

FINSKE LESENE HIŠE IN ZAKONODAJNA PODPORA V PRIMERJAVI S SLOVENSKO

Lesena konstrukcija znova počasi uveljavlja svojo vlogo kot pomembna alternativa betonu in jeklu. Tudi v državi, kot je Finska, kjer so ogromne površine pokrite z gozdovi za materialne vire in je značilna tradicija v narodni arhitekturi gradnje z lesom, se je znanje o uporabi lesa za večje stavbe skoraj izgubilo v desetletjih po drugi svetovni vojni in v času hitre industrializacije ter razmeroma pozne urbanizacije, kar je povzročilo gradnjo več sto predmestij iz betonskih elementov.

Kulturno in zakonodajno ozadje Finske in Severne Evrope

V zakonodajnem smislu je bil beton obravnavan kot trajna rešitev za izboljšanje požarne varnosti, saj so požari pogosto povezani z lesenimi hišami. Nekatere zakonske omejitve za uporabo lesa, zlasti v mestnem okolju, segajo še v čas velikega požara v mestu Turku (Åbo) leta 1827, takrat najpomembnejšega mesta v državi, ki je bilo v veliki meri uničeno, vključno z redkimi zbirkami edine univerzitetne knjižni-

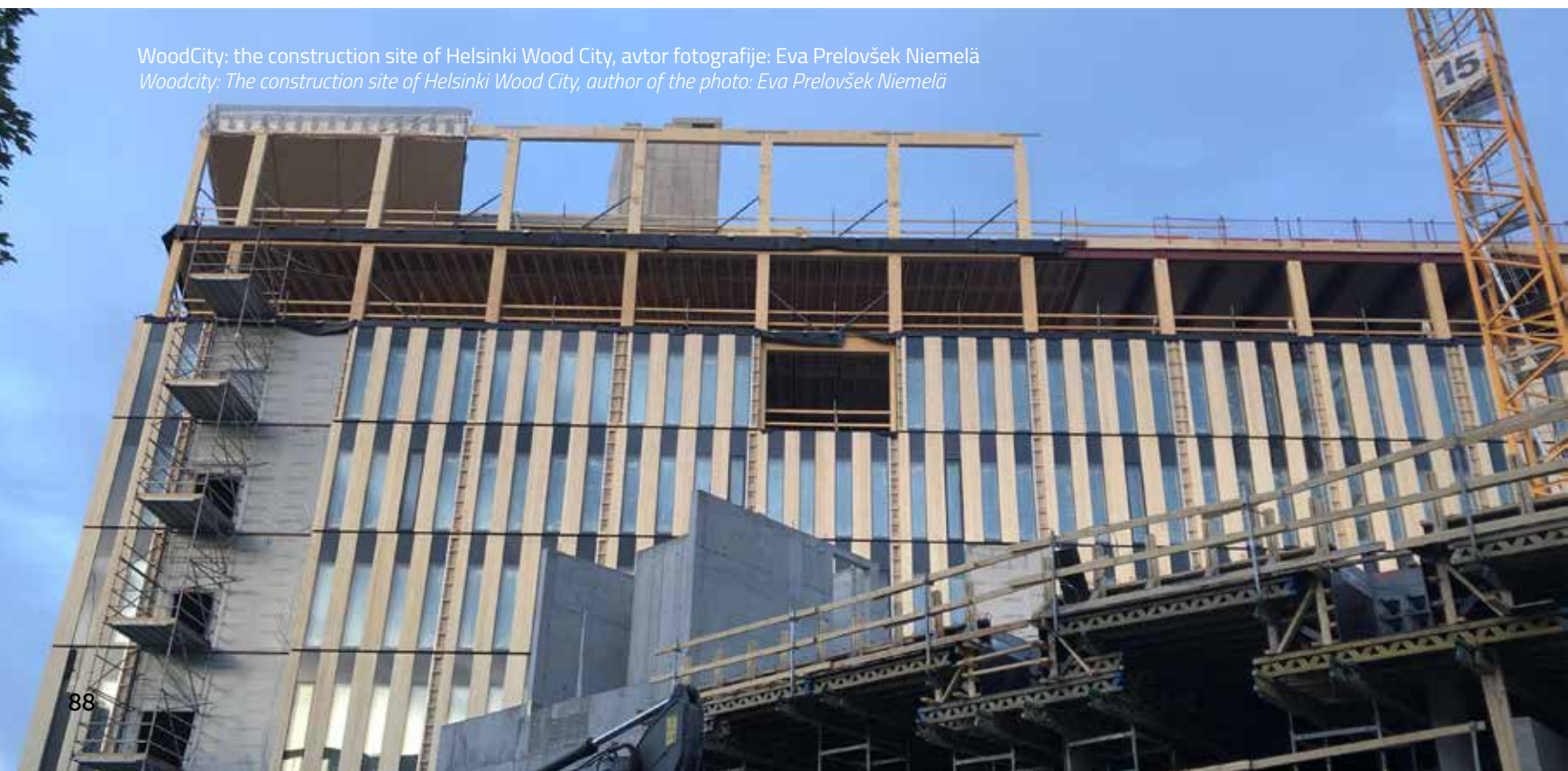
ce tistega časa na Finskem. Od takrat pa vse do leta 2010 na Finskem ni bilo več mogoče zgraditi lesene hiše, visoke več kot tri nadstropja, zlasti pa ne v gosto poseljeni mestni četrti.

V nordijskem podnebjju pa je les ves čas ohranjal svojo vlogo najcenejšega in s tem najbolj priljubljenega gradbenega materiala za nizkocenovna stanovanja, predvsem za enodružinske hiše, tudi če je bila tradicionalna lesena konstrukcija v veliki meri nadomeščena od petdesetih let prejšnjega stoletja z lažjimi lesenimi konstrukcijami, ki so omogočale učinkovito proizvodnjo v tovarnah hiš in so bile namenjene hitri montaži tudi na gradbiščih. V paket je bila preprosto integrirana tudi toplotna izolacija, pogosto mineralna volna, s folijami, ki preprečujejo vlažnost, kar pomaga zmanjšati celotno debelino stene.

Revizija modernističnih gradbenih predpisov

V zadnjih letih so se težave takšnih večplastnih struktur, ki pogosto vključujejo sintetične materiale, tudi hlapne organske spojine (HOS), pojavljale v velikem obsegu. Številni domovi so bili označeni za neseljive kot tudi, da jih ni vredno obnavljati, zaradi ogromne škode,

WoodCity: the construction site of Helsinki Wood City, avtor fotografije: Eva Prelovšek Niemelä
Woodcity: The construction site of Helsinki Wood City, author of the photo: Eva Prelovšek Niemelä



ki jo je povzročila plesen in v številnih primerih celo uničila zdravje nekaterih prebivalcev. Nekaj hitrih poskusov izboljšanja energetske učinkovitosti stavb v letih 1960–80 je položaj še poslabšalo. Dejstvo, da so podobne okvare bile odkrite tudi v številnih javnih zgradbah, kot so šole in vrtci, je pospešilo vladno podporo alternativnim rešitvam gradnje ter se je gradnja znova usmerila v preproste in dihaajoče, pogosto masivne strukture.

Simultani razvoj sodobnih lesenih konstrukcij, kot je CLT in vedno večja zavest o ekološkem odtisu gradnje – zlasti betona – je že prinesel nekaj korenitih sprememb v strategijah prihodnje gradnje. Finska vlada je svoj prvi posebni program za spodbujanje lesene gradnje v mestnem obsegu začela že na začetku novega tisočletja. Od takrat potekajo pilotni projekti med večjimi mesti in ministrstvom za okolje. Nekateri najbolj odmevni med njimi so Low2No, tekmovanje za trajnostno zasnovo stavb za območje v razvojnem območju Helsinki Jätkäsaari (nekdanje tovorno pristanišče blizu mestnega središča), kar je dejansko privedlo do spremembe nacionalnega zakonika o požaru in omogočilo gradnjo lesenih konstrukcij do osem nadstropij visoko od leta 2010. Drug mestni pilotni projekt je zajemal okrožje Linnanfältti v Turkuju, tudi v bližini lokalnega potniškega pristanišča in srednjeveškega gradu.

Vendar je zelo počasen začetek (v primerjavi s klasičnim razvojem) skupen tem projektom. V obeh primerih je bilo namreč potrebnih skoraj deset let, da smo našli trgovske partnerje – gradbena podjetja, motivirana in sposobna izvesti večjo strukturo lesenih konstrukcij. Zdaj je končno videti, da je lesena gradnja prepričala tudi kritične mase od institucionalnih vlagateljev do povprečnih kupcev stanovanj. Nekateri projekti se pojavljajo tudi v manjših perifernih mestih, obetavna primera pa sta tudi osnovna šola Tuupala in vrtec v mestu Kuhmo na severovzhodnem delu države, blizu ruske meje.

FINNISH WOODEN HOUSES AND LEGISLATIVE SUPPORT COMPARED TO SLOVENIA

Wooden construction is slowly (re-)establishing its role as a significant alternative for concrete and steel. Even in a country like Finland, which has got vast forests for material resources and notable traditions in vernacular architecture, the knowledge of using wood for any larger scale buildings almost got lost during the post-WWII decades of rapid industrialization and relatively late urbanization that resulted in hundreds of suburbs made of concrete elements.

CULTURAL AND LEGISLATIVE BACKGROUND IN FINLAND AND NORTHERN EUROPE

In legislative terms, concrete was seen as a permanent solution for improving the hazardous fire safety conditions often associated with wooden houses. Some legal restrictions for the use of wood, especially in the urban environment, still date back to the Great Fire of Turku (Åbo) in 1827, then the most important town of the country, which got largely destroyed, including the unique collections of the only university library of Finland that time. Thence, still until 2010 it was not allowed to construct a wooden house more than 3 floors high in Finland, especially not in a dense urban district.

In the nordic climate, however, wood has all the time maintained its role as the most inexpensive – and thus, the most popular – construction material for low-scale housing – especially one-family houses, even if the traditional timber structure was largely replaced since the 1950's by lighter wood-skeleton structures that enabled efficient production in house factories and were dedicated to quick assembly on the construction sites as well. Also thermal insulation, often mineral wool, with foils to block the humidity was easily integrated into the package, helping to reduce the overall thickness of the wall, too.



Tuupala: Tuupala Primary school, avtor fotografije / author of the photo: : Ville-Pekka Ikola / Alt Architects Ltd.

RECONSIDERATION OF MODERNISTIC CONSTRUCTION REGULATIONS

In recent years, the problems of such multi-layered structures, often including synthetic materials, also VOCs, have appeared in a large scale. Many homes have been doomed uninhabitable and not worth of being renovated, due to the widespread damage caused by mould, in many cases even destroying the health of some inhabitants. Some quick attempts to improve afterwards the energy efficiency of 1960-80's buildings has made the situation even worse. The fact that similar failures have been done and found also in many public buildings like schools and kindergardens, has speeded up governmental support for alternative solutions of construction, turning back towards more simple and breathable, often massive structures.

The simultaneous development of modern timber structures like CLT and the ever-growing awareness of the ecological footprint of construction – especially that of concrete – has already brought some radical changes to the strategies of future construction. The Finnish Government launched its first particular programme to promote wooden construction in urban scale already in the beginning of 2000's. Since then, there have been pilot projects between bigger cities and ministry of environment. Some of the most notable of those were the Low2No, a sustainable building design competition for a site in Helsinki Jätkäsaari development area (a former freight harbour next to the downtown), which actually led to the change of the national fire code, allowing timber-structure buildings of up to eight floors since 2010. Another urban pilot project has been Linnanfältti district in Turku, also in the proximity of local passenger harbour and medieval castle.

However, common to these projects has been a very slow start (in comparison to conventional developments). In both cases, it took almost 10 years to find commercial partners – construction companies motivated and capable of carrying out a bigger timber structure. Now it finally seems to have convinced also critical masses from institutional investors to average apartment-buyers. Some projects are popping up also in smaller provincial towns, one promising example being the Tuupala Primary School and Day-care centre in Kuhmo in the North-Eastern part of the country, close to the Russian border.

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