

BLIND SPOTS IN ARCHITECTURE

SUSTAINABILITY AND BIOPHILIA

BLIND SPOTS IN ARCHITECTURE SERIES

SUSTAINABILITY AND BIOPHILIA

SAINT GOBAIN - THE ARCHITECTURE STUDENT CONTEST PROJECTS

RISEBA University, Faculty of Architecture and Design

Architectural Design III Course- Fall 2023 Semester – Proceedings

Biznesa, mākslas un tehnoloģiju augstskola "RISEBA", SIA

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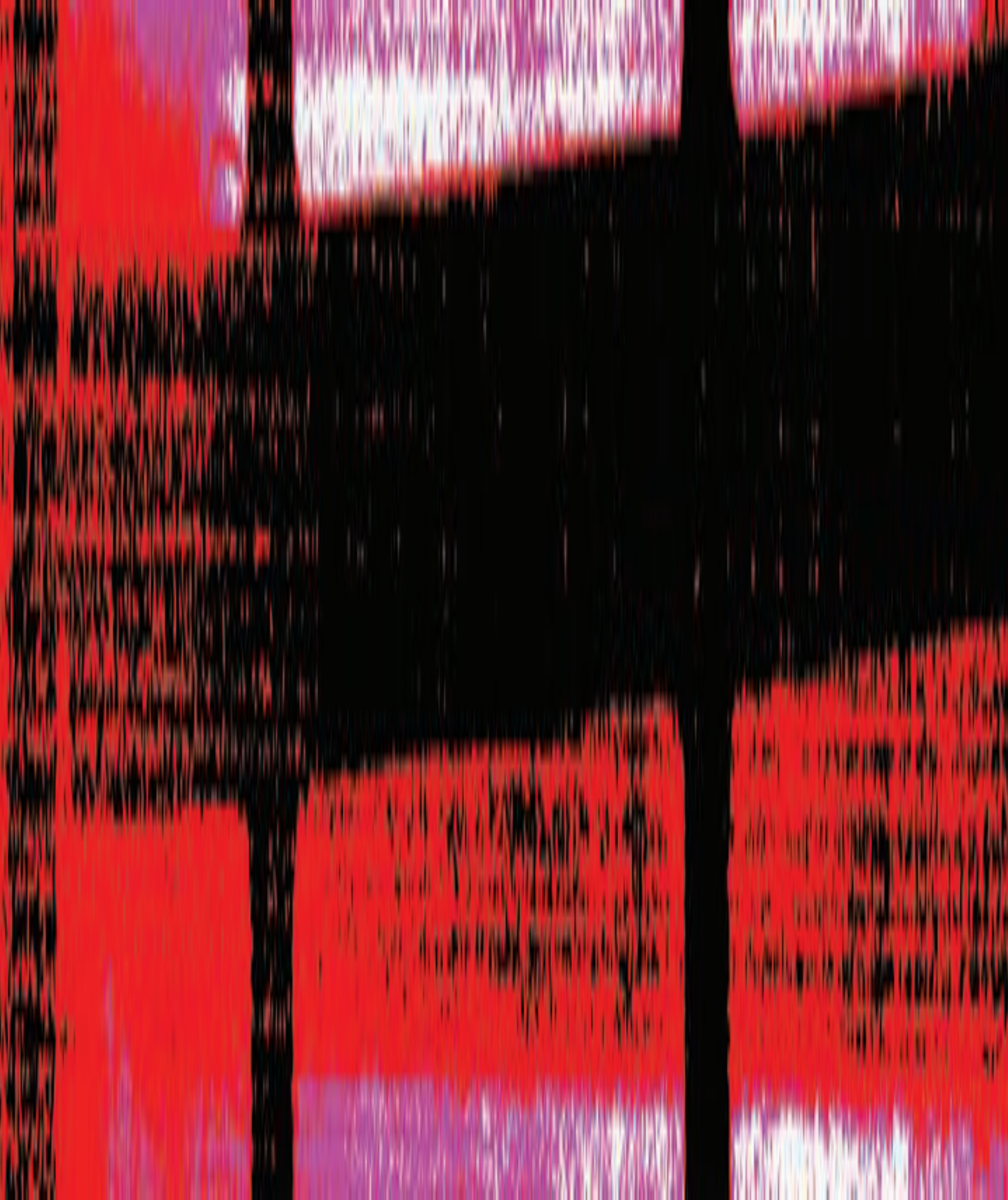
BLIND SPOTS IN ARCHITECTURE

SUSTAINABILITY AND BIOPHILIA

INTERNATIONAL SAINT-GOBAIN ARCHITECTURE STUDENT CONTEST PROJECTS

Evita Andreja, Tomass Bakēvics, Alise Birkmane, Linda Elīza Broka, Tina Deaka,
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The 3d-year architectural design studio at RISEBA Faculty of Architecture and Design collaborated with the Saint Gobain - International Architecture Student Contest in its Fall 2023 semester. The contest allowed us to explore sustainable design and restoration issues in Viikki, Helsinki.

As the overarching academic theme of the 2023/24 academic year was "Blind Spots in Architecture", we delved into the functional and esthetic aspects of sustainability and green design.

The course is lead by Efe Duyan, Ilze Paklone, Linda Leitane, and all projects exhibited in this course proceedings book are designed by 3rd-year architecture students at RISEBA FAD.

Biophilia and Sustainability

As the climate crisis has been one of the most critical issues in the last decade, it is not surprising that sustainability and green design have been at the center of architecture, a self-proclaimed socially responsible profession. The mainstream design and academic discourse focused on sustainable buildings with longer lifecycles, diminishing the carbon footprint of the built environment, and energy use by our living machines. We know that buildings produce a considerable amount of carbon footprint, and architectural efforts are diverted to minimize the resources and create eco-friendly space, in other words, to achieve technical perfection in sustainability. Nevertheless, architecture provides shelter as living machines and communicates with the inhabitants. Remembering Umberto Eco's architectural semiotics, architecture first communicates its function and provides a practical and ideological framework for living. As affordances, a neuroscience-related concept developed by Sarah Robinson, spaces are directly related to our body and mind and, thus, to our daily habits, a crucial aspect of climate-friendly social behavior and worldview. Secondly, architecture also communicates symbolically; in other words, through the perceived forms of its materiality, it conveys an esthetic message of various kinds. The communicative aspect of architecture, thus, brings about an opportunity to engage with the public through the individual architectural experience, an opportunity to act on the socio-political realm confronting climate change.

While the technical perfection of green design brings concrete and short-term benefits, the esthetic and functional layout of the built environment will play vital roles in climate-friendly architecture. The concept of Biophilia suggests a framework, a wide and varied sum of design strategies in terms of functional decisions and esthetical outlook. Conceived by social psychologist Erich Fromm in the 1960s, biologist and naturalist Edward Wilson's 1984 book *Biophilia* put forward the hypothesis that humans are genetically predisposed to be attracted to nature.

Several writers developed biophilia as a design paradigm in the 2000s, and the interest in the concept has grown exponentially in the last decade. Several analytical attempts and categorizations have been made to define biophilic design as a set of strategies. The idea of biophilic design today incorporates a wide range of perspectives and techniques, which may have been too eclectic to pave an explicit path yet. Yet it provides valuable insight into the human-nature relationship rooted in biology, evolutionary psychology, neuroscience, and phenomenology. The question is whether it can adequately fill in the gap left by the technical perfection of green design and embody the functional and esthetical aspects of climate-friendly design to affect individual behavior and experience of space.

Efe Duyan

Methodology

RISEBA FAD has established the approach of graduate and undergraduate studies, and specifically design-related processes, to be a continuous process over longer periods. The theme of co-designing territories, and choosing various urban scale case studies in Latvia, as well as internationally has been part of the university's agenda since 2017. Co-designing territories is a relatively recent spatial phenomenon where a wide network of spatial, social, research, innovation, and educational as well as business institutions cooperate and co-create facilities and share culture to foster urban regenerative processes. The said cooperation is believed to sustain an urban ecosystem in tune with the needs of the global economy, regional polity, and local community.

Co-designing calls for a critical investigation of how existing urban infrastructure, city planning policies, and local and global communities interrelate. Undergraduate 3rd Year Urban Design Studio explores as well as endeavors to compare, evaluate, and design imaginative spatial and strategic scenarios for urban regeneration. The imaginative spatial scenarios are intended to be reflexive and alternative standpoints if compared with formal planning policies and methodologies. The imaginative spatial scenarios can also be rather seen as urban feasibility studies that investigate a wide range of possibilities to tailor the urban future.

The Studio aims to provide students with both theoretical and typological knowledge of urban settings as well as insights into urban research methods and techniques in tune with anthropological investigation methods and their application to urban design. The aim of course is also to provide insights into building up reflexive, flexible, and sustainable urban development scenarios.

The design methodology developed within the Studio falls into the realm of spiral design processes and open-ended feedback looping of design and decisions. The process and results of the Studio can be seen as a methodology, which is developed practically and thus has some inconsistencies and is always open to discussion. However, the process and its results may be seen as an example, of how rapid and flexible design reactions to current issues can become valuable assets within a formal spatial planning process.

Ilze Paklone

RISEBA University of Business, Arts and Technology
Academic Bachelor's degree programme "Architecture"

Meadow

Tina Deaka | Gatis Hasners

Soar beyond dear meadow
Reach the clouds so bright
Leave a kiss to the sunset
And bring a glorious sight

by Pink Butterfly



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Introduction

Meadow aspects

7 elements

Ecosystem

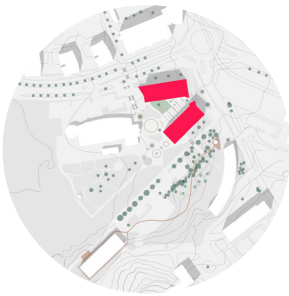
Garden House

Bee Park

A harmonious fusion of architecture and nature of a *meadow*

VIKKII, Helsinki

The Architecture Student Contest
with Saint-Gobain's



The structure stands as a testament to the symbolic relationship shared between architecture and nature, serving as a visual ode to the delicate dance between human innovation and the timeless allure of the outdoors. Each element of the design is thoughtfully curated to enhance the occupant's engagement with the surrounding meadow, fostering a sense of unity and coexistence. The result is a living space that not only shelters its inhabitants but also invites them to partake in the ever-evolving conversation between architectural ingenuity and the organic beauty of the meadow.

Meadow is an important element for plants, insects and other living creatures. Nowadays, the term "urban meadow" has become particularly important, which also plays a particularly big role in Helsinki, so we think that The Meadow is a great element that will not only complement Helsinki and Vikkii's surroundings, but will help raise the term "urban meadow" to new dimensions.





Context

This unique building is strategically positioned, serving as a bridge between the verdant meadows that stretch on either side.

Idea

Connecting the meadow, the urban environment and the everyday life of the inhabitants. Sustainability that draws inspiration from the beauty and functionality of natural meadows.



Meadow

as in important element - in different aspects

Nature is really important in Helsinki, Finland.

Meadow is a sustainable building concept that draws inspiration from the beauty and functionality of natural meadows. The design aims to seamlessly integrate architecture with nature, creating a space that promotes biodiversity and environmental sustainability.

Green roofs and Walls - The building features extensive green roofs and walls, covered with a variety of native grasses, wildflowers, and other meadow plants. These green surfaces not only provide insulation but also serve as habitats for local wildlife, promoting biodiversity.

Open Courtyard and stairs - The building have open courtyards and stairs designed as mini-meadows, with a mix of grasses and wildflowers. These spaces will serve as gathering areas, relaxation spots, and natural ventilation channels for the building.

Natural Materials - The construction materials are sourced sustainably, emphasizing the use of natural, locally available materials to blend with the meadow theme. Timber, stone, and recycled materials will be incorporated to create a warm and inviting atmosphere.

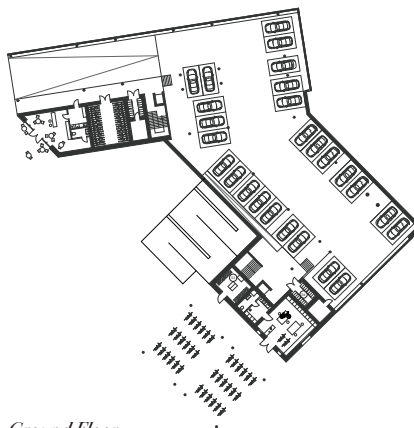
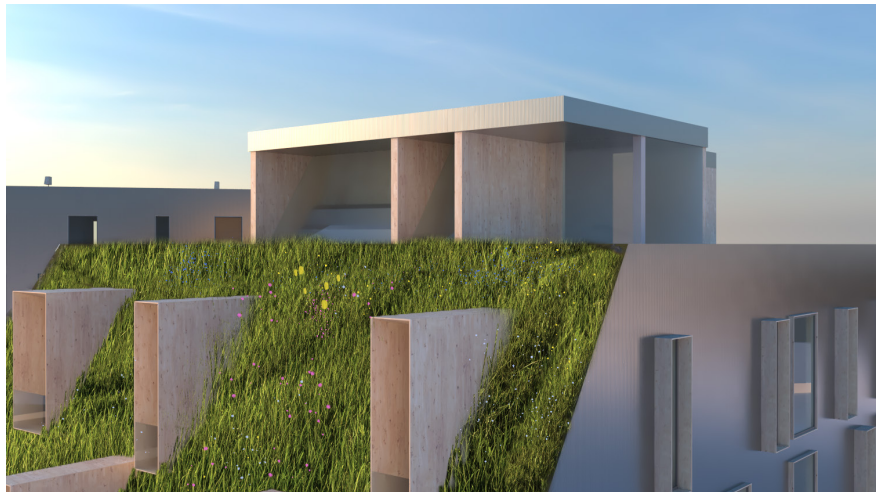
Rainwater Harvesting - Rainwater harvesting systems are integrated into the design to collect and store rainwater for landscape irrigation and other non-potable uses.



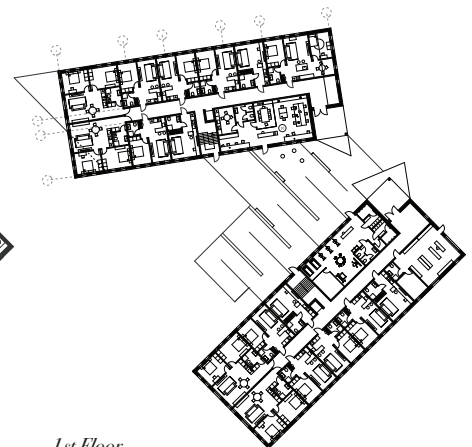


Birdhouses, insect hotels, and other wildlife -friendly features are strategically placed throughout the building and surrounding landscape to encourage biodiversity. Native plants will be selected to support local pollinators and create a balanced ecosystem.

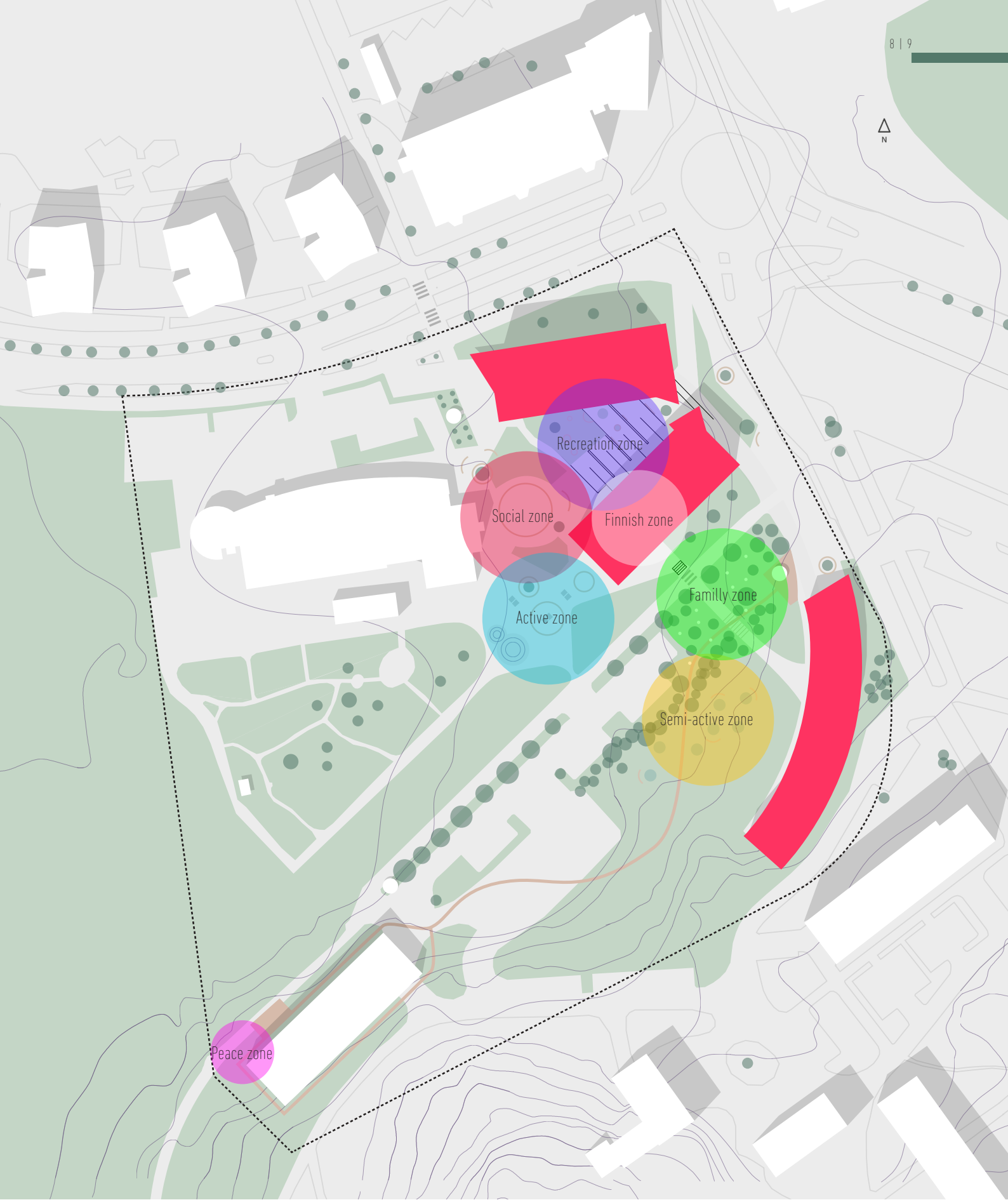
Emotions - The balconies of Meadow Building are thoughtfully designed to immerse residents in the breathtaking views of the meadow, providing an opportunity to savor the beauty of nature from the comfort of their apartments, where fresh air and the vibrant surroundings seamlessly blend, allowing the essence of the meadow to bloom within their living spaces.



Ground Floor



1st Floor



Recreation zone

Social zone

Finnish zone

Active zone

Family zone

Semi-active zone

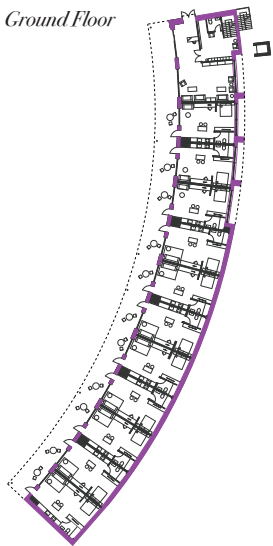
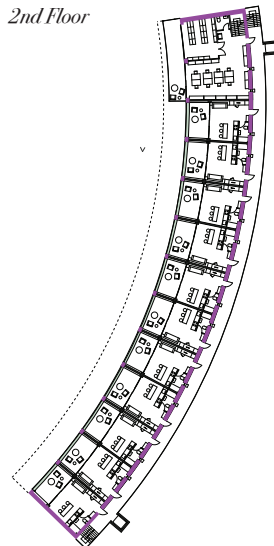
Peace zone



Garden House

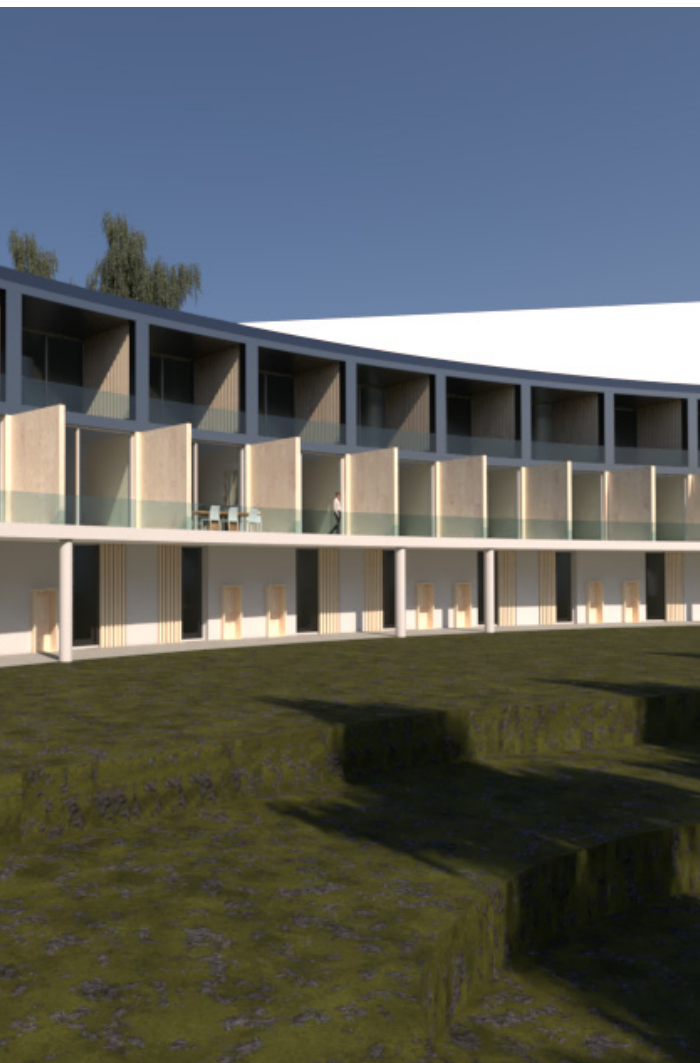
Garden House (building A) redefines urban living by seamlessly blending nature, community, and sustainability. Divided into equal parts from the 1st to 3rd floor, the first-floor apartments open to a communal courtyard, while the 2nd and 3rd-floor apartments are accessible through an outdoor gallery corridor. Offering studio and one-bedroom apartments, each unit features embedded flower beds and a captivating view of the meadow courtyard, fostering a harmonious living experience where residents can engage in shared gardening and connect with their green surroundings. Garden House epitomizes a modern, community-driven oasis that transforms the urban landscape.



Ground Floor*1st Floor**2nd Floor*

Bee Park

The old museum, repurposed for outdoor use, envisions a unique transformation with the introduction of bee hives nestled within its historic walls, featuring an open rooftop. This innovative space invites people to engage in beekeeping, fostering a harmonious blend of history and sustainable, community-driven green initiatives.





SAINT-GOBAIN ARCHITECTURE STUDENT CONTEST 2024

“KYLA”

**FINLAND
HELSINKI
VIIKKI**

RISEBA FAD

**Anna-Marija Iskrova | Anastasija Šakele | Pāvels Luzins
Efe Duyan, Ilze Paklone, Linda Leitāne**

RIGA | 2024



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PART 2: MASTERPLAN & NEW PROPOSAL FOR BUILDING B



MASTERPLAN

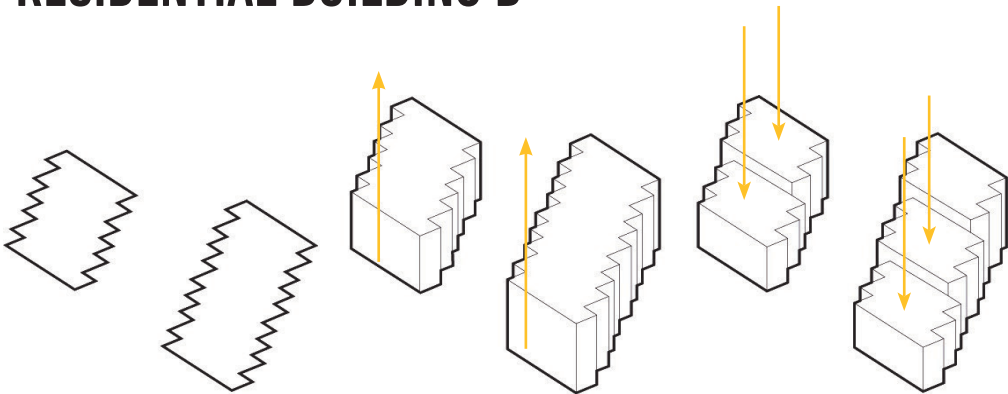
EXPLICATION:

- New residential building
- New public building
- Bicycle parking
- Greenhouse
- Car parking for residents
- Car parking for guests
- Building D- Gardenia
- Building A
- Building C- old museum
- Japanese garden

THE PROJECT IS EQUIPPED WITH GREEN ROOFS, SOLAR PANELS AND GREEN COURTYARDS TO INCREASE THE ENERGY EFFICIENCY OF THE LANDPLOT AND THE AMOUNT OF CLEAN AIR.

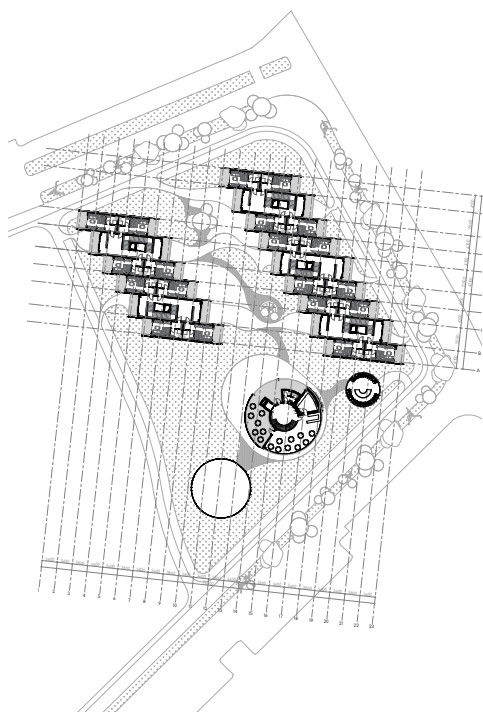
CONCEPT FOR NEW RESIDENTIAL BUILDING B

THE CONCEPT INCLUDES 2 MODULAR BUILDINGS, WHICH TEND TO INCREASE FROM 3 LEVELS TO 5 LEVELS, BY BLOCKS. MINIMUM NUMBER OF FLOORS 3, MAXIMUM NUMBER OF FLOORS 5.



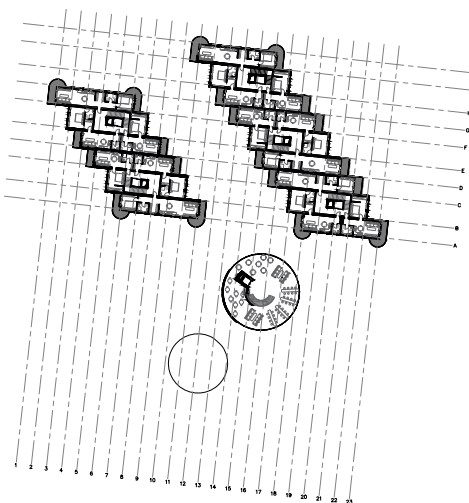
FLOOR PLANS

1ST FLOOR



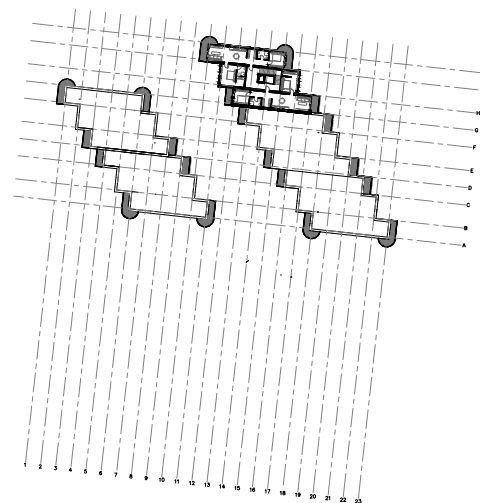
ON THE GROUND FLOOR OF THE NEW RESIDENTIAL BUILDING B ARE DUPLEX STUDIO. THIS IS A GREAT APARTMENTS FOR STUDENTS. THE STUDIO INCLUDES BATHROOM, KITCHEN WITH LIVING ROOM, SMALL TERRACE, AS WELL AS A SEPARATE BEDROOM ON THE 1.5 FLOOR

2ND AND 3RD FLOOR



ON THE 2ND AND 3RD FLOOR THERE ARE 2 ROOM APARTMENTS. GREAT TYPE OF APARTMENT FOR YOUNG FAMILIES. THE APARTMENTS INCLUDE BATHROOM, BEDROOM, KITCHEN WITH LIVING ROOM, AND SOME APARTMENTS INCLUDE 2 BATHROOMS AND SEPARATE DRESSING ROOM.

5TH FLOOR



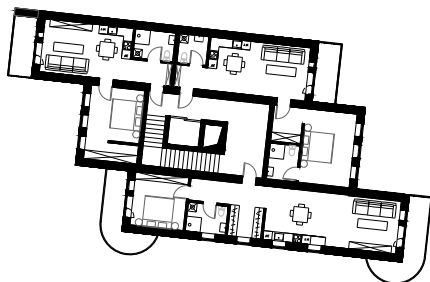
ON 4 AND 5 FLOORS, MOSTLY ARE 3 ROOM APARTMENTS, WHICH INCLUDE KITCHEN WITH LIVING ROOM, 2 BEDROOMS, AND DRESSING ROOM. SOME APARTMENTS HAVE 2 BATHROOMS.

APARTAMENT TYPES

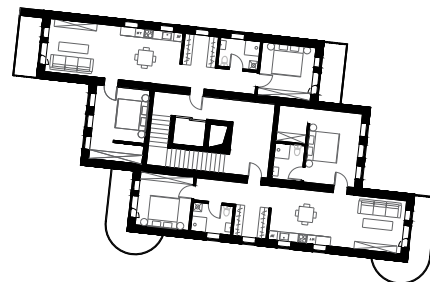
DUOLEX STUDIO APARTMENTS



2 ROOM APARTMENTS



3 ROOM APARTMENTS



PART 1: RESEARCH



HOAS STUDENT DORMITARY

GARDENIA HELSINKI

VIIKKI
LANDPLOT

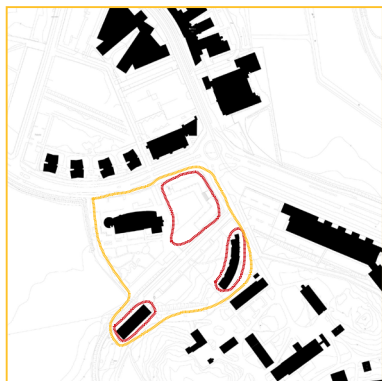
VIIKKI RESEARCH
FARM

FACULTY OF
VETERINARY
MEDICINE



AFTER VIKKI SITE RESEARCH, IT WAS REVEALED THAT THIS IS A VERY CALM AND QUIET PLACE IN WHICH LIVE AND STUDY A LOT OF YOUNG PEOPLE, THEREFORE THE VIKKI LANDPLOT CAN BECOME A GOOD PLACE TO LIVE, FOR STUDENTS AND YOUNG FAMILIES.

DIAGRAMS OF LANDPLOT “KYLA”



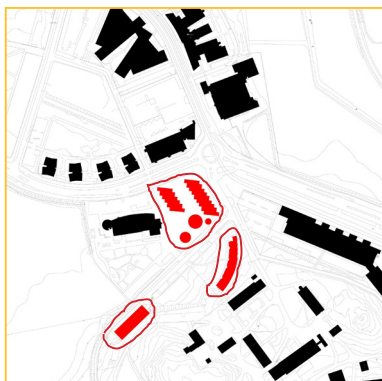
1. EXISTING LANDPLOT ZONE



2. EXISTING MOBILITY



3. SUN PATH DIAGRAM



4. NEW CONCEPT



5. NEW MOBILITY



6. NEW ZONES DIAGRAM

CONCEPT OF ARCHITECTURAL IDENTITY “KYLA”

THE CONCEPT OF THE “KYLA” IS BASED ON 3 IMPORTANT THINGS.

1. **TRADITIONAL MATERIAL, (WOOD).** IN FINLAND, HOUSES LIKE TO BUILD, USING WOOD, BECAUSE IT ORGANICALLY FITS INTO THE NATURAL ENVIRONMENT.

2. **MULTIFUNCTIONALITY.** IT WAS DECIDED TO CREATE DIFFERENT TYPES OF RESIDENTIAL AND PUBLIC SPACES TO DEVELOP THE INFRASTRUCTURE OF THE “KYLA”, AS WELL AS ATTRACT THE ATTENTION OF FUTURE RESIDENTS.

3. **ENERGY EFFICIENCY.** TO IMPROVE THE ECOLOGICAL CONDITION OF THE LAND PLOT, IT WAS DECIDED TO USE GREEN ROOFS, ENNOBLE GREEN COURTYARDS, AND ALSO USE SOLAR PANELS.

TRADITIONAL MATERIAL

+

MULTIFUNCTIONALITY

+

ENERGY EFFICIENCY

EAST FACADE



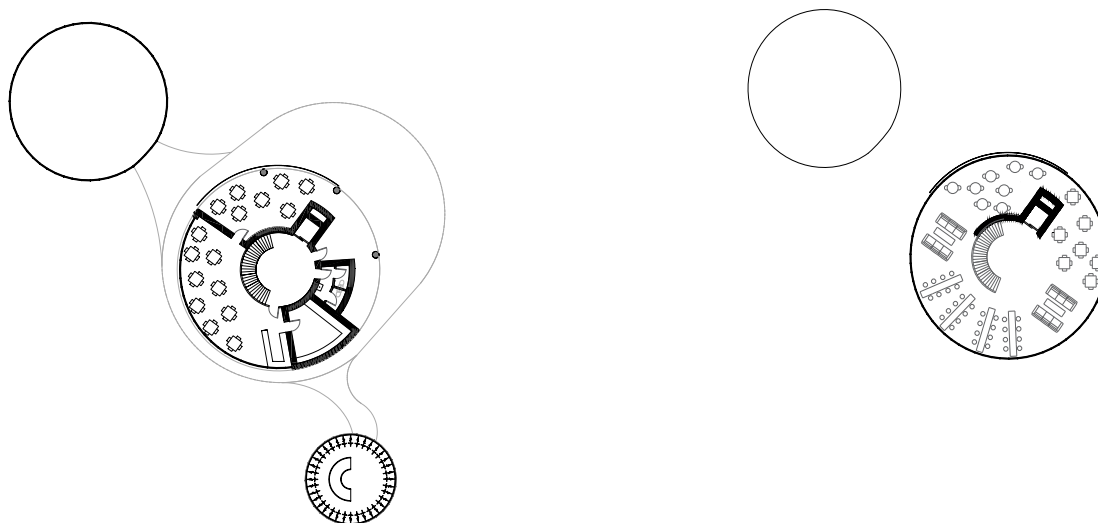
WEST FACADE



SECTION A-A



PUBLIC BUILDING B PLANS



1ST FLOOR OF PUBLIC BUILDING B INCLUDES CAFE WITH TERRACE. PEOPLE CAN GO AND SPEND TIME IN CAFE WITH FAMILIES OR FRIENDS.

2ND FLOOR OF PUBLIC BUILDING B INCLUDES DIFFERENT TYPES OF CO-WORKING SPACES ,WHERE STUDENTS CAN GO AND WORK, OR REST AFTER STUDIES.

AXONOMETRY OF BUILDING B

EXPLICATION

BYCICLE PARKING

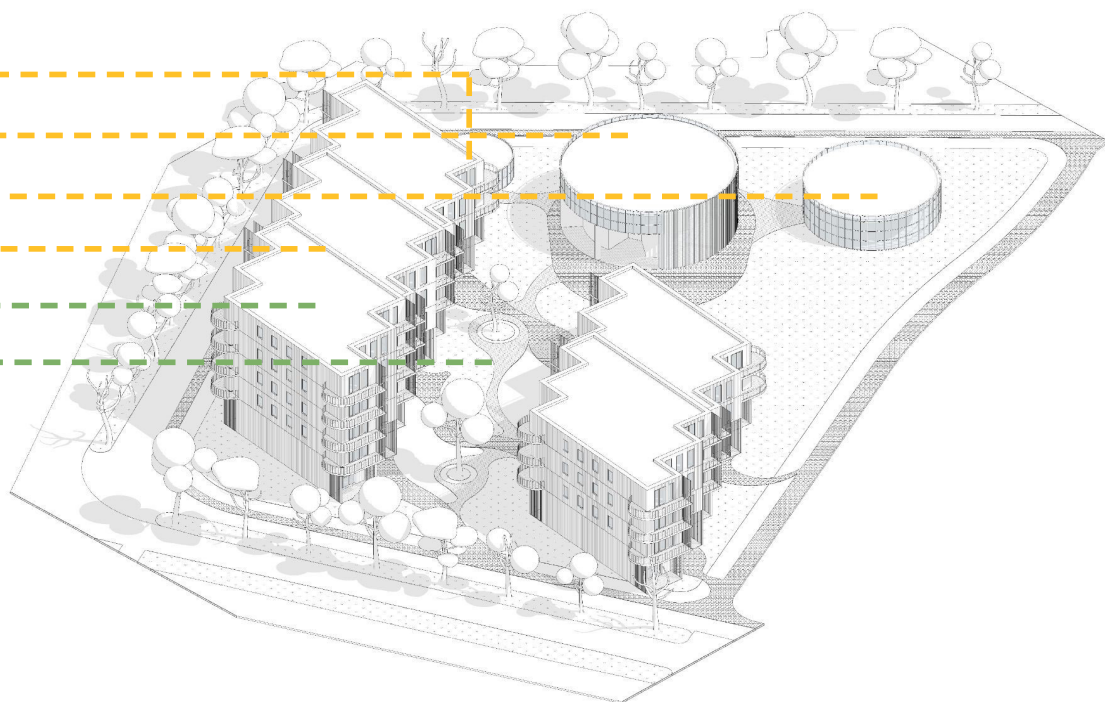
NEW PUBLIC BUILDING B

GREENHOUSE

NEW RESIDENTIAL BUILDING B

GREEN ROOFS

GREEN COURTYARDS



PART 3: RENOVATION OF EXISTING BUILDING A

FLOOR PLANS



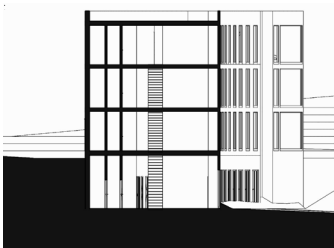
In this project, building A has 4 floors. The 1st floor includes different public spaces, meeting rooms and apartments for professors.

The 2nd and 3rd floor are the same, they consist of short-term apartments and long-term apartments.

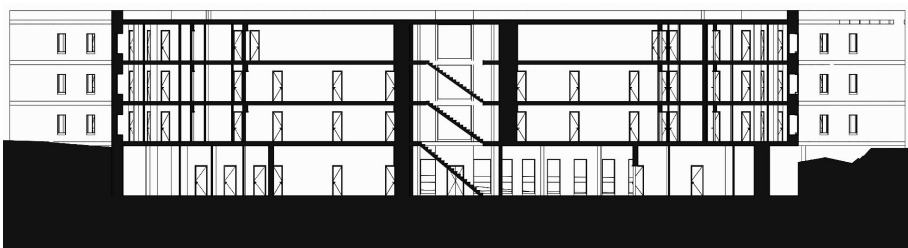
As it was already said that the building A has 4 floors, and the last floor consists of short-term apartments and 2 bedroom apartments.

SECTION CUTS

EAST SECTION CUT

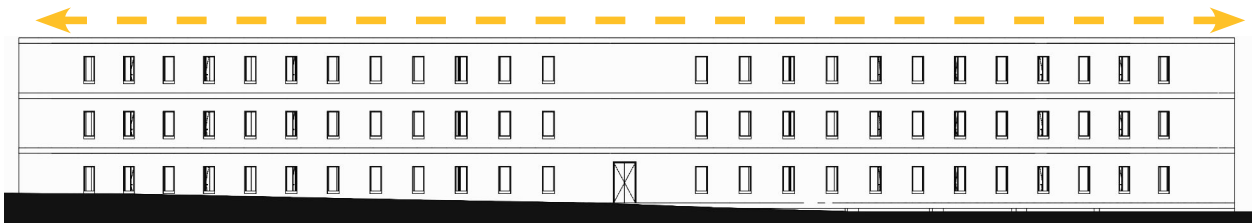


SOUTH SECTION CUT



SOUTH FACADE

SOLAR PANELS



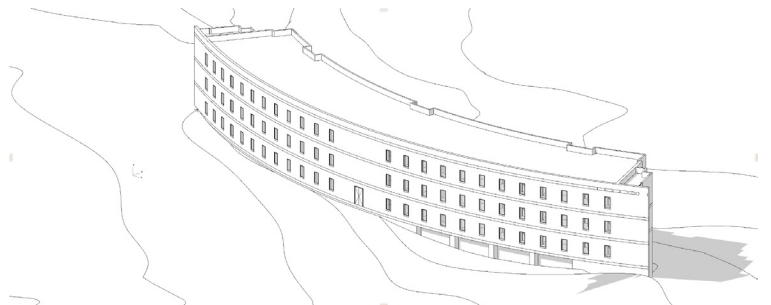
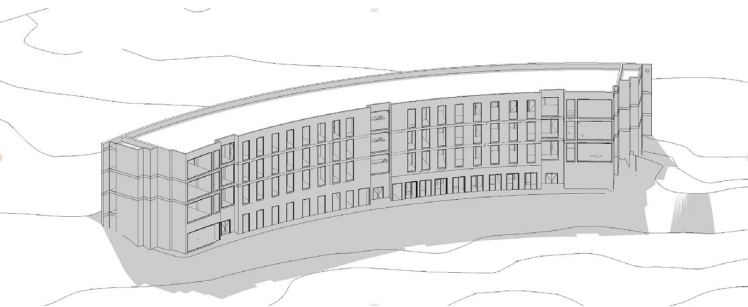
NORTH FACADE

SOLAR PANELS



Using solar panels, energy costs will become significantly lower than the market price of electricity, and this will significantly reduce the electricity bill.

AXONOMETRY

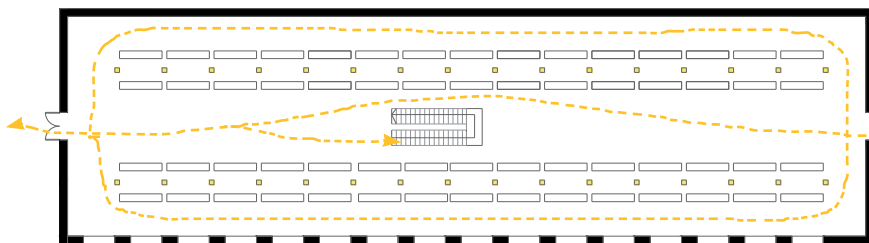


PART 4: BUILDING C NEW CONCEPT



Vikki Museum is a very old building, and according to the task, the Museum can't be demolished. It has a very interesting cobblestone texture, and unfortunately this museum is now unused for its intended purpose. We consider it important to leave it precisely, artistically and historically functional, since cultural heritage in our time should be of great importance. Only we can tell our heirs what happened in the past. It was decided to come up with a new concept for this building to create interest among residents and guests, and give a new breath to this building. It will be used as an observation tower and an open art gallery. Students will be able to use this place to show their projects, it will also be possible to hold different historical exhibitions in the fresh air. At any time of the year, everybody can come to the observation tower, and admire the beautiful view of the VIKKI site or enjoy our exhibitions in this art gallery

FLOOR PLAN

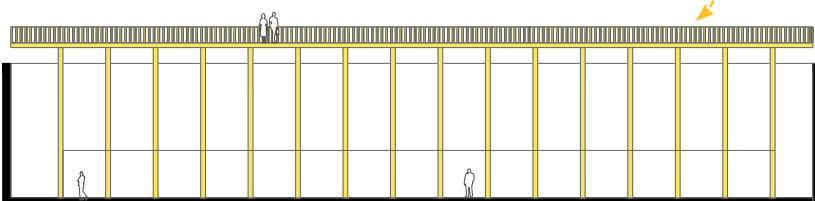


New art gallery will allow people, to be closer to art and history, and new watching tower will intersperse to see all the beauty of the Vikki site

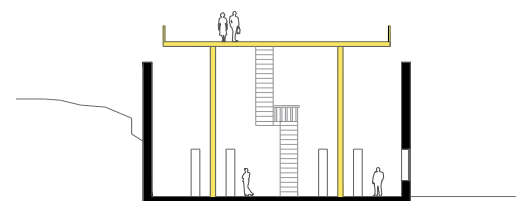
ART GALLERY
WATCHING TOWER

SECTION CUTS

SOUTH SECTION



EAST SECTION



RISEBA

Ole Harms, Magnus Gytte, Kevin



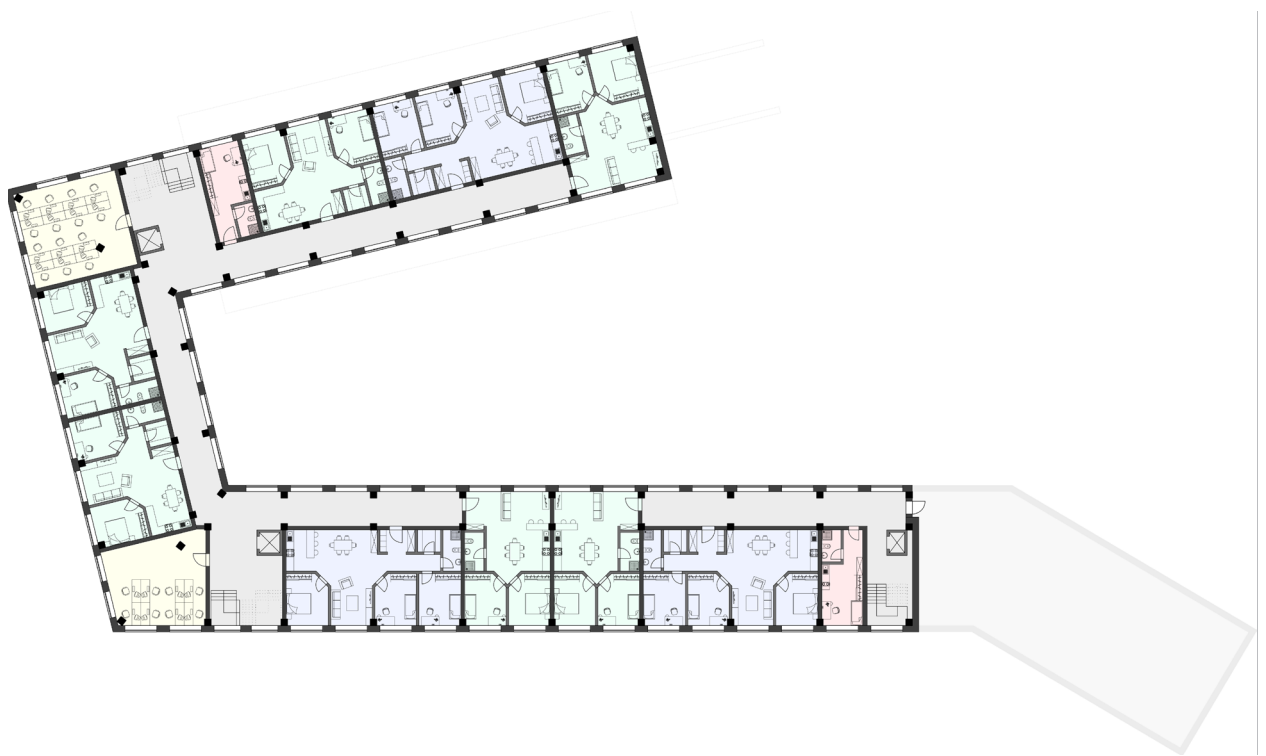
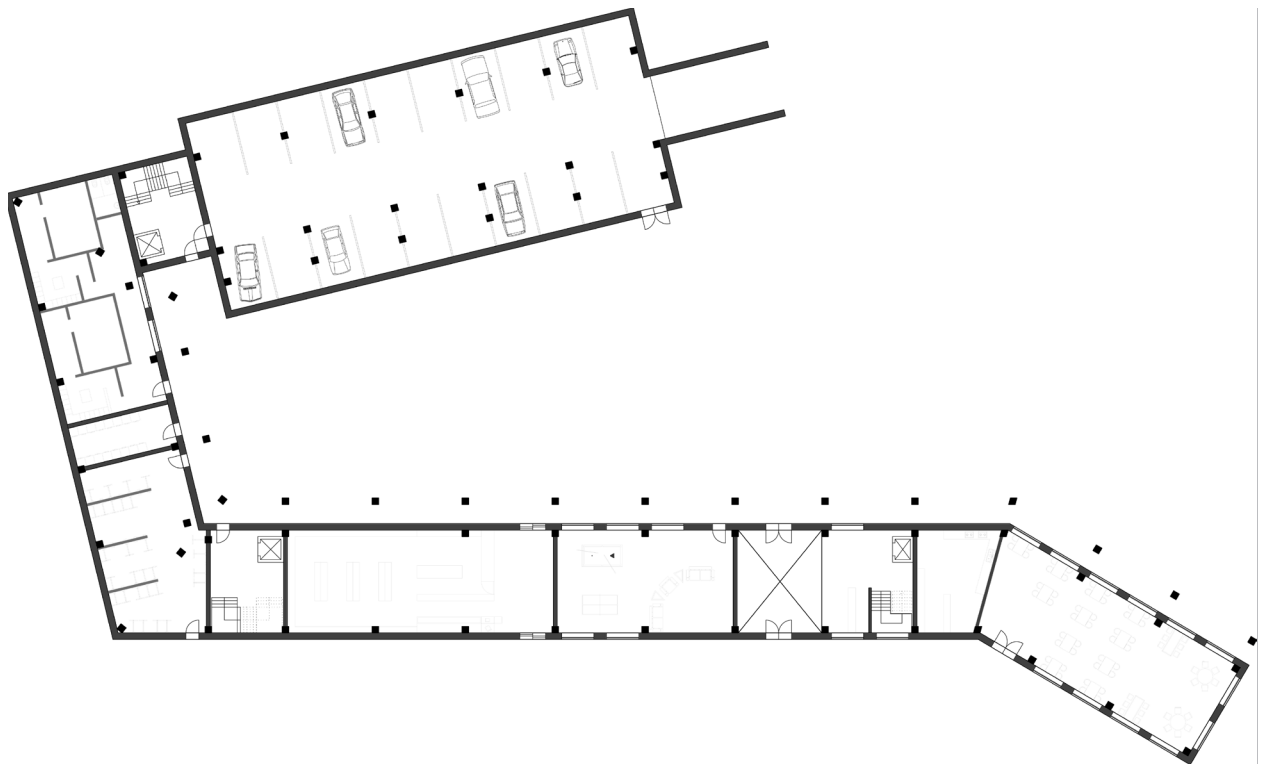


St. Gobain Student Competition Helsinki Building B

location	Helsinki
year	2023/24
area size	area size
floor area	1840m2
floor count	6
architect	Ole Harms, Magnus Gytte, Kevin (Team International)

Building B will be a new building for the student living complex in Vikki, Helsinki. It will host 80 students, professors and visiting professors for the university of Helsinki.

The footprint of the new building stands in relation to all surrounding buildings. The eastern facade creates one axis from building A in the south to the corner of the Environmental Center in the north, while the western facade runs orthogonal to the brewery. The end of the western facade is bend, to lead visitors to the old museum. This form creates two major courtyards. One semiprivate courtyard formed by the building itself and one courtyard between the brewery and building b, that is also open to the street and functions as a public place.

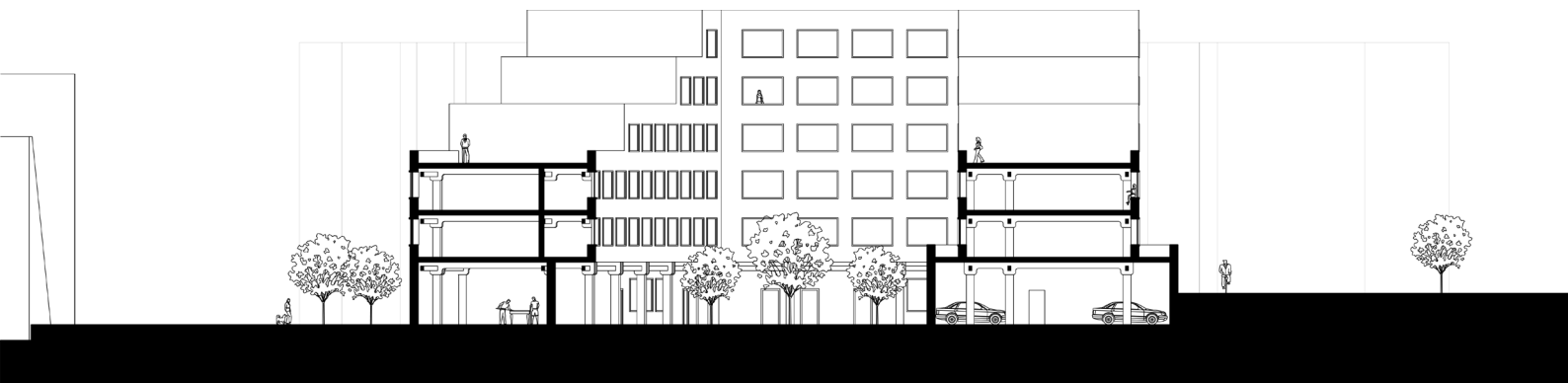
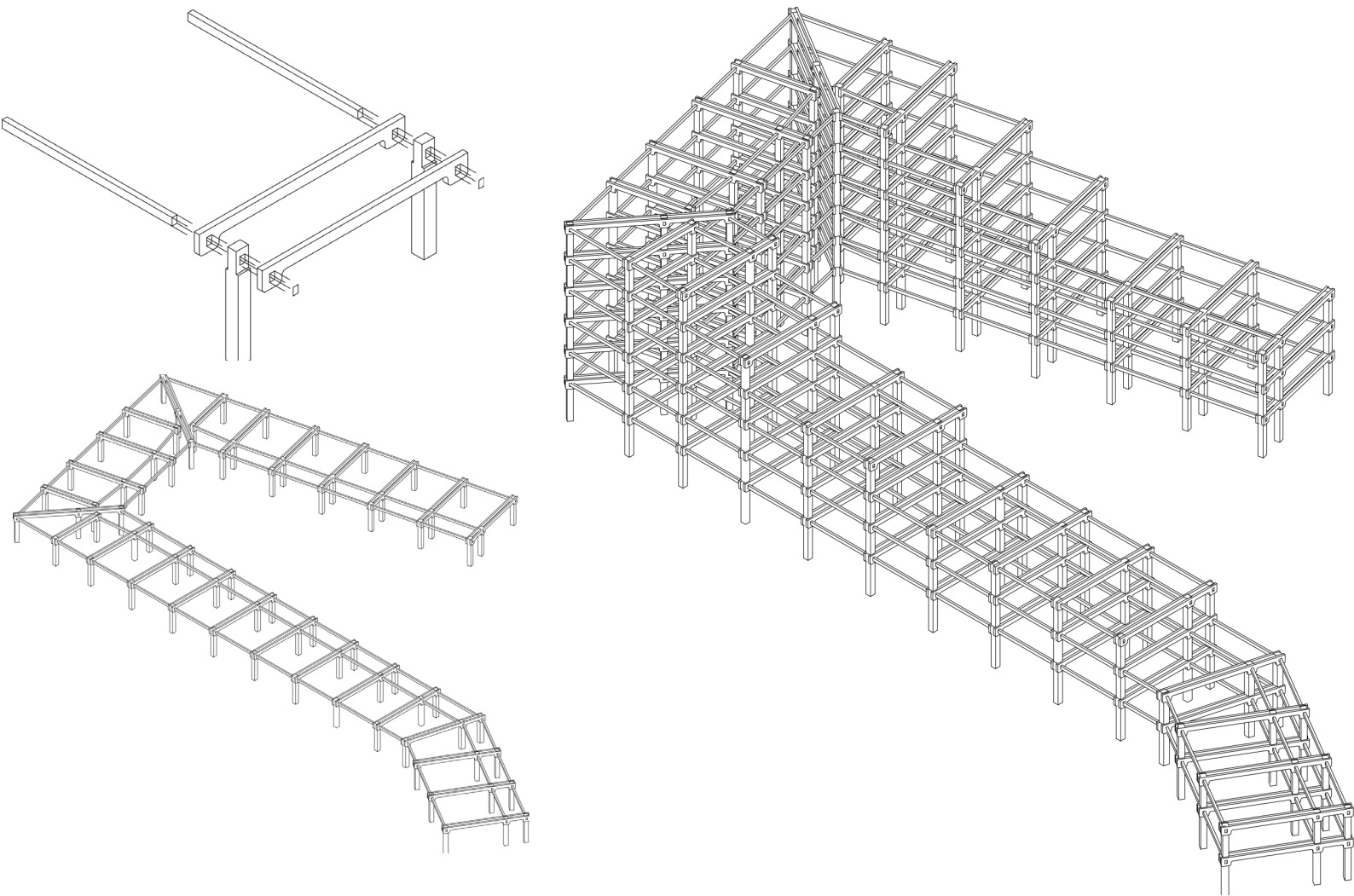


Groundfloor and 3rd Floor Building B

floorlevel	3
living units	11
resident count	23
floor area	1472m2
architect	Ole Harms, Magnus Gytte, Kevin

The ground floor level hosts most of the public and semipublic spaces such as restaurant, lobby, chill area, supermarket, bike-room, sauna and parking. The lobby is placed strategically opposite of the brewery and allows a great flow through the building to the inner courtyard. Three staircases and elevators provide an even flow of traffic inside of the building. Since the building fades into the ground the more east you go, there is a forced lack of windows towards the street. To deal with this issue, simple functions, that doesn't require windows are placed in these areas of the building.

The 3rd floor shows all examples of living units. There is one layout for the one-bedroom and the three-bedroom apartments and two layouts for the two-bedroom apartments. The corners host co-working and multifunctional spaces for the residents. Furthermore, to create more living space, the circulation area is disrupted in the western wing by residential apartments, that span over the whole width of the building. Every apartment is equipped with its own bathroom and kitchen isle. In addition, the two- and three-bedroom apartments also have a small living area. co-working and multifunctional spaces for the residents.

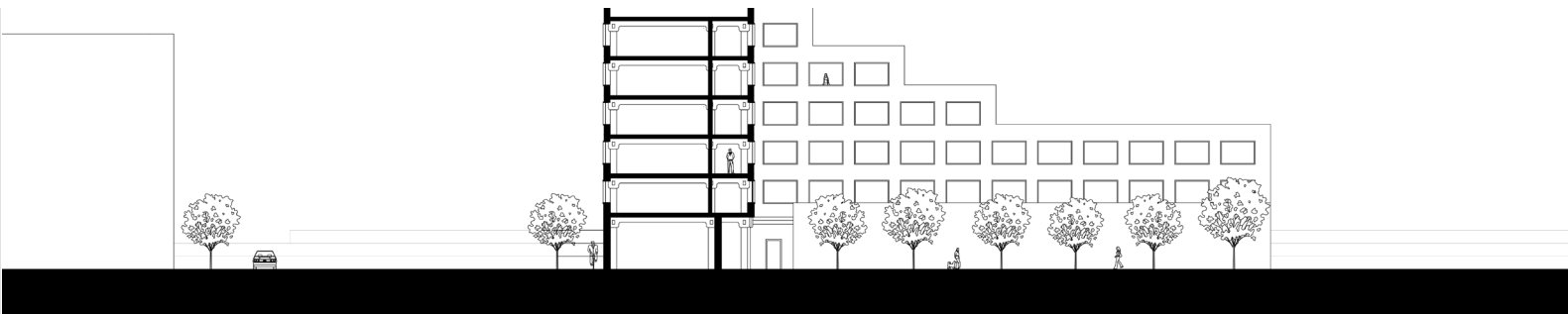


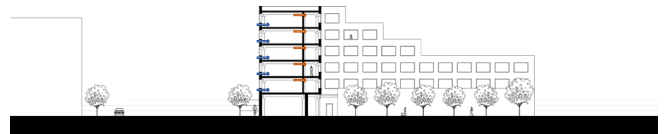
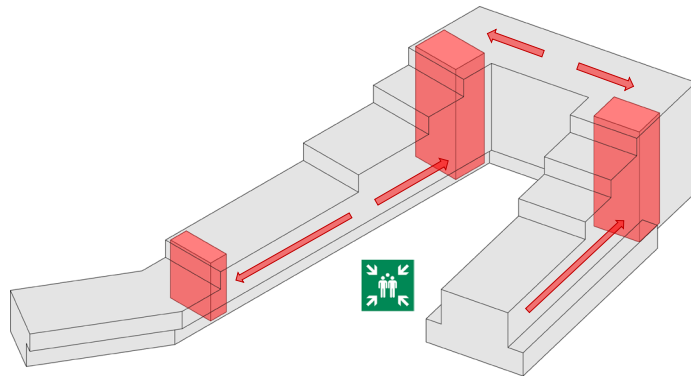
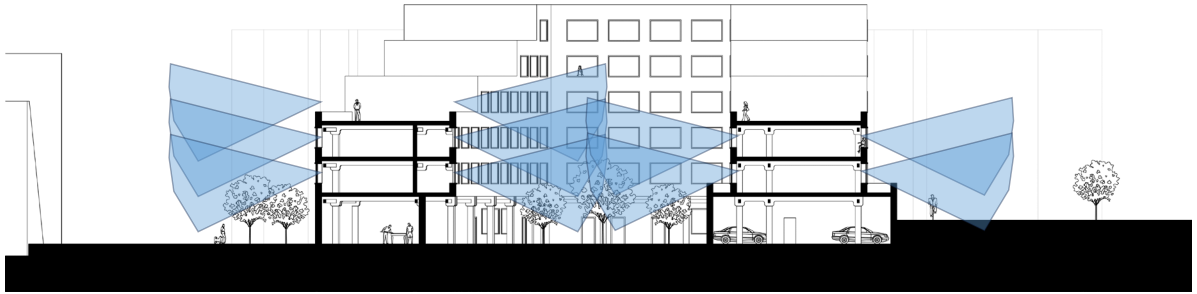
Bearing structure Building B

The façade will consist of wooden planks, while the bearing structure is made out of wooden beams and columns. This allows for a local and resourceful production. The bearing structure is put together in a simple way, that puts together the single elements with only wooden connection points. This simple process is repeated throughout the building.

Because most of the building material is wood, it is a very sustainable building. In addition, it is possible to replace the walls, if it is decided to give the building a new purpose.

In the sections, you can see how the building matches its surroundings in height. Towards the street and more urban area, building B reaches up to six floors, while on the side towards the meadows and forest, it lowers down to only two floors.





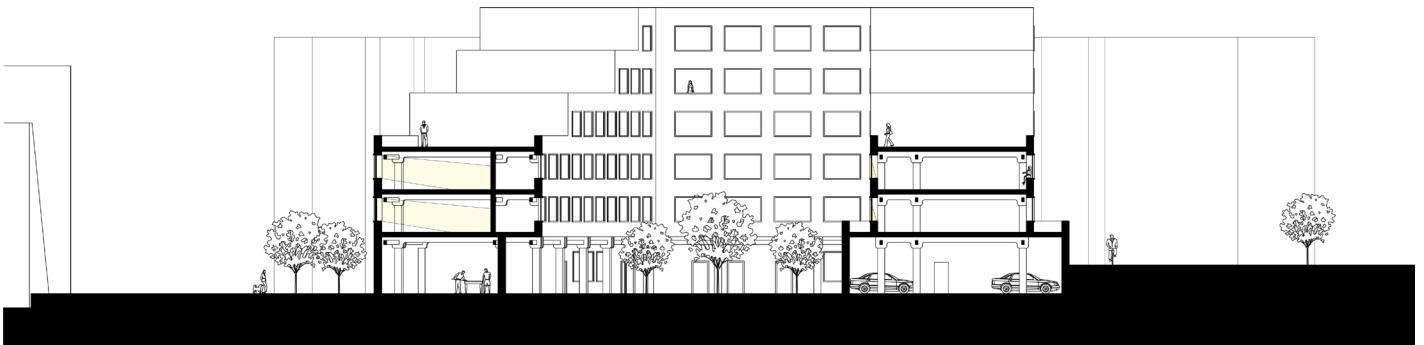
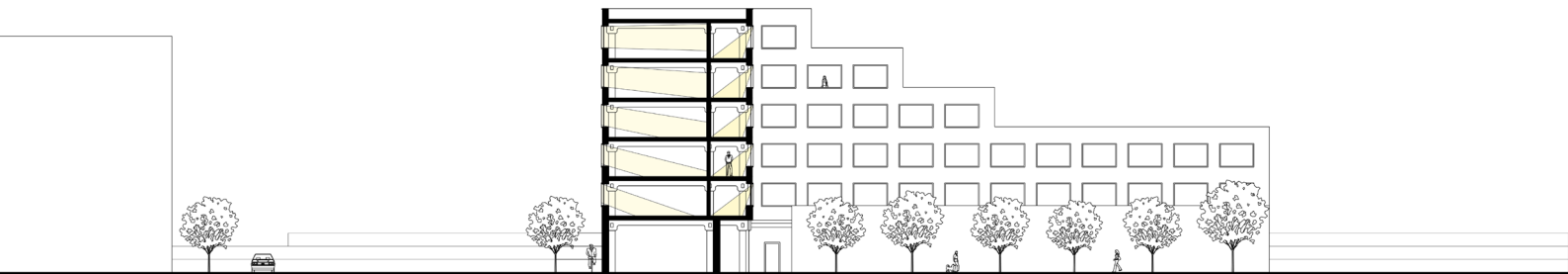
Diagrams Building B

As a resident, you are able to overlook the whole courtyard from your window, without being able to look inside the building on the other side due to the generous distance between the wings. From the road and the courtyard, you are also not able to look inside of the building, because the view is mostly blocked by the trees in front of the building, the building itself, or the distance is just too great. This results in a great privacy for the residents.

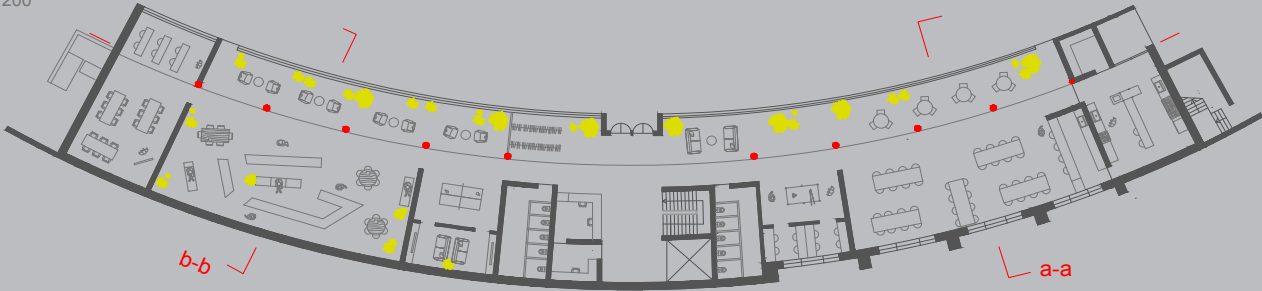
For a greater indoor air quality, the apartments are equipped with a ventilation system with heat recovery to also ensure a pleasant room temperature without draft.

Looking at the noise, the street façade functions as a blockade. It reflects the sound and doesn't allow noise to come to the apartments and inner courtyard.

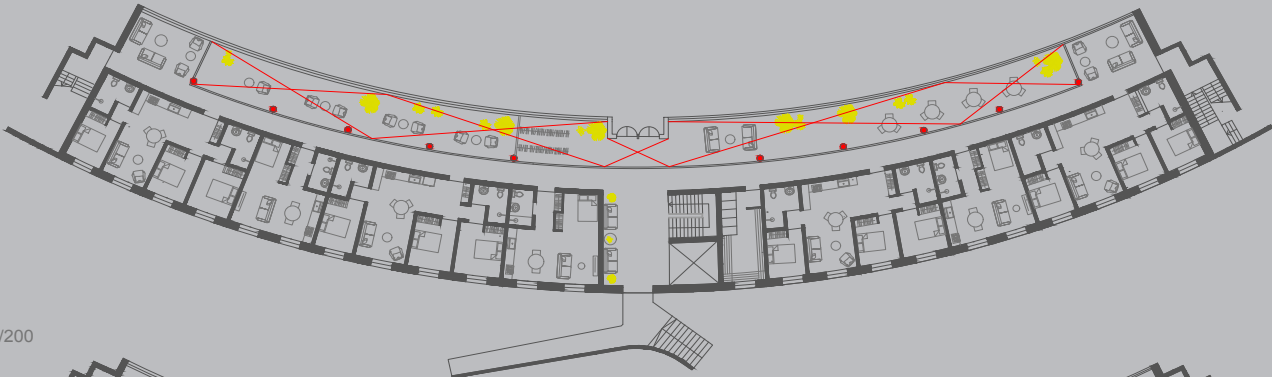
For fire-safety, the three staircases divided evenly through the building allow for a fast and safe escape-route. The meeting point will be on one of the courtyards.



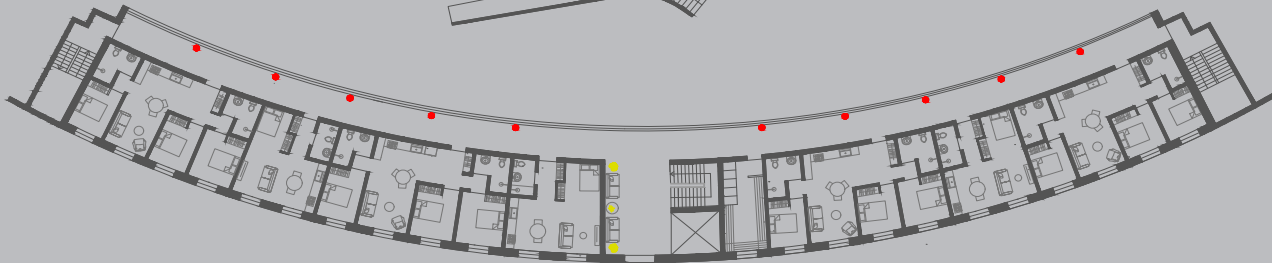
Ground floor plan/Scale 1/200



Second floor plan/Scale 1/200



Third floor plan/Scale 1/200



Plan drawings building A

The Building A is a restored office building located in Vikki in the outskirts of Helsinki. The purpose of the new building design is to host visiting students and professors for either short-time stay or long-time. The building is designed with a public groundfloor which can be used by the residents, but it's also open for visitors. The groundfloor includes different zoning areas such as a library, cafeteria, play rooms and a meeting room/lecture room.

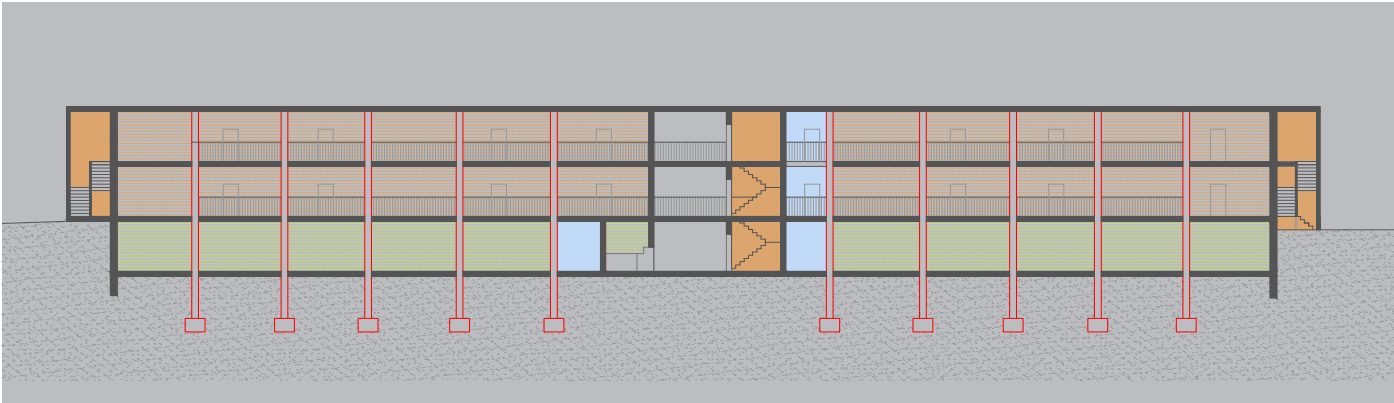
The apartments for the visitors are located on the private 1st and second floor. There are two types of dwellings, a studio apartment for the visiting professors/scientists on 34 m², and a three bedroom apartment for the visiting students on 76m².

The idea by having a three bedroom apartment in 75m² which can be considered small is that the students should use the groundfloor which is designed for them to socialise, work and learn together. The visiting scientist/professors are getting a private studio apartment because they need privacy and rest before having an important conference/lecture.

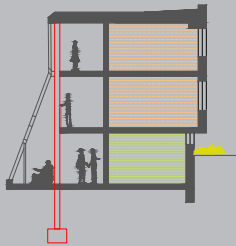
East Facade scale 1/200



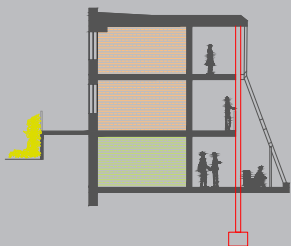
Vest Facade scale 1/200



Section a-a scale 1/100



Section b-b scale 1/100



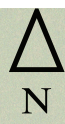
Elevations/Structure Building A

The restored office building has got a new exterior cladding material on the east facade. The new cladding is pine wood which provides a light warm color which is integrating well into the green landscape in Vikki. Pine wood has been used in construction in Finland for centuries. about 75 percent of the land area in Finland is covered in forests and pine is one of the most common. This makes the material sustainable and also includes the history of building construction in Finland.

For the west facade we decided to keep it as the original because the glass construction provides a lot of natural light into the building. The construction also gives a panorama view into the open

For the design of the A building we are using the same structure and shape as the original plan. The section is showing the original columns supporting the building. The changes we have done for the A building is changing the exterior cladding and changing the location of the staircases.

The colors in the section is showing the different zones of the building, in the groundfloor is the public area, first floor private, and second floor private. The blue colors in the groundfloor indicates public toilets, and in the private floors is indicate a laundry room and space for drying clothes.



A narrow road between Building A and Building B initially restricted the available green area. To address this, we decided to remove the road and create a larger green space, providing the residents and pedestrians with a park-like environment to unwind and enjoy. We also designed a separate route to accommodate vehicle parking in the remaining parking spaces.

The pathways were thoughtfully designed to allow smooth movement and easy access to Building B's amenities. For example, when you store your bike and enter the inner courtyard, you can walk to the elevator, sauna, shop, recreation room, and lobby without significant obstructions.

As you exit the lobby and step into the inner courtyard, you'll notice a long path leading the residents and pedestrians around the site and through the existing Japanese garden, containing several branching paths that allow visitors to explore and enjoy the natural surroundings. These paths eventually lead back to the lobby, creating a continuous cycle of relaxation and discovery.

The design includes two large areas with plentiful green space that can be used for outdoor events or activities. There's ample space for children to play, have picnics, or study outside during summer. Buildings A and B also have a courtyard with abundant vegetation that grows into the larger green spaces. These semi-private areas offer a quiet retreat for residents to relax and enjoy nature.

Finally, we created a sound diagram depicting areas where noise is generated within and outside the areas encased with vegetation. The noise sources include a nearby farm, cars passing by, and the brewery next to Building B. The dotted lines on the diagram indicate where fully public activities are located and where the majority of pedestrian noise is generated.



LIFE BETWEEN TREES



OAK TREE IN VIKKI, SEPTEMBER 2023

LIFE BETWEEN TREES

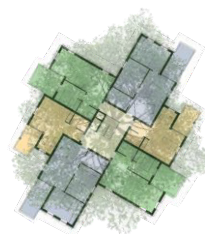
PROJECT LOCATION : VIIKKI, FINLAND

AUTHORS : EVITA ANDREJA, DITA VIĻUMA

TUTORS : EFE DUYAN, LINDA LEITĀNE, ILZE PAKLONE

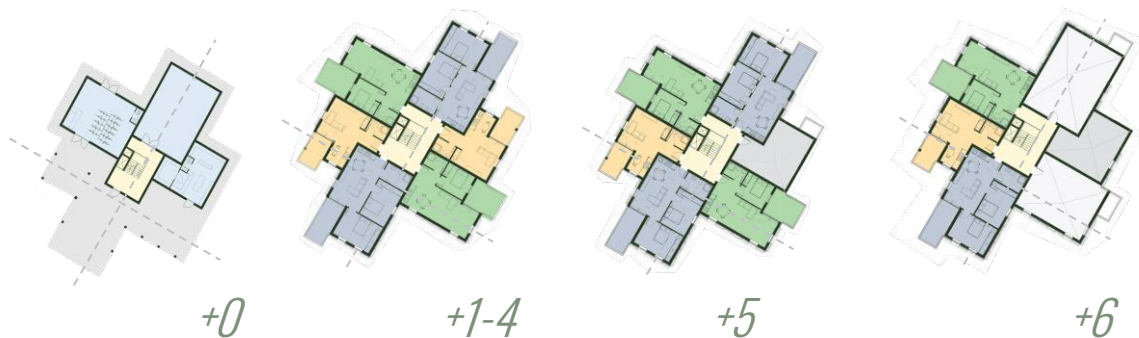
In today's busy and fast society, we see a demand in re-introducing quietness and nature into people's everyday lives.

This project proposes to develop a seamless blend of modern living and the peace of the surrounding forest into the heart of Viikki. Where the northern breeze whispers through the trees, our project unfolds as a poetic dance with nature. The vision of the proposal is based on creating diverse living conditions with proximity to nature, well-being, and a strong sense of community.

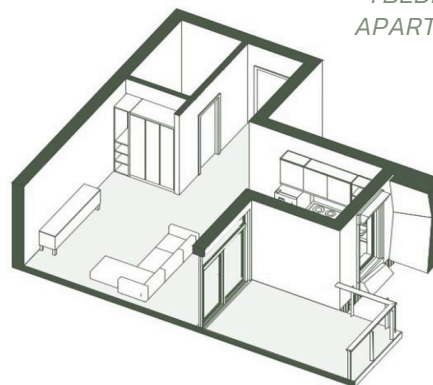
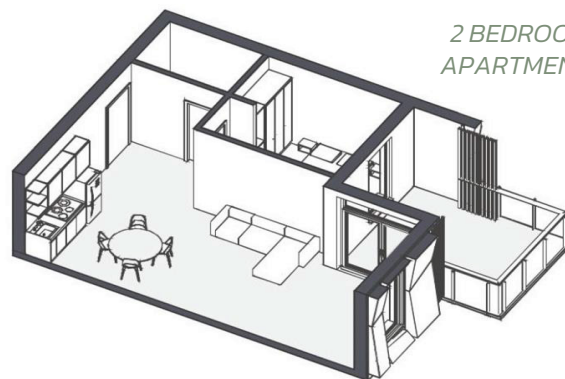
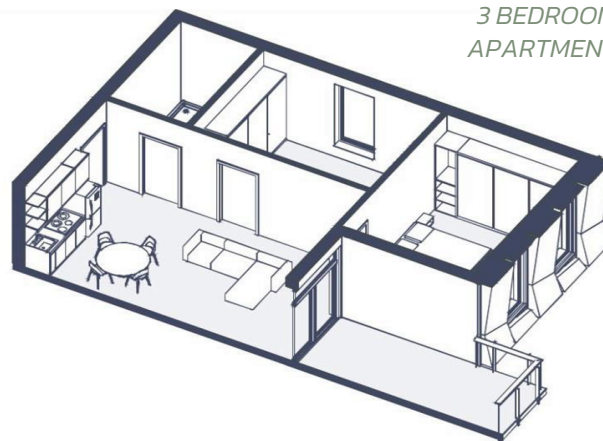




The development concept for the new residential housing is based on maintaining the landscape character of the property through their position in relation to each other, create exciting outdoor spaces and have a clear view of the surrounding landscape from all apartments. Four residential trees with concrete façades representing a pine cone pattern.



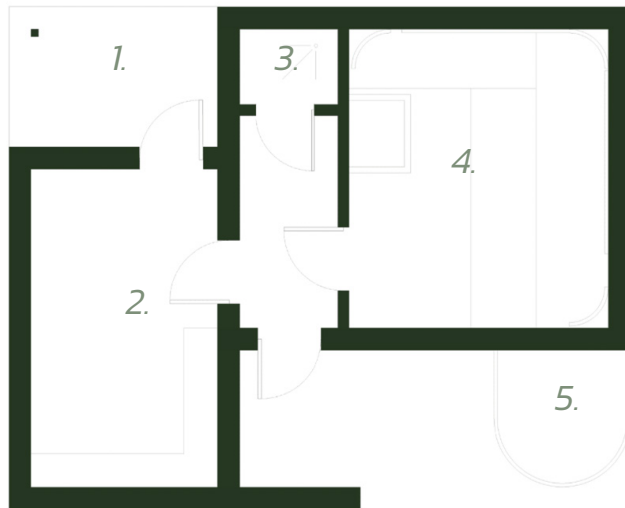
Mirroring the energy flow of trees, the circulation within the buildings is strategically positioned in the center, analogous to a tree's core, with the flats acting as the "leaves" at the destination points. The ground floor, covering 380 square meters, hosts commercial spaces offering local cafes, exploring markets, or using bike repair shop. Each floor consists of six flats with three layouts options – 33m² studio, 47m² two-bedroom and 63m² three-bedroom apartments. Balconies serve as private sanctuaries, inviting residents to unwind amidst the tranquility that complements Viikki's vibrant energy.

1 BEDROOM
APARTMENT2 BEDROOM
APARTMENT3 BEDROOM
APARTMENT

Wandering through, a natural path unravels one's way to a Japanese garden enclosed in cherry blossoms. This path morphs into a playful path.



Here residents and visitors alike are invited to rediscover the simple joys of unstructured play in a natural setting – a lush and environmentally rich setting where the unique features of the location serve as the foundation for play. The design of play areas prioritizes nature-inspired solutions over equipment, utilizing landscape elements to craft spaces and features for play.

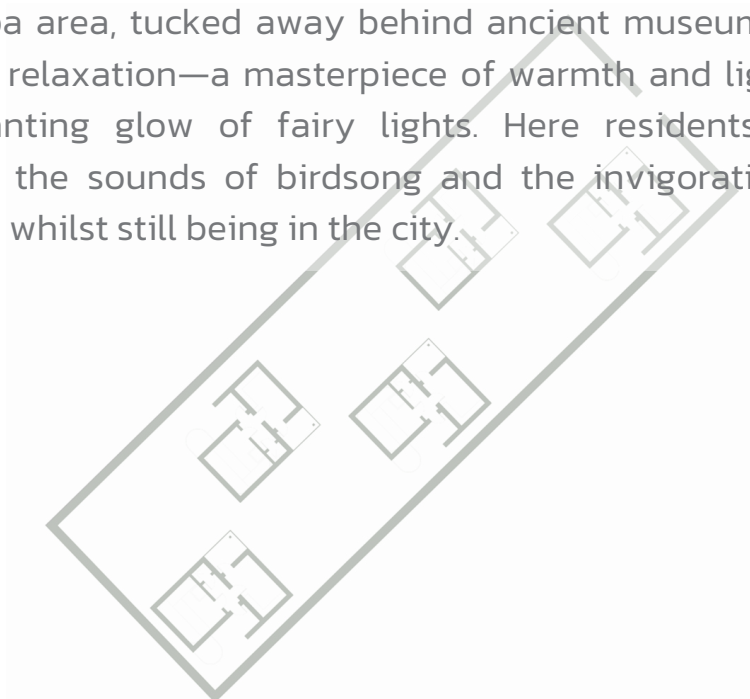


1. *PORCH*
2. *DRESSING ROOM*
3. *SHOWER*
4. *SAUNA*
5. *HOT TUB*

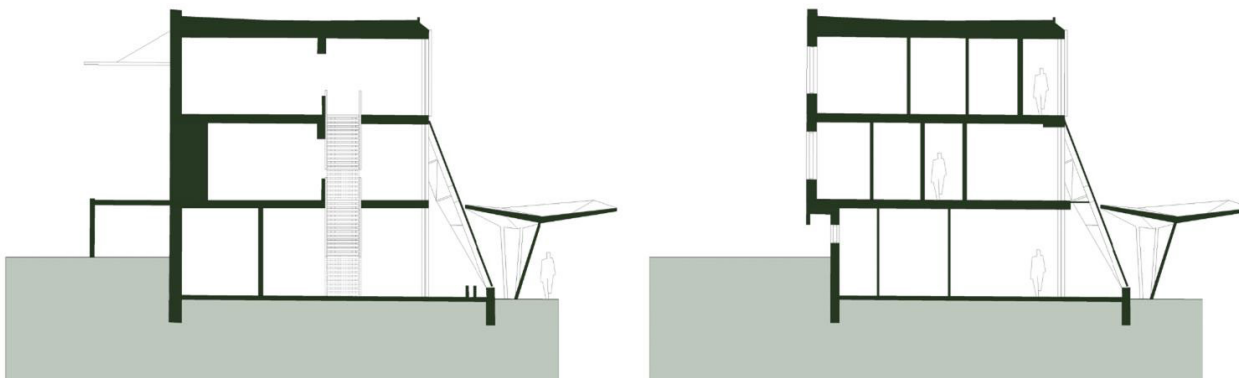


MUSEUM IN VIKKI

The private spa area, tucked away behind ancient museum walls, unfolds as an oasis of relaxation—a masterpiece of warmth and light, illuminated by the enchanting glow of fairy lights. Here residents can immerse themselves in the sounds of birdsong and the invigorating embrace of fresh forest air whilst still being in the city.

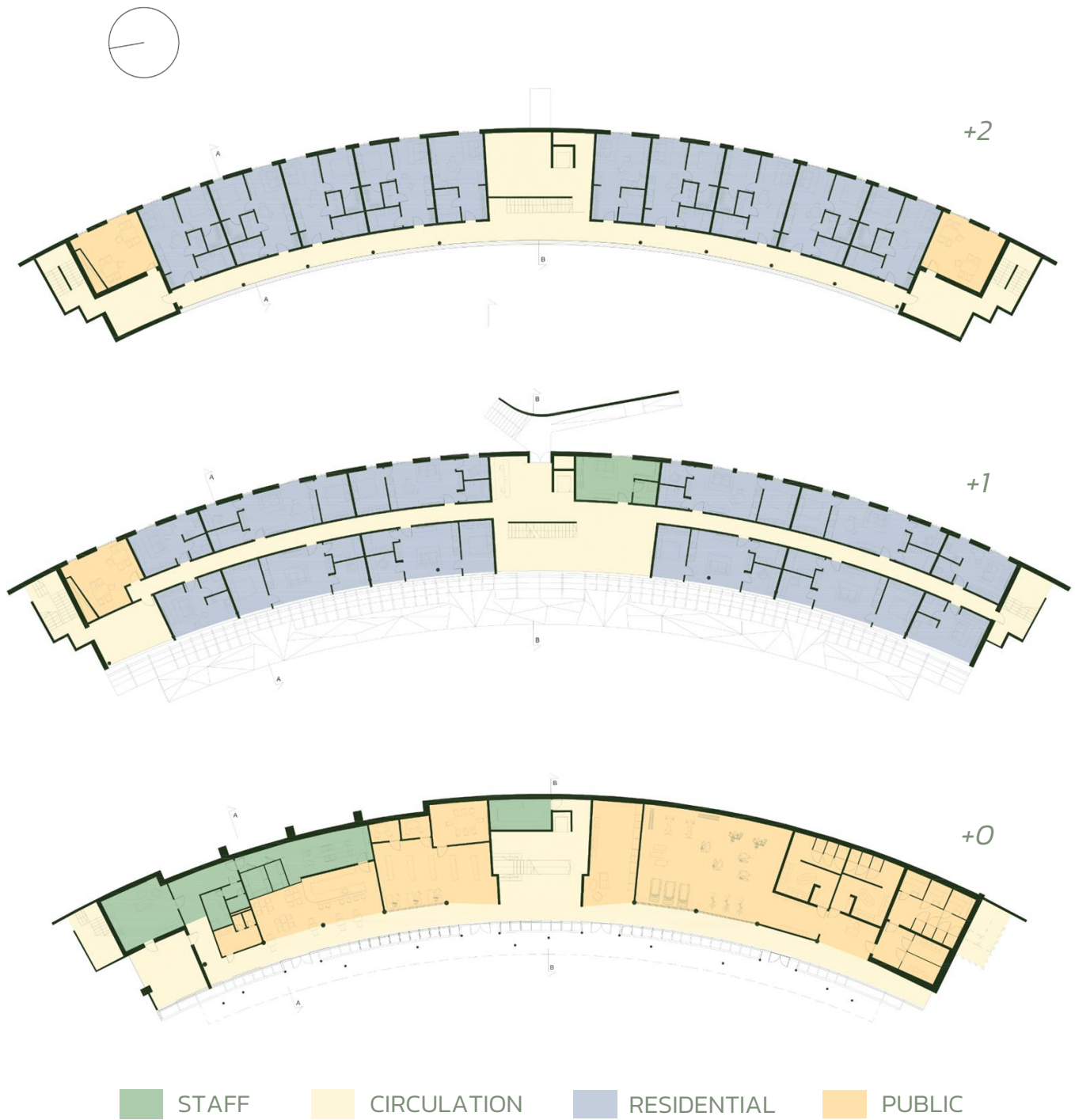


Continuing with the elegantly curved building, reminiscent of a leaf swaying in the wind or sheltering from the rain, the top two floors are designated for short-term stays. The façade, preserved in glass and green perforated metal, harmonizes with nature, complemented by wooden sun shades, creating an ideal spot for brief periods of residence. While the upper levels cater to short-term guests, the ground floor welcomes everyone.

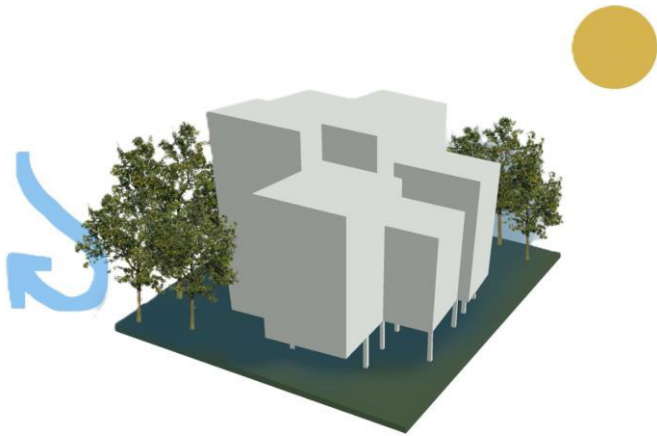


Enjoy the dual benefits of fitness and relaxation with on-site café, gym, and sauna. The space is designed to offer a comprehensive experience, seamlessly blending short-term stays with accessible amenities for everyone's enjoyment





The winding path threads through the four residential 'trees', past the Japanese garden, the private spa, and the curved leaf-like building, creating an endless loop with smaller side passages and experiences.

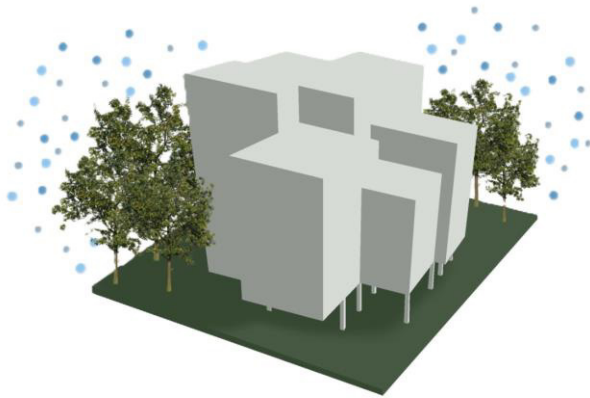


Thermal comfort

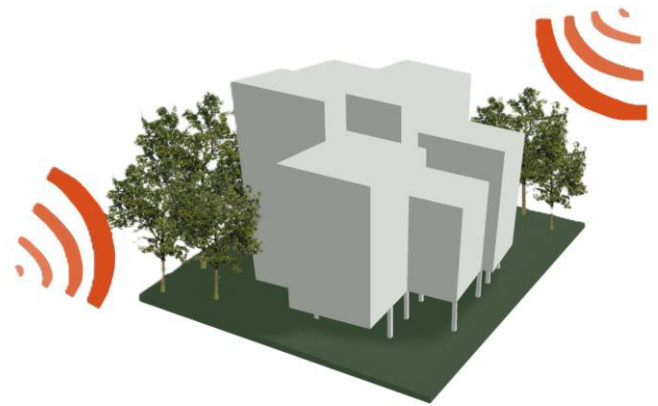


Biophilia

Nearby to the curved build lies a fenced-off sanctuary where the bioforest thrives, untouched and off-limits to human intrusion. Take a closer look, and perhaps you'll spot a bunny or other forest creature living nearby.



Air quality



Noise absorption

harmonious dance between modernity
and the wild beauty of the forest



TREES IN VIKKI, SEPTEMBER 2023



LIFE BETWEEN TREES



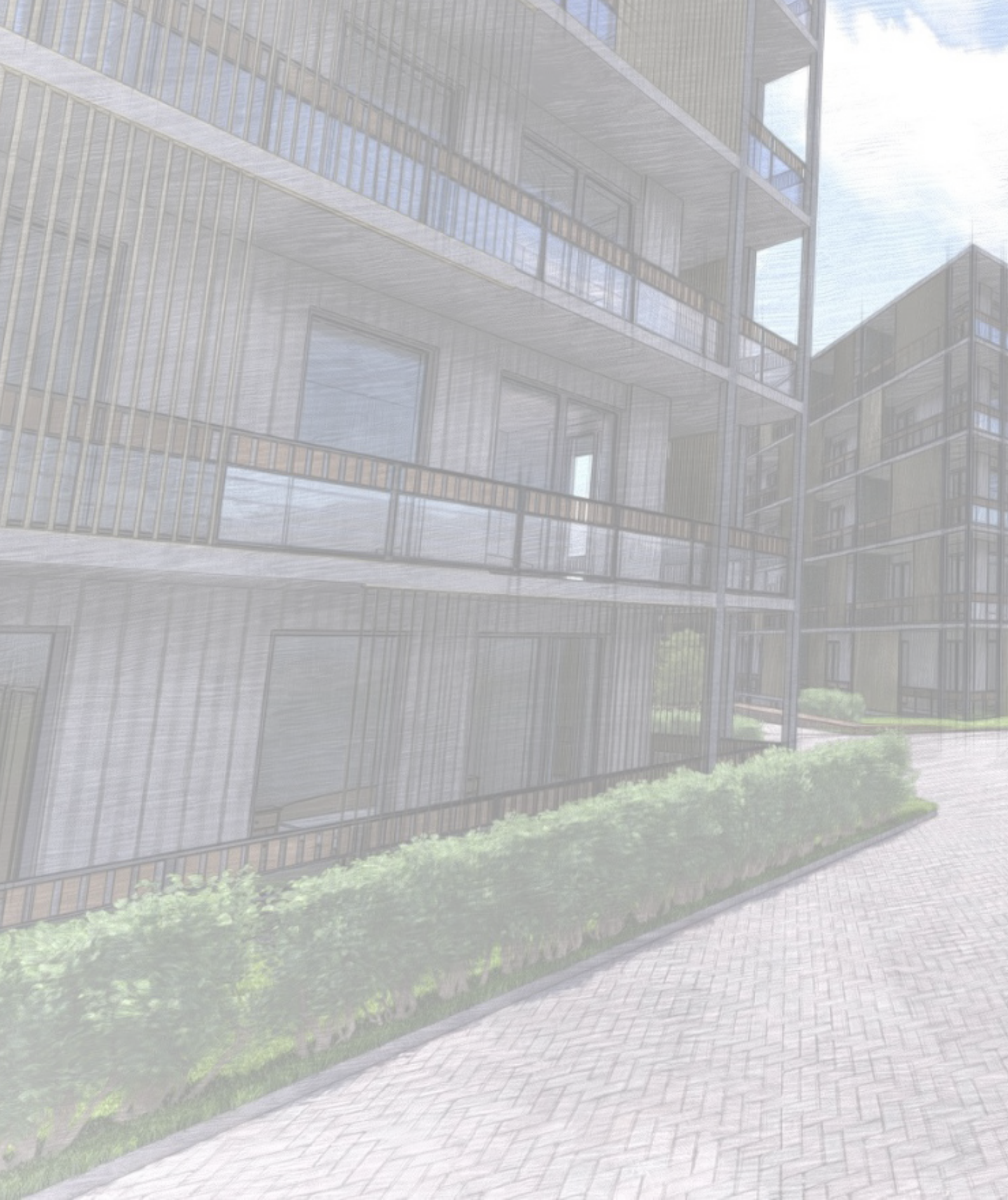


ST. GOBAIN INTERNATIONAL STUDENT CONTEST

Faultlines above the Earth

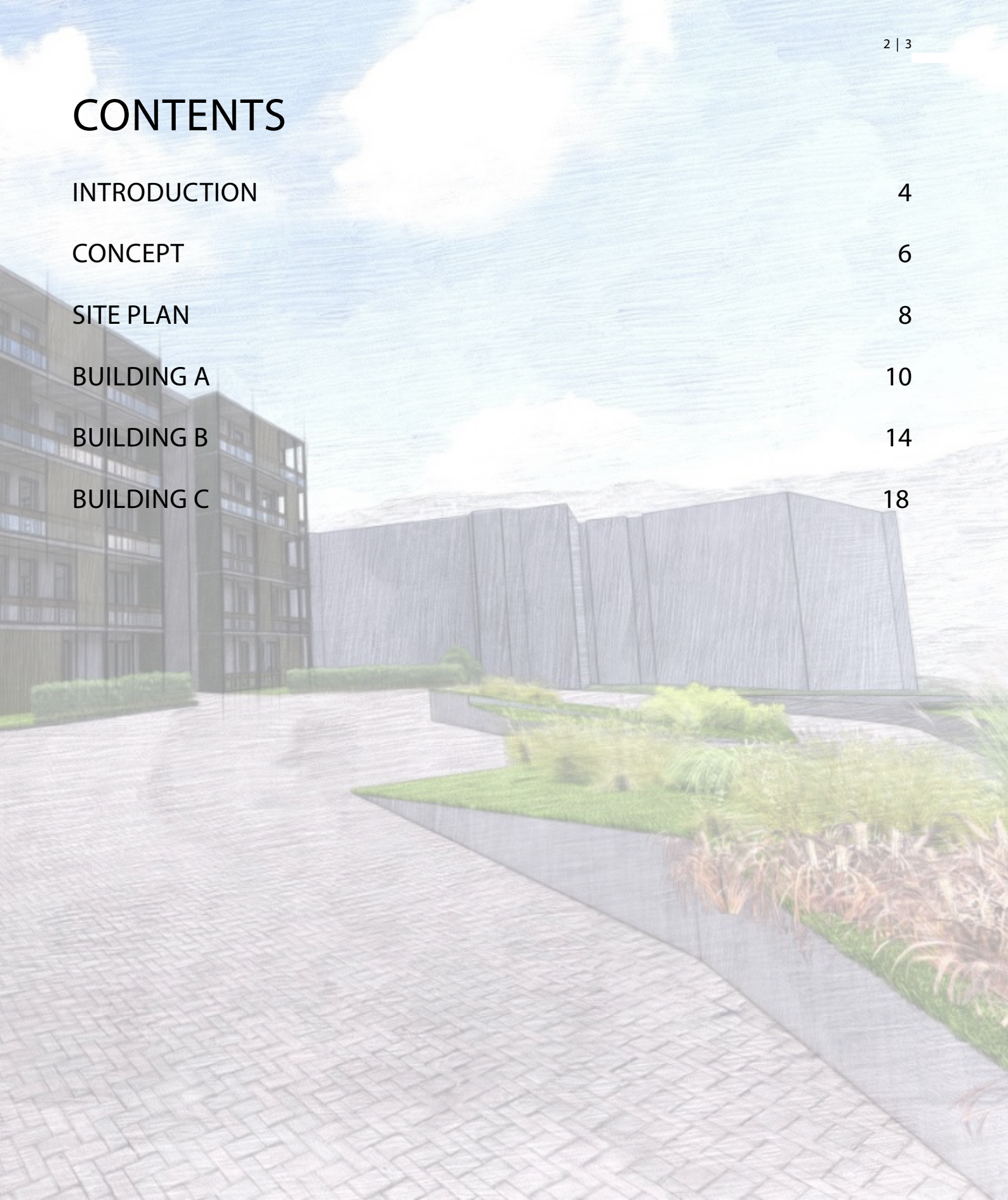
Kristaps Kadiķis
Linda Elīza Broka

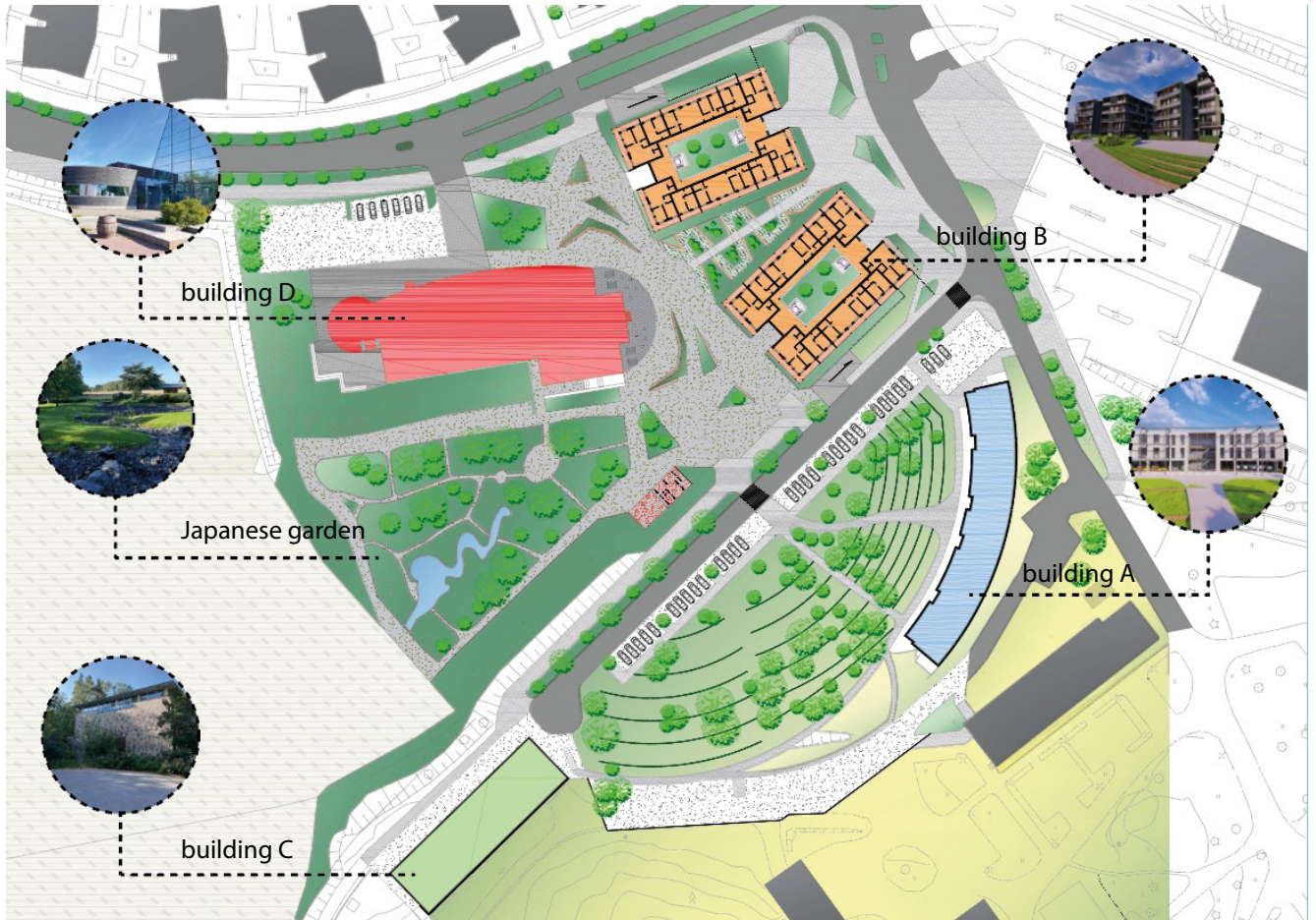
RIGA | 2023/2024



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BUILDING C	18





* masterplan

INTRODUCTION

Discovering Harmonia in Viikki, Helsinki

In the heart of Viikki, Helsinki, our project “Harmonia” unfolds across a landscape of diverse elevations, making it a unique canvas for architectural creativity. With three distinctive zones, we seamlessly weave together already existing, modern living, and artistic expression.

Building A: Embracing the Existing

Building A, an already existing building, awaits renovation. Our goal was to breathe a new life into this space, turning it into a comfortable accommodation for visiting researchers and professors. Providing not only living spaces, but also offering additional amenities such as a library, office spaces, an art gallery and a cafe.

Building B: Bridging Academia and Community

Building B is a newly constructed building, spanning five floors, dedicated to long-term residents.

On the ground level, a left-wing tech hub caters to nearby student campus. Simultaneously, the right wing offers a versatile space for pop-up events, markets and community gatherings.

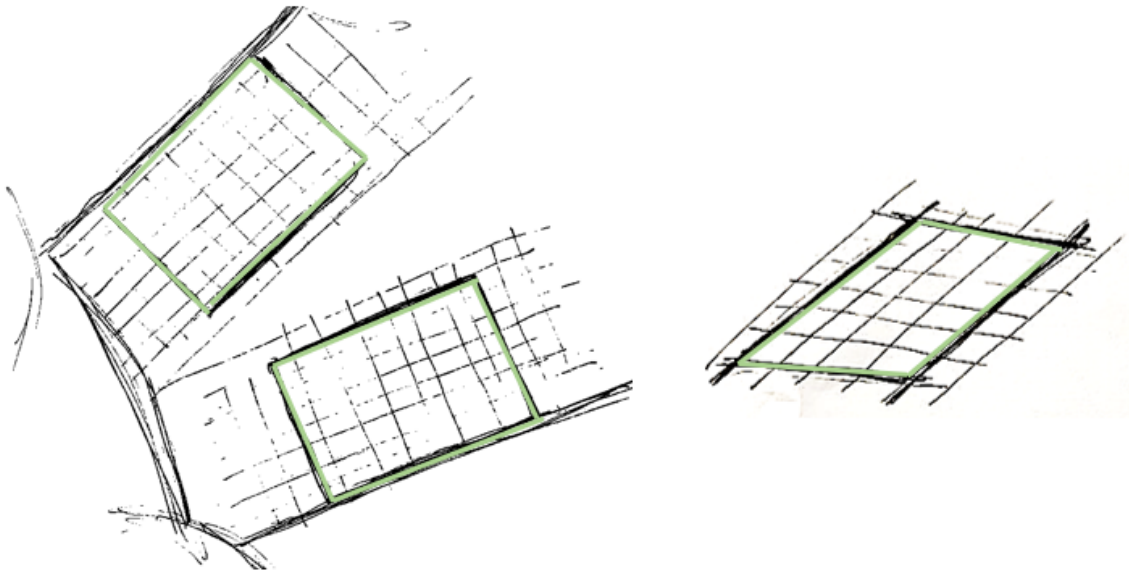
At the core of the building lies an indoor garden, creating a peaceful retreat within the structure.

Building C: The Arful Revival

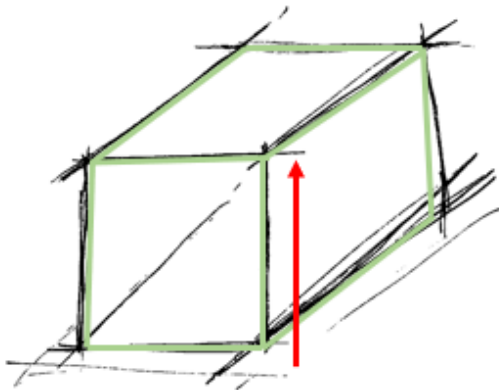
Building C transforms an old museum into an open-air art gallery and movie theater. By removing the roof, we create an interactive space that invites nature into the artistic experience.

Building D & Japanese garden

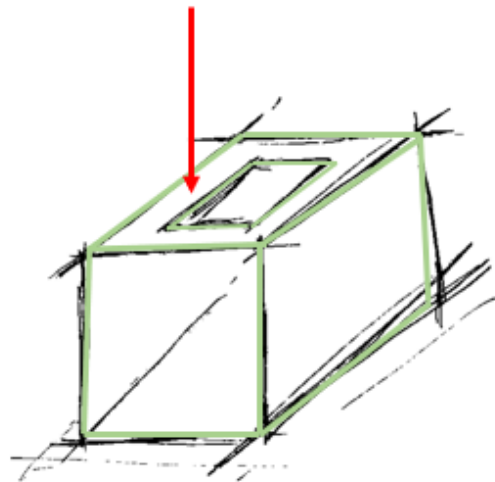
The building together with the garden will maintain its function.



utilization of existing separation site lines served as a foundation for the arrangement and placing of the buildings



the form was raised, extending it upwards to 5 levels

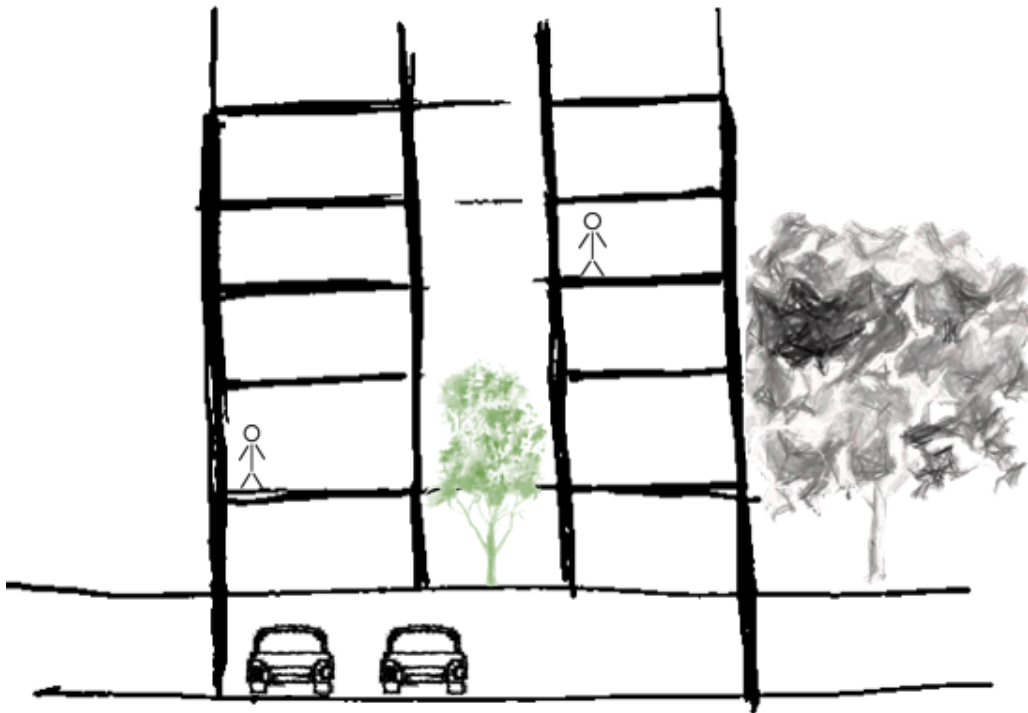


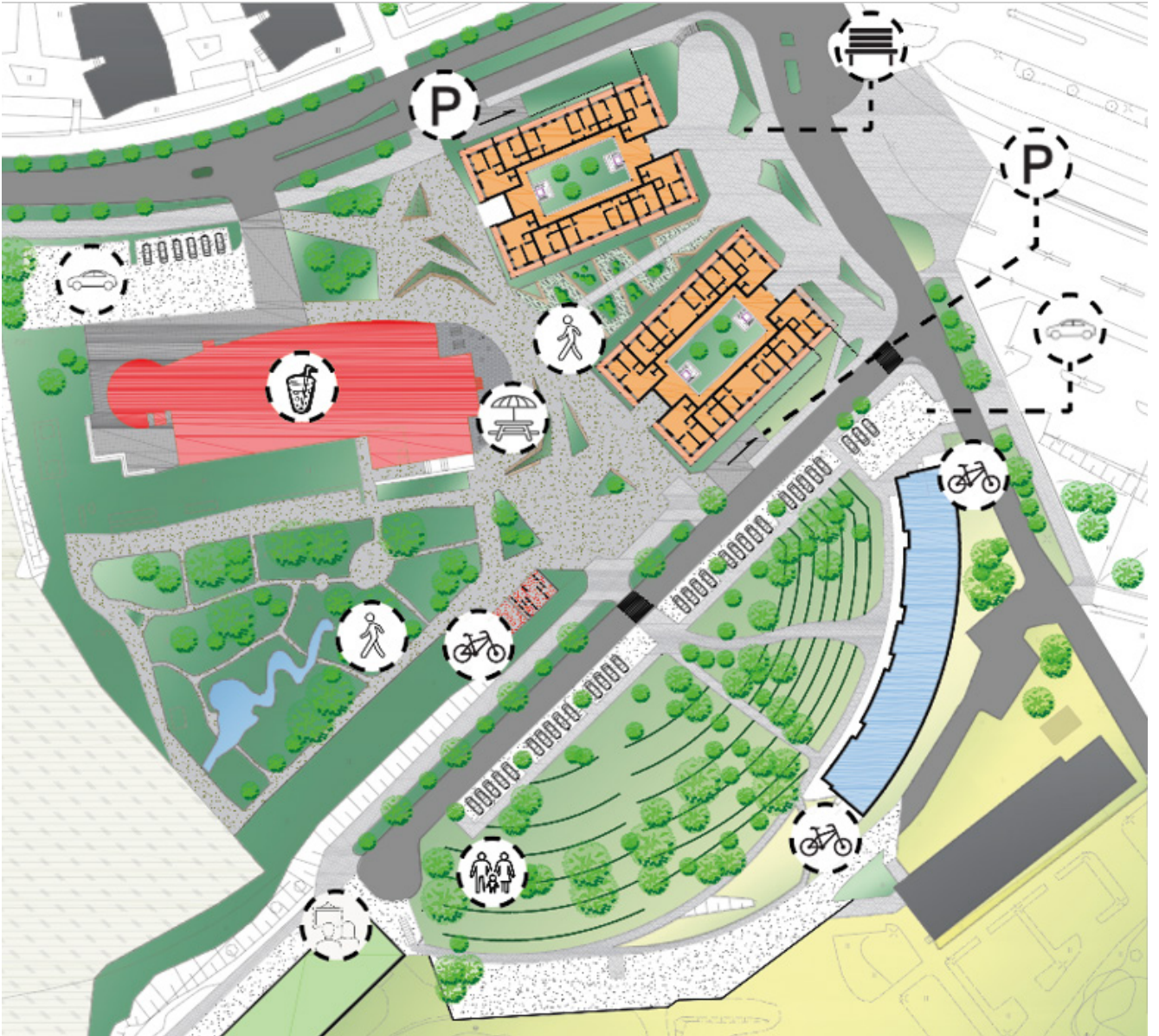
in the heart of the primary form, a smaller offset rectangle was extracted, creating a serene open garden

CONCEPT

HARMONIA

A harmonious sanctuary for modern living. Our design philosophy blends sustainability with aesthetics, fostering balance in every aspect. From the vibrant greenery that intertwines with open spaces to the thoughtfully integrated architecture.





SITE PLAN



* bicycle parking



* in-between building B walking path



* plaza of building B

BUILDING A

Building A- an existing office space, which we hope to transform into an comfortable living space for visiting academics. Our project includes not only a reshuffling of rooms but also a comprehensive redesign of the exterior, envisioning a welcoming facade that embraces openness and invites natural light to illuminate the space.

Exterior changes:

In our commitment to creating an inviting space, we plan to demolish the overhang, allowing the building to bask in natural light. The transformation continues with a shift from small windows to expansive ones, not only welcoming sunlight but also framing the beautiful views of the surrounding landscape.

A notable feature of the exterior redesign lies at the heart of the building. The area housing the lobby and stairs to the upper floors will undergo a modern transformation, with the entire facade covered in windows. These changes aim to provide a seamless connection between the interior and exterior, enhancing both aesthetics and functionality.



* front of the facade



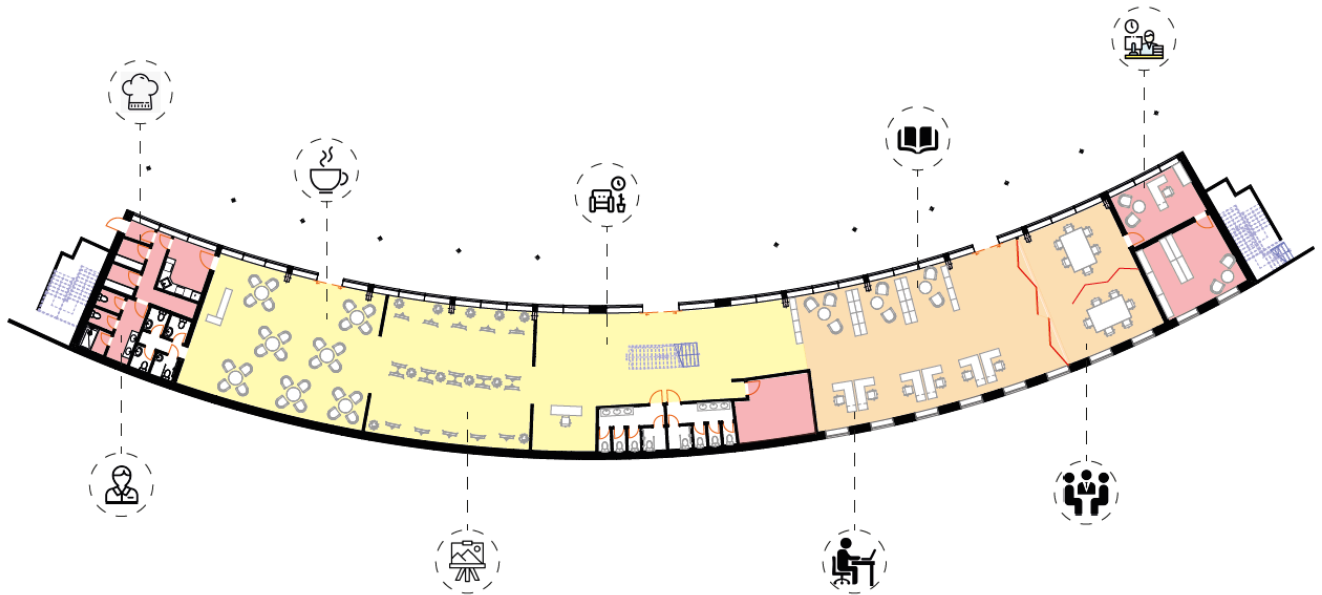
* facade

Interior changes:

The first floor is a revelation in open design. Its floor plan unfolds a vast experience, free from constraints. This arrangement encourages spontaneous discovery, allowing seamless transitions between various spaces.

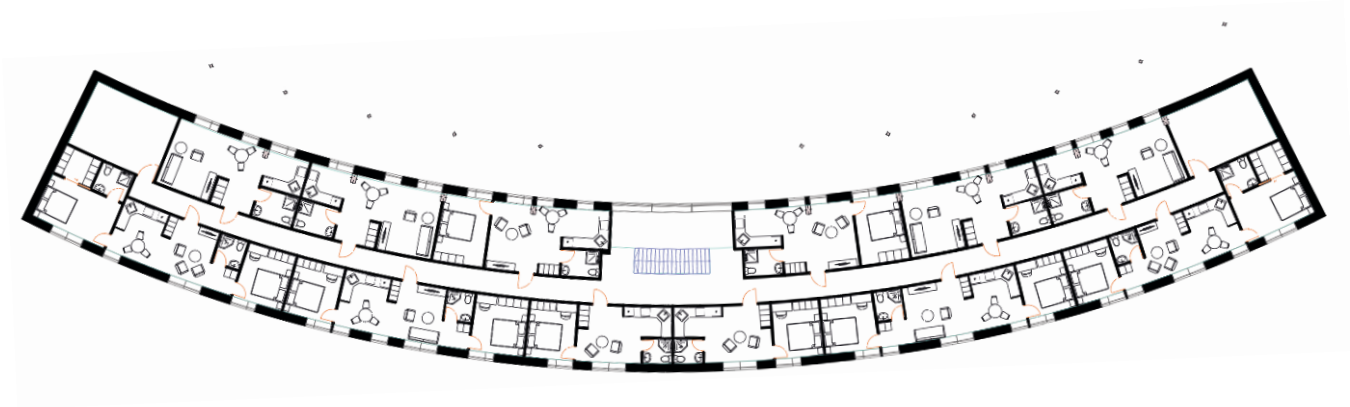
One side of the building hosts a dynamic working spaces- meeting rooms with flexible partition walls, a compact library, and adaptable workstations.

On the opposite side, an art gallery and a cafe redefine the experience within the building. Here, one can savor a drink while surrounded by art.



* first floor plan

The second and third floor reveals a collection of thoughtfully designed apartments. From studios to spacious one and two-bedroom layouts, these living spaces cater to the diverse needs of our esteemed guests.



* 2nd and 3rd floor plan



* interior

BUILDING B

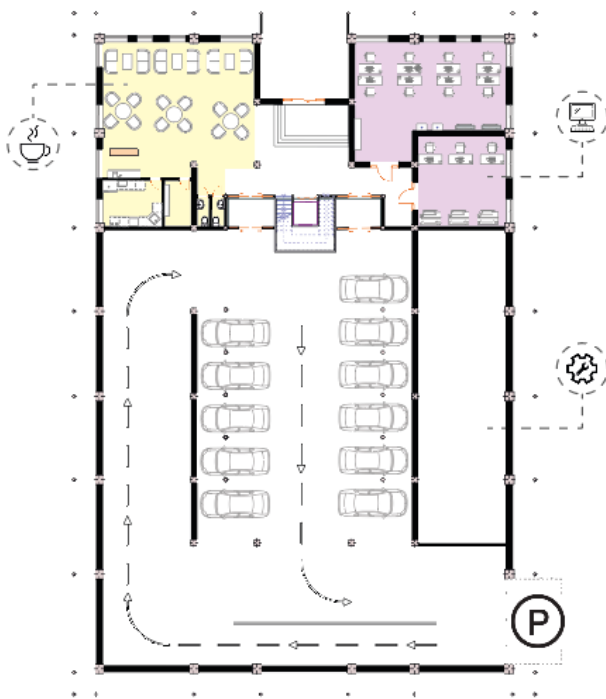
Building B will be a newly-built 5-story structure, which features two wings with a green park-like space in between. Due to varying ground levels, there is a half underground parking and lobby.

Each of the apartment on every floor is provided with balcony, which has veratile shutters for privacy and shade. Large windows provide natural light. Solar panels on the roof contribute to sustainability, powering common spaces and serving as charging stations for electric vehicles.

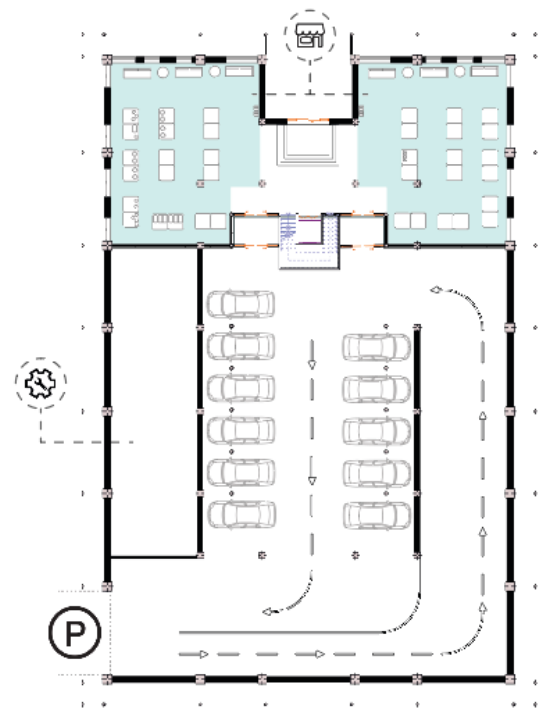


* facade

On the ground level, the left-wing hosts a tech hub for nearby students, as well as residents, while the right wing offers a flexible space for pop-up events, markets and community gatherings. Both wings incorporate indoor gardens with local vegetation.



* parking & lobby plan (left wing)



* parking & lobby plan (right wing)

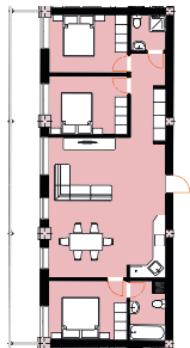
The living floors (1 to 5) house diverse one to three-bedroom apartments, providing a range of living experiences for residents.



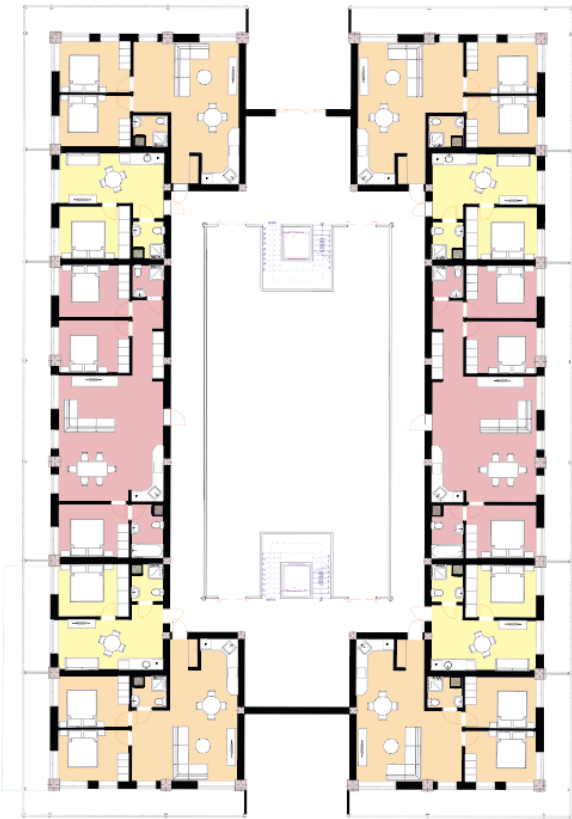
1 BEDROOM UNIT
4x
31.5 m²



2 BEDROOM UNIT
4x
61.5 m²



3 BEDROOM UNIT
2x
88.0 m²



* floor plan (2nd - 5th floor)



* vegetation of indoor garden



* cross-section

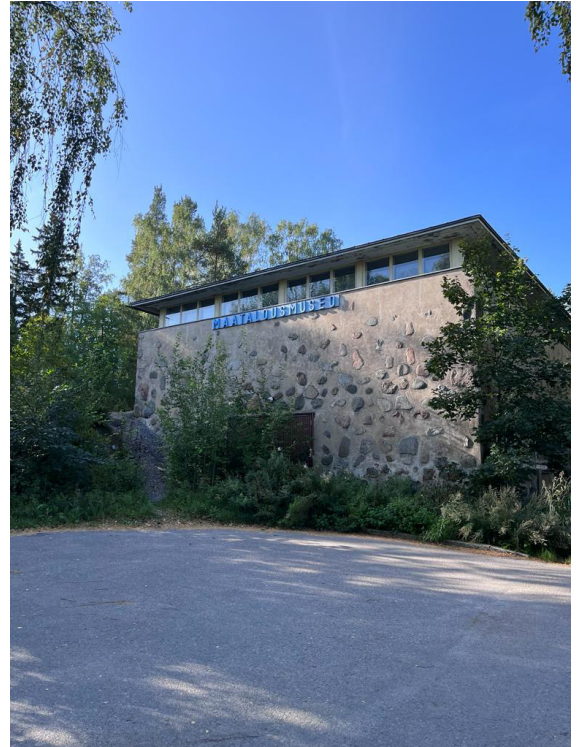


* interior

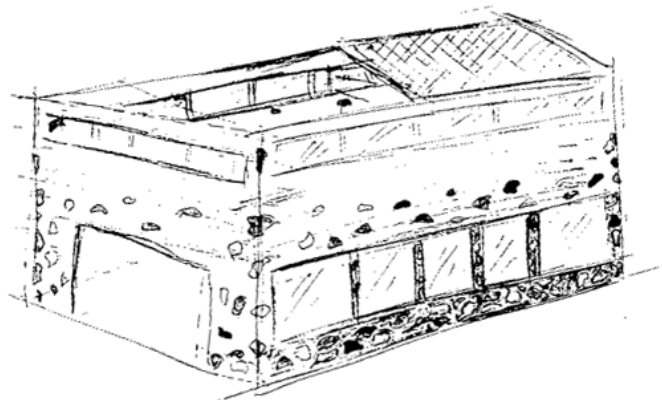
BUILDING C

Building C- an old museum, with no longer usable interior space. Recognizing the limitations of its indoor space, our vision involves alterations to breathe new life into its cultural legacy.

The planned renovation includes the removal of the second floor, opening up the building to higher ceilings that enhance the exhibition space. To embrace the outdoor ambiance, we envision the removal of half of the roof, allowing nature to become an integral part of the experience. The remaining roof section will offer partial shelter.



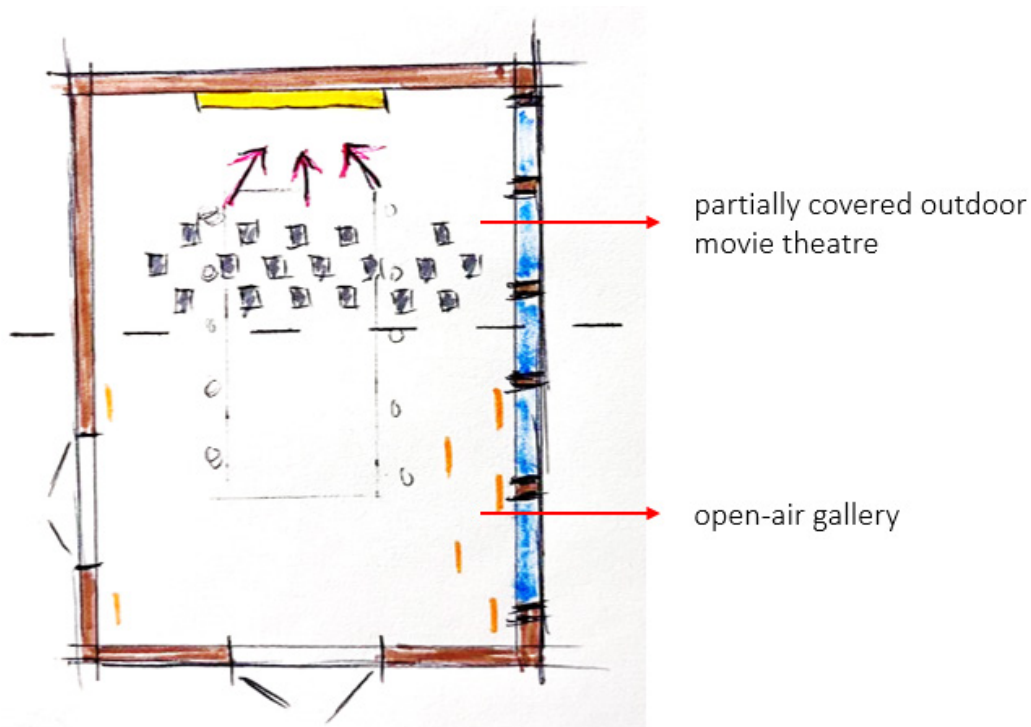
* building C



* sketch of building C

The open roof section is designated to serve as an open-air gallery, where art meets the elements, creating a unique and immersive cultural space.

Simultaneously, the covered portion with the intact roof will serve as a partially covered outdoor cinema, providing an atmospheric setting for a cinematic experiences under the sky.



* sketch plan of building C

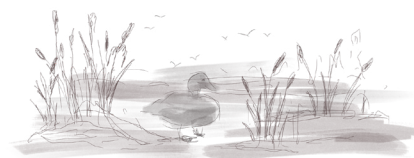


Lintukoto

location	Viikki, Helsinki, Finland
year	2024
authors	Mārcis Rautiņš, Nauris Lukjanovics

Viikki area is a harmonious intersection between urban vibrancy and the serene wilderness. This area encapsulates a balance where nature thrives amidst city life. While neighbouring a natural reserve, Viikki hosts a diverse avian population, serving as both a nesting and migratory haven.

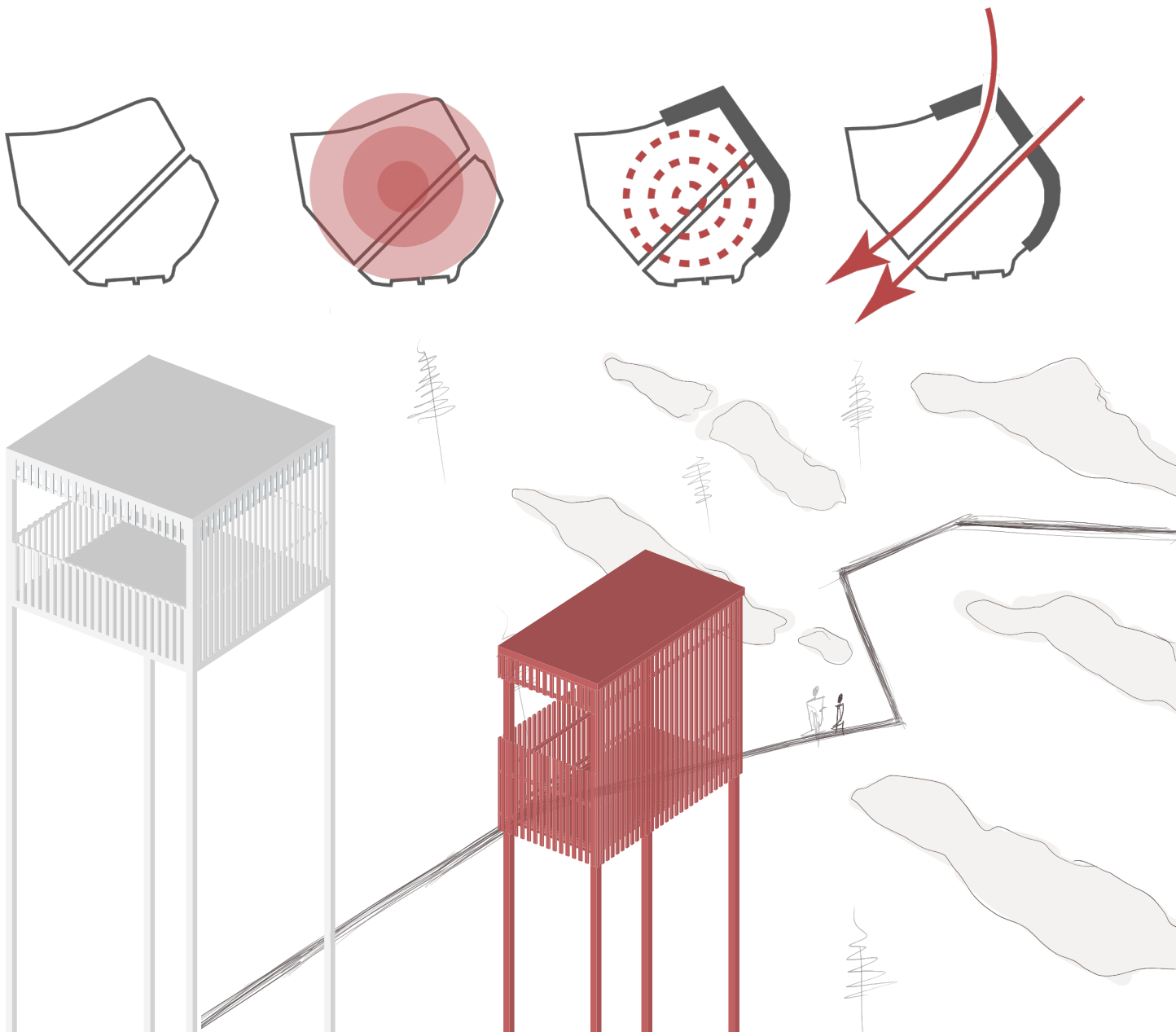
As a pioneer in sustainability, Viikki has introduced various examples of sustainable architecture and solutions to pollution and unsustainable lifestyle. Notably, Helsinki is a pioneer in Finland in developing its water bodies by establishing the first city-specific small watercourse program in 2007 in the Viikki area. The program proposed restoration measures for streams, ditches, and even ponds. Wetlands and streams offer various ecosystem services, primarily creating conditions for diverse ecosystems and services related to water purification and regulation (MEA 2005). Additionally, wetlands and streams provide cultural ecosystem services in the form of landscape.

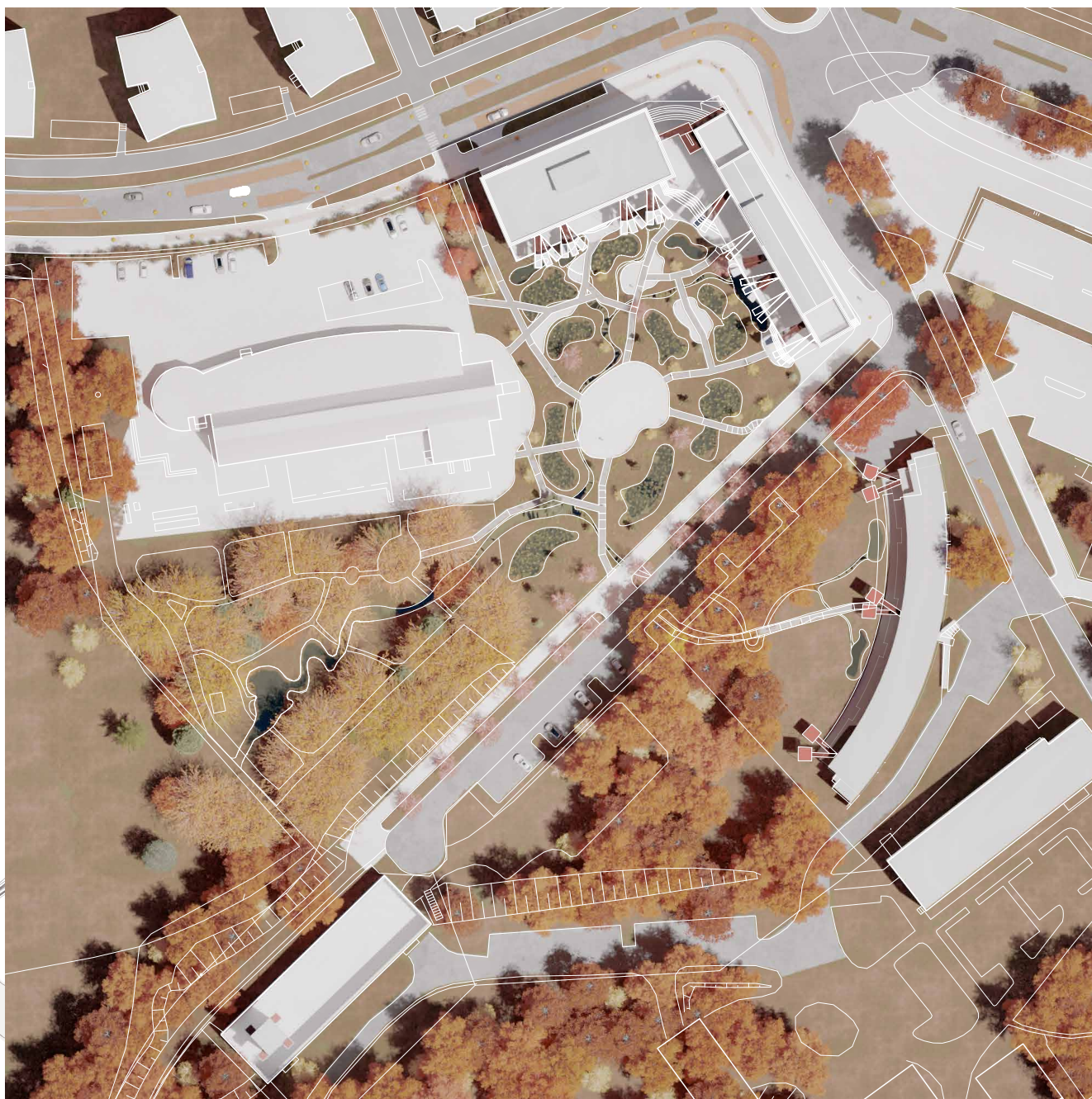


Our concept is a tribute to ancient Finnish epic Kalevala, which has encapsulated the essence of world creation and reflects Finnish mindset on human coexistence with nature.

Drawing from the it's universe, our design mirrors layers of an egg, which is a symbolic representation of life's emergence according to Kalevala, where waterbird laid an egg, from which earth, humans and sky emerged. The outer shell serves as a protective boundary, safeguarding the space from urban influences. Albumen and yolk represent transitioning – a journey, guiding inhabitants towards a coexisting paradise, thereby unifying the entire plot.

Furthermore, our plot is seamlessly creating miniature space pockets that represent various places in Kalevala. For instance, our big watching tower is a reflection of the world pole located in Pohjola, which is an abstract polarity or the end of the world, in our case – end of our plot.

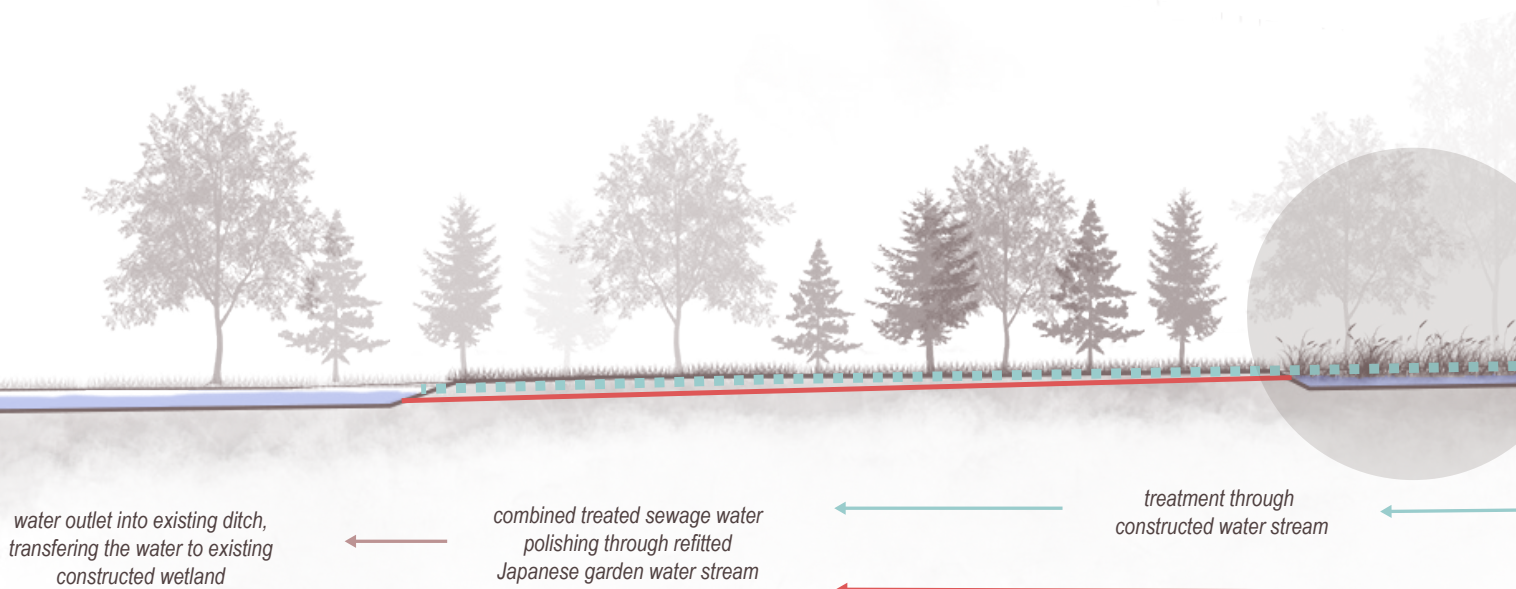
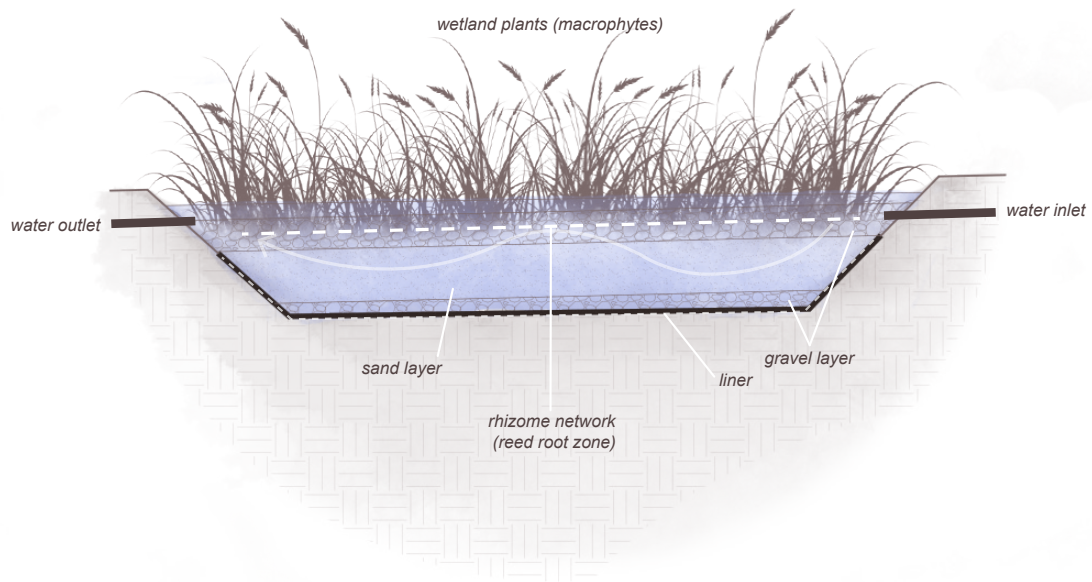




Site

- The site acts as a living canvas where nature and humanity seamlessly coexist, creating an ambiance that echoes the essence of the place;
- Designed to thrive at all hours, the plot integrates various functions which were adapted from the current buildings, to maintain the lifestyle;
- Towers or terraces function as observation points and transitional spaces;
- And leveraging existing plot materials, we've crafted artificial slopes into the wilderness, promoting a harmonious blend with nature, where Stormwater and Drainwater systems foster a lush wetland adorned with references to Finnish myths, inviting exploration and discovery.

Constructed Wetland Scheme



Wetlands

- At the heart of plot lies our wetlands - crucial in reducing water wastage by filtering drainwater and redirecting stormwater back into the ecosystem;
- Employing septic tanks within an anaerobic bacterial environment helps to filter out the water, which later on is pushed forward to already existing water ditch located near by;
- Wetlands are also supplemented by rainwater streams, which get collected within the building, and later on get merged together with the wetland water.



6th floor & Roof

- 3 Room Apartments;
- 2 Room Apartments;
- Roof Sauna;
- Roof Terrace;

2nd - 5th floors

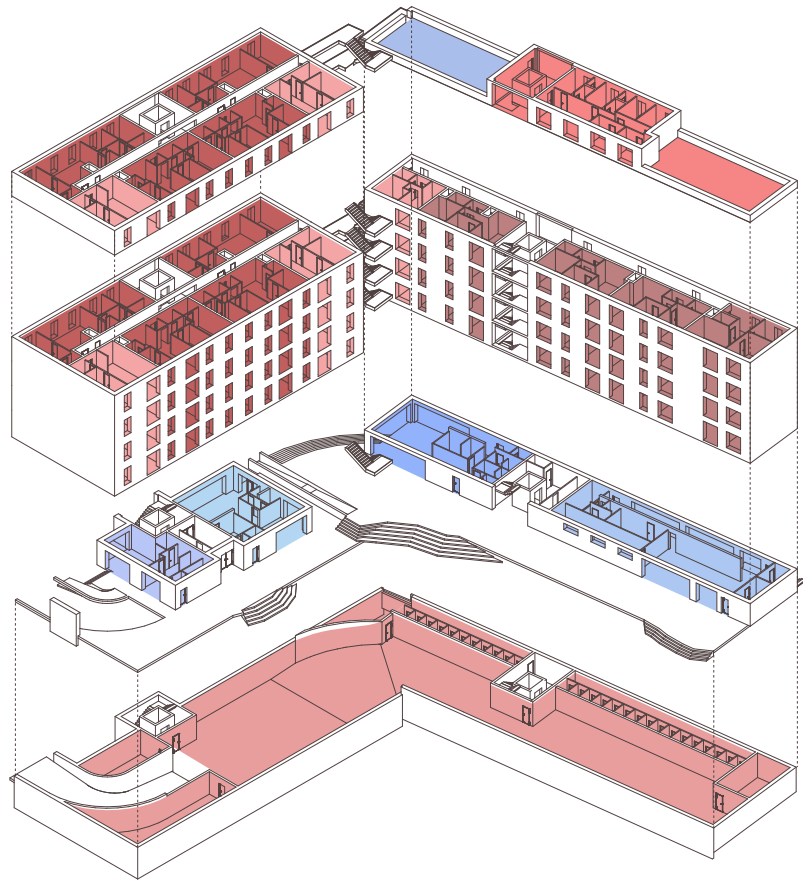
- 3 Room Apartments;
- 2 Room Apartments;
- 1 Room Apartments;

Ground floor

- Store;
- Cafe;
- Public Gym;
- Daycare;

Ground floor

- Parking, Cellar, Techrooms



Building B

- Building serves as a shell between nature and urban life;
- Bird watching tower inspired terraces are observation points and transitional spaces from the outer shell and inner coexisting paradise;
- Inner yard is a meeting point or coexisting paradise, where people, fauna and flora thrive, while being guarded by inhabitants of the building;
- Co-usage sauna for the residents is located on the roof accompanied with a private terrace with a magical view over the plot;
- Facade of the building is seamlessly inconspicuous, pushing terraces forward and removing the feeling of a barrier in the plot.



Building A

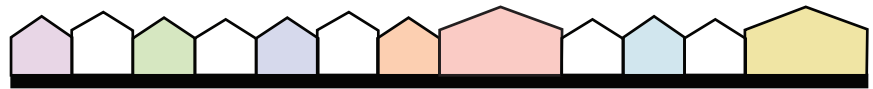
- Function of the building is changed to student and tutor dormitory which in summer period can be used as a hostel for anyone (e.g. for researchers);
- First floor consist of common spaces for the residents, such as sauna, gym and lounge area, while on the left wing a public cafe is located, with a seperate entrance;
- This building is accompanied with bigger terraces (compared to building B) for several people to enjoy the view at the same time;
- As with building B, facade is seamlessly inconspicuous, pushing terraces forward and removing the feeling of a barrier in the plot.



Building C

- Watching tower is located on the highest spot of the plot, providing with a wider view over the area;
- To repurpose the former museum the existing roof and the floor are removed in order to create an open space for the watching tower;
- Tower has several smaller towers pushed forward on different levels and sides, providing many different perspectives and views;
- The walls of the old museum serve as an enclosed area for the big watching tower, where gallery can be placed with useful information about the plot or history of the former museum;
- Facade of the tower is seamlessly inconspicuous, pushing terraces forward and protecting people from the wind.



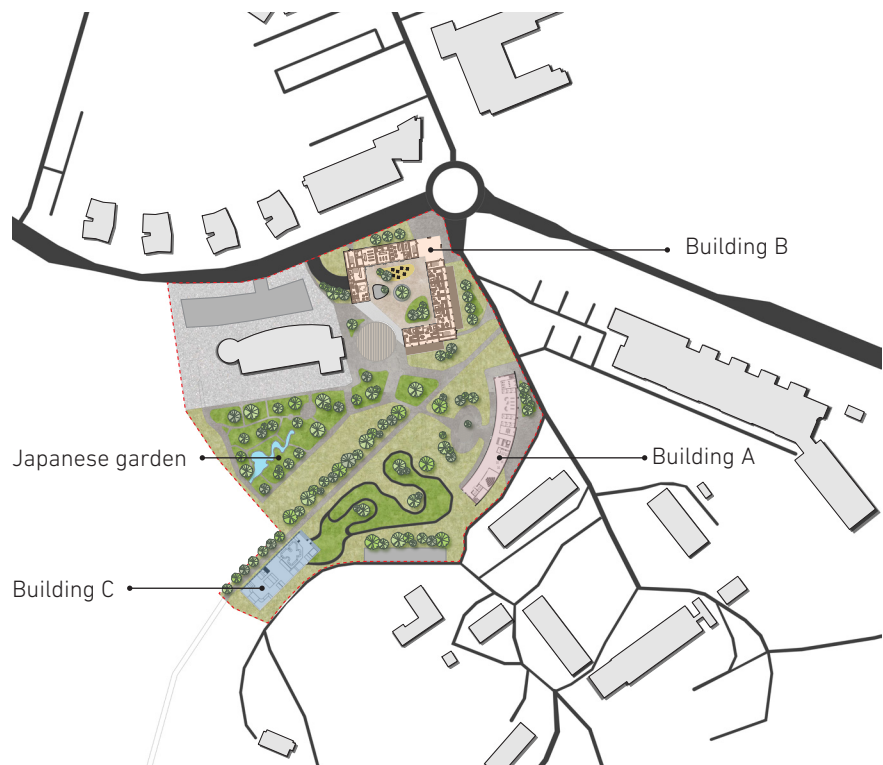


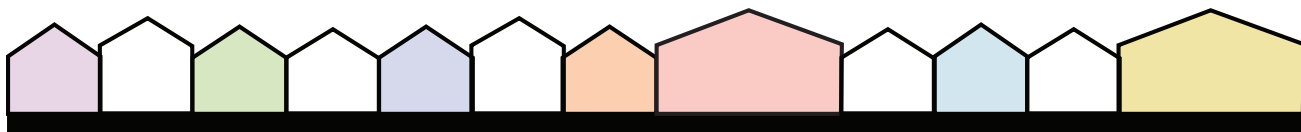
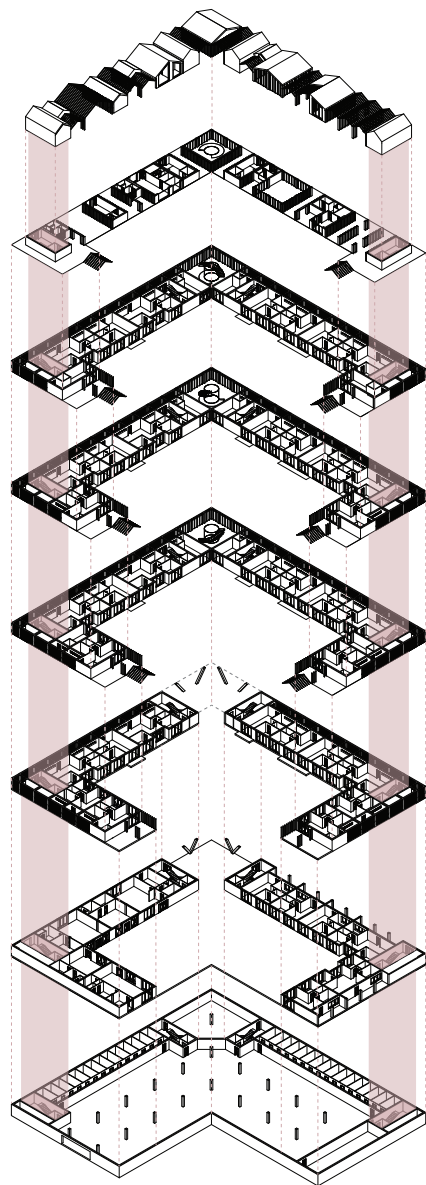
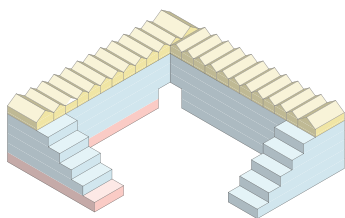
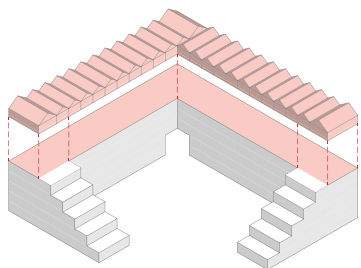
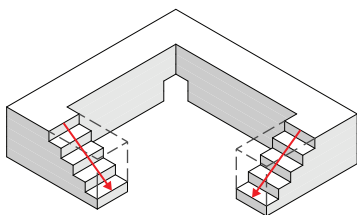
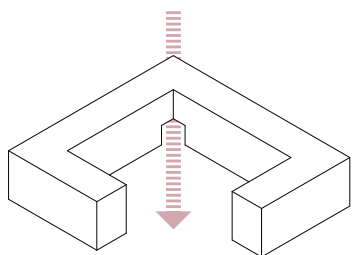
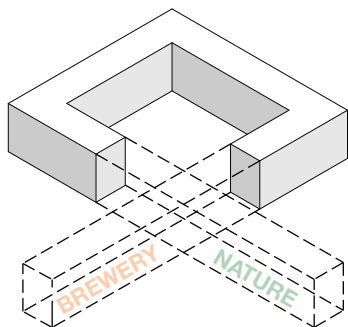
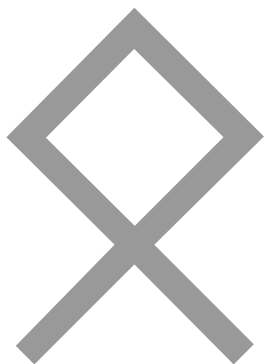
VIIKKI ROOFTS

Residential project

location	Viikki, Helsinki
year	2024
autors	Alise Birkmane Aleksejs Sviridenko Tomass Bakēvics

In the area of Viikki, just 8 kilometers from the center of Helsinki, the Saint-Gobain competition takes place in Finland's first ecologically planned area. Characterized by a harmonious combination of cultural, historical, and natural elements, Viikki is a testament to sustainable living and a commitment to preserving its natural heritage. Our architectural assignment included four key components designed to enrich the Viikki experience: the creation of a new residential building, the conversion of existing office space into researcher's accommodation, the seamless integration of the existing brewery and Japanese garden, and the revitalization of a disused museum on the periphery of the site.



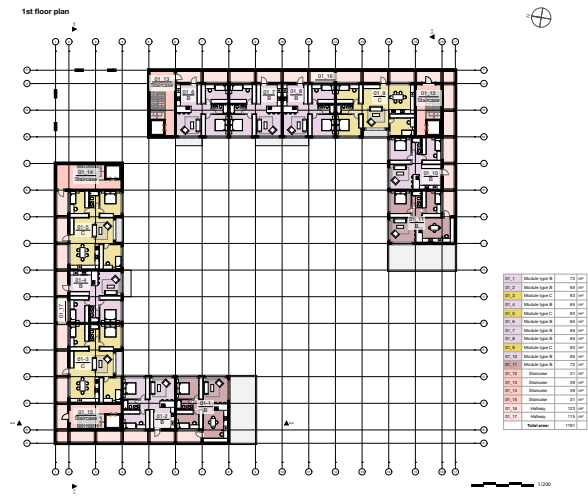


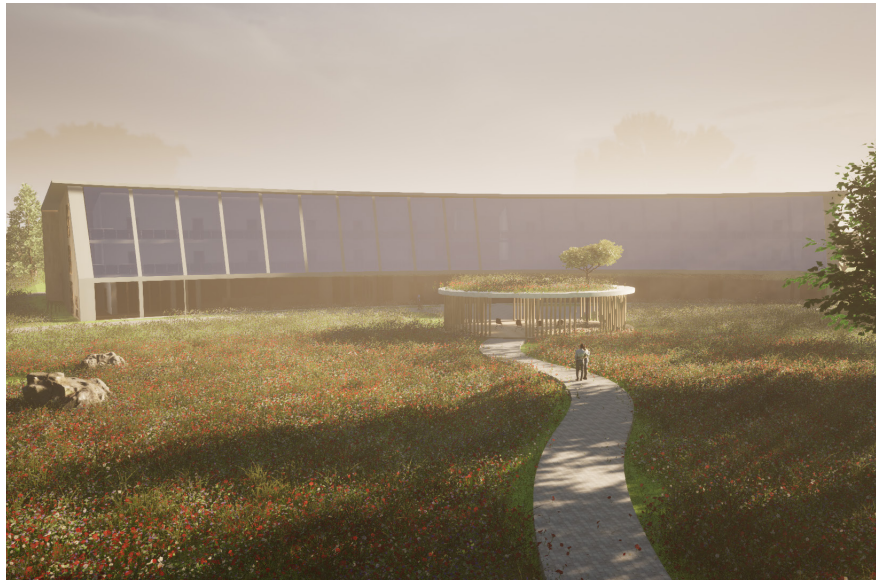


Viikki Roofts is a residential project in Viikki, Helsinki, that seamlessly blends Nordic heritage, community living, and sustainability. The architectural form of Viikki roofts is influenced by the Othala rune, with its clean lines and geometric simplicity. The Othala rune symbol represents the concept of ancestral property, inheritance, and home. It signifies a sense of belonging, heritage, and the idea of a safe and stable home environment. This rune emphasizes the importance of one's roots, family, and the legacy passed down through generations. In a broader sense, Othala can symbolize not only physical dwellings and ancestral lands but also the spiritual or cultural heritage that connects individuals to their past and traditions. This residential building redefines modern living by fostering a sense of community, well-being, and a deep connection to nature. In addition to its symbolic meaning, embodying concepts of home, security, and cultural connections, the form of a building serves functional purposes. It acts as a barrier against noise, unpleasant odors, and road emissions, providing a peaceful environment.



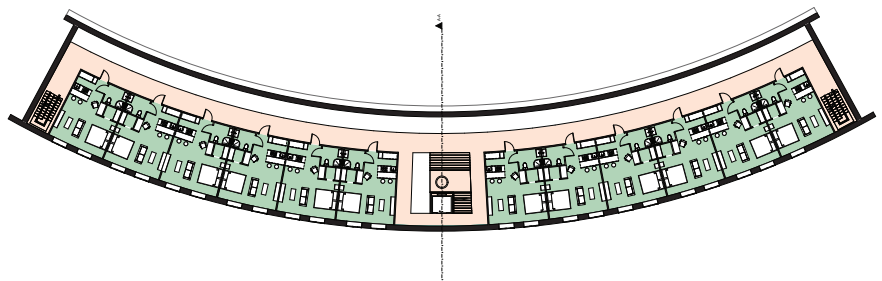
Meanwhile, the semi-open corridors facilitate fluid circulation, blurring the boundaries between indoor and outdoor spaces and promoting a sense of openness blurring the lines between indoor and outdoor spaces. This design choice enhances natural ventilation, promotes an open atmosphere, and encourages spontaneous interactions among residents.



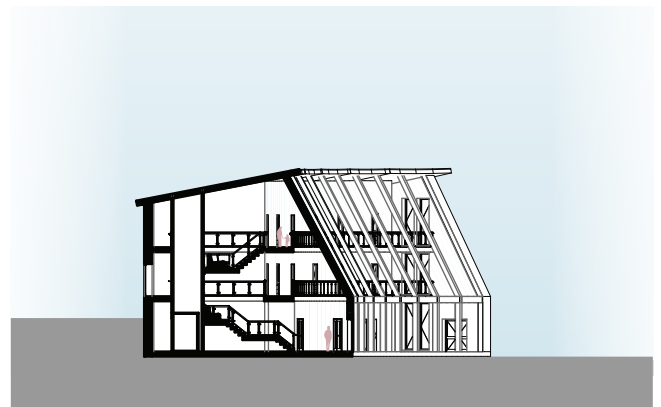
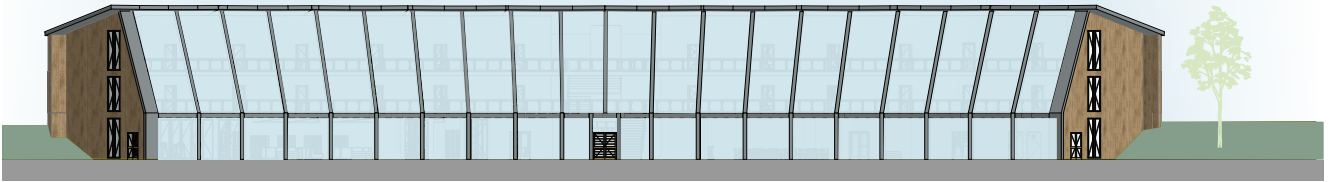


Extending our vision to a renovated office building, we replicate the roof concept to create a common architectural language between the two structures. The restored building now serves as short- and long-term housing for researchers and educators. Essentially, we changed the geometry of the building in such a way that it still resembles its current version, while adapting to the areas new look. Although both residential buildings have a different overall appearance, we tried to create a correlation between them. Thus, the corridor connecting the apartments, although it is an internal part of the building, still has a view of the courtyard thanks to the open and glazed facade. The roof now has a double-sloping design, which again recalls the overall integrity of the project and emphasizes the ideology of Finnish saunas. Thanks to its shape, the interior of the building becomes more vibrant and attractive, since this geometry allows more light to enter the atrium. In addition, we can note the continuation of the Japanese park into the courtyard, the organic forms of which are in good harmony with the forms of the building, and a distinctive feature is the tea house located not far from the main entrance, where people can relax a little by talking with a neighbor over a mug of warm tea. All these solutions give the building its own unique character and atmosphere, integrating into the new environment of Viikki.

2nd floor plan

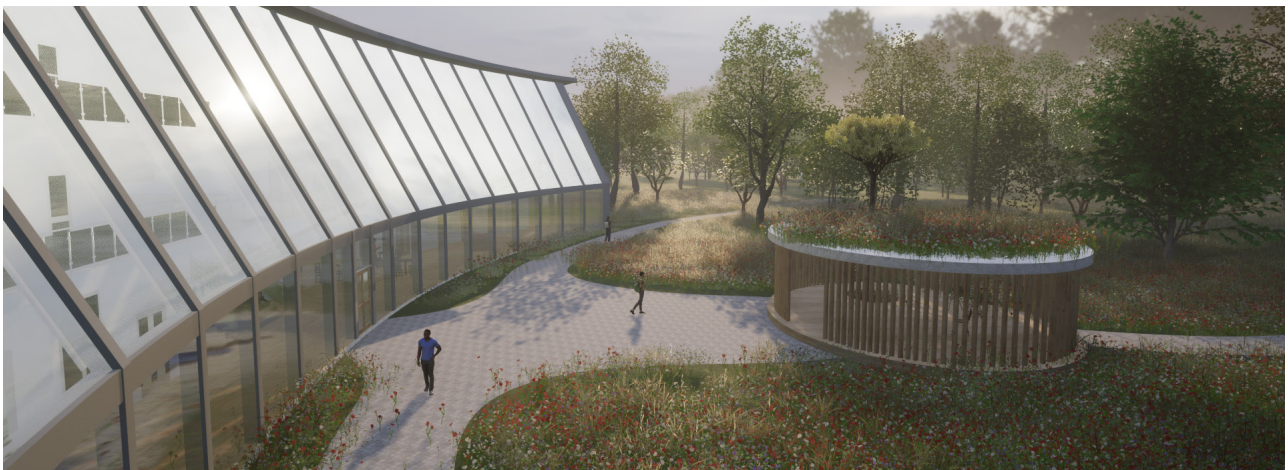


Elevation: West





The Japanese garden at Viikki roofts serves as a serene and integral component of the residential complex, acting as a bridge between the built environment and the surrounding community. Originally existing on the land plot, this garden has been thoughtfully expanded to seamlessly interweave with the architectural design. The expansion of the garden not only connects the community with nature but also establishes a cohesive link between the modern living spaces and the existing landscape, offering residents relaxation space and reinforcing the Japanese garden's role as a communal sanctuary. This intentional integration not only honors the pre-existing natural elements on the land but also elevates the overall living experience, fostering a deep sense of connection to both the cultural heritage and the natural surroundings. The open courtyard, rich in sunlight during the day, creates a serene space that gives apartment residents views of the lush meadows and forests beyond.



Viikki Roofts employs Cross Laminated Timber (CLT) as a sustainable and modular building system. This forward-thinking approach not only underscores the project's commitment to environmental responsibility but also introduces a host of benefits to the residents. CLT, a renewable resource, minimizes the carbon footprint associated with traditional construction materials, contributing to the project's overall sustainability goals. Modular construction not only ensures efficiency in material usage but also facilitates a faster and more streamlined building process, reducing construction waste and lowering energy consumption. The warmth and natural aesthetics of CLT create a cozy and inviting atmosphere within each living space, aligning seamlessly with the project's overarching design principles. As Viikki roofts stand as a testament to eco-conscious urban living, the integration of CLT underscores the commitment to harmonizing modern architecture with sustainable practices, providing residents with not only a home but a sustainable haven for generations to come.

