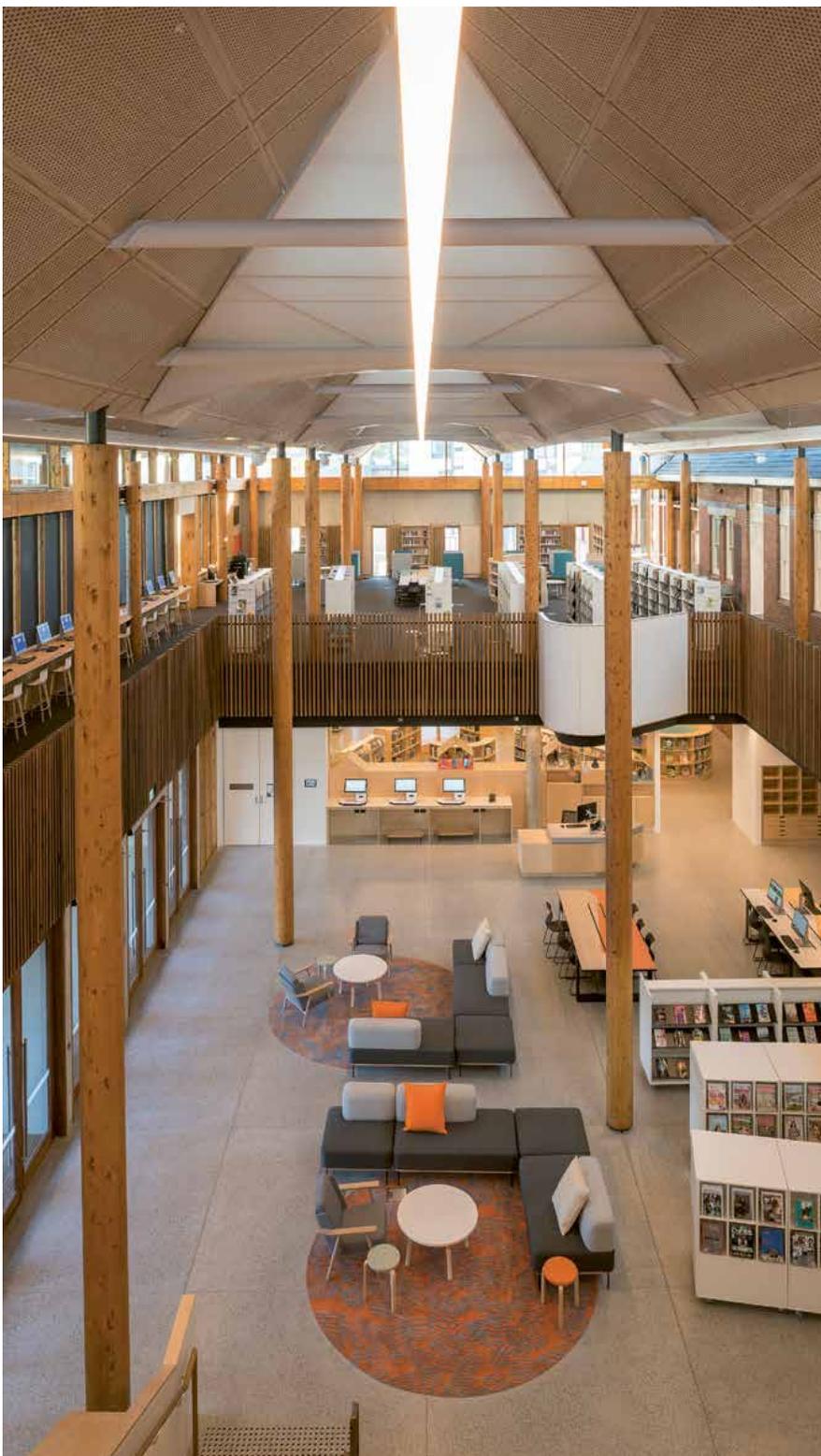


LIBRARY AND PAVILION

TIMBER DOWN UNDER

A unique, environmentally sound and inviting community centre has been created with the new library in the Australian village of Marrickville, which goes far beyond the primary use of a mere book collections site. With this construction, Rubner Holzbau sets a further milestone in its company history since Marrickville Library is the company's first project in Australia. Works executed on this fifth continent were executed as usual: smoothly, highly precise and professional, comprehensively and adhering to schedule.



Librarians agree in one aspect: their workplace is far more than just a catalogued storage site of knowledge filled with thousands of books. Libraries are places, which invite the visitors to learn and to live, there are a meeting point for different cultures of any age. In the Australian suburb of Marrickville, the listed building of the former hospital was preserved and restored to now form part of the newly built library. This newly created library has been defined as multi-purpose community facility whose innovative design combines the most state-of-the-art technologies and sustainability.

To be able to execute this project, 54 round columns had to be built with different lengths reaching from 3 to 9.3 metres. Trimmed and round milled on a CNC-controlled machine installed in the Rubner factory, some 90% of these timber columns support the roof structure of the building - an oversized floating canopy roof inspired on the old hospital roof. Five additional timber columns simultaneously bear the load of one part of the roof and of the façade including the railings. These columns provide an open space feeling since the library's main atrium, which allows to take a glance at the major areas in the newly installed three-storey building, hardly has any suspended ceilings. Before timber construction works started, the Rubner Holzbau construction

office prepared the design draft in the scope of a workshop, which took place in Brixen. The design had been elaborated by a local Australian engineering office. This meeting was also attended by the project manager of the building owner as European know-how is highly demanded by Australian construction industry. All column footing joints, and all column head elements required tailor-made designs and individual production. This millimetric precision had to be applied to the steel components as well, which serve to support the façade's and rails' fastening devices to the columns. This was all the more important considering the fact that the individual elements, which were shipped to Australia were supposed to perfectly fit on the construction site during assembly.

Besides the round columns, Rubner Holzbau also furnished the complex hybrid solution made of steel and timber as well as the entire façade composed of straight and arched tailored glued laminated timber posts. Detailed and workshop design, factory prefabrication of all timber and steel elements and the preliminary assembly of elements were part of the scope of services, which also included on-schedule transport, customs clearance in the port of Sydney and the entire, smooth execution of all tasks to be executed in close coordination with local authorities.

Pre-assembly of all elements was essential and considerably facilitated on-site erection since it allowed to position the timber columns before the steel roof construction was delivered to the construction site. In addition, the pre-assembled columns accelerated on-site erection works, which resulted in a period of less than six months for timber construction works.

Increased attention was also paid to the topic of sustainability. Not only because of the adaptive conversion of the former hospital building but also and above all because of the distinctive design features, which characterise the building. Natural and mixed ventilation systems, raised floors, controlled solar radiation by means of roof overhangs, several rainwater collection tanks and outside sun protection systems are only some of the features. In addition, some 27,000 recycled tiles were used as construction material. Given this long list of sustainable elements, the timber used in this project was expected to be on a par. Being classified as FSC-certified timber, the material originates from environmentally sustainable forests characterised by efficient resource usage and it bears quality seals guaranteeing economic and ecologic sustainability.

Completion: 2019
Execution timber engineering works: 03/2018 - 08/2018
Building owner: CD Construction Group, Sydney (AUS)
Architects: Architecture BVN, Sydney (AUS)
Technical office for timber structure: TTW, St Leonards (AUS)
Timber engineering: Rubner Holzbau, Bressanone (IT)
Size: 3,600 m² of total floor area, 1,200 m² of garden area, 100 m² children's playground
Glued laminated timber: 33 m³ columns, 36 m³ posts
Steel: 6,4 t
Pictures: The Moment It Clicks – Phil Noller

The library in Marrickville opened its doors in August 2019 and the visitors are welcomed by spacious areas, which are generously illuminated by natural light. In these areas, the users are invited to sit, read, work or simply meet. Oversized, floor to ceiling windows create unique views from the inside looking out to the green lawn decorated with publicly accessible artworks.

Curved balconies provide a view into the heart of the library with its thousands of books and connect numerous reading and learning areas. Single floors connect to the old hospital building via suspended glazed walkways and offer numerous spaces to socialise. And somewhere in this building you might certainly find one or two readers who are taking an intensive and closer look on those books dealing with timber engineering.

