



StoraEnso

WorkStack

London, UK

Partner of Stora
Enso

STRUCTURES

Welcome to WorkStack – a cantilevered industrial workshop that makes impressive use of a compact urban site.

The building's design is a response to the growing need for high-quality industrial workspace in inner city areas with little available land. Its 14 units between 55m² and 110m² offer choice and growth within the building and employment space for 60 people.

Livable City Design

The developer, Greenwich Enterprise Board, is thrilled with the outcome as one of their primary objectives was to provide Greenwich with low-cost rentable space. Bringing and maintaining workspaces into the area makes it possible for people to work within shorter commute times, a key strategy towards sustainable 15 minute-cities (a neighbourly urban planning concept where everyone gets to meet most of their daily needs within a reasonable and accessible walk or ride from home rather than adding to urban sprawl and traffic congestion).

Functional and Flexible

WorkStack provides affordable workspace units, each designed to be adaptable to different types of industrial activities, with each unit offering a practical and efficient working environment. Our partners, [B&K Structures](#) found the perfect application of prefabricated [Sylva™ CLT Walls and Floors](#) to enable a high degree of customization, so that each unit could be tailored to the specific needs of its occupants.

Specification

dRMM's approach to specification for WorkStack centered on the need for robust, long-lasting and cost-effective materials. Given the immediate context of the big shed typology of the surrounding retail parks, they looked towards system-based, high-performance, utilitarian products externally and natural, robust materials internally.

The primary material used in the construction is engineered mass timber, includes PEFC-certified [cross-laminated timber \(CLT\)](#) and [glued laminated timber \(glulam\)](#). This choice of material not only reduces the carbon footprint but also provides a warm and aesthetically pleasing environment.

Both materials are renewable resources, and its use in construction significantly reduces the embodied carbon compared to materials like concrete and steel.

Internally, the CLT superstructure is left exposed as solid walls and soffits, providing a ready canvas for a variety of uses.

Steelwork is left in its galvanised state while the circulation routes are celebrated by bold-painted timber doorsets in vibrant red and orange explains Steve Wallis, associate director, dRMM to the Architects' Journal (AJ).

The application of CLT, engineered and installed by our partner B&K Structures, significantly increased the lettable space, and reduced the overall carbon footprint of the building. In part because Stora Enso's excellent [environmental product declarations \(EPDs\)](#) and because CLT is so much lighter than concrete so it can handle a top heavy design.

Exposed wood



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By leaving the wooden elements expose, costs for finishes were eliminated, and the embodied carbon footprint of the structure reduced. The exposed wood also contributes to the tenants well-being, given the proven biophilic effects on the mental wellness of architecture, including nature.

Fire Safety:

Arup integrated fire safety measures, including fire-resistant coatings and compartmentalization, to meet stringent safety standards.

Providing oversight from design through construction to completion, Arup drew on their experience in designing mass timber buildings as well as extensive experiments and research of the fire behaviour in compartments constructed from mass timber, and close collaboration with stakeholders such as Building Control and the London Fire Brigade, for its development.

The design carefully considered and controlled the location and extent to which combustible materials are exposed. They set stringent fire safety performance criteria for the CLT panels, the structural connections, and other systems that need to interface with the CLT panels, such as fire doors, fire dampers and encapsulation. [Learn more about Fire Safety with CLT here.](#)

Sustainability

The building also incorporates energy-efficient systems for heating, cooling, and lighting, as well as the use of renewable energy sources where possible. The design also maximizes natural light, reducing the need for artificial lighting and further lowering energy consumption.

'The superstructure was a key driver of the project's embodied carbon footprint (around 21 per cent lower upfront embodied carbon than LETI's 2030 Design Target of 350 kgCO₂/m²).

Prefabricated CLT elements allowed a faster construction process, reduced wastage and, when combined with the lightweight, panelised cladding, the result is an exceptionally airtight building which reduces energy demand for tenants.'

Steve Wallis, Associate Director, of dRMM told the Architects' Journal.

Commenting on the project, the Mayor of London said, "... this is an innovative new approach to industrial intensification. It is a new building providing 14 new stacked industrial workspaces in Charlton Riverside....the spaces will provide much-needed high-quality industrial workspace in an area undergoing significant regeneration."

Emissions

CLT Carbon footprint

Manufacturing 18 tonnes CO₂e

Transporting 11 tonnes CO₂e

259.08 tonnes CO₂ Carbon dioxide removed from the air and stored in WorkStack

The project falls 44% below the RIBA 2030 embodied carbon targets for whole life carbon, and 21% less than LETI 2030 design targets.

Annual CO₂ emissions 80 kgCO₂e/m² **Predicted design life** 60 years **Embodied/whole-life carbon** Upfront embodied carbon: 271 kgCO₂e/m²,

Embodied carbon: 413 kgCO₂e/m²,

Whole-life carbon: 493 kgCO₂e/m²

Source: Architects' Journal

The renewable materials company



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Collaboration and Innovation

The success of the WorkStack project is a testament to the collaborative effort between various stakeholders, including the Greenwich Enterprise Board, dRMM Architects, our partners, B&k Structures, and Arup, a global engineering firm.

AWARDS

Structural Timber Award: Commercial Building of the Year shortlisted

Good Growth Fund Winner: This award highlights the project's innovative approach to industrial workshop units.

The Guardian's Best Art and Architecture 2023: Workstack was featured in the top five best architecture projects of 2023

Wood Awards: Recognized for outstanding wood design

SECBE Awards 2024 Finalist: Nominated for Building Project of the Year under £20m.

PUBLICATIONS

[Guardian's Best Art and Architecture of 2023](#) | [Architectural Journal](#) | [Dezeen](#) | [The Guardian](#) | [The Architect](#)

View other examples of tight infill projects [Sylva kit of parts](#)

[Modellen 4](#) | [Teach Spruis](#) | [Calle Descalzos 33-35](#)

Would you like to know more? Download the whitepaper: [10 Advantages with building with mass timber](#)



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RIBA London Award 2025



Wood Awards 2024 Winner



Good Growth Fund - Winner



Commercial Building of the Year - Structural Timber Awards Shortlist



Built by Nature 2025 Finalist



Photo credit: B&K Structures

General

Delivery year

2021

Building type

Commercial

Area (m²)

1,747

Storeys

5

Products

Products and Services

Sylva™ CLT Floors and Roofs,
Sylva™ CLT Walls

Product quality

NVI (non-visual on both sides),
INV (industrial visual + non-visual) and IBI (industrial visual on both sides)

Product volume (m³)

340

Number of deliveries

8

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Team

Partner of Stora Enso

B&K Structures

Architect

dRMM

MEP Designer

Webb Yates Engineers

Specialist Timber Subcontractor

Specialist Timber
Subcontractor (Design & Build)
– B&K Structures

Developer

Greenwich Enterprise Board

Structural Engineer

Arup

Main contractor

F Parkinson Ltd

Timber Engineer

Specialist Timber
Subcontractor (Design & Build)
– B&K Structures

Others

Construction cost (€)

4,703,000

Construction duration (months)

8