



POLITECNICO
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Honors thesis

COURSE OF MASTER OF SCIENCE IN ARCHITECTURE
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Abstract

Guide to ciabòt renovation in the Alta Langa

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The ciabot is a small isolated building made up of a single functional “cell”, developed on one or two levels and used as a support for the agricultural activity. The materials used for these constructions are those available in the nearby environment: the stones are obtained from working the land and the wood from the chestnut trees, widespread in the area.

The ciabot, even being structurally basic, embodies most of the architectural sustainability principles discussed in our universities and it can be considered a fundamental element of the Alta Langa landscape and, as such, it should be preserved and enhanced.

During the last century, the Alta Langa area has been characterised by a high depopulation, which caused the abandon and decay of the agricultural and architectural heritage.

With our thesis we aim therefore to sensitise the local community towards the restoration of those traditional buildings, by providing theoretical suggestions and technical advice in order to give a new life to those little constructions, making them key players for modern investment opportunities linked to agriculture, tourism and gastronomy.

Our work suggests new possible functions and presents guidelines for the interventions on single elements of the buildings. We do that according to the fundamental principles of ecologic and economic sustainability, to the men’s adaptation to the environment, to the interventions reversibility and to the reduction of energetic consumption.

These guidelines have then been applied to four buildings, chosen during our field survey. The description of one of the interventions follows as an example.

The project is meant to be a holiday house. The intervention consists in the recovery of the decayed parts, in the adjustment of internal spaces and in the addition of a sanitary system made possible by a small building enlargement.

The enlargement focuses on a wall made of Langa stone, built according to traditional techniques. The wall contains a tank for the collection of rainwater and a stove which can be used for both cooking and heating purposes. This wall also allows for a second entrance to the upper level by a stone staircase, with the steps wedged in the bricklaying. Between the ciabot and the new wall, in contrast with the heaviness of the stones, there is the enlargement, light and transparent, made of chestnut wood and polycarbonate.

The project is “off the grid”, it does not have running water neither electricity. It uses though passive and sustainable technologies to solve primary needs: the transparent enlargement works as a solar greenhouse which heats up the internal spaces; the stone wall mass provides a high thermal inertia; the water supply (for non-drinkable use) is managed through a rainwater collection system which serves a shower and a sink. There is a compost toilet and a small phytopurification bed for the disposal of the small quantity of grey waters produced.

The ciabot is seen as a shelter where one can challenge his own adaptability to live in the nature. The intervention is just a basis on which, in the future, the usual construction technologies would be possible. It is in fact feasible to add a solar panel

or to connect the building to the electricity grid. However what we claim, given the occasional utilization of the structure, is if it is indeed necessary and above all appropriate.

The intervention respects the environment preserving what already exists as well as the local background; it lightly integrates itself in the existing reality through minimum operations that show how it is easier and more sustainable for the human being to adapt to the environment rather than the opposite. The ciabot remains a shelter in which the light is given by candles, the water by rainfalls and the heat by fire, witness of a past to be appreciated.



Fig. 1 Ciabòt / valley view

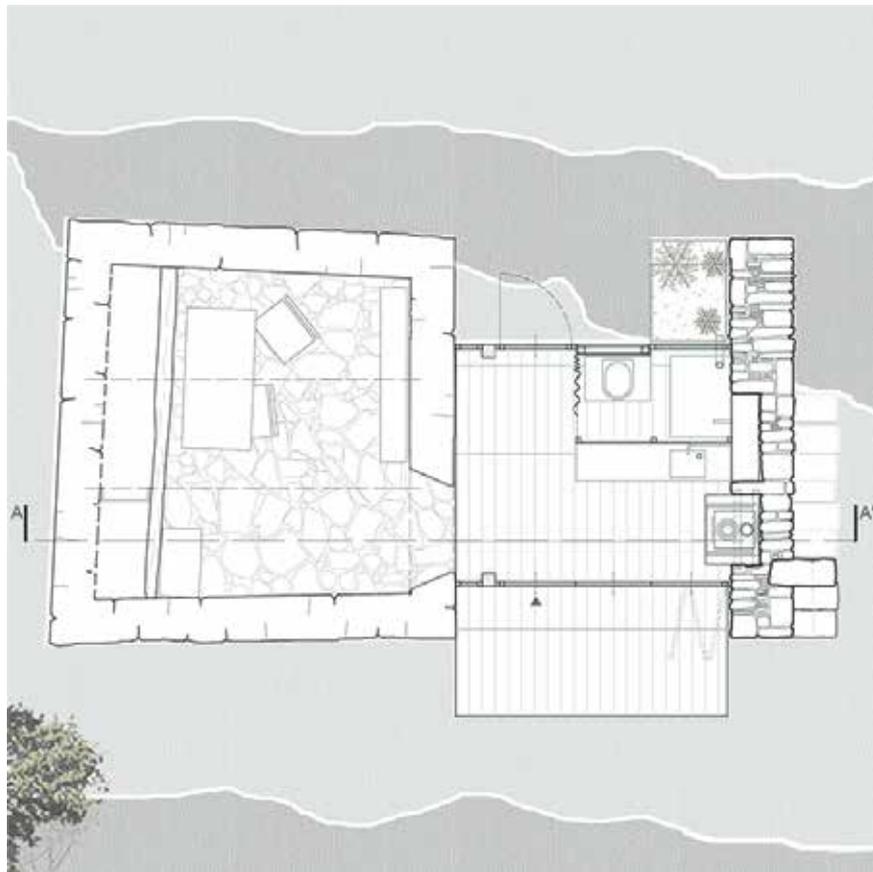


Fig. 2 Ground floor project 1 of 4

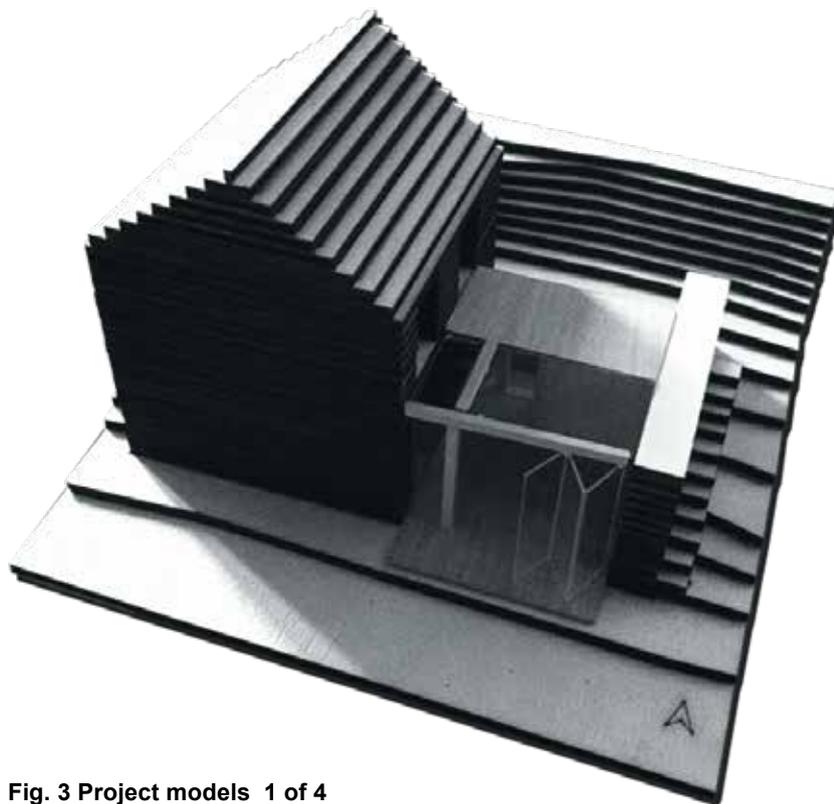


Fig. 3 Project models 1 of 4

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