

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture (Rehabilitation and Revaluation)
Honors theses

The Veneria Estate in Lignana, Vercelli

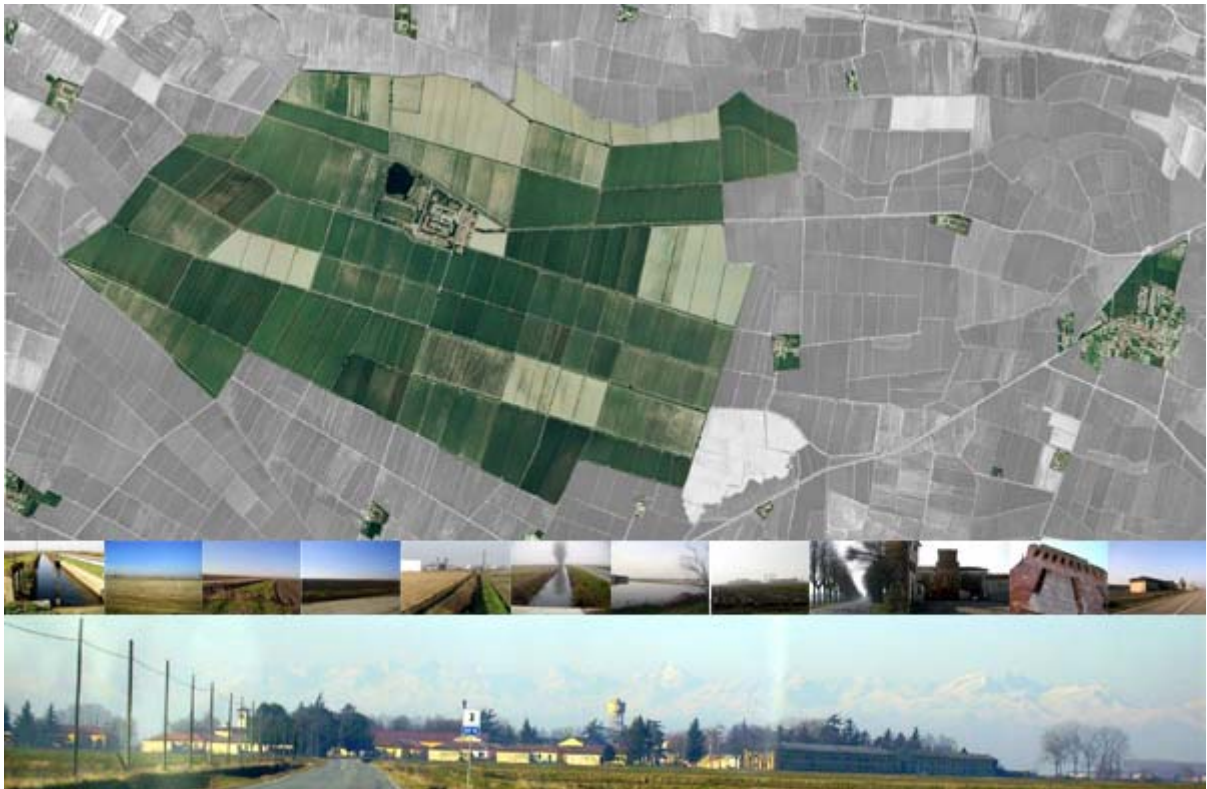
by Giulia Carlone and Francesca Pozzati

Tutor: Guido Drocco

Co-tutor: Paolo Scoglio

The estate occupies a vast area of about 750 hectares in the territory of the southern valley of Vercellese.

This territory has a strong identity resulting from the close relationship that has formed over the centuries between the rural settlements, called “grange”, and the infrastructural system of canals for rice cultivation. The large complexes built and the water create changing landscapes having the rhythm of the seasons flow. The accuracy and the severity of the system for maximum exploitation of the territory are lost into wide perspectives.



The first plant of Veneria dates back to 1200 and was part of the complex of Lucedio Abbey.

At the apex of its bloom, was owned by Sen. Giovanni Agnelli and about 1300 people lived there. In this period Veneria was the set of the neorealist movie “Bitter Rice”.

Currently the SAI group is the owner and employs 12 wage-earners and 7 employees.

The process of rice manufacture has changed and the SAI group has been searching for some years for some solutions in order to use the surplus of spaces which are not useful to the changed productive process. So, to cope with this need, we have to compare with structures that over the years have been adapted to modern technologies and with buildings fell into disuse or abandoned because they have completely lost the instance of their existence.

The solution is based on putting together in a single building all the productive functions, following the drawing of the court system, and on putting in order spaces and routes to create three independent systems: the productive heart, the residence and the park, linked by three different levels of orthogonal routes.

The idea is giving again a built border to the farmstead, a border that should have some characteristics like lightness, transparency, reversibility and flexibility. These characteristics should highlight the exchanges between the built complexes and the territory to produce new relationships between territory and settlement through an ideological but also practical experience thanks to the functions in the new wing and to the aerial route that, like a thread, from the territory passes over the building and, finally, comes back to the territory.



Thanks to the analysis of PTCP, the newly inserted connections open the farm towards new perspectives, different from the productive one. So the creation of a system open to different dynamics has defined all routes, especially the farm tractors and trucks, in order to create an organic system where the connection is guaranteed by the diversifications of access and pathways.

The new building is a climatic wrapping which consists of a shell structure with an organic form in laminated wood and steel. In the storage area of tractors and reapers, the internal core is characterized by a cube of services that is connected to the main vertical distribution and to the terrace from which one enters in the spaces of rice production. These, linked to existing silos, bring together the manufacturing process of rice within a single building.

The system of rice production is characterized by a double wrapping: the wall plugs of the first one consist of rice panels in a green colour in order to prevent the access of insects.

Instead, the second wrapping is characterized by a covering that consists of variable films. There are pneumatic cushions of a modified copolymer Ethylene Tetra Fluoro Ethylene (ETFE) which are characterized by a diaphragm structure that allows the overlap of different membranes that, by differentially pressurising air chambers, allow the control of solar radiation indoors and the integration of photovoltaic cells.



Inside this covering, functions can find different collocations and may change with the passing of time, as the wrapping itself, so that the architecture becomes functional in comparison with the quick changes of these days.

For further information, e-mail:

Giulia Carlone: giulia_carlone@virgilio.it

Francesca Pozzati: francesca.pozzati83@libero.it