ROOF CONVERSIONS AND EXTENSIONS USING CLT BBS
Roof conversions and extensions can create homes and workplaces where the available space is now limited and expensive, as is the case today in cities and conurbations. This form of post-densification of the urban space preserves building land, utilises the existing infrastructure and promotes social mixing within buildings.

According to a study carried out by the TU Darmstadt University, there is the potential for an additional 1.5 million apartments in existing buildings in Germany alone.

Feasibility of roof conversions and extensions (Source: Deutschland-Studie 2015 »Wohnraumpotentiale durch Aufstockungen« „Potential living space created by roof conversions and extensions“, TU Darmstadt University)

CLT BBS is a perfectly solid, multi-ply board made of wood. Bonding longitudinal and transverse layers together reduces the „movement“ of the wood, that is its swelling or shrinkage, to a negligible degree. The solid finished element can bear heavy loads, is fire-proof, can quickly be fitted dry and has sound and thermal damping properties.

The use of binderholz solid wood products and construction solutions results in building projects that meet all the regulatory structural physics and fire protection requirements. Solid wood structures retain their value, are stable and meet the most exacting demands in terms of quality, efficiency and environmental sustainability.

LEAN AND LIGHTWEIGHT CONSTRUCTIONS WITH A HIGH DEGREE OF PREFABRICATION

binderholz construction solutions provide for a very high degree of prefabrication, thereby significantly shortening construction times and guaranteeing a high level of quality. The economically attractive ratio of gross to net living space also sets solid wood constructions apart from conventional construction methods. This fact is becoming increasingly important in the light of current building costs, particularly in urban areas.

A major benefit is their outstanding load bearing strength based on the dimensions of binderholz BLT BBS elements. This strength is literally brought to bear with roof conversions and extensions. The structural possibilities offered by the BBS elements come into their own here, coupled with the fact that their comparatively light weight does not significantly increase the load on the building.

On the Alserbachstraße in Vienna, the old roof truss was demolished around the listed fireplaces. A BBS 125 system ceiling was installed on top of the existing building on which the two-storey roof extension rests and the loads are deflected onto the existing load-bearing walls. From this point onwards, the ceiling could be used as temporary storage space for the materials needed for the overall conversion. As a result, city traffic down below could continue to flow unimpeded and no parking spaces were lost. The visible quality ceilings used also mean that no subsequent work is needed in the interior.
Pflegeheim Vorderes Zillertal [Neubau Dachgeschoss]
1. Preis geladener Architektenwettbewerb 2013

Raumkonzeption: Die Erweiterung und Aufstockung des Altenheimes ergänzt den Bestand zu einer u-förmigen Bebauung, die sich zum Tal hin öffnet.

Planungsleistung lt. HOA: 1-4, 6,7

Bauherr: Altenheimverband Vorderes Zillertal

BRI: 7600 m³, BGF 1960m², NF 1660m²

Erweiterung 1. Stufe (Zu-Umbau) 30 Betten


COMPLETED CONSTRUCTION PROJECTS

DasPosthotel, Zell am Ziller  I  A

Freiburger Hof, Freiburg  I  D

Franziskusheime, Fügen  I  A
COMFORT AND AIR QUALITY WITH THERMAL PROTECTION IN SUMMER

Coupled with the outstanding properties of timber as a store of heat and humidity, the warm timber surfaces also guarantee a balanced living environment and a high level of comfort. As BBS stores heat exceedingly well, it also helps to provide optimum protection against the building overheating in summer. Solid wood is synonymous with well-being and living comfort, as guaranteed by its multifaceted architectural design possibilities alone. The visible BBS surfaces of diverse species of wood, such as spruce, stone pine or BBS Antique, can be combined in the interior of the building and further individualised using coloured glazes and planed or brushed finishes.

BENEFITS OF ROOF CONVERSIONS AND EXTENSIONS | POST-DENSIFICATION USING BINDERHOLZ CLT BBS ELEMENTS:

- Renovation work can be carried out when the building is occupied
- Rain-tight after a few days
- Minimal noise pollution, no dust pollution and minimal waste
- No drying time needed
- Materials can be stored directly on the ceiling, resulting in no major site equipment being needed at street level
- Increased space: comparatively minimal element thicknesses are possible, resulting in an economical ratio between gross and net floor areas
- Finished system parts: shorter construction periods with a high degree of prefabrication and simple detailing
- Crosswise construction of the BBS elements: excellent dimensional stability | 2-axis load deflection is possible |
  Overhangs can be fitted directly from the ceiling
- Permeable: BBS acts as a vapour retarder, enabling construction largely without the need for vapour films
- Timber: comfortable living climate, thermal store in winter, insulator in summer
- Visible quality: pleasantly warm timber surfaces

Retirement home in the former Robert Bosch School in Arnstadt  |  D