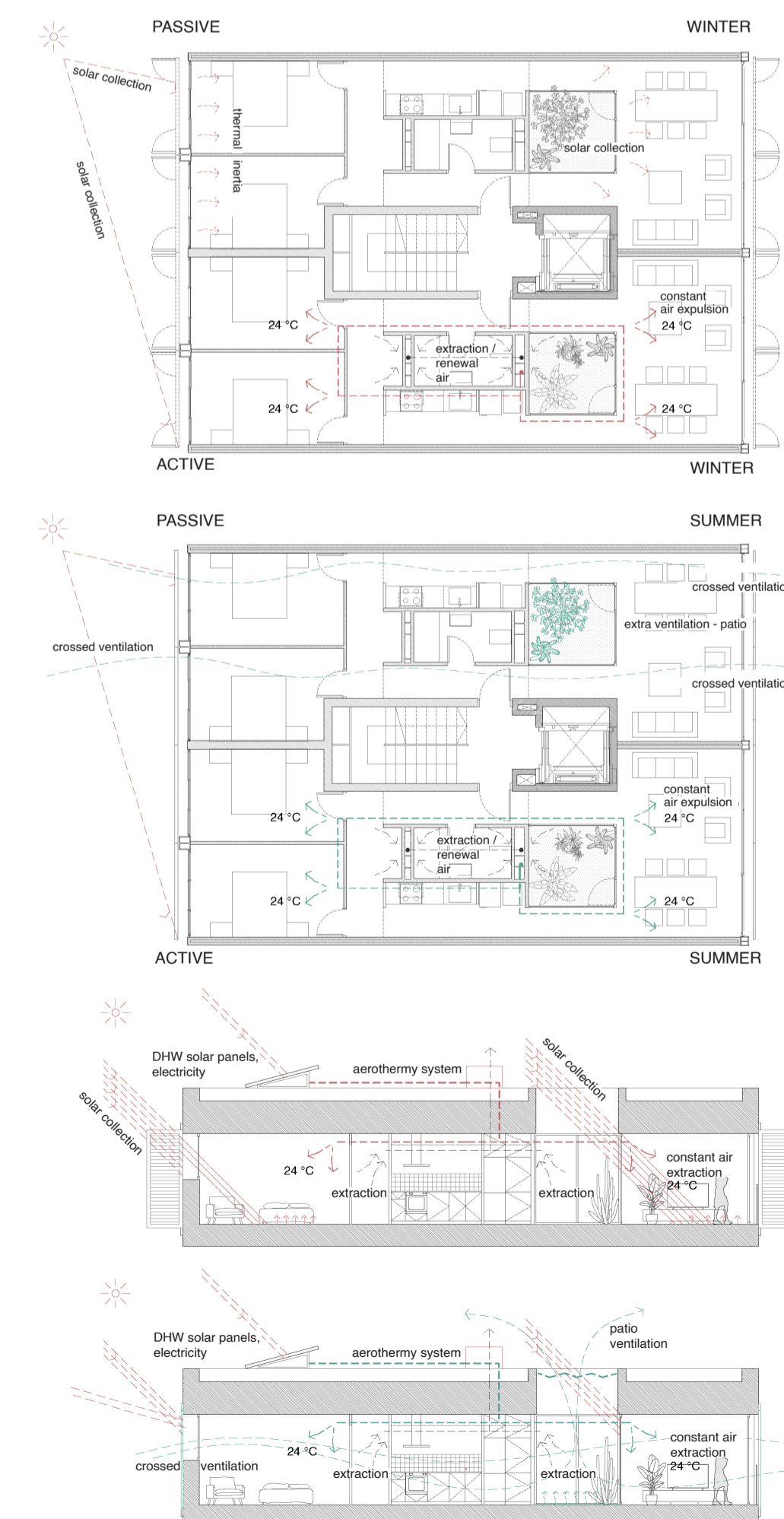


THE MODULE

1. Larch wood sun protection shutters
2. Carpentry manufactured on the island (KM0)
3. Surrounding made of projected natural cork and lime mortar, with a layer of natural pigments
4. Interior clay floors fired with biomass
5. Patio pavements with draining gravel that allow rainwater recovery
6. Vegetation that acts as a thermal regulator in summer and winter
7. Ceramic wall coverings
8. Mineral interior paints and lime mortars
9. Concrete structure
10. Ceramic interior partitions
11. Construction aggregates recycled into gravel
12. Exterior pavements with draining gravel that allows rainwater to filter into the subsoil
13. NUOS aerometry system (1 for every 18 homes)
14. DHW system
15. Photovoltaic panels
16. Hot/cold air expulsion at 24 degrees C
17. Constant extraction of air inside the home
18. Jaracas that will help protect from the sun

CLIMATE OPERATION MODULE



The proposal addresses two fundamental aspects: the correct insertion of the building into the urban and physical environment and a solution that synthesizes the functional aspects of the program (54 social housing units and interior common space).

The line of action has been implementing a series of passive strategies that reduce the energy demand for heating and cooling. Consequently, all homes have cross ventilation, solar protection, great thermal inertia in floors and walls and hygroscopically regulating humidity and perspiring materials. It is strategically designed to have the maximum solar collection in winter and accumulate energy in the inertia of the construction itself.

The housing module is organized around a central wet core that defines two areas with double orientation. The location of day and night areas varies in height, generating different housing types per floor. The homes have patios, terraces and private gardens that allow greater air intake in winter and improved ventilation. The vegetation will regulate sunlight, temperature and humidity.

The finishing and materials are strictly related to circularity in an exceptional spot like the singularity of this Mediterranean Island, developed by local industry or craftsmen as much as possible. When it couldn't be possible (wood/recycled aluminium), the chosen material is because of its very low carbon footprint.

The façade is resolved by a double ceramic sheet with exterior insulation using projected cork and lime coarse developed by local companies, and solar protection made of larch wood (FSC) manufactured by local artisans.

The coverings are ceramics fired with biomass, and the lime paint is applied directly on the ceramic walls to give hygroscopic capacity and inertia to the homes.

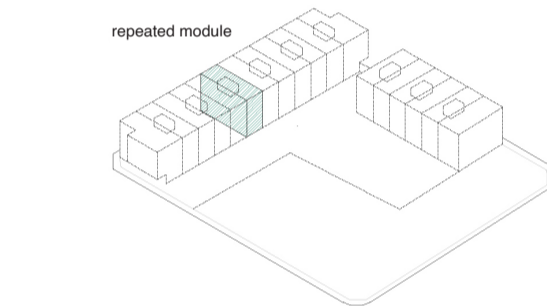
Pavements are local clay "cocked" with biomass. We have reduced the areal facilities to the bathroom areas so in this wet area it's the only ceiling, reducing layers on the whole construction on the circularity concept, in the same concept all the electric services, plumbing and pipes run over the walls to have an easy maintenance.

The roofs are solved by recycled gravel from urban mining. The photovoltaic panels will provide the electricity needs of the building. The ACS is produced by a NUOS aerothermal system with low consumption and high performance. The ventilation of the homes is resolved through heat recovery that tempers the air thanks to community aerothermal systems.

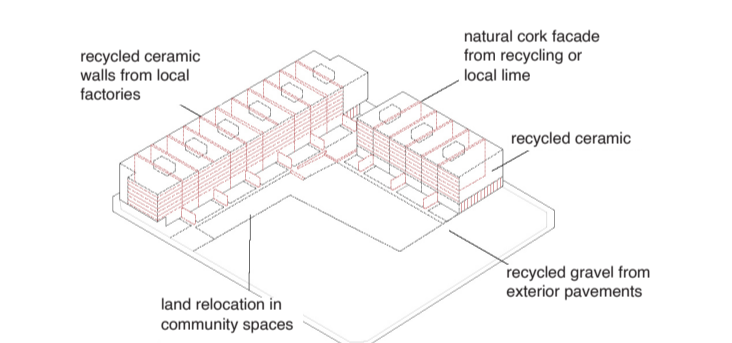
This process results in a building with practically zero consumption (0,64 kWh/m² x year 'NZBE') developed from a local economy model, passive strategies and naturally healthy materials.

CLIMATE STRATEGIES

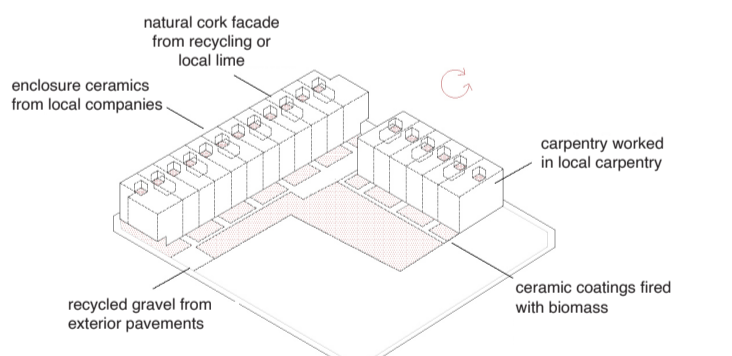
1. BUILDING MODULATION



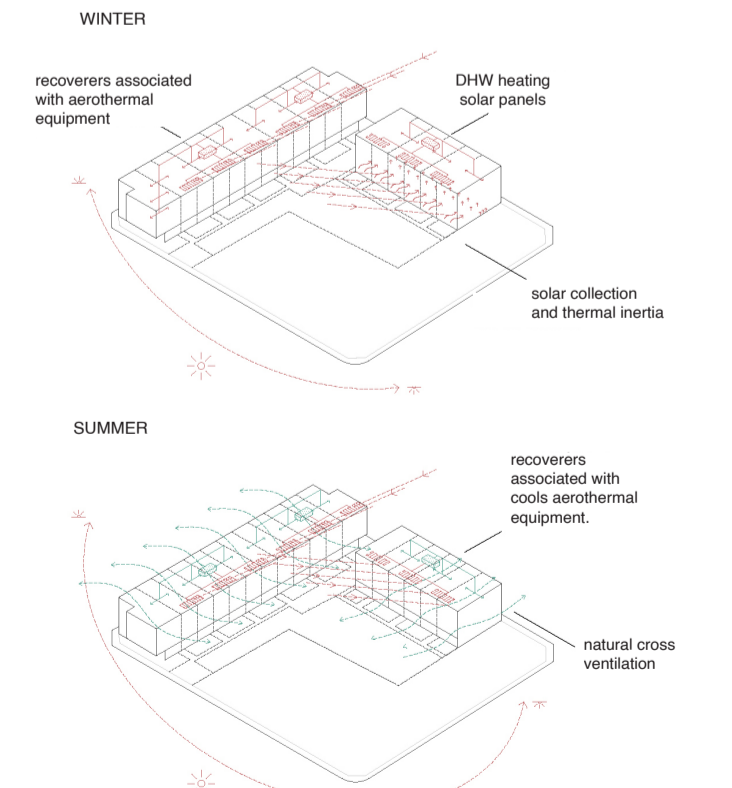
2. CIRCULAR ECONOMY, ECO-FRIENDLY LOCAL MATERIALS



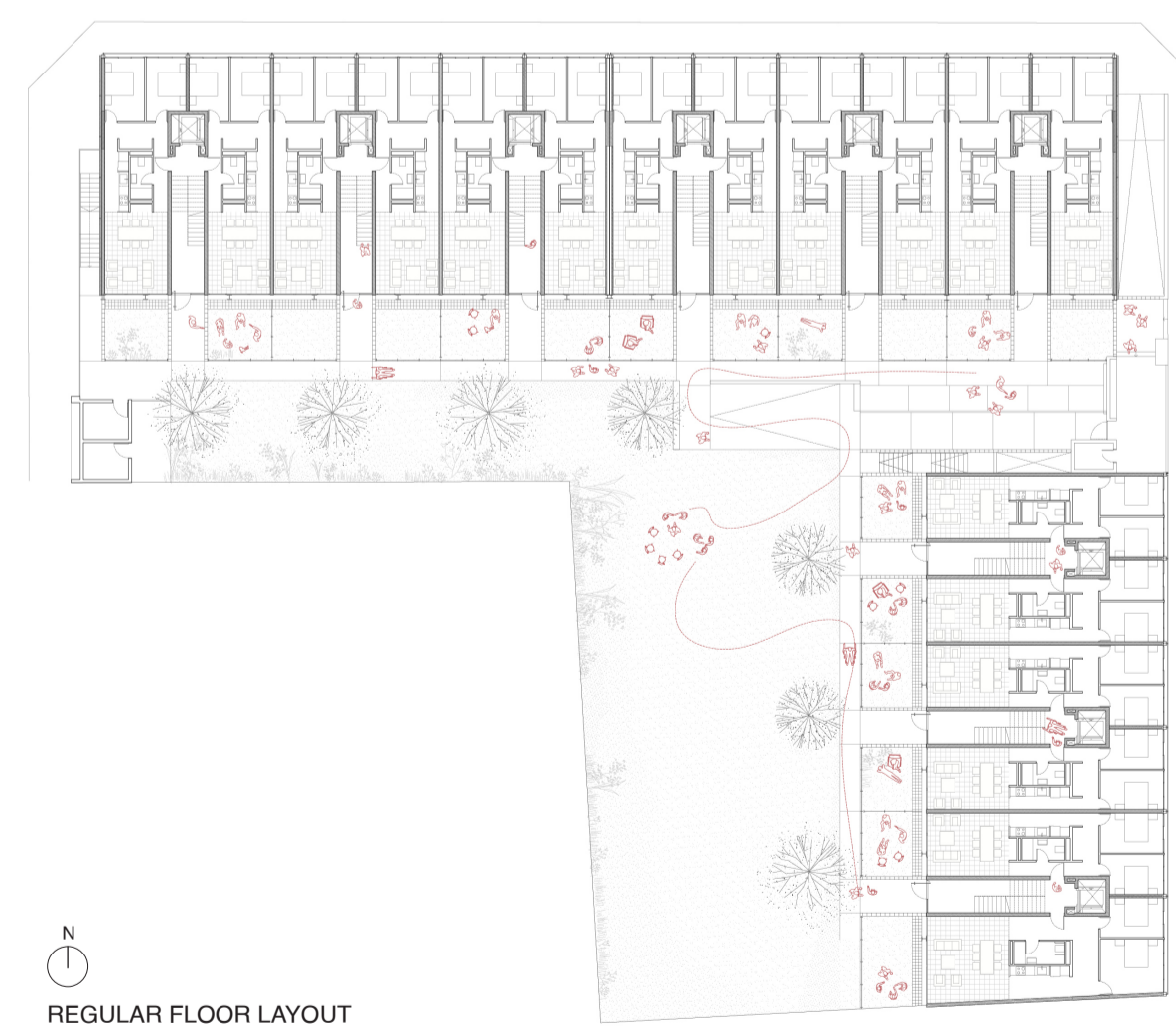
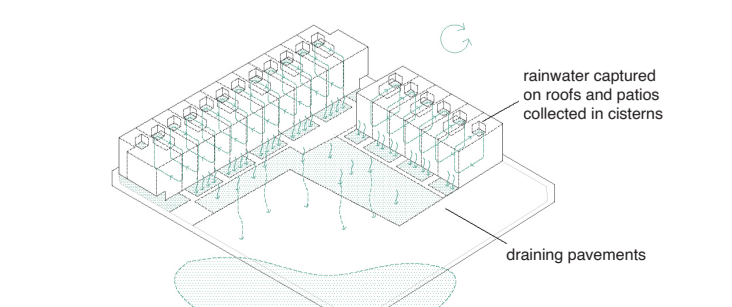
3. REDUCTION OF CO2 EMISSION



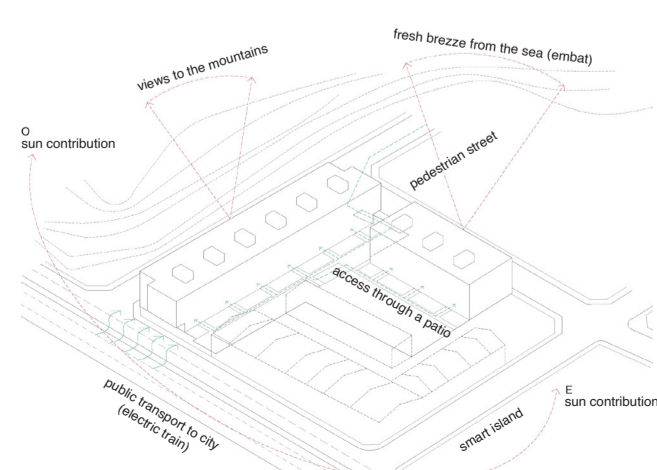
4. CLIMATE EFFICIENCY - CLASS A



5. WATER CYCLE



REGULAR FLOOR LAYOUT



URBAN STRATEGY

The building is organized along a north-south axis that gives rise to the location of two independent volumes, generating a public space between them.

The community spaces on the ground floor have solved the circulations with a concrete floor and the entirety of the space by pavements that allow the natural permeability of the ground, allowing natural flow to the subsoil. Local trees will protect the circulations from the summer sun.