Stora Enso and SRV join forces to build a world-class ‘Wood City’

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An urban, eight-storey quarter consisting of wooden buildings will form a stunning gateway to the new Jätkäsaari district

Stora Enso, a leading global provider of renewable solutions in packaging, biomaterials, wood and paper, is currently finalizing construction plans for a unique wooden construction project in Finland called ‘Wood City’ in collaboration with the construction company SRV. The aim is to create a world-class project in which engineering skills can be taught in a practical way and to develop wood architecture. The extraordinary city, located in the Jätkäsaari district of Helsinki, will be built of wood and includes office, hotel and commercial buildings.

According to the company, special attention will be paid to solutions that improve energy efficiency in designing and constructing the buildings for the area. A high standard, internationally interesting and progressive plan for Wood City has been achieved through an invitation-only design competition. In addition, Stora Enso is planning to supply supporting structures based on its new Urban MultiStorey^{TM} concept for the buildings totaling 20,000 sqm of floor area in the site.

“Development of the new CLT-based Urban MultiStorey^{TM} concept has been not only one of the most important Building Solutions actions in strengthening our strategy, but also the start of a totally new future for construction. The concept, which is especially suitable for energy- efficient construction, is a more competitive and flexible total solution for our customers than other construction solutions for multiple-storey buildings globally. In addition to rapid construction, the major advantage of the concept is cost-effective construction of impermeable, fire-resistant and long-lasting wooden buildings,” said Hannu Kasurinen, EVP, Stora Enso Wood Products.

“The Wood City project offers us an excellent opportunity to develop our concept for the needs of office building construction too, jointly with the construction company SRV. Our solution based on massive CLT boards facilitates, for example, often popular vast glass surfaces, open, modifiable interiors and placing of piping and similar partly inside the elements,” adds Kasurinen.

Project overview
Wood City is a unique wooden architectural landmark that SRV and Stora Enso Wood Products as well as the City of Helsinki Housing Production Department (ATT) have teamed up to develop. A total of approximately 28,000 m2 is divided into office premises (12,000 m2), hotel and commercial premises (8,000 m2), and apartments (8,000 m2). According to Stora Enso, construction is estimated to start this year and will be carried out in stages over the next two years.

An urban, eight-storey quarter consisting of wooden buildings will form a stunning gateway to the new Jätkäsaari district. The unique architecture of the complex as a whole aims to represent Finnish design at its most authentic. The complex as a whole, which will consist of business premises, hotels, residential units and a multi-storey car park, will provide an innovative environment in which to work and live. Further, a common lobby area open to everyone as well as a courtyard forms the heart of the quarter.

The complete structure will be mainly constructed of wood – an appealing and ecological building material proven to reduce stress levels. Wood City’s location is one of a kind in terms of both view and logistics. Light and open, the

office facilities, complemented by a sea view, are located along excellent public transport links serving as a gateway to Jätkäsaaari.

Landmark in wooden architecture
The architecture of the city quarter is intended to create a unique entity adapted to its location representing personal, timeless modern architecture. Wood will be eye-catchingly expressive in Wood City. The wave-like design of the wooden ceiling of the foyer of the ground floor continues through the facade in a unique way. Knots and other natural irregularities will be stylishly visible in the wooden facade. Designed by Anttinen Oiva Arkkitehdit, Wood City is a spearhead project for innovative city architecture, sustainable construction and new way of using space. The construction project will promote Finnish wooden structure design, construction and architecture, and networking of those in this field.

Wood construction
Wood City will have groundbreaking wooden multi-storey buildings that are first of their kind.The industrialization of wood construction and innovative concepts make the building of wooden multi-storey buildings a genuinely competitive option. Creating better and better lumber products and providing more added value are in a key role when building the future of the Finnish wood product industry. As such, the new solution and expertise developed for Wood City will also have significant global demand.

Why wood?
Wood is a warm and natural material that has acoustically and visually attractive features. It improves the atmosphere in a room by reducing fluctuations in humidity and filtering out air pollution. Wood is also a material that reduces stress. Wood is a 100 percent renewable building material, and, if managed properly, there is no shortage of wood. Wood absorbs carbon dioxide from the air while it is growing and stores it. The carbon footprint is significantly smaller for a wooden building than for a building made of competing materials. As such, Wood City is the ecological choice for its users.

Wood City’s wood structures use Stora Enso’s module system of cross laminated timber (CLT) boards, developed in cooperation with SRV, which is in charge of building the block. The apartments and the hotel are built using modules equipped with building systems and interior lining already at the factory, and will just need to be put in place at the building site. Manufacturing the modules at a plant will ensure better quality control and professional finish, with the added benefit that the structures are not exposed to the weather conditions.

A building frame made of wood elements is, depending on the solutions chosen, 20-70 percent faster to build than using competing solutions. The cost savings achieved through this make a wooden frame competitive in terms of price. The fact that it is faster to build also means that people and companies can move in more quickly. The structural system based on wooden elements is very safe in a fire – the CLT boards used in Wood City do not burn, when heated CLT only chars at a rate known in advance. Further, modern sprinkler systems spread steam, which extinguishes any fire effectively and reduces damage caused by dampness in the building.

Innovative use of space
In addition to eye-catching wooden architecture that Wood City will bring to the central Helsinki, it will be an example of innovative use of space as well. A service concept based on users’ needs is being developed in Wood Cityfor the common facilities on the ground floor of the hotel and office buildings. Needs of future users of premises are investigated by means of different methods, including service design as the newest and the most important tool.

”In Wood City we want to create premises that really support business of our clients. Service design helps us to identify also hidden needs of the space users and dive into their real experience regarding various layout and service solutions. At its best, such half-public area unites different user groups,” said Tuomas Rantsi, Account Director from SRV.

Future users of Wood City’s premises will be engaged in development and testing of generated area and service

ideas in workshops together with the designers, builders and other professionals. SRV and Stora Enso have also entered into an agreement with the service design agency Diagonal (Helsinki) for the development of great user experience in common premises.

Future outlook

Despite the public debate around urban wood construction in Finland, there is no denying that wood provides excellent opportunities for constructing special architectural objects. With industrial concepts, wood-based multi-storey construction becomes a truly alternative choice for urban construction – a cost-competitive and fast building solution that is also a safe and modest choice for residents. Wood City then allows imposing city architecture to meet modern wood-based building solutions in a unique way.

“Wood City, the eight-storey high Bridgeport House in London, a shopping center in Vienna and the Finnish Nature Center Haltia are all real proof points of projects in which Stora Enso’s building solutions have a key role, heralding the dawning of a new era of wood construction. Thanks to new fire regulations that came into force in April, Finland now has an excellent opportunity to secure its place globally as one of the top countries for innovative and environmentally friendly multi-storey wooden construction and, above all,an opportunity to build office buildings up to eight storeys high from wood,” concludes Kasurinen.