

# HoHo Wien<sup>®</sup>: From an idea about wood to the world's tallest wooden high-rise

Subheader: Exactly three years ago, on a drab November Sunday, a simple query – "How to meaningfully use wood as a building material in a new city neighbourhood for future generations? " – laid the foundations for a high-rise made of wood. The highest in the world. Construction has been underway for over a year. The lower of the two structures is complete and installation of the initial prefabricated wooden elements is in full progress. This stage is alos all about spearheading pioneering work, since tried-and-true solutions are of no avail in a project of this nature.

#### (Vienna, 29 November 2017) Caroline Palfy, managing director of cetus

**Baudevelopment**, was spellbound by the notion of testing the feasibility of such a largevolume timber project: "It's true, Austria's building standards are very stringent and that's fine, but I know all about the load-bearing capacity of wood– also when there's a fire. Testing all the risks took four months, always requiring close consultation between the core team and the authorities". What **investor Günter Kerbler** and Caroline Palfy are now accomplishing in Seestadt Aspern constitutes a milestone in the international timber boom. The trend to wider implementation of wood as building material in its own right in the urban context is being picked up by major cities such as Paris, London and Vancouver. "Living with a view is just as popular as working at lofty heights. What they share is a sense of individuality and a slice of 'freedom'. At HoHo Vienna<sup>®</sup>, the exposed wooden surface makes for a particularly snug atmosphere," says Palfy.

### Production logistics and construction time management are in competent hands

Cetus Baudevelopment has entrusted **HANDLER** Group with the construction of HoHo Vienna<sup>®</sup>. HANDLER supervises all production logistics and the construction schedule. Around one hundred HANDLER employees, as well as other companies and suppliers, need to be coordinated on site. "We now rank among Austria's experts for construction projects using wood. It was high time to give wood its due as a natural product in urban development That makes it all the more gratifying to be part of the HoHo Vienna<sup>®</sup> team as general contractor. The preparations and construction with wood are a tricky business, since ready solutions are not forthcoming in all areas. It's all about developing new things and using them – and that's what makes this project so exciting," underscores **Markus Handler, managing partner at HANDLER Group**.

All included, HoHo Vienna<sup>®</sup> comprises five structure with between six and twenty-four floors. The shell construction of the basement extending under the entire development and that of the underground car park have been completed. The solid concrete core is now being built and timber installation is in full swing. Assembly work is scheduled to take one and a half weeks per floor. Naturally, the challenges assembly workers face



during the winter months also need to be factored in. The plan is to follow-up with the facade one floor at a time. The solid timber walls will never be distinguishable as such from the outside, since a moisture barrier will have been applied to each of the individual elements before they leave the factory to protect against weathering. During shell construction, the wooden elements need to be protected against the ingress of moisture. All wood surfaces that are visible on the inside of the building need to be treated with special care.

# Timber from Austria's sustainably managed forests

Right from the start, Caroline Palfy insisted on launching this success story in Austria's forests. The XC<sup>®</sup> ceiling panels supplied by MMK, a joint venture bringing together **Mayr-Melnhof Holz Holding AG and Kirchdorfer Group** are sourced from Mayr-Melnhof's own timberland and the walls and wooden supports supplied by **HASSLACHER NORICA TIMBER** all originate from sustainably managed Austrian forests. Palfy: "I keep getting asked whether our timber resources are jeopardised by the current timber boom in the construction industry. Everyone is familiar with the Christmas tree at Vienna's *Christkindelmarkt*. This year, the tree measures 25 metres in height and hails from Vorarlberg. Our HoHo Vienna<sup>®</sup> is made of **around 2,300 such Christmas trees**." In Austria, forests produce 30 million cubic metres of timber a year, of which 26 million cubic metres are logged. The remaining 4 million cubic metres remain in the forest, continually increasing timber stocks. "In other words, 1 cubic metre of wood grows back every second and thus the timber used for the entire HoHo Vienna<sup>®</sup> project will have grown back in our country's forests in only **one hour and 17 minutes**," adds Caroline Palfy.

### A high degree of prefabrication saves time on the construction site

The tower that forms part of the HoHo Vienna<sup>®</sup> project has one major strength: lots of building parts are prefabricated in the factory where weather conditions can be left out of account. As a result, numerous procedures are no longer necessary on the construction site itself. The windows supplied by **Katzbeck**, for example, are for the most part assembled in modern workshops of the Carinthia-based HASSLACHER Company, where the supports made of glued laminated timber and external wall elements made of cross laminated timber are manufactured. The wall elements supplied by just-in-time delivery to the construction site at Seestadt Vienna are mounted directly from swap bridges, making further hoisting work unnecessary. The procedure is similar for the XC<sup>®</sup> ceiling supplied by MMK. These load-bearing XC<sup>®</sup> timber/concrete composite ceilings – produced at the Kirchdorfer site in Gerasdorf near Vienna – are attached to the core of the building and connected with the supports previously integrated into the external wall modules. The larch casing for the first two floors is mounted directly on the construction site. Starting with the third floor, fibre cement



panels made by **Eternit** are mounted on the outside of the building. These are made with 100% natural raw materials.

A "simple" modular construction system and extensive prefabrication Richard Woschitz, managing director of Woschitz Group, was able to optimally meet all requirements regarding structural stability and structural design, which were enormous in terms of soundproofing, fire protection and robustness, but also efficiency, etc. The HoHo Wien<sup>®</sup> system, which is kept deliberately "simple", stacks up four prefabricated, serial building elements: **supports, joist, ceiling panels and facade elements.** The system node – in other words, the connection between ceiling and walls – is joined together perfectly in a modular type of system.

# It's time to clock off and no one wants to go home. HoHo Wien<sup>®</sup> is just different.

True to the motto "It's time to clock off and no one wants to go home", HoHo Vienna<sup>®</sup> caters to all the wishes of a new generation of blue-collar workers, white-collar employees and self-employed. The office of the future breaks completely new ground. New features are brought into league with wood, a traditional material, creating a relaxed and homey atmosphere. A vibrant recreation and business hub is emerging at the versatile site of Seestadt Aspern, right by the lake in the green countryside. To get to downtown Vienna, you only need to take the metro from the adjacent Seestadt Station and get off merely twenty-five minutes later in the city centre.

For further details on HoHo Vienna<sup>®</sup>, please consult the HoHo Vienna<sup>®</sup> website at http://www.hoho-wien.at and the Facebook fan page www.facebook.com/hohowien.

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