

## CLEVER CLIMATE BUILDING FOR THE FUTURE

# EXCLUSIVE WOODEN BLOCK-HOUSES

“Beautifully situated next to the water in a suburb close to Stockholm, Folkhem Produktion AB is building four spectacular eight storey wooden buildings. The houses are designed by Wingårdh Arkitekter, Sweden’s most prestigious and internationally renowned architectural firm. In addition to a core of solid wood, the houses will have a beautiful facade of cedar chip. Thanks to the choice of natural materials for the interior, a pleasant indoor comfort has been created. Purmo underfloor heating in the wooden floors provides a high comfort level too.”

The vision is to build a fantastic area with exciting new residences in a beach and parkland environment. “We have chosen this location to construct sustainable and modern houses seen from all aspects,” says architect Anna Höglund at Wingårdh. The apartments are spacious, open and beautifully planned, with large windows from floor to ceiling. All balconies have lake views. Extra care is taken to use natural wood in the interior, such as window frames, floor surface and the kitchens. The cedar wood façade is completely maintenance free and will age beautifully and become brighter with time.

### WOOD AS A BUILDING MATERIAL

The construction of multi-storey buildings with wooden frames is a new and growing trend. “From an environmental aspect, it’s fantastic,” says Folkhem CEO Arne Olsson. Using wood in the construction of buildings requires much less production energy, and therefore results in lower carbon emissions. If Sweden is to meet its environmental goals, we must begin to build a lot more wooden buildings. It is also a renewable material, as new trees are planted and eventually become new building materials.

Since wood as a material is light and malleable, it becomes easier and often cheaper to build in wood than in other materials. - “It is increasingly common to build wooden houses in Europe and with a larger market, prices can fall, continues Arne Olsson. At the end of the 1800s, there was a ban on building multi-storey wooden houses, because of the fire risk. The ban lasted until 1994, when it was lifted to allow construction of large and tall buildings from wood. With today’s way of construction the fire risk is no greater than in a house built in the conventional way, says Arne Olsson.

### CLIMATE-BUILDING FOR THE FUTURE

The construction and real estate sector has already gone to some effort to reduce energy consumption, especially greenhouse gas emissions. This has mostly taken the form of green energy, passive houses and energy recovery. Globally, this sector accounts for more than one third of the world’s carbon emissions. But by putting the focus entirely on the heating aspects this sector underestimates its climate impact. The good news is that there is an excellent alternative to traditional building materials that is renewable, recyclable and also absorbs carbon dioxide; building in wood.

### UNDERFLOOR HEATING PROVIDES A HIGH COMFORT LEVEL

Purmo underfloor heating systems provide perfect comfort, a combination of pleasant warmth and even temperature. The benefits of Purmo underfloor heating extend far beyond its good characteristics of a stable, reliable and pleasant feeling of warmth all year. Beside the fact that Purmo underfloor heating operates invisibly and silently, after installation it requires only minimal supervision, often even none at all. “All our systems are also planned for easy installation with minimal expenditure of time and effort,” says Purmo Sales and Marketing Director Jan Ekwall. “There is a plethora of underfloor heating systems on the market. But only one company can offer you security that is based on decades of experience and expertise of using underfloor heating in combination with radiators.

“This is a very exciting project and we look forward to working with Folkhem,” says Magnus Hedlund, project manager at heating installation experts NVS in Stockholm. It is the first time NVS has designed a total heating solution in such large apartment buildings

with underfloor heating in massive wooden floors. “We have very good experience in working with Purmo Thermopanel, which made the choice of supplier easier,” continues Hedlund.

“The fact that NVS has selected us as a strategic partner in this exclusive underfloor heating project shows that Purmo now has taken another step towards being the complete supplier of radiators and underfloor heating,” concludes Ekwall.

### HEATING:

The heat source is district heat, which is fed into the central heat exchangers. Hydronic under-floor heating is laid in Purmo Chipjet, grooved chipboard screwed into the solid wood joists. On top of Purmo Chipjet there will be hardwood floors in ash. The total surface to be covered with under-floor heating is about 2200m<sup>2</sup> per house.

**HVAC INSTALLATION:** NVS Installation AB, with 90 offices in Sweden, Norway and Finland and approximately 2400 employees NVS is one of the leading installation companies. ■

### PROJECT INFORMATION:

Area: Sundbybergs Strandpark, Stockholm

Contractor: Folkhem Produktion AB

Architect: Wingårdh Arkitekter, Anna Höglund

Construction start: November 27th, 2012

Type of property: Apartment

Number of flats: 124, living area: 64-167 sqm

Rooms: 2-6 rooms + kitchen