ARCHITECTURE STUDENT CONTEST

19th INTERNATIONAL EDITION, HELSINKI 2024

TRIO OF THE NORDIC GREENS

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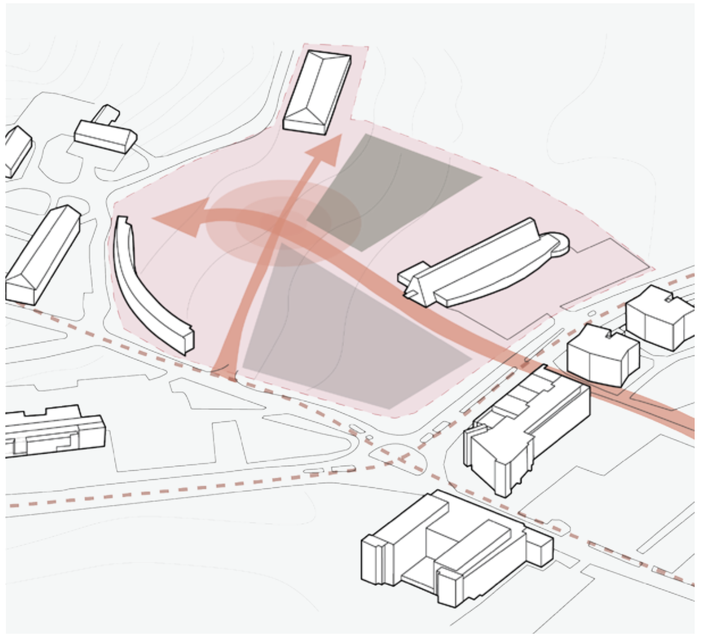
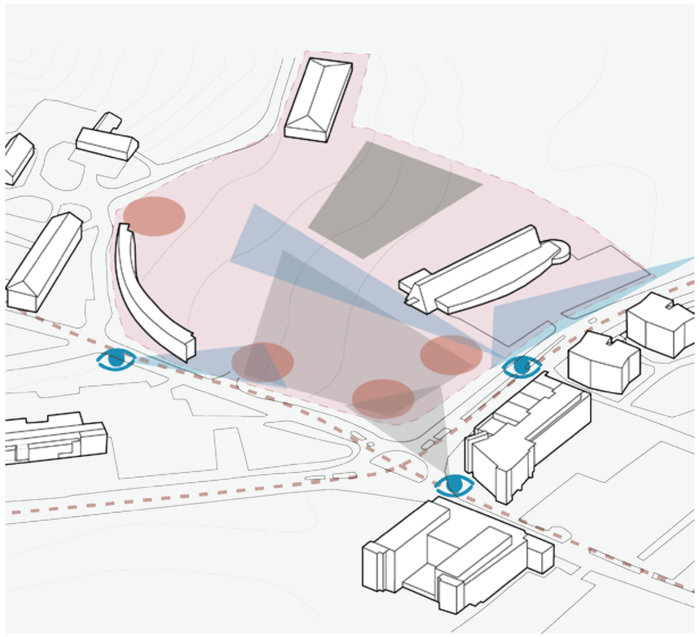
THE SITE IS ON THE BORDER BETWEEN URBAN AND RURAL

The area is constantly developing, so the study site is a pole of attraction for all the neighbouring areas. This strategic position gives it considerable potential for development and growth. it is important to appropriately manage the urban expansion in order to ensure a balance between the requirements of the project and the preservation of the natural and cultural characteristics of the area.



CIRCULATION ANALYSIS

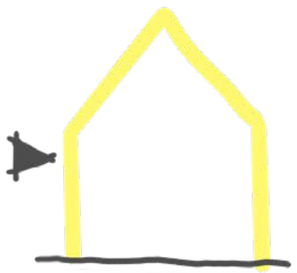
Through careful analysis of the site, we identified the natural axes of circulation, which formed the basis for a strategic and coherent integration of the project into the urban-rural landscape. This detailed assessment allowed us to optimise access and connectivity between the various functions and areas, thereby ensuring efficiency and consistency of development across the area in a way that serves the needs and aspirations of the community.



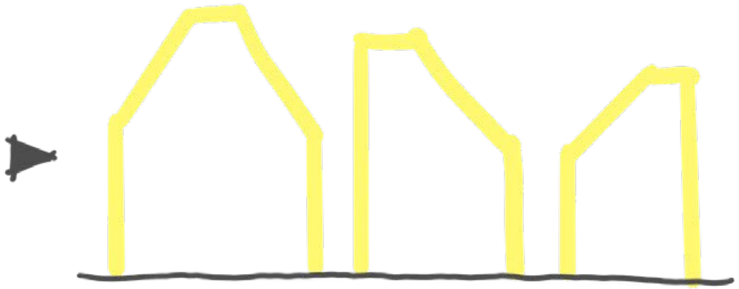
LANDMARKS

We wanted to accentuate the places where favourable perspectives were opening from and toward the site. Vertical emphasis serves not only aesthetic but also functional purposes, amplifying the visibility and attraction of certain key points in the project. Through this strategy, we aimed to create distinctive landmarks and enhance the visual experience of those transiting the area, thereby contributing to the project's unique character and identity in context.

HOUSES IN FINNISH
OLD TOWNS



SIMPLE FORM



MODERN ADAPTATION OF
THE TRADITIONAL FORM

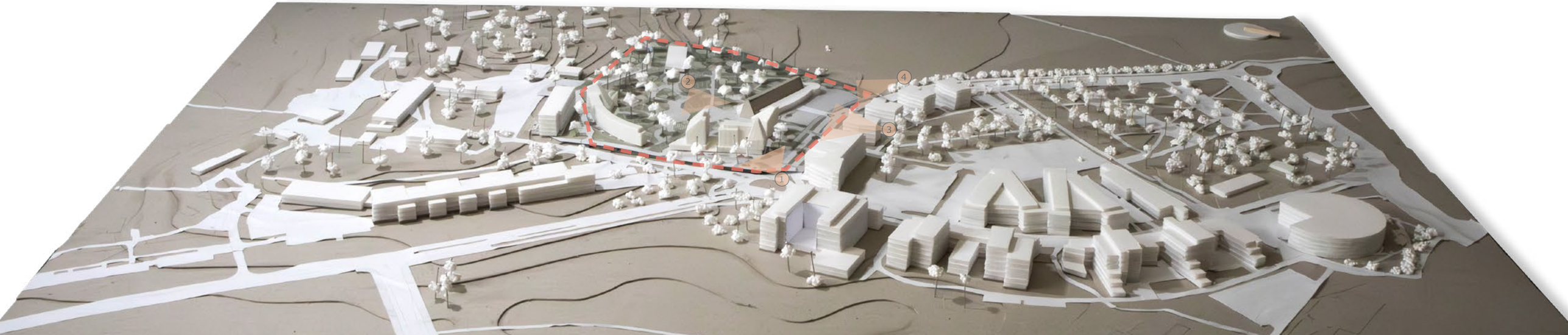
AERIAL VIEW

1

2

3

4



SITE LIMIT

TRAFFICABLE SLAB FLOOR 1

A B C RESIDENTIAL HOUSING BLOCK

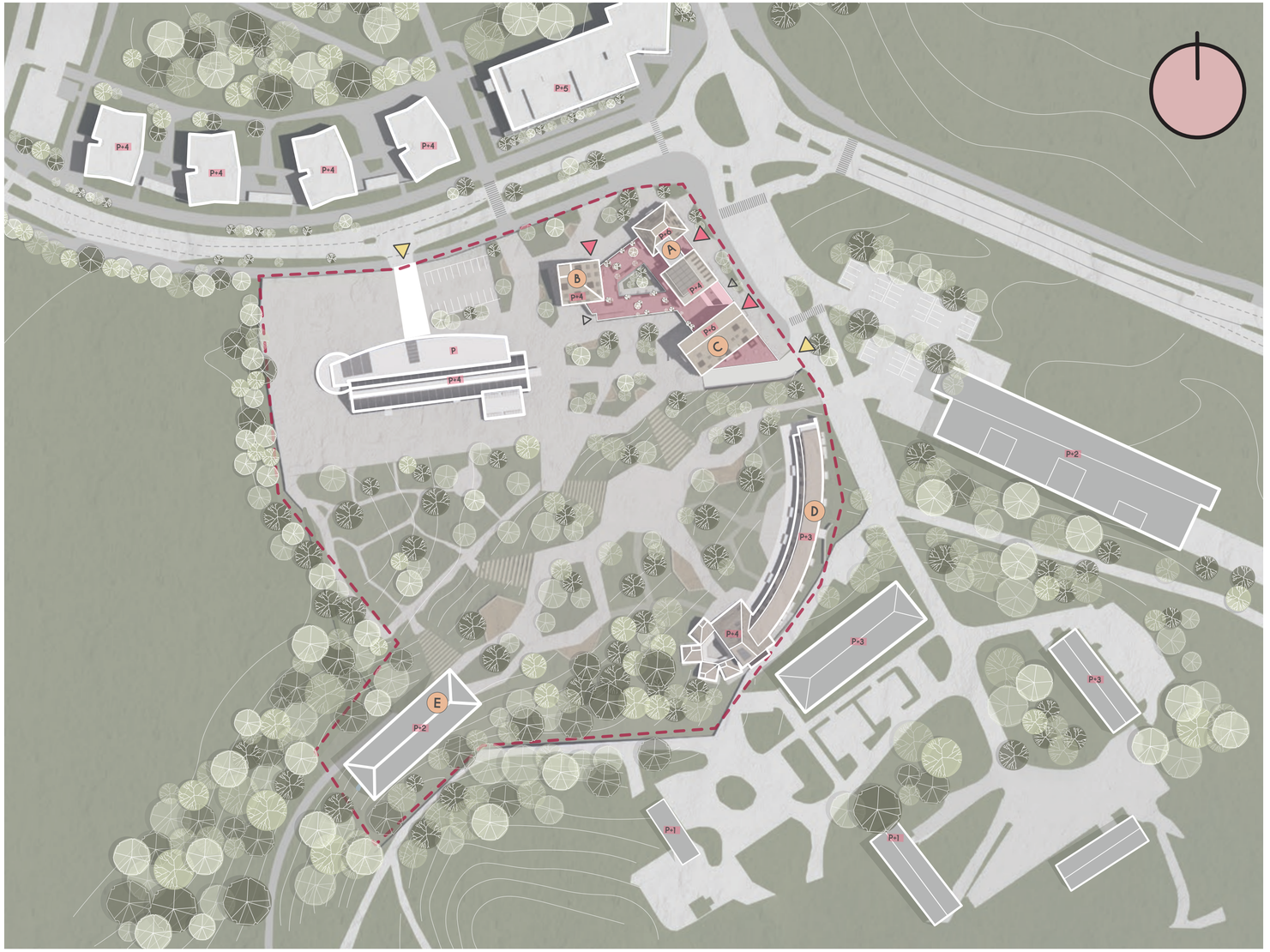
D REHABILITATED BUILDING

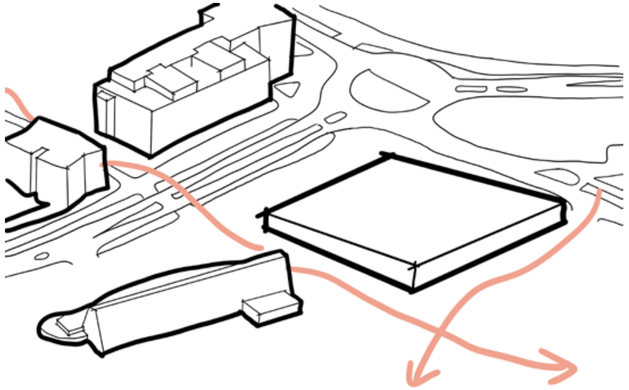
E PROTECTED MUSEUM

RESIDENTIAL HOUSING ACCES

VEHICLE ACCES

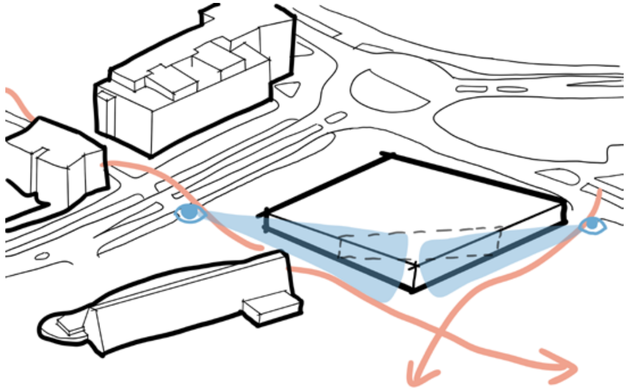
ACCES TO TRAFFICABLE SLAB





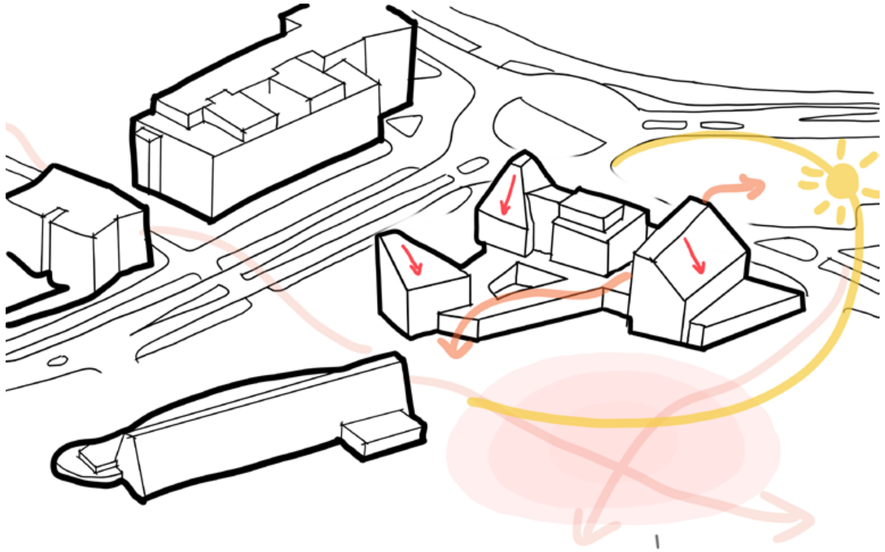
GENERAL SHAPE GIVEN BY CIRCULATIONS

1 The architectural ensemble is shaped around the main axes of circulation, giving the building a natural and functional initial form, adapted to the way people move and interact in space.



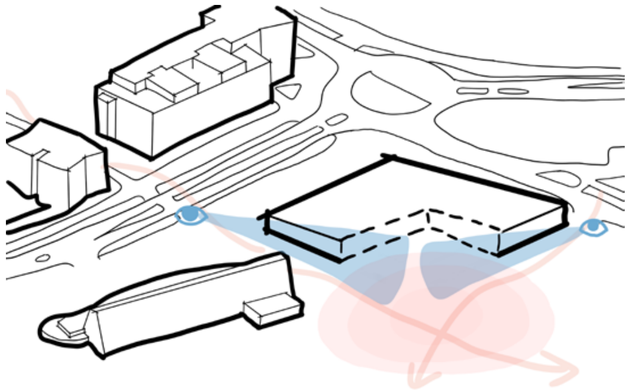
INTEGRATION OF FAVOURABLE SITE PERSPECTIVES

2 Adapting the shape of the ensemble to optimise favourable perspectives and to strengthen the visual connections between the different areas of the site. This creates a unified and inviting urban atmosphere.



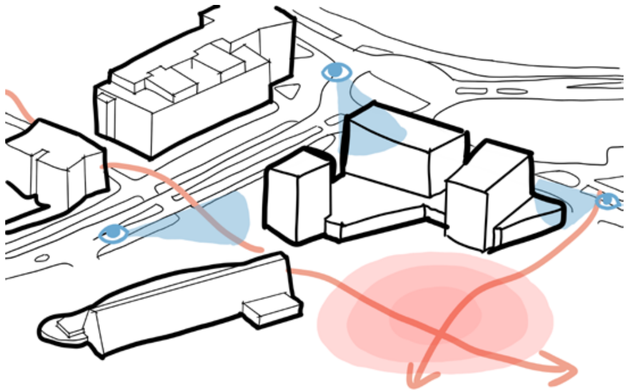
MODELLING THE SHAPES FOLLOWING ENERGY EFFICIENCY PRINCIPLES

5 Shaping the building shapes according to the position of the sun is done to maximise the benefits of natural light. We have opted for a compact form and pitched roof design to optimise light capture, maximise space efficiency and reduce the environmental impact of the building. This approach not only improves the energy efficiency of buildings, but also contributes to creating a bright and comforting indoor environment for residents. Careful integration of the roof into the final design of the architectural ensemble helps us to shape and reinforce the identity and character of the ensemble within the urban landscape.



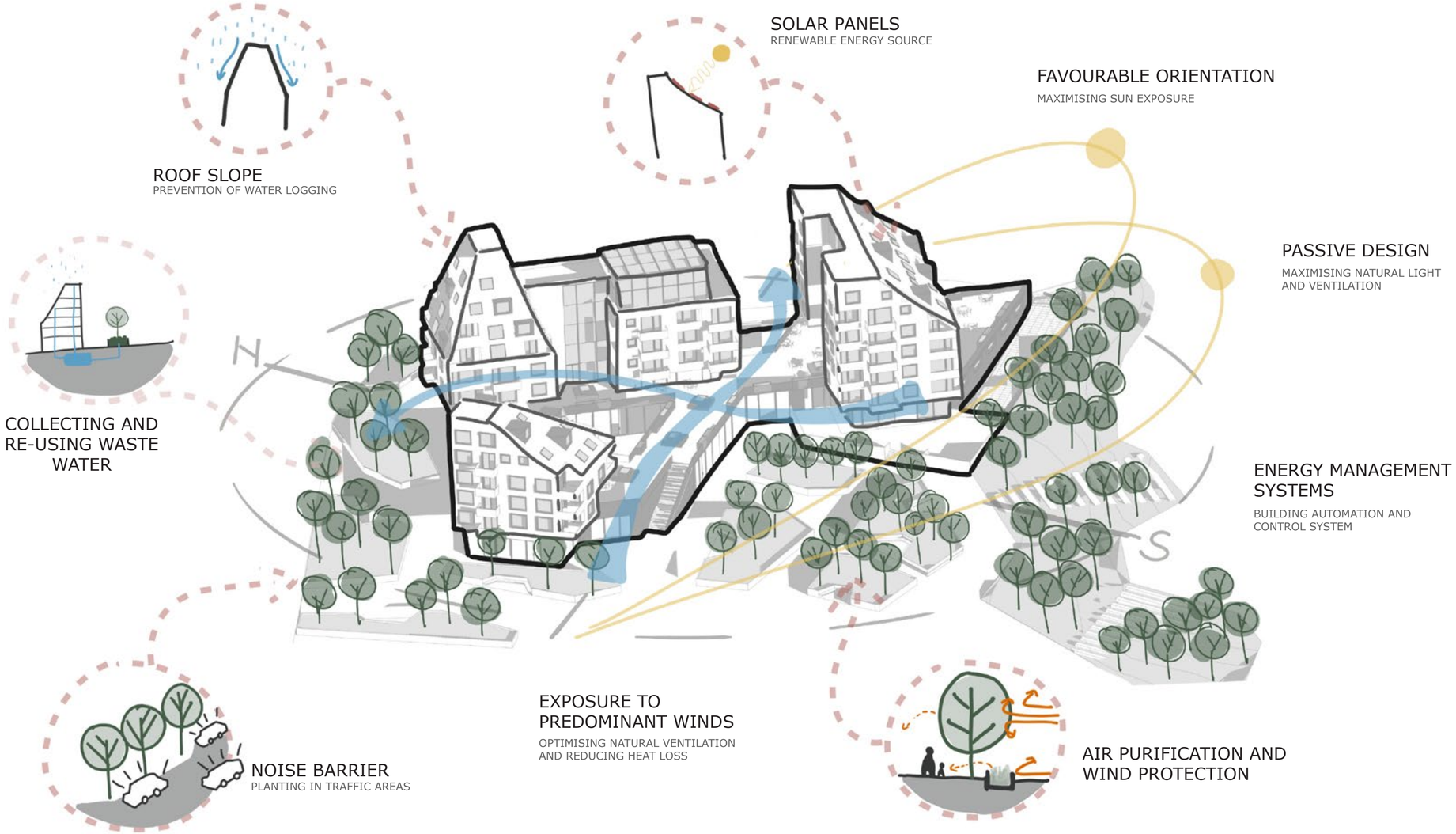
SHAPING THE VOLUME TO CREATE A CENTER OF INTEREST

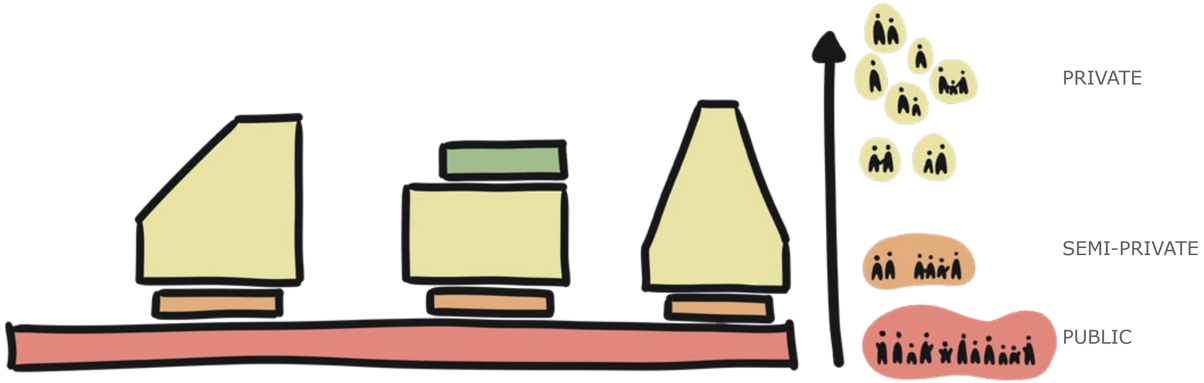
3 We modelled and adapted the shapes of the design to fit harmoniously into the urban centre created by the main circulations on the site. The aim was to highlight the centre as a vital element of the whole urban ensemble. By carefully placing and shaping the forms, we sought to encourage activity and interaction around the centre, giving our ensemble a distinctive and unified character.



PERSPECTIVES AND ACCENTS

4 The buildings are oriented towards the main axes created by the site's peripheral and outlying circulations in order to create favourable perspectives and to draw attention towards the whole ensemble both from close and from afar. We integrated vertical accents into our ensemble, giving it a distinctive and memorable character in the urban landscape. We proposed that these units be placed on a base, creating a raised urban plaza mainly

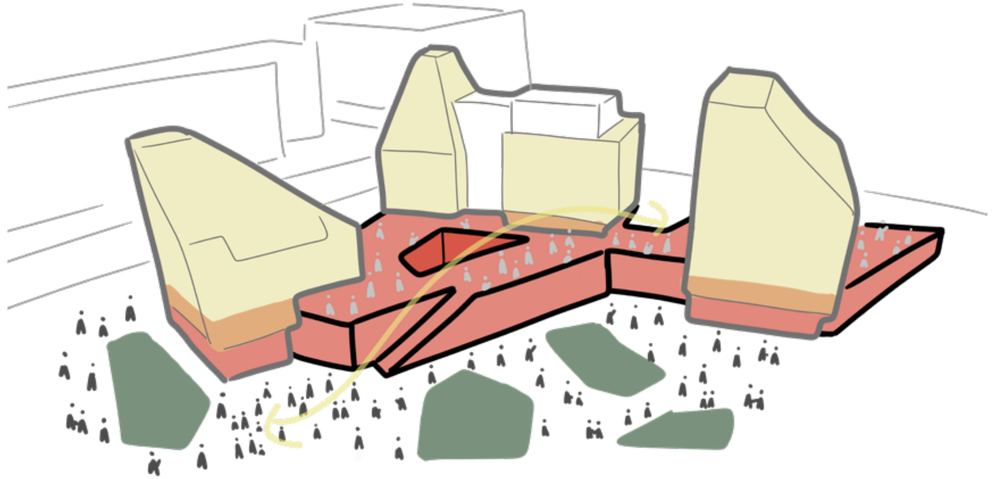

ROOF SLOPE
PREVENTION OF WATER LOGGING
SOLAR PANELS
RENEWABLE ENERGY SOURCE
FAVOURABLE ORIENTATION
MAXIMISING SUN EXPOSURE
PASSIVE DESIGN
MAXIMISING NATURAL LIGHT AND VENTILATION
COLLECTING AND RE-USING WASTE WATER
ENERGY MANAGEMENT SYSTEMS
BUILDING AUTOMATION AND CONTROL SYSTEM
N
S
NOISE BARRIER
PLANTING IN TRAFFIC AREAS
EXPOSURE TO PREDOMINANT WINDS
OPTIMISING NATURAL VENTILATION AND REDUCING HEAT LOSS
AIR PURIFICATION AND WIND PROTECTION



GRADUAL TRANSITION FROM PUBLIC TO PRIVATE

Our architectural concept is based on creating a tall volume structure on a solid base, providing a commercial ground floor accessible to the general public. This approach facilitates a gentle transition from public spaces at ground level to private spaces on the upper floors. We designed an open space on the first floor that connects to the interior coliving spaces. The upper floors are reserved for private spaces, offering apartments that provide privacy and comfort to our residents.

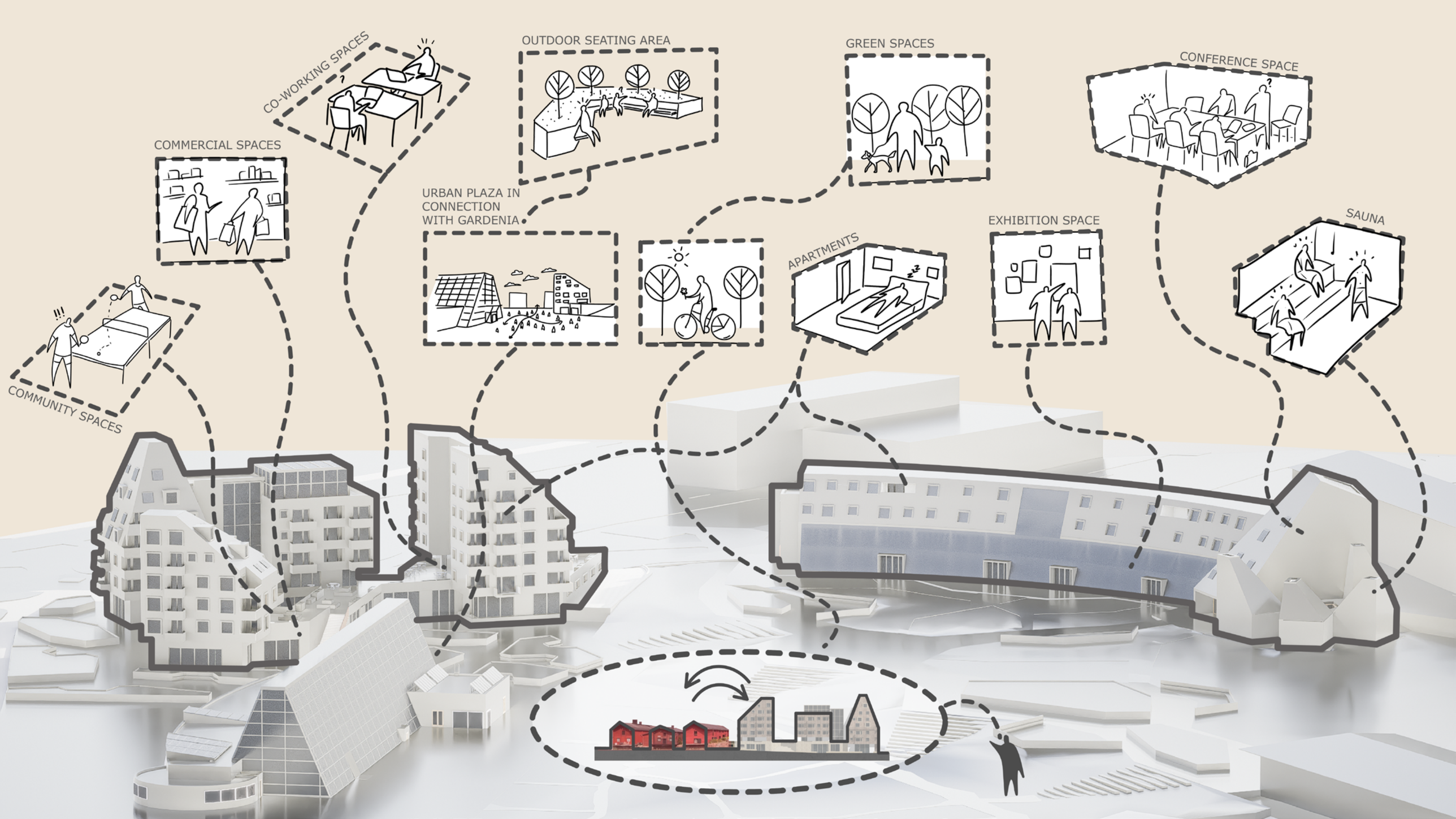
- GREENHOUSE FOR TENANTS
- APARTMENTS
- CO-LIVING SPACES
- COMMERCIAL SPACES



EXTENSION OF THE URBAN PLAZA AND INTEGRATION OF THE GARDENIA

The semi-public space on the first floor is an extension of the urban centre on the ground floor, providing an open and friendly environment that facilitates social interaction and promotes community. This space can be designed as a recreational or leisure area, with green spaces, benches or play areas, attracting residents from the neighbourhood or other areas of the city. By integrating this semi-public space on the first floor, an organic link is created between urban life on the ground floor and the private housing on the upper floors, contributing to the development of a lively and dynamic community.

EXTERIOR VIEW FROM THE COURTYARD OF THE COMPLEX


CO-WORKING SPACES
OUTDOOR SEATING AREA
GREEN SPACES
CONFERENCE SPACE
COMMERCIAL SPACES
URBAN PLAZA IN CONNECTION WITH GARDENIA
EXHIBITION SPACE
SAUNA
APARTMENTS
COMMUNITY SPACES

FACADE STREET KOETILANTIE

EXTERIOR VIEW FROM THE COURTYARD OF THE COMPLEX

GROUND FLOOR

- RESIDENTIAL HOUSING ACCESS
- VEHICLE ACCESS
- ACCESS TO THE PUBLIC TERRACE
- 1 STAIRCASE BUILDING A
- 2 STAIRCASE BUILDING B
- 3 STAIRCASE BUILDING C
- 4 LIBRARY
- 5 CAFETERIA
- 6 BISTRO
- 7 PET SPA
- 8 GYM

1ST FLOOR

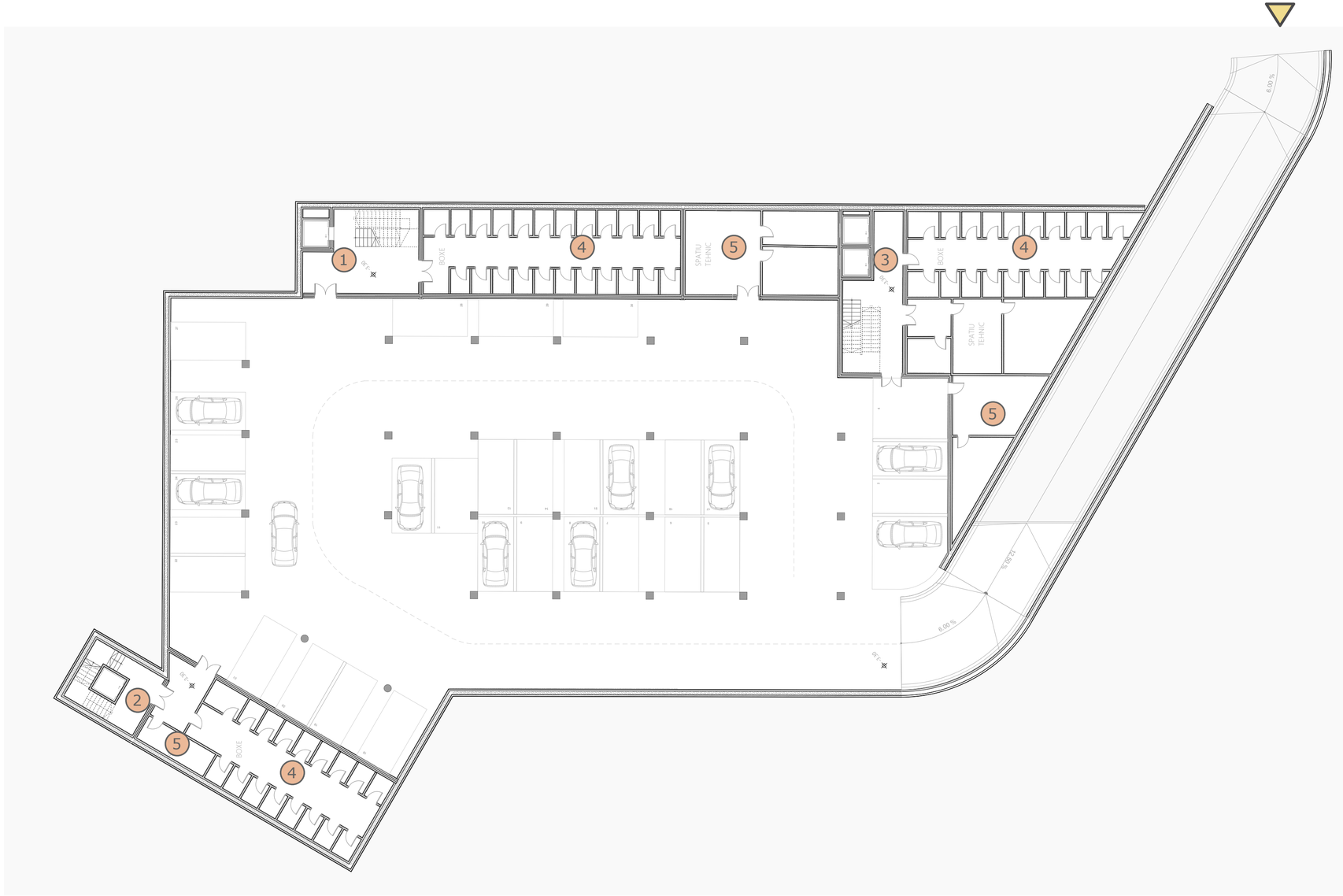
ACCESS TO THE PUBLIC TERRACE

1 COLIVING AREA

2 TRAFFICABLE SLAB

3 APARTMENT

BASEMENT FLOOR

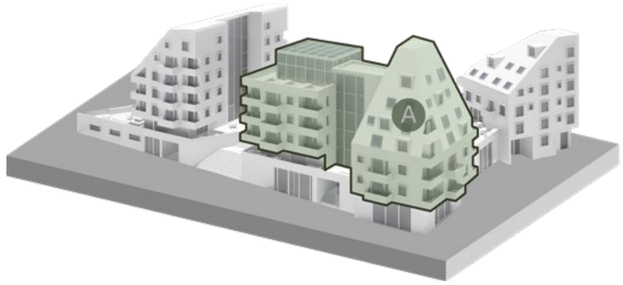


- VEHICLE ACCESS
- 1 STAIRCASE BUILDING A
- 2 STAIRCASE BUILDING B
- 3 STAIRCASE BUILDING C
- 4 STORAGE AREA
- 5 TECHNICAL SPACE

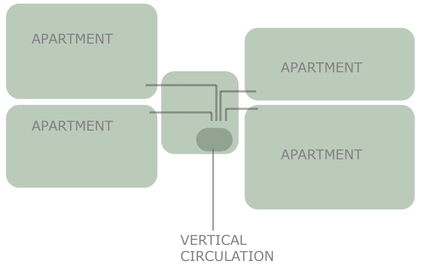
INTERIOR VIEW FROM PET SPA

EXTERIOR VIEW FROM THE PUBLIC TERRACE

ZONE B BUIDING A

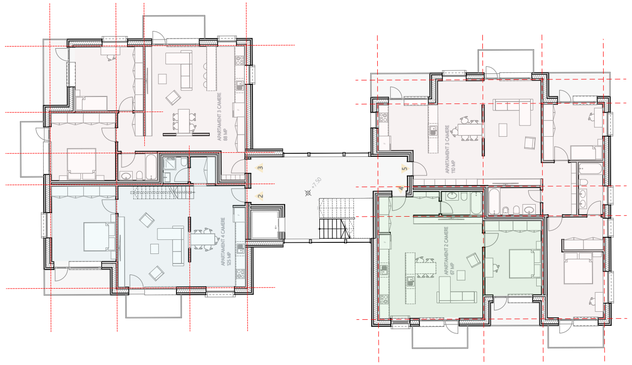


- STUDIO
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT

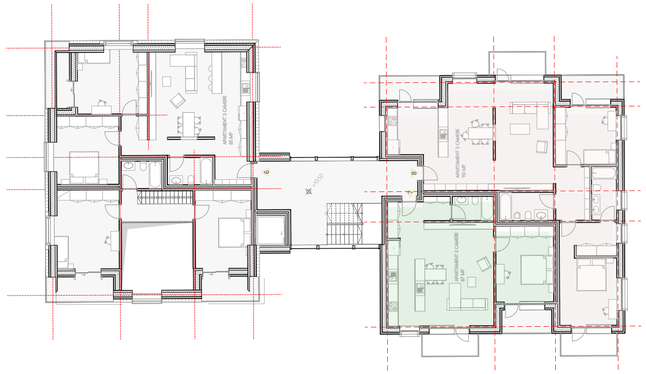


FIRE SAFETY

COMPACT BUILDINGS ▶ SHORT EVACUATION DISTANCES



2ND FLOOR



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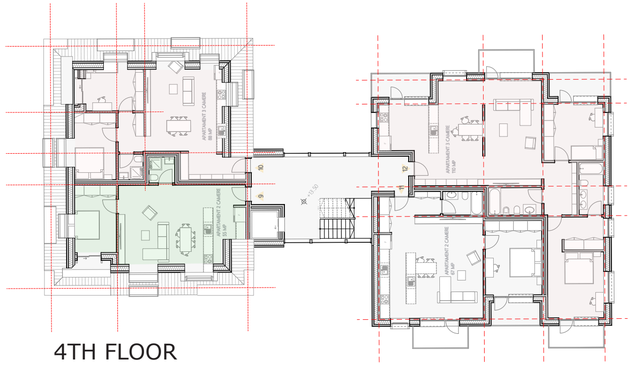
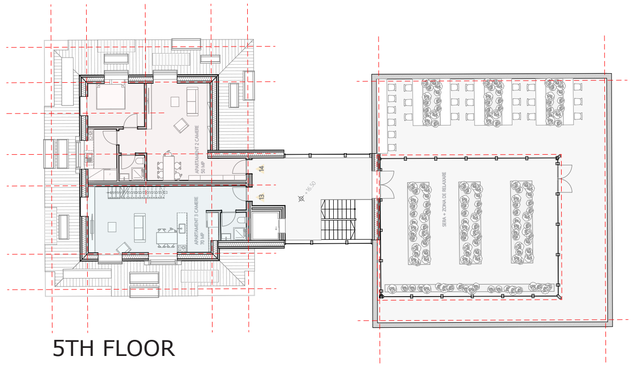
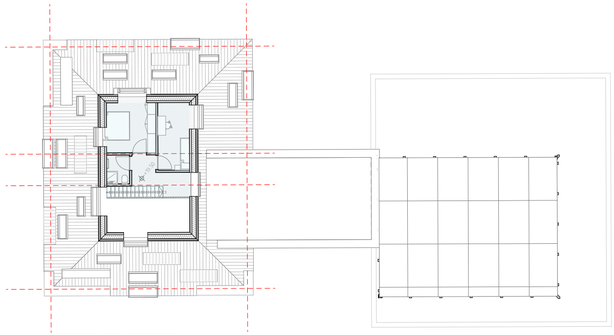


4TH FLOOR



5TH FLOOR



6TH FLOOR

- STUDIO
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT

DIVERSITY OF APARTMENTS

▼

DIFFERENT NEEDS OF TENANTS

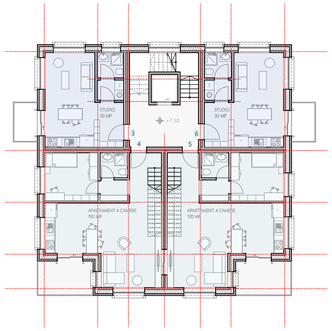
▼

FLEXIBILITY

▼

INCLUSION

The collective housing project adopts a non-modular approach, emphasizing the diversity of apartment shapes and configurations. This variety is designed to respond to the individual needs of the tenants, offering personalised and adaptable solutions.
Through this diversity, housing becomes more flexible and inclusive, helping to create a richer and more connected community.



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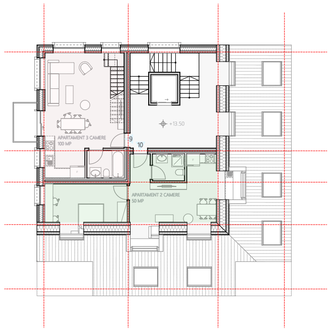
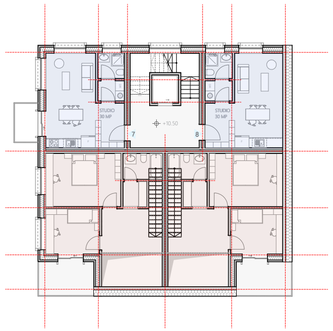
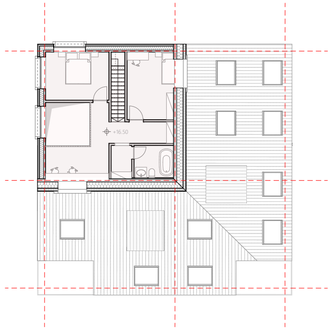


4TH FLOOR



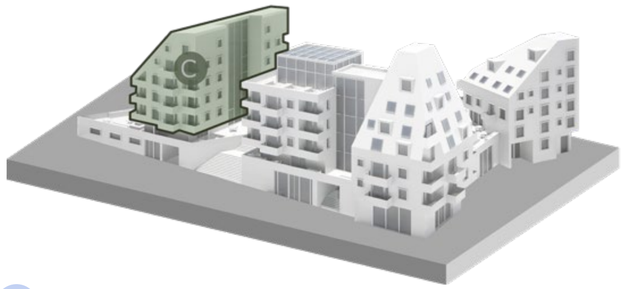
3RD FLOOR



5TH FLOOR

ZONE B

BUILDING C

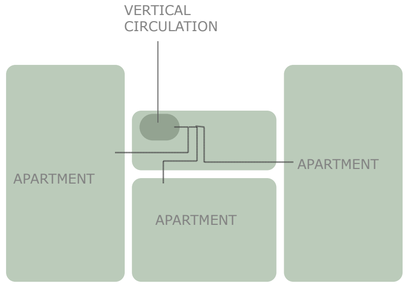


STUDIO

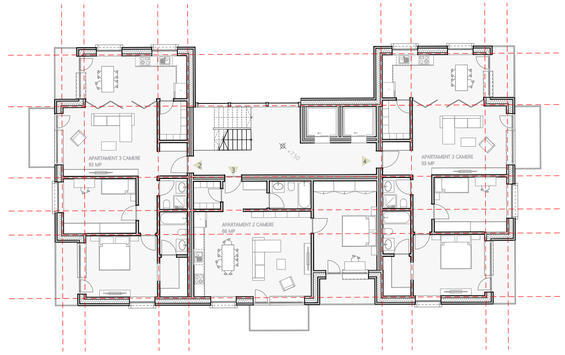
1 BEDROOM APARTMENT

2 BEDROOM APARTMENT

3 BEDROOM APARTMENT



FIRE SAFETY



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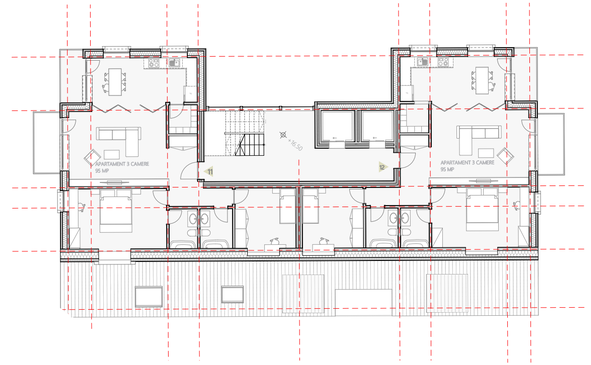
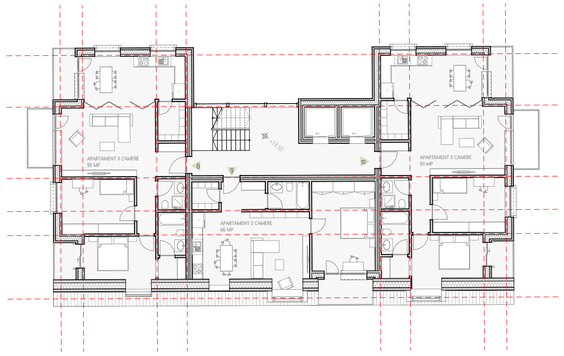


4TH FLOOR



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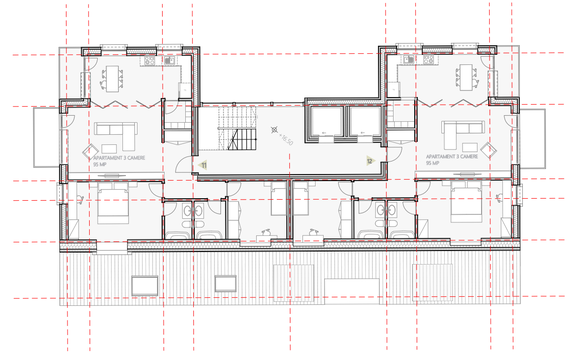


5TH FLOOR

INTERIOR VIEW APARTMENT

EXTERIOR VIEW INTERSECTION

WALL BETWEEN APARTMENTS
FIRE-RESISTANT
NOISE PROTECTION 64 dB

CURTAIN WALL
SAINT-GOBAIN
TRIPLE GLAZING
COOL-LITE XTREME
70/33 ORAE

LIGHT TRANSMISSION
LT= 70% g=33%

WINDOW
SAINT-GOBAIN
TRIPLE GLAZING
ECLAZ ONE

LIGHT TRANSMISSION
LT= 78% g=54%

SKYLIGHT
SAINT-GOBAIN
TRIPLE GLAZING
COOL-LITE XTREME
50/22 ORAE

LIGHT TRANSMISSION
LT= 47% g=21%

FACADE STREET VIIKINTIE

CURTAIN WALL
SAINT-GOBAIN
TRIPLE GLAZING
COOL-LITE XTREME
70/33 ORAE

LIGHT TRANSMISSION
LT= 70% g=33%

WINDOW
SAINT-GOBAIN
TRIPLE GLAZING
ECLAZ ONE

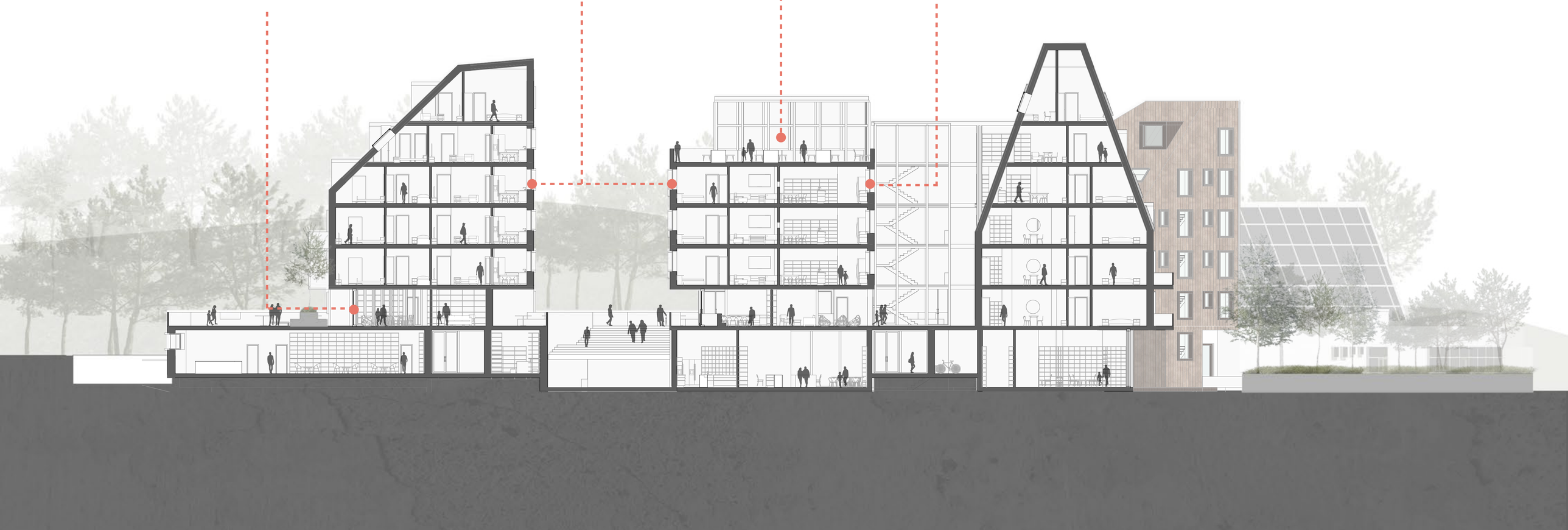
LIGHT TRANSMISSION
LT= 78% g=54%

CURTAIN WALL
SAINT-GOBAIN
DOUBLE GLAZING
COOL-LITE XTREME
61/29 ORAE

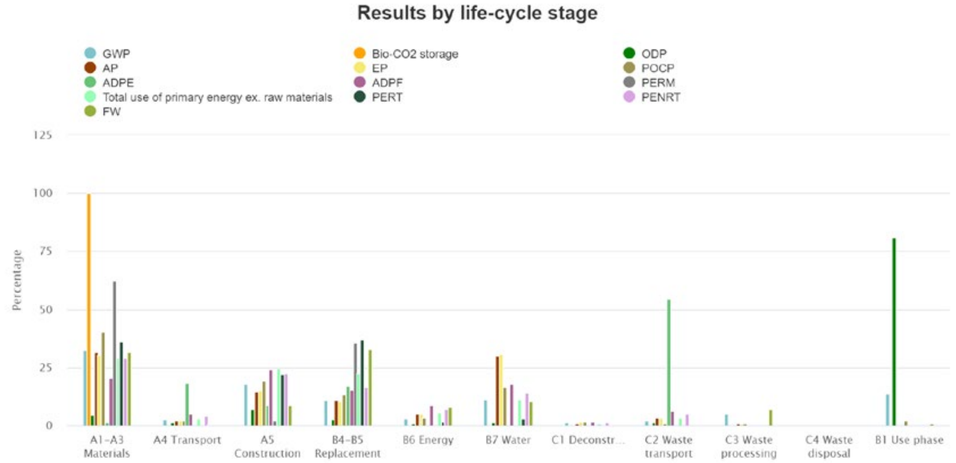
LIGHT TRANSMISSION
LT= 61% g=29%

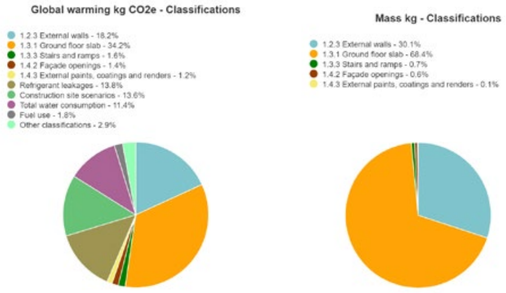
CURTAIN WALL
SAINT-GOBAIN
TRIPLE GLAZING
COOL-LITE XTREME
70/33 ORAE

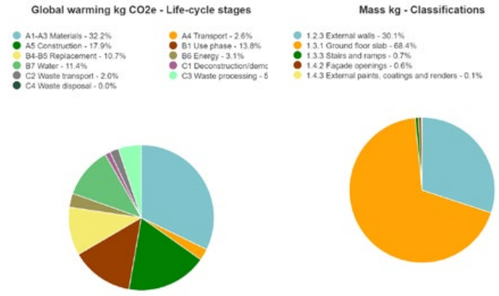
LIGHT TRANSMISSION
LT= 70% g=33%

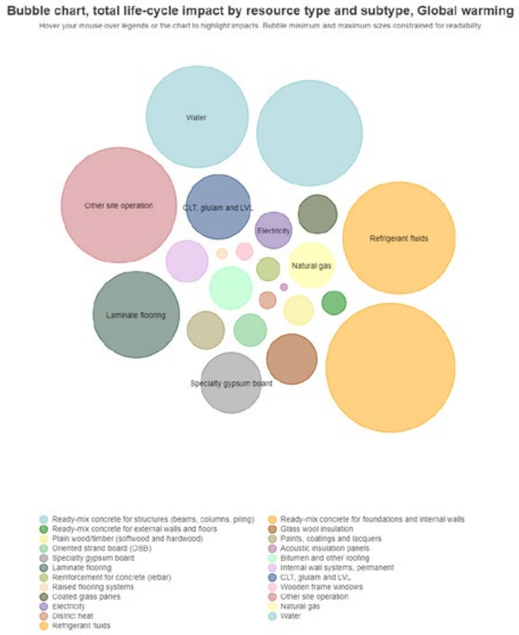


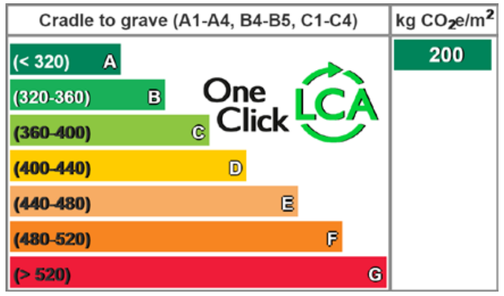
EXTERIOR VIEW FROM THE COURTYARD

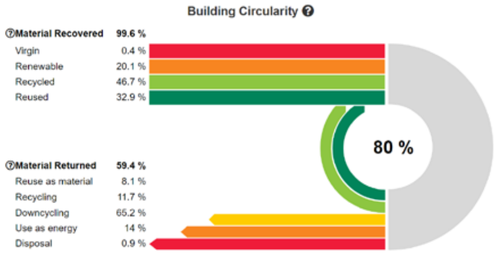












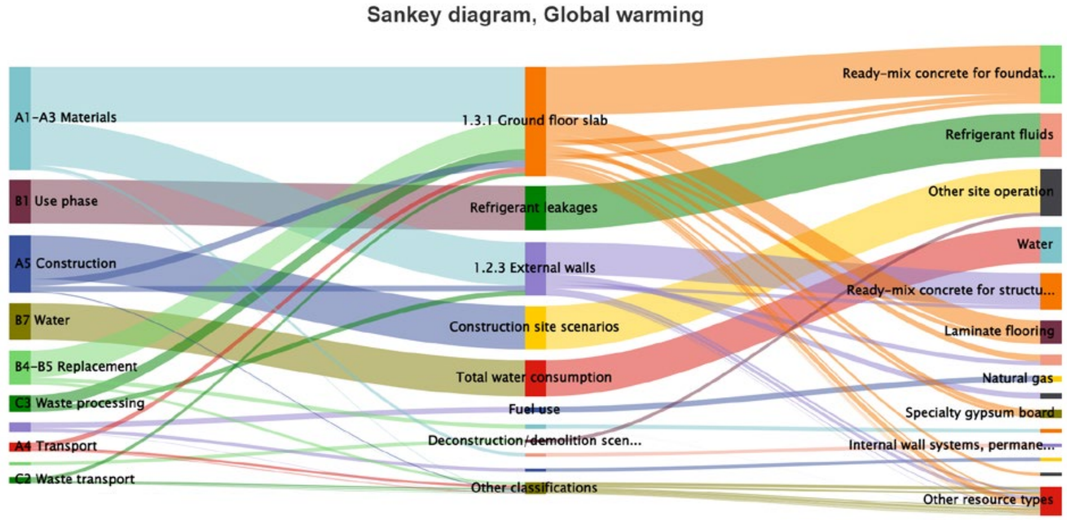
CLT- LOW CARBON FOOTPRINT

WOOD - RENEWABLE RESOURCE

PREFABRICATION- EASY INSTALLATION

LOCAL BUILDING MATERIALS - LOW TRANSPORT COST

The use of laminated timber (CLT) and local materials reduces carbon emissions associated with the production and transport of building materials. Advanced thermal insulation systems and efficient heating and cooling technologies minimise energy losses, reducing the total energy consumption of the building. Compact construction optimises space utilisation and reduces the exposed external surface area, contributing to energy efficiency.



ZONE B

SAINT-GOBAIN

1 EXTERIOR WALL - BUILDING ENVELOPE

PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
CROSS LAMINATED TIMBER(CLT) ELEMENT - 150mm
VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
ISOVER PROFI FASSADE FIX
MINERAL WOOL INSULATION **ISOVER** RKL-31 - 200mm
DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
VENTILATED AIR LAYER - 50mm
WOOD CLADDING FACADE LUNAWOOD THERMO-D

U-value: 0,07 W/(m²K)
Airborne sound insulation: 70 (dB)

2 FLOOR BETWEEN APARTMENTS

LAMINATED WOOD FLOORING
CEMENT FLOOR SCREED **WEBER** D10
FLOOR HEATING SYSTEM
ACOUSTIC PROTECTION BOARD - **WEBERFLOOR** COMFORT LITE
HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
MINERAL WOOL INSULATION **ISOVER** STANDARD -50mm
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine

Airborne sound insulation : 65 (dB) - SG recommendation
Impact sound insulation : 41 (dB) - SG recommendation

3 BALCONY DETAIL

RAISED ACCESS FLOOR SYSTEM
CEMENT FLOOR SCREED **WEBER** D10
HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
MINERAL WOOL INSULATION **ISOVER** RKL-31 - 50mm
CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
VENTILATED AIR LAYER - 50mm
WOOD CLADDING FACADE LUNAWOOD THERMO-D

4 FLOOR PUBLIC TERRACE

RAISED ACCESS FLOOR SYSTEM
CEMENT FLOOR SCREED **WEBER** D10
HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
VENTILATED AIR LAYER - 150mm
Ecophon Fade™ Duo

U-value: 0,09 W/(m²K)
Impact sound insulation: 39 (dB) - SG recommendation

5 WALL LAYERING BETWEEN APARTMENTS

PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
CROSS LAMINATED TIMBER(CLT) ELEMENT - 120mm
MINERAL WOOL INSULATION **ISOVER** ACOUSTIC -100mm

Wall between units (airborne sound insulation): 64 (dB) - SG recommendation

6 GROUND FLOOR

LAMINATED WOOD FLOORING
CEMENT FLOOR SCREED **WEBER** D10
HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
ACOUSTIC PROTECTION BOARD - **WEBERFLOOR** COMFORT LITE
REINFORCED CONCRETE SLAB - 150mm
MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
PLASTERBOARD **Gyproc** GNE 13 Normal Ergo

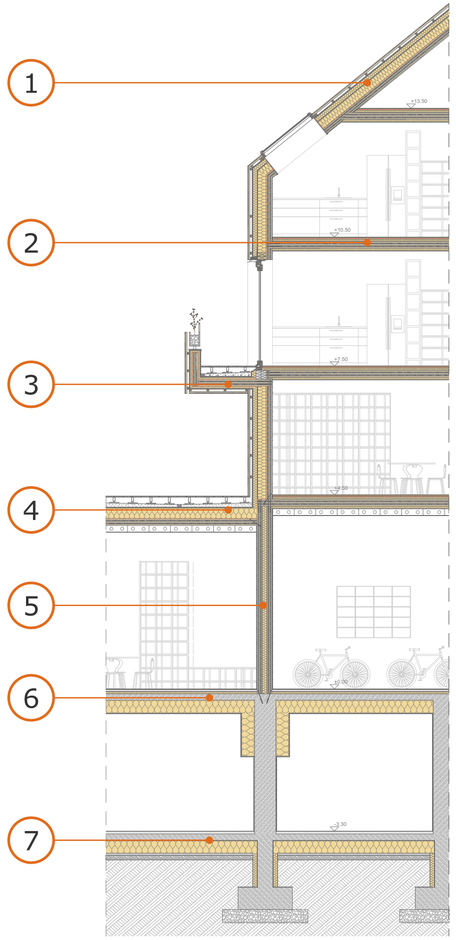
U-value: 0,094 W/(m²K)

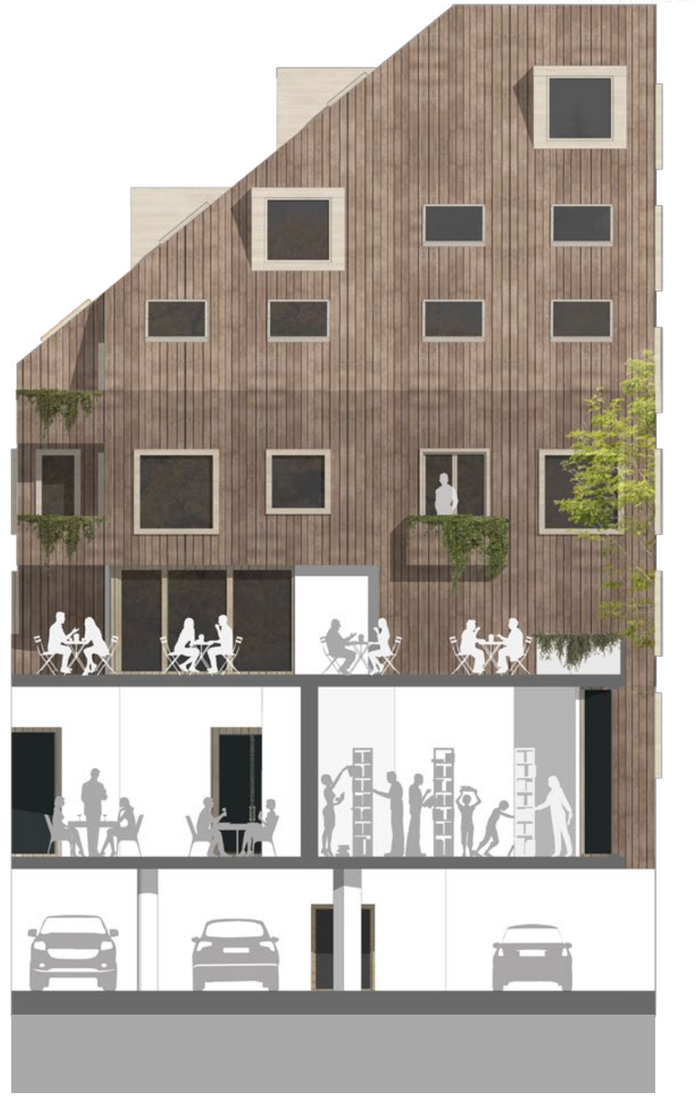
7 INTERIOR WALL

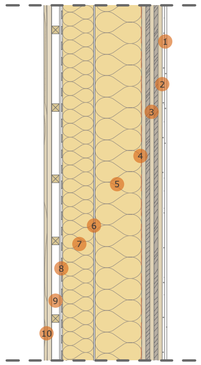
PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
CROSS LAMINATED TIMBER(CLT) ELEMENT - 120mm

Partition wall (airborne sound insulation): 56 (dB) - class A2

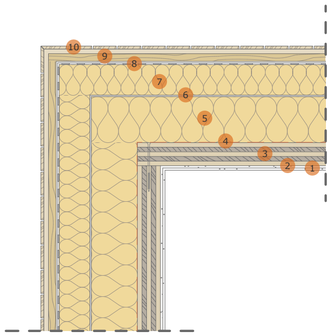
ISOVER SAINT-GOBAIN
weber SAINT-GOBAIN
gyproc SAINT-GOBAIN
ecophon SAINT-GOBAIN



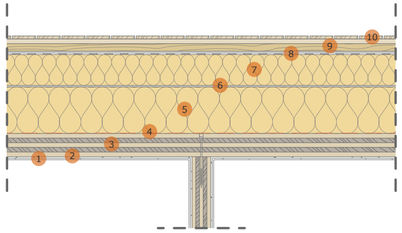




DETAIL EXTERIOR WALL/BUILDING ENVELOPE



DETAIL EXTERIOR WALL-CORNER

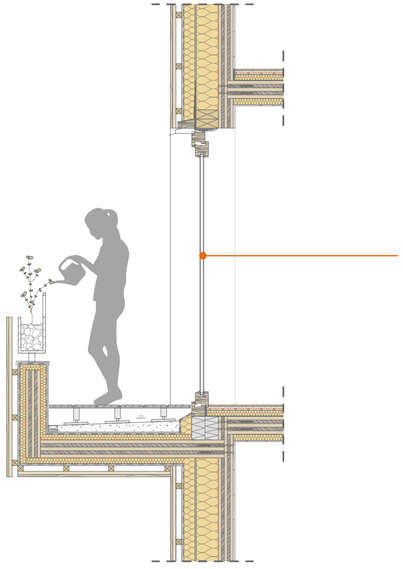


INTERIOR WALL JOINT DETAIL-EXTERIOR WALL

1 EXTERIOR WALL - BUILDING ENVELOPE

1. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
2. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
3. CROSS LAMINATED TIMBER(CLT) ELEMENT - 150mm
4. VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
5. MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
6. **ISOVER** PROFI FASSADE FIX
7. MINERAL WOOL INSULATION **ISOVER** RKL-31 - 200mm
8. DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
9. VENTILATED AIR LAYER - 50mm
10. WOOD CLADDING FACADE LUNAWOOD THERMO-D

U-value: 0,07 W/(m²K)
Airborne sound insulation: 70 (dB)

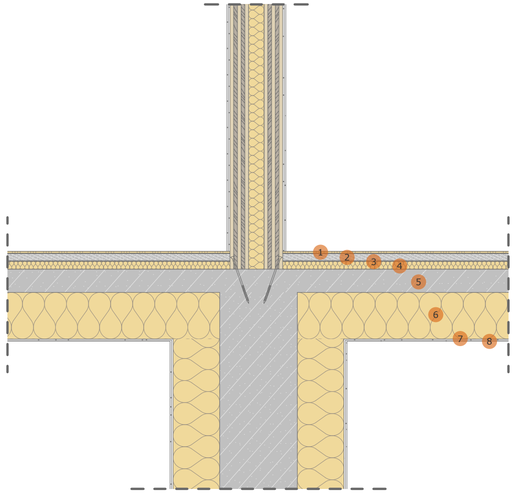


DETAIL EXTERIOR WALL/BUILDING ENVELOPE

2 GLASS ELEMENT DETAIL

SAINT-GOBAIN TRIPLE GLAZING ECLAZ ONE

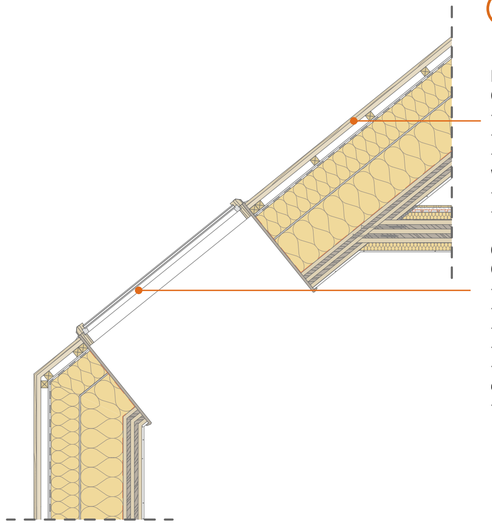
Ideal for north-facing elevations to capture as much of the sun's heat as possible, it features an innovative coating designed to reduce uncomfortable solar heat gain inside the home. Actively reflecting and absorbing heat, this smart solar control glass also filters light to reduce the unbearable and unwanted glare from the sun that often renders extensions or glazed rooms virtually unusable.



3 GROUND FLOOR

1. LAMINATED WOOD FLOORING
2. CEMENT FLOOR SCREED **WEBER** D10
3. HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
4. ACOUSTIC PROTECTION BOARD - **WEBERFLOOR** COMFORT LITE
5. REINFORCED CONCRETE SLAB - 150mm
6. MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
7. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
8. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo

U-value: 0,094 W/(m²K)



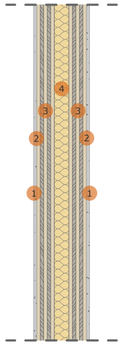
4 SKYLIGHT AND FACADE DETAIL

LUNAWOOD THERMO-D
Characteristics:
-suitable for all climates
-dimensionally stable
-low Maintenance - Does not require surface treatments when installed according to the instructions
-easy to assemble – a tongue and grooved panel
-gains a beautiful silver color outside when left untreated

COOL-LITE XTREME 50/22 ORAE
Characteristics:
-considerable reductions in heating factors;
-eliminates cold areas around windows;
-great reduction of condensation on the inside glass;
-maximises the transmission of natural light into the
-maximises natural daylight transmission to the building, especially compared to other low-e glazing;
-good acoustic insulation.

SAINT-GOBAIN

5 WALL LAYERING BETWEEN APARTMENTS

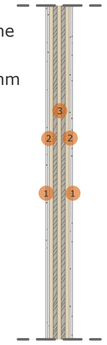


1. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
2. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
3. CROSS LAMINATED TIMBER(CLT) ELEMENT - 120mm
4. MINERAL WOOL INSULATION **ISOVER** ACOUSTIC -100mm

Wall between units (airborne sound insulation): 64 (dB) - SG recommendation

gyproc SAINT-GOBAIN
ISOVER SAINT-GOBAIN

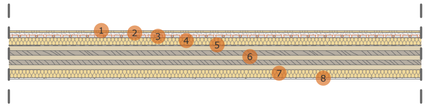
6 INTERIOR WALL



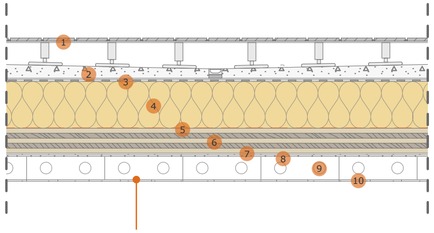
1. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
2. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
3. CROSS LAMINATED TIMBER(CLT) ELEMENT - 120mm

Partition wall (airborne sound insulation): 56 (dB) - class A2

gyproc SAINT-GOBAIN



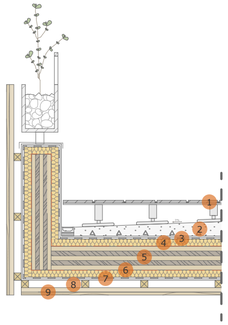
7 FLOOR PUBLIC TERRACE



ecophon SAINT-GOBAIN

1. RAISED ACCESS FLOOR SYSTEM
2. CEMENT FLOOR SCREED **WEBER** D10
3. HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
4. MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
5. VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
6. CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
7. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
8. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
9. VENTILATED AIR LAYER - 150mm
10. **Ecophon** Fade™ Duo

U-value: 0,09 W/(m²K)
Impact sound insulation: 39 (dB) - SG recommendation



8 FLOOR BETWEEN APARTMENTS

1. LAMINATED WOOD FLOORING
2. CEMENT FLOOR SCREED **WEBER** D10
3. FLOOR HEATING SYSTEM
4. ACOUSTIC PROTECTION BOARD - **WEBERFLOOR** COMFORT LITE
5. HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
6. CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
7. MINERAL WOOL INSULATION **ISOVER** STANDARD -50mm
8. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine

Airborne sound insulation : 65 (dB) - SG recommendation
Impact sound insulation : 41 (dB) - SG recommendation

gyproc SAINT-GOBAIN
weber SAINT-GOBAIN
ISOVER SAINT-GOBAIN

9 BALCONY DETAIL

1. RAISED ACCESS FLOOR SYSTEM
2. CEMENT FLOOR SCREED **WEBER** D10
3. HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
4. MINERAL WOOL INSULATION **ISOVER** RKL-31 - 50mm
5. CROSS LAMINATED TIMBER(CLT) ELEMENT - 160mm
6. VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
7. DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
8. VENTILATED AIR LAYER - 50mm
9. WOOD CLADDING FACADE LUNAWOOD THERMO-D

gyproc SAINT-GOBAIN
weber SAINT-GOBAIN
ISOVER SAINT-GOBAIN

NATURAL LIGHTING

LARGE, WELL POSITIONED WINDOWS IN RELATION TO THE CARDINAL POINTS

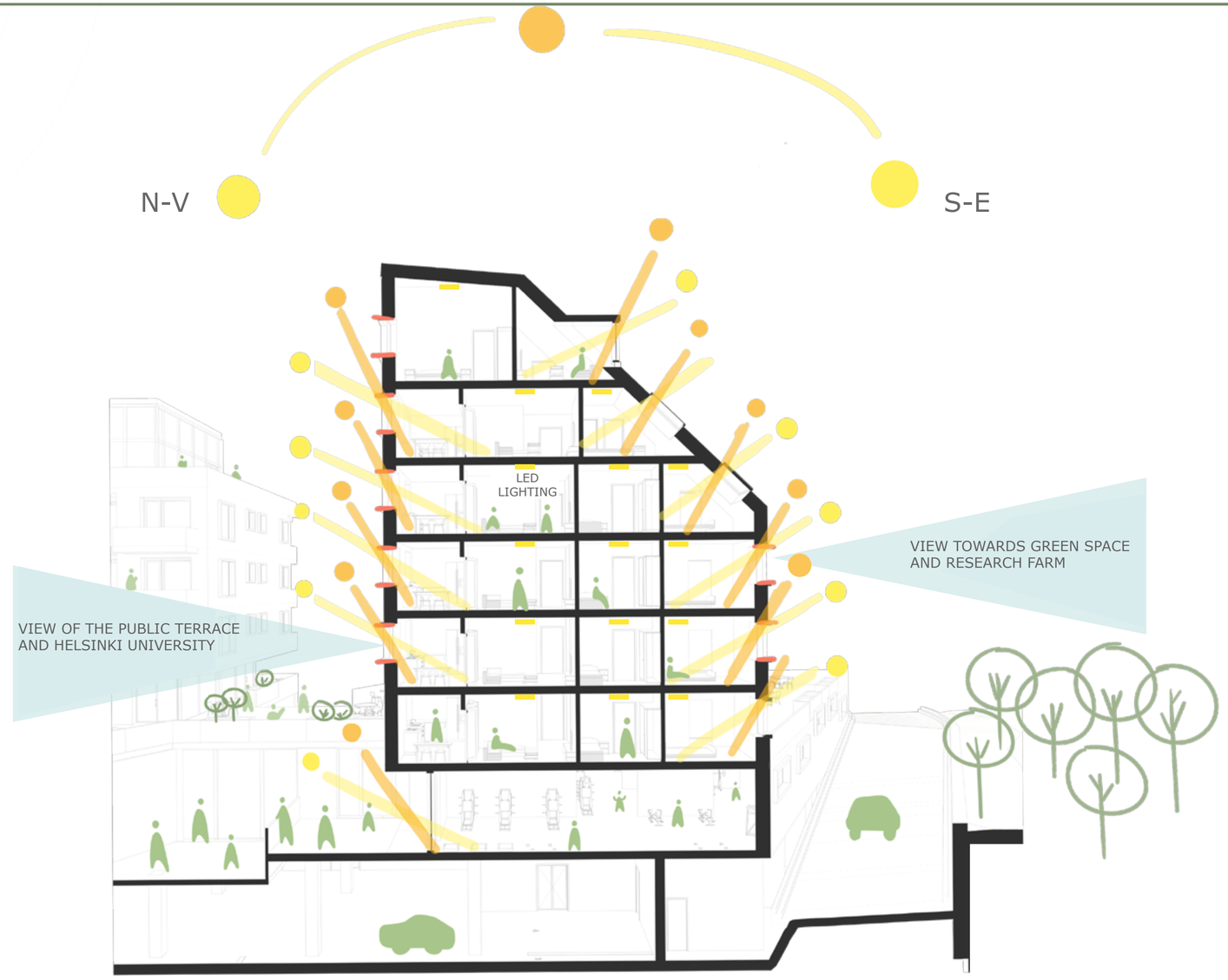
LIVING SPACES FACING SOUTH-WEST

EFFECTIVE ARTIFICIAL LIGHTING

USE OF LED TECHNOLOGY FOR SUPERIOR ENERGY EFFICIENCY

VIEWS TOWARDS GREEN SPACES

EXPOSURE TO GREEN SPACES HELPS TO IMPROVE THE QUALITY OF LIFE OF RESIDENTS



WINDOW

SAINT-GOBAIN
TRIPLE GLAZING
ECLAZ ONE

LIGHT TRANSMISSION
LT= 78% g=54%

SAINT-GOBAIN

glassolutions
SAINT-GOBAIN

SOUND INSULATION

THE USE OF EFFECTIVE BUILDING MATERIALS AND SYSTEMS TO REDUCE EXTERIOR-TO-INTERIOR OR INTER-ROOM SOUND TRANSMISSION

SOUND INSULATING WINDOWS

REDUCTION OF EXTERIOR NOISE

STRATEGIC BUILDING PLANNING

ZONING OF APARTMENTS ACCORDING TO HIGH TRAFFIC AREAS

NATURAL BARRIER - GREEN SPACES

GREEN SPACES CAN ABSORB ENVIRONMENTAL NOISE

ECOPHON FADE™DUO

ACOUSTIC INSULATION

ecophon SAINT-GOBAIN

WEBERFLOOR COMFORT LITE

ACOUSTIC PROTECTION BOARD-FLOOR BETWEEN APPARTMENTS

weber SAINT-GOBAIN

WALL BETWEEN UNITS

AIRBORNE SOUND INSULATION-
64 dB

SG recommendation

NATURAL VENTILATION

PRIORITISING LIVING AND SLEEPING SPACES FOR NATURAL LIGHTING AND VENTILATION

CROSS-VENTILATED LIVING SPACES

MECHANICAL VENTILATION

COMMERCIAL SPACES BENEFIT FROM MECHANICAL CEILING VENTILATION

GROUPING AND STACKING OF SANITARY SPACES TO BENEFIT FROM MECHANICAL VENTILATION

NATURAL BARRIER - GREEN SPACES

TREES ARE STRATEGICALLY PLACED AROUND THE BUILDING TO INFLUENCE THE WAY AIR CIRCULATES AND TO PURIFY AND COOL IT

HEAT RECOVERY VENTILATION SYSTEM

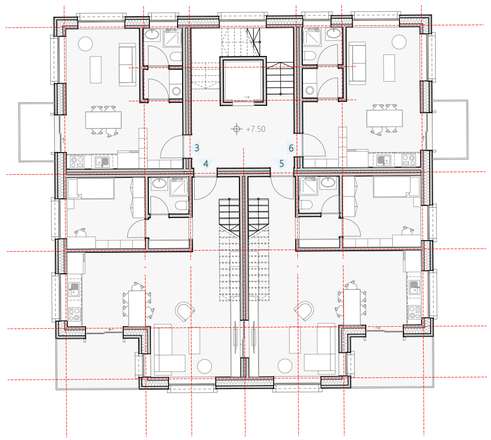
ENSURING EFFICIENT VENTILATION OF THE BUILDING

MINIMISES HEAT LOSS ASSOCIATED WITH AIR EXCHANGE

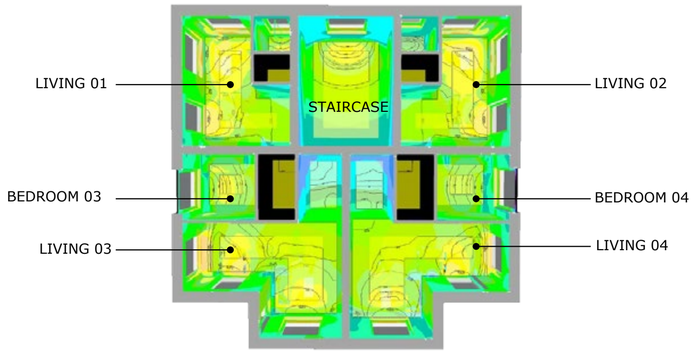
ISOVER SAINT-GOBAIN

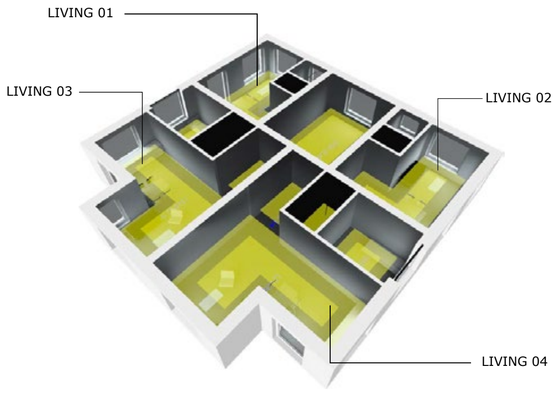
ISOVER CLIMAVER

SIMULATION OF NATURAL LIGHTING



2ND FLOOR



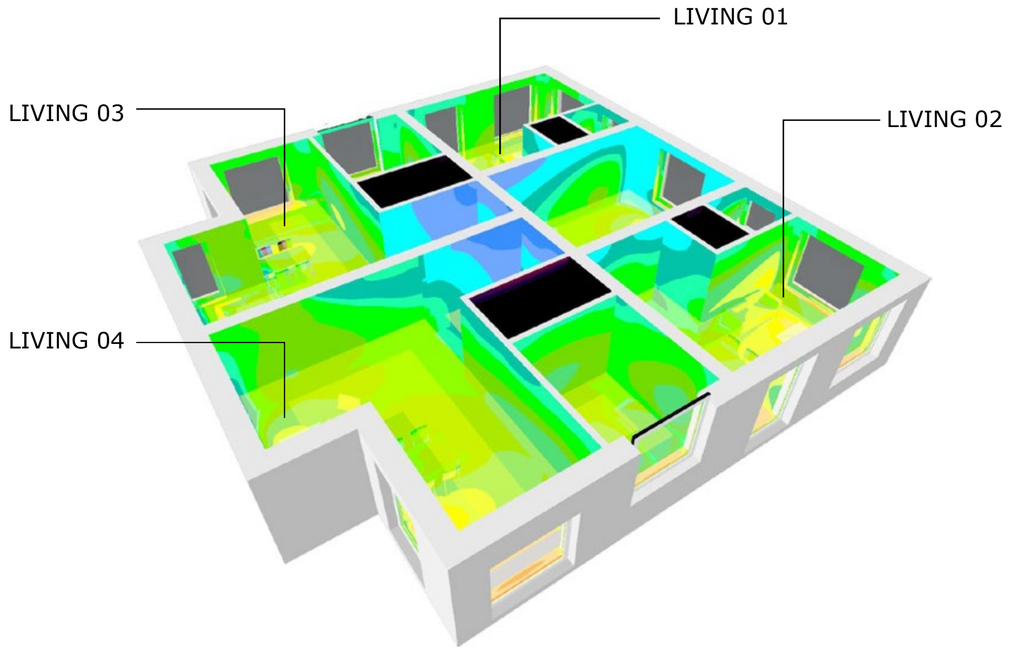


Daylight

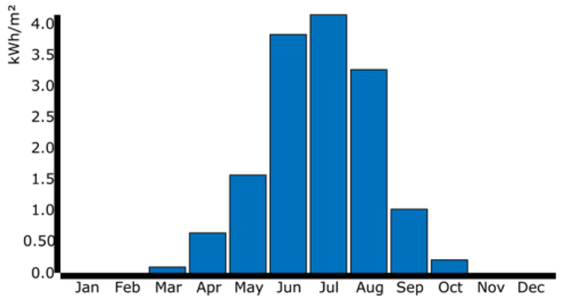
Properties	D_m	D_{min}	D_{max}
Daylight factor effective area (LIVING 02) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	5.365 %	0.966 %	11.681 %
Daylight factor effective area (LIVING 01) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	3.978 %	0.839 %	10.668 %
Daylight factor effective area (BEDROOM 04) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	3.984 %	2.270 %	6.778 %
Daylight factor effective area (BEDROOM 03) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	4.061 %	2.225 %	7.000 %
Daylight factor effective area (STAIRCASE) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	1.462 %	0.372 %	5.578 %
Daylight factor effective area (LIVING 04) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	3.590 %	1.424 %	6.552 %
Daylight factor effective area (LIVING 03) Daylight factor Height: 0.850 m, Wall zone: 1.000 m	3.689 %	1.473 %	8.139 %

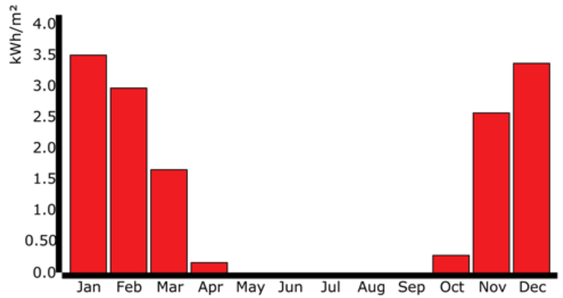
Working planes

Properties	Ē (Target)
LIVING 2 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.278 m	522 lx (≥ 100 lx) ✓
LIVING 1 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.269 m	450 lx (≥ 100 lx) ✓
BATHROOM 02 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.235 m	288 lx (≥ 200 lx) ✓
BEDROOM 4 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.448 m	433 lx (≥ 100 lx) ✓
BATHROOM 04 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.253 m	0.00 lx (≥ 200 lx) ✗
BATHROOM 03 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.253 m	0.00 lx (≥ 200 lx) ✗
BEDROOM 3 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.448 m	459 lx (≥ 100 lx) ✓
BATHROOM 01 Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.235 m	574 lx (≥ 200 lx) ✓
Working plane (W 01) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.186 m	0.00 lx (≥ 200 lx) ✗
Working plane (W 02) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.186 m	0.00 lx (≥ 200 lx) ✗
STAIRCASE Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.500 m	164 lx (≥ 500 lx) ✗



RESULTS ENERGY SIMULATION - SKETCHUP





Heating needs (kWh/m²)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Heating	3,5	2,97	1,66	0,15	--	--	--	--	--	0,27	2,57	3,37	14,49
Total	3,50	2,97	1,66	0,15	--	--	--	--	--	0,27	2,57	3,37	14,49

Cooling needs (kWh/m²)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Cooling	--	--	0,09	0,64	1,57	3,82	4,14	3,27	1,02	0,2	--	--	14,75
Total	--	--	0,09	0,64	1,57	3,82	4,14	3,27	1,02	0,20	--	--	14,75

Indicator	Building [kWh/m²]	Limit value [kWh/m²]	Comply
Heating needs	14,5	15,0	Yes
Cooling needs	14,7	15,0	Yes

Indicator	Building [kWh/m²]	Limit value [kWh/m²]	Comply
Heating needs	14,5	15,0	Yes
Cooling needs	14,7	15,0	Yes

Lighting autonomy 300 Lux	Autonomy [%]	Required [%]	Comply
TZ: SPACE 1 DAYLIGHTINGCONTROLS	68,0	60.0 %	Yes
TZ: SPACE 10 DAYLIGHTINGCONTROLS	64,5	60.0 %	Yes
TZ: SPACE 11 DAYLIGHTINGCONTROLS	65,2	60.0 %	Yes
TZ: SPACE 12 DAYLIGHTINGCONTROLS	72,3	60.0 %	Yes
TZ: SPACE 13 DAYLIGHTINGCONTROLS	84,2	60.0 %	Yes
TZ: SPACE 14 DAYLIGHTINGCONTROLS	78,2	60.0 %	Yes
TZ: SPACE 15 DAYLIGHTINGCONTROLS	74,9	60.0 %	Yes
TZ: SPACE 16 DAYLIGHTINGCONTROLS	63,9	60.0 %	Yes
TZ: SPACE 17 DAYLIGHTINGCONTROLS	61,9	60.0 %	Yes
TZ: SPACE 18 DAYLIGHTINGCONTROLS	61,6	60.0 %	Yes
TZ: SPACE 19 DAYLIGHTINGCONTROLS	63,7	60.0 %	Yes
TZ: SPACE 2 DAYLIGHTINGCONTROLS	63,4	60.0 %	Yes
TZ: SPACE 20 DAYLIGHTINGCONTROLS	65,0	60.0 %	Yes
TZ: SPACE 21 DAYLIGHTINGCONTROLS	78,5	60.0 %	Yes
TZ: SPACE 22 DAYLIGHTINGCONTROLS	77,2	60.0 %	Yes
TZ: SPACE 23 DAYLIGHTINGCONTROLS	78,2	60.0 %	Yes
TZ: SPACE 24 DAYLIGHTINGCONTROLS	79,2	60.0 %	Yes
TZ: SPACE 3 DAYLIGHTINGCONTROLS	63,5	60.0 %	Yes
TZ: SPACE 4 DAYLIGHTINGCONTROLS	61,6	60.0 %	Yes
TZ: SPACE 5 DAYLIGHTINGCONTROLS	62,5	60.0 %	Yes
TZ: SPACE 6 DAYLIGHTINGCONTROLS	65,8	60.0 %	Yes
TZ: SPACE 7 DAYLIGHTINGCONTROLS	73,4	60.0 %	Yes
TZ: SPACE 8 DAYLIGHTINGCONTROLS	62,6	60.0 %	Yes
TZ: SPACE 9 DAYLIGHTINGCONTROLS	62,5	60.0 %	Yes

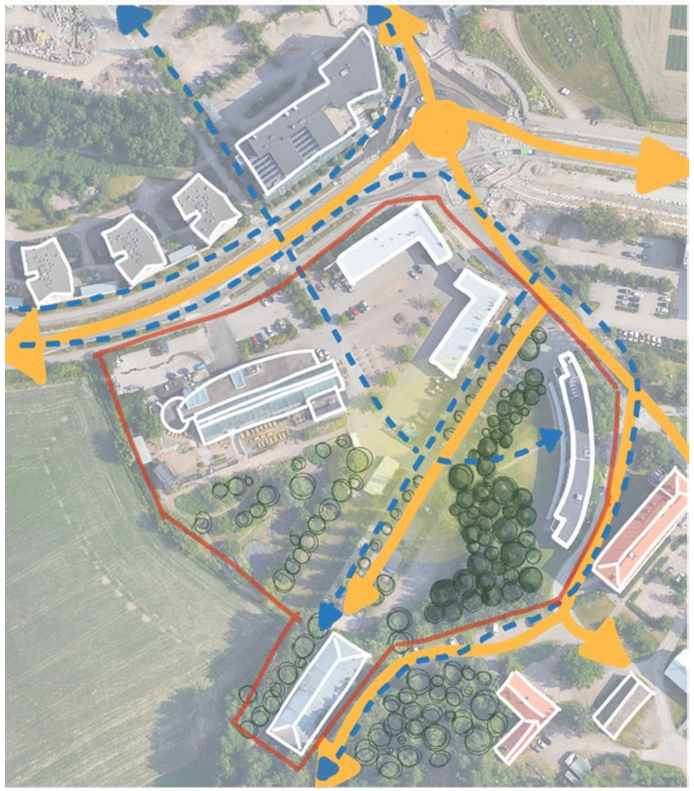
Summer comfort (overheating % of season)	Overheating [%]	Required [%]	target [%]	Comply
TZ: SPACE 1	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 10	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 11	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 12	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 13	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 14	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 15	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 16	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 17	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 18	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 19	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 2	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 20	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 21	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 22	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 23	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 24	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 3	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 4	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 5	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 6	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 7	0,0	10.0 %	5.0 %	Yes
TZ: SPACE 8	0,0	10.0 %	5.0 %	Yes

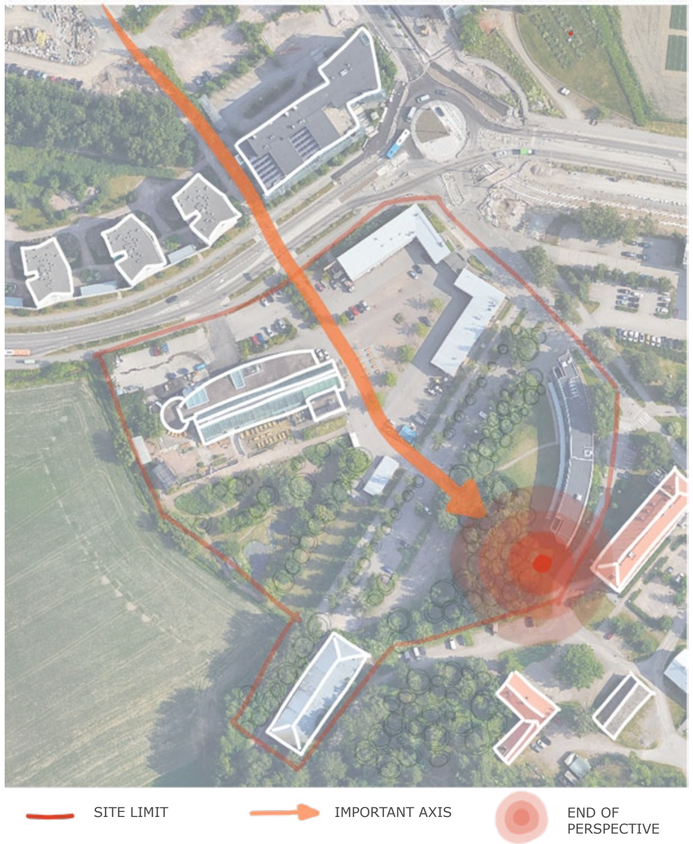
EXTERIOR VIEW VIIKINTIE STREET

EXTERIOR VIEW FROM THE COURTYARD

EXTERIOR VIEW OF THE RENOVATED BUILDING

CURRENT CONDITION OF THE BUILDING





RIGID SYMMETRY

▼

LONG HALLWAY,
NO SPACE BREAKS

▼

REPETITIVE SPACES

▼

MONOTONE
USER EXPERIENCE

▼

A STRONG SENSE OF UNIFORMITY AND PREDICTABILITY

▼

LOW
VISUAL INTEREST

POTENTIAL ARCHITECTURAL VALUE

CIRCULAR SHAPE IN PLAN

CIRCULAR SHAPE

▼

OPEN AND WELCOMING FEELING

▼

GOOD CONNECTION
WITH THE ENVIRONMENT

▼

CREATION OF A
COMMON CENTRE

▼

ENCOURAGING
SOCIAL INTERACTION

SOCIAL EPICENTER-
REQUIRES FUNCTIONS
THAT BRING PEOPLE
TOGETHER

The intention is to carefully **preserve the pre-existing elements of the building**, but with a contemporary approach, promoting cohesion and harmonious integration of the building in the urban context. The inviting character of the building leads to its transformation into a lively cultural hub where the community can gather for study, entertainment and social connection, therefore embracing the fundamental idea of the ensemble.

CURTAIN FACADE

ENCOURAGING SOCIAL INTERACTION

▼

VISUAL PERMEABILITY
INTERIOR EXTERIOR

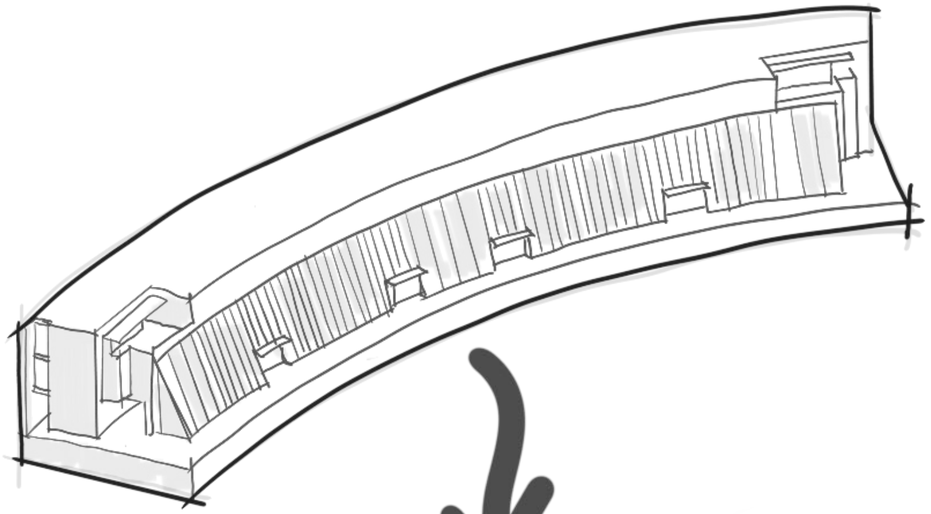
▼

FEELING OF OPENNESS
AND ACCESSIBILITY

▼

COMMUNITY
CONNECTION

EXISTING VOLUME



ADAPTATION OF THE EXISTING BUILDING TO THE GENERAL CHARACTER OF THE ENSEMBLE

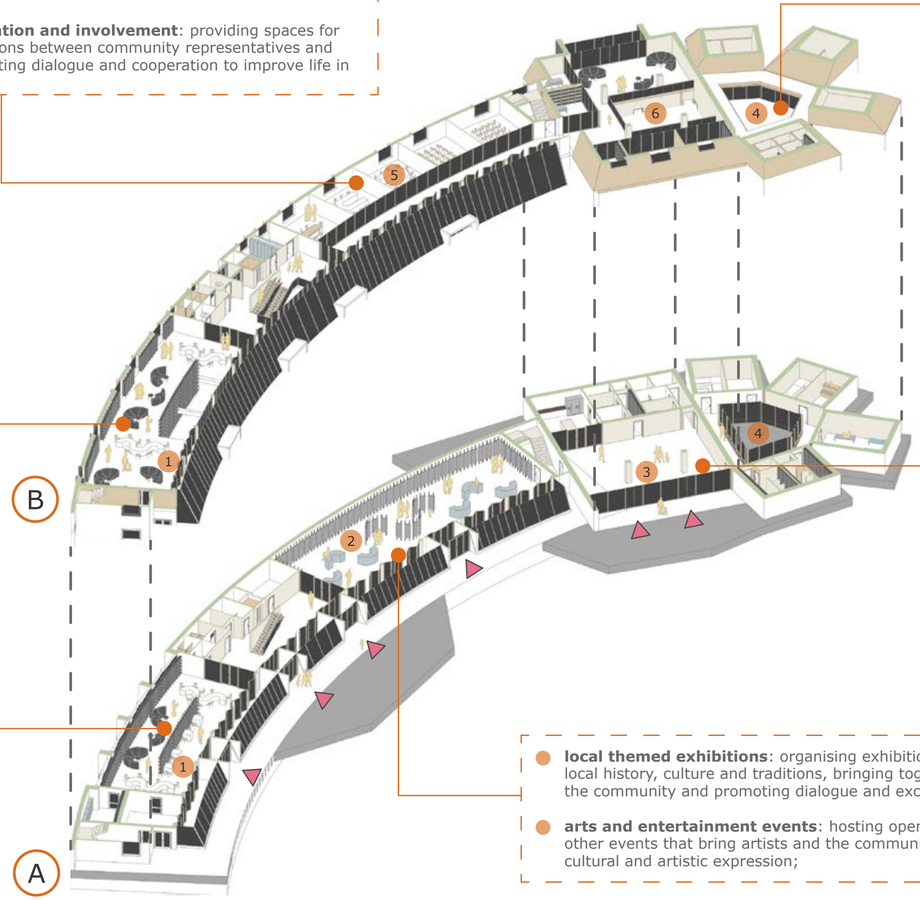
ADDED VOLUME CREATED TO REPRESENT A VISUAL REFERENCE ELEMENT IN THE OVERALL PROJECT

ZONE A

LEGEND

- ACCESS REHABILITATED BUILDING
- A GROUND FLOOR
- B FIRST FLOOR PLAN
- 1 LIBRARY
- 2 EXHIBITION SPACE
- 3 RESTAURANT/CANTEEN
- 4 WELLBEING-SAUNA AREA
- 5 ADMINISTRATIVE SPACES
- 6 TEACHERS' WORK OFFICES
- 7 TEMPORARY APARTMENTS

- **community support services**: providing information and assistance to community members in various areas, such as access to social services, information about local events or help in solving administrative problems;
- **platform for collaboration and involvement**: providing spaces for meetings and consultations between community representatives and local authorities, facilitating dialogue and cooperation to improve life in the area;



- **health and well-being programme**: organisation of relaxation sessions, yoga, meditation and other activities aimed at improving health and reducing stress for community members;
- **promotion of a healthy lifestyle**: facilitating access to sport and relaxation facilities such as sauna to promote a balanced and healthy lifestyle among local residents;

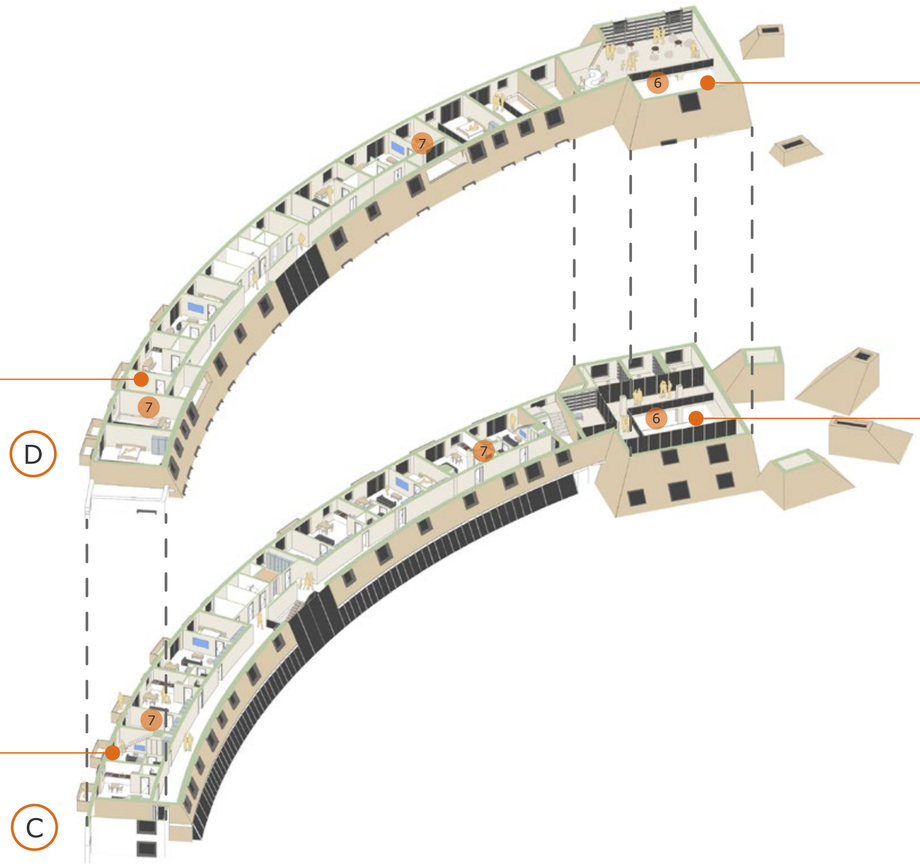
- **local gastronomic events**: the organisation of themed evenings with traditional local dishes or wine tasting evenings that promote local products and encourage socialising between local people;
- **volunteering and community involvement programme**: providing opportunities for members of the community to get involved in the restaurant's activities, such as volunteering in the kitchen or organising special events;

- **cultural and educational events**: organisation of conferences, debates, lectures and workshops that engage the community and facilitate interaction between participants;
- **promoting dialogue and debate**: participation of teachers in conferences stimulates dialogue and debate within the community, providing diverse perspectives and encouraging critical and analytical thinking;
- **networking and collaboration opportunities**: conferences provide valuable opportunities for teachers to meet and collaborate with colleagues from other institutions and disciplines, facilitating the exchange of best practice and the establishment of future collaborations;

- **local themed exhibitions**: organising exhibitions that celebrate local history, culture and traditions, bringing together members of the community and promoting dialogue and exchange of ideas;
- **arts and entertainment events**: hosting openings, art shows and other events that bring artists and the community together to enjoy cultural and artistic expression;

LEGEND

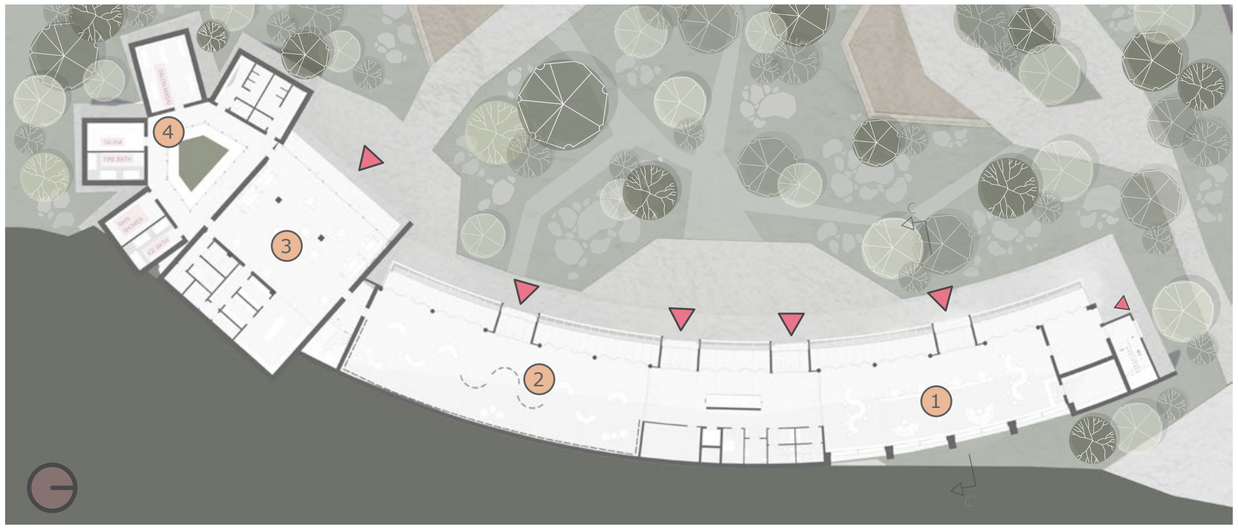
- ACCESS REHABILITATED BUILDING
- C SECOND FLOOR PLAN
- D THIRD FLOOR PLAN
- 1 LIBRARY
- 2 EXHIBITION SPACE
- 3 RESTAURANT/CANTEEN
- 4 WELLBEING-SAUNA AREA
- 5 ADMINISTRATIVE SPACES
- 6 TEACHERS' WORK OFFICES
- 7 TEMPORARY APARTMENTS

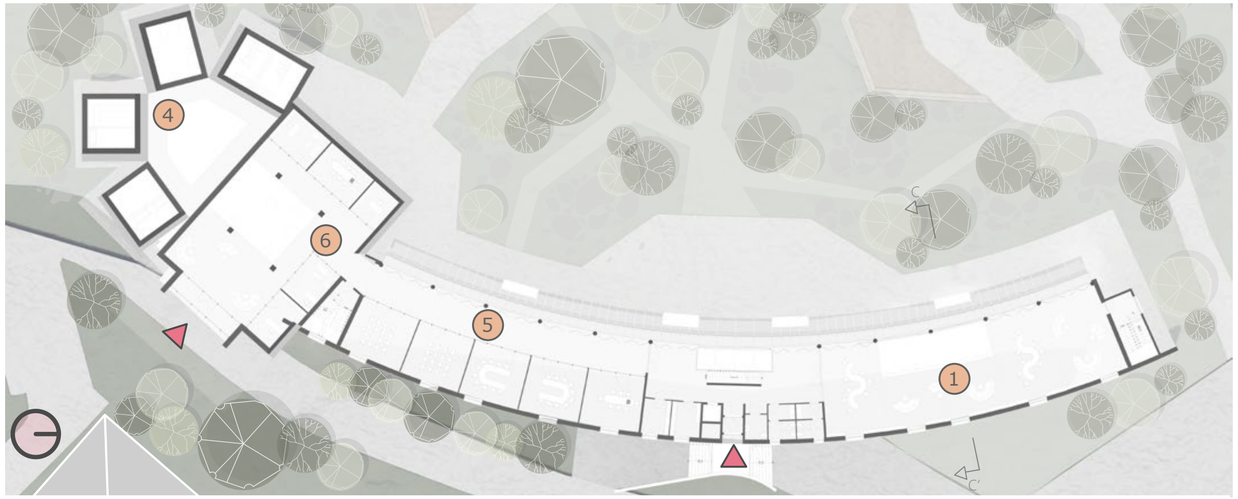


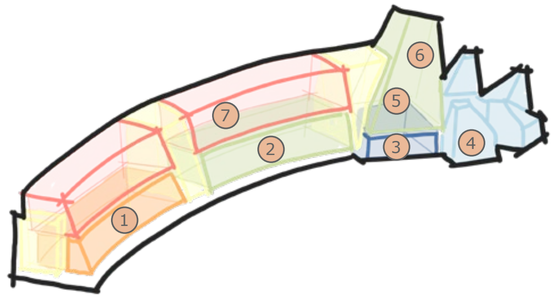
- **integration of foreign teachers into the local academic community**: organisation of social and professional events to facilitate interaction and collaboration between foreign teachers and their colleagues in local educational institutions, as well as with students and other academics;
- **learning and professional development opportunities**: providing access to academic resources and training and education programmes for foreign teachers to improve their skills and knowledge in their field of expertise;

- **mentoring and consultancy programme**: creating an enabling environment for teachers to interact and collaborate with each other, providing a space for the exchange of experiences and good practice in education;
- **educational and professional development programmes**: organisation of courses, seminars and workshops for teachers to promote their continuous development and stimulate the exchange of ideas and innovation in the educational process

INTERIOR VIEW LIBRARY

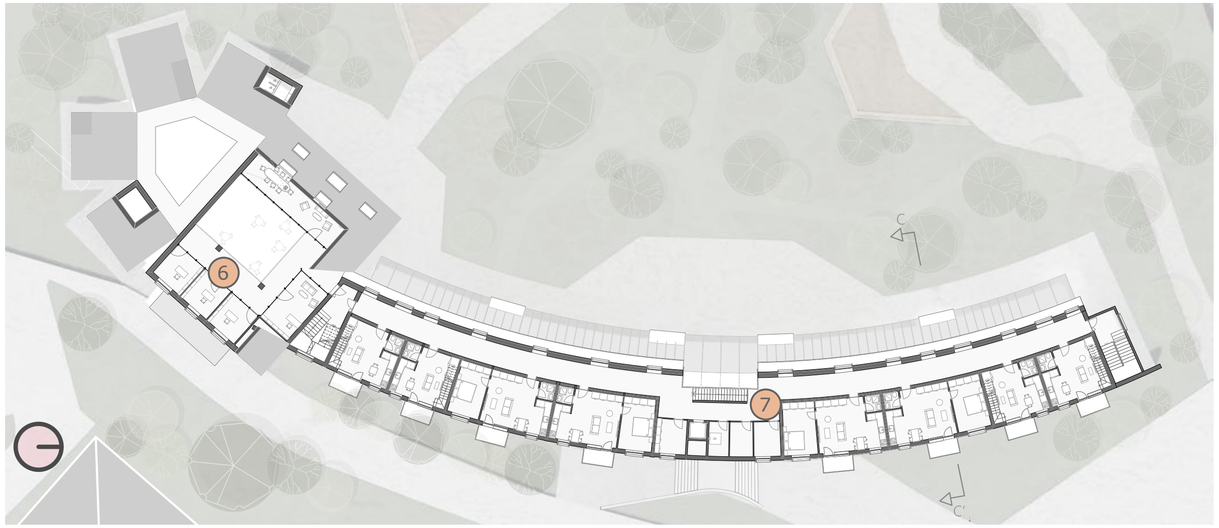


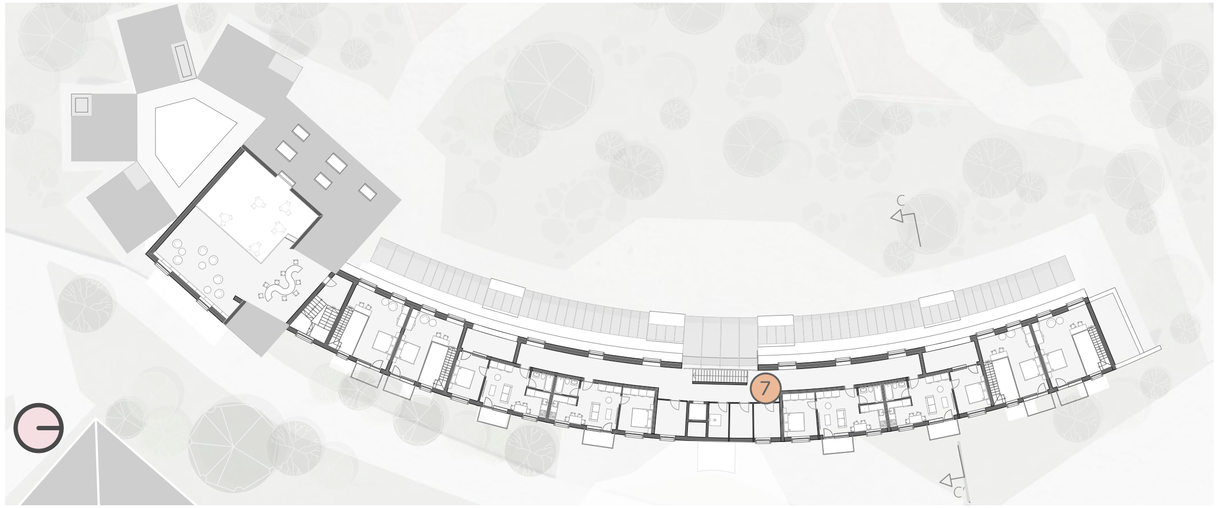




1. LIBRARY
2. EXHIBITION SPACE
3. RESTAURANT/ CANTEEN
4. WELLBEING- SAUNA AREA
5. ADMINISTRATIVE AREA
6. TEACHERS' OFFICES
7. TEMPORARY APARTMENTS

ACCESS TO REHABILITATED BUILDING





1. LIBRARY
2. EXHIBITION SPACE
3. RESTAURANT/ CANTEEN
4. WELLBEING- SAUNA AREA
5. ADMINISTRATIVE AREA
6. TEACHERS’ OFFICES
7. TEMPORARY APARTMENTS

▶ ACCESS TO REHABILITATED BUILDING

ZONE A

WINDOW
SAINT-GOBAIN
TRIPLE GLAZING
ECLAZ ONE

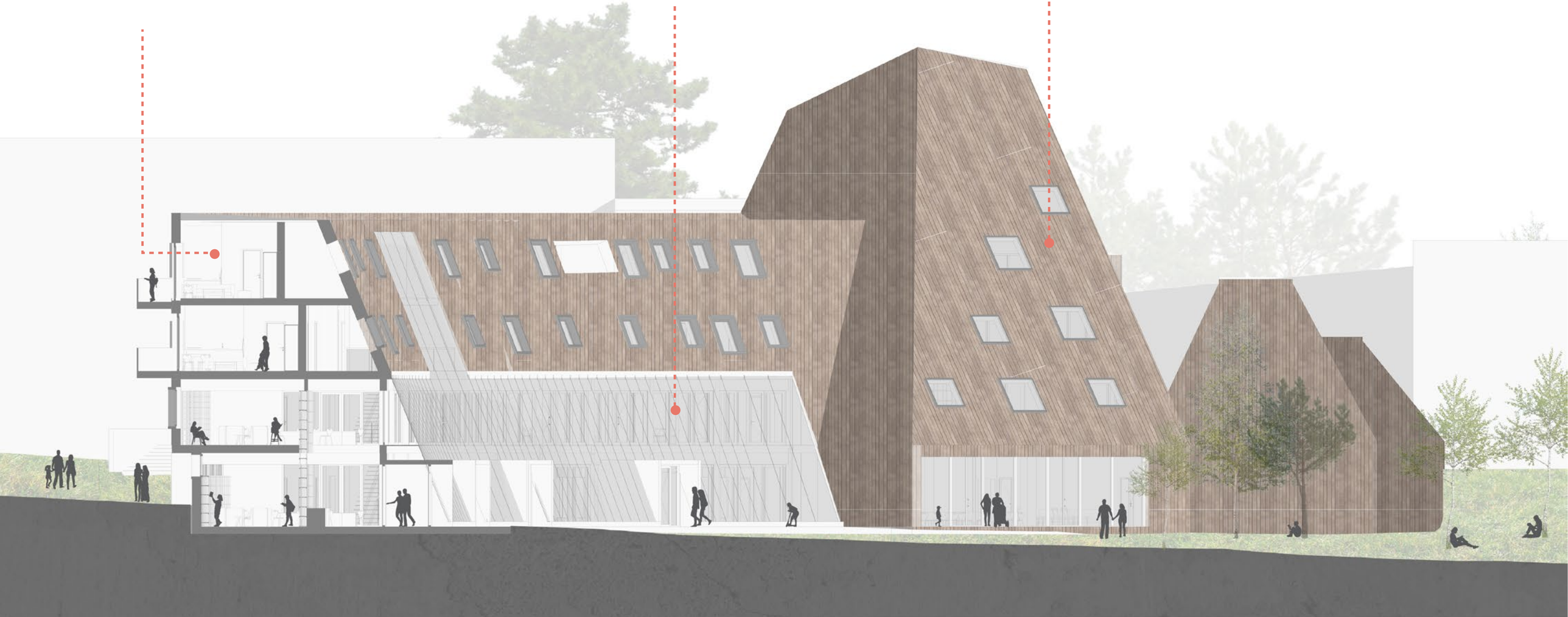
LIGHT TRANSMISSION
LT= 78% g=54%

CURTAIN WALL
SAINT-GOBAIN
DOUBLE GLAZING
COOL-LITE XTREME
61/29 ORAE

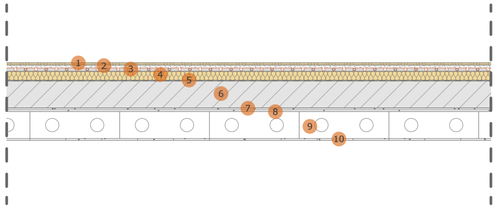
LIGHT TRANSMISSION
LT= 61% g=29%

SKYLIGHT
SAINT-GOBAIN
TRIPLE GLAZING
COOL-LITE XTREME
50/22 ORAE

LIGHT TRANSMISSION
LT= 47% g=21%



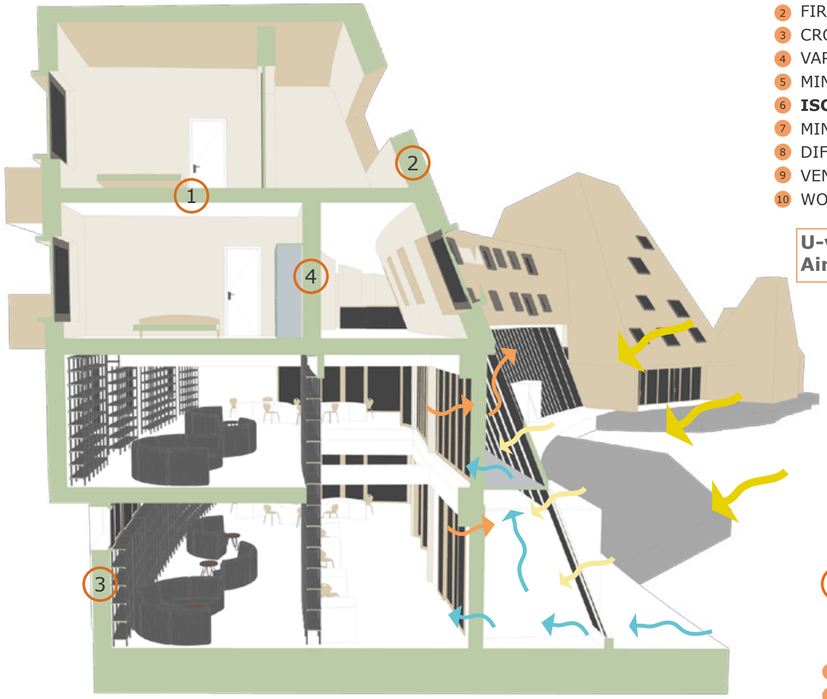
ZONE A



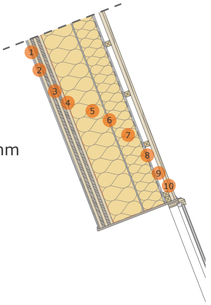
1 FLOOR BETWEEN APARTMENTS

1. LAMINATED WOOD FLOORING
2. CEMENT FLOOR SCREED **WEBER** D10
3. FLOOR HEATING SYSTEM
4. ACOUSTIC PROTECTION BOARD - **WEBERFLOOR** COMFORT LITE
5. HYDRO INSULATION MEMBRANE **Gyproc** Biplas PL 4/200
6. CONCRETE SLAB - 150mm
7. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
8. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
9. VENTILATED AIR LAYER - 150mm
10. **Ecophon** Fade™ Duo

Airborne sound insulation : 66 (dB) - SG recommendation
Impact sound insulation : 41 (dB) - SG recommendation

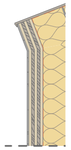


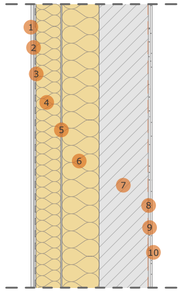
2 EXTERIOR WALL - BUILDING ENVELOPE



1. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
2. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
3. CROSS LAMINATED TIMBER(CLT) ELEMENT - 150mm
4. VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
5. MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
6. **ISOVER** PROFI FASSADE FIX
7. MINERAL WOOL INSULATION **ISOVER** RKL-31 - 200mm
8. DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
9. VENTILATED AIR LAYER - 50mm
10. WOOD CLADDING FACADE LUNAWOOD THERMO-D

U-value: 0,07 W/(m²K)
Airborne sound insulation: 70 (dB)





3 REINFORCED CONCRETE WALL

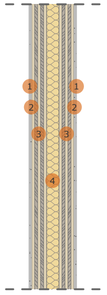
1. **WEBER** AH ANTIQUE DÉCOR FINE
2. **WEBER** R40 max2
3. DIFFUSION PERMEABLE FOIL **ISOVER** Tyvek Solid
4. MINERAL WOOL INSULATION **ISOVER** RKL-31 - 200mm
5. **ISOVER** PROFI FASSADE FIX
6. MINERAL WOOL INSULATION **ISOVER** PREMIUM 33 - 300mm
7. REINFORCED CONCRETE WALL
8. VAPOUR BARRIER MEMBRANE **ISOVER** Vario® Xtra
9. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
10. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo

- Over 25% of the envelope is a ventilated double facade with an interstitial space acting as a climate protection layer. In winter, it captures solar heat and re-distributes it inside, and in summer, shading devices reduce insulation.
- Our approach aimed to efficiently control the flow of heat and sunlight to optimise energy performance and create a comfortable indoor environment while minimising energy consumption. The double ventilated facade helps capture solar heat and reduce heat loss to the outside in winter, and manages excessive heat and sunlight in summer.
- Shading devices can be integrated into the interstitial space or mounted outside the glass panes to reduce overheating and ensure optimal indoor thermal comfort, and controlled ventilation can help cool the air and ensure proper air circulation in summer.

4 WALL LAYERING BETWEEN APARTMENTS

1. PLASTERBOARD **Gyproc** GNE 13 Normal Ergo
2. FIRE-RESISTANT PLASTERBOARD **Gyproc** GFL 15 FireLine
3. CROSS LAMINATED TIMBER(CLT) ELEMENT - 120mm
4. MINERAL WOOL INSULATION **ISOVER** ACOUSTIC -100mm

Wall between units (airborne sound insulation): 64 (dB) - SG recommendation



AERIAL VIEW