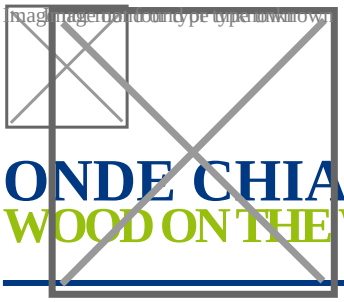


ONDE CHIARE GYM - REGGIO EMILIA

WOOD ON THE WAVE OF SPORT

The Onde Chiare - Energy Waves gym is an integral part of a sports complex near Reggio Emilia and extends for about 3,000 square meters along a rectangular and flat plot of land. In response to the request from the client to create a new building that adequately meets budget needs and reduced timing, a simple and compact structure was created, embellished by the soft lines of the arched roof, which follows the sinuous profile of a wave. The building is spread over two levels: the ground floor serves all the rooms that can be used by external users, including training rooms and service areas, while the first floor houses the administrative offices of the company. The wave roof, facing south with its 20 KW of photovoltaic panels to best capture the sun's rays, covers an area of ??950 square meters and the pitch is supported by 9 curvilinear lamellar beams measuring 25 meters to define 8 regular spans.

PRODUCT SPECIFICATION

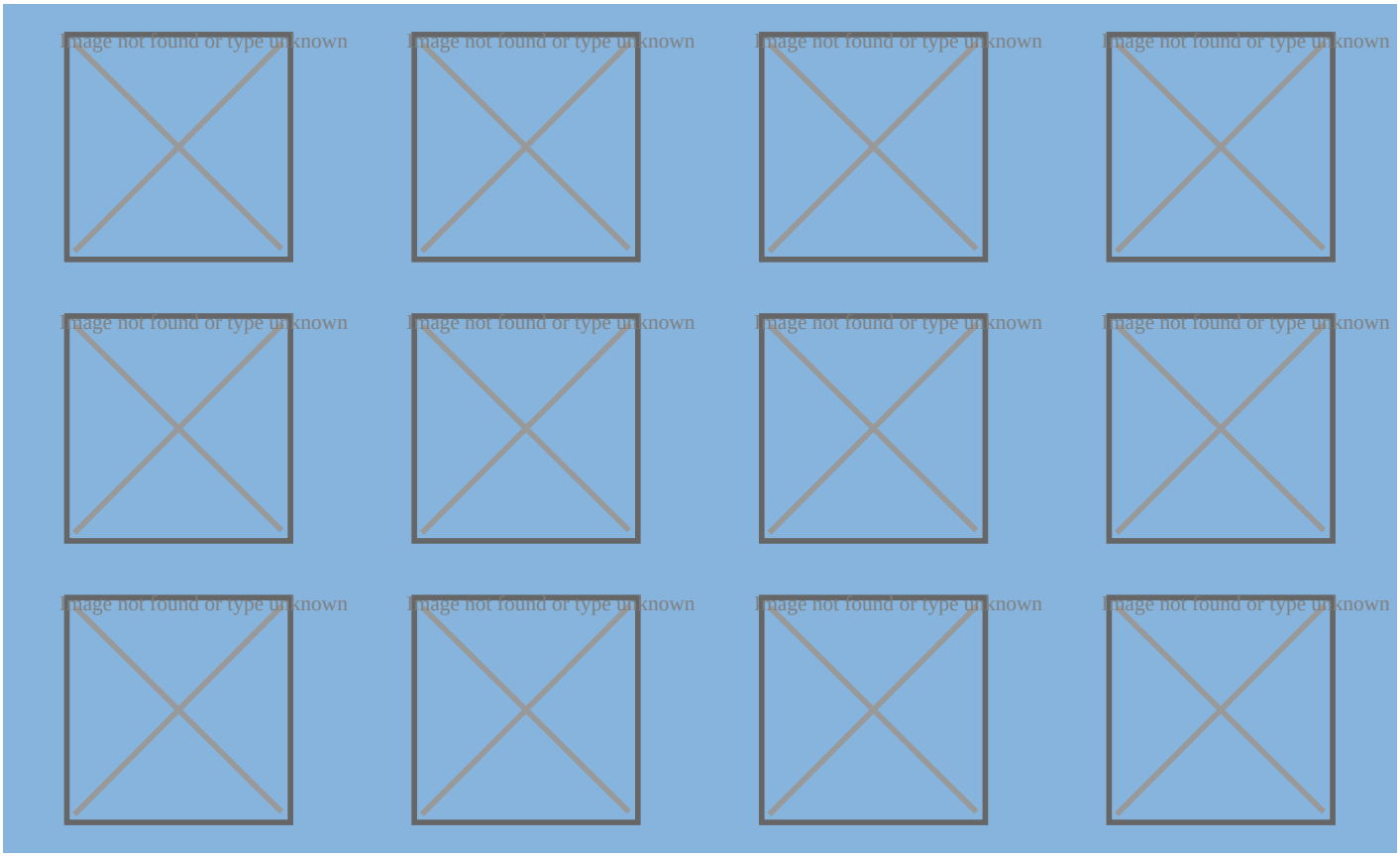
Gym

Localization: Reggio Emilia

Intended use: Gyms and sports centers

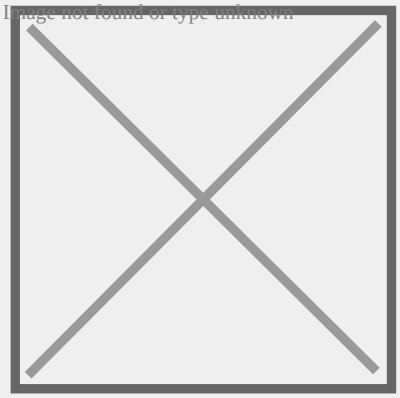
Architetural and structural design: Studio BP Architects

Total area: 950ft



BUILDING SYSTEM

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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