ARCHITECTURE STUDENT CONTEST

EDITION 2025 - Nord Isère

PROJECT TEAM

Yasar University | Faculty of Architecture | Team 23

Assist.Prof. (PhD) Matthieu Joseph Pedergnana

Ahmet OKUŞ
Türkiye

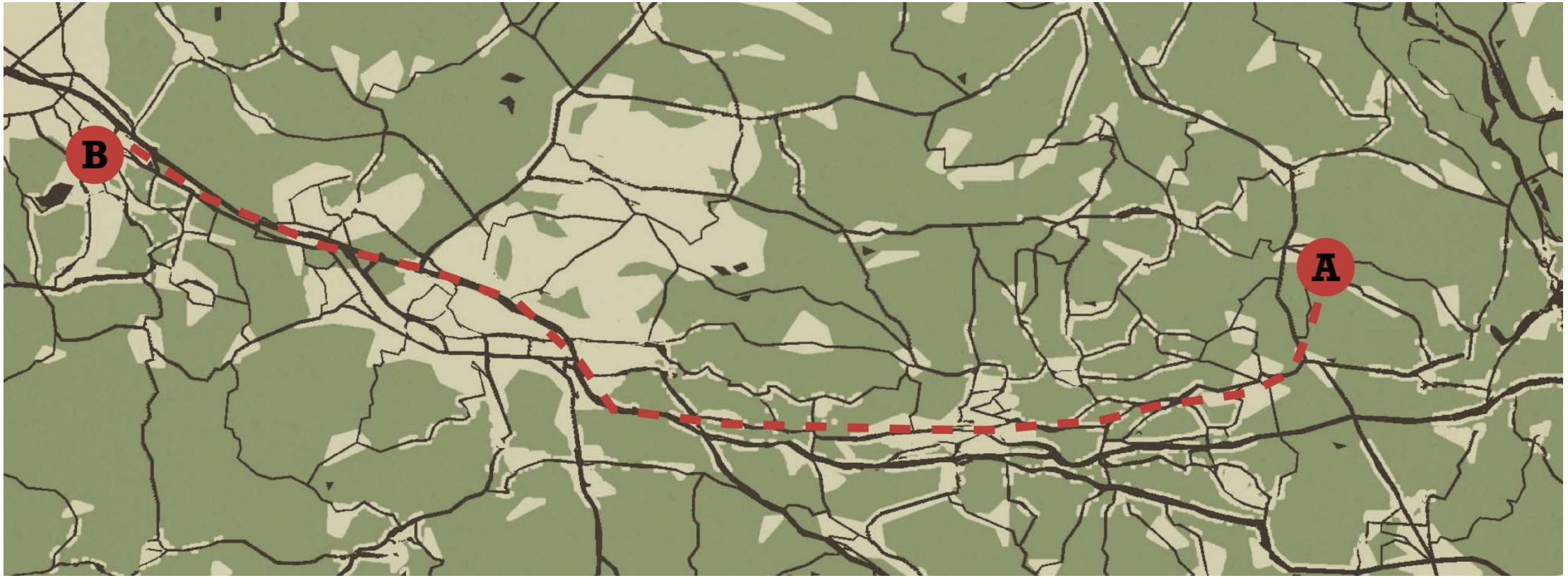
Ecenaz ADIGÜZEL
Türkiye

Sıla Yaren KURT
Türkiye

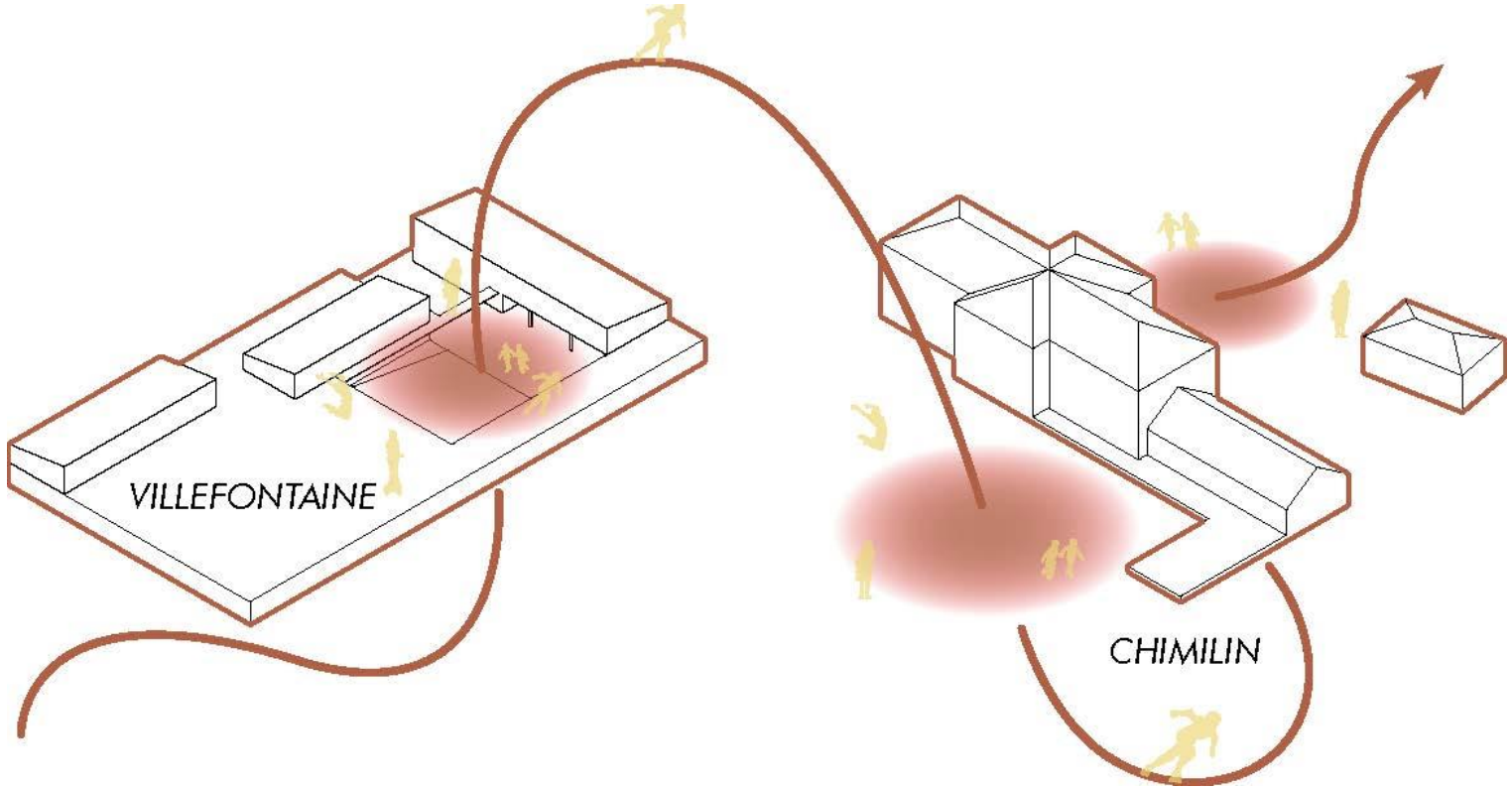
SAINT-GOBAIN

THE COMMUNE GROUND

PROJECT SITES



PROJECT SITES

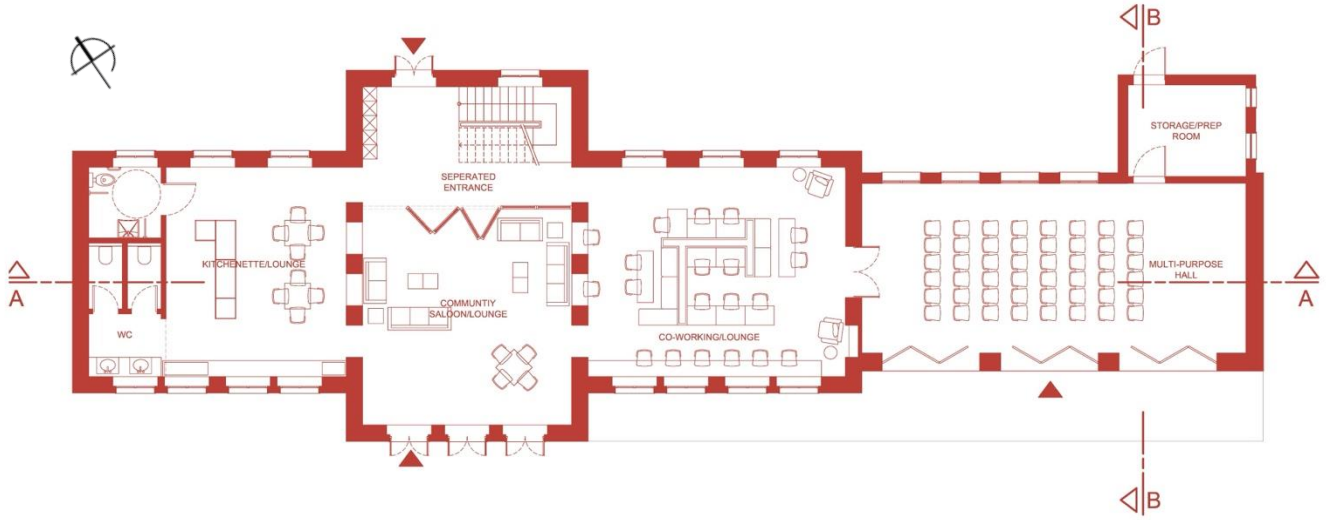


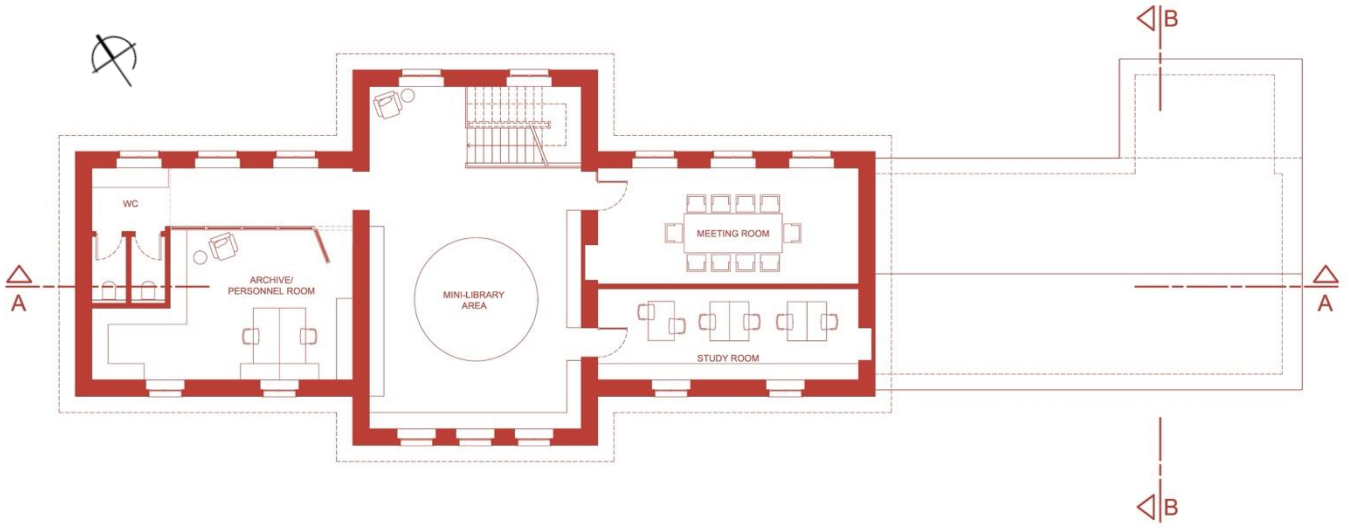
SAINT-GOBAIN

ZONE A | CHIMILIN

SAINT-GOBAIN

BUILDING PLANS

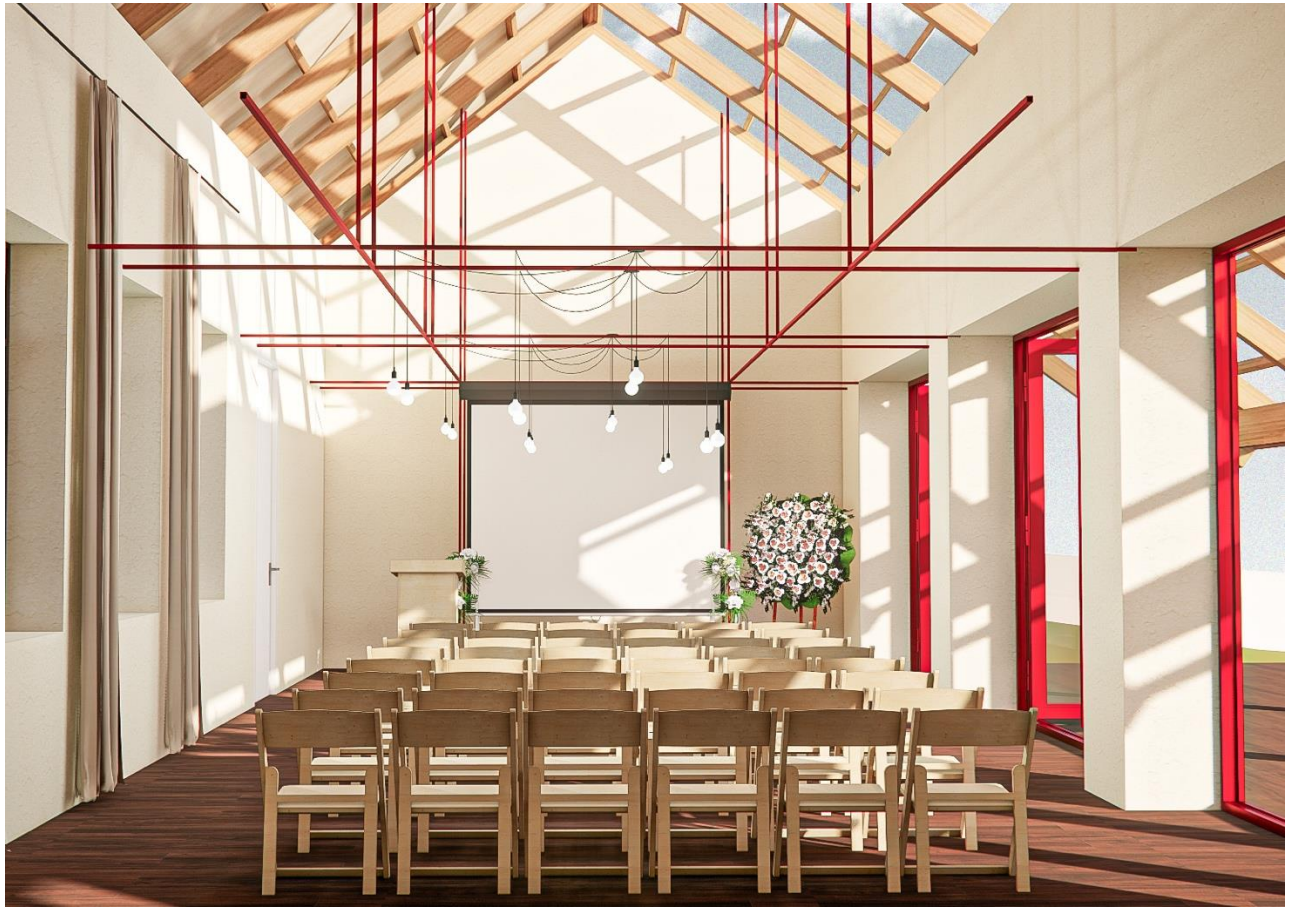




SAINT-GOBAIN

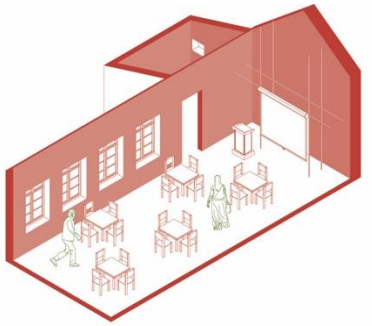
REUSE STRATEGIES

Multipurpose Hall



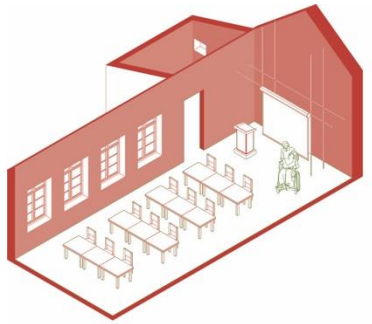
EVENT

Space for social events and gatherings such as small banquets, get togethers, wedding and birthday celebrations. With bifold doors on the front facade, the space extend to the semi open garden area.



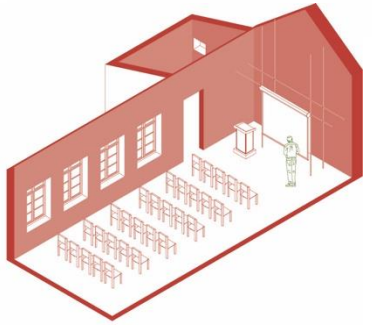
WORKSHOP/CLASS

Extra space for various workshops. Furniture such as tables and chairs can be stored in the storage unit next to the «stage».



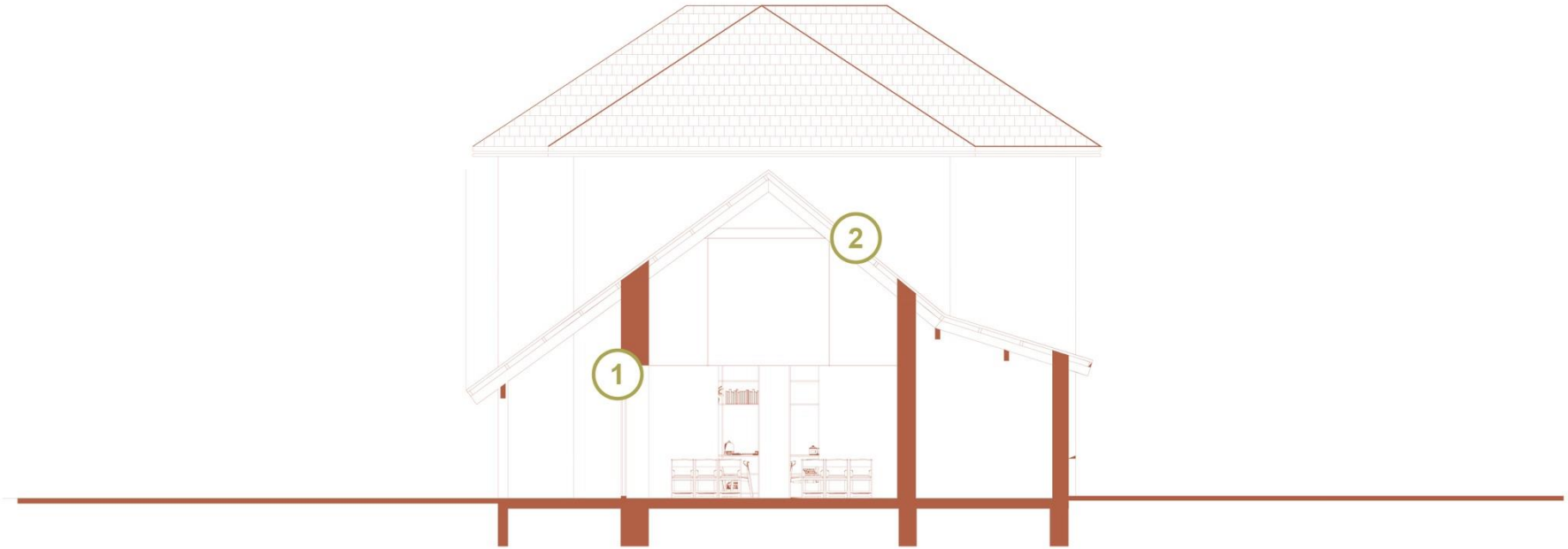
SEMINAR/MEETING

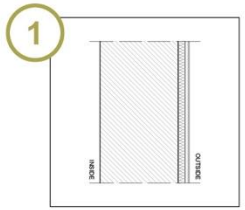
Space for seminars and large meetings. Can be used by local assossiations. Small performances can happen here such as mini concerts and mini plays for indoors.



SAINT-GOBAIN

REUSE STRATEGIES

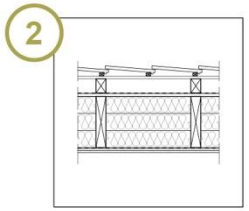




EX-04 EXTERIOR WALL LAYERS

1. Weber.ton 414 AquaBalance (0,075mm)
2. Lime Plaster (20mm)
3. Weber.therm 310 (0.01mm)
4. Weber.therm 301 (0.03mm)
5. Weber.therm Eco ETICS (50mm)
6. Weber.therm 301 (0.03mm)
7. Rammed Earth (500mm)

U = 1,90 W/(m²K)



RF-02 PITCHED ROOF LAYERS

1. Metal Roofing Sheet (1mm)
2. Timber Battens (2x30mm)
3. Air Gap (100mm)
4. Isover Integra ZUB (2x1mm)
5. OSB (18mm)
6. Isover Akustic TP 1 (3x120mm)
7. Isover Difunorm (2x0.2mm)
8. Rigitone Activ' Air 8/18Q Acoustical Board (12.5mm)

U = 0,20 W/(m²K)

Daylight

Semi transparent elements used on the roofs that face the north allows more daylight coming inside the facilities. These parts can be covered with shutters according to heat and light. Glare control glass materials were used.

Heating & Cooling

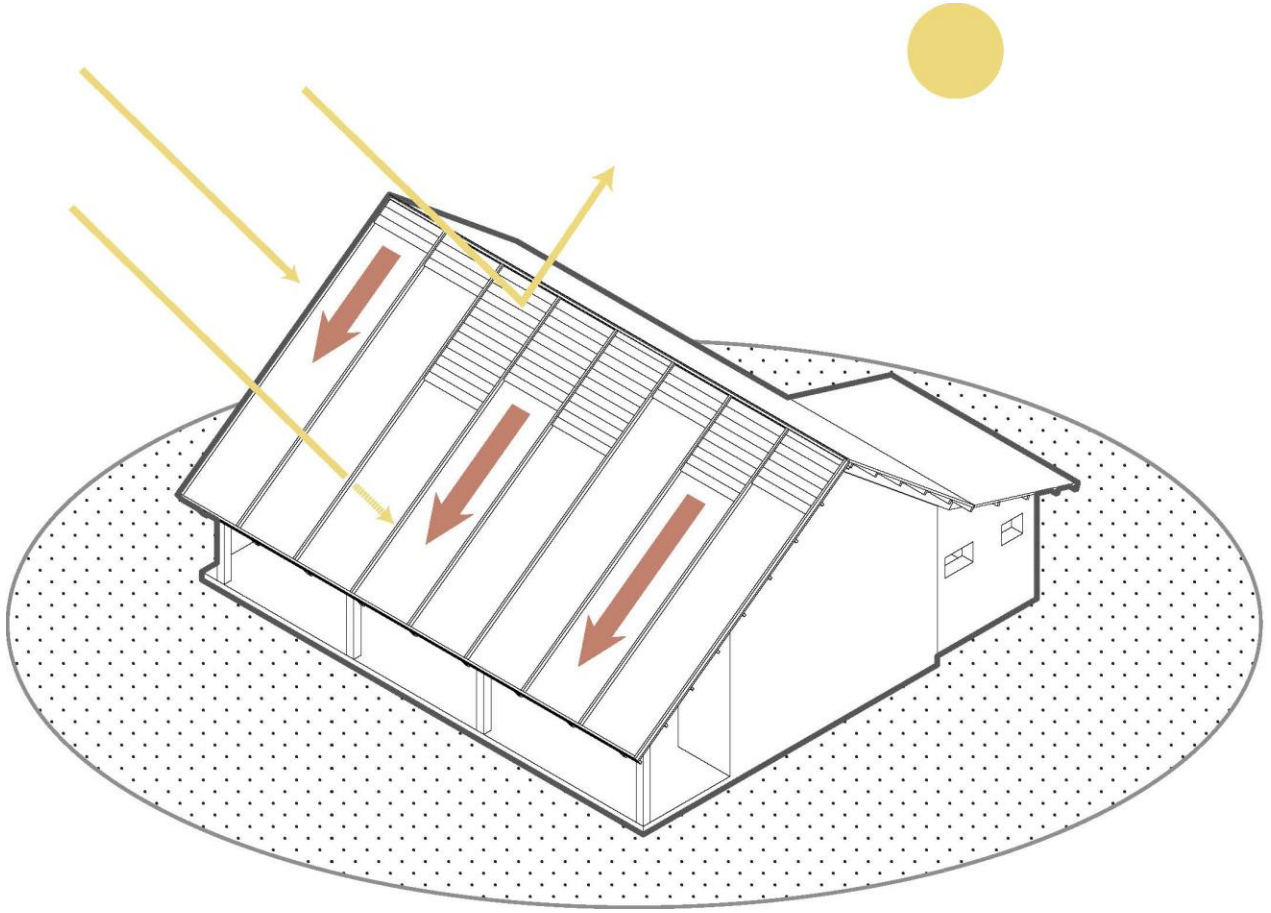
The renovated building is covered with new thermal control layers and plasters to improve IEQ and decrease heat transmittance.

Intervention

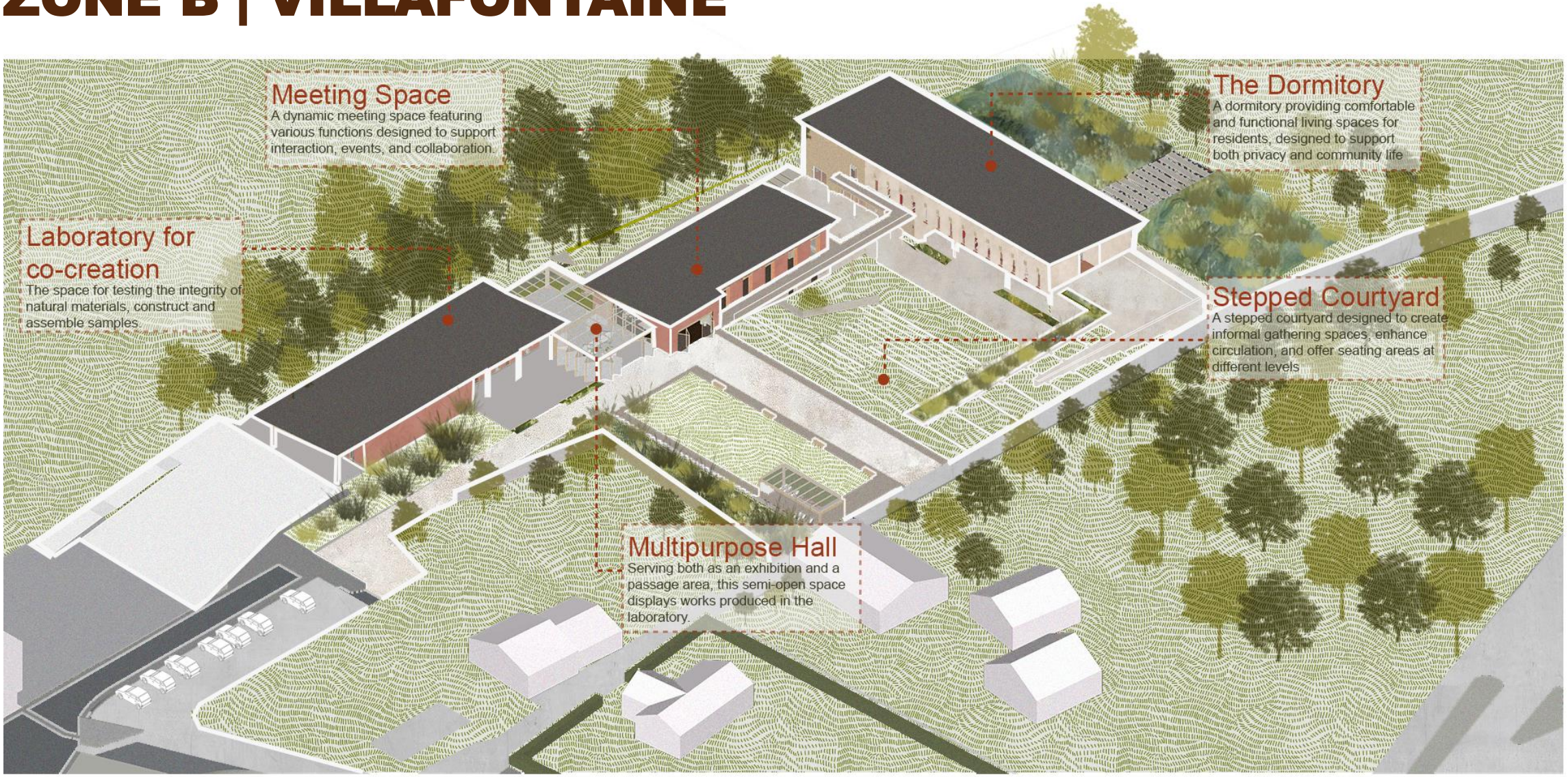
The amount of changes for the adaptation of the building, major reconstructions and additions were avoided to minimize energy and material use.

SAINT-GOBAIN

REUSE STRATEGIES



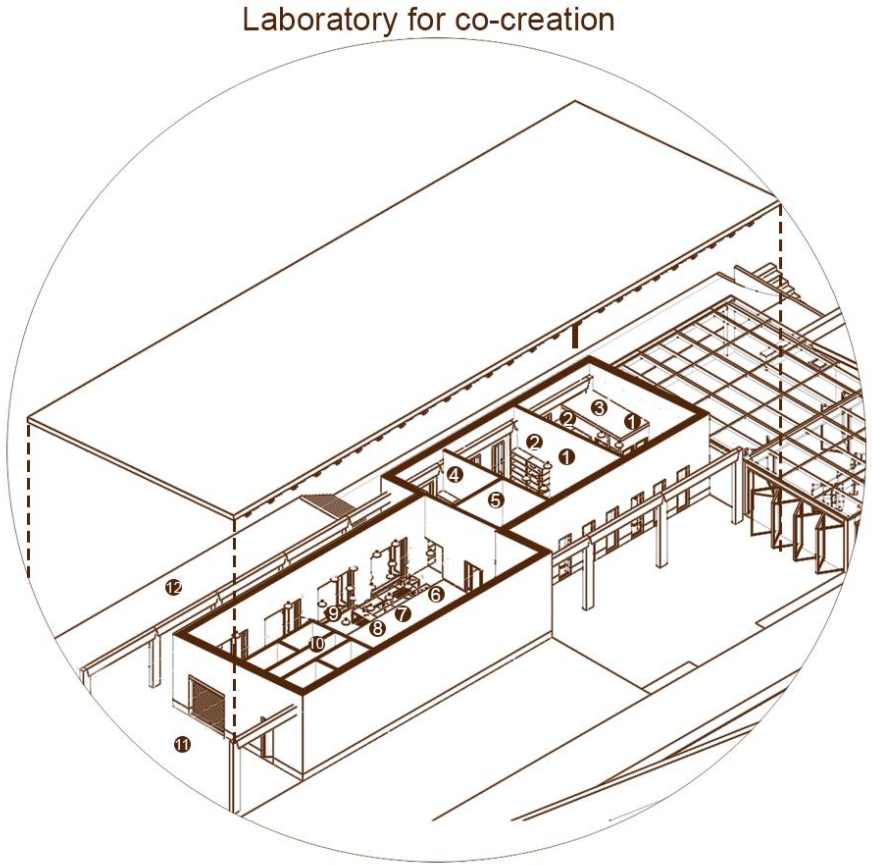
ZONE B | VILLAFONTAINE



SAINT-GOBAIN

SAINT-GOBAIN

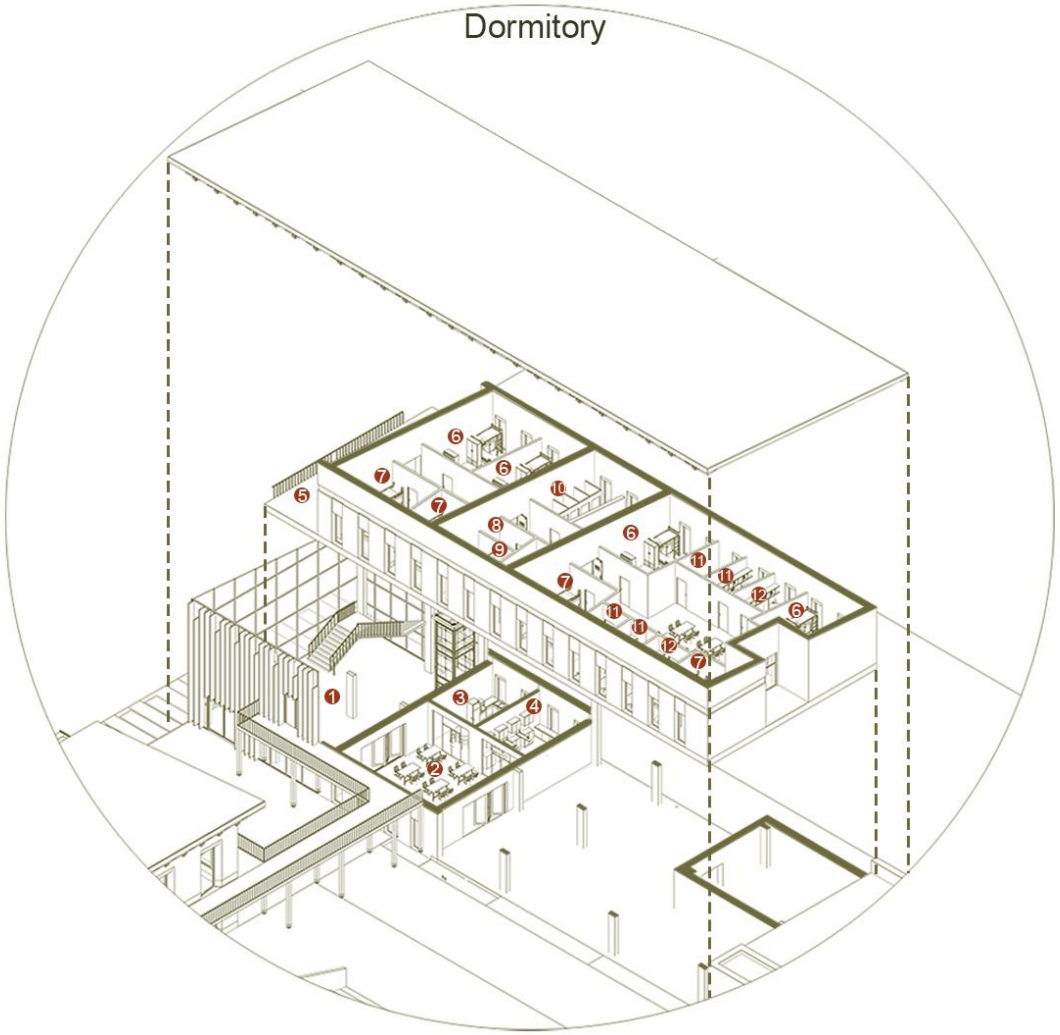
BUILDING PROGRAM



1. Assembly Zone
2. Prototyping Area
3. 3d Printing Room
4. Material Tool Storage
5. Entrance Hall
6. Material Library
7. Cloakroom
8. Restrooms
9. Mud Earth Experiment Zone
10. Machine Rooms
11. Drop-off Zone
12. Terrace

SAINT-GOBAIN

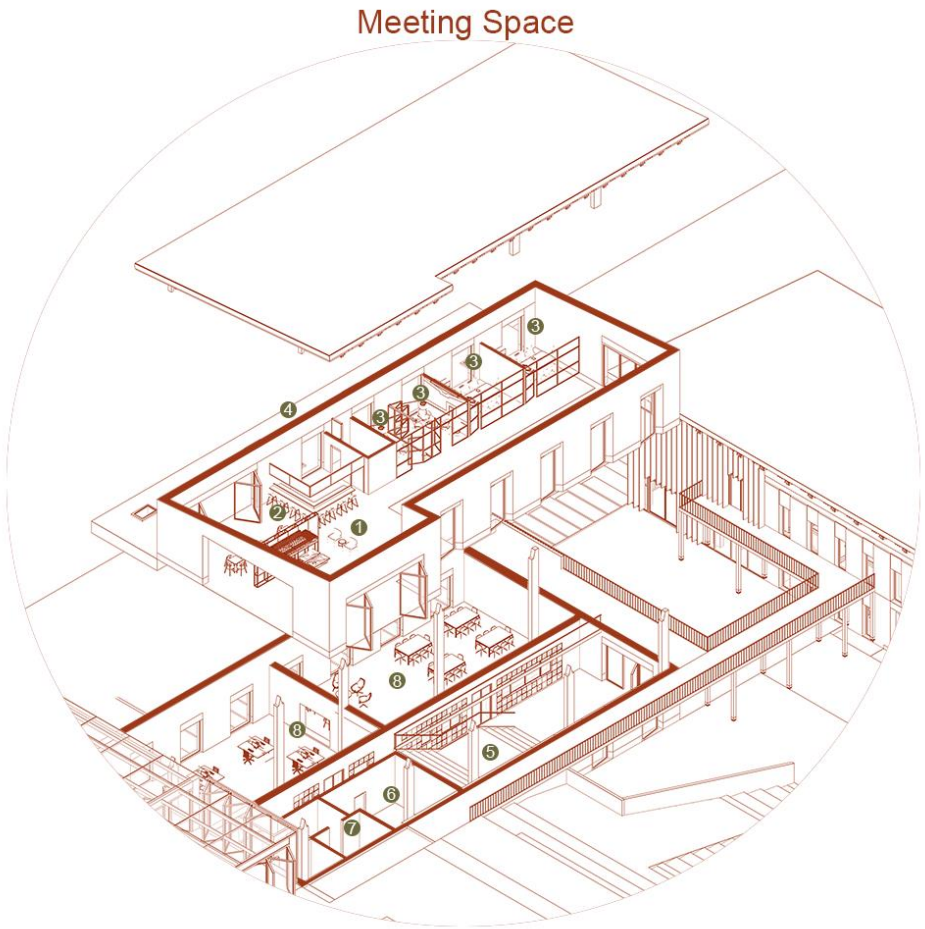
BUILDING PROGRAM



1. Leisure Area
2. Common Working Area
3. Kitchen
4. Laundry Room
5. Leisure Area
6. 8 Bed Room
7. 6 Bed Room
8. Disabled Restroom&Shower
9. Men Restroom & Shower
10. Women Restroom & Shower
11. Single Room
12. Double Room

SAINT-GOBAIN

BUILDING PROGRAM

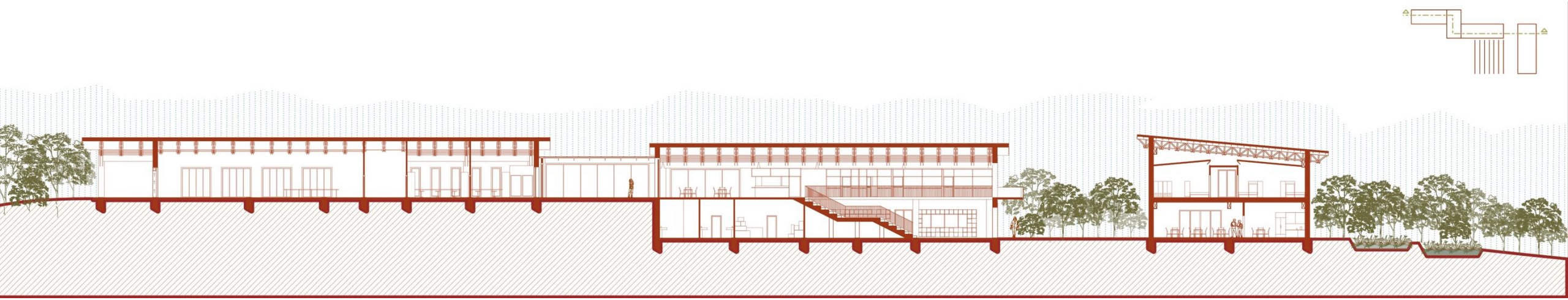


1. Reception
2. Kitchen
3. Meeting Room
4. Prototype Test Area
5. Multipurpose Area
6. Storage
7. Restroom
8. Office

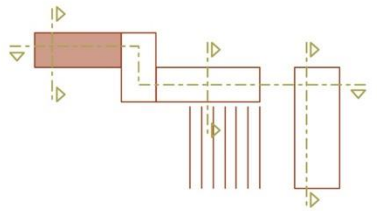
SAINT-GOBAIN

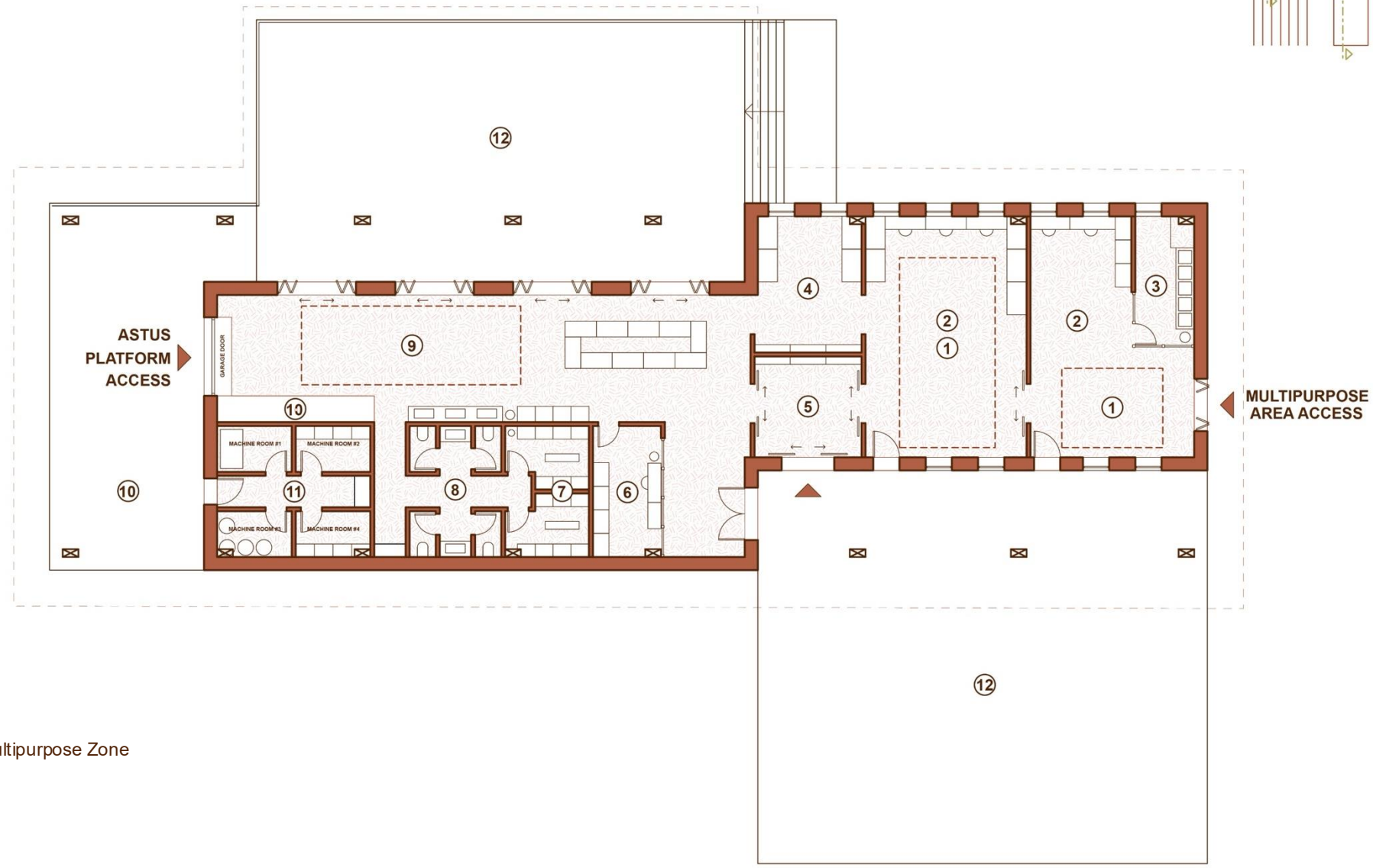
SITE PLAN

SECTIONS



BUILDING PLANS

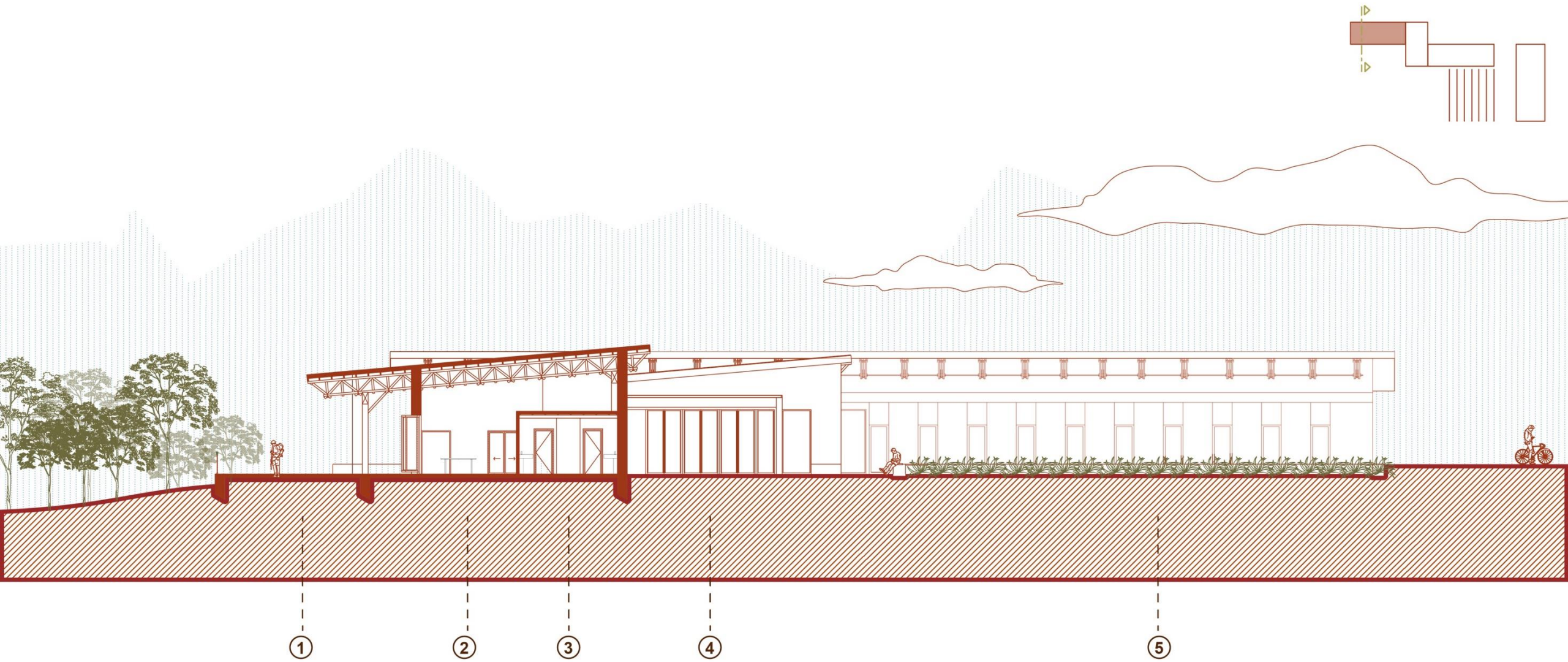




1. Assembly zone
2. Prototyping area
3. 3D printing room
4. Material & Tool Storage
5. Entrance Hall
6. Material Library/Laboratory
7. Cloakroom
8. WC
9. Mud/Earth Experiment & Multipurpose Zone
10. Drop-off Zone
11. Machine rooms
12. Terrace

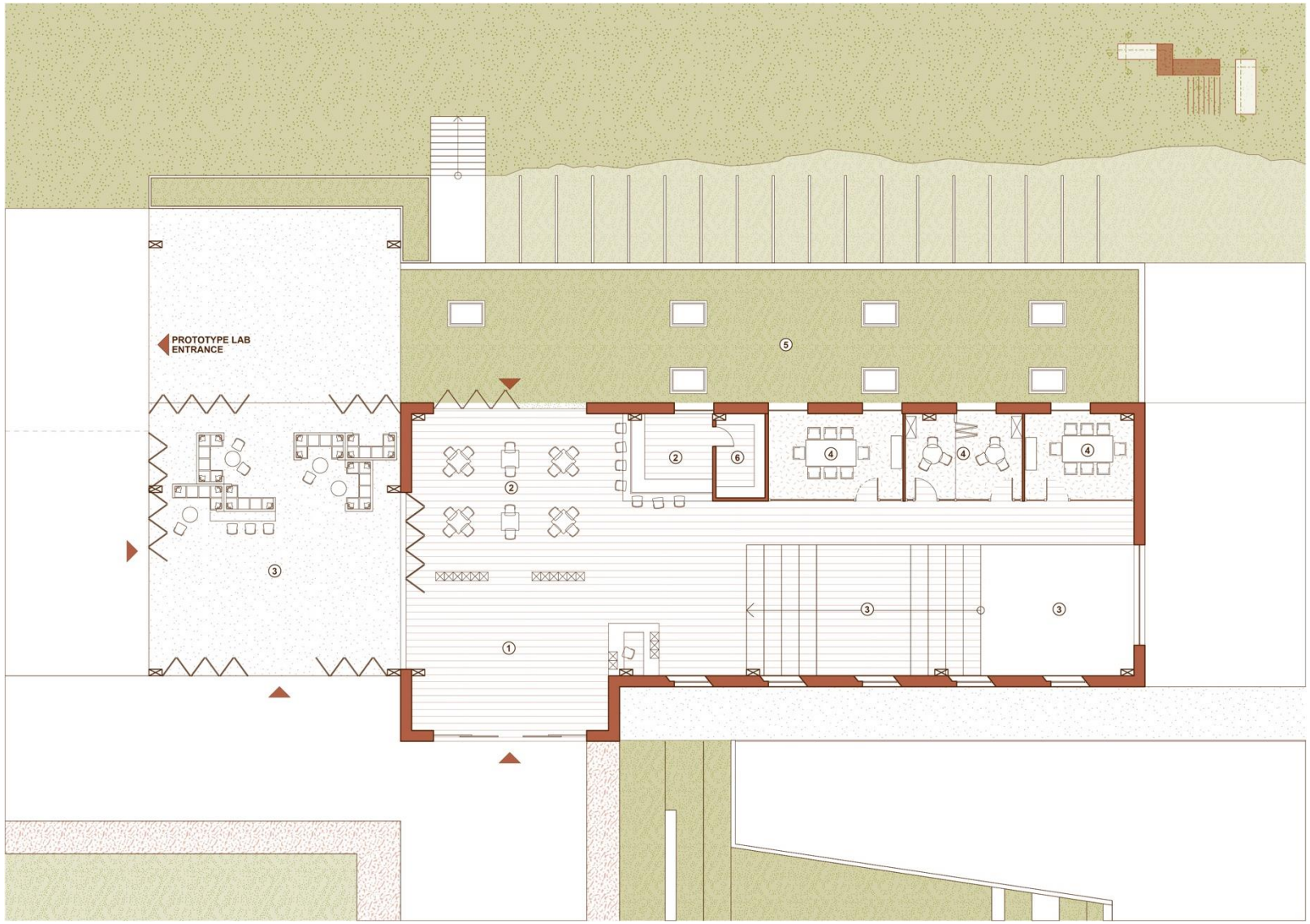
SAINT-GOBAIN

SECTIONS



SAINT-GOBAIN

BUILDING PLANS



1. Reception
2. Kitchen + Seating
3. Multipurpose Area
4. Meeting Rooms
5. Prototype Village Test Area
6. Storage
7. Office
8. Print/Stationary Area
9. WC
10. Terrace

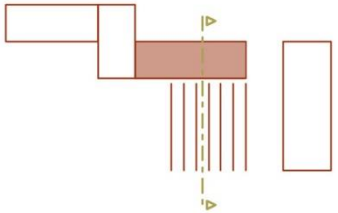
SAINT-GOBAIN

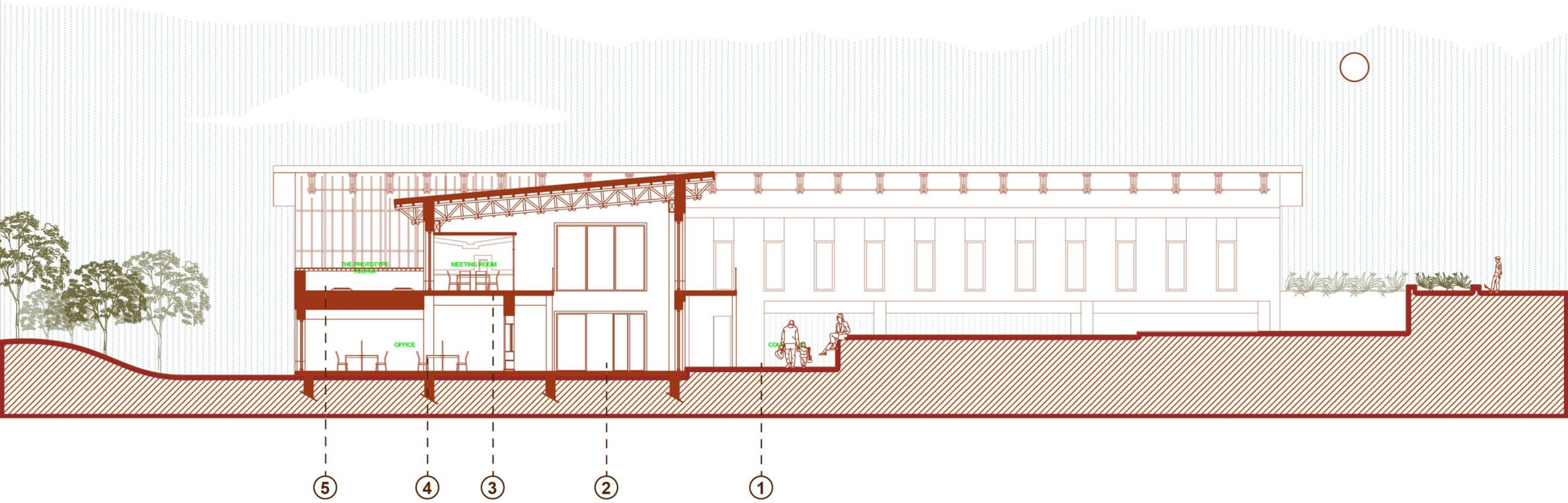
BUILDING PLANS

1. Reception
2. Kitchen + Seating
3. Multipurpose Area
4. Meeting Rooms
5. Prototype Village Test Area
6. Storage
7. Office
8. Print/Stationary Area
9. WC
10. Terrace

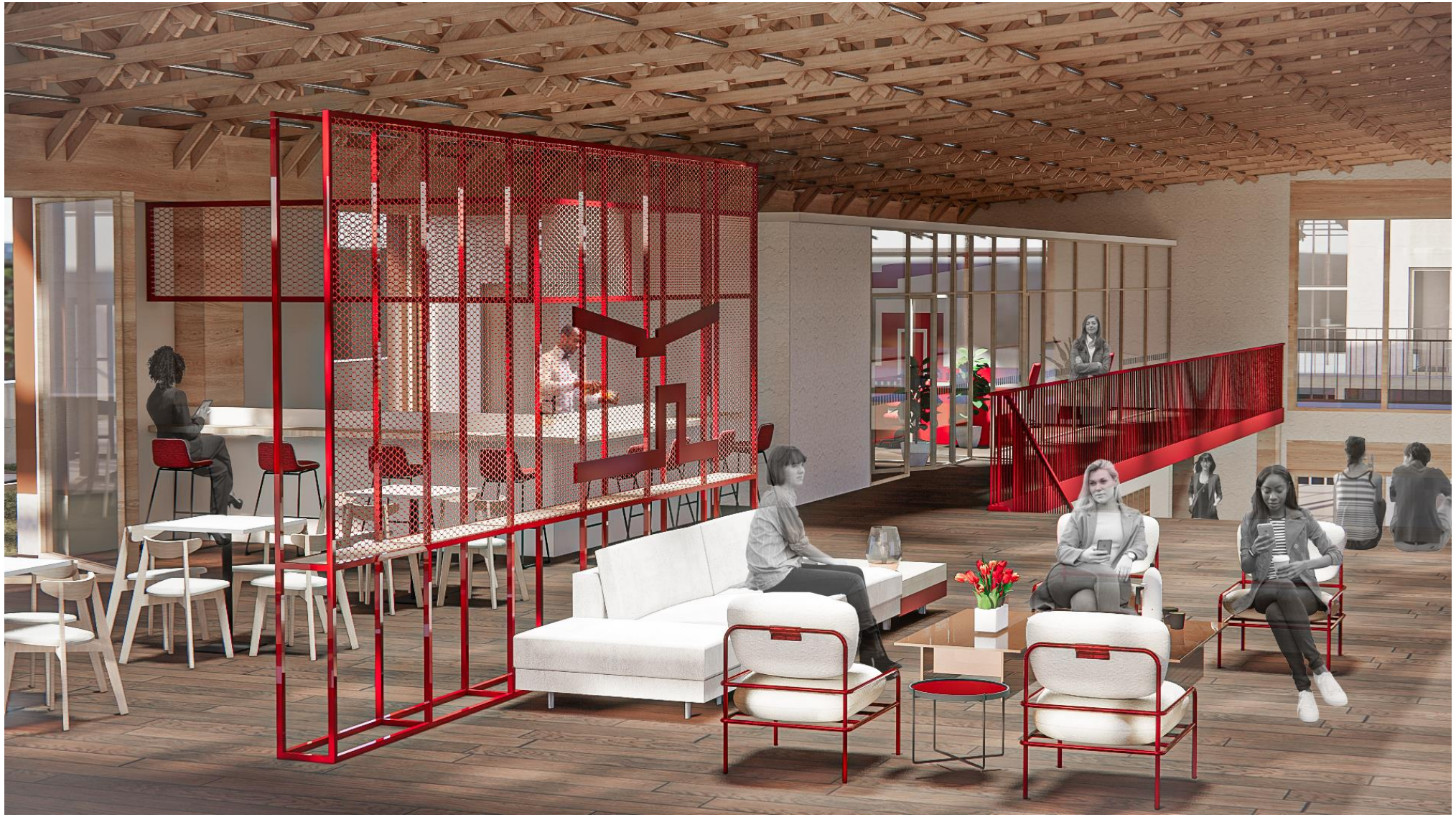
SAINT-GOBAIN

SECTIONS





SAINT-GOBAIN



SAINT-GOBAIN

BUILDING PLANS

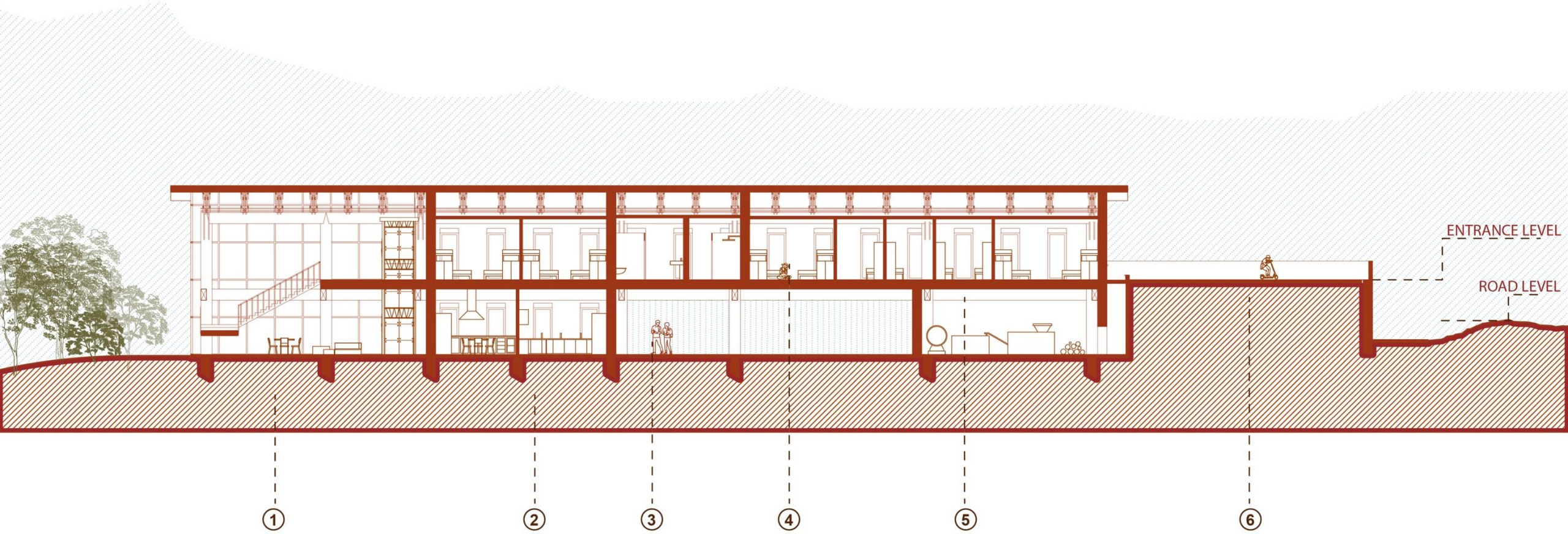
1. Entrance-Leisure Area
2. Elevator
3. Common Area-Study
4. Kitchen
5. Laundry
6. Open Space Area
7. Boiler
8. 8 bed room
9. 6 bed room
10. Double room
11. Single room
12. Restroom&Showers
13. Terrace

SAINT-GOBAIN

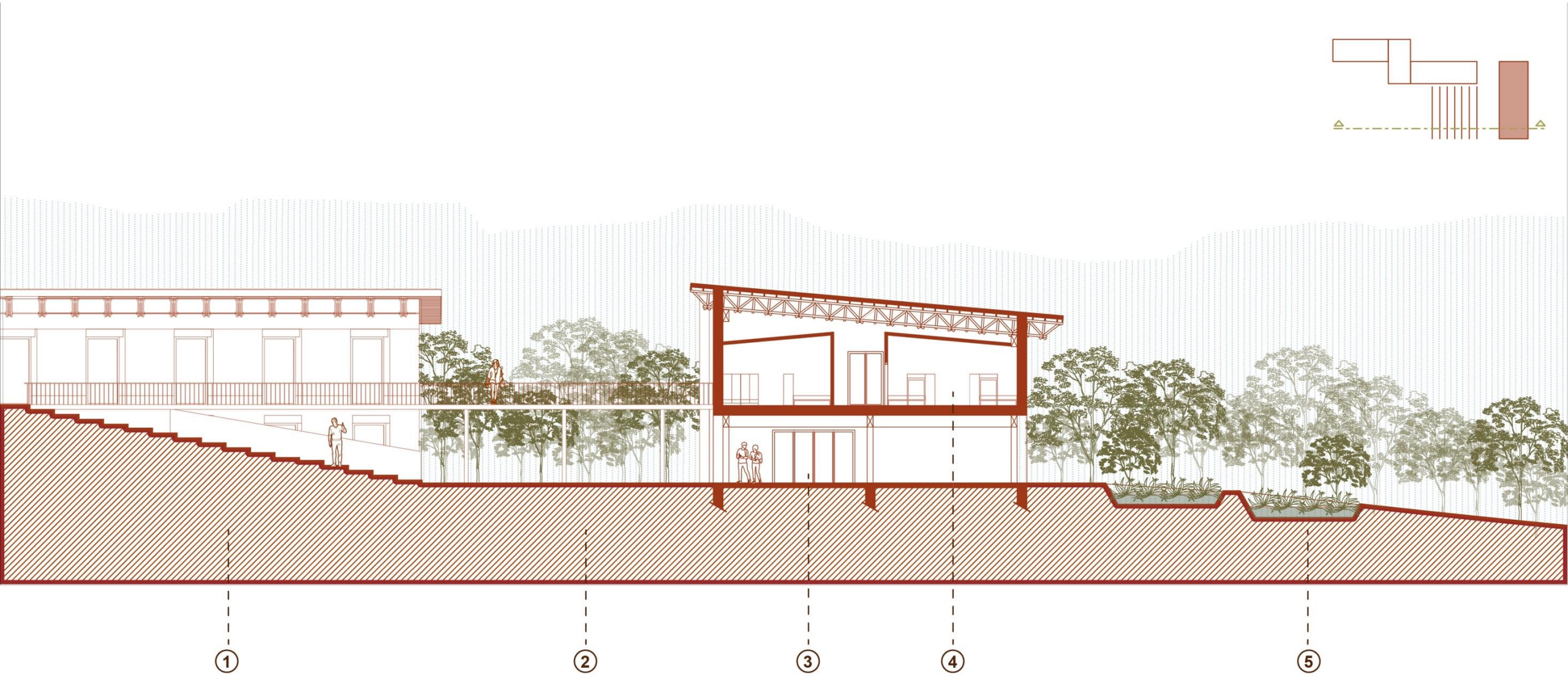
BUILDING PLANS

1. Entrance-Leisure Area
2. Elevator
3. Common Area-Study
4. Kitchen
5. Laundry
6. Open Space Area
7. Boiler
8. 8 bed room
9. 6 bed room
10. Double room
11. Single room
12. Restroom&Showers
13. Terrace

SECTIONS

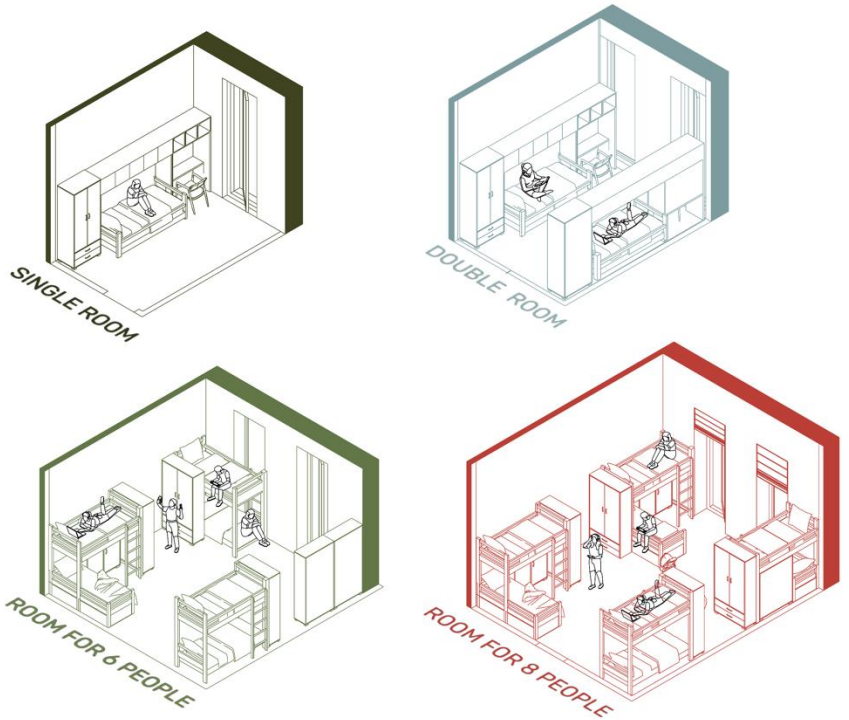


SECTIONS



STUDENT DORMITORIES

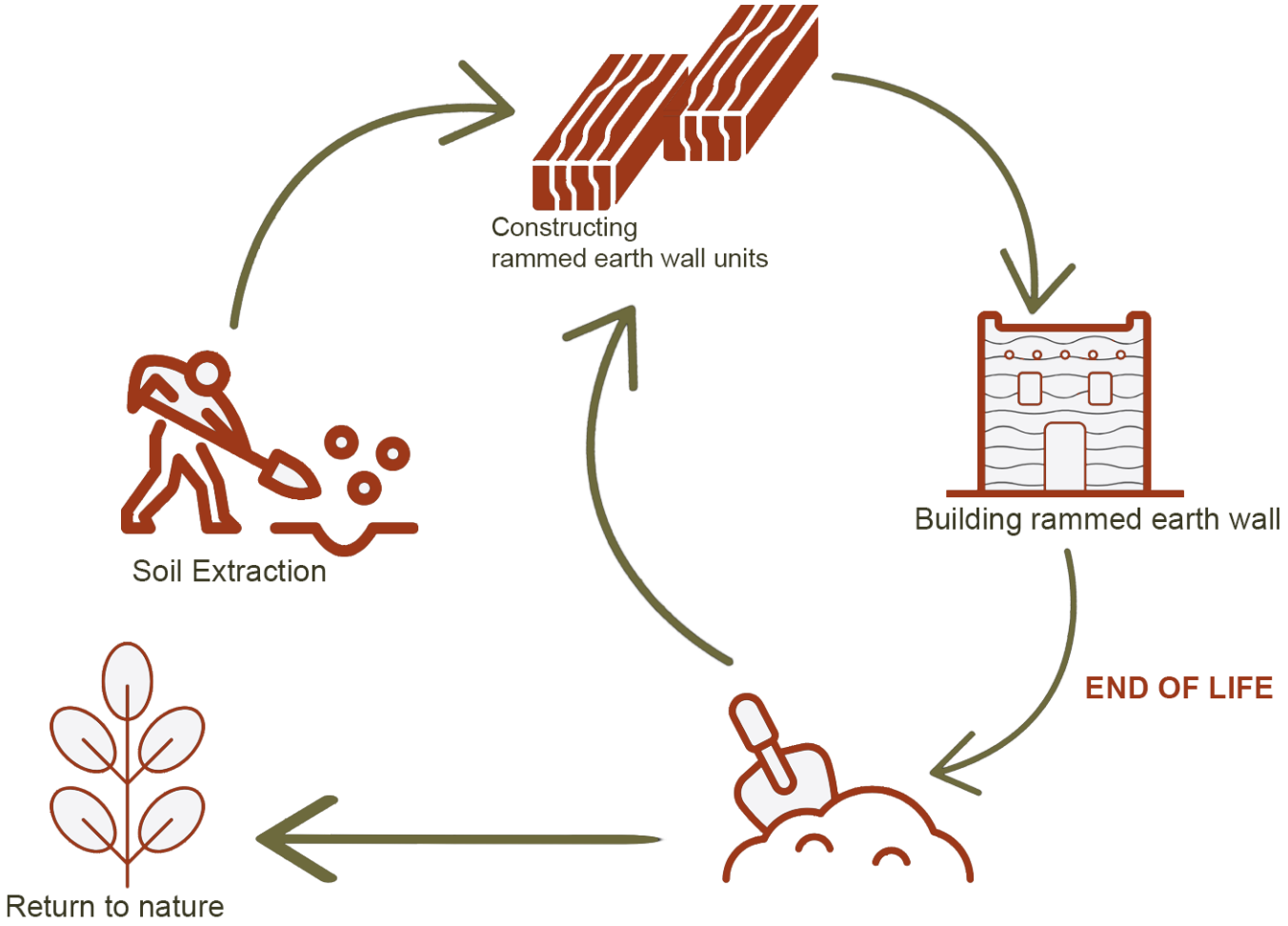
Spaces within spaces



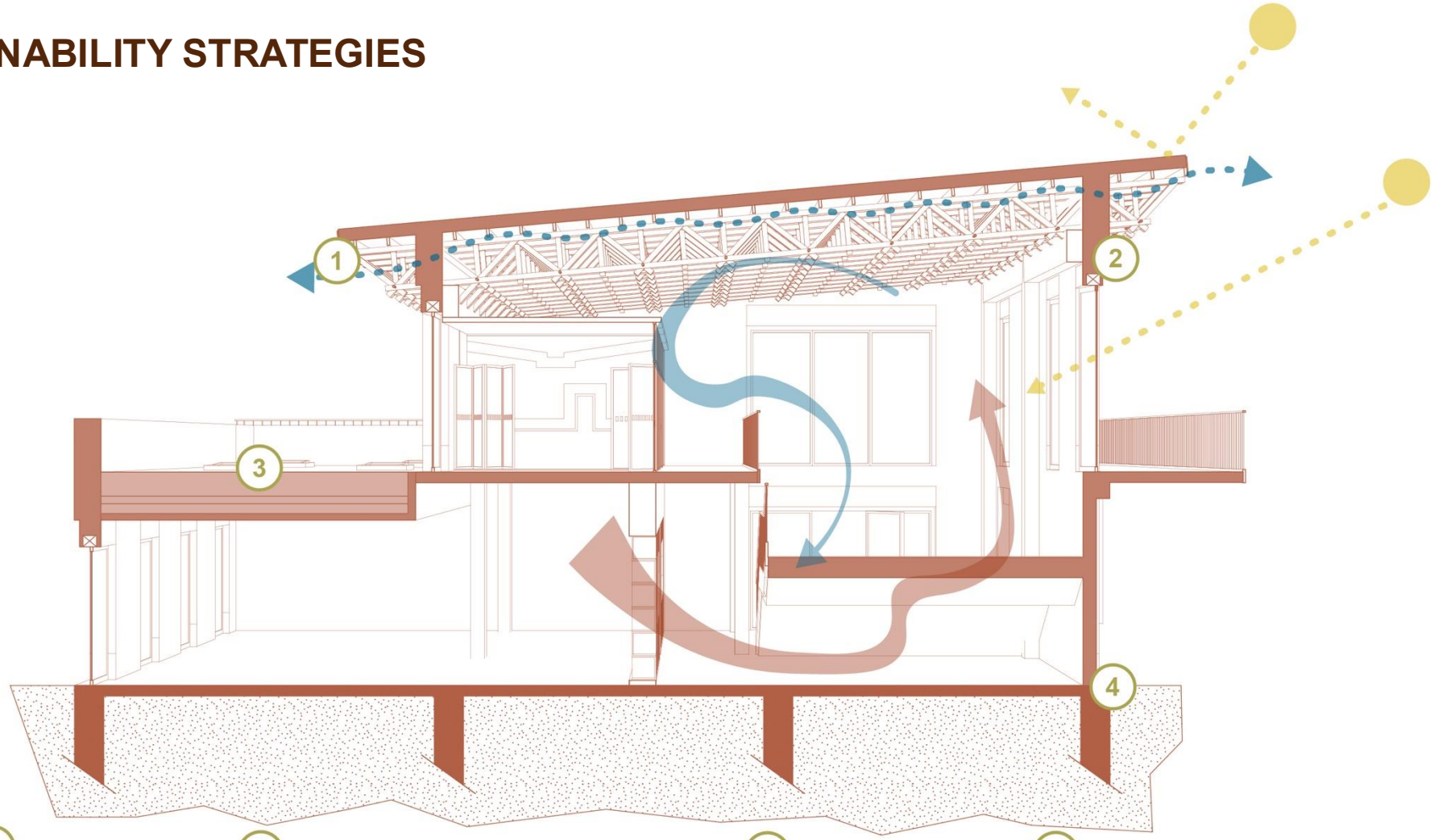
SAINT-GOBAIN

SUSTAINABILITY STRATEGIES

Circularity



SUSTAINABILITY STRATEGIES



Sun Shading

Passive design strategies such as angled windows, eaves and setbacks on facades to prevent overheating and glare.

Daylight

Controlled and designed glazing elements to provide steady lighting throughout the day and minimize active lighting. Spaces are positioned according to their time of use.

Natural Ventilation

High ceilings and openings provide natural ventilation. Open plan functions allow air circulation throughout the buildings.

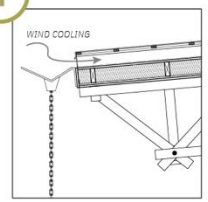
Heating & Cooling

Passive heating and cooling strategies are integrated through building orientation, thermal mass, and natural airflow. Materials with good thermal properties and shading devices are utilized to maintain indoor comfort.

Rainwater Collection

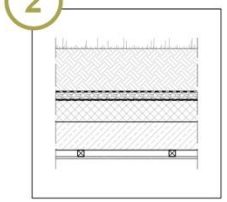
Rainwater is harvested through roof catchment systems and stored to reuse for irrigation and non-potable appllications.

1



ROOF EAVES DETAIL

2

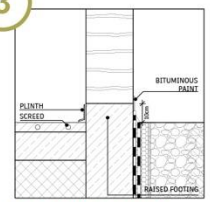


RF-01 GREEN ROOF LAYERS

1. Soil (300mm)
2. Weber Geotextile PP (20mm)
3. Leca L (50mm)
4. Weber Goetextile PP (20mm)
5. Isover Bituver X-PRO (2x2mm)
6. Leca D (150mm)
7. Reinforced Concrete (150mm)
8. Air Gap (45mm)
9. Rigitone Activ' Air 8/18Q Acoustical Board (12.5mm)

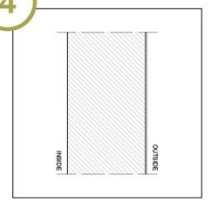
U = 0,59 W/(m²K)

3



R.C. FOUNDATION & RAMMED EARTH DETAIL

4



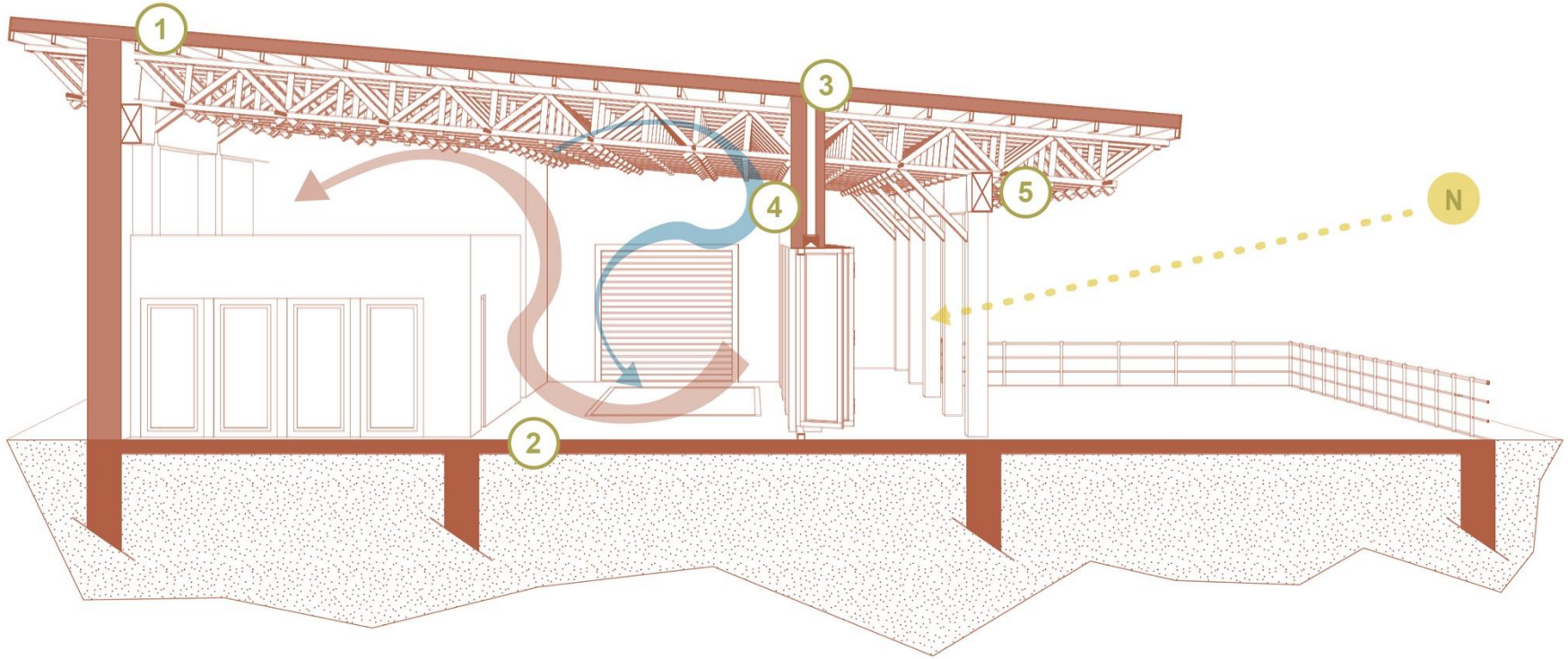
EX-02 EXTERIOR WALL LAYERS

1. Weber.ton 414 AquaBalance (0,075mm)
2. Rammed Earth (550mm)

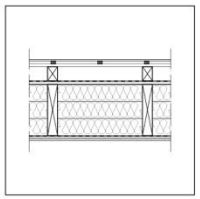
U = 1,86 W/(m²K)

SAINT-GOBAIN

SUSTAINABILITY STRATEGIES



1

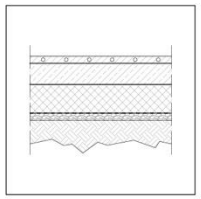


RF-02 PITCHED ROOF LAYERS

1. Metal Roofing Sheet (1mm)
2. Timber Battens (2x30mm)
3. Air Gap (100mm)
4. Isover Integra ZUB (2x1mm)
5. OSB (18mm)
6. Isover Akustic TP 1 (3x120mm)
7. Isover Difunorm (2x0.2mm)
8. Rigitone Activ' Air 8/18Q Acoustical Board (12.5mm)

U = 0,20 W/(m²K)

2

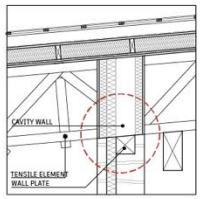


SL-01 SLAB LAYERS

1. Weberfloor Anhydrite (50mm)
2. Reinforced Concrete (150mm)
3. Leca D (200mm)
4. Isover Bituver X-PRO (2x2mm)
5. Compacted Gravel Layer (50mm)
6. Soil

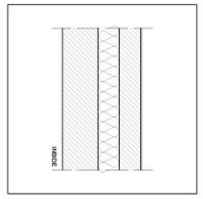
U = 0,71 W/(m²K)

3



RAMMED EARTH WALL & ROOF CONNECTION DETAIL

4

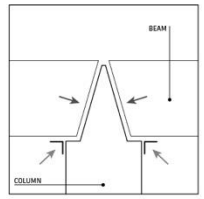


EX-01 EXTERIOR WALL LAYERS

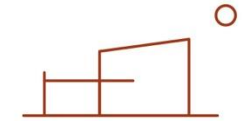
1. Weber.ton 414 AquaBalance (0,075mm)
2. Rammed Earth (150mm)
3. Leca L (150mm)
4. Rammed Earth (250mm)

U = 0,87W/(m²K)

5

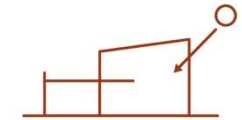


COLUMN & BEAM CONNECTION DETAIL



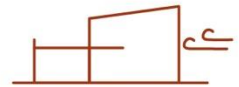
Sun Shading

Limited openings on the front facade and entrance with a setback allows interiors to be protected from overheating.



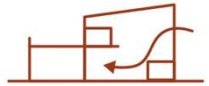
Daylight

Repetitive openings on facades that bring stable lighting such as north allow usrs to work in prototype areas with minimal to no active lighting during daytime.



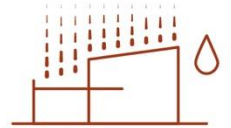
Natural Ventilation

High ceilings and openings provide natural ventilation. Open plan functions allow air circulation throughout the buildings.



Heating & Cooling

Passive heating and cooling strategies are integrated. Selective insulation on south and northern facades with rammed earth wall materials provide massive heating.

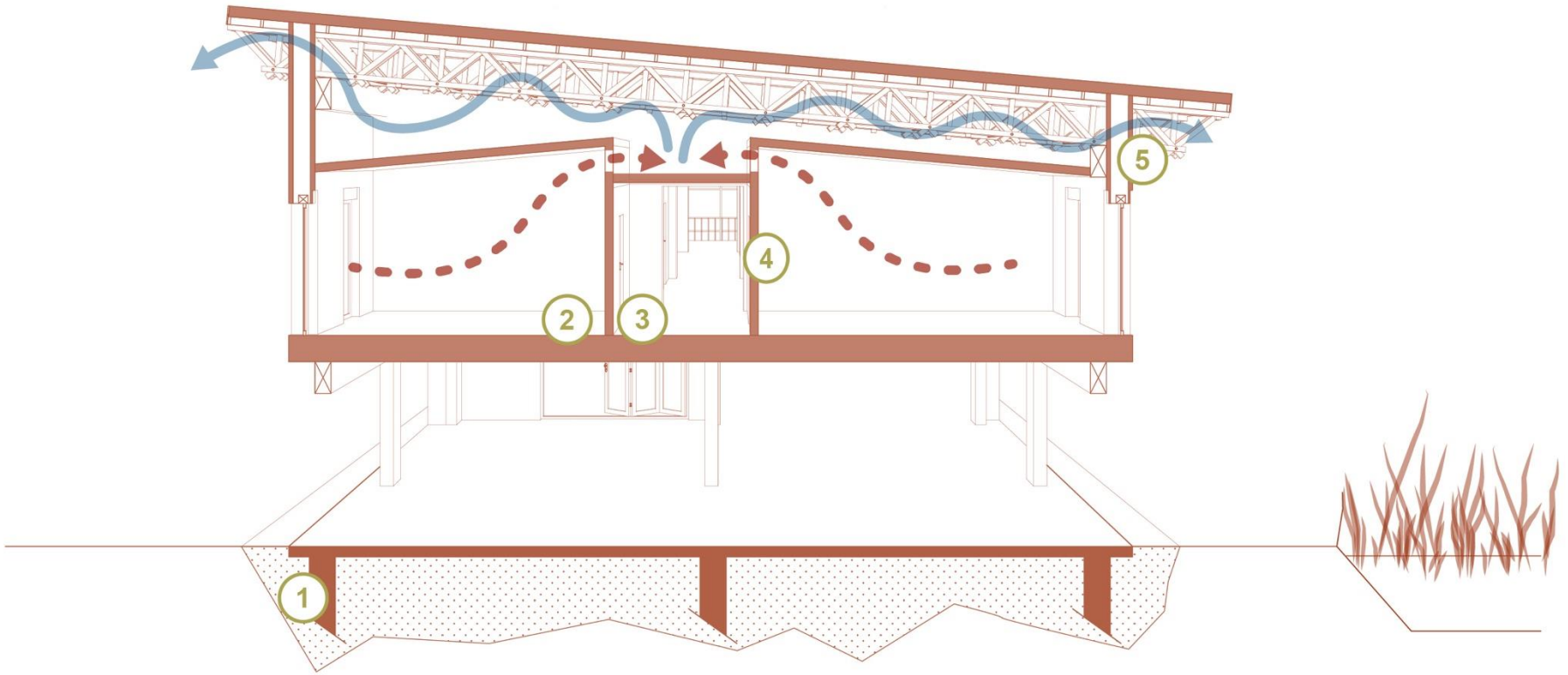


Rainwater Collection

Rainwater is harvested through roof catchment systems and stored to reuse for irrigation and non-potable appllications.

SAINT-GOBAIN

SUSTAINABILITY STRATEGIES



Sun Shading

Sliding shutters were applied to large glazed facade to minimize overheating.

Natural Ventilation

High ceilings and openings provide natural ventilation. Open plan functions allow air circulation throughout the buildings.

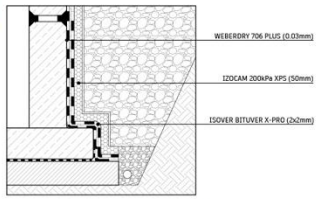
Heating & Cooling

Passive heating and cooling strategies are integrated through building orientation, thermal mass, and natural airflow. Materials with good thermal properties and shading devices are utilized to maintain indoor comfort.

Phytodepuration

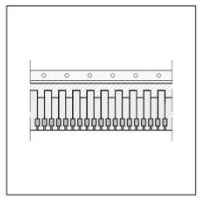
Wastewater created during the operation of the building can be purified through plant-based systems and reused for irrigation

1



R.C. FOUNDATION DETAIL

2

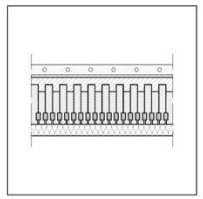


DLTS-01 SLAB LAYERS

1. Poured Earth Floor (70mm)
2. Isover Acutex Sound Insulation (20mm)
3. Screed (50mm)
4. Dowel Laminated Timber Slab (300mm)
5. Rigitone Activ' Air 8/18Q Acoustical Board (12.5mm)

REI-60
U = 0,21 W/(m²K)

3

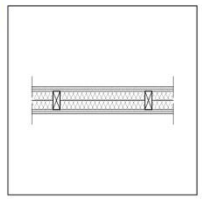


DLTS-02 SLAB LAYERS

1. Poured Earth Floor (70mm)
2. Isover Acutex Sound Insulation (20mm)
3. Screed (50mm)
4. Dowel Laminated Timber Slab (300mm)
5. Weber.therm HF 042 Facade Eco (80mm)
6. Weber.cal 288 (3mm)

REI-60
U = 0,33 W/(m²K)

4

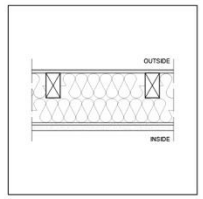


IN-01 INTERIOR WALL LAYERS

1. Rigips Plasterboard RB (2X12.5mm)
2. Isover Akustic TP 1 (2x65mm)
3. Rigips Plasterboard RB (2X12.5mm)

EI-60
Sound insulation (Rw) = 64 dB

5



EX-03 EXTERIOR WALL LAYERS

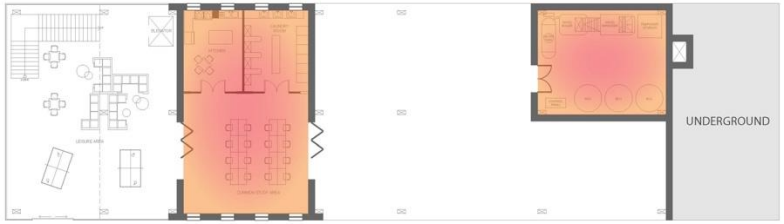
1. Weber.cal 288 (3mm)
2. Webertherm Mesh (0.5mm)
3. Weber.cal 172 (20mm)
4. Straw Bales (350mm)
5. Rigidur H (15mm)
6. Weber PR310 (0.03mm)
7. Clay Topcoat Plaster (30mm)
8. Webertherm Mesh (0.5mm)
9. Clay Topcoat Plaster (10mm)

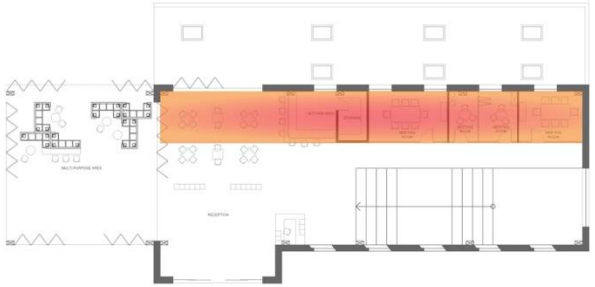
U = 0,15 W/(m²K)

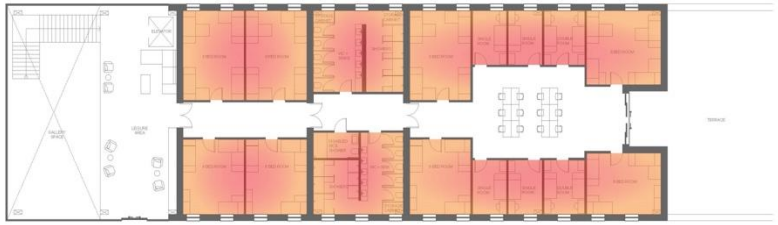
SAINT-GOBAIN

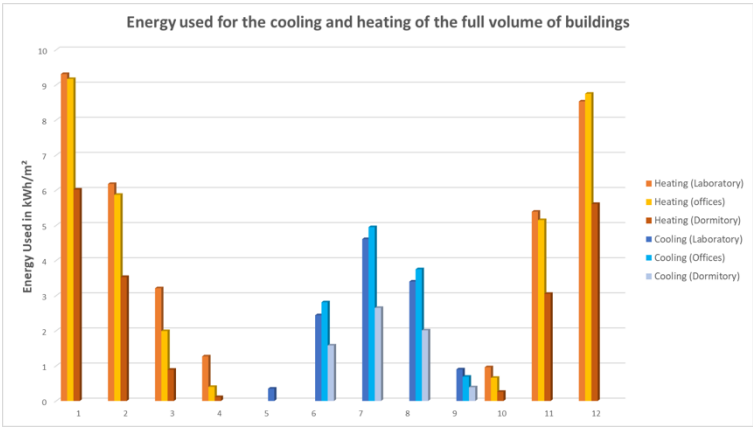
SUSTAINABILITY STRATEGIES

Spaces within spaces









Laboratory/Workshop Building (as if full building was heated up)

Total Energy for heating: 35.0 kWh/m²

Total energy for cooling: 11.7 kWh/m²

Dormitory Building

Total Energy for heating: 19.48 kWh/m²

Total energy for cooling: 6.64 kWh/m²

Office Building (as if full building was heated up)

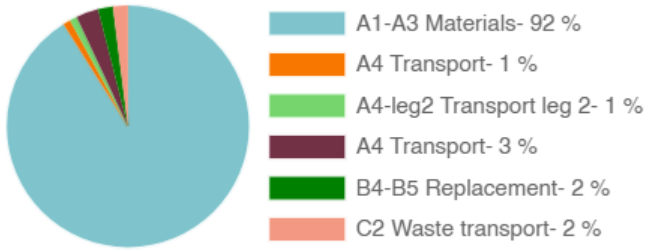
Total Energy for heating: 32.0 kWh/m²

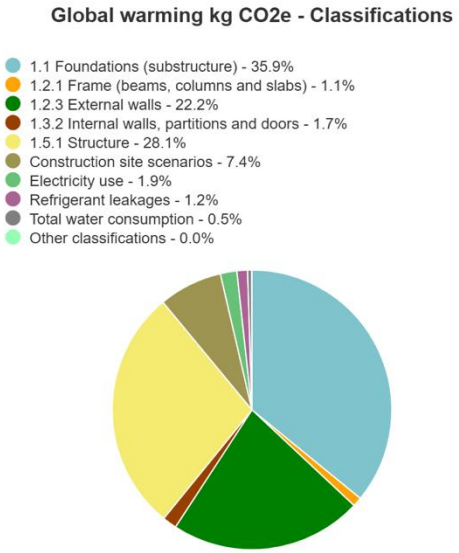
Total energy for cooling: 12.2 kWh/m²

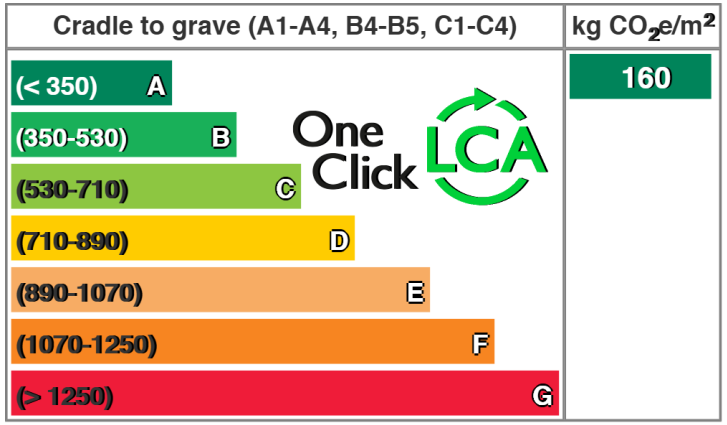
SAINT-GOBAIN

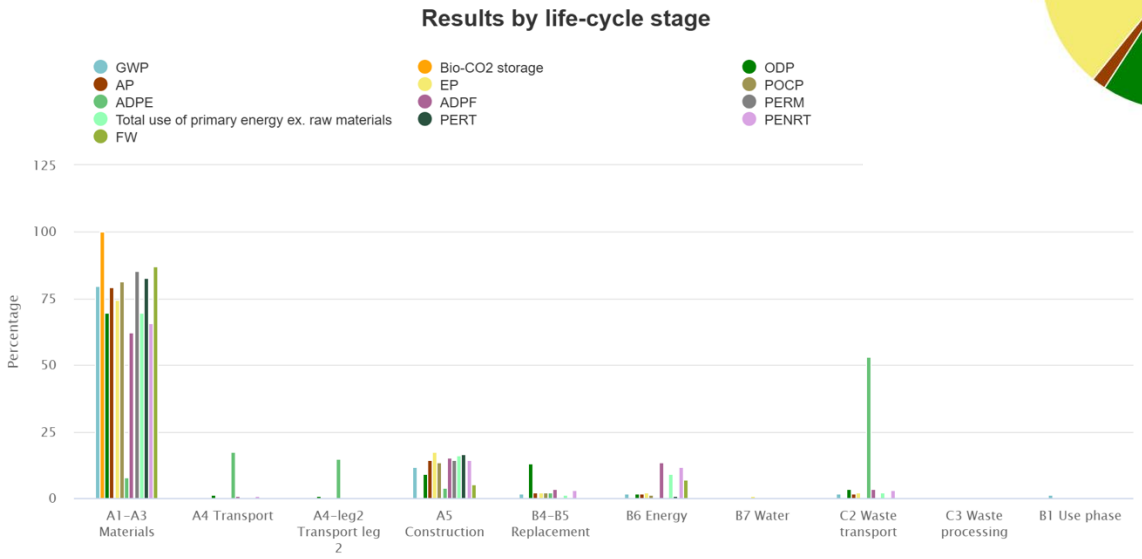
SUSTAINABILITY STRATEGIES

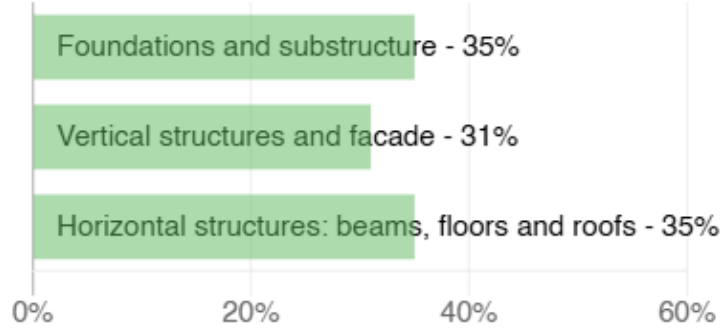
Life-cycle Analysis











SAINT-GOBAIN

THE COMMUNE GROUND