

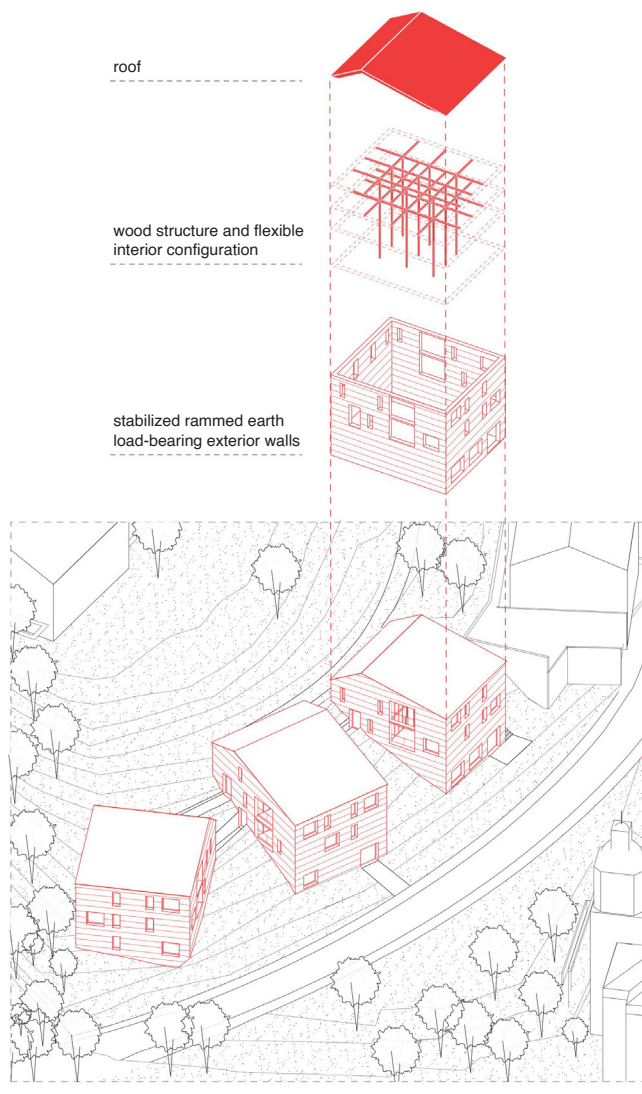


UP THE HILL

EUROPAN 16
Beizama (ES)

The architectural proposal

UP THE HILL is a social housing project that seeks to explore a new concept of living and working that unfolds in the context of the rural environment of Beizama (Basque Country, Spain). Main aspect of our design proposal was to actualize an innovative residential model, one that combines multiple scenarios of working from home with the direct relation to the rural context, in such a way that the contemporary needs are introduced back into a dynamic and circular connection to nature. It was of great importance for us to maintain a balance between the intervention and the landscape, so that the project essentially becomes part of the village, standing in dialogue with the environment, both natural and built.



basic components derived from the traditional 'baserri' typology

Part of this intention was our decision to maintain the scale of the local built environment, by proposing three separated volumes 13m x 15m, instead of a single building unit. Each volume is situated on the plot at a different angle, a configuration that both takes advantage of the orientation in order to optimize the lighting conditions and achieves a plurality of different views of the exterior. At the same time, by following the orientation of the nearby buildings, a sense of tacit order is established, in accordance to the existing village typology.

The challenge of the steep inclination of the plot was solved by placing the three buildings partly inside the hill, connected to one another in different heights by exterior paths that cross the plot horizontally. Except of their role in distributing the movement around the plot, these paths act as exterior communal spaces for the residents. The part of the slope between the buildings remains mainly untouched and natural, so that the volumes appear as if emerging from the landscape, integrating seamlessly with the environment. This organic relationship between the built and the un-built, where both coexist in a dynamic yet organic way, constitutes one of the principles of our design proposal. The new typology emerges as a hybrid outcome of the types of the detached housing and the multiple apartment building, empowering the interaction among residents and the nature.

The architectural proposal draws from the interpretation of the traditional farmhouse found in the region, the *Baserri*. Examined as an example of successfully intertwining living and working into the same unit, as well as one that accommodates more than one family, this typical building typology appeared as closely corresponding to the competition's briefing of having a space where productive activities can take place inside the house. The core elements that we translated into our design are the thick load-bearing exterior walls, which result to a large solid-to-openings ratio on the facade, the wooden structure of beams and columns in the inside that bear the potentiality of an open plan configuration and the pitched roof.

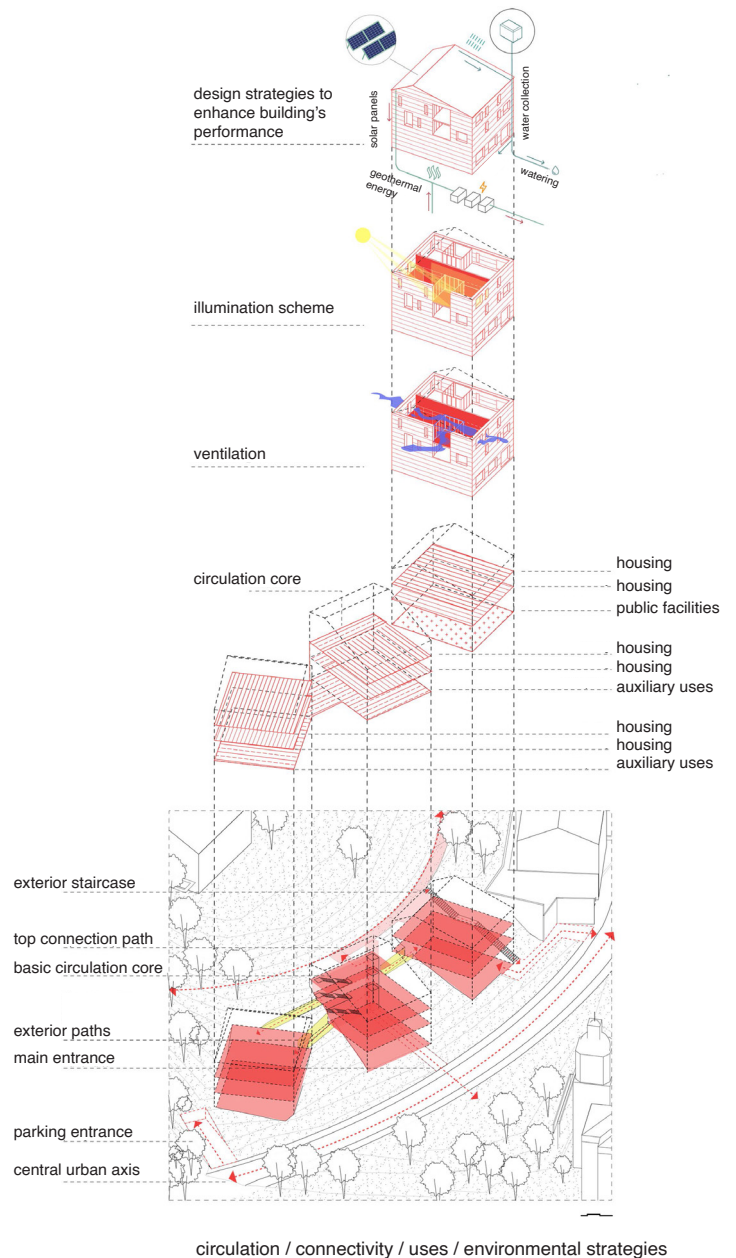
The volume in the middle of our proposal, houses the main entrance and the vertical connection and distribution system for the other floors and volumes. It also links the entrance level (+0.0m) to the pedestrian track on the top of the slope (+10m), which allows all residents to reach their house also from the top. In addition, we propose the construction of an outdoor staircase on the side of the plot closest to the center of the village, where the inclination of the slope is adjusted in order to allow better light and ventilation for the dwellings of the first and second floor. The entire ground floor of this particular building takes up the public facilities use, on account of the closer proximity to the central square and the rest of the village. On the opposed side of the plot, a car ramp located near the village's west entrance leads to the ground floor indoor parking space, which is connected vertically with the rest of the complex via the elevator and staircases located in the central volume.

Materiality and energy-saving solutions

Towards the achievement of a low-maintenance and energy efficient solution, we suggest the use of sustainable building materials that can be locally acquired. The building structure consists primarily of stabilized rammed earth, a technique used for the formation of the load bearing exterior walls, and oak wood, which comprises the interior skeleton supporting the floors and part of the pitched roof. The idea of rammed earth came forth as a solution for repurposing the large amount of on-site soil that will have to be excavated from the plot during the first stages of the construction. The consistency of the mixture of aggregates used is enhanced with a percentage of cement, so that the walls gain in endurance and resistance to the elements. In addition, rows of mud bricks are placed horizontally on the exterior surfaces of the walls, in order to redirect water from the rammed earth surface and prolong the material's life. Rammed earth is also beneficial due to its inherent thermal insurance properties and its lack of maintenance need, once the project is finished. Apart from these advantages, the choice of rammed earth supports the idea of the three volumes emerging out of the landscape, as they are actually formed by the same exact material.

The interior structure, namely the columns, beams, flooring and partitions are made of oak wood, a choice that makes sense in terms of both being locally produced and sustainable, when regulated lumbering is assured. The window frames are also made out of oak wood, as another solution would not comply with the natural character of the rammed earth.

In addition, energy saving solutions such as a geothermal heating system are considered, as it appears that the region is suitable for such a practice to be developed. Solar panels on the roof could cover part of the need for electricity during the day-time hours on sunny days and a rainwater collection system could store sufficient amount of grey water to be used for domestic needs and watering of plants, considering the fact that Beizama's rainfall rate is relatively high.



Apartment typology

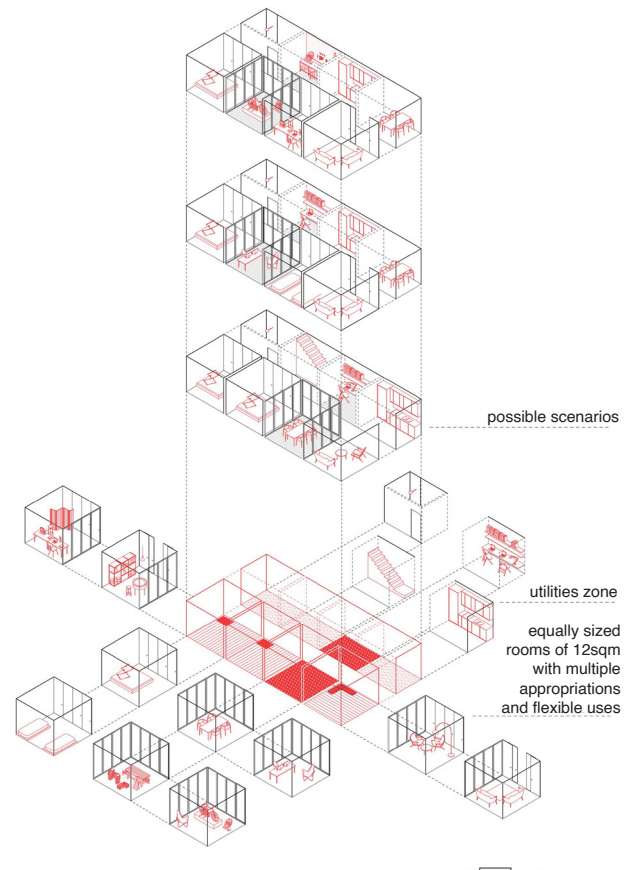
The typology consists of four different rooms with the same size along the biggest façade, one of them exterior, allowing flexible uses and appropriations by the inhabitants. Each room is placed within a grid of 3,50 x 3,50m. Parallel to these rooms, a narrow row of spaces placed within a grid of 3,50 x 2,50 m houses all the utilities and wet areas. By building permeable and movable walls like folding wooden doors and windows, each room can be totally open or closed to the next, allowing a diverse range of possibilities according to the inhabitants wishes and desires.

The floors that accommodate the residential use (first and second) in each volume are organized as follows: the configuration of the interior is resolved by using a grid of 9 wooden columns (3x3), placed in the center of the volume and detached from the exterior walls. The middle row of columns forms an interior permanent wall that crosses the volume in length and divides the floor in two, providing a housing unit on each side, hence 2 apartments per floor and 4 per volume. A centered utilities zone is formed along both of the sides of this wall and takes up the wet areas of the apartments (bathroom, kitchen). Hence, a corresponding vertical plumbing system is achieved throughout the entire volume. The rest of the uses (one or two bedrooms, working space, living room, dining area) are developed on the periphery of the volume, where the lighting and ventilation conditions are optimal. In that way, uninterrupted views of the exterior are achieved in those areas mostly used during the day.

The interior balcony: a hybrid space

One of the most amazing things of living in a rural environment is the fruition of the outside. With that in mind, we thought that each apartment should have a generous balcony where one could eat, work, rest, play, dry their clothes, protected by the sun or rain. Also, the particularly steep form of the plot's terrain raised the question of how we could come up with a solution which allows natural light to enter the areas that are located in the back, where the volumes are partially buried in the slope.

formation of the living-working typology



Bearing in mind this challenge, we introduced the element of the interior balcony, a room that is in a way both an interior and exterior space, on account of being open but still protected by the elements. We carefully located balconies on each side of the volumes, allowing every housing unit to have its own, so that natural light and proper ventilation is achieved in the whole of the housing unit. The space of the balcony is equal in size to any other of the four rooms forming the apartment, and can take up a plurality of uses. We envision the working space located in close proximity to the balcony, in case the residents working from home need extra space or the nature of his/her profession dictates to work in the open air.

There are 3 different apartment typologies:

- T1 one-bedroom apartments x 4
- T2 two-bedroom apartments x 6, including an apartment that can be adjusted in order to accommodate persons with disabilities
- T3 two-bedroom duplexes (floor+loft) x 2

Area of a typical T2 apartment

Living Room + Kitchen	20 sqm
Bedroom 1	12sqm
Bedroom 2	12sqm
Bathroom	4sqm
Interior working space	8sqm
Entrance - Hallway - Storage	4sqm
Balcony (half)	6sqm
Total	66sqm

General Buildable Parameters

Ground Floor	$800\text{sqm} + 238\text{sqm} =$ 1038sqm
Garages, auxiliary uses and apartment entrances	800sqm
Public facilities	$195\text{sqm} + 43\text{sqm (mezzanine)} =$ 238sqm
Dwellings $13\text{m} \times 15\text{m} = 195\text{sqm} \times 6 =$	1170sqm

Public Space Strategy

Despite the limited number of people currently living in Beizama, we anticipate that the implementation of the social housing project will invite more inhabitants, such as young couples and families. In order to create more opportunities for the old and the newly arrived inhabitants to gather, engage in activities and socialize, an enhance of the existing public space is considered important. Towards that direction, in addition to the square that already exists between the church and the town hall, whose important role as a point of reference for the people of Beizama is recognized and preserved, we suggest the creation of an open-air public space where the natural element prevails, placed in the opposite side of our building site. A modern playground, as well as urban furniture, such as benches and tables to play chess, will appear under the trees, creating a welcoming atmosphere that both locals and visitors enjoy. Part of the proposal is also the relocation of the existing parking spots to the periphery of the village, so that wide pedestrian paths are formed and the view on the road level remains uninterrupted. All public spaces are designed bearing in mind the need for accessibility, so elements such as low-inclined ramps are implemented, when required, in order for everyone to circle around the site.

aerial view

