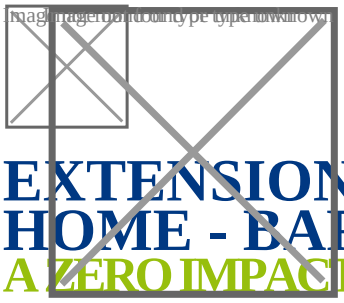


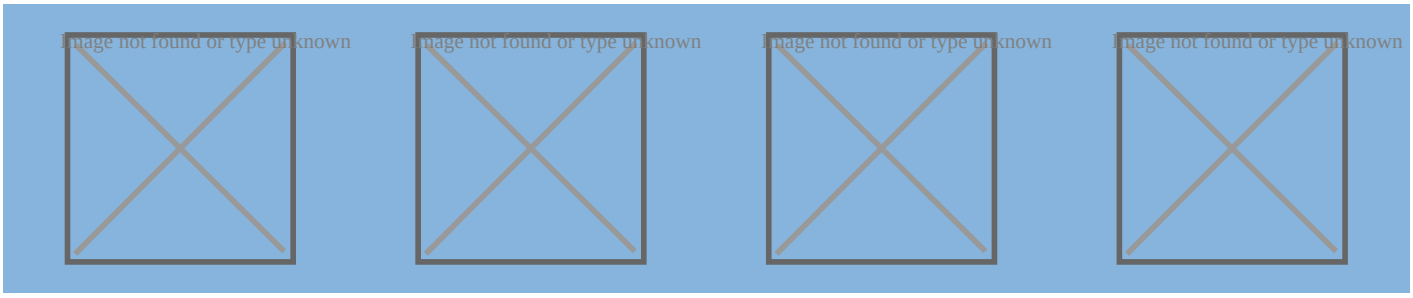
EXTENSION OF THE "OPERA PIA" NURSING HOME - BARBARANO VICENTINO (VICENZA)

A ZERO IMPACT WOOD EXTENSION

For the retirement home "Opera Pia Raggio di Sole" Sistem Costruzioni has created a zero-impact extension that draws its strengths from environmental sustainability and living comfort, as well as from the speed of assembly through the use of prefabricated elements in wood. The structure is characterized by the high living comfort offered by the Xlam walls and the lightness and flexibility of the laminated wood roof.

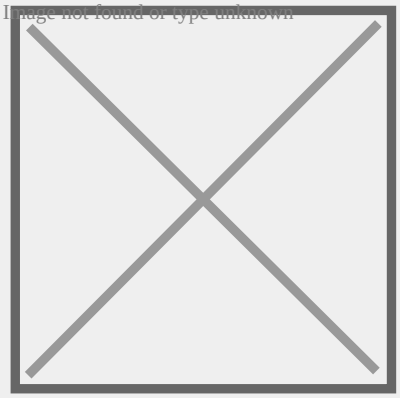
PRODUCT SPECIFICATION

Retirement home expansion
Localization: Barbarano Vicentino (Vi)
Intended use: Added storeys and extensions Micro homes for senior citizens Recreational Centres
Architetural and structural design: Arch. Giovanni Lando
Total area: 80ft



BUILDING SYSTEM

XLAM



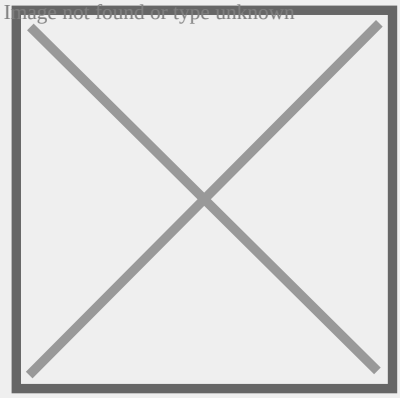
Reasons for choosing the Xlam system

The Xlam system is a technical innovation in the construction of timber homes and buildings. The system's exceptional versatility allows the creation of a wide range of architectural constructions, including multi-storey **timber buildings**. The system assures **optimal thermal insulation** and a high level **of fire resistance**, a fast drying process and exceptional **acoustic insulation**.

About the Xlam system

The Xlam panel is composed of crossed layers bonded together, making the construction system extremely **versatile**. Composed of 99.4% timber and 0.6% adhesives, Xlam is considered to be a monolithic material **capable of supporting very high loads and withstanding external stresses and seismic activity**.

Laminated and Solid



Reasons for choosing the Laminated and Solid system

This construction system guarantees **the creation of timber roofs of various sizes and of different levels of complexity** in compliance with specific static loading calculations and transferring vertical and horizontal loads to the foundations by means of conventional building elements, in certain cases.

A durable and versatile timber roof

The unique characteristic of laminated wood and the connections between the various elements make it possible to create roof spans of more than 30 metres and **to build roofs of very large surface areas without having to break up the ground plan of the building with awkward intermediate pillars.**

High levels of insulation and strength

Depending on the thermal requirements, the **roof** can be completed with an insulating package and outer covering. The joists of the web roof structure can be designed in accordance with a very diverse range of geometries: the ridge beam establishes the shape of the roof while the wall plate beam can be adapted to match architectural, static or application requirements. The nodes of the web support structure can be created with metal plates fastened to the wood with screws and pins, with wood to wood joints, or by means of direct fastening with normal screws or full-threaded screws. Because they are extremely slender elements, timber joists or rafters must be braced with timber or steel elements designed to prevent the occurrence of lateral out-of-plane instability.

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