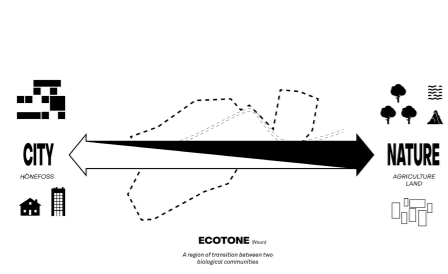


BUILDING THE ECOTONE

HJERTELIA (NO)
With this project, we want to develop a new form of neighborhood where agriculture, manufacturing process and cooperative housing come together as an alternative to low-density suburban housing.

Hjertelia is perfect example of Ecotone, a transition area between two biological communities. It is a sharp boundary line where synergies have to be created, where the city can expand without degrading soils, where agriculture can meet biodiversity and a vibrant community can take place in an metabolic way.

The long delay before the arrival of the new train line gives the possibility of a staged development of the site. First, we will focus on the development of an agricultural community. Then we will attract people through prototyping and education. Finally, sustainable and flexible housings will be implemented in a metabolic way.



TRANSPORTATION

During phase 1, cycle-pedestrian connection of the site to the center of Honefoss will be the very first action taken thanks to the new bridge. During phase 3 electric charging points for bikes will be provided. Except for emergency services, we will take a very strong stance by creating a 100% car-free site demonstrating that car dependence is not compulsory in suburban areas. Inside Honefoss, the numerous parking areas are to be reduced through incentives to use bike transportation for medium to short distances and car-sharing and public transports for longer journeys. Parking spaces can also be rationalized through the use of retrofittable structures hosting solar panels.

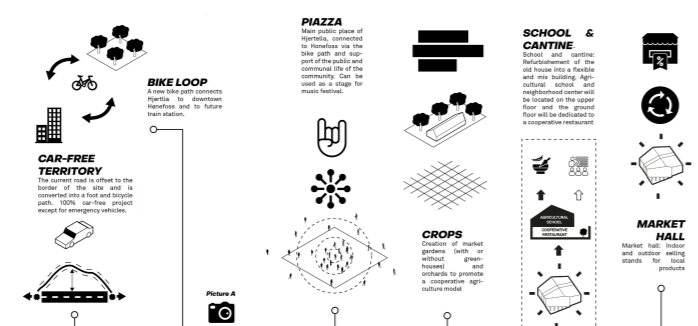
CLIMATE ADAPTATION & LAND REGENERATION

In Hjertelia, the insertion of housing among agricultural plots and next to woodlands, during phase 3 enables the reduction of heat thermal shocks and the heat island effect. All the trees on site are being kept and we will intensify their presence. We want to extend this proximity to green spaces to downtown Honefoss with renaturalization works at the heart of the city. Awaiting investors involvement, large areas of parking and brownfields can be converted, even temporary, into green spaces and urban agriculture plots.

Naturalisation
Bike Loop



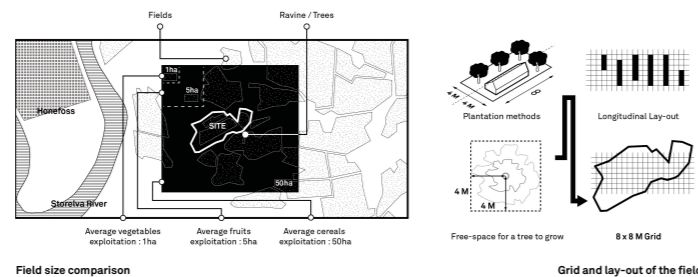
Picture A - Public plaza with the refurbished school



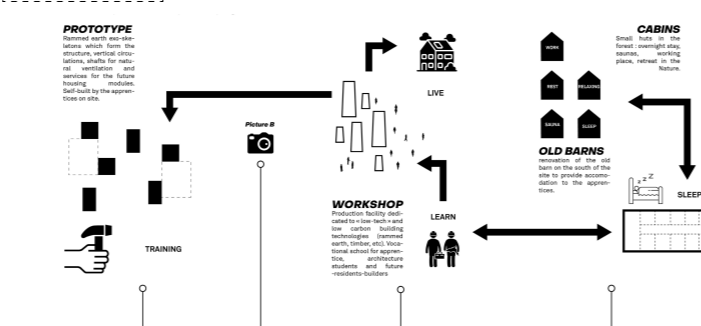
FIRST STAGE COMMUNITY

In this first phase, we want to put an end to the status quo caused by the wait of the trainline. As of now the municipality can implement actions to convert Hjertelia into a regional hub for community-supported agriculture. The very first action is to connect Hjertelia to Honefoss through a new path for bicycles and pedestrians only. It will run from the new bridge to a new central plaza built around the old school. This plaza will be the heart of the future neighborhood and will concentrate all the public buildings of Hjertelia.

Surrounding the plaza, the site will be divided in agricultural plots to restore Hjertelia to its primary agricultural purpose: production will be oriented towards fruit and vegetables. The analysis of the site show that agriculture have evolved a lot the past 50 years and that these plots do not fit anymore to grain cultivation. Indeed, today, an average wheat exploitation is 50Ha. Being 5Ha big, the site will never be able to generate an acceptable income. Nevertheless, a classic fruit exploitation is around 4Ha and a classic market garden is around 1Ha. The idea here is to recreate appropriate plots to develop new operating models directly connected to economic opportunities.



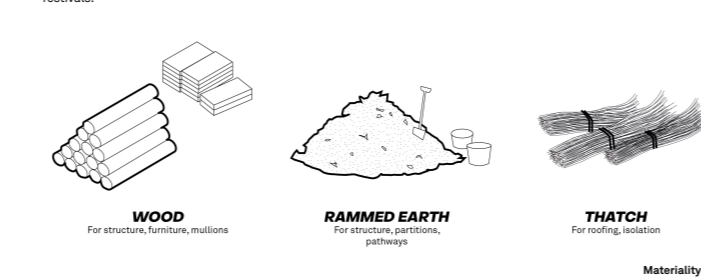
Field size comparison
Grid and lay-out of the field



SECOND STAGE ATTRACTION

In this phase, we will prototype solutions in a local test-and-try attitude to build amenities and attractions to the area. The whole site will become a building school focused on sustainable technologies like rammed earth and timber construction. Next to the former school and the market hall, we will build a workshop that will become the third public entity of the plaza. As for the agriculture school, the workshop will provide visitors with vocational training in rammed earth and wood construction.

1:1 earth structure will be built by the apprentices as a training. They will provide the future structure of the self-built housing along with shafts for vertical circulations, technical devices and services. This building development of the site will be limited to the land strips left over by crops. Simple cabins will be built on the south part of the site in direct connection with the forest and the river to host visitors from outside Honefoss, with work places connected to nature or sauna house. Playgrounds are to be implemented on the central plaza which can also be used as a stage for music or even construction festivals.

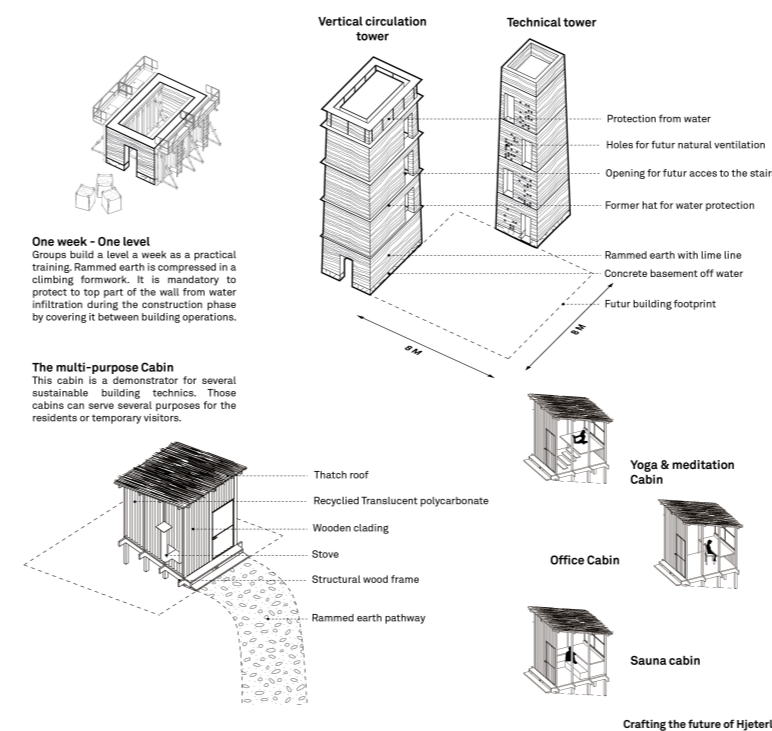


Materiality Atlas

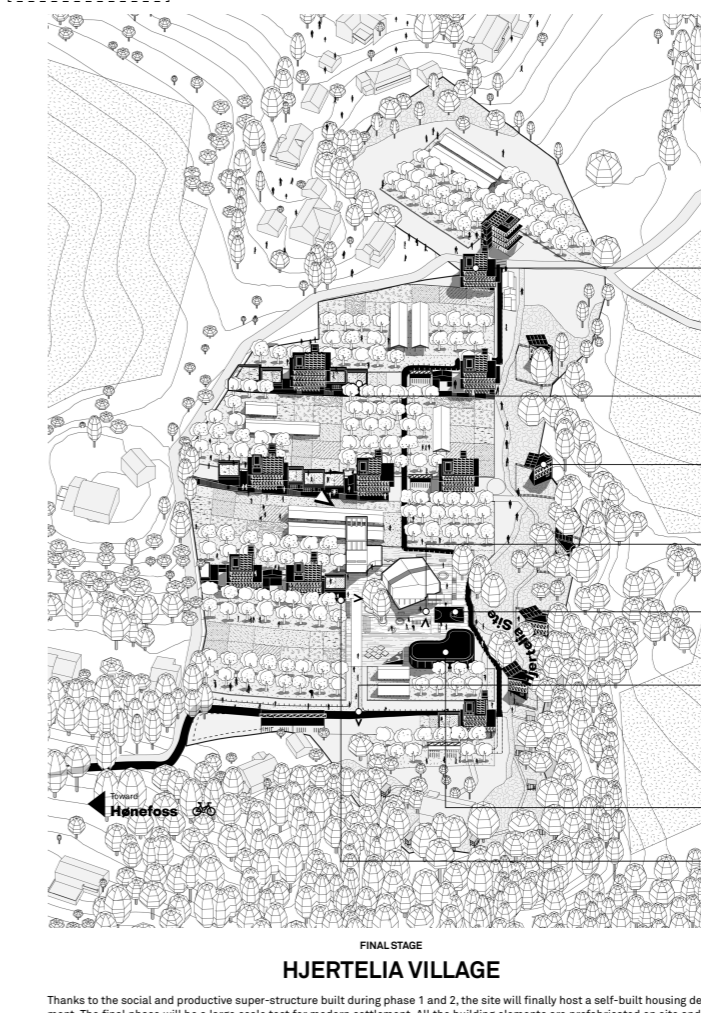
BUILDING THE ECOTONE



Picture B - Rammed earth tower in construction



Vertical circulation tower
Technical tower
Materiality Atlas

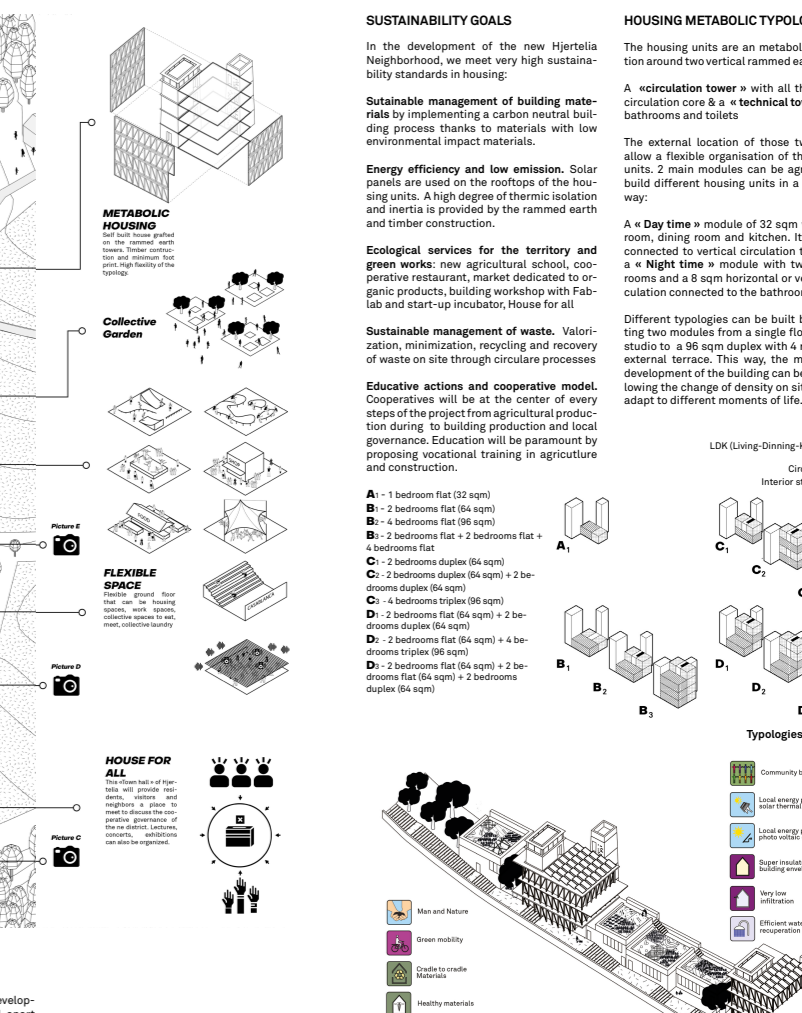


FINAL STAGE HJERTELIA VILLAGE

Thanks to the social and productive super-structure built during phase 1 and 2, the site will finally host a self-built housing development. The final phase will be a large scale test for modern settlements. All the building elements are prefabricated on site and apart from the vertical circulations and services made of rammed earth, all the housing are planned as wood frame constructions and will comply with the highest energy and environmental standards. The ground floors will be occupied by collective program: co-working spaces, offices, collective kitchen, laundry or kindergarten and housing. A third public building will take place on the plaza next to the agricultural school and the workshop. This «house for all» will gather all actors interested in the production of housing.



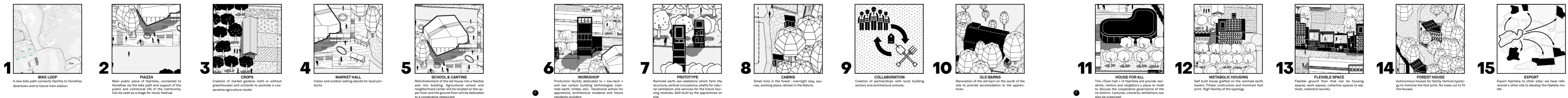
Picture C - Housing units



Sustainability Goals
Housing Metabolic Typologies
Typologies Inventory



Picture D - The central plaza
Picture E - House for all



1 BIKE LOOP: A new bike path connects Hjertelia to Honefoss downtown and to future train station.
2 PLAZA: Main public place of Hjertelia, connected to Honefoss via the bike path and support of the public and communal life of the community. Can be used as a stage for music festival.
3 CROPS: Creation of market gardens (with or without greenhouses) and orchards to promote a cooperative agriculture model.
4 MARKET HALL: Indoor and outdoor selling stands for local products.
5 SCHOOL & CANTINE: Refurbishment of the old barn as a flexible and mix building. Agricultural school and neighborhood center will be located on the upper floor and the ground floor will be dedicated to a cooperative restaurant.
6 WORKSHOP: Production facility dedicated to a low-tech and low carbon building technologies (rammed earth, timber, etc.). Vocational school for apprentice, architecture students and future residents-builders.
7 PROTOTYPE: Rammed earth, wood assemblies which form the structure, vertical circulations, shafts for natural ventilation and services for the future housing modules. Self-built by the apprentices on site.
8 CABINS: Small huts in the forest: overnight stays, saunas, working place, retreat in the Nature.
9 COLLABORATION: Creation of partnerships with local building sectors and architecture schools.
10 OLD BARNS: Renovation of the old barn on the south of the site to provide accommodation to the apprentices.
11 HOUSE FOR ALL: This «house for all» of Hjertelia will provide residents, visitors and neighbors a place to meet to discuss the cooperative governance of the future housing modules. Concerts, exhibitions can also be organized.
12 METABOLIC HOUSING: Self-built housing grafted on the rammed earth towers. Timber construction and minimum footprint. Higher flexibility of the typology.
13 FLEXIBLE SPACE: Flexible ground floor that can be housing spaces, work spaces, collective spaces to eat, meet, collective laundry.
14 FOREST HOUSE: Autonomous housing for different typologies to minimize the footprint. No trees cut to fit the houses.
15 EXPORT: Export Hjertelia to other sites: we have referenced other sites to develop the Hjertelia model.