

Country /City

University / School

Academic year

Title of the project

Authors

Finland / Espoo

Aalto University / School of Arts, Design and Architecture

2022 / 2023

Up and around – Occupying closed coal power plant area with temporal sports landscapes

Eveliina Kunnaton

TECHNICAL DOSSIER

Title of the project Up and around – Occupying closed coal power plant area with temporal sports landscapes
Authors Eveliina Kunnaton
Title of the course Design of Special Environments, Studio
Academic year 2022 / 2023
Teaching Staff Jyrki Sinkkilä, professor; visiting teachers Janne Saario, Sarianna Salminen and Rolf Autio
Department / Section / Program of belonging Aalto University, Department of Architecture / Major in Landscape architecture / Master's programme in Architecture, Landscape Architecture and Interior Architecture
University / School Aalto University / School of Arts, Design and Architecture



Written statement, short description of the project in English, no more than 250 words

Master's program Studio course Design of Special Environments aims at improving landscape architectural designer skills. Project work introduces participants to the design of artistically, architecturally, functionally or technically demanding commissions. The themes and topics of the Studio vary every year, ranging from cemeteries to the design of amusement parks. In autumn 2022, the studio's theme was the landscapes of physical training and sports. The participants chose both the sport and the site for their own plans.

This project is located in the surroundings of a coal power plant in Hanasaari in the city of Helsinki, Finland. The power plant, representing the industrial architecture of the 1970's and creating an impressive landmark with its 150 meters high chimney, was put out of operation during spring 2023. Closing of the power plant will lead to major changes of the land use of the area, as the city of Helsinki plans to create a new vibrant city district to Hanasaari, starting in 2030's. Drawn from these prerequisites the focus of this project was to explore the temporal use of the power plant area through sports use. The design of the project merges two concepts and sports that complement each other and make use of the existing structures of the power plant as much as possible. In the framework of sports the design discusses the role and value of post industrial landscapes in cities. It also considers how the temporal landscape use influences peoples views of a developing city district.

For further information

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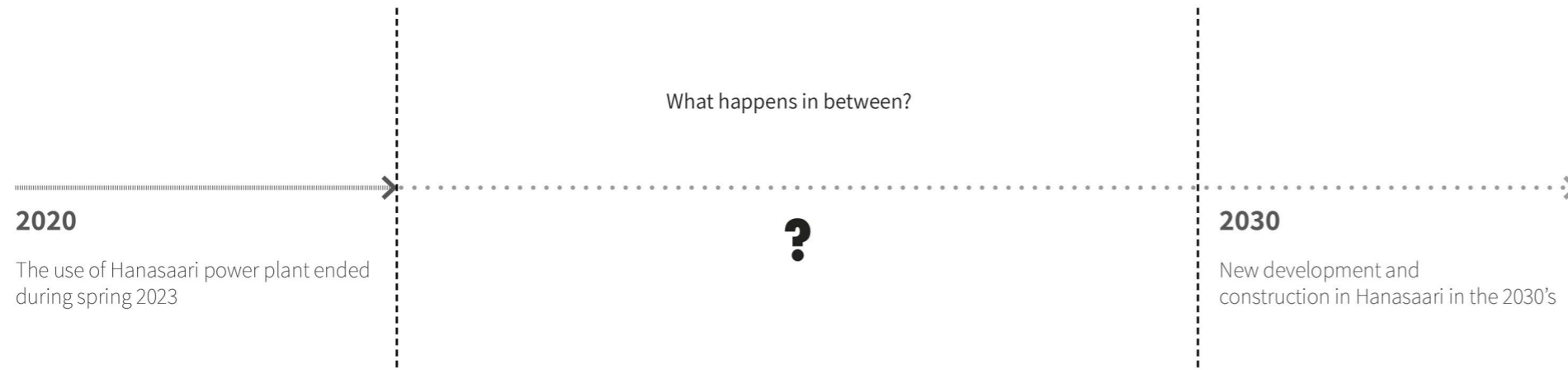
12th International Biennial Landscape Barcelona

Barcelona November 2023

SCHOOL PRIZE

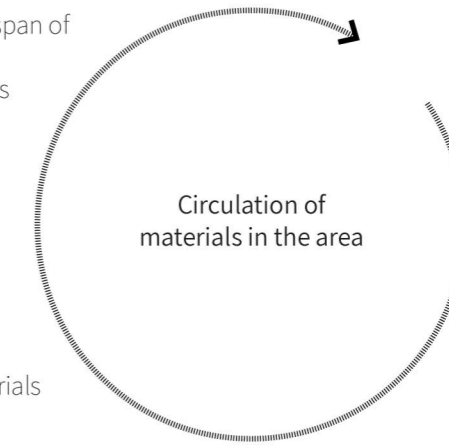
Starting points

Temporal use of the area



Circular economy

extending the lifespan of materials and creating new ways of use



utilizing the existing structures as much as possible

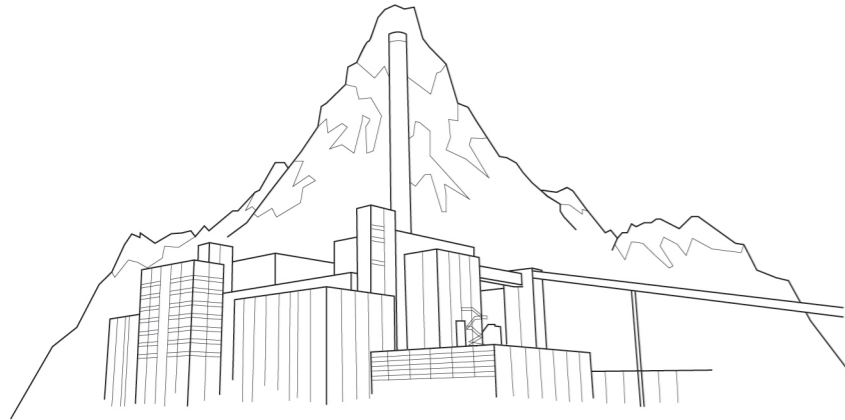
inventory of materials found in the area

Merging two concepts

Concept one: The Peak of Hanasaari

Emphasises the impressive scale of the power plant and how it creates a far reaching landmark in the city, like a man made mountain.

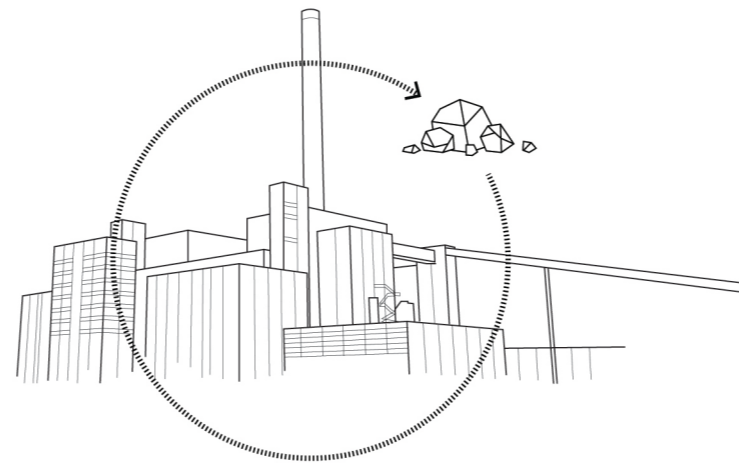
The sport in focus: climbing.



Concept two: The Coal Cycle

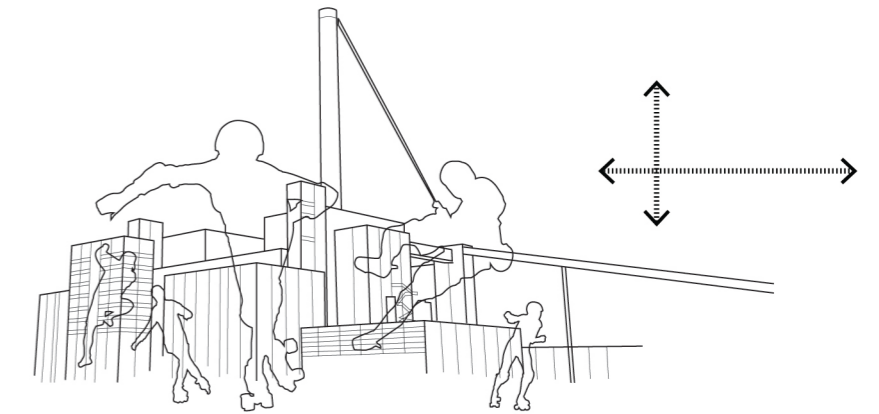
Studies how the power plant has operated and how the coal has circulated in the area during the operation.

The sport in focus: roller skating.

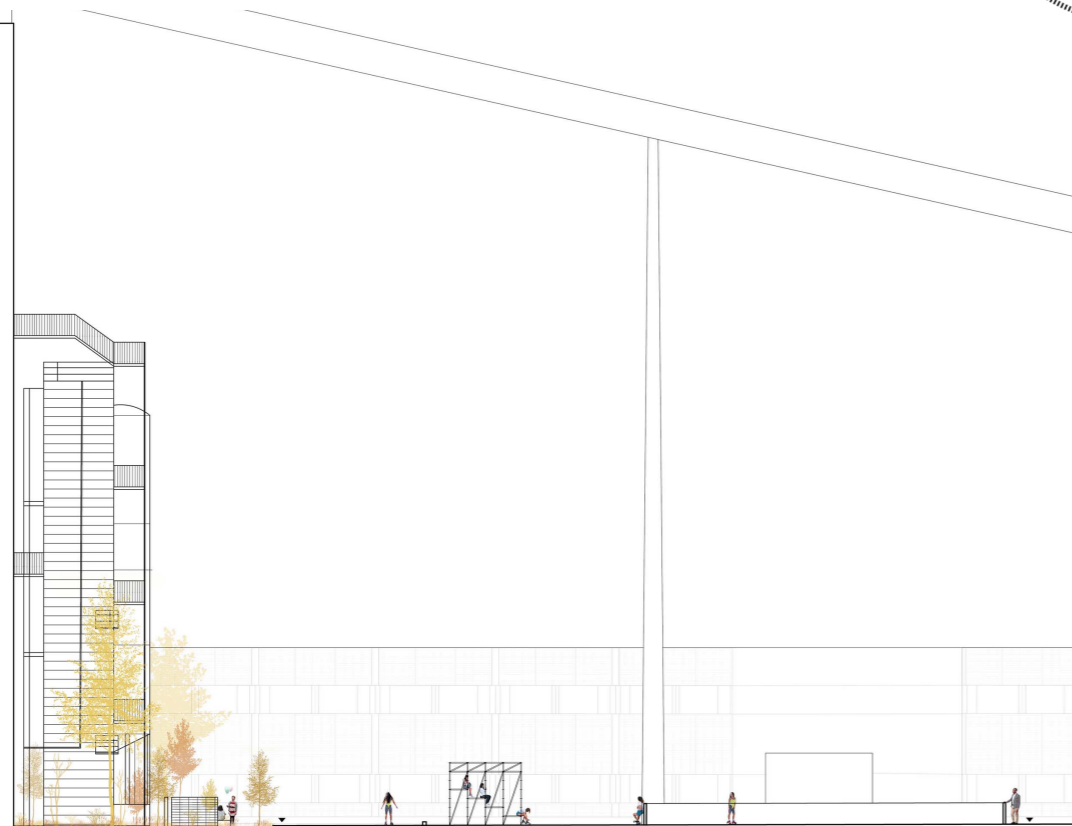


Result: Up and around

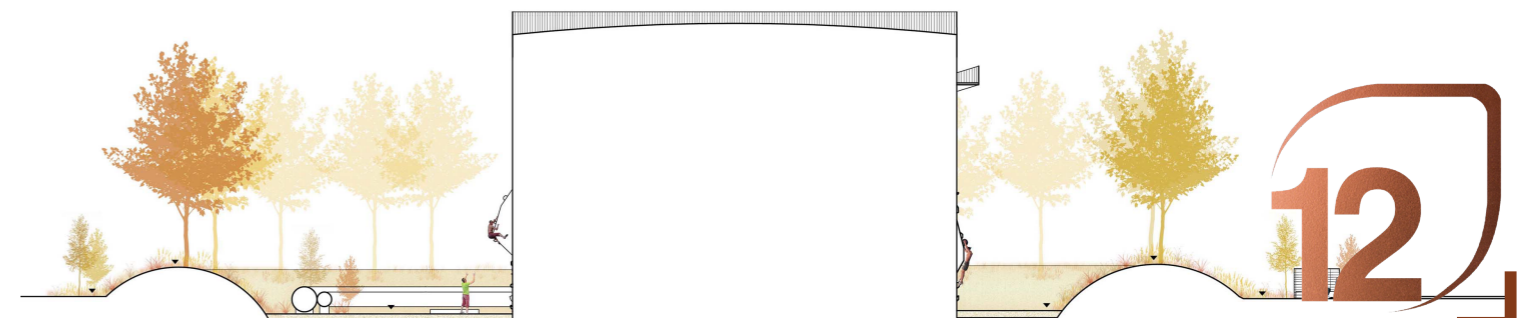
Merges together the two concepts that complement each other, climbing occupies the vertical surfaces while roller skating occupies the horizontal surfaces.

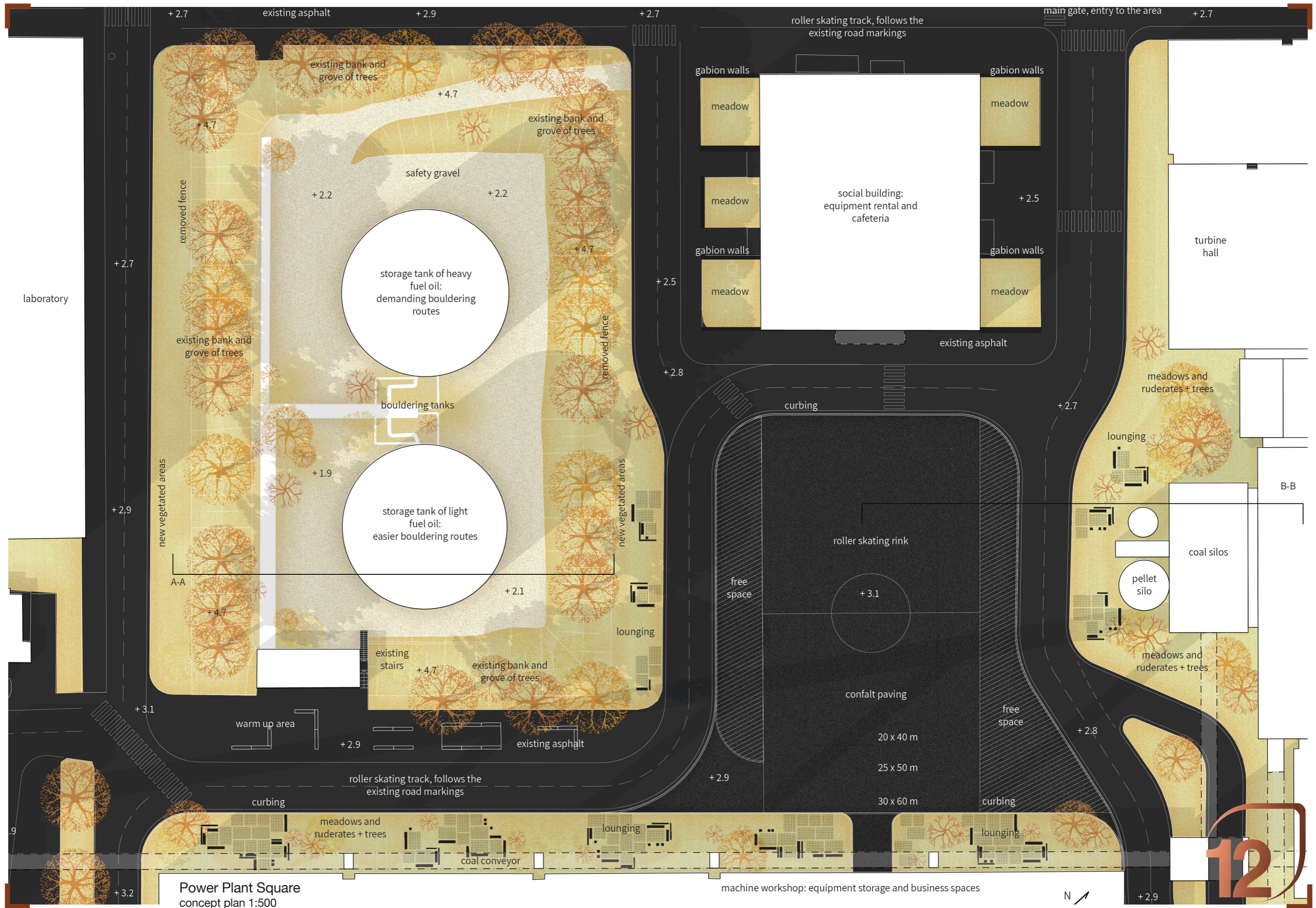


Section B-B
Roller skating rink



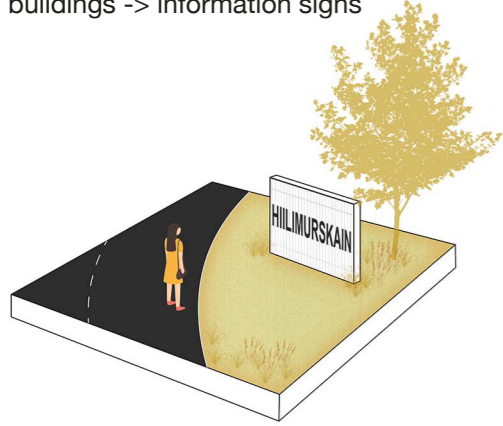
Section A-A
Bouldering tanks



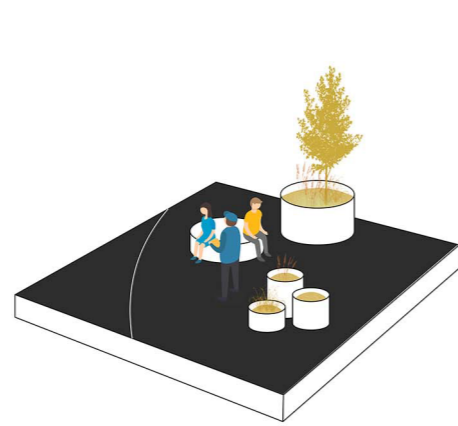


Power Plant Square
concept plan 1:500

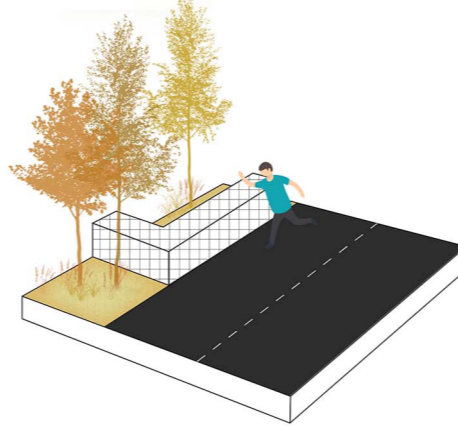
Principles for material use
facade elements from demolished
buildings -> information signs



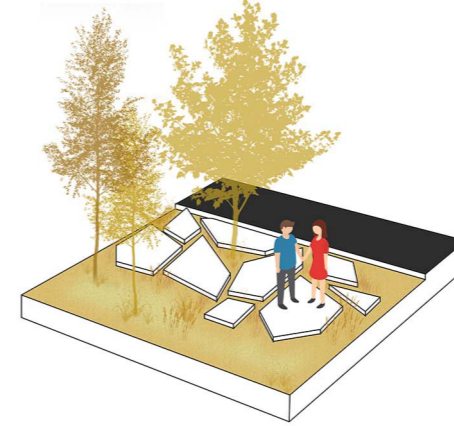
metal pipes -> installations



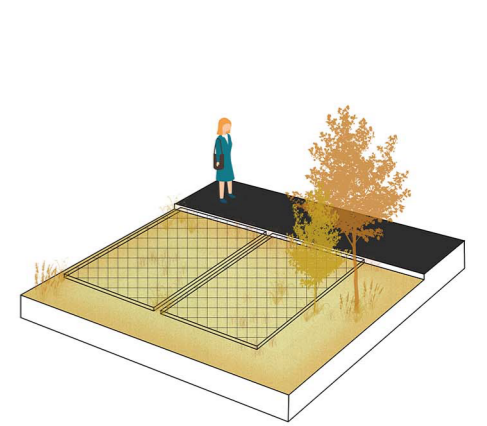
peeled asphalt -> gabion walls



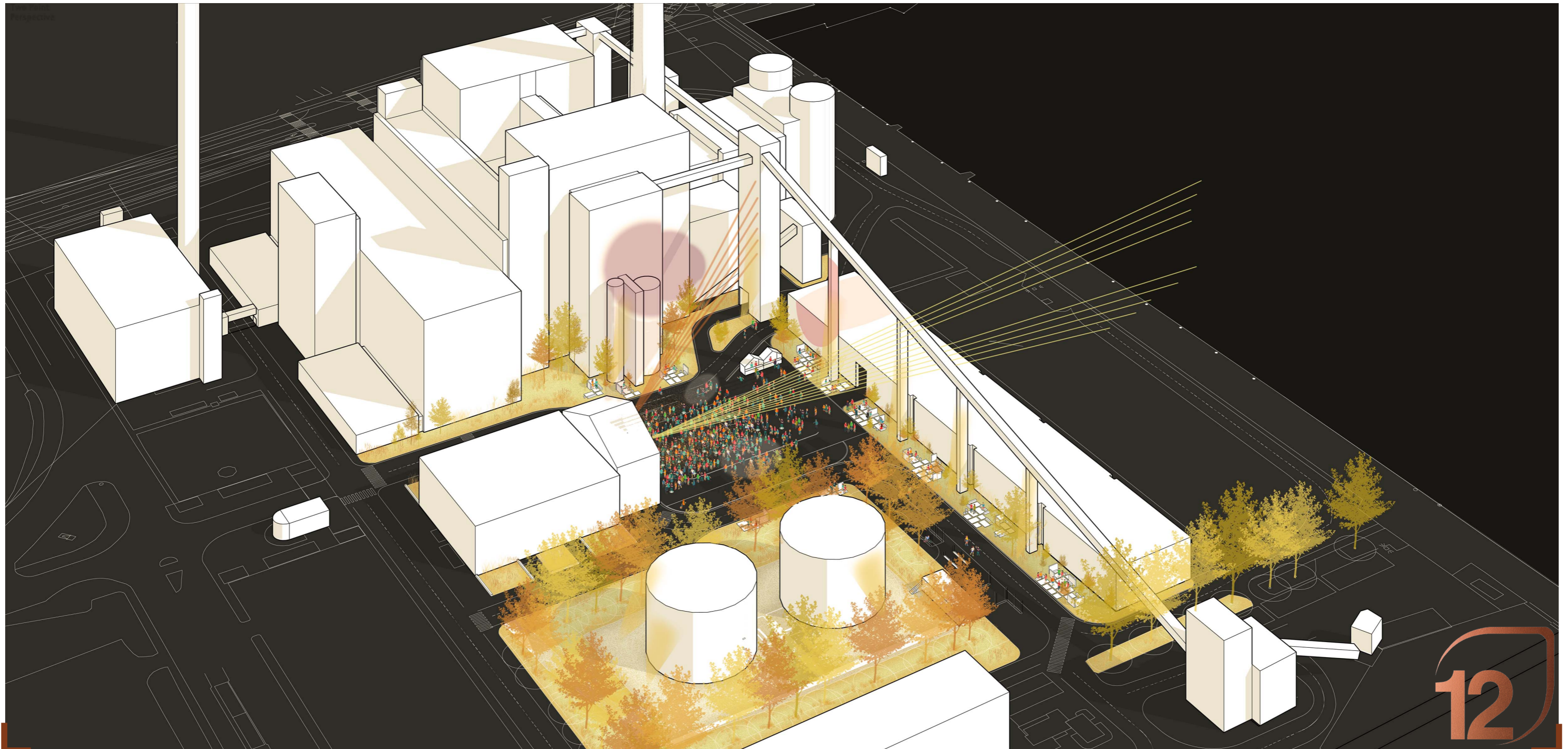
peeled asphalt -> asphalt slabs or gravel

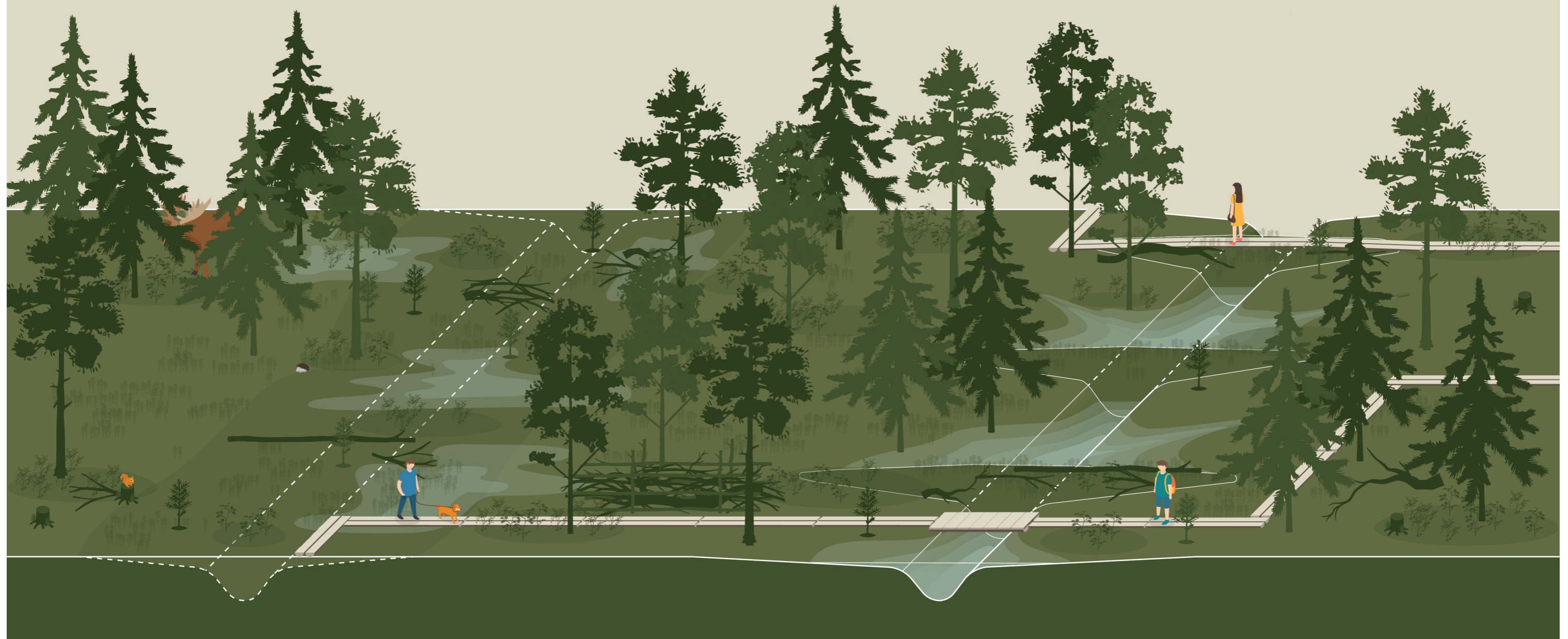


removed fences -> grate surfaces



Axonometric
Power Plant Square during an event





Country /City Finland / Espoo

University / School Aalto University / School of Arts, Design and Architecture

Academic year 2022 / 2023

Title of the project Puddle up! Utilizing restored and constructed wetlands in urban carbon sequestration

Authors Eveliina Kunnaton & Alex Salminen

TECHNICAL DOSSIER

Title of the project Puddle up! Utilizing restored and constructed wetlands in urban carbon sequestration
Authors Eveliina Kunnaton & Alex Salminen
Title of the course Landscape Management Studio
Academic year 2022 / 2023
Teaching Staff Ranja Hautamäki, professor; Annaleena Puska, visiting teacher; Emilia Saatsi, visiting teacher
Department / Section / Program of belonging Aalto University, Department of Architecture / Major in Landscape architecture / Master's programme in Architecture, Landscape Architecture and Interior Architecture
University / School Aalto University / School of Arts, Design and Architecture



Written statement, short description of the project in English, no more than 250 words

The master's program Studio course Landscape Management studies strategic planning and management of socio-ecological processes of landscapes. The theme of the course in spring 2023 was carbon-smart urban green infrastructure and its role in climate change mitigation and adaptation and related co-benefits. Students chose a specific theme and site in City of Espoo, drafted a research-based basis for their project and studied how carbon sequestration and storage can be enhanced and combined with climate adaptation benefits and biodiversity outcomes.

The city of Espoo has the goal of being carbon neutral by 2030 and increasing carbon sequestration and carbon storage potential by means of carbon efficient green infrastructure can play a key role in achieving this. This project investigates the potential of utilizing wetlands for carbon sequestration and storing in the urban areas of Espoo, Finland. Based on a review of scientific literature and extensive GIS analyses general guidelines and design principles were drawn up both for the restoration of drained woodland marshes and the construction of new freshwater marshes. These guidelines and design principles were then applied to selected sites in Espoo, as two schematic plans were composed: one for the restoration of an existing drained woodland marsh, one for the construction of a new freshwater marsh to a site of unprofitable farmland. The schematic plans highlight the multiple benefits and ecosystem services that wetlands offer as well as the challenges of finding common ground between the various interests that lie in the green infrastructure of densely populated urban areas.

For further information

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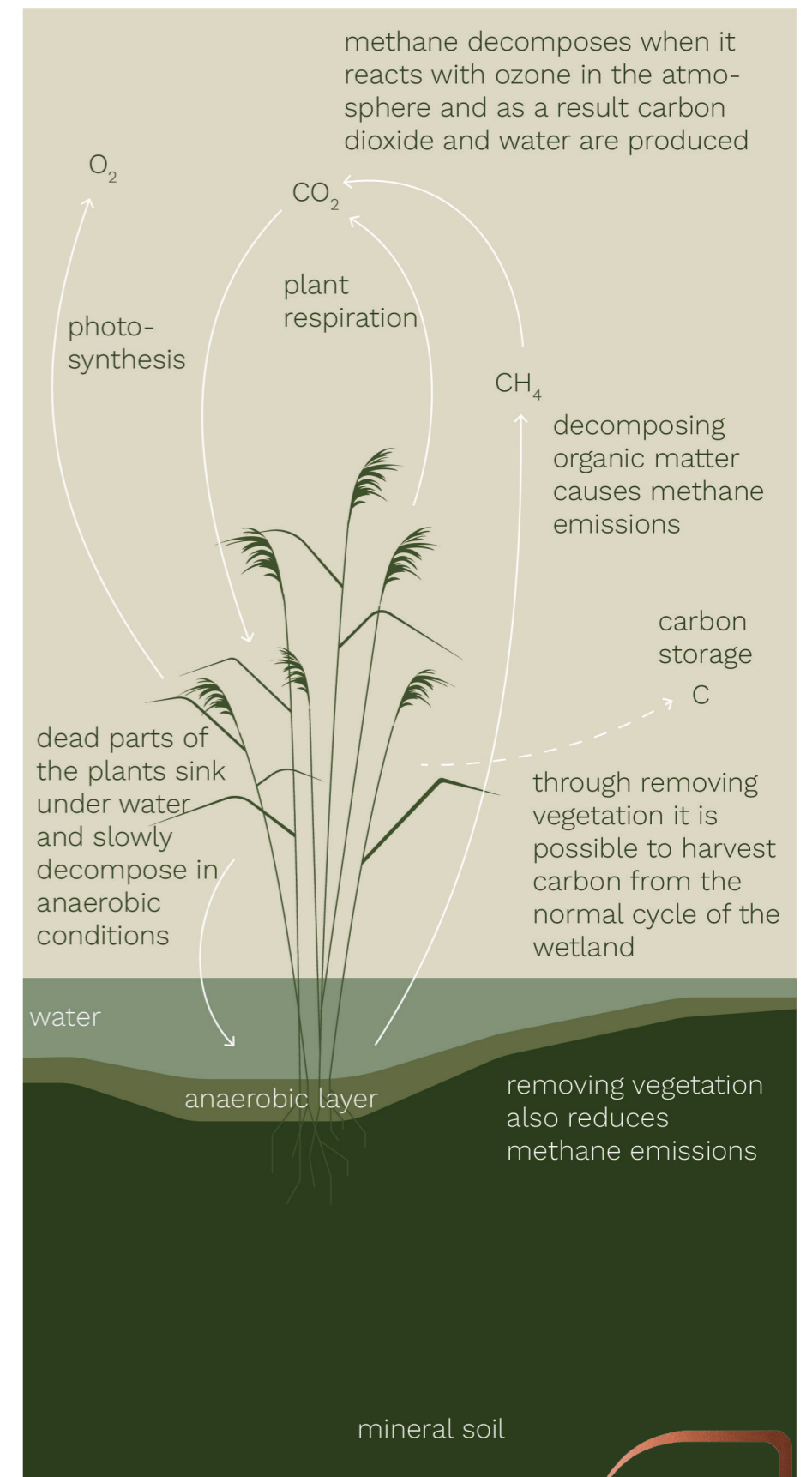
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Barcelona November 2023

SCHOOL PRIZE



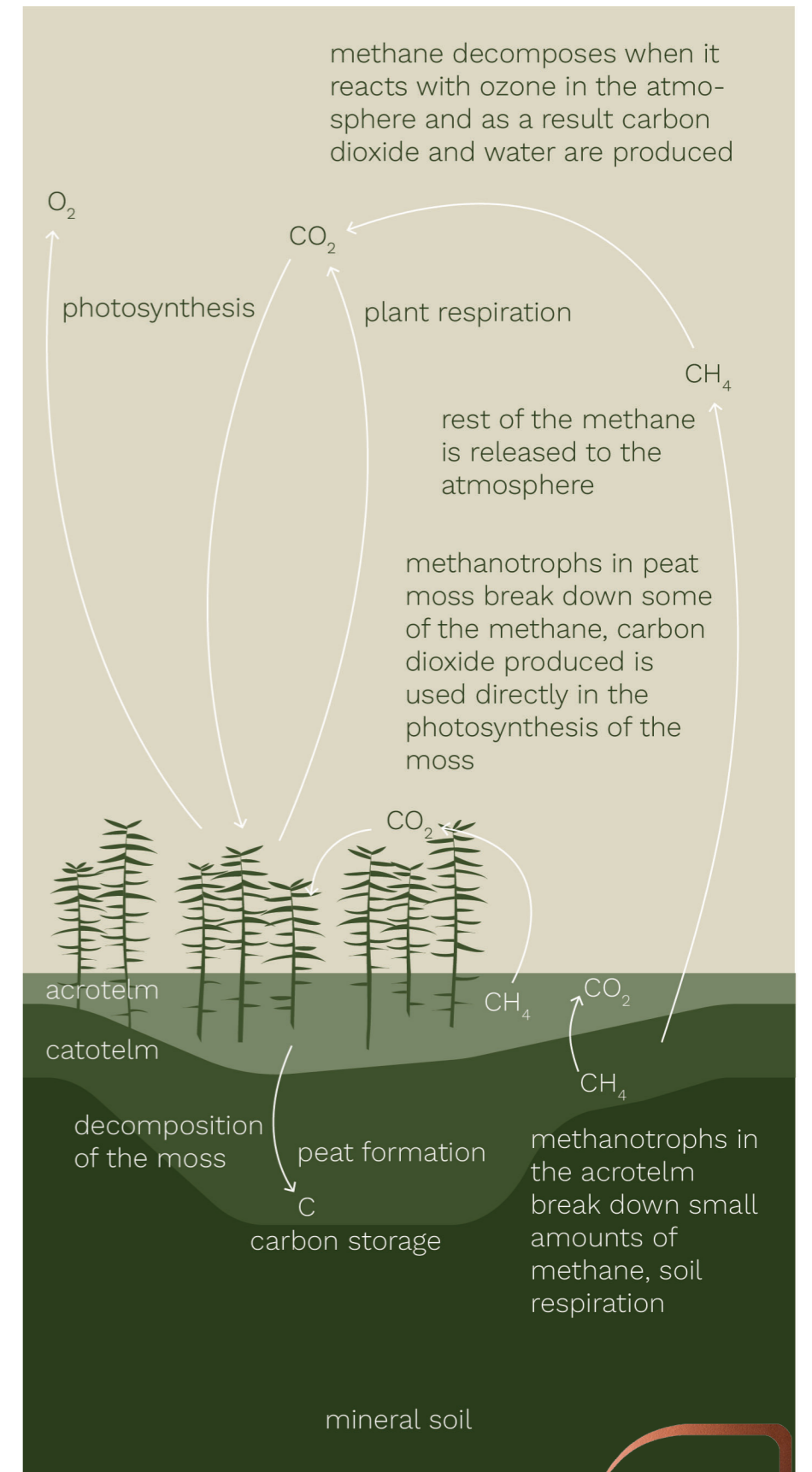
New freshwater inland marsh in Latokaskenniitty, Espoo
schematic plan 1:200



Optimization of carbon sequestration and methane emissions in freshwater marshes
process diagram



Restoration of a drained woodland marsh in Suotorpanpuisto, Espoo
schematic plan 1:2000



Carbon sequestration and methane release
in woodland marshes
process diagram

Carbon storage in land ecosystems
tons of carbon per hectare

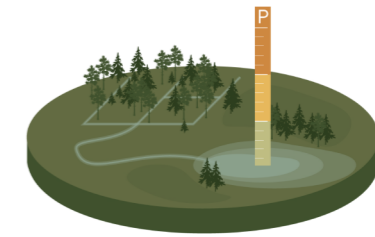


Follow-up after intervention



Management monitoring

Risks and negative effects
to be considered



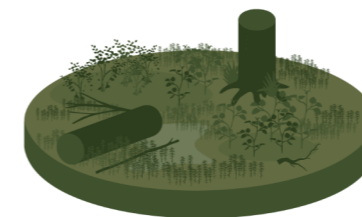
Impact on water quality



Monitoring the hydrology of the site
and its surroundings



Impacts on recreational use of the site



Monitoring the biodiversity of the site



Risk of insect and pest damage



CYCLES

*ROTATIONAL GRAZING, NUTRIENT CYCLING,
BIOMASS CYCLING, POLLINATOR CYCLING,
KNOWLEDGE CYCLING FROM ONE GENERATION
TO THE NEXT...*

Country /City

University / School

Academic year

Title of the project

Authors

Finland /Espoo

Aalto University / School of Arts, Design and Architecture

Fall 2022

Cycles

Jenni Karhapää & Lotta Lipsanen

TECHNICAL DOSSIER

Title of the project	Cycles
Authors	Jenni Karhapää & Lotta Lipsanen
Title of the course	Landscape of Production, Studio
Academic year	Fall 2022
Teaching Staff	Elisa Lähde, Assistant Professor; Hanna Hannula & Pirita Meskanen, visiting teachers
Department / Section / Program of belonging	Department of Architecture /Major in Landscape Architecture /Master's programme in Architecture, Landscape Architecture and Interior Architecture
University / School	Aalto University / School of Arts, Design and Architecture



Written statement, short description of the project in English, no more than 250 words

Master's program Studio course Landscape of Production aims at improving landscape architectural planning skills. Project work introduces participants to the planning of complex and functionally demanding commissions, where the aim is economically, socially and ecologically sustainable and fair use of landscape resources and related ecosystem services. The themes and topics of the Studio vary every year, ranging from energy production to the planning of traffic landscapes. In autumn 2022, the studio's theme was the landscapes of food production. The participants produced a master plan for an existing Niipala farm enhancing regenerative food production.

In the coursework Cycles, we explored the principles of the circular economy and applied mutually beneficial socio-ecological cycles into our plan. The production within the organic farm does not generate waste but resources that can be used in other production processes. Nutrients, by-products and food are circulated within the internal farming system. In the process, real local food is produced for the planned Niipala Farm village and for the people living in the surrounding area.

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SCHOOL PRIZE

Biogas for energy self-sufficiency?



Providing a place for exploration and experiences

Renewing vistas with traditional landscapes in mind

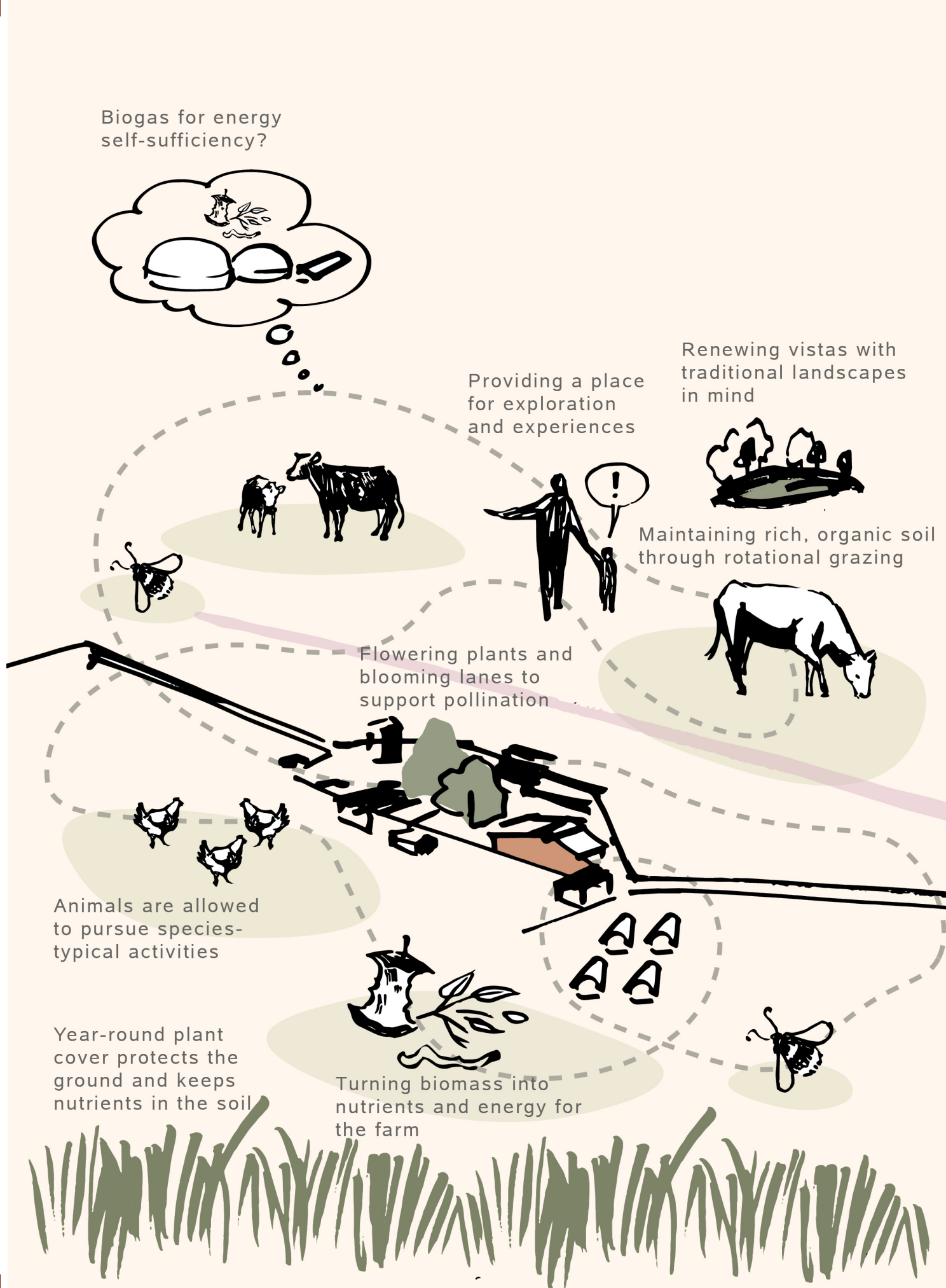
Maintaining rich, organic soil through rotational grazing

Flowering plants and blooming lanes to support pollination

Animals are allowed to pursue species-typical activities

Year-round plant cover protects the ground and keeps nutrients in the soil

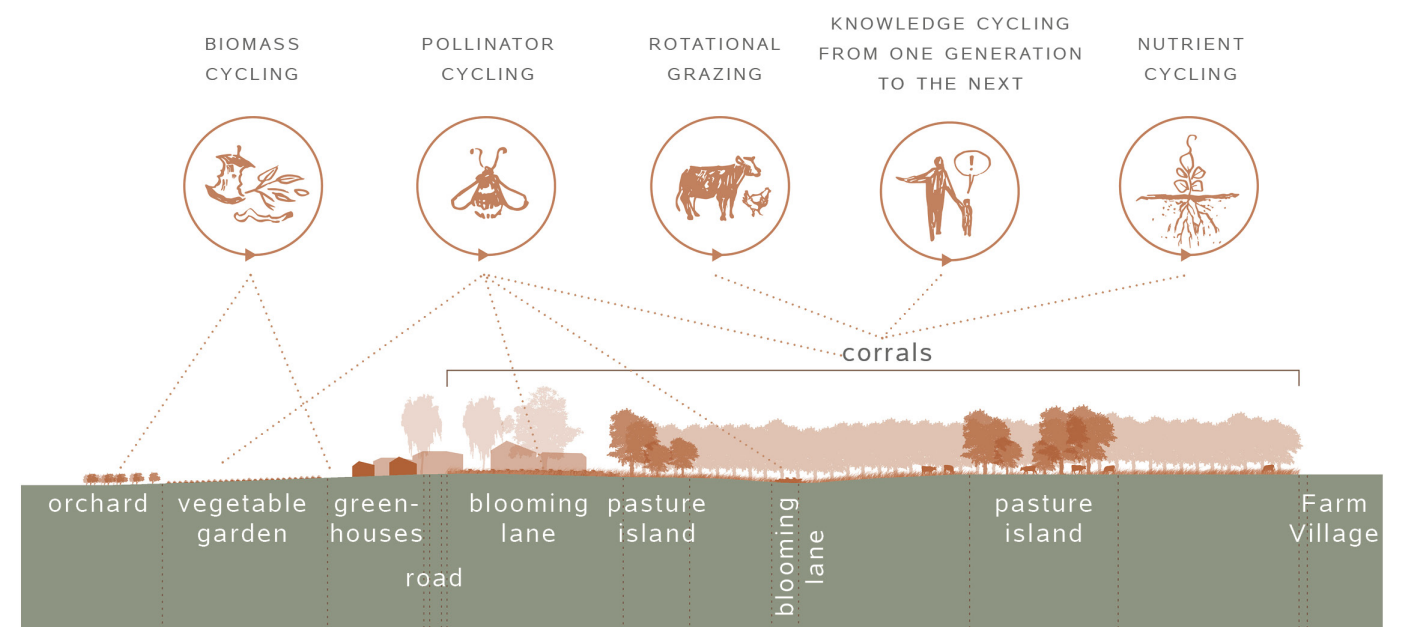
Turning biomass into nutrients and energy for the farm



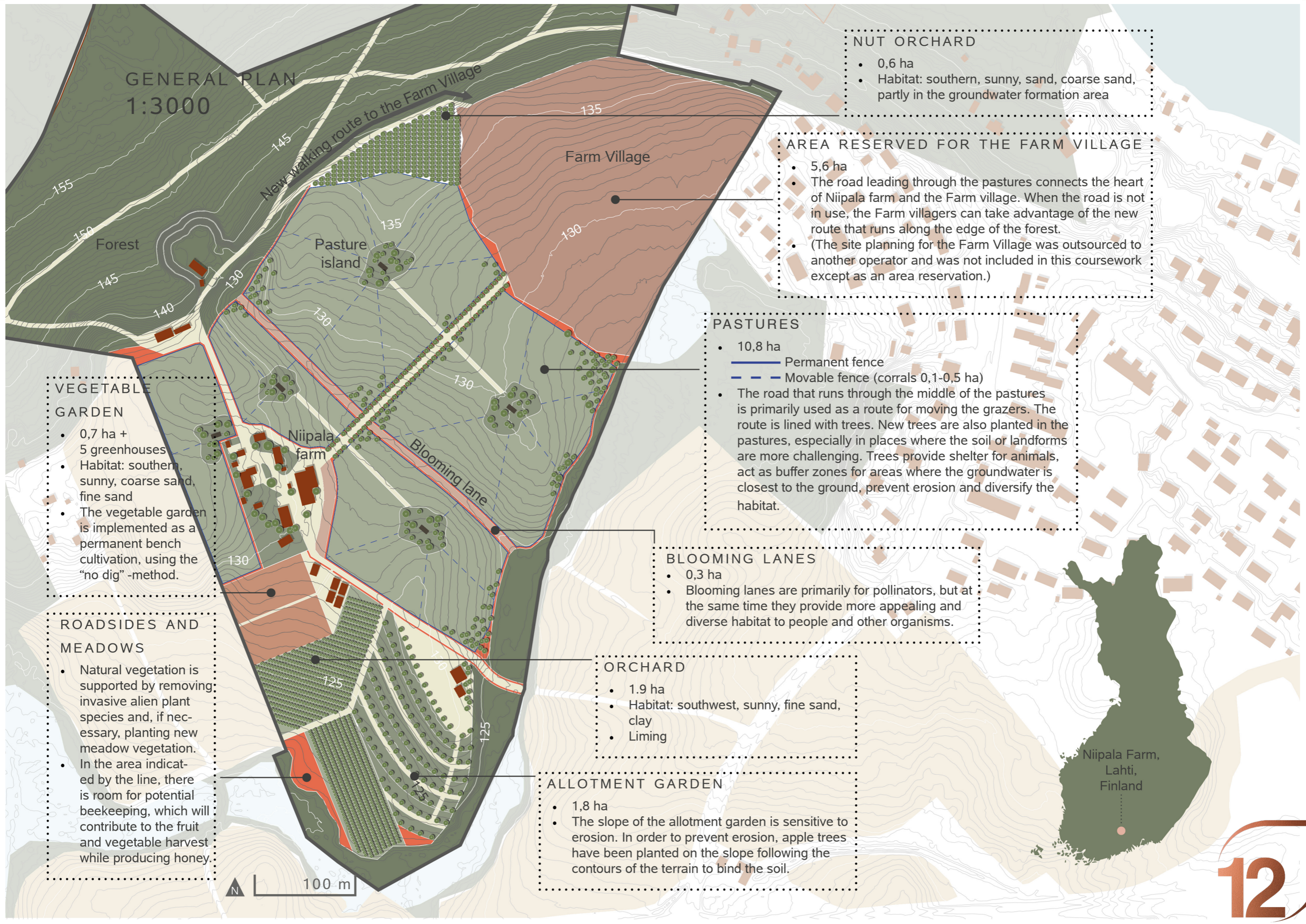
CYCLES CONCEPT

The history of Niipala Farm dates back to the 19th century. The property has been passed down through the generations. Today, the farm has been operating as an organic farm in Hollola, Finland for almost 10 years and covers about 20 hectares of farmland and approximately 15 hectares of forest. The farm's value system emphasises ecology, community and the curiosity to develop and innovate.

The course work was aimed at finding sustainable solutions based on nature's own cycles, which work in the present moment, but will also benefit future generations. The Cycles concept is all about striving for development and wanting to do better. This underlines the need for research. The Niipala farm could serve as a research platform for research and development of sustainable food production. By supporting and strengthening nature's own processes, we ensure that future generations will also have the opportunity to run the farm in the best ecologically sustainable and regenerative way.



**GENERAL PLAN
1:3000**



NUT ORCHARD

- 0,6 ha
- Habitat: southern, sunny, sand, coarse sand, partly in the groundwater formation area

AREA RESERVED FOR THE FARM VILLAGE

- 5,6 ha
- The road leading through the pastures connects the heart of Niipala farm and the Farm village. When the road is not in use, the Farm villagers can take advantage of the new route that runs along the edge of the forest.
- (The site planning for the Farm Village was outsourced to another operator and was not included in this coursework except as an area reservation.)

VEGETABLE GARDEN

- 0,7 ha + 5 greenhouses
- Habitat: southern, sunny, coarse sand, fine sand
- The vegetable garden is implemented as a permanent bench cultivation, using the "no dig" -method.

PASTURES

- 10,8 ha
- Permanent fence
- - - Movable fence (corrals 0,1-0,5 ha)
- The road that runs through the middle of the pastures is primarily used as a route for moving the grazers. The route is lined with trees. New trees are also planted in the pastures, especially in places where the soil or landforms are more challenging. Trees provide shelter for animals, act as buffer zones for areas where the groundwater is closest to the ground, prevent erosion and diversify the habitat.

ROADSIDES AND MEADOWS

- Natural vegetation is supported by removing invasive alien plant species and, if necessary, planting new meadow vegetation.
- In the area indicated by the line, there is room for potential beekeeping, which will contribute to the fruit and vegetable harvest while producing honey.

BLOOMING LANES

- 0,3 ha
- Blooming lanes are primarily for pollinators, but at the same time they provide more appealing and diverse habitat to people and other organisms.

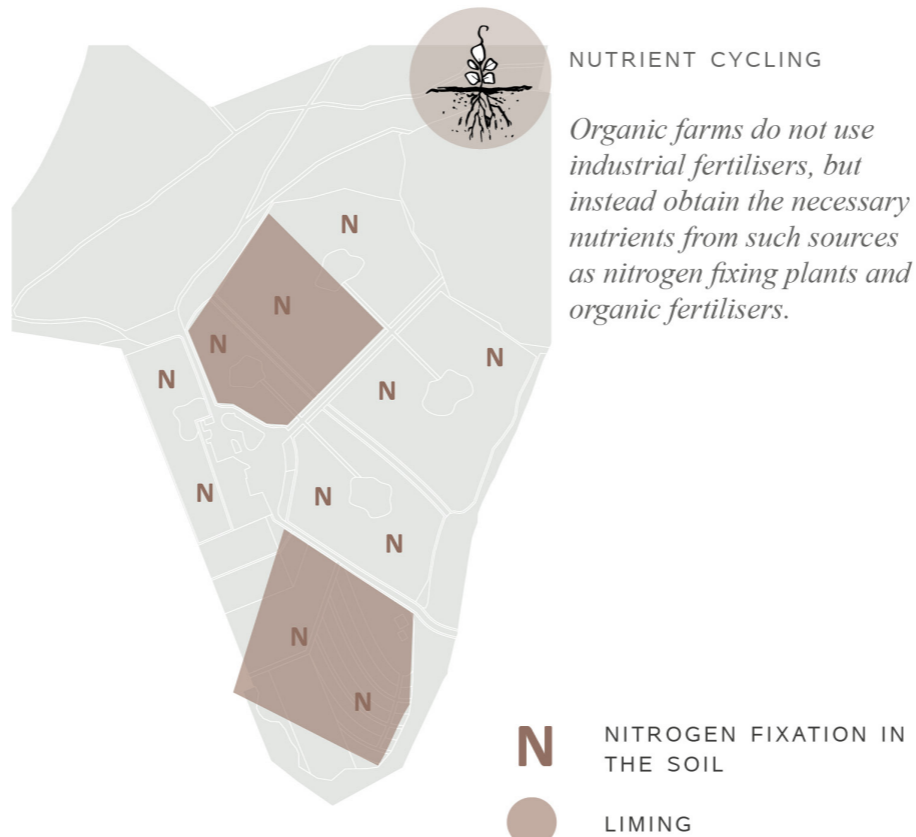
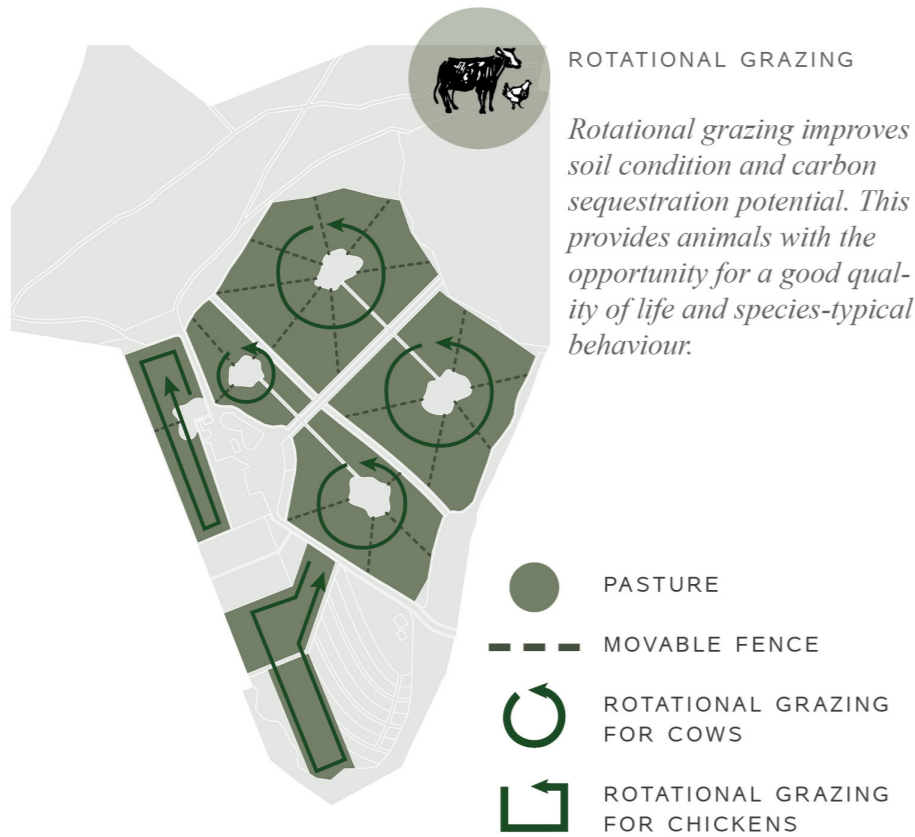
ORCHARD

- 1.9 ha
- Habitat: southwest, sunny, fine sand, clay
- Liming

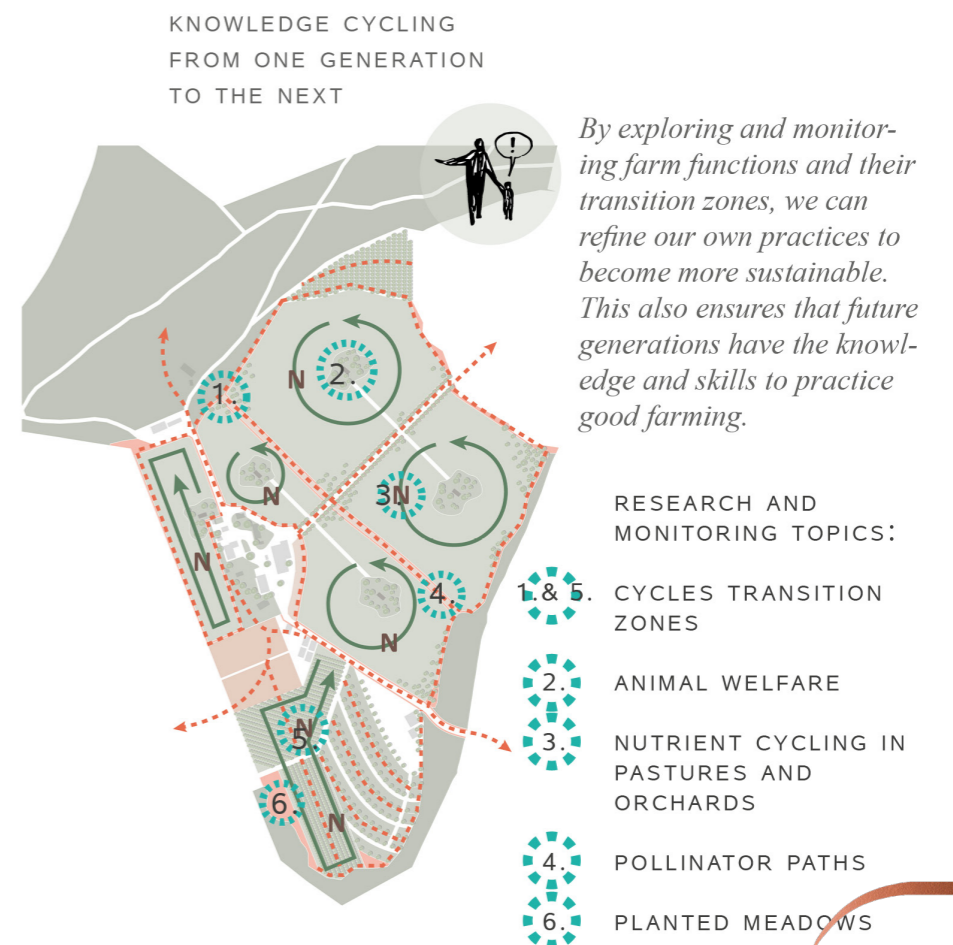
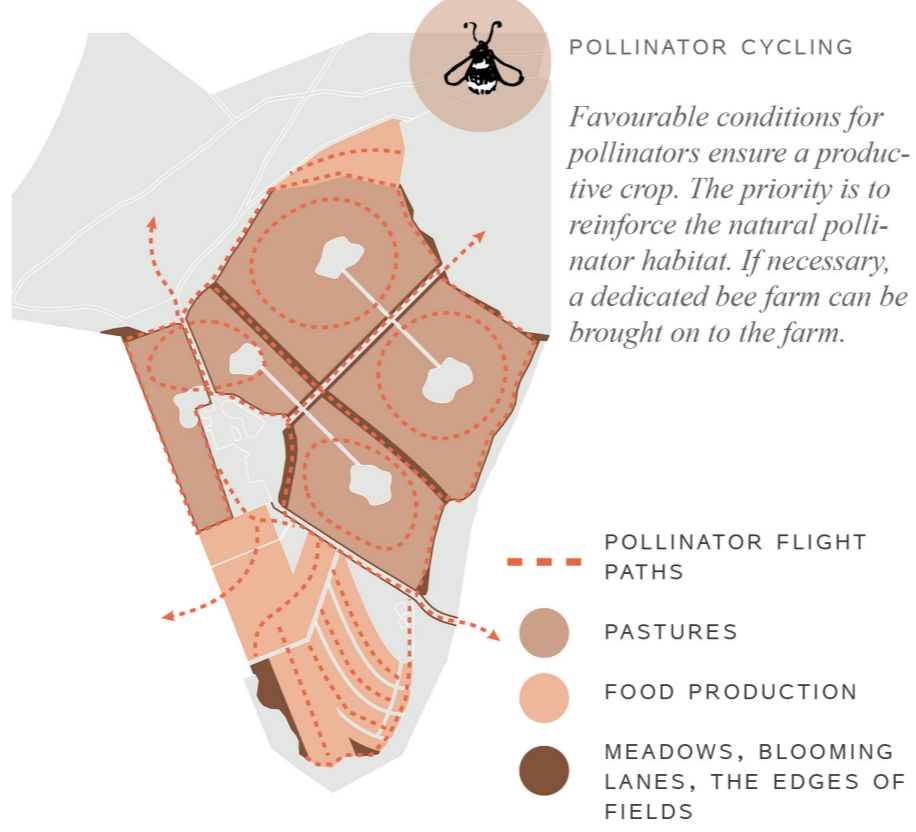
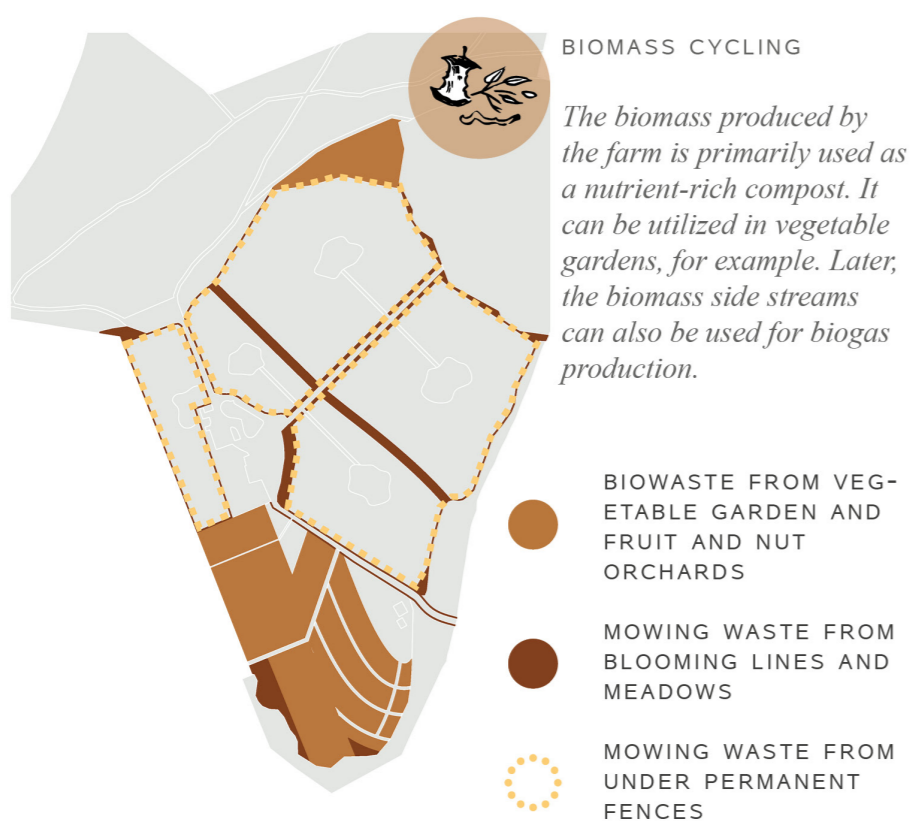
ALLOTMENT GARDEN

- 1,8 ha
- The slope of the allotment garden is sensitive to erosion. In order to prevent erosion, apple trees have been planted on the slope following the contours of the terrain to bind the soil.





SCHEMATIC REPRESENTATION OF THE CYCLES



LIGHT IN THE LANDSCAPE OF PYHÄTUNTURI



Country /City
University / School
Academic year
Title of the project
Authors

Finland /Espoo
Aalto University, School of Arts, Design and Architecture
2021/2022
Light in the Landscape of Pyhätunturi
Elina Suksi, Heli Kansanniva

TECHNICAL DOSSIER

Title of the project	Light in the Landscape of Pyhätunturi
Authors	Elina Suksi, Heli Kansanniva
Title of the course	Social-ecological systems, Studio
Academic year	2021/2022
Teaching Staff	Elisa Lähde, associate professor; Vilja Larjosto, visiting teacher, Tiina Falck, visiting teacher
Department / Section / Program of belonging	Aalto University, Department of Architecture/ Major in Landscape Architecture/ Master's programme in Architecture, Landscape Architecture and Interior Architecture
University / School	Aalto University/ School of Arts, Design and Architecture



Written statement, short description of the project in English, no more than 250 words

Master's program Studio course Landscape Ecology in Planning aims at improving landscape architectural planning skills. The project work presents planning tasks for architecturally and functionally demanding, ecologically sensitive landscape conditions, where complex ecological processes must be carefully taken into account. The themes and topics of the Studio vary every year. In spring 2022, the studio's theme was sustainable tourism in arctic areas and participants created master plans for Pyhä-Luosto area. By using a social-ecological systems perspective to understand tourism and landscape interactions in northern areas, the aim was to create visions for ecologically sensitive and sustainable future land use.

Studio course work Light in the landscape of Pyhätunturi examines the effects and possibilities of artificial light and natural light in the environment. The goal was to find solutions suitable for the region's sensitive natural environment, which support the region's significant tourism industry. In examining even partially conflicting goals, a socio-ecological framework is employed to illustrate the needs and impacts of humans and nature in the area. Light itself is an intangible experience that can deepen the experience of nature. The changes in light that occur throughout the year and the day at Pyhätunturi are a northern spectacle, visible in the surrounding nature.

Developing year-round tourism offers tourists a wider opportunity to hike and experience nature in different seasons, enables business continuity and reduces harmful congestion. The goal is to experience unique light, darkness, and nature based on the context of the place.

For further information

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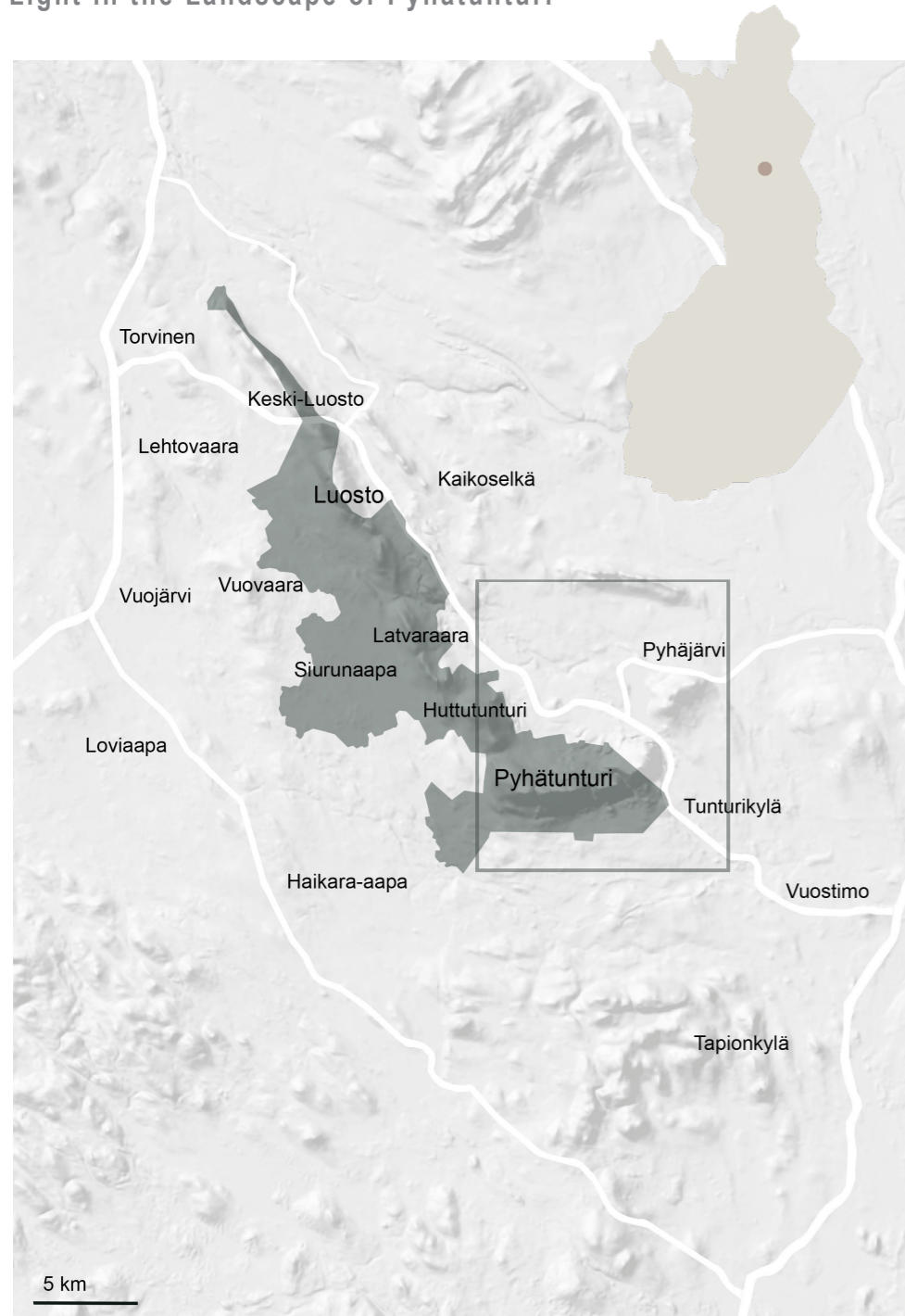
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Barcelona November 2023

SCHOOL PRIZE

Light in the Landscape of Pyhäntunturi



SPRING



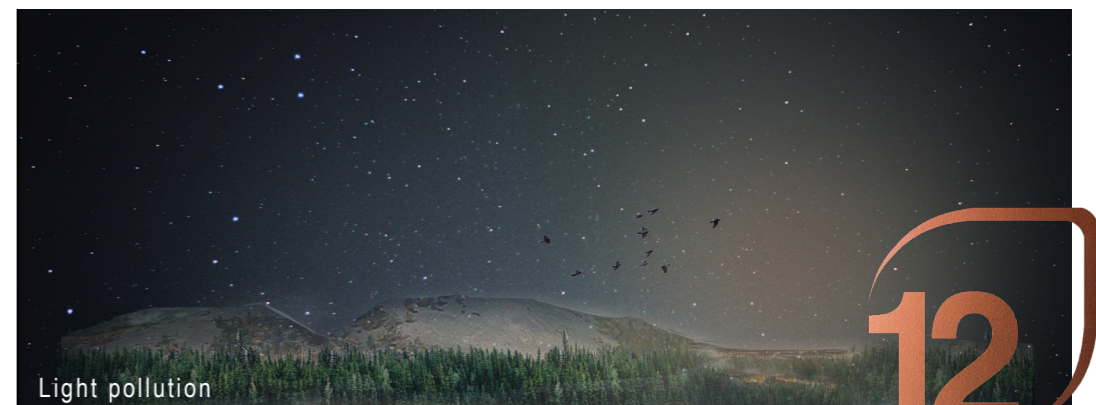
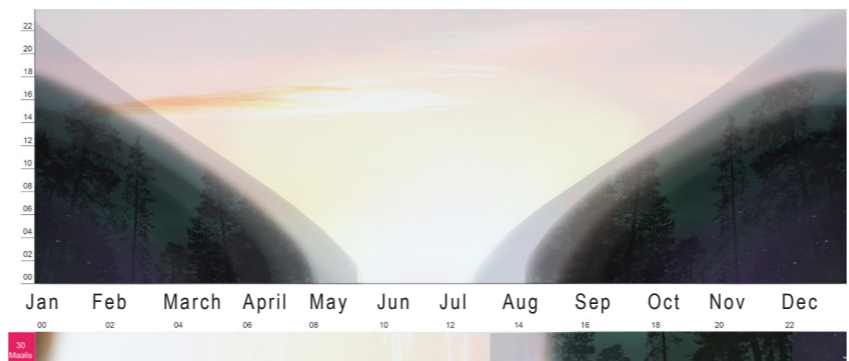
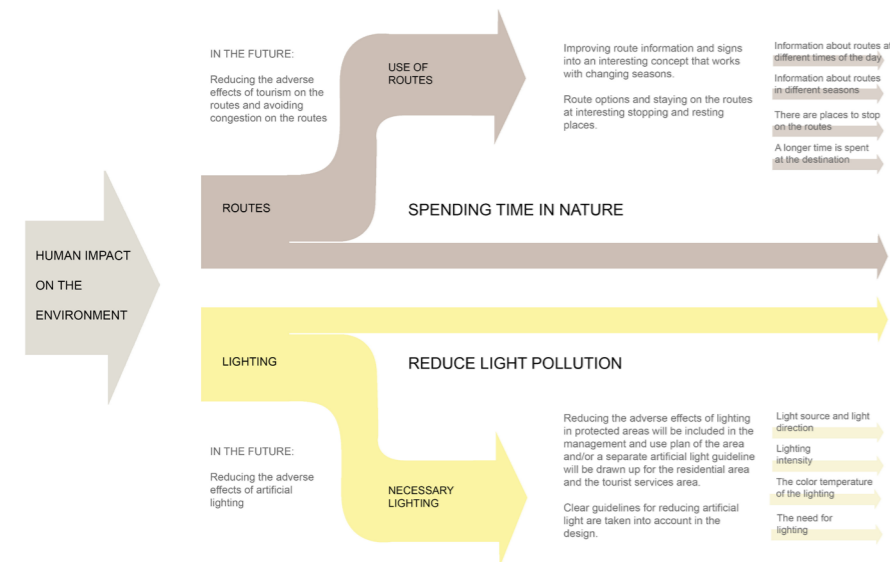
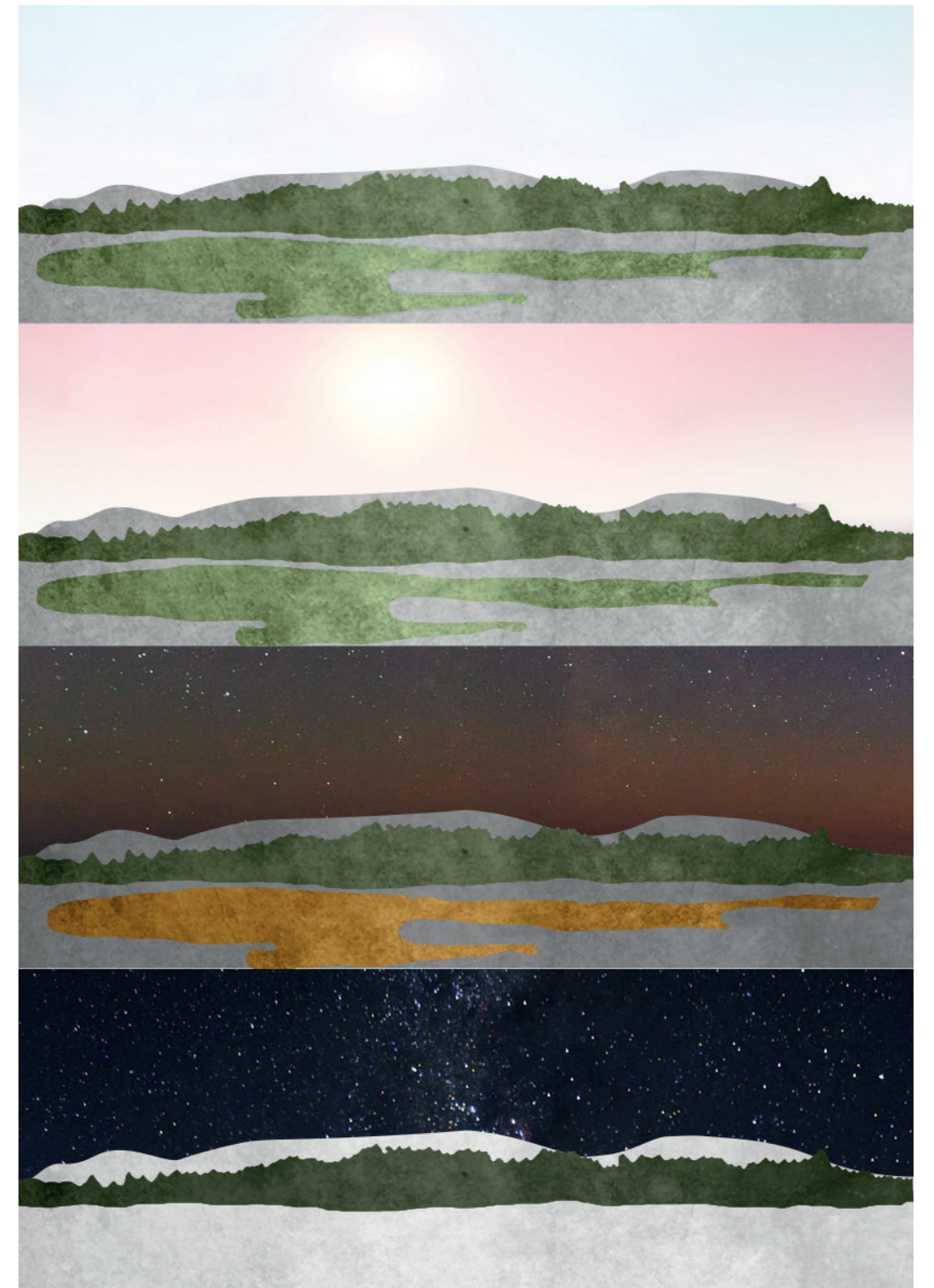
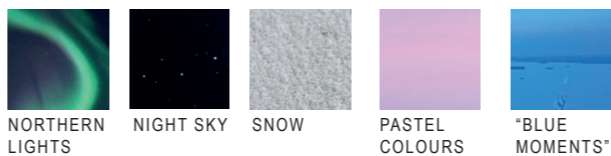
SUMMER



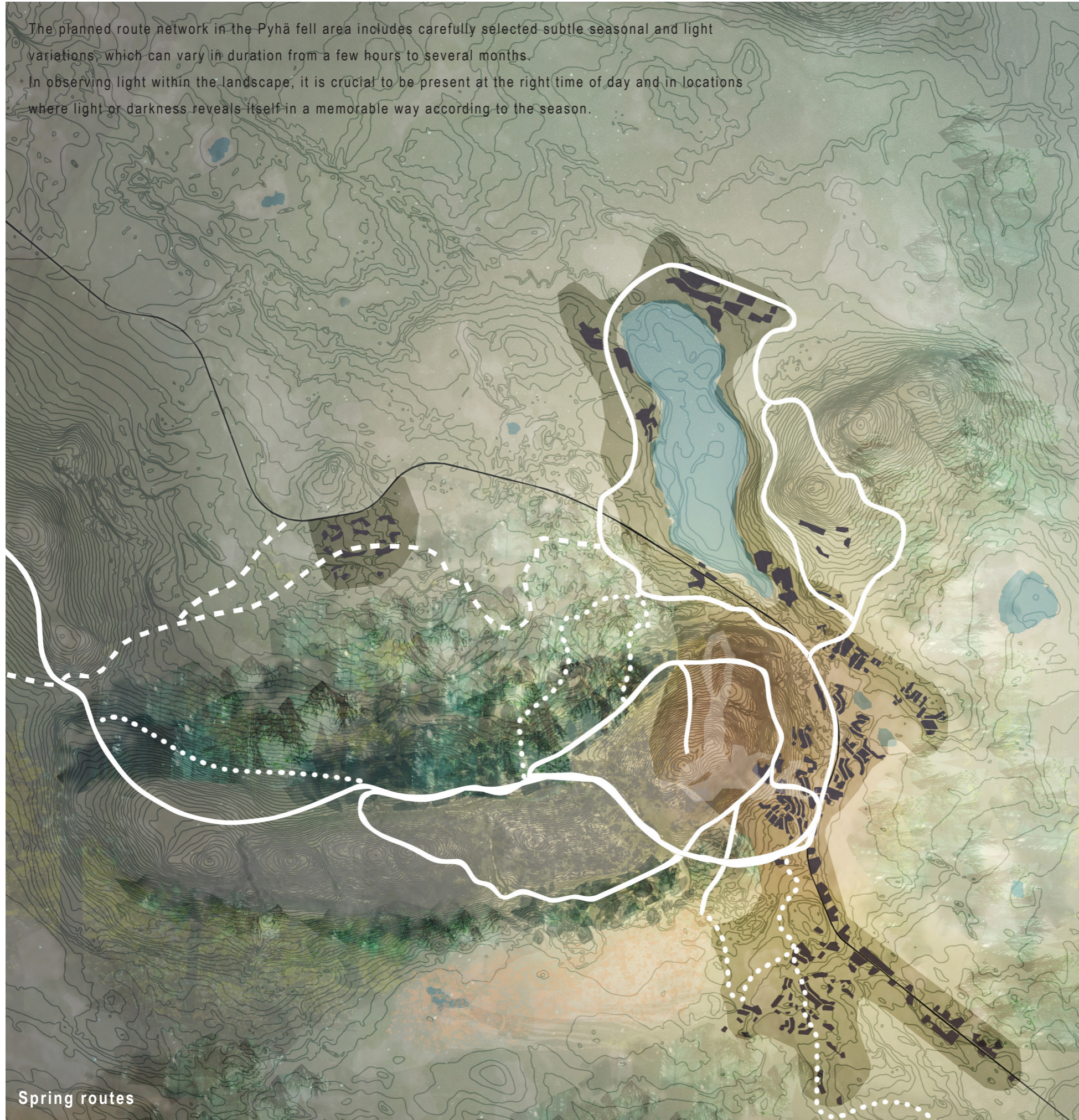
AUTUMN



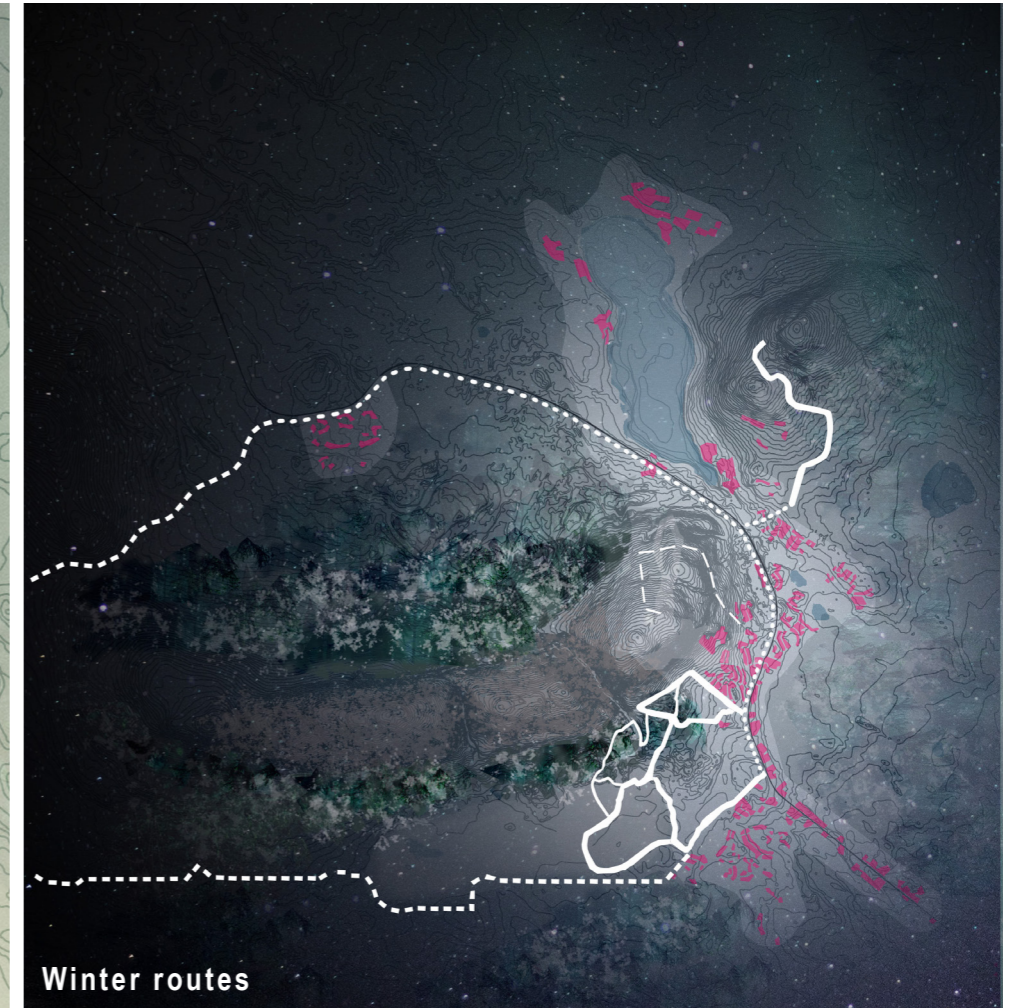
WINTER



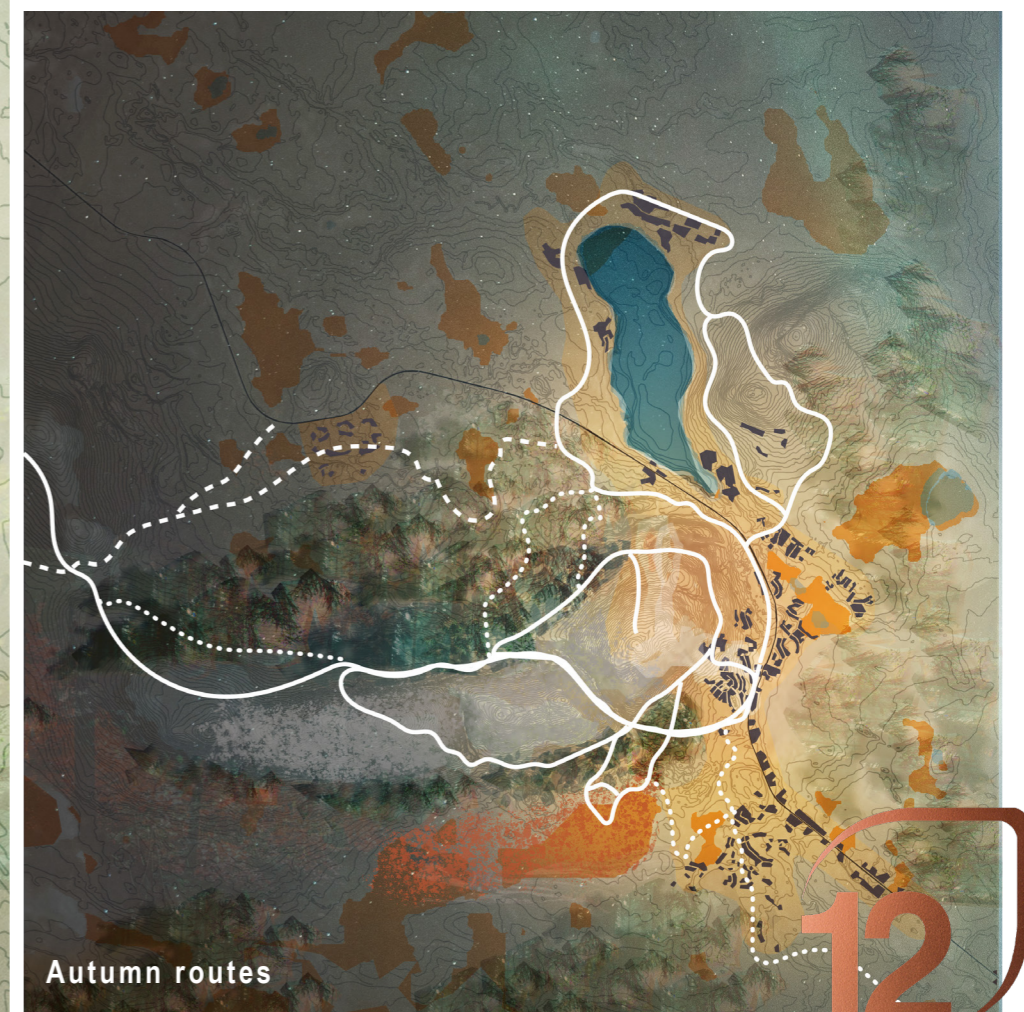
The planned route network in the Pyhä fell area includes carefully selected subtle seasonal and light variations, which can vary in duration from a few hours to several months.
In observing light within the landscape, it is crucial to be present at the right time of day and in locations where light or darkness reveals itself in a memorable way according to the season.



Spring routes



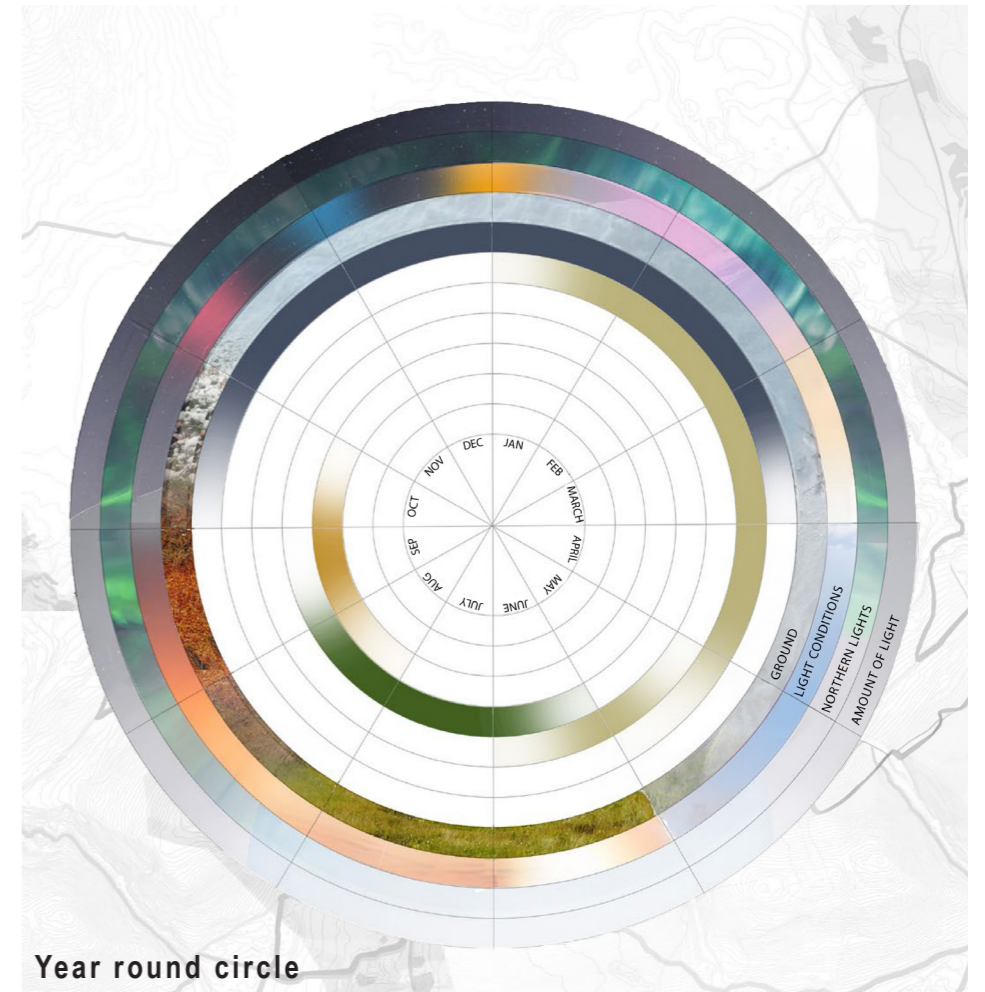
Winter routes



Autumn routes



Autumn morning



Year round circle

The schematic route plan is based on the seasons and more detailed changes in light and landscape.

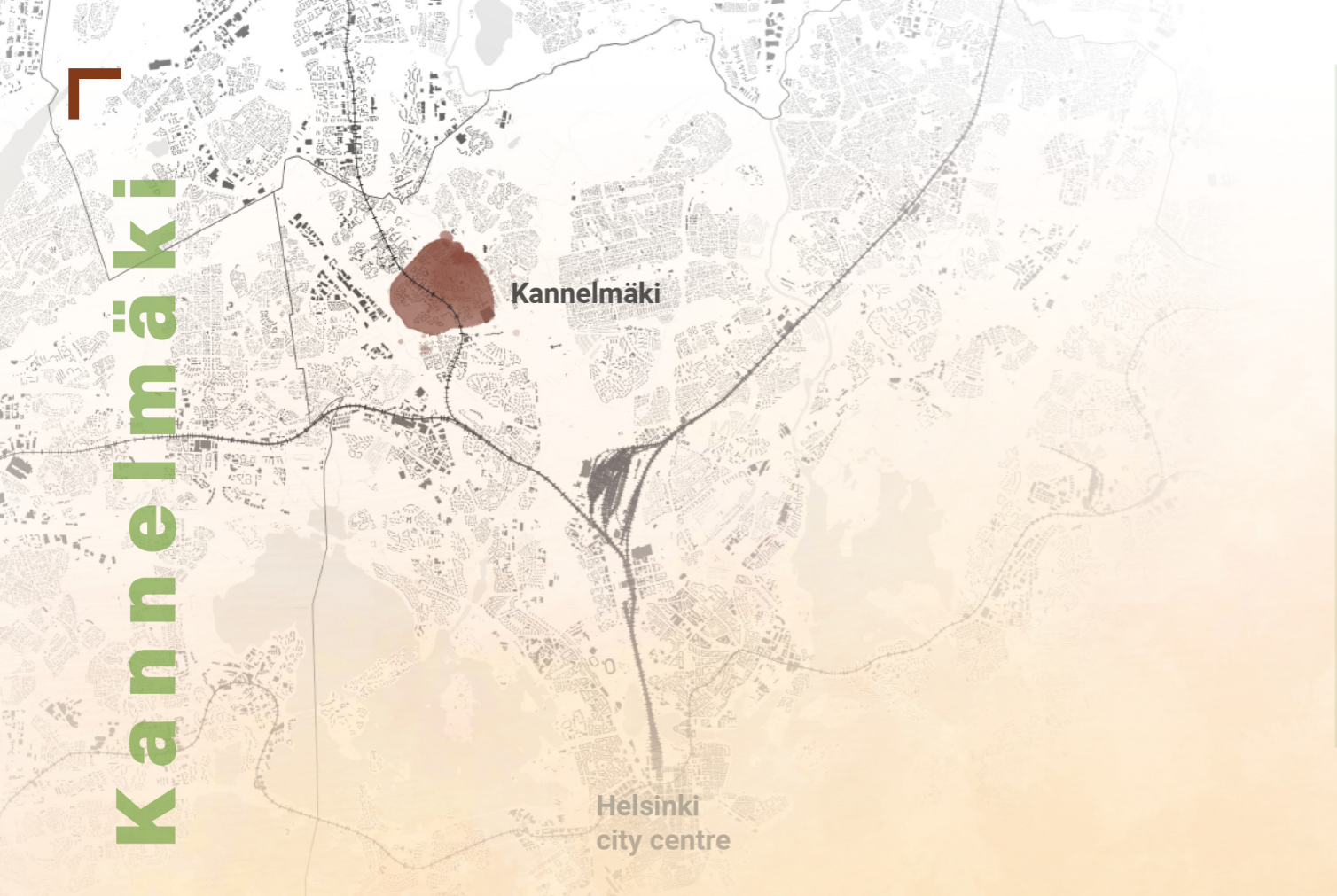
Experiences can be easy-to-reach and pleasant places to stay and go on hikes nearby or adventurous trips further into nature.



Winter night



Spring morning



Cultivating a Place

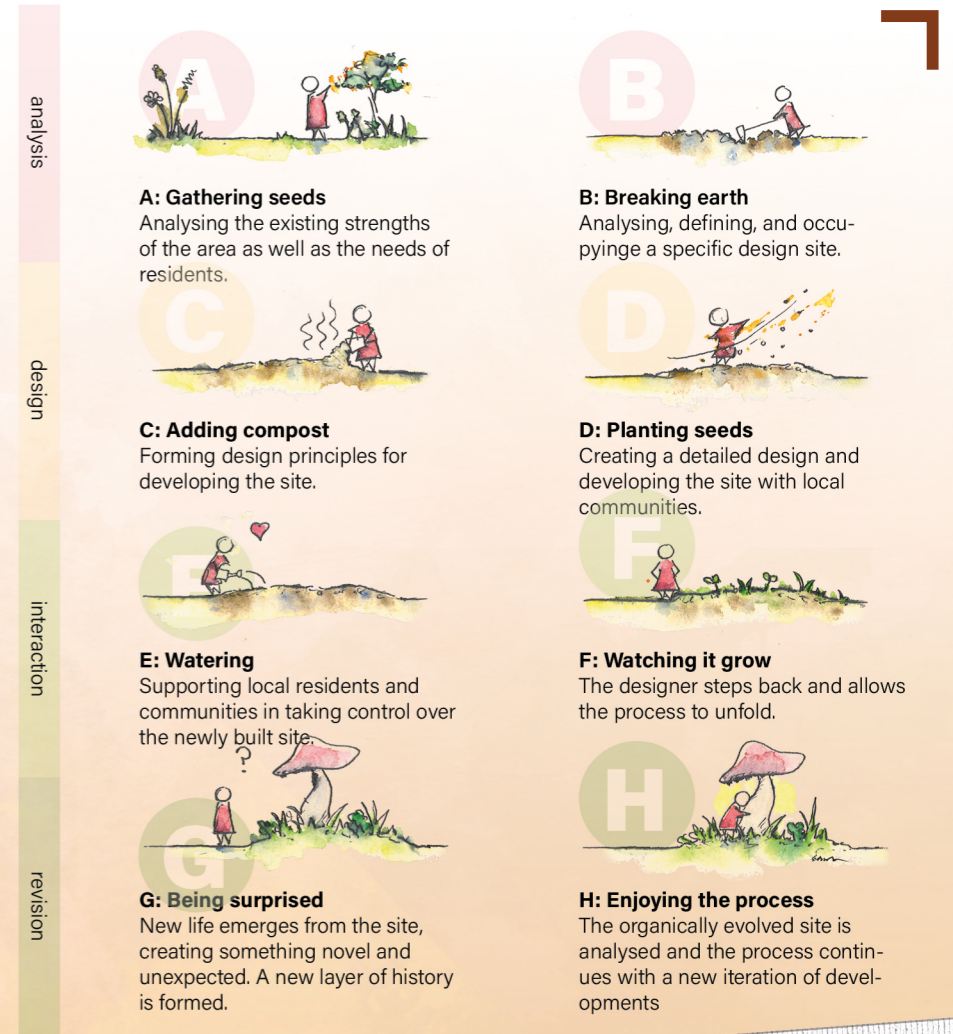
Cultivate
verb

to try to develop and improve something

Place
noun

a suitable area, building, situation, or occasion

a position in relation to other things or people



Country /City
 University / School
 Academic year
 Title of the project
 Authors

Finland / Espoo
 Aalto University / School of Arts , Design and Architecture
 2021-2022
 Cultivating Kannelmäki
 Elias Luoto, Linnea Westerlund, Anu Hakola

TECHNICAL DOSSIER

Title of the project	Cultivating Kannelmäki
Authors	Elias Luoto, Linnea Westerlund, Anu Hakola
Title of the course	Historical Landscapes, Studio
Academic year	2021-2022
Teaching Staff	Ranja Hautamäki, professor; Visiting teachers Lilja Palmgren and Minna Raassina
Department / Section / Program of belonging	Department of Architecture/Major in Landscape Architecture Master's programme in Architecture, Landscape Architecture and Interior Architecture
University / School	Aalto University / School of Arts , Design and Architecture



Written statement, short description of the project in English, no more than 250 words

Master's program Studio course Historical Landscapes studies the cultural heritage of landscape architecture and embedded negotiations between preservation and change. The course in autumn 2021 aimed at re-evaluating the hidden heritage of suburban landscapes under densification and renewal in the Helsinki region. Students chose a specific suburban landscape, drafted an evidence-based program for their project and studied how historical and socio-cultural values can be assessed, strengthened and integrated in planning.

Our group studied the suburb of Kannelmäki in northern Helsinki. After multiple site visits and thorough analysis of the area, we designed a new public space along a raised railway track on the north-eastern side of the suburb. Kannelmäki is characterised by a patchwork of divided historical layers and typologies. Since the no-man's-land around the railway bridge accentuates the feeling of separation, we chose it as our focus area in order to **transform a divisive space into a unifying one.**

Our design process focused on enhancing the existing character, and history of the suburb. To use a gardening metaphor, instead of transferring fully grown plants into the ground and hoping for the best, we aimed to **cultivate a place from the ground up**, using local seeds and giving them optimal conditions to grow. We wanted to create a design that feels like it grew naturally out of its surroundings, and provides fertile ground for the diverse and active communities of Kannelmäki to claim the heart of the suburb as their own.

For further information

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12th International Biennial Landscape Barcelona

Barcelona November 2023

SCHOOL PRIZE

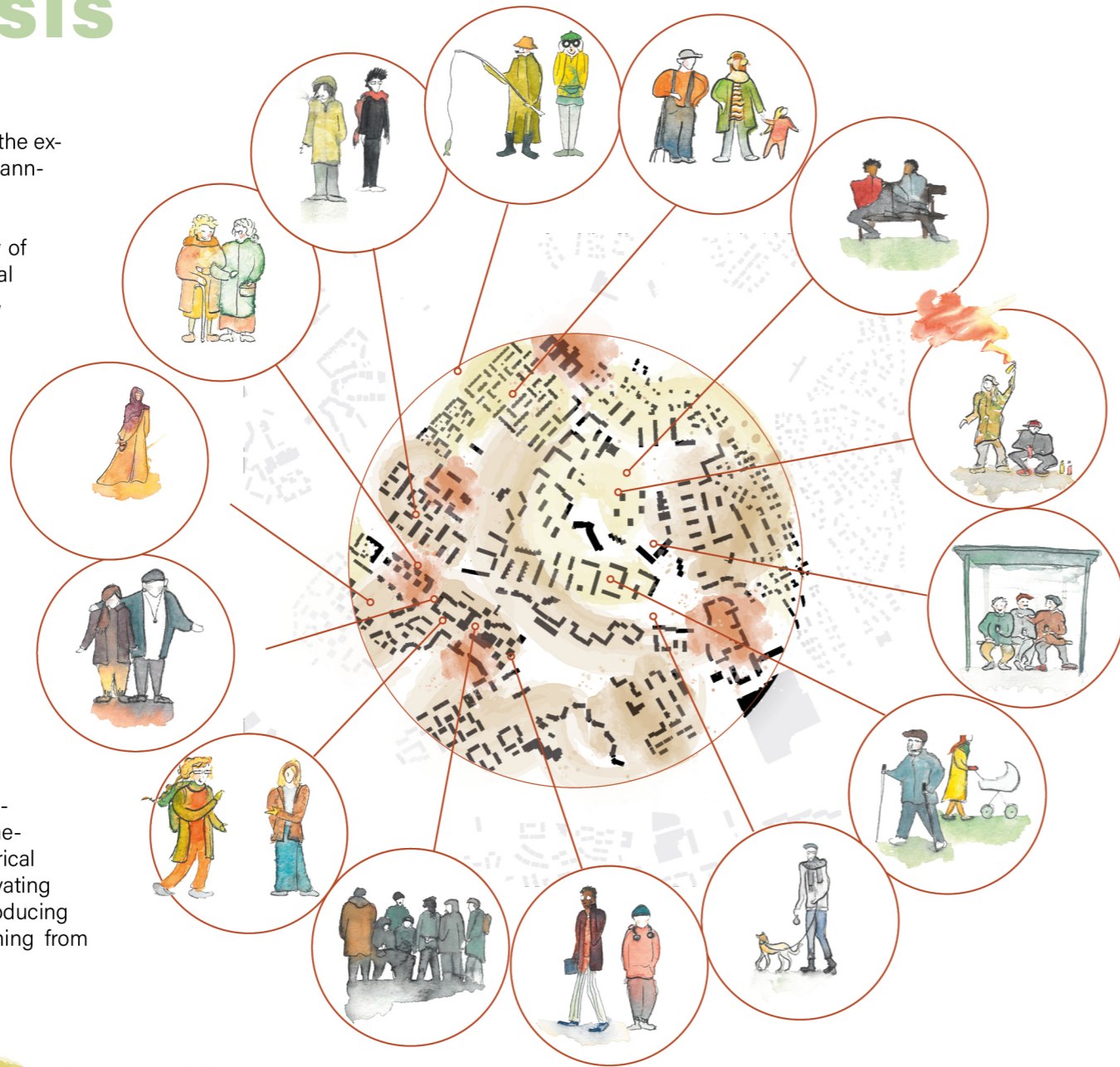
Analysis

In this section, we studied the existing fabric of the varied Kannelmäki neighbourhood.

We researched the history of community and communal activities in Kannelmäki, the strengths and needs of existing communities of the area, as well as the varied built and natural typologies and materials of the existing suburban fabric.

Based on the research, we identified strengths of the existing historical layers, as well as the needs of current residents as 'seeds' forming the basis for our design.

The thorough 30+ page analysis allowed us to generate a design that genuinely contributes to the historical continuity of the area cultivating existing strengths, reintroducing past successes, and learning from past mistakes.

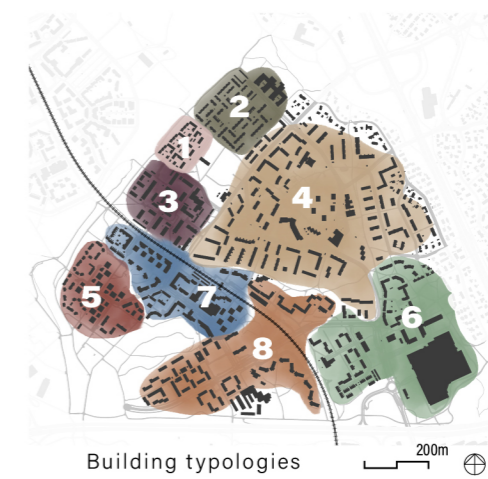


Map and illustrations of existing residents, users, and communities

-  Owner-occupied dwelling
-  Rental apartments
-  Serviced housing



Axonometric illustrations of existing building typologies



Design

In the design phase, the historical layers, building typologies and nature, as well as the needs of existing communities of Kannelmäki were reflected in the form and materiality of the site. The design emphasises and embraces the strengths of the unique suburb, whilst introducing a new unifying element that ties the fragmented area together.

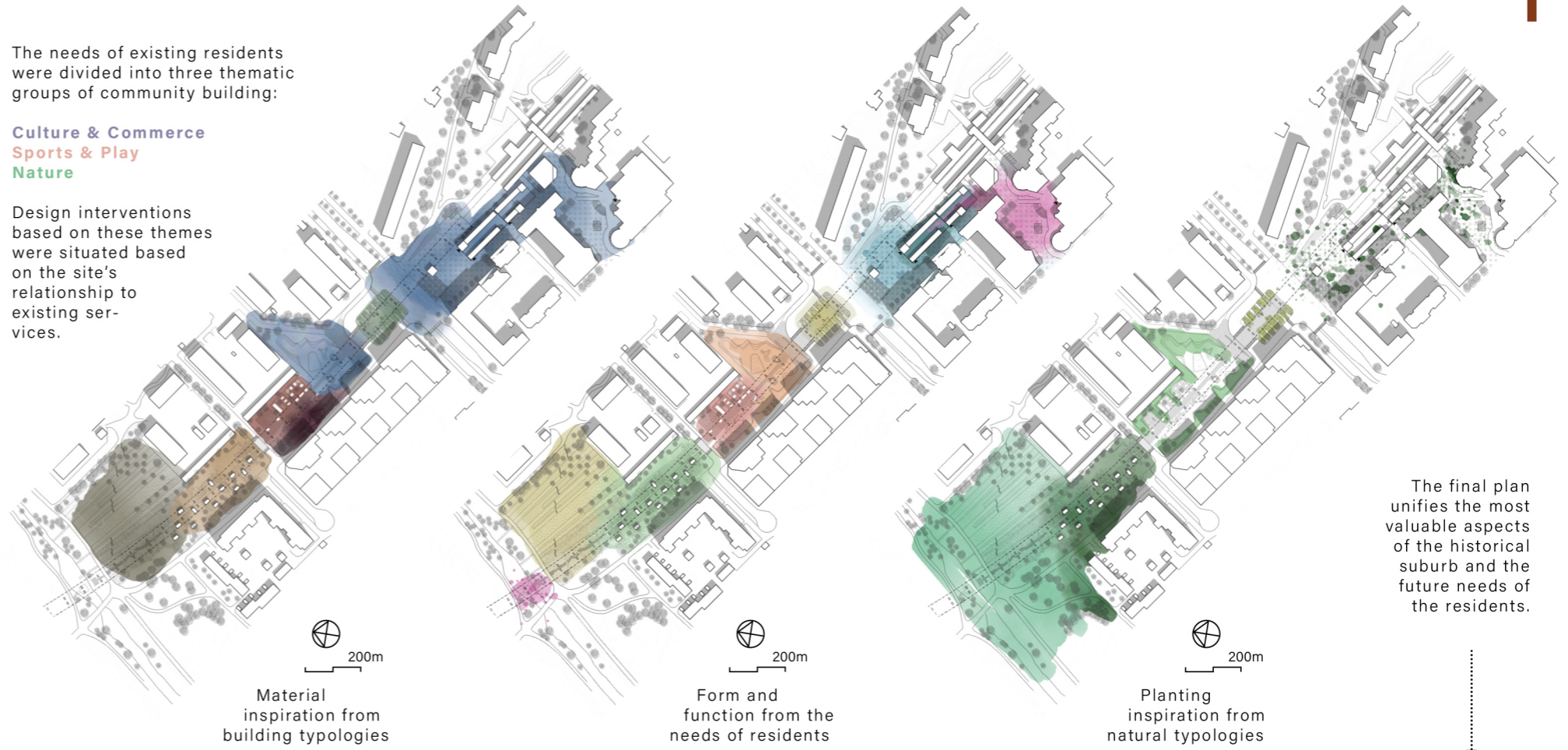


Design site and its relation to existing services and typologies

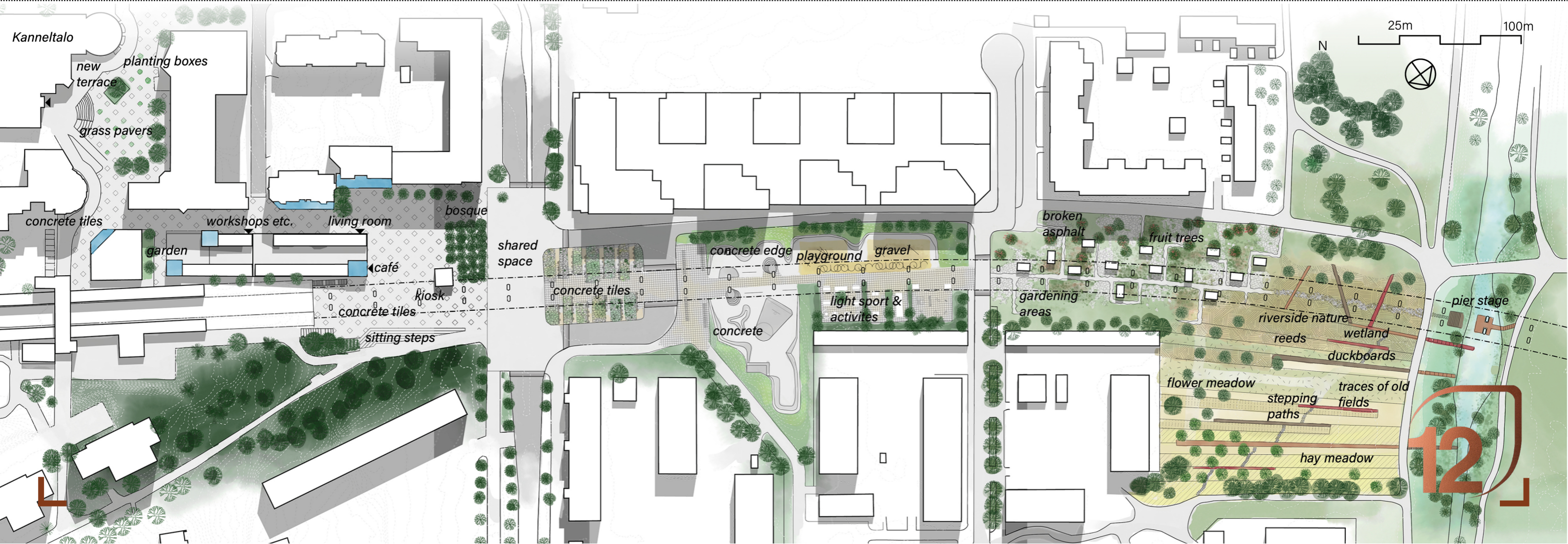
The needs of existing residents were divided into three thematic groups of community building:

- Culture & Commerce
- Sports & Play
- Nature

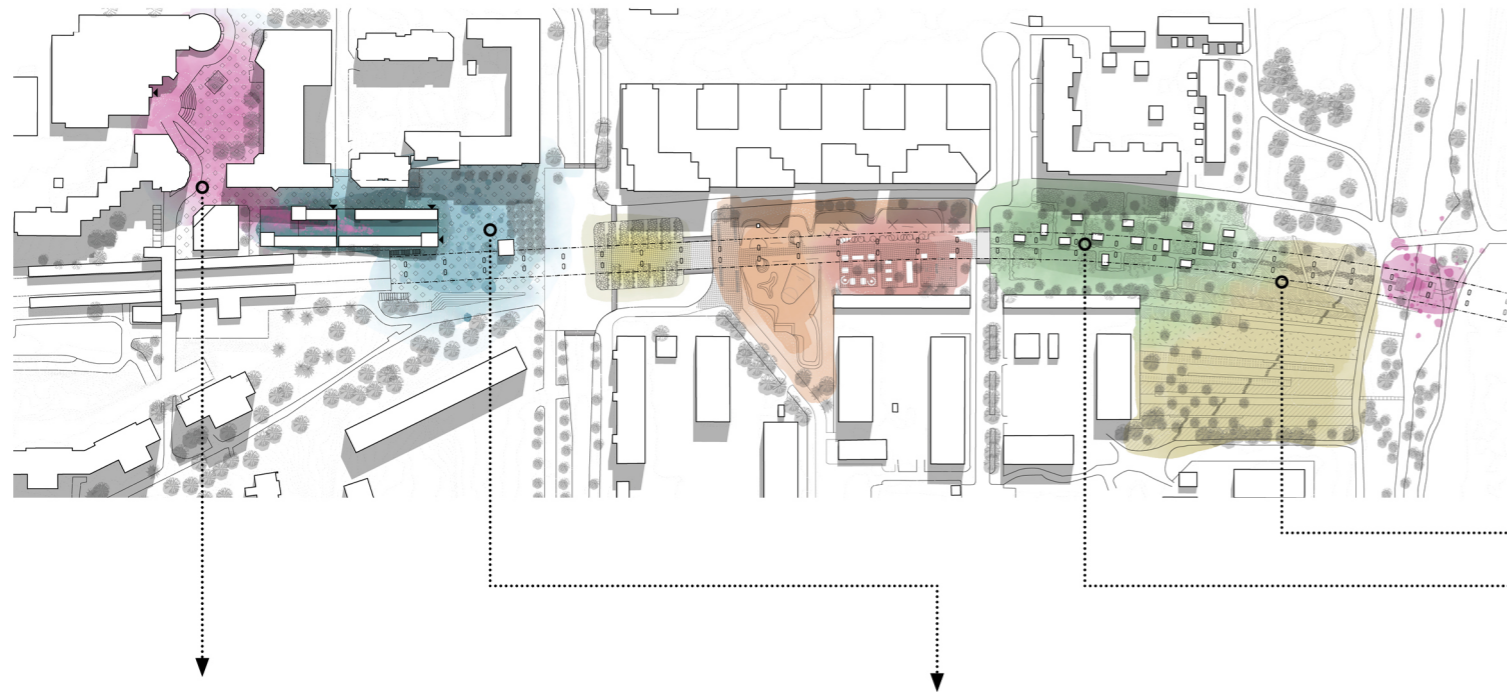
Design interventions based on these themes were situated based on the site's relationship to existing services.



The final plan unifies the most valuable aspects of the historical suburb and the future needs of the residents.

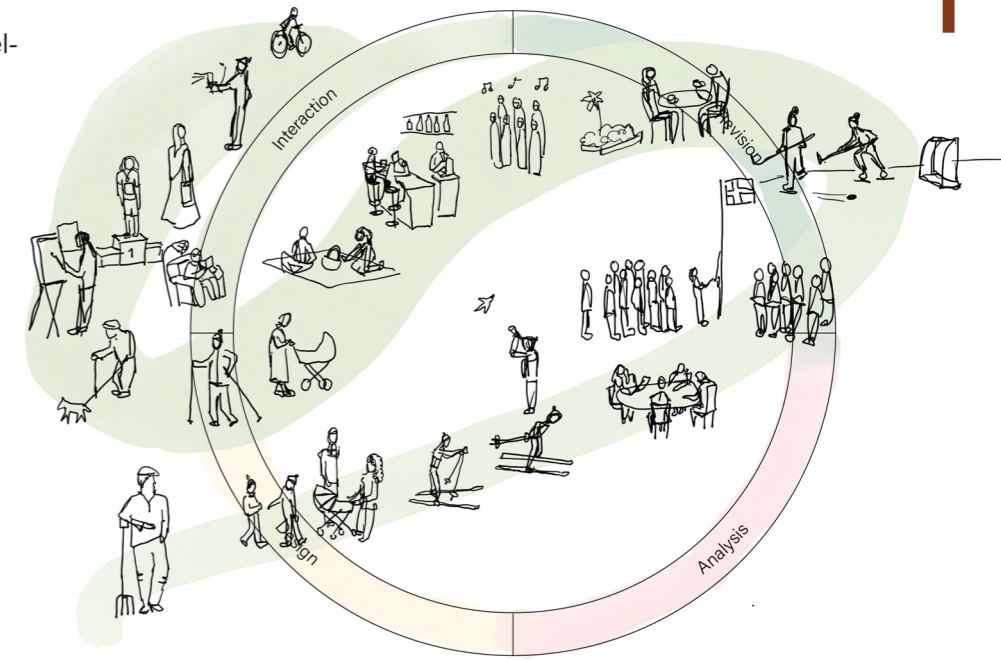


Interaction & Revision



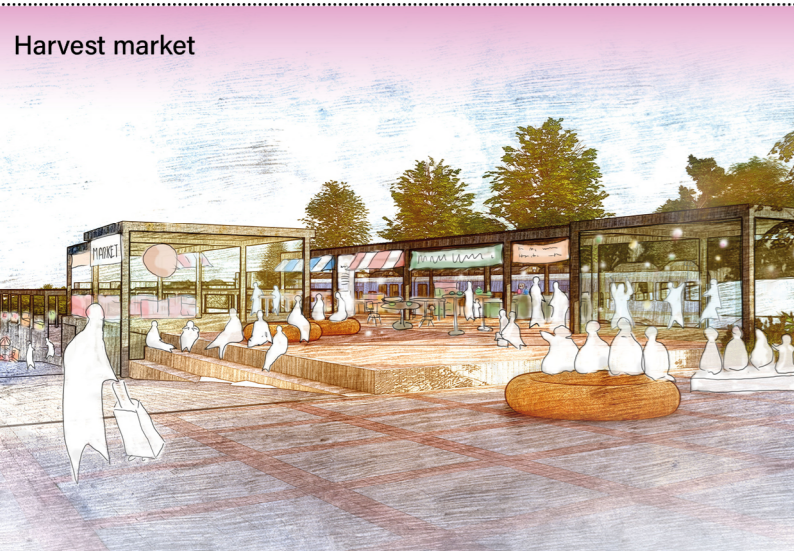
In the final phases of the development process, the site begins to have a sustainable life of its own. The designer retreats to the role of an observer, allowing the intangible culture of Kannelmäki to evolve and manifest itself at the new site.

This post-design state initiates a review process where the developed site is analysed, and the cultivation process reiterates, beginning a new cycle responding to contemporary needs.



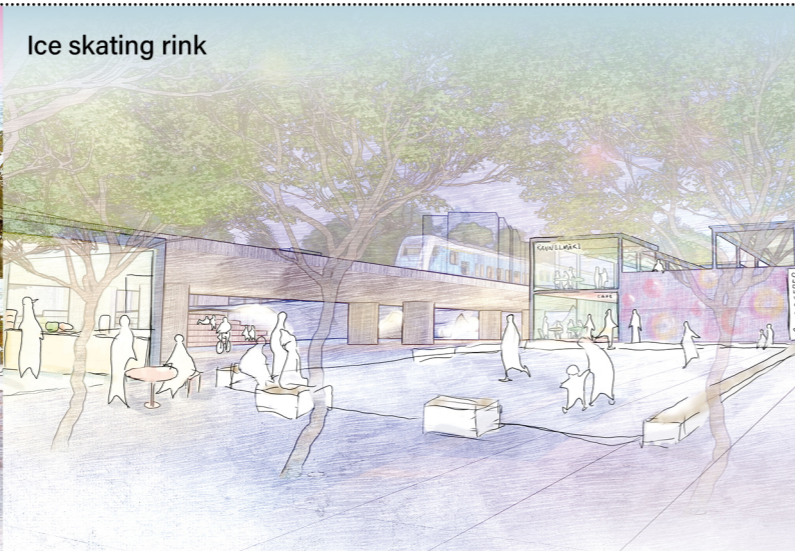
Perspective images illustrating potential use-cases and activities at different times of day, week, and year.

Culture square and bazaar



Harvest market

Community square



Ice skating rink

Gardening area



Gardening and nature play

Musicians park



Rainwater playground



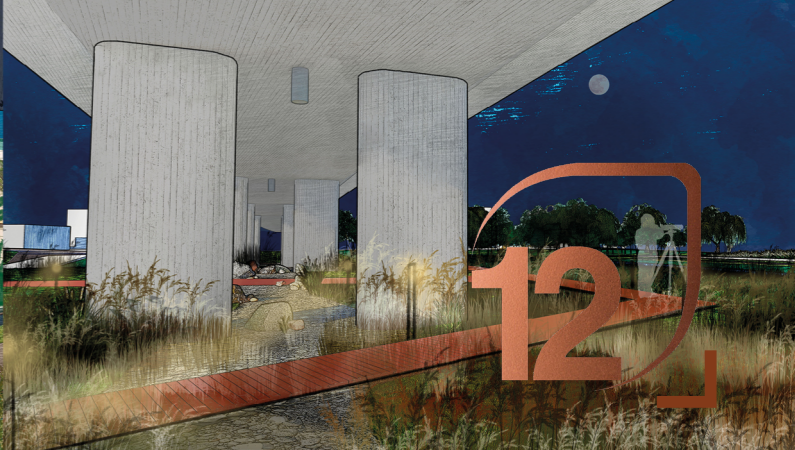
Rave party



Movie night



Evening classes



Nature observation