

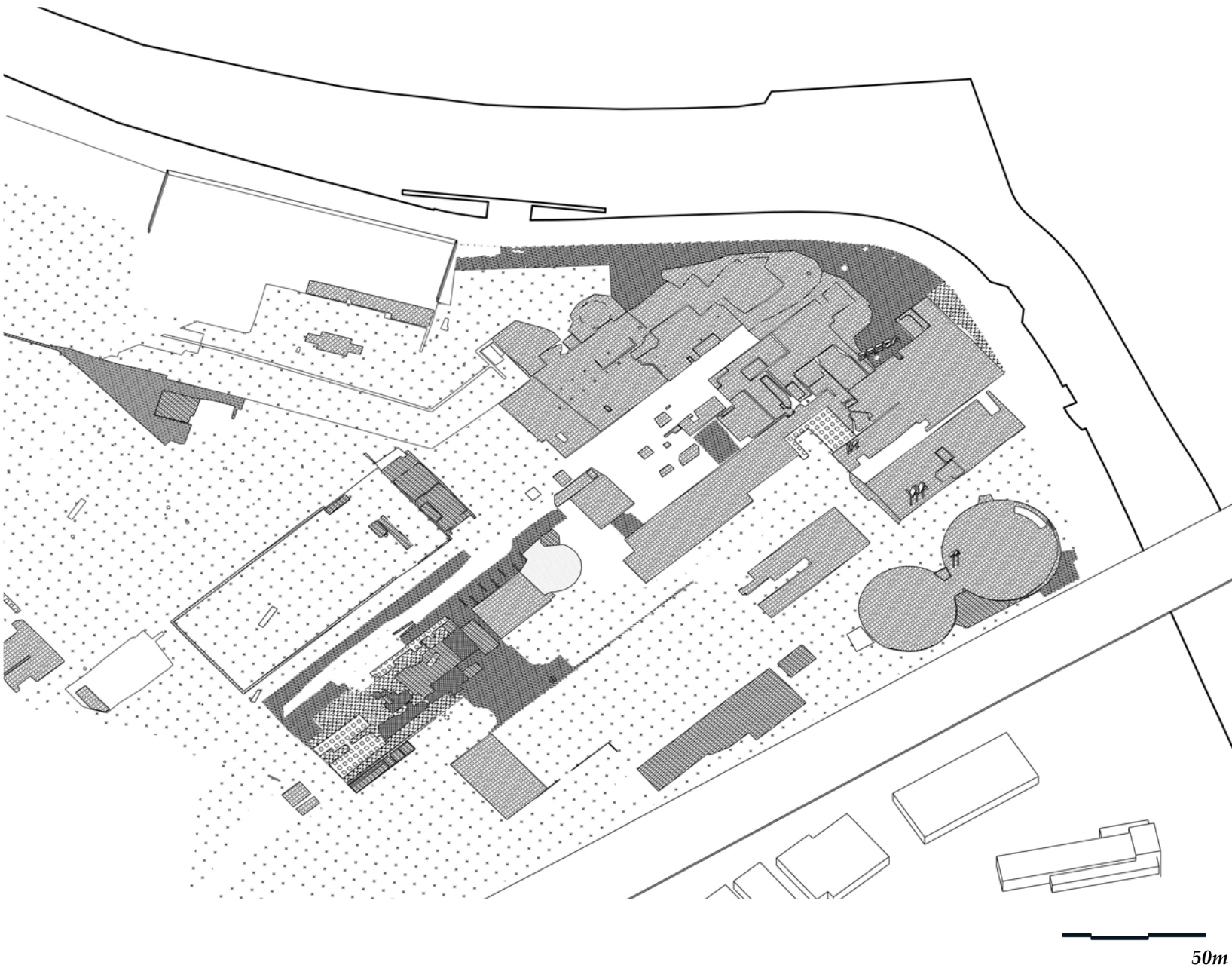
Strata - scapes

Past soils

Most of the existing foundations are kept and reused as the basis for the new strata. In this way, the ground (and its pollution) is mostly sealed, and allows for a safer inhabitation by human and non-human beings.

In the case of dilapidated foundations, these are removed and the materials are re-used elsewhere for construction or paving, while the soil is exposed and a landscape strategy is implemented to phytoremediate it.

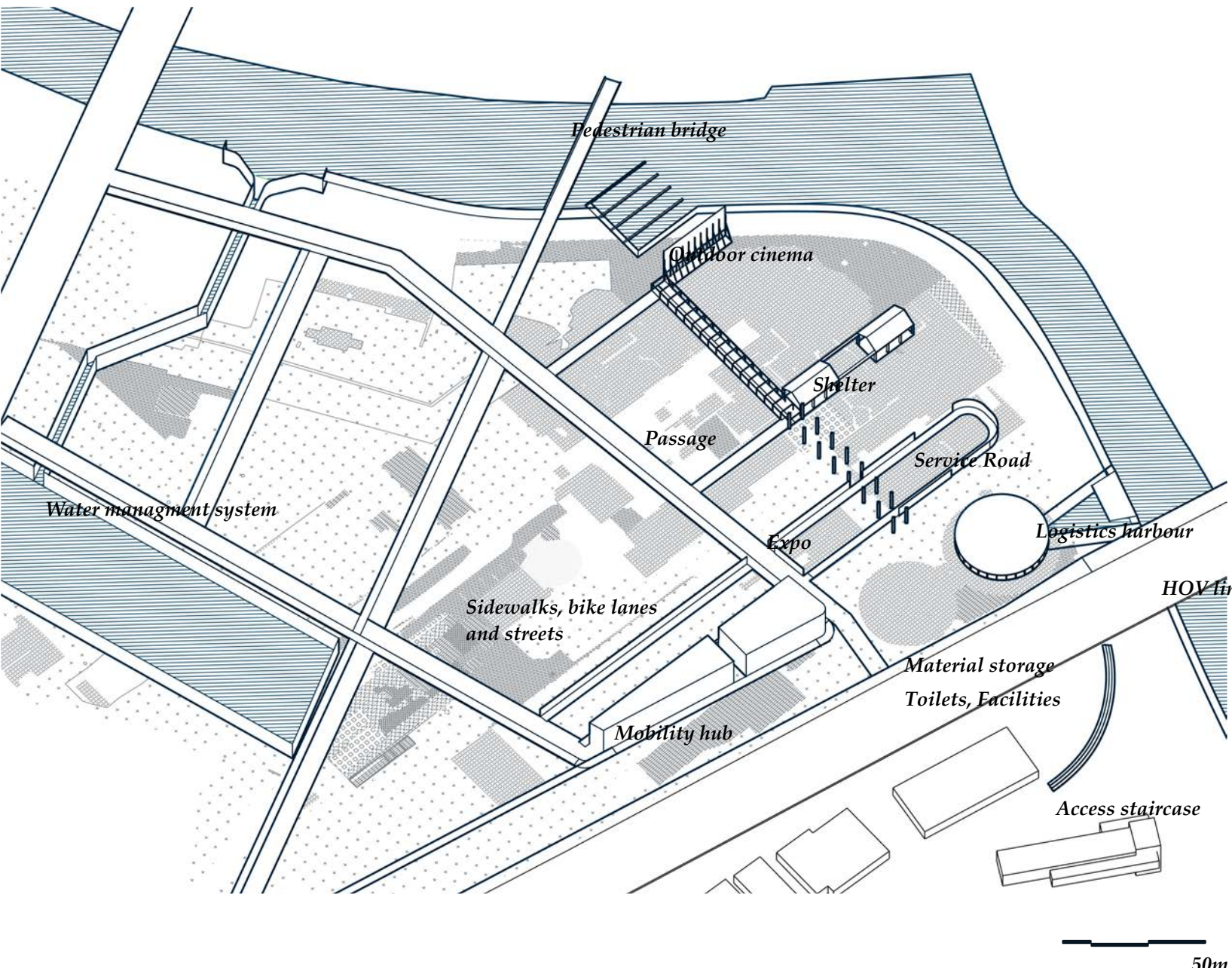
The contaminated soil is also a bearer of past traces, as well as a support for the above-ground ecosystem and an ecosystem in itself, and as such is part of the strata-scape.



Basic infrastructures

The Basic Infrastructure constitutes the most rooted, fixed stratum. It allows access to and permanence on site, it responds to the essential technical and social needs, and it is therefore always public. It generates a framework within which urban development can take place.

Elements of the Basic Infrastructure grow over time and create an onset for the future architecture. In the meantime they provide basic amenities for public events, first material experiments and research to take place.

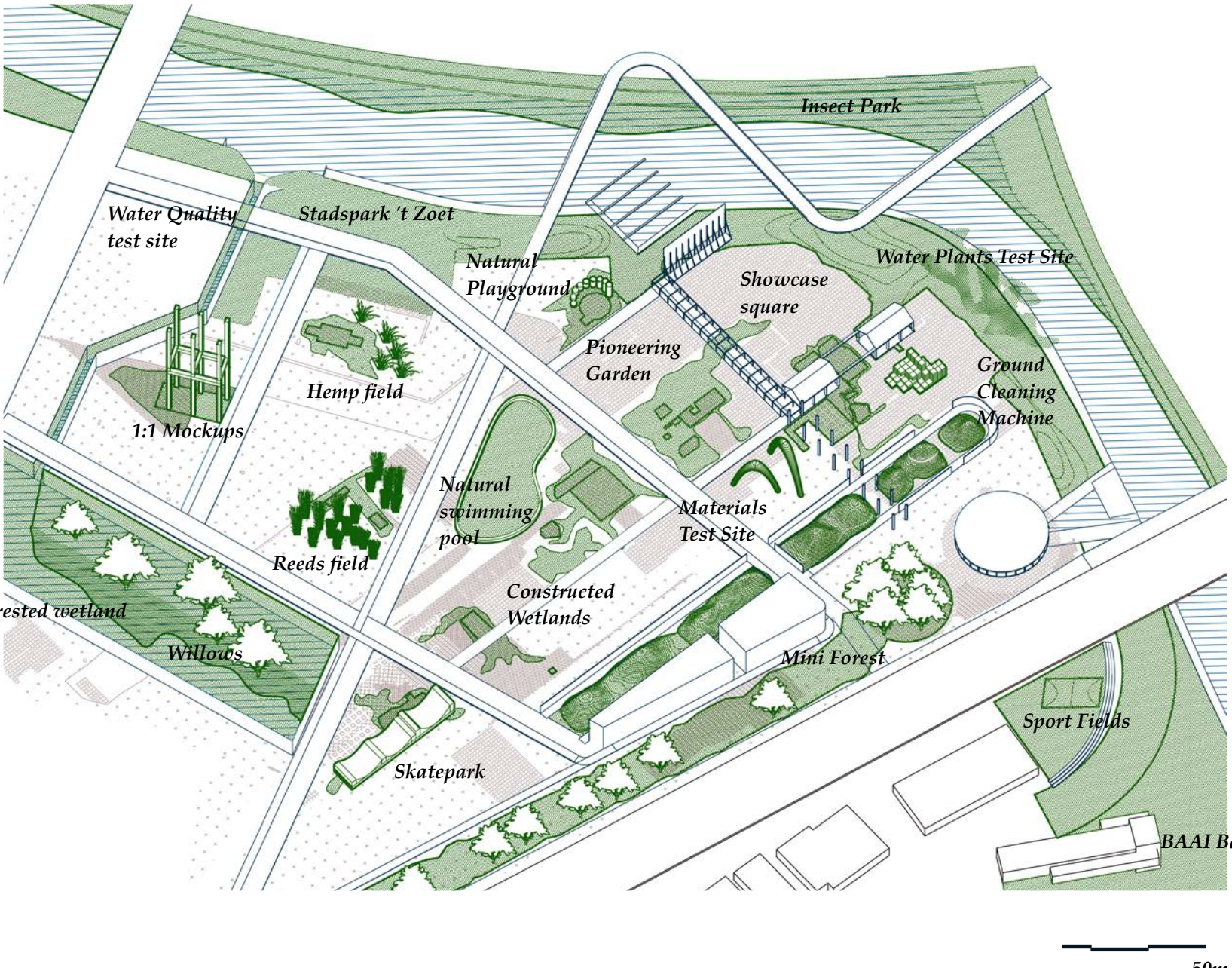


Test grounds

The Test Grounds are occasions to experiment with innovative approaches, materials, construction techniques, uses and aesthetics. They activate the site in unexpected ways and push the boundaries of what architecture and urban spaces could look like.

They also establish links with local industries, from education, agriculture, to digital fabrication in order to test and implement circular flows.

These tests become a valuable shared resource for the further development of the site, in terms of knowledge, networks and social aggregation, and inform future developments.



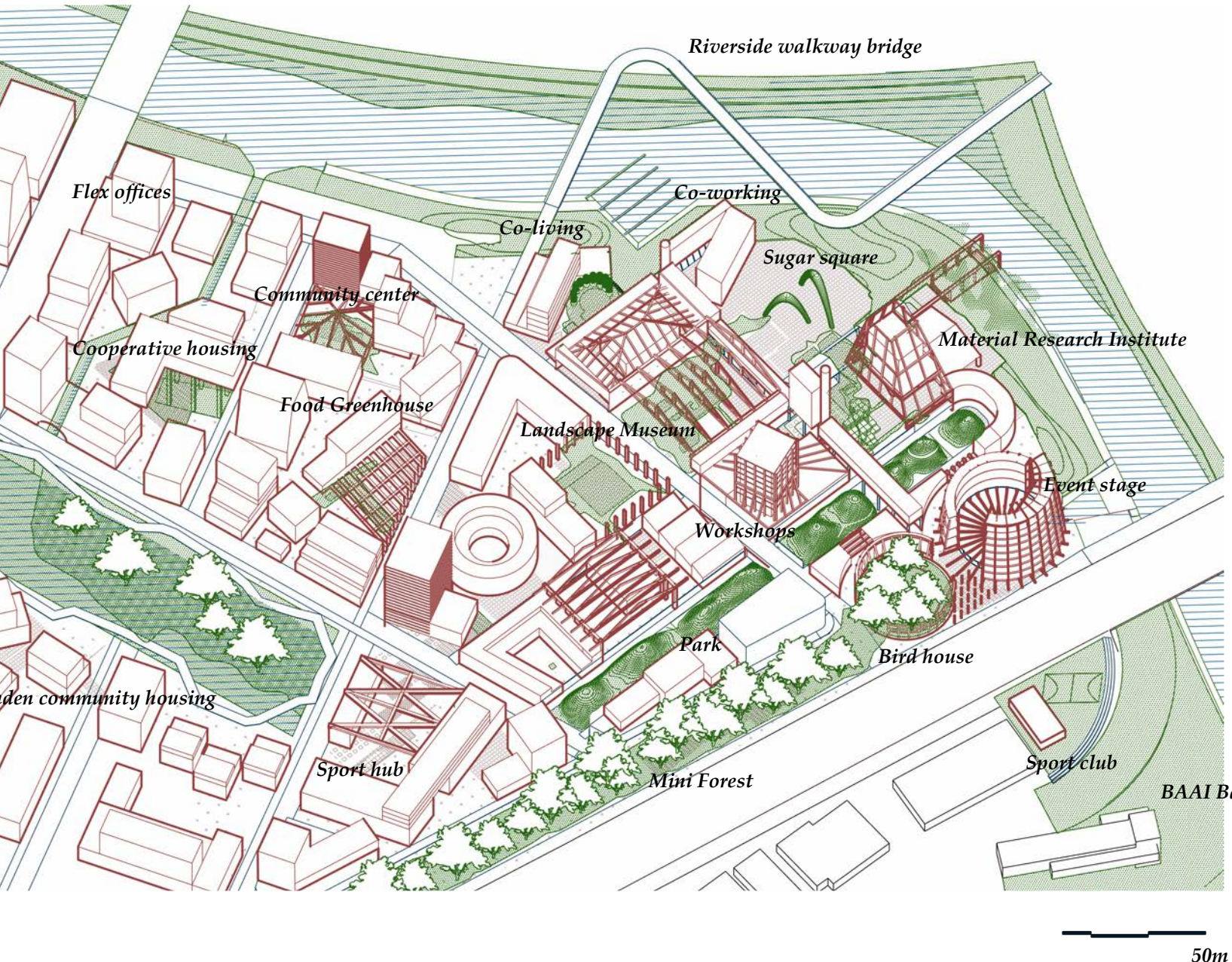
Bio-based infills

Finally, the Bio-based Infills complete the build-up of the site. It is the most flexible and malleable layer and consists of all the buildings, spaces and structures that allow the full inhabitation of the site.

The Infills provide a wide range of inside-outside climates and a gradient of privacy, from shared unisolated workshops and lobbies to enclosed housing units and classrooms.

Their added program overlaps with previously introduced common grounds and basic infrastructures, and incorporates them within new architecture (as a passage, public part of the building, cutout from the building site etc.).

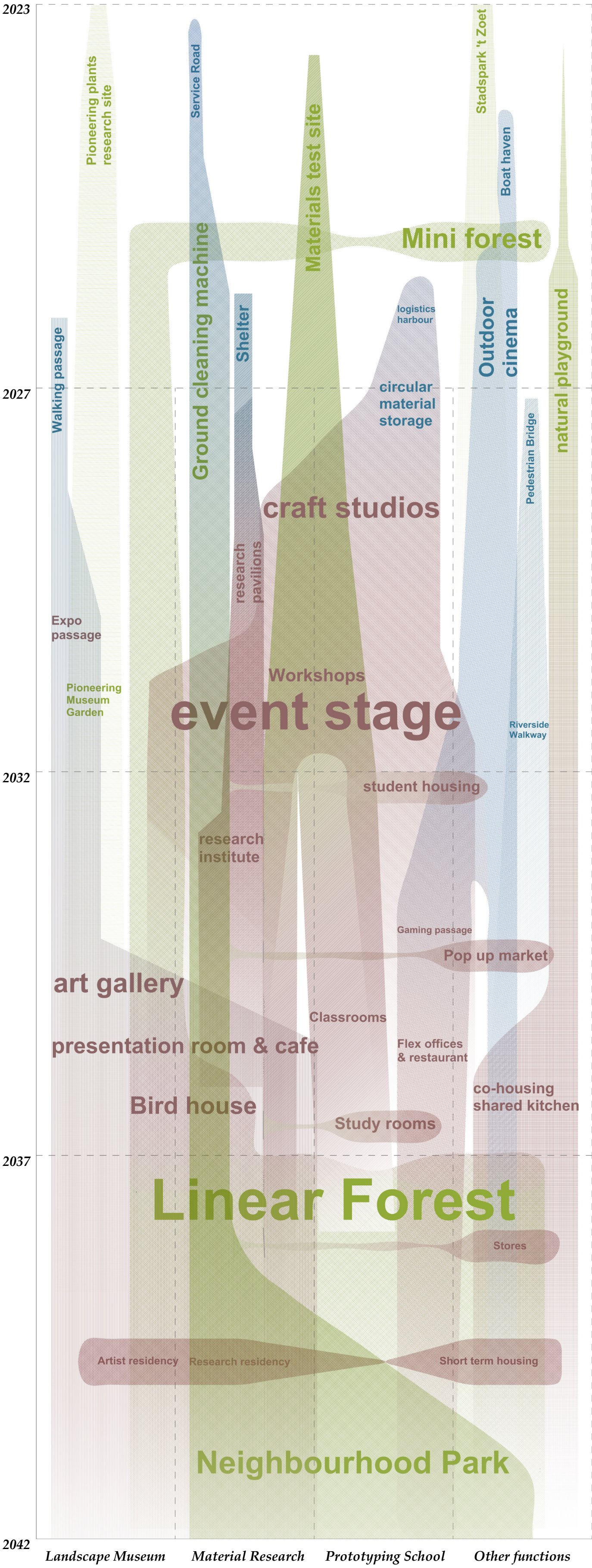
Added structures are made out of bio-based materials - majority of which were sourced locally, tested and experimented within the Test Grounds.



strat*um
(ˈstri təm, ˈstræt əm)
n., pl. strat*ta (ˈstri tɑ, ˈstræt ə) strat*ums.
1. a layer of material, naturally or artificially formed, often formed one upon another.
2. layer, level: an allegory with many strata of meaning.
3. a single bed of sedimentary rock, generally consisting of one kind of matter representing continuous deposition.
4. a layer of tissue; lamella.
5. a layer of vegetation in a plant community.

Strata-scapes project embraces the visible and hidden layers of ‘t Zoet, reassembling them as foundations for the future growth. Each space is envisioned as a habitat, and the city itself as an ecosystem, adapting and evolving over time through the influence of anthropological and biological factors.

The added strata follow the principles of bioregional design and have their own functions: Basic Infrastructures unlock the site’s technical and social potential, supporting Testing Grounds where existing and new materials are cultivated and experimented with, before being used for Bio-based Infills of new activities. The result is a living laboratory shaped by culture and nature, where architecture and landscape are conceived as one, fostering regenerative spatial practices.



Together with some basic infrastructure, experimental landscape and material interventions initiate the transformation of ‘t Zoet. The different strata do not follow a chronological order, but they happen gradually and almost in parallel to each other. Stemming from the basic infrastructure and learning from the test grounds, the infills develop as new institutions, residential quarters, office and production spaces. They are structurally intertwined with the infrastructures, incorporating them in parts of the buildings.

The assembled buildings and spaces distributed on the site serve as parts of three main functions: the Landscape Museum, Material Research Center, and Prototyping School. While each of these institutions has dedicated buildings for their specific programs, they also share many rooms, outdoor spaces, test grounds, and infrastructures. They are interconnected throughout the project site with above-ground bridges and passages, leading to a high degree of cross-pollination of ideas, collaboration, and exchange. Additionally, various forms of co-living housing and recreation spaces have been integrated to accommodate a wide range of participants and visitors.

Strata - scapes

Urban Palimpsest

'T Zoet - an empty but layered space is the starting point of the project - an urban palimpsest, where past and new traces overlap and inform each other.

Our project doesn't propose an ideal city, but an imperfect one, where the interstitial spaces, the cracks, the in-betweens acquire as strong a value as the architecture itself. Within this friction, the distinction between inside and outside, organic and inorganic, built and natural is not visible nor relevant anymore. Every space becomes a habitat, every surface a support for new life, as a collection of pioneer landscapes, where natural and organic processes are given room (and time) to play their role in shaping the built environment.

We treat the city as a living ecosystem, in continuity with the existing, but always evolving, adapting and finding new ways of growing.

Selection of groundfloor spaces:

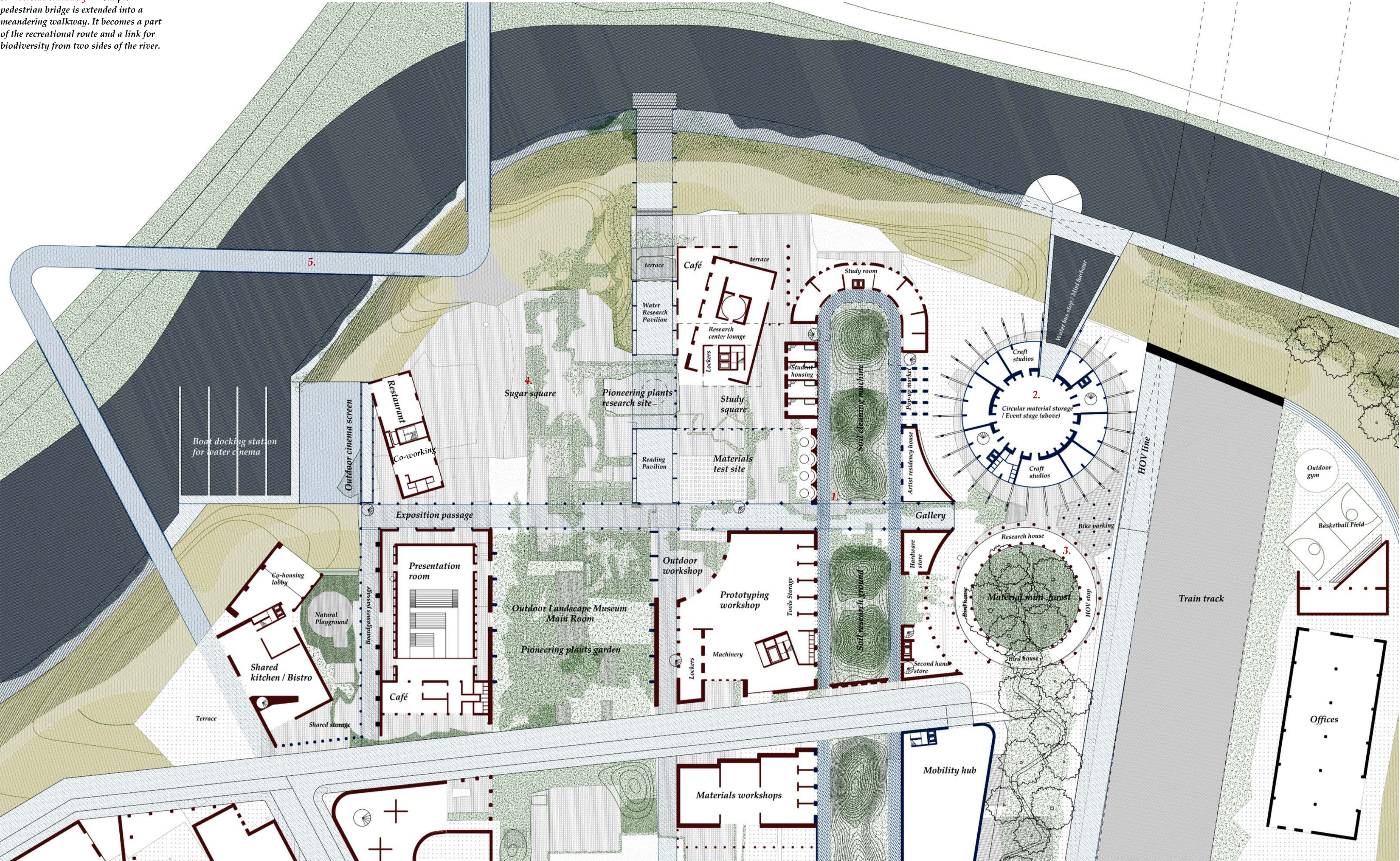
1. Ground cleaning machine - Soil that needs to be excavated and cleaned is brought to the designated terrain - Ground Cleaning Machine and piled in big hills (reminiscent of slopes of sugar beets from the past). It is gradually covered with plants and cleaned by a phytoremediation process. In the long term the area will transform into neighbourhood park.

2. Silo 1 - On the foundations of the big silo there is a new layered structure proposed. It starts with a basic infrastructure consisting of boat harbour and material storage with craft studios around. Later on, a new semi-open event venue grows of top of it.

3. Silo 2 - The second silo is designated as a mini forest area - a source of timber. A new circular structure made of reclaimed materials, gabion walls, and porous bricks is then built around it. It serves as a large-scale birdhouse, dedicated to promoting biodiversity and providing a habitat for animals. The perimeter of the circular structure functions as a bus waiting area.

4. Sugar square - The Sugar square is defined in the early phases of development by a series of public infrastructures. It is not an empty field, but a rich collection of materials of old foundations, various vegetation in between its cracks and pioneering plants growing out of the adjacent areas.

5. Riverside walkway - A simple pedestrian bridge is extended into a meandering walkway. It becomes a part of the recreational route and a link for biodiversity from two sides of the river.



Strata - scapes

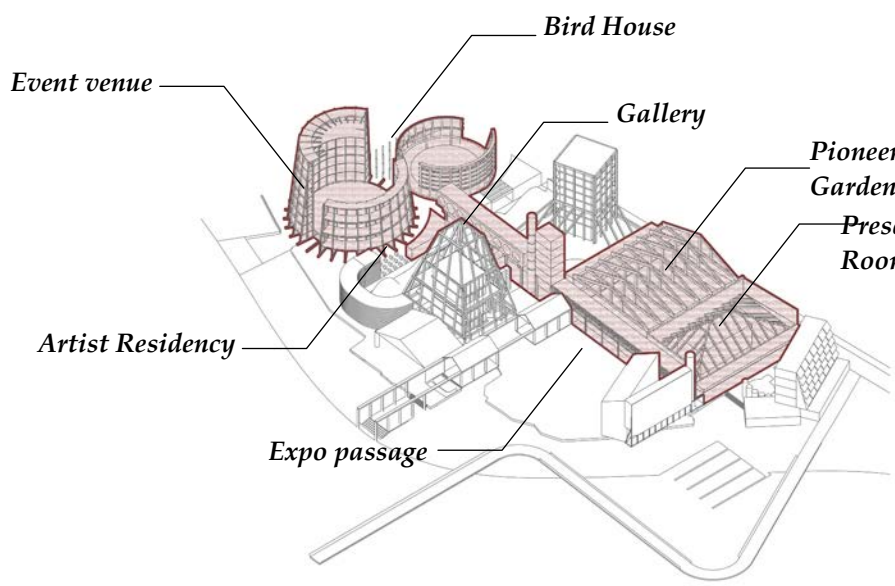


Bioregional architecture

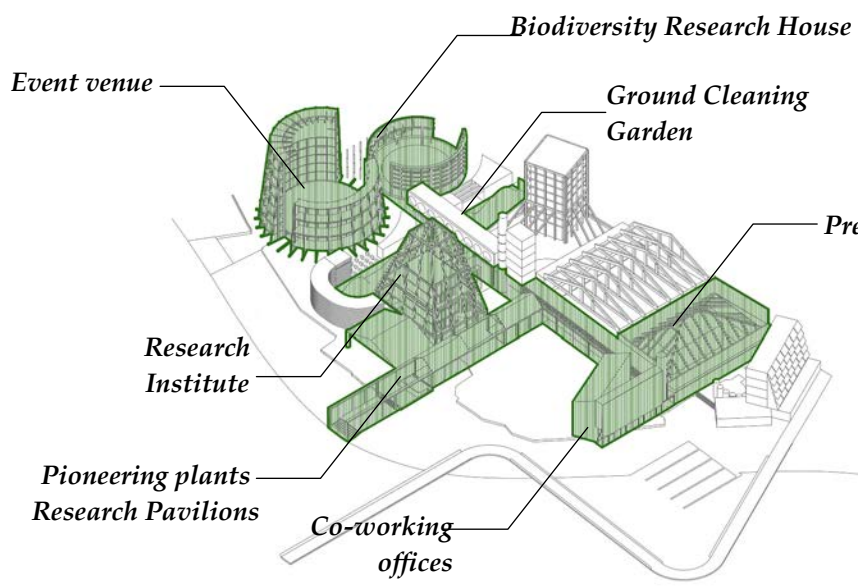
To create a healthy, hybrid milieu and offer a positive model of the building sector in an era of climate crisis, we embraced the concept of bioregional design. We chose to employ for the most part, organic and locally sourced materials, with a farm-to-building approach.

This range of materials reflects in the range of spaces they are able to define. Transition spaces that blur the boundaries between outside and inside are the result of this approach, where certain (lightweight) materials are used for screens, curtains, roofs that delimitate spaces but don't fully enclose them. In this way, a variety of climatic conditions is offered to users, who are able to choose the environment that is better suited for their activities in relation to seasonality and weather.

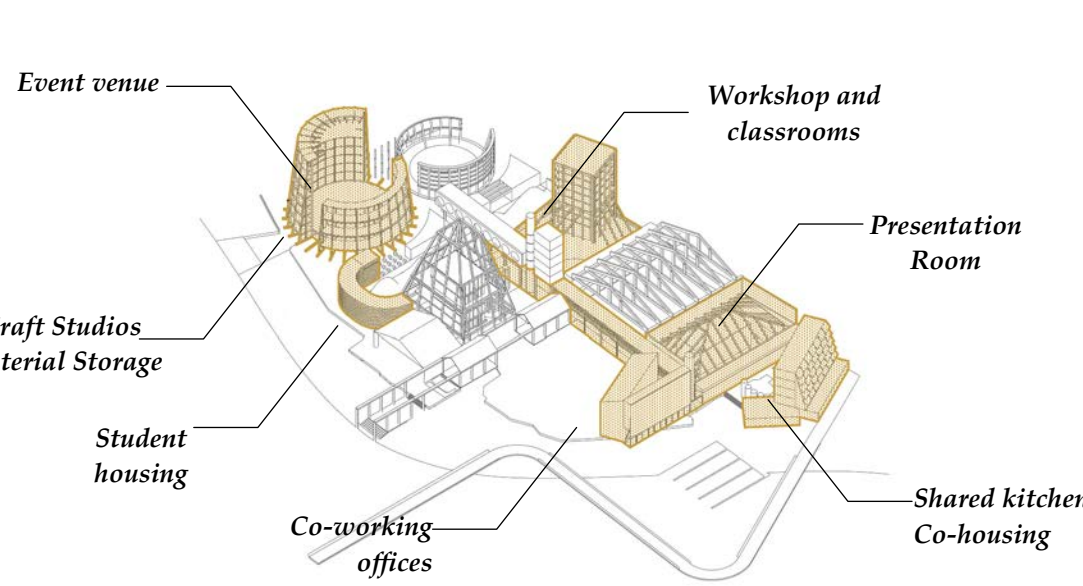
Landscape Museum



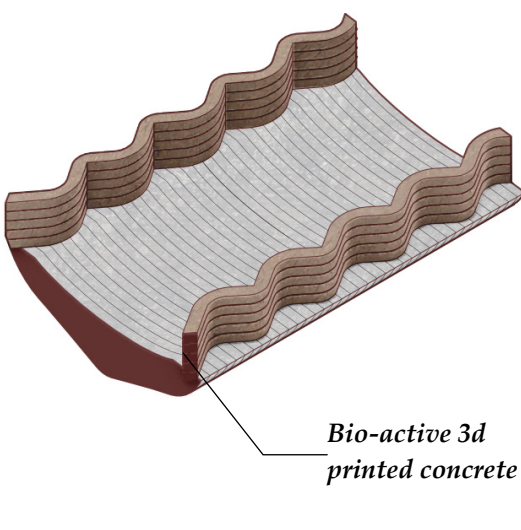
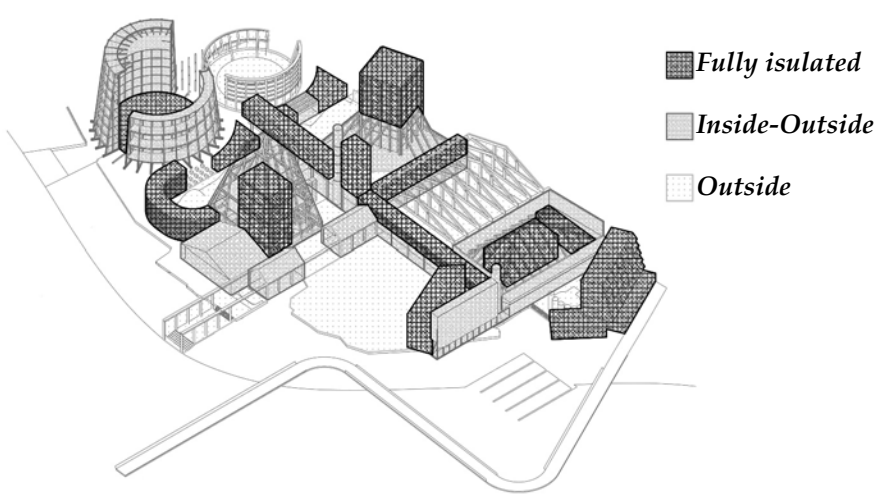
Material Research Center



Prototyping School

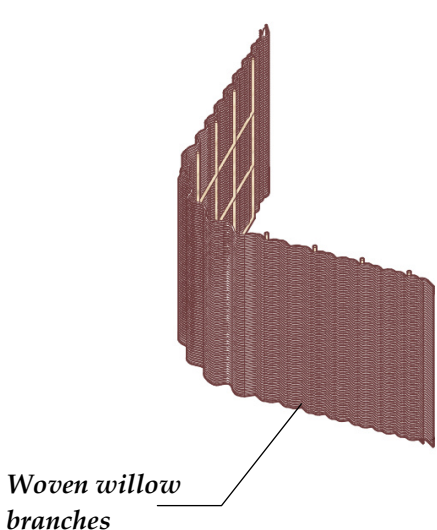


Gradients of climate control



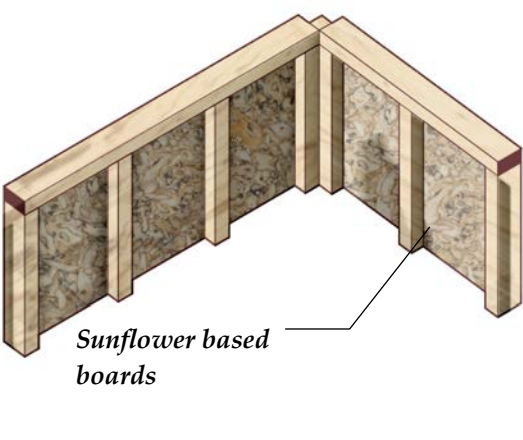
Infrastructures

Some elements of infrastructures are made out of more rigid materials like recycled metal or concrete. 3d printing techniques are used to save material and design more eco-friendly processes. Concrete elements are made out of bio-active concrete to support and enhance growth of algae, lichens and mosses.



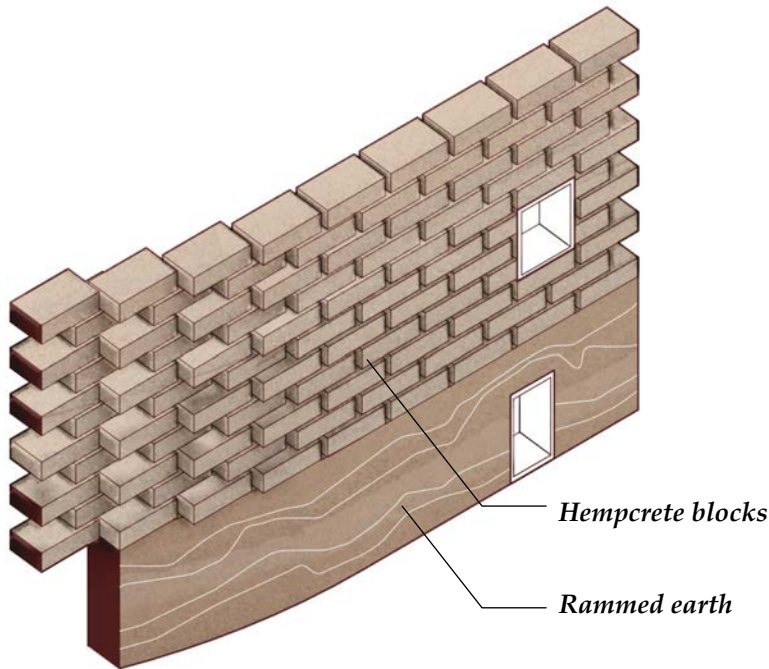
Screens

Experimental non-load bearing materials made of Japanese knotweed, textile bricks, curtains or woven willow branches are used to create lightweight screens - separation of transitional spaces in between inside and outside and balustrades.



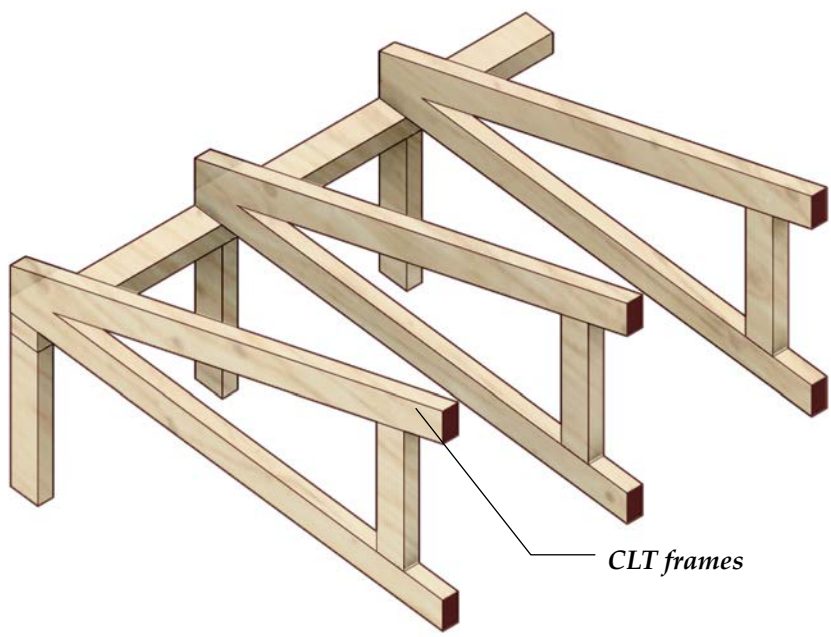
Insulation

Traditional insulation is replaced by blocks of compressed straw or sunflower marrow combined with the water-based glue made from the sunflower seeds forming a light and foamy composite material that acts as a natural alternative to polystyrene.



Volumes

More enclosed low and medium height volumes follow stereotomic principles and have massive load-bearing walls of rammed earth or structural hay in their lower floors, while higher ones are made of bricks or blocks, easier to lift and assemble.



Frames

Tectonic constructions use timber frame structures, to be able to have more openings and cover bigger spans. Timber is grown for example on the site of one of the silo and along the train tracks. The traditional glue in cross laminated timber elements is replaced with sunflower seed based glue.