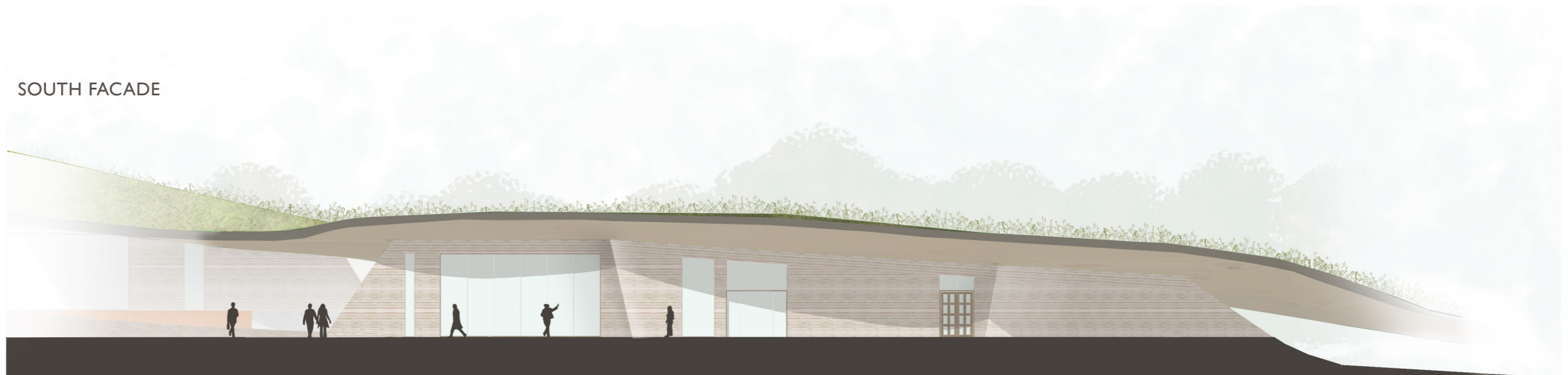
The café-restaurant supports the daily life of students and teachers while also attracting outside visitors to the area. It complements the services available in the surrounding neighborhood and enhances the appeal of the campus. Its terrace extends into the shared outdoor space between the buildings, activating the public area of the campus.

## FI PLAN

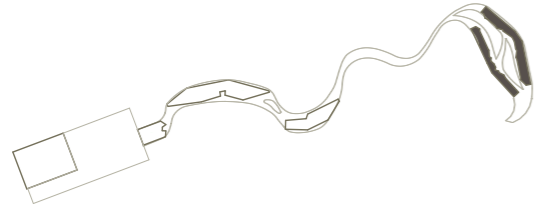
- 1 Entrance
- 2 Dining Hall
- 3 Kitchen
- 4 Cabinet
- 5 Staff space
- 6 Secondary exit



## SOUTH FACADE



# ACCOMMODATION



## FI PLAN

1 Common areas / Kitchen / Laundry x2

2 Bathrooms x4

3 Buffer space, covered terrace

+ accommodations

4 x room for 8

4 x room for 6

2 x room for 2

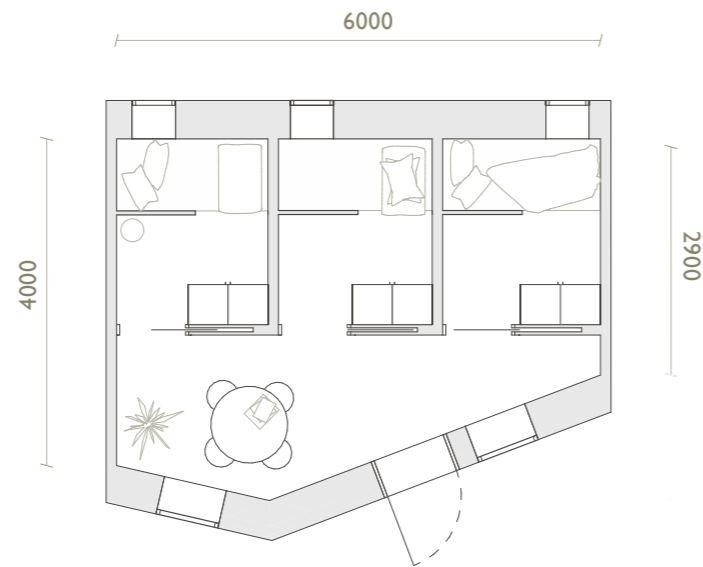
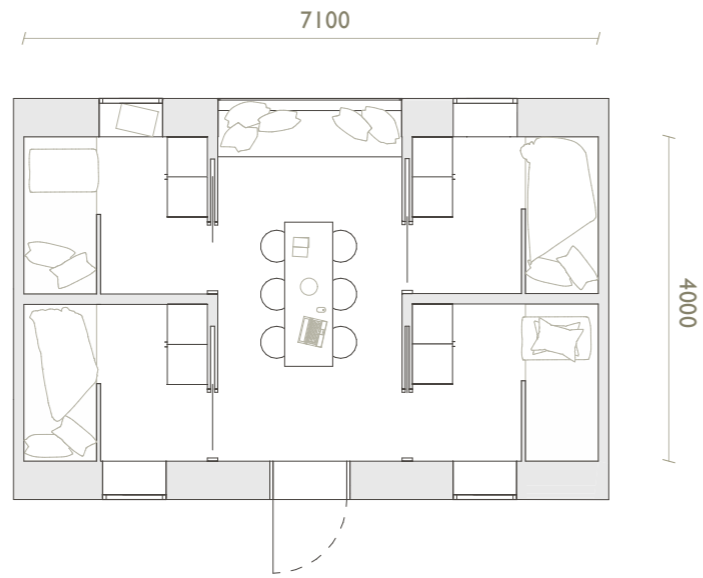
4 x room for 1

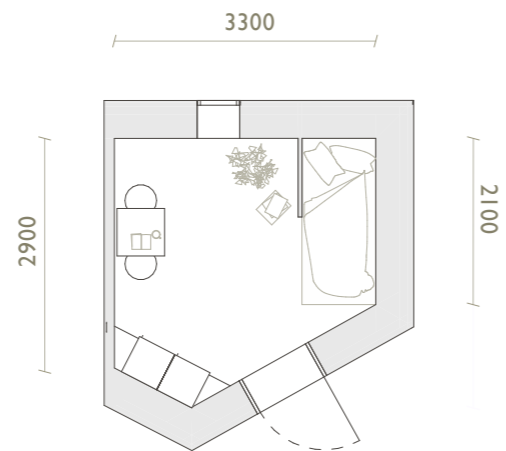
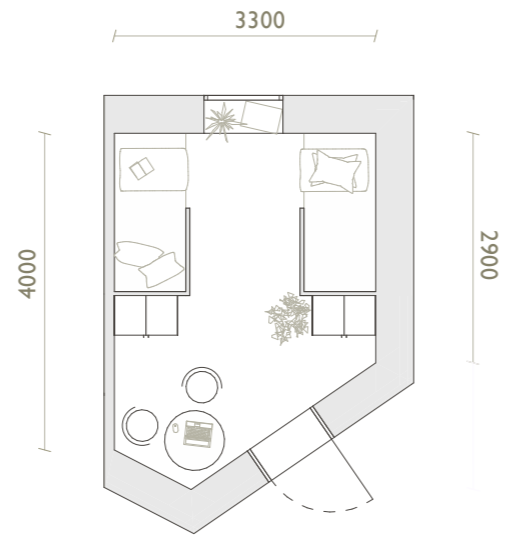
The accommodation facilities are located in the eastern part of the site, set apart from the other buildings to provide residents more privacy. Access to the accommodations is either via the main pathway coming from the other buildings or directly from a dedicated road, which also includes bicycle storage.

Each accommodation unit features a shared living area and sleeping spaces separated by sliding doors. The facilities also include two kitchens to ensure a higher quality of daily life, as well as toilets, laundry and shower areas, and both indoor and outdoor communal spaces to encourage a sense of community.

Access to the accommodation is through a semi-heated glazed buffer zone, improving the building's overall energy efficiency.










The decked terrace between the student accommodations offers a space to enjoy the surroundings during every season. It also encourages everyday encounters and the forming of community among students.

# CHOOSING MATERIALS

 chosen option

## NON BEARING WALL STRUCTURE

Metal  
+ Transformative and flexible  
- High carbon emissions


Wood  
- Less transformative  
+ Low carbon emissions

## INSULATION

Hempcrete (Saint Gobain)\*  
+ Low carbon emissions  
+ Safe for construction  
+ Decompostable  
+ Similar to traditional Pisé

Recycled fiberglass insulation  
+ Durable for another use  
- Not safe to work with

## BATHROOM FINISHES

Tadelakt finish\*\*  
+ Safe to work with   
+ Decomposable  
+ Education possibility  
- Needs to be renewed every 1-2 years

Ceramic tiles  
+ Durable  
- Hard to recycle

## FACADE

Metal  
+ Transformative and flexible  
+ Aesthetics  
- High carbon emissions

Wood  
+ Shows the natural stages of aging  
+ Low carbon emissions  
- Less waterproof  
- Less transformative

\***Hempcrete** is a bio-composite material made from hemp hurds, lime, and water. It is lightweight, breathable, and has excellent thermal and moisture-regulating properties. Used mainly for insulation rather than structural support, hempcrete is eco-friendly, carbon-negative, and promotes sustainable construction. At the end of its lifecycle, it can be naturally decomposed and returned to the environment without harm. The advantage of timber framing is its flexibility, which allows for all kinds of shapes.

\*\***Tadelakt** is a traditional Moroccan lime plaster technique known for its smooth, water-resistant, and breathable finish. It's polished with a stone and sealed with natural soap, making it ideal for bathrooms and wet areas. Eco-friendly and aesthetically rich, tadelakt offers a seamless, organic look with a soft sheen.



## EDUCATIONAL PURPOSES

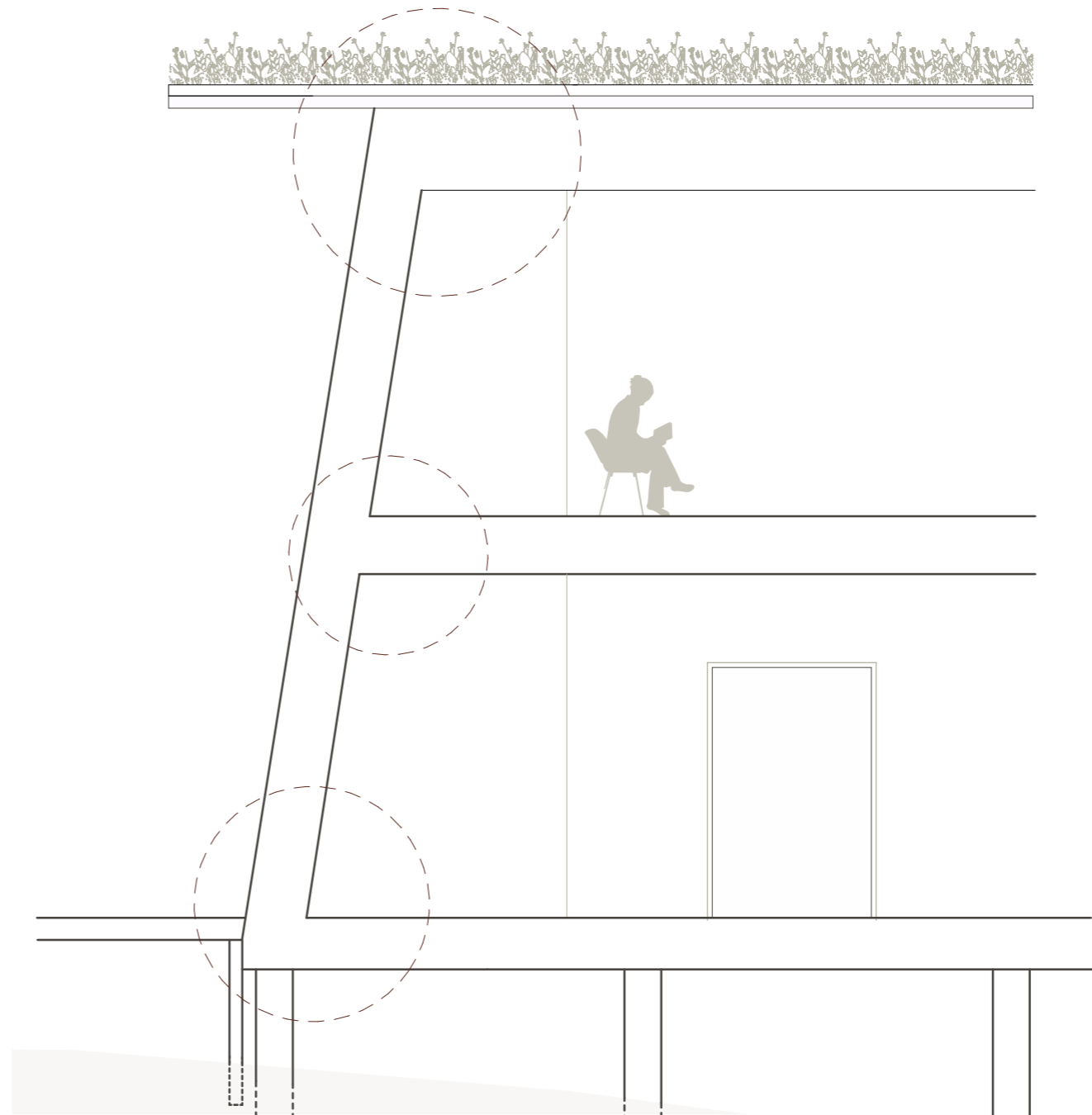
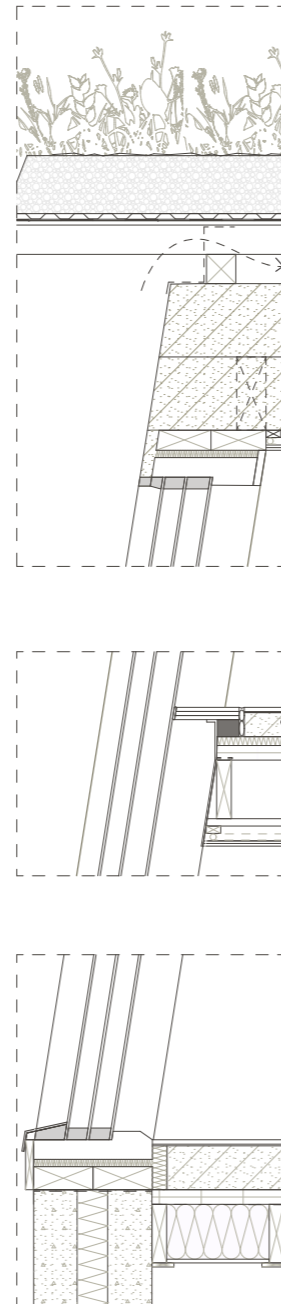
The chosen materials such as Hempcrete for the main building and using tadelakt method for the bathroom surfaces give the students a possibility to get to know alternative practises.

This allows the students to engage with lesser-known sustainable solutions. The use of tadelakt in bathrooms requires regular care, offering students hands-on experience in creating and preserving its water-resistant qualities.

Hands-on work helps students to understand materials and construction through real experience.

## WINDOW DETAIL 1:20

Window detail that gives an illusion of a seamless contact to the outside and the upper floor.



# STRUCTURAL DRAWINGS

**A**

**GEEN ROOF +-**

200 mm  
6 mm  
75 mm

Meadow/grassland vegetation  
Expanded clay (**Leca**) for planting  
Filter fabric  
Drainage, water-retaining board  
Drainage mat, covered with filter fabric on both sides  
Root protection membrane  
Waterproofing, 3 layers of bitumen membrane TL 2, fully adhered or welded

200 mm  
100 mm  
250 mm

Recycled rubber coating  
Timber structure, air gap  
Woodfiberboard  
**Hempcrete Tradical Weber**  
Bearing timber structure

250 mm

**Weber Tradical Hempcrete**  
Bearing timber structure  
250x100 mm

50 mm  
18 mm

Air gap for sprinklers and installations  
**Gypsum board, Placo Multiconforts**

Thickness:  
U-value:

1149 mm  
0,138 W/(m²K)

**C**

**FLOOR BETWEEN STORIES**

3 mm  
80 mm  
30 mm  
50 mm  
200 mm  
25 mm  
50 mm  
18 mm

Wood parquet  
Linen soundproofing mat  
**Hempcrete Tradical Weber**, floor heating  
**ISOVER Comfort FLO**  
CLT  
Beams (Bearing)  
Plywood board  
Sprinkler system  
Fire safe gypsum board

Thickness:  
DnT,w:

474 mm  
≥ 55 dB

**B**

**EXTERNAL WALL +-**

2 mm  
2 mm  
150 mm

Chalk finish, light grey  
Attachment lining, gobetis  
**Hempcrete Tradical Weber**  
Bearing timber structure  
300x100 mm

100 mm  
200 mm

Woodfiber insulation **Isonat Flex 55**  
**Hempcrete Tradical Weber**

Thickness:  
U-value:

450 mm  
0,147 W/(m²K)

**D**

**BASE FLOOR +-**

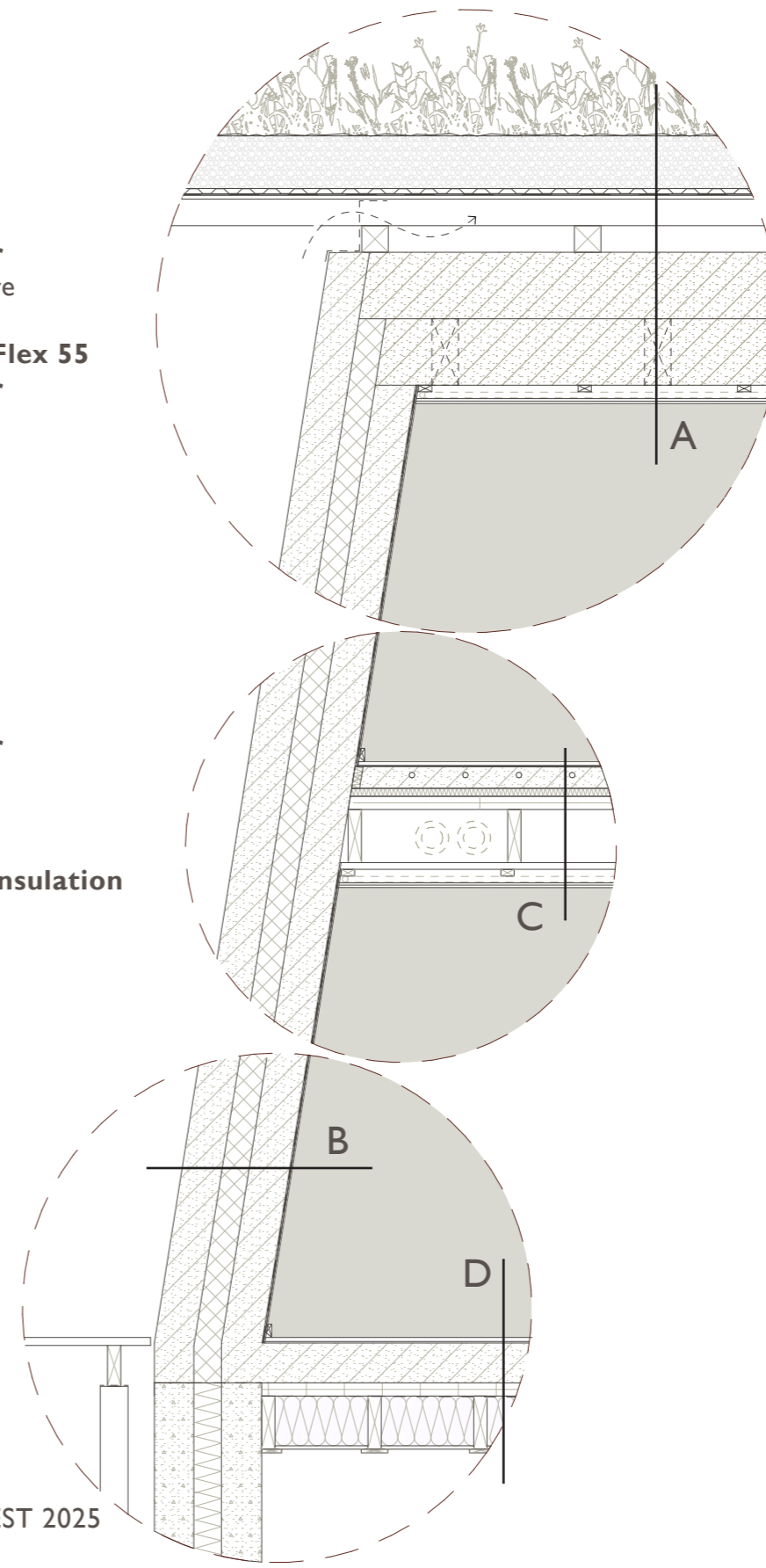
6 mm  
120 mm  
50 mm  
0,2 mm  
200 mm

Wood parquet  
Linen sound proofing mat  
**Hempcrete Tradical Weber**  
CLT  
**Isover Vario® XtraSafe**  
Timber structure  
**Isover Premium 33 Insulation**  
200 mm  
Woodfiberboard

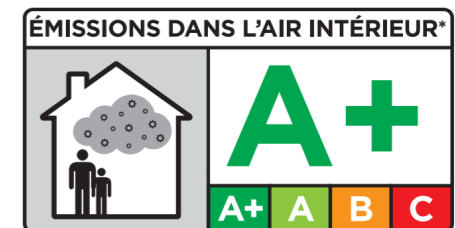
15 mm

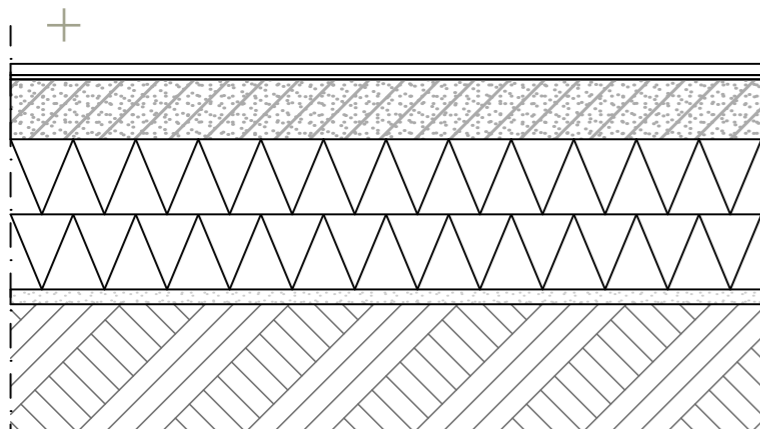
Thickness:  
U-value:

391 mm  
0,150 W/(m²K)



A+ certification Eurofins n°G15614

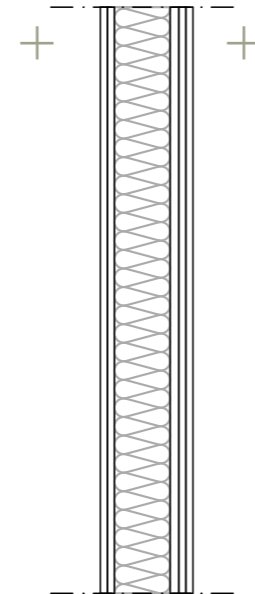




### LAB FLOOR +/-

100 mm	Interior finish <b>Chryso EnviroMix concrete,</b> floorheating
200 mm	Thermal insulation
20 mm	Leveling sand
300 mm	Drainage layer

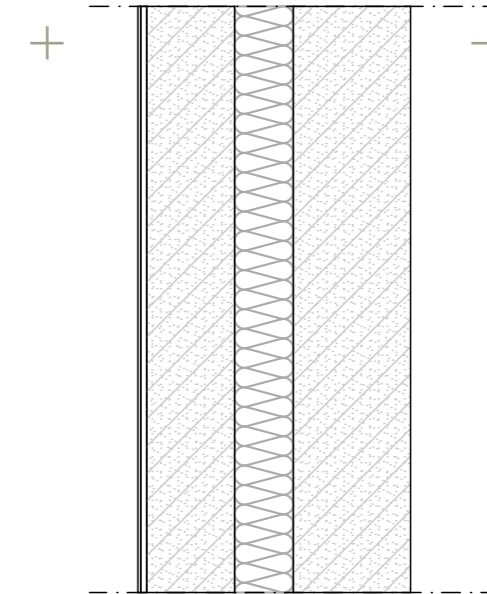
Thickness: **620 mm**



### WALL BETWEEN APARTMENTS

12,5 mm	Interior finish, white paint
12,5 mm	<b>Gyproc Rigidur H GFH 13 AK</b>
120 mm	<b>Gyproc GN 13 Normal Klima</b>
15 mm	Timber structure 120x50 mm
12,5 mm	Air gap
12,5 mm	<b>Gyproc GN 13 Normal Klima</b>
12,5 mm	<b>Gyproc Rigidur H GFH 13 AK</b>
	Interior finish, white paint

Thickness: **185 mm**  
DnT,w: **≥ 55dB**



### EXTERNAL WALL, BATHROOMS +/-

10 mm	Beeswax protective sealer
10 mm	Oil based soap sealer
150 mm	Tadelakt plaster
	Mortar sand and hydrated dry lime base
	<b>Hempcrete Weber Saint Gobain</b>
	Bearing timber structure
	300x100 mm
100 mm	<b>Woodfiber insulation, Isonat Flex 55</b>
200 mm	<b>Hempcrete Weber Saint Gobain</b>

Thickness: **465 mm**  
U-value: **0,147 W/(m²K)**



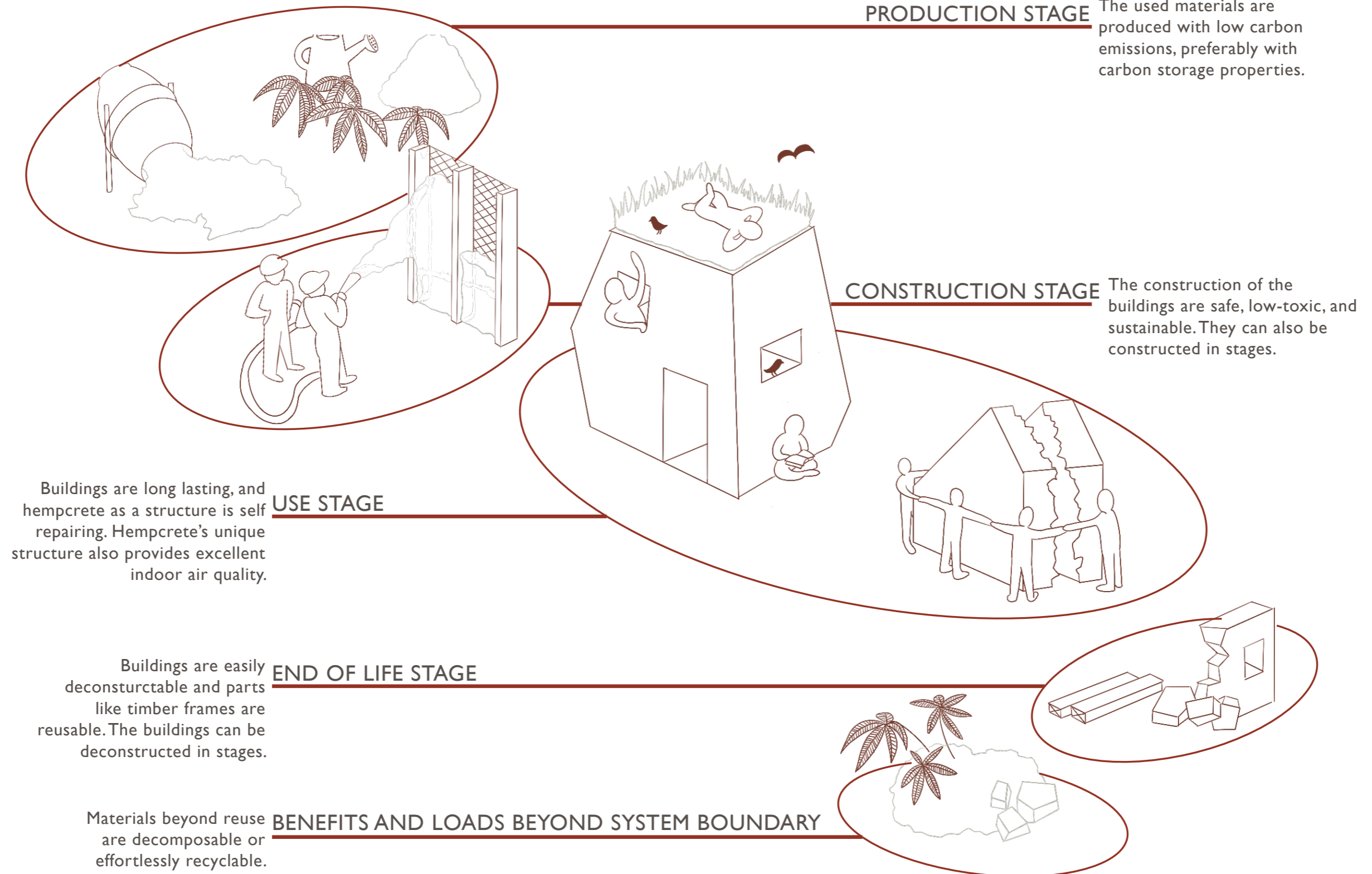
STREAM OF SUSTAINING



SAINT-GOBAIN STUDENT CONTEST 2025



# LIFE CYCLE ASSESSMENT

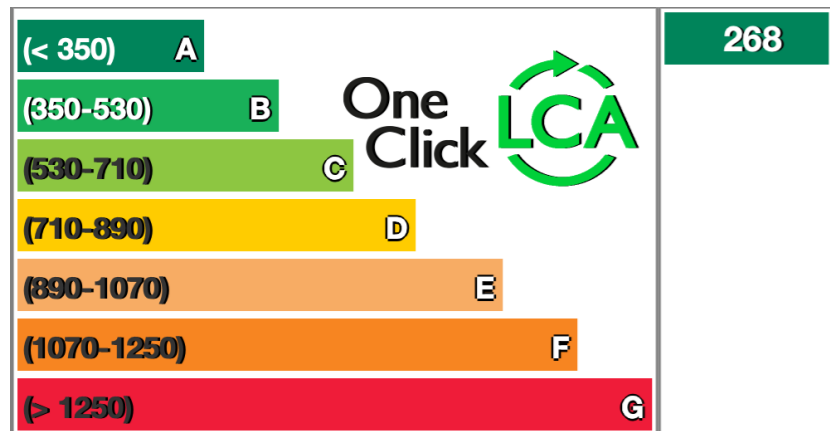




As the surrounding green spaces merge, the area between the educational buildings and restaurant create an auditorium. This auditorium can be used in different events and as a social gathering space. The auditorium is formed with stairs and slopes and creates shelter from harsh sunlight.

SAINT-GOBAIN STUDENT CONTEST 2025

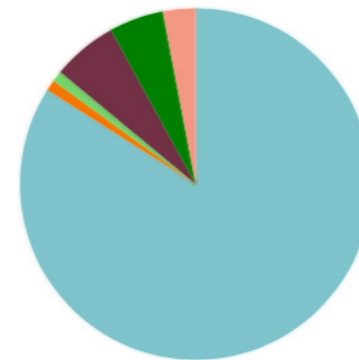
# ENERGY EFFICIENCY CALCULATIONS



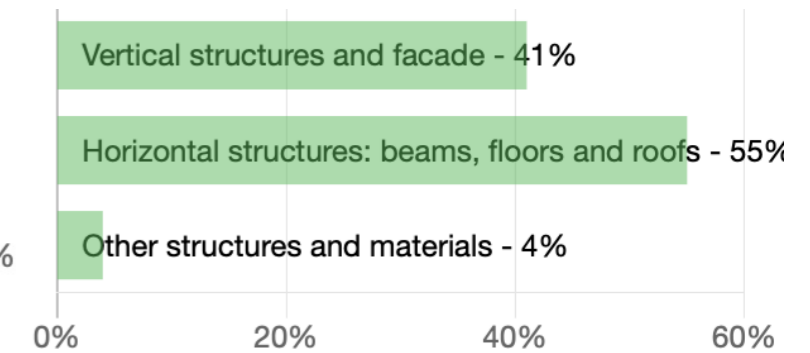
Rakennuksen nimi ja osoite:	Uudispienitalo YM:n energiatodistusoppaan esimerkki
Pysyvä rakennustunnus:	
Rakennuksen valmistusvuosi:	2018
Rakennuksen käyttötarkoitusluokka:	Yhden asunnon talot
Todistusnumero:	
Energiatodistus on laadittu:	Uudelle rakennukselle rakennuslupaa haattaessa

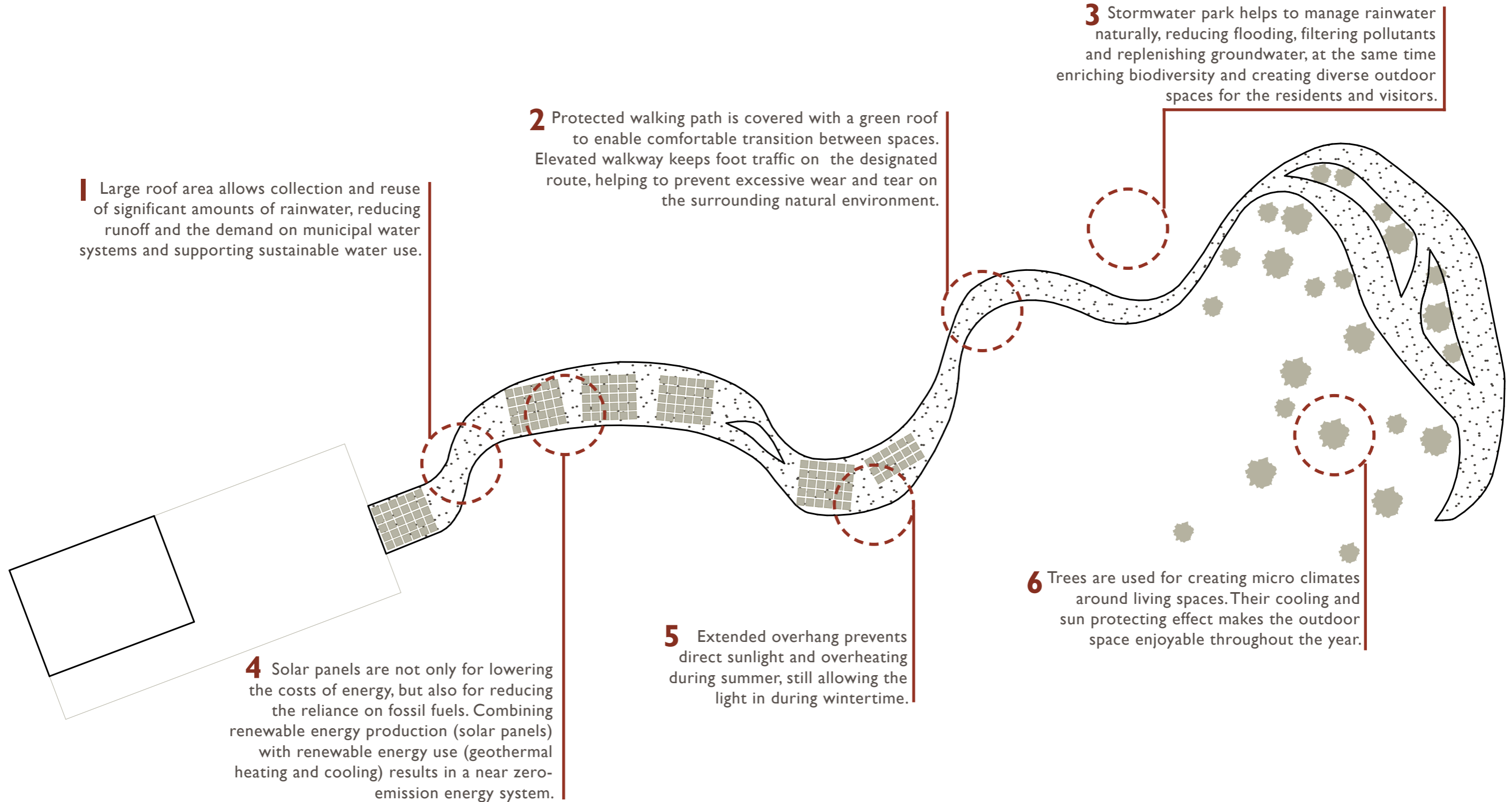
	Energiatodistusluokka
A	← A 2018
B	
C	
D	
E	
F	
G	



- A1-A3 Materials- 84 %
- A4 Transport- 1 %
- A4 Transport- 1 %
- B4-B5 Replacement- 6 %
- C3 Waste processin...- 5 %
- C4 Waste disposal- 3 %



# SUSTAINABILITY STRATEGY

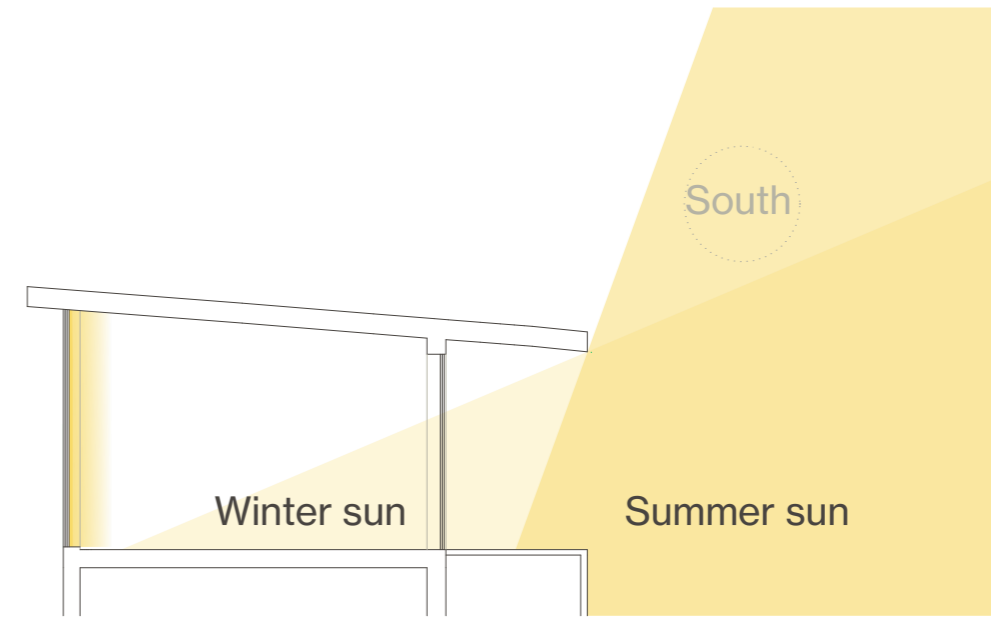
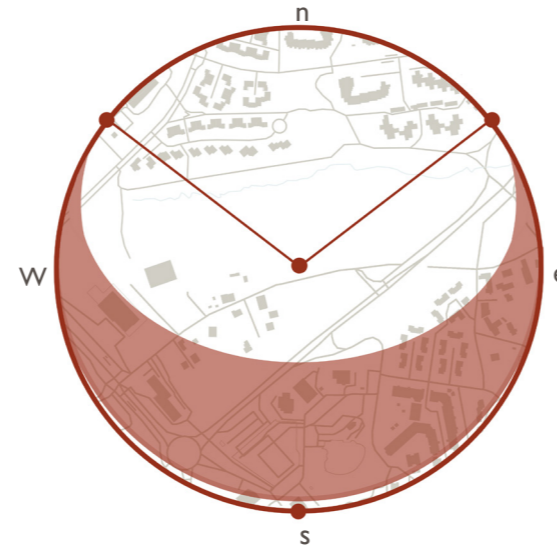


## SUNLIGHT ANALYSIS

The building's windows are designed to optimize indoor thermal comfort and support passive design strategies. South-facing windows are smaller, while larger glazed surfaces are oriented to the north to allow in soft, diffused light.

A large overhang above the southern windows effectively prevents overheating during summer. In winter, the lower sun angle allows direct sunlight to enter the interior, helping to warm the indoor spaces.

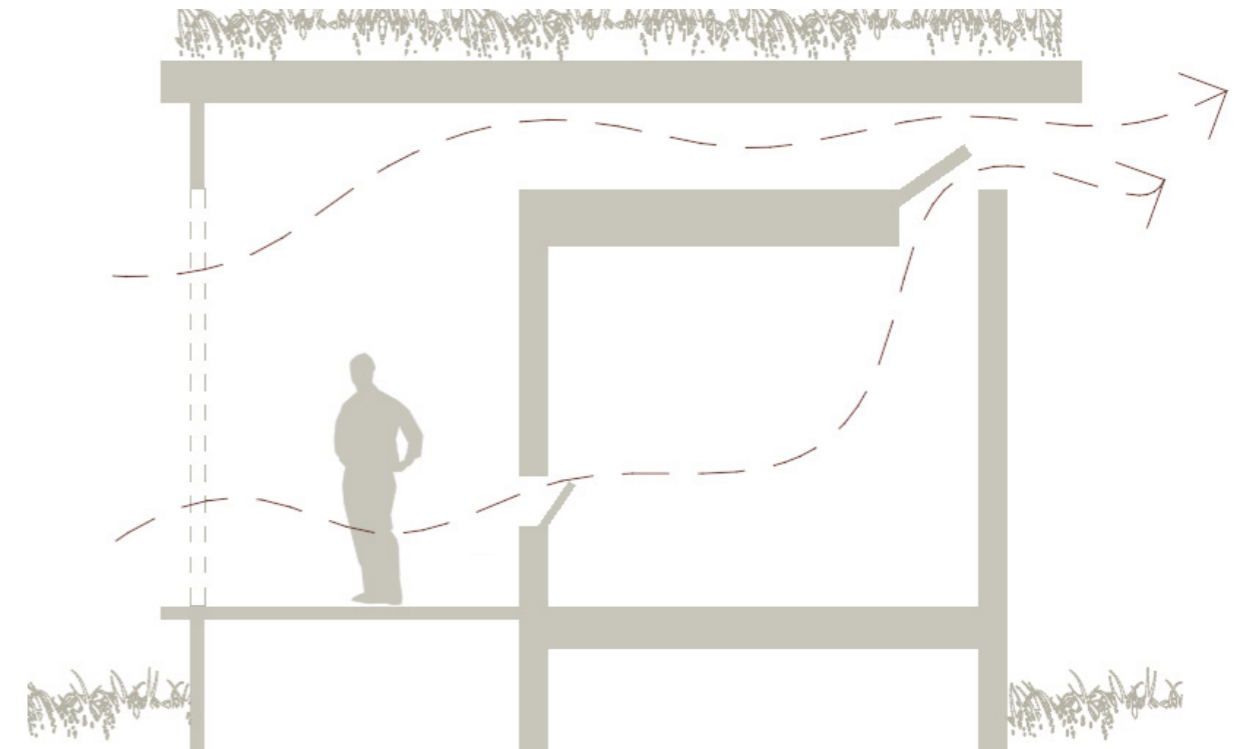
In the sun path analysis graph the sunlight has been observed throughout the whole year. Results guided the design to provide shelter from the scorching heat.



## VENTILATION SYSTEM

The buildings feature passive ventilation systems that naturally circulate the air. This provides cooling air circulation in the summer heat while providing fresh air in the winter and keeping the interior pleasant. This minimises reliance on mechanical cooling and heating, also reducing the energy usage of the building and making the building self reliant.

Indoor air comfort that is made possible by the material choices of the buildings, concentrating on naturally sound-absorbing materials, windows that provide natural, passive ventilation, buffer zones that collect the excess heat from the buildings while also being used for sociality without excessive use of heating.



## STORMWATER PARK

### ZONE 1

plants tolerating standing water

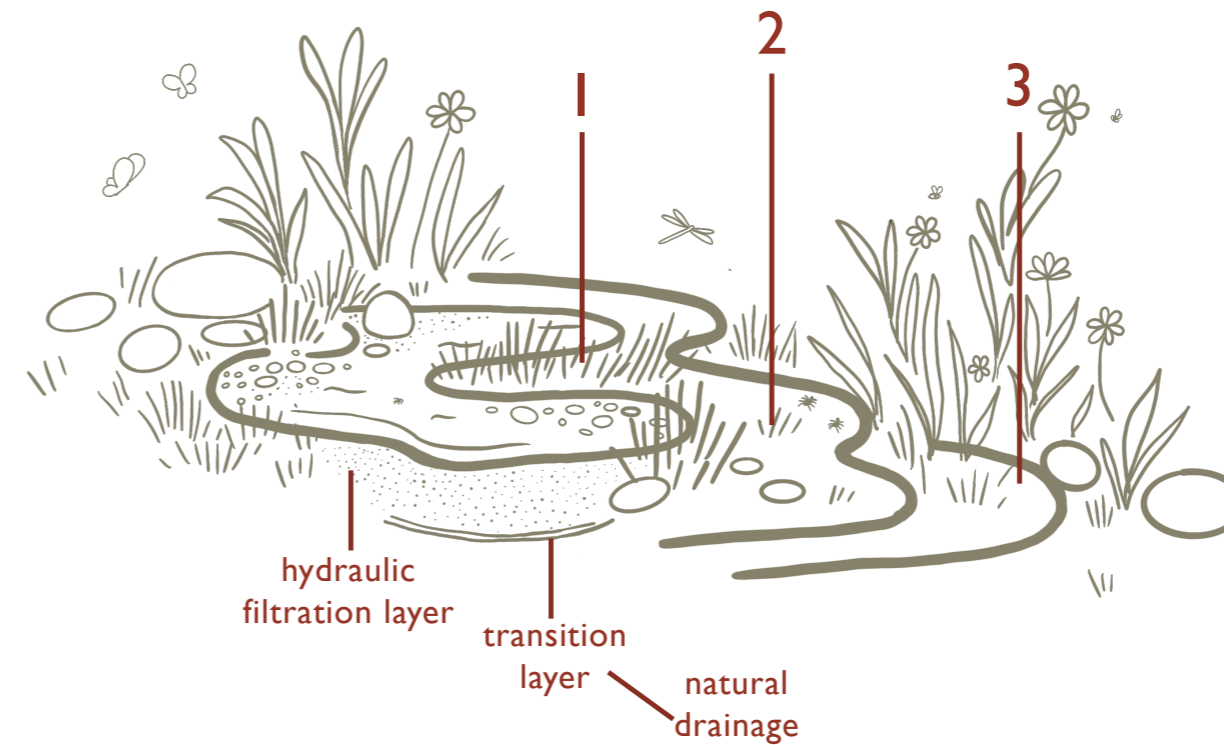
### ZONE 2

plants tolerating occasional standing water

### ZONE 3

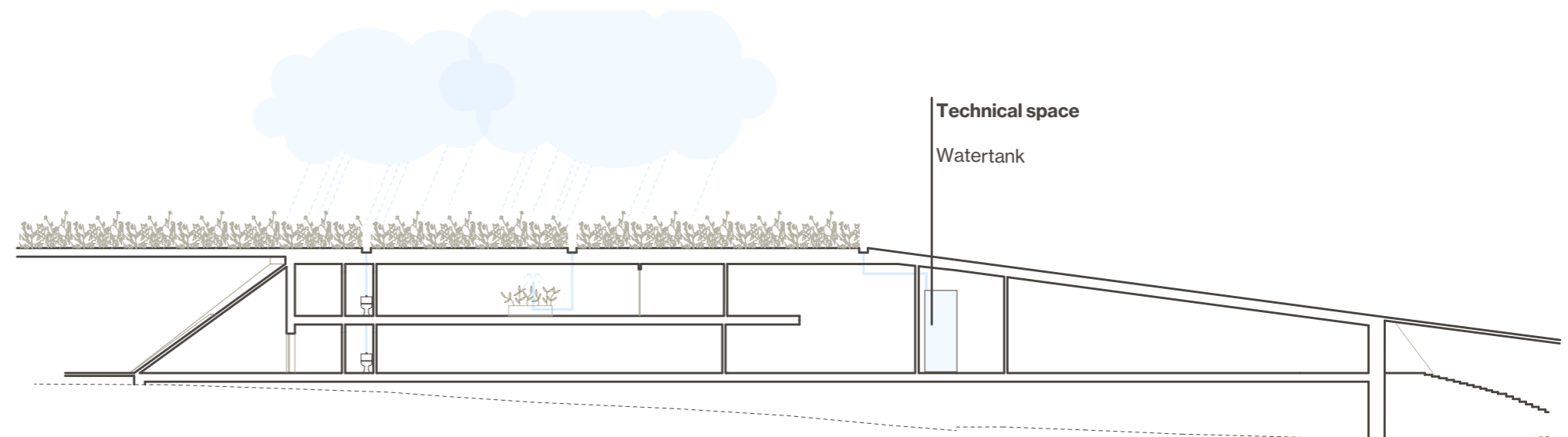
plants for drier conditions

The stormwater park provides a versatile outdoor space for the surroundings while preventing nutrients from being washed away with runoff. In addition to retaining stormwater, it also filters it, allowing clean water to gradually seep into the groundwater instead of being lost in the stream. This type of green infrastructure enhances biodiversity by enriching the soil and supporting a wide range of plant species.



## RAINWATER HARVESTING SYSTEM

This system, located on the continuous rooftops of the buildings, collects rainwater and stores it in a shared water tank for greywater use, such as toilet flushing and garden irrigation. It reduces the consumption of potable water for secondary purposes and helps prevent soil erosion by reusing the water instead of allowing it to wash nutrients into nearby water bodies.

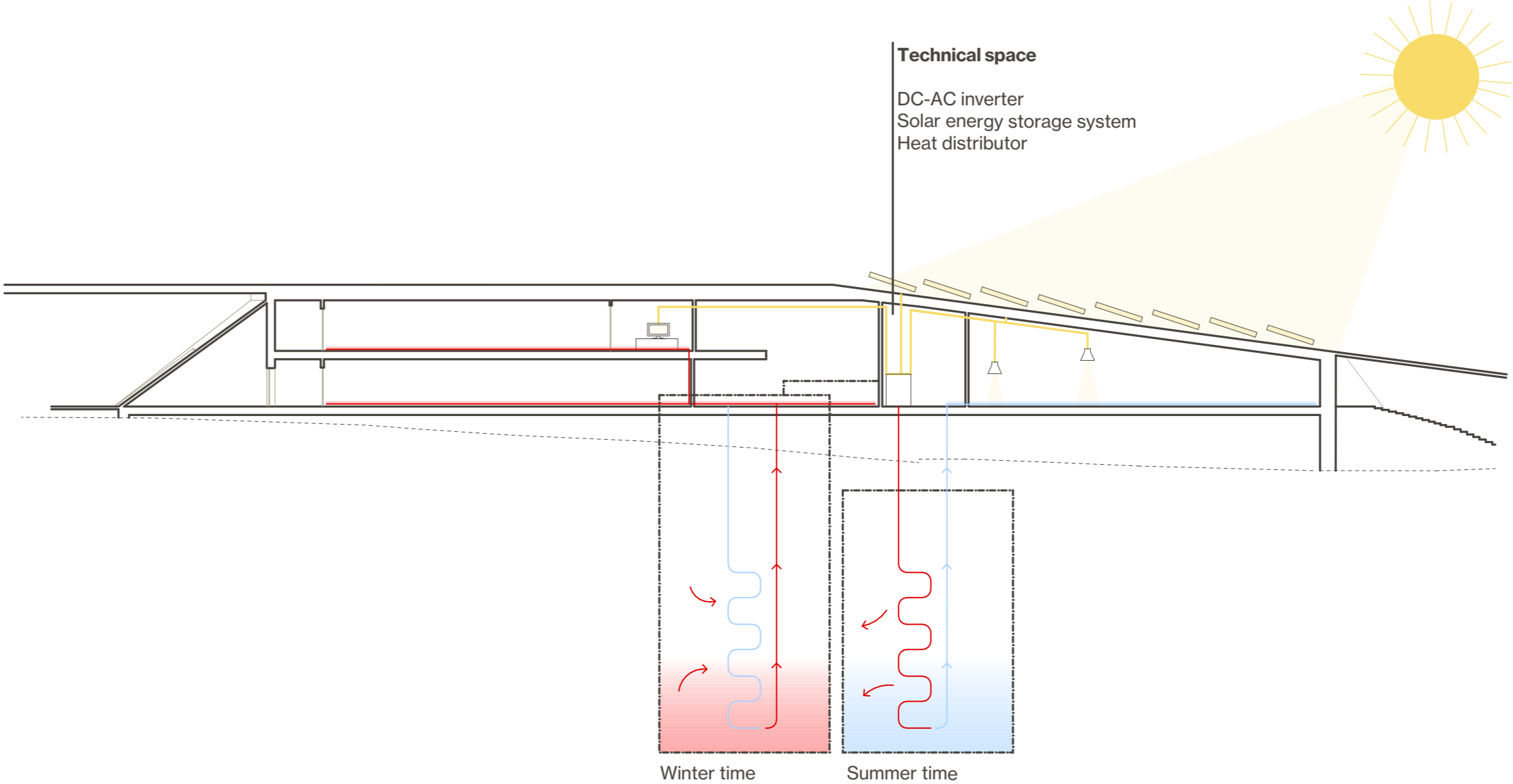
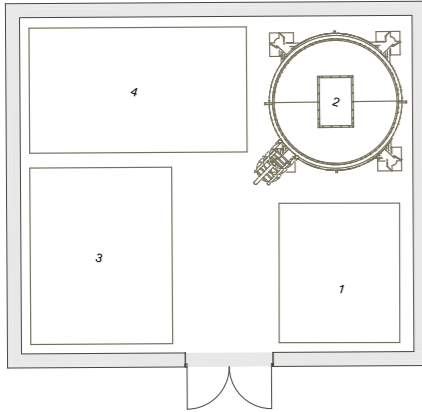


# ENERGY SOLUTIONS

Technical space for a geothermal heating and cooling system is located in the same building with the boiler room to centralise the different energy resources.

## BOILER ROOM

- 1 Shredder
- 2 Silo
- 3 Boiler room





The river runs, the city flows  
– time carves both.