

BACK TO NATURE is a project that propose to develop a sustainable way of living together. It is a 16.000 m² mixed-use housing neighborhood gently set in the landscape of Hjertelia.

The project has the aim of **reading the landscape** where it stands, finding and designing its characteristics and peculiarity.

It is a simple shape that reminds on ancient traditional settlement all around the world, a circle that sorround an "hortus" where to live and work together, a circle that follow the inclination of the ground becoming a shape designed with nature. The height of the building, as well as the wood structural facade, is simply obtained in analogy with the tall trees that surround the area, as birch and pines so that it will not emerge from vegetation but instead it will be an essential part of it (1).

"Back to nature" is founded on the understanding that the way we plan and build today has an enormous impact on people, aswell as the planet.

The project will try to show a **new way of "living together"** that is centered around building a better living environment that benefits both people and the planet: we envisioned development model based on a new **holistic approach** to sustainable construction by considering the entire lifecycle understanding that all phases of the development must be taken into consideration in order to create a regenerative way of living for the many.

A new mindset to design a better living environment.

HOW CAN WE LIVE TOGETHER?

A lot of ancient and traditional examples all over the world show us that there is a way of **living together in a sharing system**. The project has the will to become a pilot way of living that can be adapt to every situation (2-3-4-5).

Adaptation is fundamental especially for a diverse landscape as Honefoss offers.

APPROACH STRATEGY

Urban development and ecological restoration must be thought together creating a new way of living. This, combined with afforestation, can be a **pilot project** for **sustainable housing** development. The green system is designed in order to have two different scales of nature: bigger outside, smaller inside.

SUSTAINABLE USE OF SOIL

In our time it appear clear the preciousness of our planet. The semi-detached house system would consume a lot of soil losing the quality effort of nature and with a bad impact on the system.

A single volume can **solve the problem** creating a strong sense of community where to live and work together.

PILOT RURAL BASED COMMUNITY

The garden is an enclosed space protected by the wooden structure.

The building clearly refers to the "**Hortus conclusus**" of the medieval gardens (2). The boundaries becomes the living spaces that protect the agricultural garden. Following this concepct the original soil conformation is adjusted and deformed in order to get agricultural terraces enhancing the seasonal **agricultural vocation** of the area.

METABOLIC AND INCLUSIVE VITALITIES

This goal can be achieved through the right balance between the following issues:

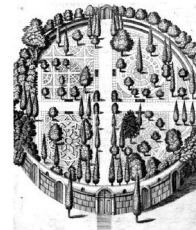
- **community**: single apartments are conceived as a part of a community, where people can connect and engage, shape and support.

Future communities will be interconnencted and gather around shared interests and purposes. Communities can provide benefits in relation to social contact, sharing of spaces and resources.

Identity, inclusion, partecipation, trust and security are the key-words.



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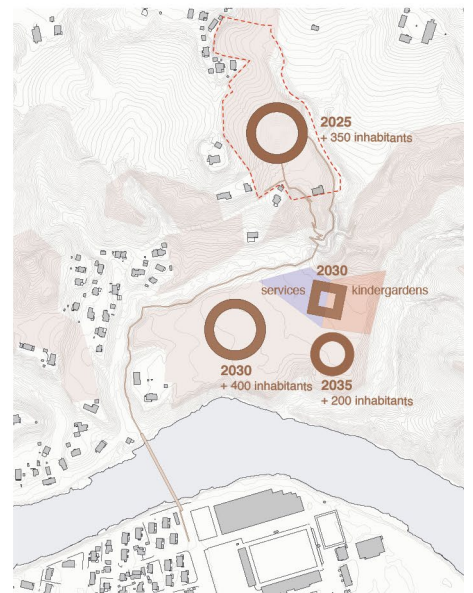
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- **“glocal”** is about keeping the rural vocation of the area together with the needs of the contemporary city-life without losing the identity of the place. Of course dialogue with the context, building culture and inclusion and are fundamentals issues.

Sustainable use of farmland, is possible experimenting with different concepts for community-supported agriculture.

Synergies can be created between local farms and new generation farmers making the place attractive also in this respect.

- **quality of space:** both as regards materials and construction techniques (in line with the local vernacular practice). Easy assembly and disassembly (LCA life cycle settlement) plays a key-role.

All the spaces of the building, are defined by prefabricated wooden structure and partitions. Rigorous but extremely flexible, the modular system (7) (composed by few different element) allows both to reduce production times and costs and also has great advantages: It can adapt to the topography following its natural course and guarantees maximum flexibility of the interior spaces, giving the possibility of combining different modules according to the housing needs, in order to maximize the offer.

The external structure also acts as a solar shield in order to ensure a high quality of indirect light.

Great attention is also given to outdoor connections: they are both physical (large portals at the ground level connecting whit the forest) and visual in order to emphasize the feeling of living (in) the nature. Bring the outdoor inside in a wider sense.

- **circular approach** to resource consumption and circular economy cycle: it's not only about the resources loops but also all the aspect about easy repair and maintenance are key-cards.

- **economic-financial sustainability** has the purpose of favoring the entry and occupation of the entire complex in order to maximize dynamics on which the intervention is based on. New forms of ownership models and enabling accessible rents, are viable strategies to be attractive to young people who want to capitalize on their education and talents in the Ringerike region.

“FUTURE” MOBILITY

“Back to nature” is not just a slogan. As already said, it is a new, broader housing concept that can be applied to every aspect of it; therefore the awareness that walking or cycling is the most **sustainable way** we have to achieve this goal. For this reason we have tried to give as much importance as possible to the cycle and pedestrian paths: they are always clearly separated from the driveways (8) in order to guarantee safety and functionality.

The cycle and pedestrian traffic is favored by the addition of a **new bridge** and a path into the woods, with panoramic viewpoints, bird watching and meditation pavilions along the way. We have also designed these paths in such a way that they can be extended along the river to connect future neighborhoods over a longer period of time (next 30-50 years).

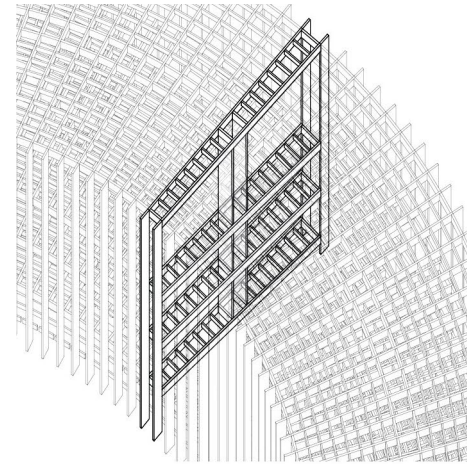
Road traffic plays, anyway, an important role: public transport and **shared cars** can, however, help to change course.

Public transport is strongly encouraged by electric bus and shuttles adding a bus stop directly connected to the building.

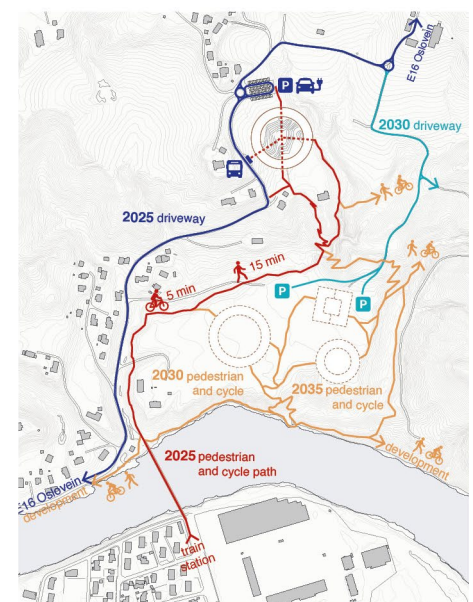
A dedicated zone for a car park is designed also as an exchange area for shared electric cars available to the inhabitants in order to promote mainly a cycle-pedestrian viability.

DEVELOPMENT STRATEGY

Hjertelia deserves a development that is not limited to an isolated intervention to the new building alone. It seems clear that, following the future expansion dedicated to residential areas, many clusters (hortus conclusus) must be arranged around an area dedicated to services (according to the development of the municipal urban plan) (6). All the interventions will be designed balancing green and built, nature and artificial.



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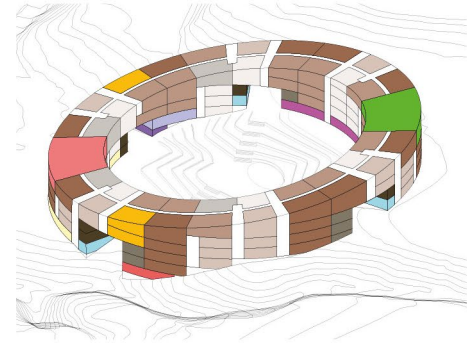
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We can clearly define the **stages of sequential development**. They are advantageous under various aspects, first of all the possibility of having the timing overlapped in the final phases of one and initial of the following so as to never have “time blocks” in which the system is stopped (6-8).

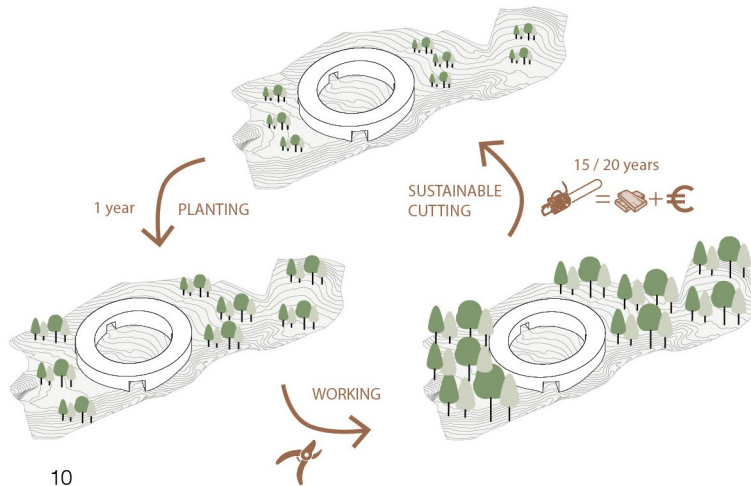
It aims to be mostly a self-powered system so, this is a fundamental aspect. Driveways are based on the existing road network, in order to maintain the **existing landscape balance**. The only change introduced concerns the moving of a small portion of the road at the border of the site project in order to get all the site available for the new building and dividing the residential area from the streets.

In the following phases (2030-2035) road connections are ensured by extending existing roads linking future interventions (8) (always with the aim of having a condition in which the normal daily life and the construction of future neighborhoods **can coexist in a non-traumatic way**)

Parallel to housing and mobility development, another fundamental issue concerns the **forestry cycle** (10). Trees are planted immediately and during their growing and partial - cutting cycle, they will produce economic revenues that will strengthen the system. At the same time, the forest will be managed in a sustainable way as not to compromise its integrity.



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A MIXED-USE SYSTEM

We think that the key to achieving a **metabolic and inclusive living environment** is to maximize the circumstances in which to meet, share interest and activities. This process must take place within the “cluster system”. For this reason, the building is conceived as a “meltin’ pot” of **common-use functions**, between the apartments, that can be easily reached from any area in order to not create closed and isolated “sectors” just with a function. Walking through “back to nature” we can meet different common facilities: café, bike storage, kindergarden, fitness and workshop areas, plant nursery, ateliers and elderly spaces (in the lower levels) surrounding and directly connected with the “hortus”. On the rooftop, we can find other common areas: indoor **hydroponic** greenhouse and a **shared terrace** where people can meet and socialize informally (green and pink areas in the scheme 9).

APARTMENT TYPE: *corridor 2.0*

The apartments system are conceived as distinct units but linked by a semi-public space. Usually the **corridors** remains a lost space, used for the sole purpose of arriving at one’s home. Here the corridors open into spaces that act as a filter area and at the same time can be used as a recreational, sharing area: **a living space**.

Inside, the building almost becomes a historic city with its alleys, narrow streets and “piazzas” (11). It appears clear also that two modules of apartment might be joined together to get bigger house.

Particular attention was given to the **stairs** which, colored, became points of reference for orienting oneself in the interior of “Back to nature”.



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ECOLOGICAL RESOURCE LOOP

The most important issue, as regards to the management of the internal hortus as a community garden, was that of the conservation and **reuse of water**. Through the use of a rainwater system and the positioning of rain gardens in the higher areas, the rain is captured and stored and then collected in a humid area in the center of the garden that acts both as a conservation tank and as a new habitat that gives a favorable microclimate for increasing the biodiversity of the area.

The roof inclination allows the correct positioning of photovoltaic panels that produce **sustainable energy** for the operation of the entire building.

The energy in excess can be stored in specific accumulators which also allow the charging of electric cars in the car sharing area.

LANDSCAPE SUCCESSION STRATEGY

The main aim of this green system is to be completely **self-sustainable and self-powered**. In fact, it puts first: the conservation and maintenance of an environment similar to that of the city of Hønefoss, the increase and spread of biodiversity and the sharing of resources. The first aspect of this important objective is solved by proposing a careful choice of herbaceous, shrubby and arboreal vegetation using species present in this area of Norway or in the fluvial areas of northern Europe.

Species therefore that are able to withstand both very long periods of cold, with possible winter frosts but also high humidity due to the presence of waterways. The second fundamental point is to increase **biodiversity**, this is a key aspect of the whole green system because biodiversity strengthens the productivity of any ecosystem (of an agricultural land, a forest, a lake, and so on).

Tree species: *Acer platanoides*, *Pinus sylvestris*, *Betula pendula*, *Betula humilis*, *Picea abies*, *Abies alba*, *Pseudotsuga menziesii*, *Alnus incana*, *Populus tremula*, *Sorbus aucuparia*, *Sorbus aria*, *Corylus avellana*. Shrub species: *Salix hastata*, *Salix lanata*, *Salix caprea*, *Dwarf Birch*, *Dwarf Juniper*. Each species, regardless of whether small or large, plays a specific role in the ecosystem in which it lives and precisely by virtue of its role helps the ecosystem to maintain its vital balance. In fact, the diversity of the species is present both at the herbaceous level and at the tree level; by inserting diversified vegetation, a more resistant and productive system of greenery is created. The last point is fundamental for the construction, within the hortus conclusus located at the center of the building, of a large system of cultivable **community gardens**.

This system of shared gardens will give the inhabitants of the area the opportunity to grow their own vegetables, thus procuring **zero-kilometer raw material**. This, in addition to making a significant ecological contribution to the whole area, allows the development of a more open and active community, which can establish a working and human relationship of collaboration.

PHASE 1: grass layer

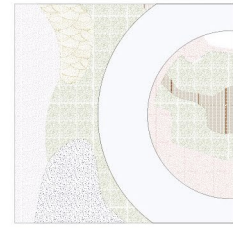
The lowest level of vegetation present in the area is designed with various herbaceous species to increase the biodiversity of the area and to maintain a relationship consistent with the wooded situation of the Hønefoss area. (12)

PHASE 2: trees and bushes layer

Over the years, in addition to the herbaceous species, the shrub species typical of these river areas of northern Europe will begin to populate the undergrowth of the area, thus creating a more compact and diversified vegetation. (13)

PHASE 3: herbaceous layer

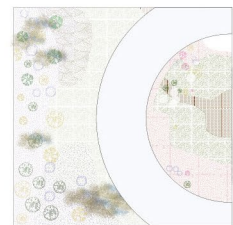
After about 10 years, even the tree species will have reached a considerable height and some will have even reached their maximum size. Outside the building are inserted mainly first and second magnitude species and it will take years, for them, to reach full maturity. Inside the hortus, on the other hand, third or fourth size species are planted that will have reached their maximum height. (14)



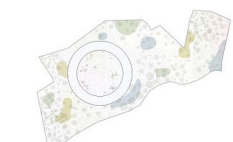
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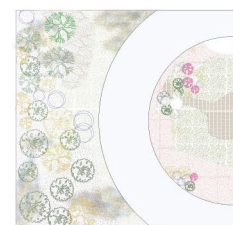
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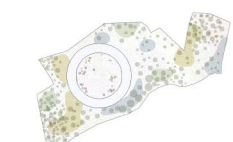
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13 - phase 2



10y.



14 - phase 3