StoraEnso

Partner of Stora Enso

HYBRID STRUCTURES

Timber Square Bankside, London

Welcome to Timber Square: the largest commercial development in the UK using cross-laminated timber (CLT) spanning 370,000 square feet. The scheme reconstructs a former printworks into two office-led timber buildings (15 floors and 10 floors high) complete with retail space, lots of greenery and public space.

Some of the UK's most ambitious operational and embodied carbon construction goals are taking shape as Bennetts Associates architects, the global leaders in sustainable architecture, with this placemaking development in Bankside near the Tate Modern in London.

Landsec, the UK's largest commercial property developer, had a vision when they started back in 2019, to create a large-scale office-led, building using the existing fabric of the 1950's printworks. With the expertise of our partners the mass timber specialists, Hybrid Structures, the vision is now taking shape.

The redevelopment will provide c.380,000 sq ft sq ft of workspace within two buildings, the East and West buildings. The West Building will be a new 15-storey structure, while the East Building will be an 8-storey building with significant refurbishment.

Landsec, estimates they have already avoided 7,000 tonnes of carbon emissions by retaining 80% of the existing fabric of the 1950s printworks (UK Green Building Council).

Using a hybrid cross-laminated timber structure (CLT) / steel frame was key to the project's overall upfront carbon output. Stora Enso's prefabricated Sylva™ building kit has a reputation for having a lower carbon footprints according to third-party verified environmental product declarations (EPDs).

The embodied carbon was tracked throughout the design. The combined figure for both sites is 248 kg CO_2e/m^2 which sits just above the 2030 target for the structure set by LETI. The development would even exceed this target if the carbon storage were also included in the final calculations.

The Sylva CLT elements generated only 345 tonnes of greenhouse gases (CO_2e) to manufacture. Compared to the 4,999 tonnes of carbon dioxide that the trees removed while growing and will be stored in Timber Square, this is a small fraction. Choosing Sylva CLT elements instead of non-renewables avoided 7,499 tonnes of greenhouse gases. (Source: Stora Enso Carbon Calculator)

To put that in perspective, according to Eurostat, the average carbon footprint of a person in the EU was approximately 7.2 tonnes of CO_2e (equivalent) emissions per year in 2021 (Source).

Reusing the existing fabric also preserves heritage and is expected to lead to a higher-value floorplate. Many of the structural joints are also designed to be reversible, allowing the space to remain flexible and adjustable for a long and useful building service life.

Protect

Many of the elements were protected before leaving the mills with a biocide-free end grain sealer and breathable, temporary membrane by Stora Enso's Sylva™ Protect Service. The in-house application prevented water or dirt from getting trapped in the wood during the transport and construction phase and eliminated the need for any time-consuming on-site application. When the kit of parts arrived on-site, the elements were ready to be installed immediately.



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Learn more: BBC feature video story UKGBC Timber Square Case Studies

Are you interested in other office-led projects in the London area built with Sylva™?

11 Belgrave Road | Metropolis | Paradise | Roundhouse Works | Arding & Hobbs | WorkStack

Read more about this project in the AJ and the NLA

Specifications (targeted):

BREEAM Outstanding

WELL Core Platinum

NABERS 5 Star

NZC ENBOD

NZC OPERATION

General

Delivery year

Under Construction

Building type

Office

Area (m²)

380,000

Storeys

15



Photo credit: Bennetts Associates/Landsec

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Products

Products and Services

Sylva™ CLT Floors and Roofs, Sylva™ CLT Walls, Sylva™ CLT Stairs, Temporary Membrane, End Grain Sealer, Preinserted lifting devices

Product quality

NVI, INV, VI

Product volume (m³)

6,561

Team

Partner of Stora Enso

Hybrid Structures

Developer

Landsec

Architect

Bennetts Associates

Structural Engineer

Heyne Tillet Steel

Main contractor

Mace

Timber Engineer

Heyne Tillet Steel

Others

Construction cost (€)

228,500,000

Total construction development duration (months)

72