

SA MURALLA

Public rental housing development
in Ca n'Escadell, Eivissa

CONCEPT

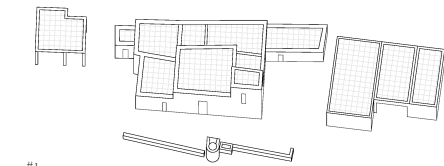
The project is based on the reinterpretation of the rural built heritage of the island of Eivissa, the largest island of the Pitiusas, and its application to the contemporary needs of the housing development in Ca n'Escadell. The proposal regains the vernacular systems of the past architecture for harnessing natural resources linked to the territory.

TERRITORY

Sa Muralla starts with the objective of reconnecting, on a territorial scale, the "Serra d'Eivissa", which is located on the west of our site, with the town and historic center in the southeast. This connection will be possible through a new green axis that crosses the E-20 Highway and extends longitudinally to the sector of the intervention, Parc des Putxet.

The path invites the user to approach different heritage traces, and it merges with the urban built environment until it reaches the sea: the beach of "Ses Figueres". In a perpendicular way, three new axes are traced in order to connect both sides of the park, that are currently disconnected, and at the same time, structures the new public rental housing development.

In line with the constellation of existing rural heritage of the island, the structural element in the project is the "feixa", a stone retaining wall that organizes the productive landscape of the area, generating terraces to control the topography, hydrology, and former agricultural cultivation.



#1 CAN TOMEU JAUME BEFORE 1798
Traditional rural house located on dry land. The property is the old rural house of Can Tomeu Jaume, a clear model of Ibiza rural architecture, which has been documented since at least the first third of the century XVIII. Its typology maintains the typical traces of the houses of the rural island environment, with several rooms arranged around a large room (porch). (Source: *Catàleg Municipal de Patrimoni Històric de l'Ajuntament d'Eivissa*).

#2 CAN TONI TOMEU XIX CENTURY
Traditional single-storey rural house, fully glazed and whitewashed. The access door to the porch is preceded by a porch with arches. It has undergone several reforms that have altered the original configuration, however, traces of the past architecture can be identified. As an element of interest, it preserves the era, located on one side of the access road. (Source: *II. SERRA, Inventory of rural architecture of Ibiza as cited in Catàleg Municipal de Patrimoni Històric de l'Ajuntament d'Eivissa*).

#3 SES CASES NOVES DE CAN TOMEU AROUND 1914
Traditional rural house that externally has the appearance of a modern house, the result of the reforms that have been carried out in recent decades and that have erased its traditional character. Even so, the main core retains much of the original layout with a rectangular porch through which the rest of the out-buildings are accessed. Inside, different elements of interest are preserved, such as the wall cupboard with wooden leaves and the cistern with the mouth integrated into the front wall of the porch, touching the door. (Source: *II. SERRA, Inventory of rural architecture of Ibiza as cited in Catàleg Municipal de Patrimoni Històric de l'Ajuntament d'Eivissa*).

#4 CAN XICU DE CAS MUT XI CENTURY
Traditional single-storey rural house, which originally adopted an L-shape, with two bodies the kitchen, with N-S orientation, and the living room and bedrooms, E-W, with a facade facing SW, preceded by an exterior porch on four pillars (L...). In the center is the entrance to the room, with a wide door in the central part and two windows, one on each side. On the west side, the building extends into a set of courtyards aligned with the volume of the kitchen. At the back, the era is preserved. (Source: *Catàleg Municipal de Patrimoni Històric de l'Ajuntament d'Eivissa*).

#5 FEIXES
The wall of "pedra seca" defines the identity of the rural landscape of Ibiza as structures the territory. In this particular area, the stone wall acts as a "feixa", an element that contains the land of several levels of terraced arable land and allows the collection of water for its use.



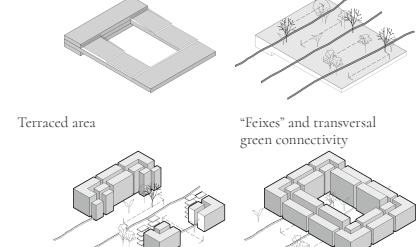
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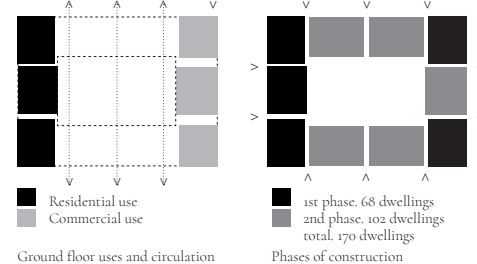
PARK

The "feixa" or retaining stone walls structure the park and divides it into permeable terraces, following the functionality of the past.

The water is sought to infiltrate as soon as it precipitates through the walls. The terraces prevent runoff from increasing as they go down the slope of the terrain, causing water to stay in place. In consequence, the water infiltrates into the soil and contributes to the improvement of the state of groundwater. With this concept, the park is designed, creating both naturalized streets and paths.



1st phase - 68 dwellings Partial execution of the housing block
2nd phase - 170 dwellings complete execution of the housing block



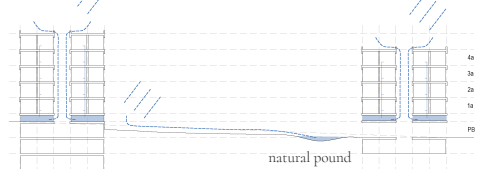
TRANSITION TO THE BUILDING
The urban plan proposes the construction of four aligned dwelling blocks between the new park and the existing urban grid. One of those, is developed in this project. These buildings act as a filter between the landscape, the urban grid, and the housing.

The "feixes" are brought to the ground floor of the block, creating a transverse circulation between the urban grid and the park. These walls organize the park topographically and follow the architectural heritage. This small walls get an organic shape while disappearing to generate different spaces and atmospheres in the inner courtyard of the block.

BUILDING
The design of the building aims to avoid a rigid and stagnant scheme, opening up on the ground floor to Park d'Es Putxet. The established axes lead to the access of the building. These accesses are vertical elements that separate the dwelling units and are conformed by a staircase and elevator.

Bioclimatic architecture concepts are used to achieve hydrothermal comfort without the need for excessive artificial systems. The building functions like a large chimney that constantly ventilates during the summer. The air circulates mechanically through the parking areas, cooling down, and then rising towards the dwellings through convective currents that generate a constant airflow. Additionally, the concept of the material inertia is highly present in the project, where the stone walls are used to attenuate the temperature.

Furthermore, the building is used for water resource collection. Eivissa is a small island and has very limited drinking water. When this fact is combined with an increase of population during the summer season, water becomes a highly precious resource. Rainwater is stored in the intermediate zones of the building, helping to cool the air and generate the airflow previously mentioned while serving as a reserve for domestic use.



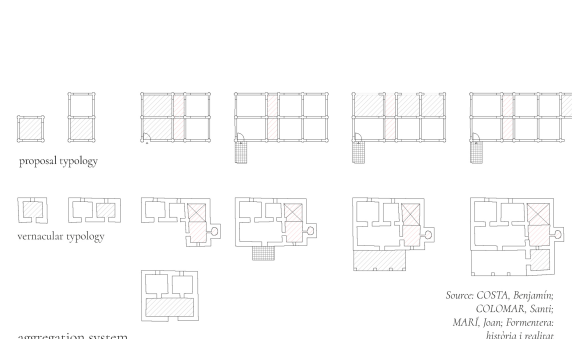
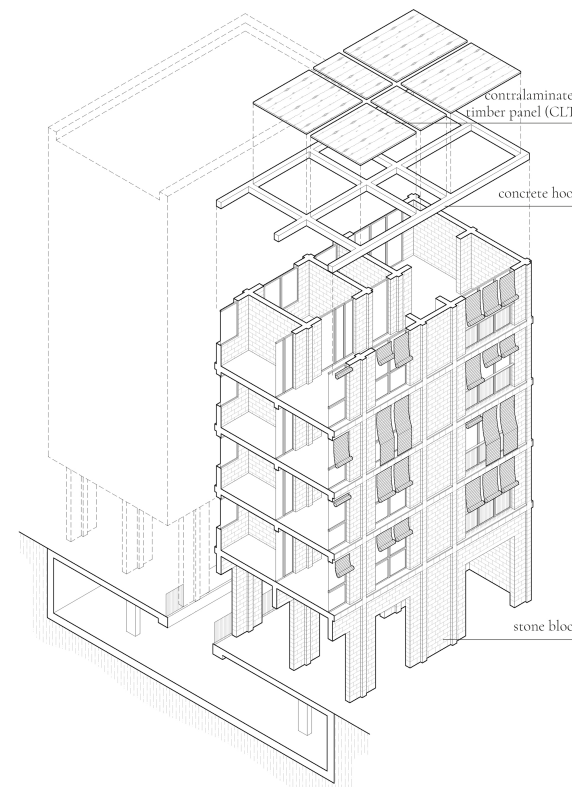
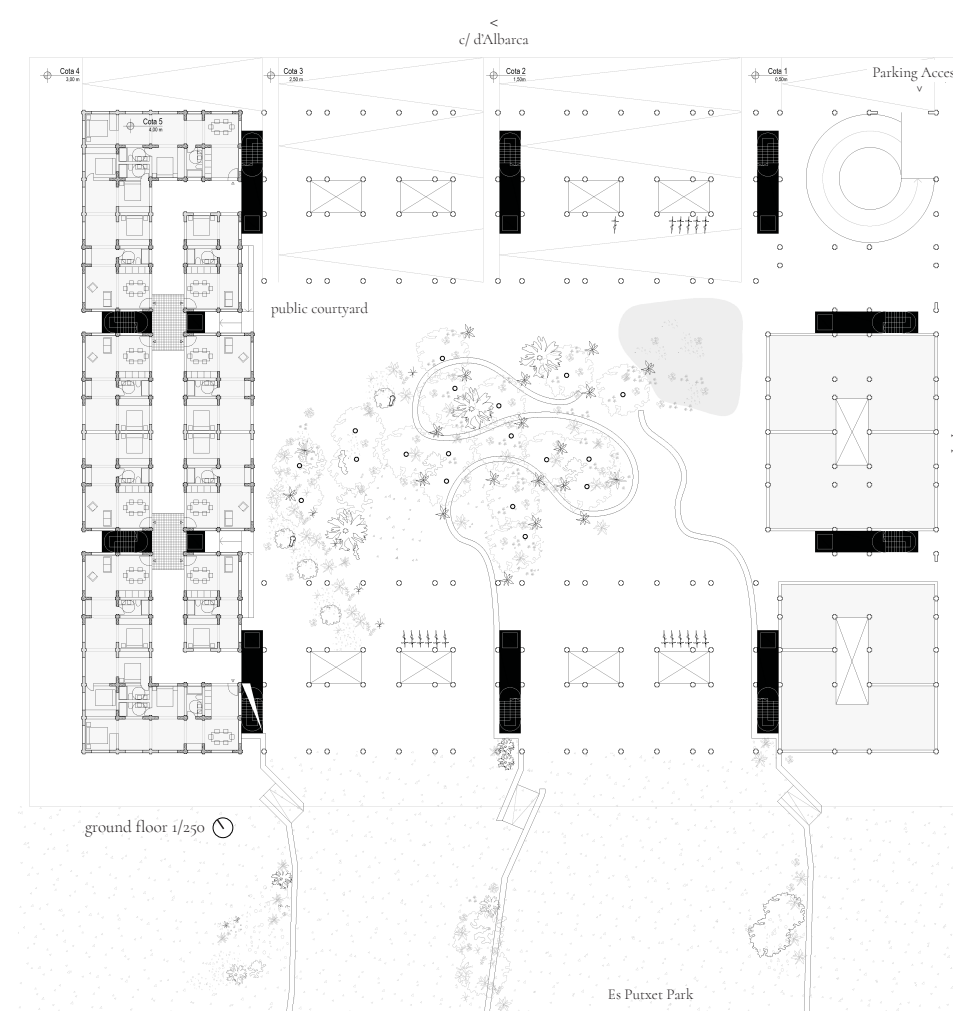
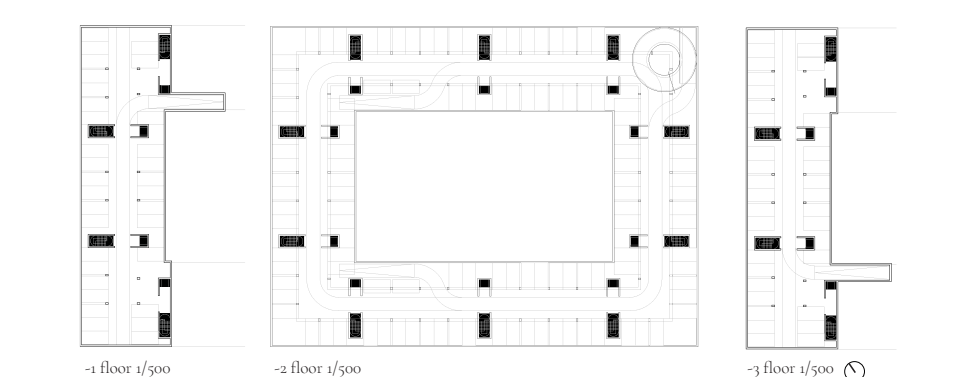
Winter scenario - climatic strategy



Summer scenario - climatic strategy



Bioclimatic sections 1/500



TYPOLGY
The traditional system of rooms aggregation is based on the indispensability of a unit that concentrates the main activity and grows by adapting to the users' needs. In this project, the basic unit of habitability is formed by three essential living functions: eating (kitchen), hygiene (bathroom and cleaning), and living. Additional rooms are annexed based on the user's vital needs. The housing typology, through the system of linear aggregations, generates connected spaces. On the one hand, the spaces can aggregate to the living room in a longitudinal direction. On the other hand, it serves as a space that supports the room in a transversal way.

These intermediate spaces behave differently thermally depending on the time of the year. In winter time, the mass of the stone facade functions as a heat collector, and its high inertia helps control the interior temperature. In contrast, during the warmer months, the intermediate space is perceived as a semi-external covered space that contributes to the ventilation of the interior of the dwelling.

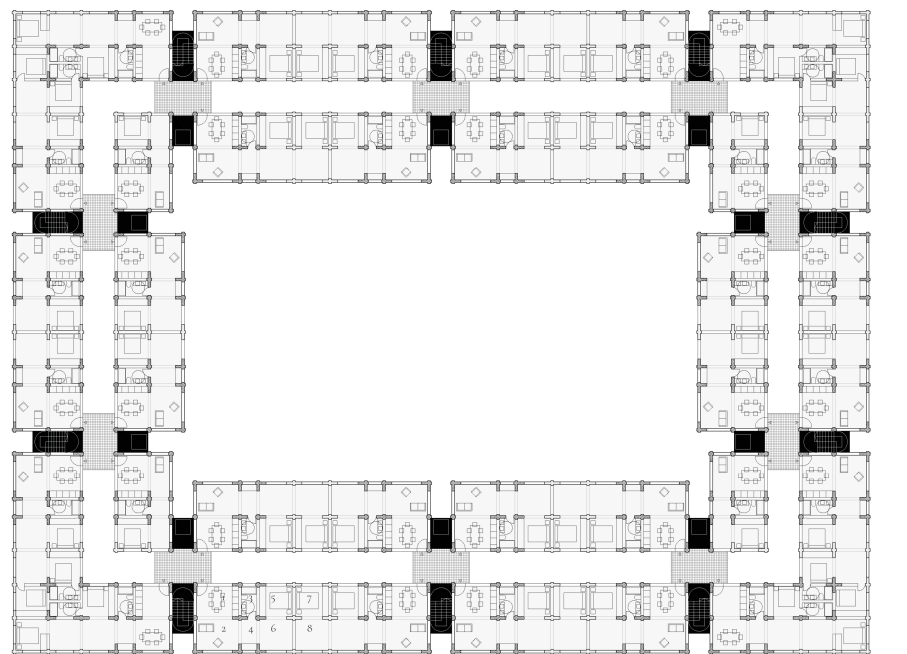
MATERIALITY AND ATMOSPHERES
The main idea to explain the urban and natural landscape of vernacular architecture in the area is the construction based in dry stone.

Characterizing the stone piece and its arrangement as a wall, Sa Muralla represents an architecture of matter. The massiveness of the stone takes a center stage and the architecture of lightness of the CLT (cross-laminated timber) reinforces the former element.

Spatially, the language of the stone behaves in such a way that the other elements are subordinate to it.

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Housing unit - 4R

1. Kitchen	11,50 m ²
2. Living room	10,00 m ²
3. Bathroom	4,20 m ²
4. Hall	4,20 m ²
5. Room	10,00 m ²
6. Room	10,00 m ²
7. Room	10,00 m ²
8. Room	10,00 m ²
Total	70,60 m ²

