

## BARCELONA (ES)

# DE REC A RIU

“De REC a RIU” points to a fertile area between two water streams, now blocked by railway tracks, old structures and a lack of clear order and identity. We propose to expand it and turn this in-between into a horticulture reserve for a productive city, i.e., a city where production is found at all scales, and where all the cycles are sustainable and carefully optimized. We also understand it as the clever combination of the benefits of traditional production -*the quality of km.0 products, waste recycling and connection with domestic realm*- and the modern techniques -*direct consumption, passive energy, variety of choice, lesser involvement in production*.

To reach this goal, we propose to put in value the history, geomorphology and urban conditions of Vallbona by providing simple guidelines for a sustainable development of this land. We opt for taking advantage of the future tunnelling of the railway tracks in order to provide for a new *soft* centrality for this valley, an axis that could smooth the connection with the Besòs River, improve the local mobility and to support the accesses to the new productive units and dwellings. By listening to the force of the water system, we finally propose a new way of dividing the land at multiple sizes and for multiple actors. Ranging from the large territorial dimension to the small housing scale, **De REC a RIU** aims to be a synthetic answer to the multiple pressures that are flying over this fragile in-between.

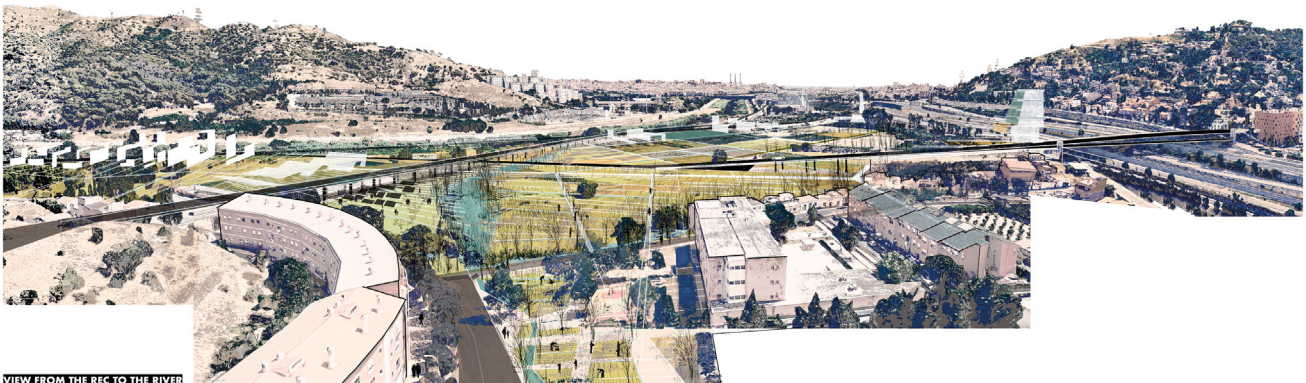
**XL**

Vallbona hosts the latest and largest agricultural land between the Rec Comtal and the Besòs River. For decades now, it has been subject to several urban plans aimed at densifying the site with city blocks, infrastructures and anthropic pressure.

### **Why not expand it and turn this leftover land into a horticulture reserve for a productive city?**

Three actions are proposed at this level:

1. All the land between the Rec Comtal stream and the Besòs river may be restored to its original condition as a fertile agricultural field shaped by the existing water streams. The aerial view taken in 1956 is an eloquent image of this approach.
2. The site is surrounded by metropolitan parks and free spaces linked by important pedestrian itineraries (GR 92 and Parc del Besòs). Opening up Vallbona's agriculture fields could easily reinforce a biological corridor for flora and wildlife through the Turó de Vallbona. The reforestation of the hill with local species, the renaturalization of Torrent de Tapióles and the tunnelling of the train are three key operations to achieve this goal.
3. Due to the low level of the farmlands of Ponderosa in relation to Besòs River, the whole area between the Rec and the river is subject to flooding in a 250-500 year-return period. The decision to increase porous ground is a resilience strategy in which water is not contained but led throughout the land in a natural way.



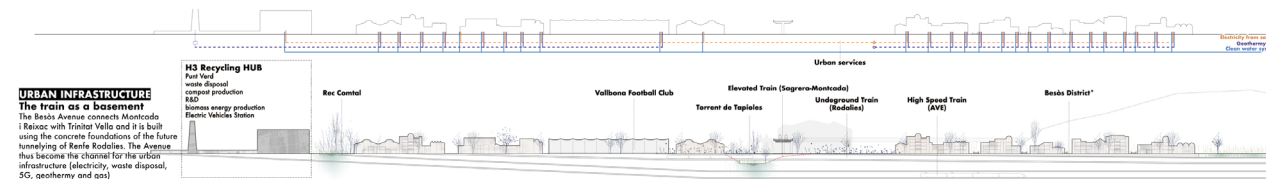
Vallbona is the territorial and geometric center of a number of neighbourhoods endangered by a high level of social vulnerability and inequity: Ciutat Meridiana, Torre Baró, Singuerlín, Montcada i Reixac (Can Sant Joan) and Trinitat. Although they are crossed by arterial infrastructures, they are poorly connected to the rest of the metropolis and they also suffer from a fragile relationship between them. Vallbona is now just a residuary space embedded amidst grey and hard infrastructures of strong (and everlasting) presence.

## Why not turn Vallbona into a new *soft* centrality by taking advantage of the shadow of the infrastructures of the site?

Let's return to the essence of recycling: taking into consideration that the infrastructures have a great and indeleble impact on the place, the project takes advantage of their presence to support the new productive structures and dwellings.

The foundation of this productive city will be based in a new (1) *cardus* and (2) *decumanus*, (3) the elevation of the railway tracks (RENFE) and (4) the pacification of the C-17:

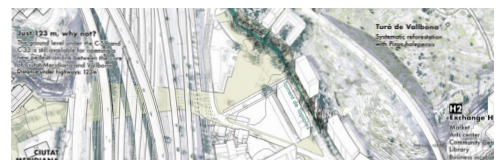
1. The new *cardus* is the Besòs Avenue, a new axis that connects Montcada i Reixac with Trinitat Vella and it is built on top of the concrete foundations of the future tunneling of Rodalies Renfe. On one hand, the Avenue is a channel for the necessary contemporary urban services. On the other, it will be a civic and landscape axis defined by its openness and asymmetry. On the one side, the Avenue opens gradually to the Besòs River, reconfiguring the hard protection wall into a system of smooth slopes. The other side of the street is defined by the rhythm of the accesses to productive gardens and dwellings: a reinterpretation of "suburban lines" of historical agricultural villages. So essential.



2. The second main axis or *decumanus* is given by the existing bridge over the C-58 and C-17 that connects Vallbona to Ciutat Meridiana and the Metro station. We propose the demolition of the descending curve to Vallbona and to extend the straight alignment towards Besòs River and beyond, to Serralada de Marina. At the crossing points of both axis the center of the Productive City appears. So simple.



3. Nowadays the Rodalies RENFE linking Montcada with Sagrera acts as a strong barrier between the Rec and the River, blocking views and water flows. We propose to adjust the geometry of the existing tracks and transform it into an elevated viaduct in order to provide fields of a higher connectivity, a (re) preservation of the ecosystem and continuity for pedestrian and urban connection. The space beneath is used as an open market and to relocate the necessary access to Vallbona. So strategic.



4. The viability of the proposal in terms of metropolitan roads rests on the activation of the new Besòs Avenue and on the progressive urbanization and pacification of the C-17 road. Even more. To enforster the quality of Vallbona as a new centrality, there is still a possibility to open a wide promenade linking to the core of Ciutat Meridiana (and Torre Baró Station). At this point only 123m must be opened to pass under the bunch of highways that now blocks the natural connectivity of people and water. Why not?

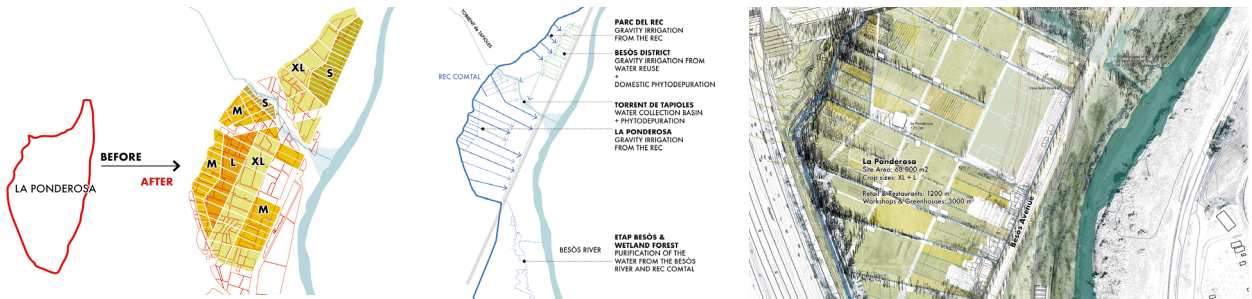


For centuries, the layout of the Ponderosa has been shaped by water requirements. However, new constructions and facilities have imposed over years their own hard logics. If agriculture is the base of sedentary life and -therefore- the origin of cities...

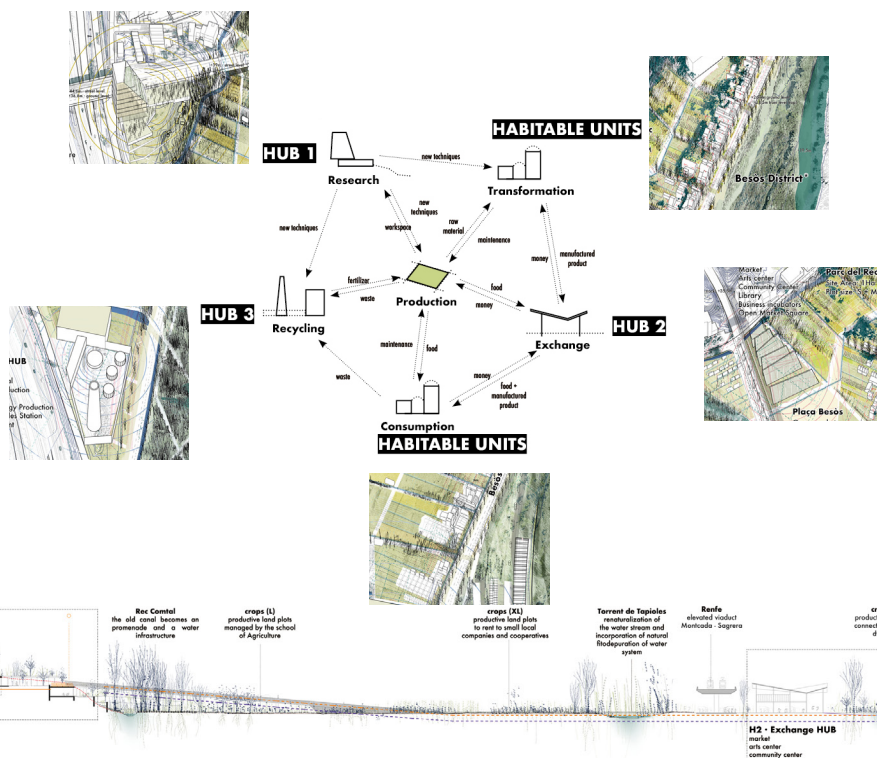
## Why not rethink agriculture as the core of a 21<sup>st</sup> Century productive city?

In order to set agriculture as the driven-force for the whole area, some decisions have been done:

1. Recuperation of the water logics to draw the parcellation lines. The Rec Comtal is the main channel from which the water flows. It creates a regular pattern which is able to host agriculture plots of different sizes and the installation of dwellings, workshops, greenhouses, shops and warehouses.



2. Reinforcement of the existing geological agents that historically shaped the site. This is the case of the Torrent de Tapioles, a stream which collects water and also connects Vallbona to Ciutat Meridiana. We propose to turn it into a biological connection, a new attraction for leisure activities and an active element for natural phytodepuration of Vallbona. It also links Vallbona and the new Besòs District transversely and configures the Plaça Besòs which holds an open market, traveling fairs and other leisure activities.
3. Allocation of a net of productive HUBs as condensers of social, economic and ecological assets. They are places and architectures which enforces a self-sustainable and flexible cycle comprised of: **Production, Research, Transformation, Exchange, Consumption and Recycling**. The food harvested in the lands is either consumed by the own inhabitants of Vallbona or exchanged at the market (Exchange HUB 2). All the waste is brought to the Recycling HUB (3), transformed into fertilizers, recycled or converted into clean energy. Finally, the goal of the Research HUB (1) is to collaborate with Universities and locals to progressively bring new techniques into both Production and Recycling. HUBs are iconic installations which will give a powerful identity to the place as well as making visible the potential of silent agriculture.





The changing needs and requirements of 21st Century society are asking for flexible, affordable and zero-energy forms of housing which might be combined with economical and productive activities.

### Why not imagine the Vallbona Productive City as a flexible combination of simple habitable units?

New dwellings, workshops, warehouses and shops are placed along the Besòs Avenue and are understood as porous constructions structured by open and green atrium. The Besòs District would be the first step on this city. The following guidelines will lead the construction of this mix-use neighbourhood:

1. **Land division:** The building plots follows a pattern of 5m-wide division and the depth of the buildings must leave free a minimum of 15m as a backyard for agriculture production. Each unit is thought to be developed in different phases and the number of floors can be adjusted according to each scenario (see pl.2).
2. **Construction:** The housing or productive units are defined by the space between structural cores made of earth walls coming from the material of tunneling and elevating the trainlines. They host the main wet areas. Access is provided through the open/green atrium. With this layout, a huge variety of types can be achieved (module 5x5m). Materials are meant to come from the proximity and are expected to give a powerful image to the city landscape: greenhouses, wood panels, earthwalls and inclined roofs.
3. **Typology toolkit:** The construction of the dwellings and productive units is based on the combination of simple elements. *Green Atriums*, *Rooftop Greenhouses* and *Productive Terraces* are community but also small-scale production spaces linked to the dwellings. The *Habitable spaces* (dwellings and workshops) are located between the earth-wall *Access Cores* which concentrate vertical mobility and wet areas. The rest of the building is built on a wood framework structure which is optimal for variable housing typologies. *Collective Greenhouses* are also spread through the Avenue, providing for flexible spaces for intensive production and/or social events.
4. **Sustainable development.** The new Besòs District and the way it is built allows different types of development, to ensure a wide range of different tenants. 40% of the buildings are designed to be rented as social housing, another 40% is expected to be managed by VALLCOOP cooperative and, finally, 20% might be accessible to private investors.

