



CORTE BERTESINA

VICENZA, 2017

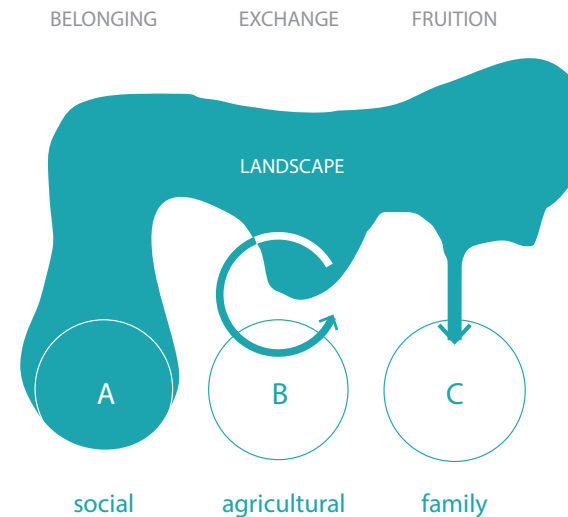
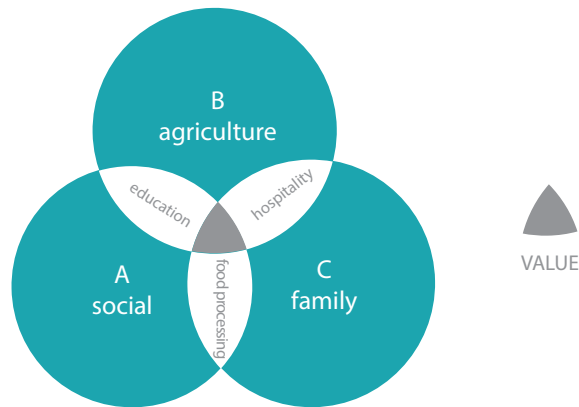
TEXTS

**traverso
vighy —**

traverso-vighy architetti
strada delle Querce 22a - Pignare
36030 Costabissara (VI) - Italy
www.traverso-vighy.com

Corte Bertesina is a project where environmental, social and agricultural values intersect: an 8-hectare forest which encloses vegetable gardens and farmland, a social farm, an agricultural food processing center and shop, a bed and breakfast, a visitor's center for educational activities and residences.

Its construction process has been a virtuous experience shared by clients, designers and builders, where the use of innovative building methods and adaptive reuse allowed the project to reach objectives in sustainability, resource management and energy efficiency.



CORTE BERTESINA

strada Bertesina, 270
Vicenza, Italy

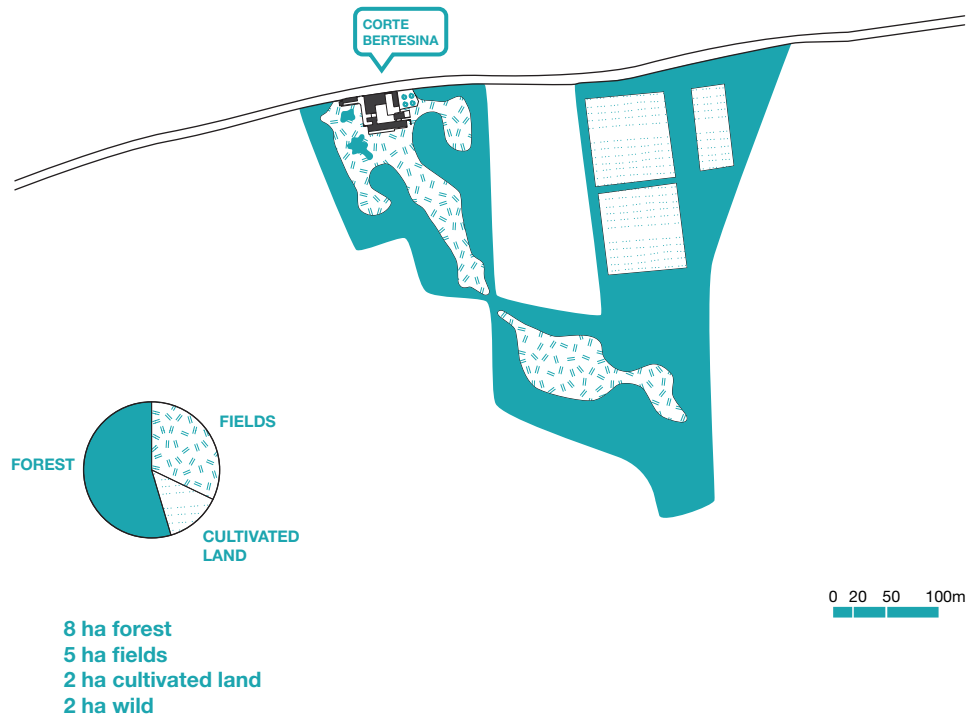
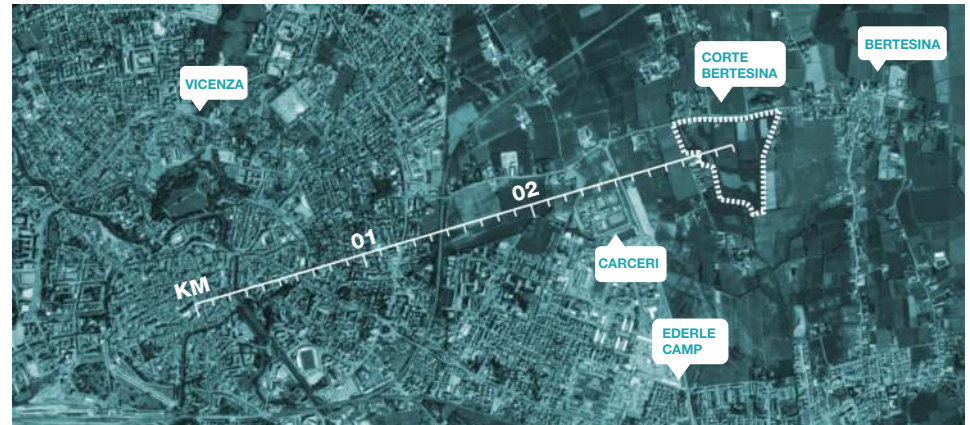
Year: 2017

Surface area: 2258 mq

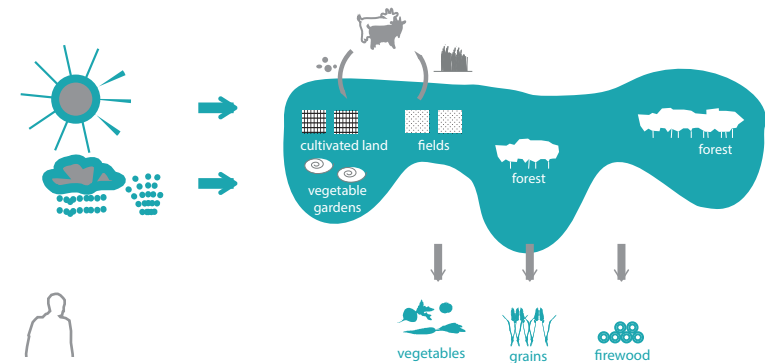
Volume: 6960 mc

Located on the outskirts of Vicenza and only 3km from Piazza dei Signori, **Corte Bertesina** is a typical, rural, nineteenth century Venetian courtyard connected to a 17-hectare country estate with certified organic gardens of vegetables, grains and fodder. The gardens are protected inside a vast area planted in 2001 with trees native to the Po Valley: an oak forest, hornbeams, elms, maples, medium shrubs and hedges which today act as a refuge and nesting ground for local wildlife.

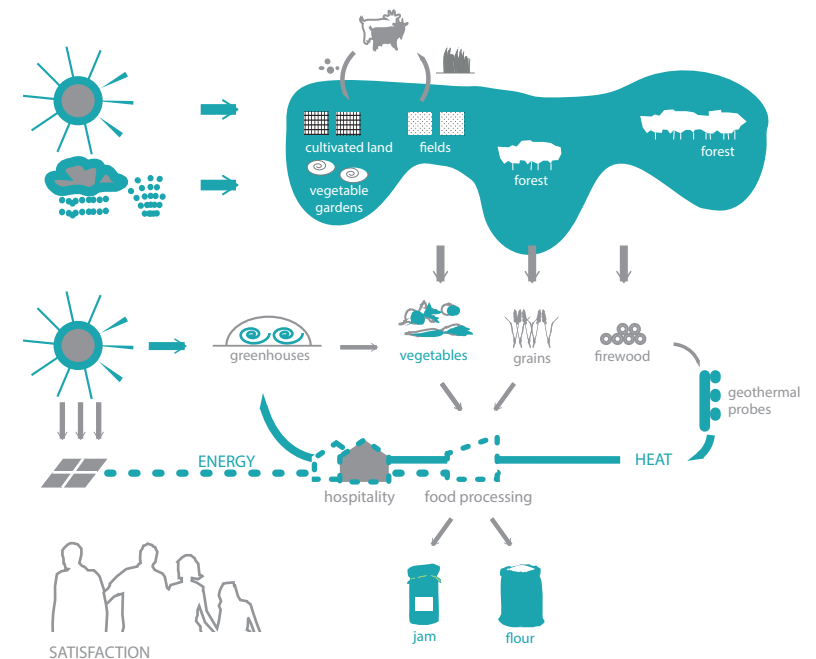
Since 2010, the estate also functions as a social farming center, offering job opportunities to young people with Down Syndrome.



ECOLOGIES _ CURRENT SITUATION



ECOLOGIES _ ZEB PROJECT



The objective of the project has been to regenerate and complete the existing building core with the intention of developing new functional relationships: cultural and educational activities for the enhancement of the forest landscape, social farming activities through the involvement of young people with Down Syndrome, collaboration with local social cooperatives, preparation and sale of agricultural products, residences, bed and breakfast.

Additionally, the project aims to intervene into the natural context as lightly as possible, absorbing from the surroundings visual, energetic and wellness potential for its future inhabitants.

The concept of sustainability was a driving force behind the social intentions of the project, encompassing the wellbeing of its users, the choice of building materials and construction techniques, and energy production and use.

The space of the historic courtyard is defined on the south edge by a long, linear wall in local stone built using traditional methods. The wall acts as a “filter” between public, social functions that occur in the courtyard and the private programs of the new residences.

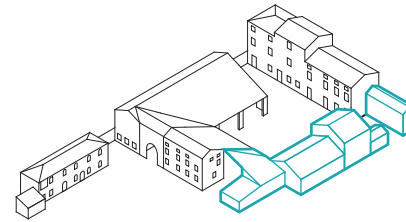
A ‘barchessa’, an open building historically used to house livestock and hay, can be found in the courtyard. Water emerges from spouts along the “barchessa” and travels through stone channels running the length of the wall, programmatically also acting as a filter and separator.

The new residential volumes are articulated linearly: light structures, hinged onto a stone wall which sits on a large, underground floor conceived to house the residents’ vehicles. A visual connection with the exterior landscape, the sun’s orientation and the control of natural ventilation are the main factors that informed the design solution.

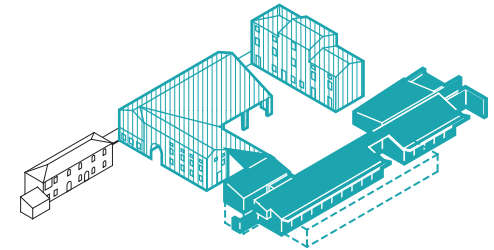
The roof covering is shaped to control natural light and maximize its photovoltaic potential: it produces 60 KW of energy, enough to support the court’s agricultural activities and a heat pump air conditioning and heating system for the buildings, all linked by a geothermic ring.

On the southeast, a simple volume clad in irregular larch planks completes the courtyard: it holds the cultural center, dedicated to the education and appreciation of the surrounding wooded landscape. Its glass wall guides the visitors’ attention towards the outdoor scenery and a network of trails inside the woodland.

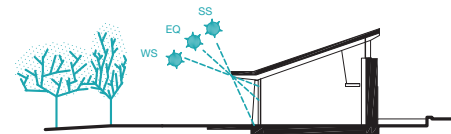
The “barchessa” and historic buildings contain the bed and breakfast, gathering spaces for the social farm, food preparation areas and market spaces for the sale of the agricultural goods produced on-site.



CURRENT SITUATION
demolitions



PROJECT
renovations and new buildings



SUN PENETRATION 12 am



FLOOR HEATING



NATURAL VENTILATION



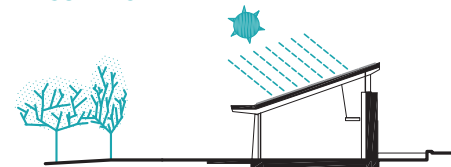
AIR COOLING



INSULATION



LIGHTING



SUN ENERGY

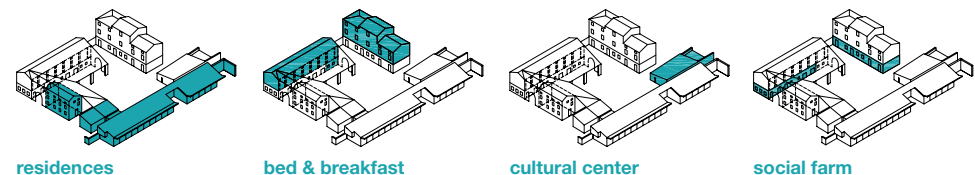
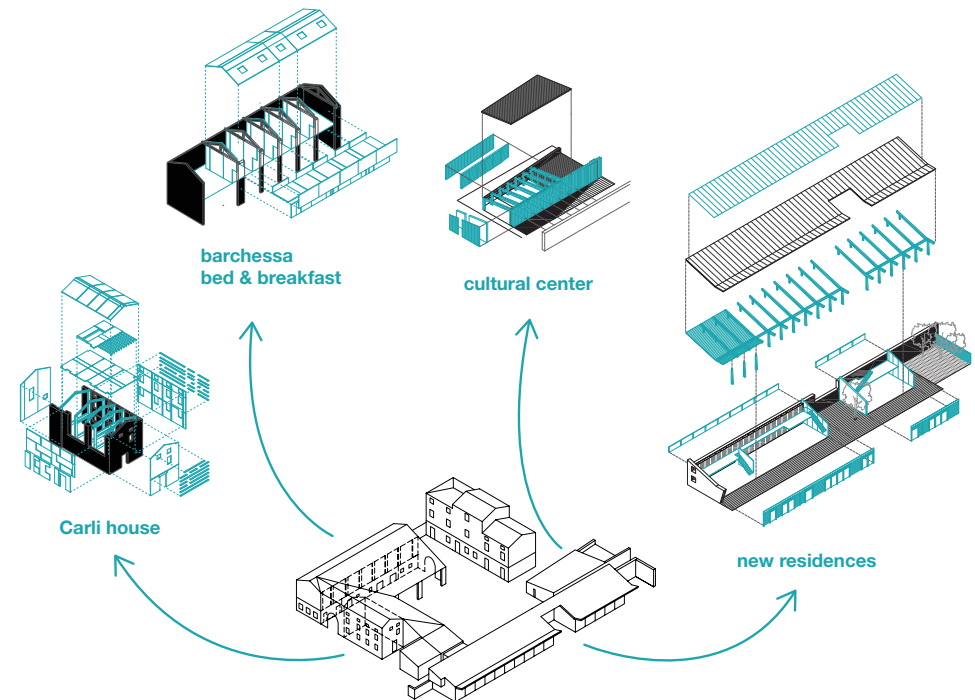


LANDSCAPE VIEW

From a construction standpoint, the intervention was approached with an innovative spirit, using the development of light, prefabricated construction methods which allowed the project to be concluded in a limited time frame. The design process resembled that of an industrial product and defined various construction components in wood, steel and stone built off-site by a group of local industrial companies and artisans. The components were then assembled on-site using tectonic connectors.

The materials, produced by numerical control systems, are traditional and chosen to easily blend into the surrounding environment. Larch wood, conventionally used for its durability, was chosen as the main construction material. Throughout the project it can be found in the form of glued laminated beams and columns, interior and exterior enclosures, in door and window framing and shading, as flooring and in the design of custom-made furniture.

The techniques involved in the prefabrication of light construction elements were carried through the renovation of the historic buildings of the courtyard, linking the intervention to a concept of reversibility and respect of the existing structures: entirely prefabricated Xlam cells were inserted into the large nineteenth century 'barchessa', acting as living spaces of the bed and breakfast. The new cells, set upon a steel structure on the ground floor, form the new, earthquake proof skeleton of the brick building. A unique structural technique was experimented on the residential unit facing west (Carli house): the old brick façades were anchored every 50cm to a homogenous surface composed of Xlam panels, themselves supported by portals in glued laminated wood.



**CORTE BERTESINA
Vicenza 2017**

client

Azienda Agricola Tapparo

architectural design

traverso-vighy architetti

**Giovanni Traverso e Paola Vighy
con Lucia Angelini, Cristina Baggio,
Chiara Cavalieri, Stefania Dal Bianco,
Giulio Dalla Gassa, Giulia Maria d'Arco,
Aurelia Marzano, Grace Rome.**

structural design

Loris Frison

electrical and mechanical design

Gruppo SIA

safety

Giorgio Schettin



CORTE BERTESINA Vicenza 2017

local suppliers

contractor
De Facci Luigi spa
Vicenza
www.defacci.it

de facci luigi s.p.a.
impresa di costruzioni edili-vicenza
www.defacci.it

xlam structures
KLH - Wood Cape srl
Silea
www.woodcape.it



glued laminated structures
Trend
Thiene
www.carlitrend.it



steel structures
Massignani & C
Cornedo Vicentino
www.massignani.it



MASSIGNANI & C.

mechanical systems
Trevisan impianti srl
Vicenza
www.trevisanimpianti.it



air conditioning systems
Mitsubishi Electric spa
Bassano del Grappa
www.melcohit.com



electrical systems
Elettrika srl
Noventa Vicentina

lighting
L&L Luce & Light srl
Povolaro di Dueville
www.lucelight.it



alarm and surveillance systems
Videotecnica srl
Vicenza
www.videotecnica.com



door and window frames
Carretta Serramenti srl
Zanè
www.carrettaserramenti.it



stone masonry
Bevilacqua Marmi srl
San Pietro Mussolino
www.bevilacquamarmi.com



flooring
Pellizzari Armando srl
Arzignano
www.pellizzariarmando.com



custom-made furniture
Cortese srl
Pieve Belvicino
www.corteseantoniomario.it

Cortese S.r.l.



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Giovanni Traverso (Bolzano 1969) and **Paola Vighy** (Vicenza 1969) graduated in architecture from the IUAV in Venice, with Arrigo Rudi. They improved their studies attending MsC in Light&Lighting at The Bartlett, University College of London.

In 1996 they founded the **traverso-vighy** where they develop sustainable architecture and experimental projects related to the use of light.

The studio's projects follow a consistent path leading to the design of lightweight buildings, based on experimentation, prefabrication and economy of resources. Working with the local craft production they try to establish a balance between traditional knowledge and technological optimization.

In recent years the focus for the environment has turned into a real effort to use sustainable technologies.

They have been teaching at the main Italian Master courses of Lighting Design (IUAV, La Sapienza) and at the School of Architecture, University of Florida (UFL).