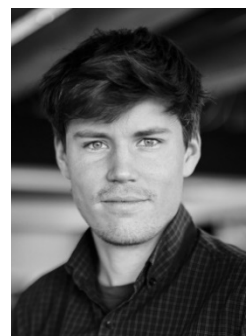


Stockholm Wood City – a vision for an entire neighbourhood in timber

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1. Background

Stockholm Wood City extends over 250,000 square meters in Sickla, in the southern parts of Stockholm, and is thus the world's largest known urban construction project in wood. The new area houses additional 7,000 office spaces and 2,000 homes in a vibrant, urban environment. The first sod is planned to be turned in 2025 and the first buildings are expected to be completed in 2027. The ambitious project is being developed by Swedish urban developer Atrium Ljungberg. Through innovative design, technology and a strong collaborative culture, a new standard is to be set for sustainable construction.

Early 2023 we were invited by Atrium Ljungberg to develop a vision for the all timber neighbourhood, and outline the advantages and challenges of building in large scale with mass timber based on our previous experiences. The presentation outlines our way of working, the precedents and our vision for Stockholm Wood City.

1.1. Sickla

Sickla is located just south of central Stockholm. Formerly the site of Atlas Copco headquarters, a leading Swedish mining tools supplier, it was sold in the 1990's as the production moved. The site contains many historic buildings and traces of the historical production line. Atrium Ljungberg has developed the site from an industrial area into a over 20 years and it is today home to Sweden's third largest shopping centre, with over 180 shops and restaurants, right next to workplaces, homes, hotels, schools, preschools, health, culture and nature. Approximately 8,000 people already work here.

The area is approximately the size of Old Town in Stockholm and represents a unique opportunity to imagine a new well-connected neighbourhood. The extension of Stockholm's subway with a new station in Sickla will add to the existing connections through commuter train, tramway and buses and bring Sickla to only 7 minutes from Stockholm Central Station.



Figure 1: Map of Stockholm, Sweden. Dotted line outlines Central Stockholm, continuous line outlines Sickla.

2. Precedents

2.1. White Arkitekter

White Arkitekter is one of Scandinavia's leading firms of architects. We work with sustainable architecture, design and city planning in an international context, for current and future generations. We are an employee-owned architect collective with close to 800 employees and a presence in Sweden, Norway, the UK, Germany, Canada and East Africa.

Our vision is for all our projects to be climate neutral by 2030, through design excellence. We are convinced that diversity and cross-disciplinary collaboration is key to solving today's challenges and achieving our vision. Since the employees own the company together, we have the opportunity to invest in what we believe in, both now and over the longer term. White Research Lab is where we conduct practice-based research and development, often in partnership with clients, the academic sector, industry colleagues, government authorities and civil society. In this way we build knowledge together, and jointly contribute to the development of the industry and our shared future.

2.2. R&D&I at the foundation of the vision for Stockholm Wood City

White Research Lab has focused on decarbonized construction for several years, and specifically timber construction. Through a series of architectural competitions in Sweden and abroad we have tested new applications for timber, developing new solutions together with structural engineers and sustainability specialists.



Figure 2: Competition proposal for Stora Enso HQ in Helsinki. The project redefined the timber grid using LVL.



Figure 3: Won competition in Riga, Latvia. The project develops solutions for mixed use mass timber construction in a heritage environment.



Figure 4: Competition proposal Vilnius, Lithuania. The project developed solutions to integrate greenery with mass timber construction.

2.3. Learnings from realized projects in mass timber

The Stockholm Wood City vision relies on our learnings from several large scale, mixed use projects in mass timber, mainly Sara Culture Centre, Magasin X and Nodi.

Sara Culture Centre in Skellefteå, Sweden is a 28.000sqm development combining a library, two art galleries, six theatre stages and concert halls with a 200 room hotel. The building was inaugurated in 2021 as the world's first 20 storey building in mass timber, designed with a structure of Glue and Cross laminated timber for walls, slabs, columns and even stabilizing cores. The innovative construction technique paired with a complex content and a situation right at the centre of town is a true challenge, but the project highlights several advantages of building with timber. Reconnecting new green solutions

with the timber heritage of the region, Sara and Skellefteå were named one of the Best Places in the World by Times Magazine. The building has received numerous awards, including the International Award for Wood Architecture in 2022, Best Culture Building at World Architecture Festival 2022 and Best Tall Building Europe at CTBUH Awards in 2023. It is currently featured at the Venice Biennale «Laboratory of the Future» and nominated for the EU Mies van de Rohe award 2024.



Figure 5: Sara Culture Centre, Skellefteå. Photo: Patrick Degerman

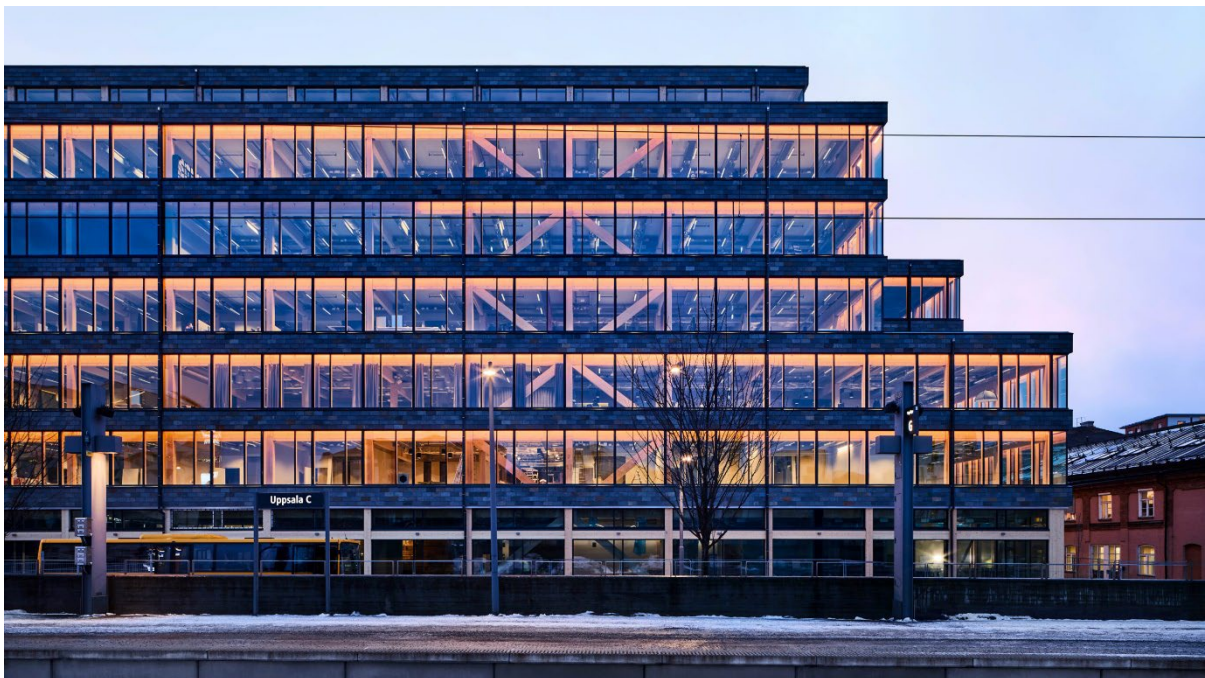


Figure 6: Magasin X, Uppsala. Photo: Måns Berg



Figure 7: Nodi, Gothenburg. Photo: Åke E:son Lindman

3. A vision for Stockholm Wood City

The vision for Stockholm Wood City relies on a series of strategies that will be developed in the presentation:

- An urban forest
- A 5-minute city
- A climate neutral and circular city
- Establishing a timber Innovation Hub



Figure 8: Stockholm Wood City, The Timber Innovation Hub.



Figure 9: Stockholm Wood City, Overview.