

CULTIVATING SYNERGIES

Carouge | CH

A diagnosis

The Carouge-Fontenette area is at the same time the east end of Carouge, the entrance to the Geneva dense urban area and a place held between three strong landscape elements, the Arve river, the Champel cliffs and the agricultural lands. It has a huge potential of putting into interaction these spaces, activities, opportunities and uses.

The urbanization on the site first developed and transformed in the last century, but some of its open elements have been present since a long time, like the two cemeteries, the stadium of La Fontenette and the agricultural use of the plateau. Now that this area is quite central due to the expansion of the urban area of Geneva, there is a housing pressure and increasing prices. At the same time, an increase of unemployment in Carouge generates difficulties for local inhabitants.

Even though the neighborhood benefits from numerous sports facilities, indoor as outdoor, and has a rather low density, the lack of public space doesn't invite people to stay longer here. The pedestrian and cycle paths are interrupted by prominent roads like the Route du Val d'Arve. The smaller streets, although enjoyable, could become more attractive. Except for the rue de Veyrier and rue de Fontenette, which are urban green corridors, the site has structural brakes to ecological continuity.

The river is one of the few ecological corridors. Nowadays, the access to the river is not really comfortable, and the routes are interrupted. The neighborhood is rather looking towards the city center. Sport facilities, and roads break the link between the river and the district. The arrival of the CEVA in the last years also increases this fracture.

At the south of the area starts the agricultural landscape, covering a large area over the water table of the Arve. The agrarian plots are scattered by small woods, roads and suburban sprawl, forming a fragmented landscape, hard to access and grasp. On the other hand, this density of typologies is an opportunity for new ecological and local production methods.



A method

The proposal is not supposed to represent the final scheme of the new urban development. It is rather a process in which we propose a diagnosis of the site and a conceptual scheme that connects diverse potentialities of the site. In addition to this scheme, a toolbox, composed of diverse actions that could be implemented in the site, creates a basis for discussion in the frame of a collaborative project.

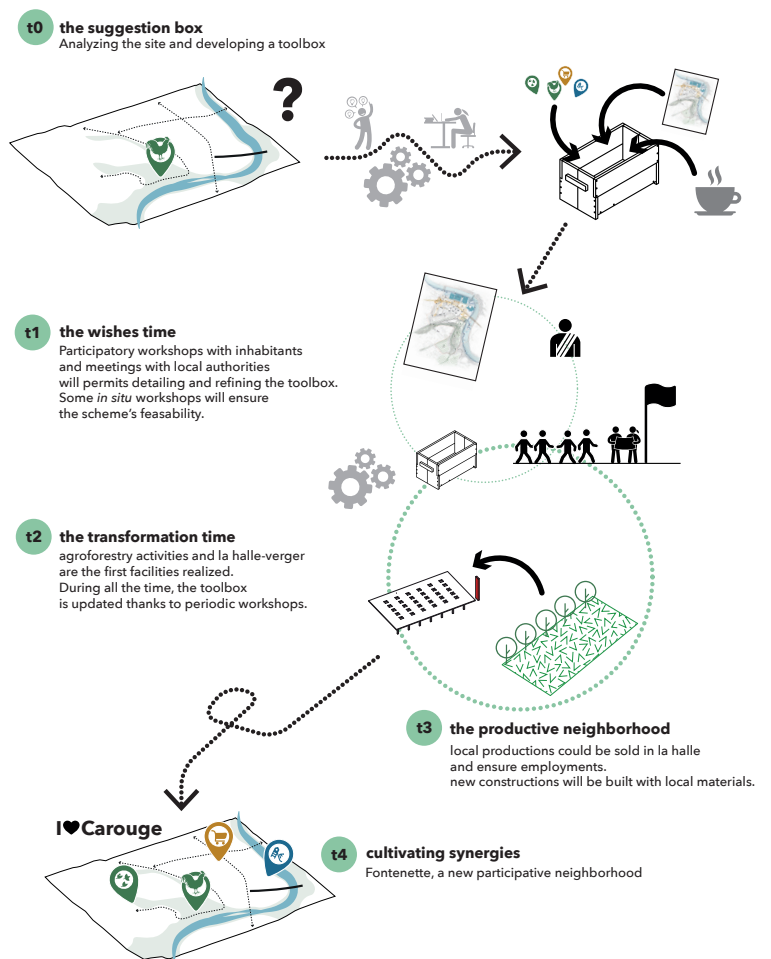
Our toolbox puts in perspective urban, social and environmental thematic, echoing the inhabitants expectations and actual challenges. The project lies in the process of boosting collective intelligence. Series of meetings, workshops, experiments with the inhabitants will foster the participation and the arising of new dynamics and interventions on the landscape of la Fontenette.

- *Step zero is the diagnostic and the proposal of a flexible global scheme also completed by a series of potential actions and interventions on the site, it is the ground toolbox for the future collaborative conception.*

- *At time 01, workshops and meetings will be organized with inhabitants, farmers and local authorities in order to define the wishes and the ambitions of the different parties for the site. This will allow to sharpen the general scheme and the possible projects.*

- *At time 02, the Halle will be used as a multifunctional space, to be a commercial covered market but also the platform of discussion for the urban project in progress. In front of the Halles, a plaza with orchards will be installed as a symbolic agrarian activity in the neighborhood.*

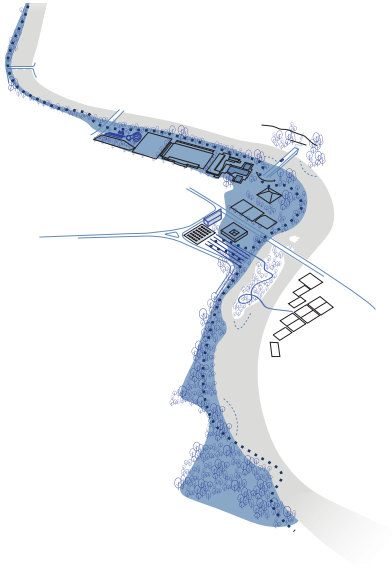
- *At time 03, small projects will be started on different areas of the neighborhoods with new activities, dwellings, urban and natural spaces. It is an iterative process in which the early results of the first operations return as a critical basis to update the collective conception for the next*



Along the next decade, Fontenette will benefit from new living, public and natural spaces. This will feed this virtuous circle, fostering social interactions and the ambition of setting the neighborhood in the transition. Cultivating synergies will be the future of Carouge-Fontenette!

Three axes for Fontenette

From the reading of the existing, three main axes of development seem to summarize the actions that can activate the potential of this neighborhood. These are the Urban spine, spanning from the Place du marché up to the new Halle-verger ; the Arve's Flow, this active landscape zone reactivates the Arve within the neighborhood ; and the Green net, this one extending rather towards the south of the site. The axes are on one hand conceptual programs and on the other hand, spatial intervention areas. The project connects the different dynamics of the site to create new opportunities.



The Arve's flow

Located in one of the river's loops, water was always taking part of Fontenette history. Today, the bank is mainly used by sports facilities. One of the key actions is to provide a continuous path along the banks that connects to the city centre and gives new perspectives on the river.

The sports activities will be slightly restructured to create more porosity both towards the river and the city. Obstacles to this continuous route will be readapted. Some new activities, such as playgrounds, art exhibitions, open running tracks etc. will be integrated along this path to attract new users.

This contemplative route branches out towards the Champel cliff with some climbing tracks and above the Île aux Castors connecting at the same time the area with Champel and Bout du Monde. A more natural flow of the Arve river could be consolidated through natural and hydrological small interventions.

The Green net

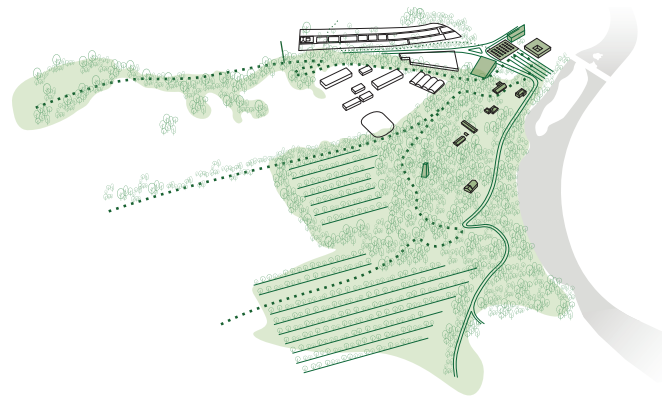
The green net is a superposition of layers of actions. The main goal is to create and reinforce ecological corridors all along the site and towards a wider territory.

The green net is partially made by the existing woods, in these the continuity of the green arteries will be reinforced, and soft paths for pedestrians with observation and educational features will give value to this urban forest.

In the urban area, ranges of trees and bushes and hedges, for example between the sports fields or along the streets will allow ecological continuities and give again the spirit of a thinner vegetal structure that this area had a century ago.

In addition, the green net is also about productive landscape. To reduce the rupture between woods and fields, we propose to implement the culture of agroforestry in the canton.

Agroforestry is a broad agricultural concept of trees association with crops or animal in the same unit of land unit (Nair et al., 2008)¹. It is formed in alley cropping: alternance of crop alleys and tree rows, under which can be found an understory vegetation strip. This system provides various benefits, wether economicals as the exploitation of the trees may provide another source of income, diversifying the farm activities. Nevertheless, mostly environmental, the trees reduce erosion and act as carbon sinks, helping mitigating greenhouse gas emissions (Kay et al., 2019)². This greater diversity in the parcel and the vegetation strip host a greater vegetal and animal biodiversity than a monoculture without, as sometime criticized providing a "reservoir for weeds" (Boinot et al., 2019)³.



1. Nair, P. K. R., A. M. Gordon, and M. Rosa Mosquera-Losada. "Agroforestry." in *Encyclopedia of Ecology*, edited by Sven Erik Jørgensen and Brian D. Fath, 101-10. Oxford: Academic Press, 2008. <https://doi.org/10.1016/B978-008045405-4.00038-0>.

2. Kay, Sonja, Carlo Rega, Gerardo Moreno, Michael den Herder, João H. N. Palma, Robert Borek, Josep Crous-Duran, et al. "Agroforestry Creates Carbon Sinks Whilst Enhancing the Environment in Agricultural Landscapes in Europe." *Land Use Policy* 83 (April 1, 2019): 581-93. <https://doi.org/10.1016/j.landusepol.2019.02.025>.

3. Sébastien Boinot, Guillaume Fried, Jonathan Storkey, Helen Metcalfe, Karim Barkaoui, et al. *Alley cropping agroforestry systems: Reservoirs for weeds or refugia for plant diversity? Agriculture, Ecosystems and Environment*, Elsevier Masson, 2019, 284, pp.106584. <https://doi.org/10.1016/j.agee.2019.106584>.hal-02620662

The Urban spine

The main axis of Carouge ends nowadays at the rue de la Fontenette, the concept is to pull the wire up to the end of the neighborhood. By giving a more structured urban pattern to the area, transforming the profile of the streets, densifying and bringing new activities, Fontenette will gain attractivity.

Due to the configuration of the site, only a small part will be densified. The new constructions should respect the existing typologies and sizes and use local and ecological materials. The new dwellings should be affordable, flexible and provide relation to exterior space. On the whole site, more space will be given to pedestrians and cyclists both on the main axis but also on a secondary net of smaller connection routes.

The Fontenette - Veyrier crossing could be transformed and optimised as a green plaza with large restaurant terraces, reduced traffic and offering new activities on the ground floor. The route de Veyrier will be planted and appeased with large pathways and new built fronts on both sides. Along the street, new social places are created like shared gardens and temporary event places. Secondary streets such as Chemin du Centurion will also be adapted to host new constructions and more practicable and pleasant public space.

At the east end of Carouge, a new public square on the banks of the Arve will be created. The Halle technique of the SCV could be used as a covered market and a multifunctional place for the area's public life. The office building could be used as a hub for associations. The plaza would be a fusion of the different characteristics of the area with a direct relation to the water, an orchard for urban fruit culture and a very active urban space creating echo to the Place du marché de Carouge.

