

The Wood Awards recognises, encourages, and promotes outstanding design, craftsmanship and installation using wood.

ABOUT WOOD AWARDS

WINNERS 2022

## 250+ entries per year

"A snapshot of who is building in the UK, with what, and where"

### Buildings Furniture & Product Design

## Judges

Our judges are leaders from across the UK architecture and design industry. They are fully independent, and make their decision after visiting every building site and seeing every product in person.

VIEW ALL JUDGES

















### Awards Timeline

6
MARCH
Open for entries for

The call for entries for the Wood Awards 2024 opens on this date!

31 MAY

Closed for entries

Entries for all categories closes on this date.

4

SEPTEMBER

Shortlist Announced

The shortlist for the Wood Awards 2024 announced.

Read More  $\rightarrow$ 

18

SEPTEMBER

Exhibition

The Wood Awards will display the shortlisted projects at London Design Festival.

Read More  $\rightarrow$ 

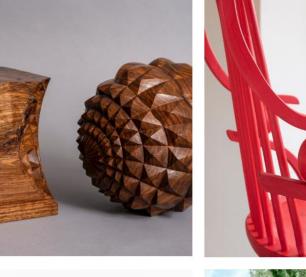
20

NOVEMBER

Awards Night

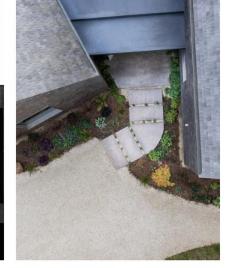
One of the most highly anticipated events in the timber design industry calendar.

































































## WOOD AWARDS EXHIBITION

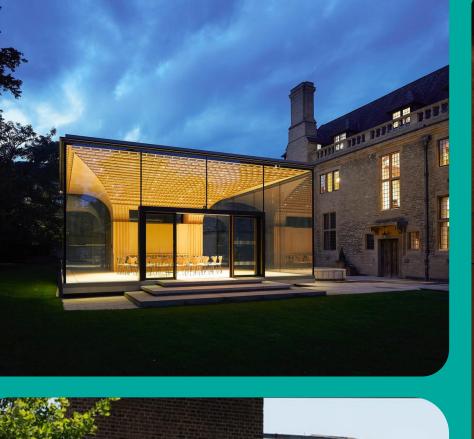
Wednesday 18 - Saturday 21 September Gallery@Oxo

In partnership with Material Matters Part of London Design Festival























# ALIGNING THE WOOD AWARDS TO TDUK VALUES

## CONNECT THE SUPPLY CHAIN

TDUK suppliers working with TDUK designers and TDUK installers.

### SHOWCASE BEST PRACTICE

By promoting and sharing lessons from the very best timber designs.

## ACCELERATE A LOW-CARBON FUTURE

By gathering sustainability data for all submissions.

## CASE STUDIES

A library of inspiring, indepth case studies showing timber at its finest



CASE STUDY 0011
TIMBER DEVELOPMENT UK
MAR 2023

#### **GREEN HOUSE**

**PRIVATE** 



#### PROJECT

Location: London

Completion date: 2021

Gross internal floor area: 186 m²

Architect:

Hayhurst & Co Architects

CLT Structure: EURBAN Limited

Substructure and Steelwork:

Iain Wright Associates

Main contractor: Rebuild London

Wood suppliers: Stora Enso and Pabst

Photography: Kilian O'Sullivan and Tom Van Schelven

.

#### PRODUCTS

Cross-laminated timber: Visual grade, PEFC certified

European whitewood, Austria.

Glue-laminated timber:
PEFC certified European

whitewood, Austria.

3-layer board:
PEFC certified European

whitewood, Austria

#### PERFORMANCE

Upfront embodied carbon (A1-A5):

562 kgCO<sub>1</sub>e/m<sup>8</sup>

Stored biogenic carbon: 260 kgCO<sub>2</sub>e/m<sup>2</sup>

Airtightness at 50pa: 3.44 m³/hcm² U-values: Roof 0.15 W/m²k; exterior walls 0.16 W/m²k; ground floor 0.13 W/m²k

Design life: 60 years

Volume of materials used: mass timber 55.5m\* (CLT & glulam)





#### INTRODUCTION

Hayhurst & Co's design for Green House draws on the natural history and verdant character of its location. Set on a backland plot in the Clyde Circus Conservation Area in Tottenham, which used to contain small market gardens, orchards and greenhouses, the new house sits opposite a rewilded area dense with trees and birds.

With an internally expressed CLT structure, a light-filled, open layout and a façade planted with bamboo, this unique home blurs boundaries between inside and autside, creating a contemporary, low-energy re-imagining of a domesticscale greenhouse.

Interconnected living spaces and access to nature were priorities for the design. A central double-height atrium connects living spaces across the two floors and brings daylight into the heart of the house. Views out to sky or greenery from all living spaces create a connection to nature, reinforced by the use of planters and exposed timber throughout.

The plot's existing building was a 1980s house in multiple-occupation self-build that was not viable to retain due to its poor condition and design. It was important to the client and design team that the new house be low carbon both in construction and long-term use.

Materials were selected to be lowcarbon or carbon-sequestering wherever possible. The house is constructed from PEFC-certified CLT. Engineered and installed by EURBAN, the CLT frame is lighter in weight than a traditional masonry structure, reducing the concrete foundations as a result.

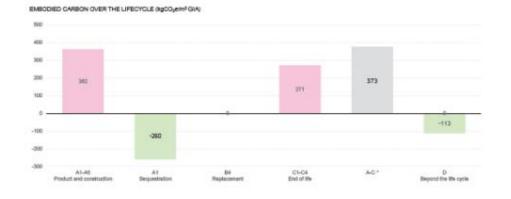
The material palette of the house has been kept to a minimum, with all primary structures exposed. Internal doors are notched into the frame and the timber's end grain has been exposed and growth rings displayed to visually express how the material has grown.

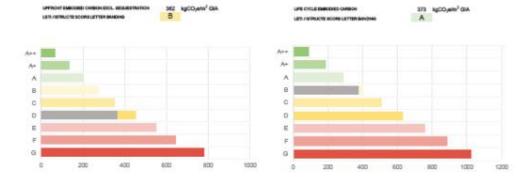
The natural warmth of the CLT walls is complemented by smooth concrete aggregate flooring (over underfloor heating) downstairs and soft recycled cork-rubber for the upstairs floors.

The exterior is clad in Onduline: a utilitarian, low-cost material made from recycled paper mixed with bitumen which is light in weight, providing a corrugated matt finish.

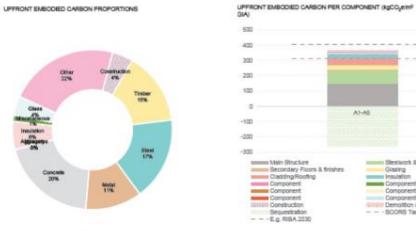
The house is well insulated and fossil-fuel free, heated by an air-source heat pump and with solar panels mounted on the roof to assist with the house's electricity needs and a water butt which irrigates plants on the front facade.

#### CASE STUDY 0011 | TIMBER DEVELOPMENT UK





LIFE CYCLE EMBODIED CARBON (A - C)



#### STRUCTURE Workshop

Embodied corbon calculation method: Effective Workshop Carbon Calculator: As-ball? morterial quantities have been used for the obove calculations. Services are excluded, as occurate moterial quantities were not oxidable. The SW Corbon Calculator measures the Embodied Carbon of fuel electric and processor related corbon or has electric content on a processor related corbon artifacts. The New Total, CORPLETIA, CORPLE

#### CONSTRUCTION

The overall ansite construction of Green House took just eight months - including the demolition of the existing house, laying the groundworks and preparing the slab for the superstructure.

The use of CLT supported construction efficiency in a number of ways.

While the groundworks were being completed, EURBAN manufactured the superstructure. The precise tolerances that the CLT is made to meant that the steel mezzanine and façade frames could also be manufactured before the CLT was completed. Being able to progress with the various structural components in tandem reduced onsite installation time. The CLT frame itself was erected in only three weeks.

Exposing the CLT structure internally meant that there was a minimal amount of finishing work to do. Envirograf Class 0 fire protection coating was applied, leaving the timber with a chalky tint.

The mass timber was delivered from Austria to the UK on two articulated lorries. Due to restricted site access, material was delivered onsite using three rigid lorries, which had an implication on the maximum size of the CLT panels and glulams. This was one of the first structures that EURBAN assembled with the weather protection membrane pre-installed in the factory. This sped up onsite installation and ensured protection of the panels from the moment they were delivered. It is especially beneficial in projects such as Green House, where many of the panels are left exposed.

Green House provides an exemplar prototype for a sustainable family home that could be replicated on other restricted sites, or duplicated on a larger scale as terraces.





Delivering the CLT panels with weather protection membranes to the restricted site (top), and the CLT frame almost complete (below).

#### SUSTAINABLE DESIGN

The client's brief was for a large, open living space with a sense of great height and light. With two young children and regular visits from international family, it was also important to have a flexibility of use. To achieve the client's requirements within their limited budget a highly efficient design was needed. Hayhurst 6 Co developed a block form that maximised structural, material and energy efficiency by providing the best form factor possible. This also meant it was simple to construct, with limited wastage.

As side windows were not possible due to the proximity of neighbouring properties, the middle has been opened up, bringing daylight into the plan from above. The upstairs bedrooms are arranged around a mezzanine which looks down onto the central dining space, which then connects to the living room and kitchen, Curtains wrap around the whole atrium, allowing it to be separated off as an awesome. double-height dining hall as well as providing acoustic absorption to the inside spaces. The atrium also assists in cooling the house on hot days through passive stack ventilation.

Double aspect, long views connect the central space to both the front and rear gardens. By being slightly sunk into the ground, a feeling of being in an outdoor courtyard is created. The upstairs doors are all aligned, creating long views through the bedrooms, from the front to the back of the house.

The south-facing green façade, with sliding polycorbonate panels, works like outdoor curtains. It provides a privacy screen to the upstairs bedrooms and the planted bamboo creates dappled shading that cools on hot summer days.

MESH energy consultants supported the project from an early stage, determining required U-values for thermal efficiency, recommending the use of a heat pump, and creating calculations for heat loss and gain for the large glazing and double height space. The roof skylight contains rain and heat sensors, and is angled so direct sunlight doesn't hit the ground floor.



"The clients sought a big sense of light and space in the living space, and for everything to be connected. They are passionate gardeners and we wanted to link this to the site's history of cultivation and greenery, by creating a fluid inside-outside feeling."

Claire Taggart, Associate Architect, Hayhurst & Co Architects.

#### **CLT STRUCTURE**

Hayhurst & Co initially approached CLTspecialists EURBAN at RIBA Stage 3, to discuss the feasibility of the site and structure, and to provide a rough outline design. EURBAN were then appointed by main contractor Rebuild London to engineer, design and install the CLT and glulam structure for the project.

The design of the superstructure was developed by EURBAN in detail at Stage 4 – coordinating with the architects in terms of CLT panel thicknesses, beam sizes, openings and services.

After exploring different approaches, the design team opted for the simple block form with a double-height space in the middle. Accordingly sized glularn beams span the atrium and support the roof light and deck.

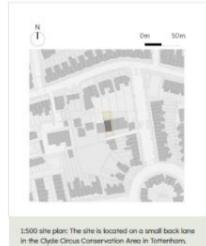
The glulam beams that support the roof deck were set just inside the bedroom walls to allow a continuous unbroken appearance of the CLT walls going all the way up to the sky. The glulams supporting the first-floor slab were not

a structural requirement, but part of the architectural intent to create an evenly spaced rhythm rather than a flat, smooth slab.

The cantilevered mezzanine walkway is a steel structure that is botted into the glulam beams which span the atrium and the perimeter CLT walls. Iain Wright Associates engineered both the substructure and the steelwork for the project. Where steelwork was required for the foçade framing and cantilevered landing, the structure has been kept as slim as possible, left exposed and simply botted together for ease of disassembly.

The CLT was supplied by Stora Enso, who have calculated that a volume of 52.9 m\* of CLT was used for the structure, storing 39 tonnes of carbon dioxide during the building's lifetime. They have also calculated that it will take only 18 seconds for the sustainably managed forests in Austria to regrow this volume of timber.







Concept axonometric showing a sense of openness and a blurring of the inside-outside boundaries of the house.







## CASE STUDIES

View our library of inspiring and creative case studies showing timber at its finest.



#### **Greyfriars Charteris Centre**

Konishi Gaffney Architects' refurbishment and extension Studio Hagen Hall's transformation of a constrained of Greyfriars Charteris Centre in Edinburgh has transformed the underused former church and administrative building into a thriving community hub, providing flexible work and...

VIEW PROJECT



Search by keyword

Type here...

Filter by collection

- Select -

Hardwood (19)

Hardwood (19) Interiors (6)

Mass Timber (52)

Religious (7) Retrofit (2)

UK Grown (3)

Order results by

- Select -

Zero Carbon (4)

Performing venue (9)

#### **Balcorne Street**

terraced house takes inspiration from the precision and elegance of sailing boat joinery, with ingenious storage solutions concealed within the bespoke elm veneer...

VIEW PROJECT





Oak Barbican Kitchen



Hastings Pier

## CASE STUDIES

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#### **Built: East Pavilion**

Built: East is a public pavilion, by OGU Architects and Donald McCrory Architects, that brings together both historical and present-day manufacturing innovations of London. The addition of the annex accompanied a its East Belfast location.

VIEW PROJECT



#### Wooden Annex

The Wooden Annex is a single-storey, fully timber extension to a 1950s end-of-terrace house in South complete refurbishment of the existing house,...

VIEW PROJECT

Cork House



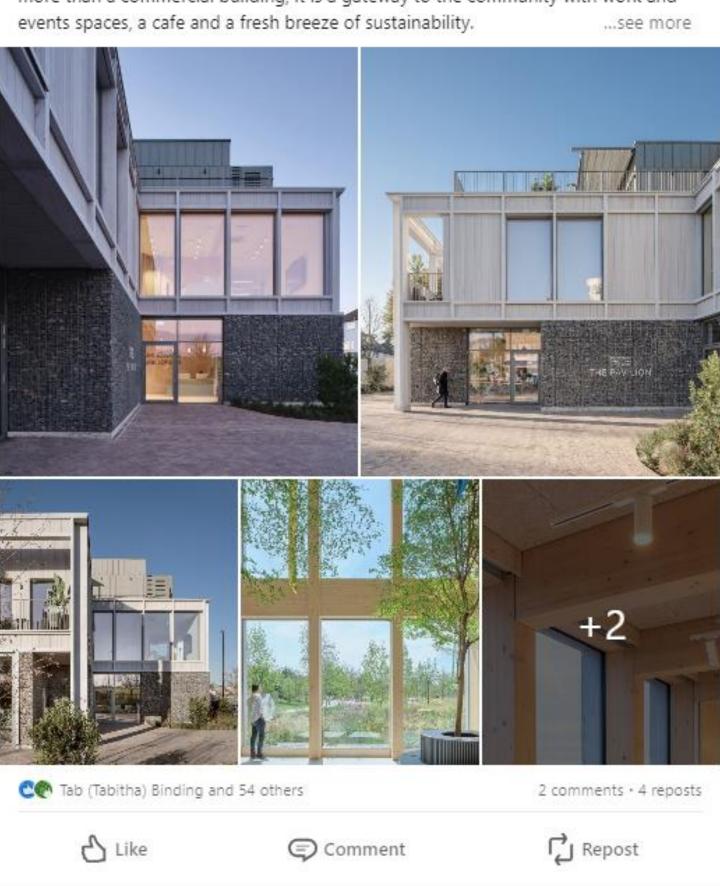
Coastal House



Search by keyword Type here... Filter by collection - Select -Filter by product Accoya (4) - Select -Accoya (4) Acoustic panels (1) Brettstapel (1) Cassettes (2) Cladding (74) CLT (27) Doors (4) Floor Structure (4) Furniture (6) Glulam (52) Joinery (7) Joist (2) Louvres (2) LVL (9) OSB (2) Panel (1) Plywood (34) Roof lining (1) Roof structure (29)



On The Brent Cross Pavilion is a new addition to London's timber landscape. It is more than a commercial building; it is a gateway to the community with work and



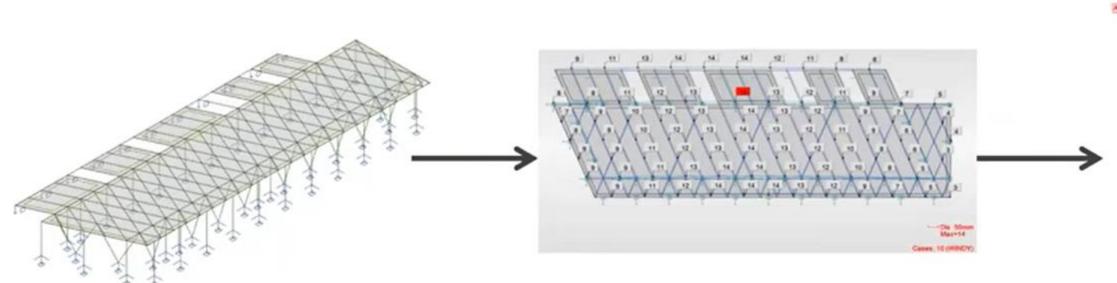


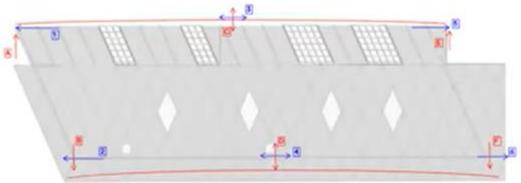






## Structural Strategy - Roof Stability



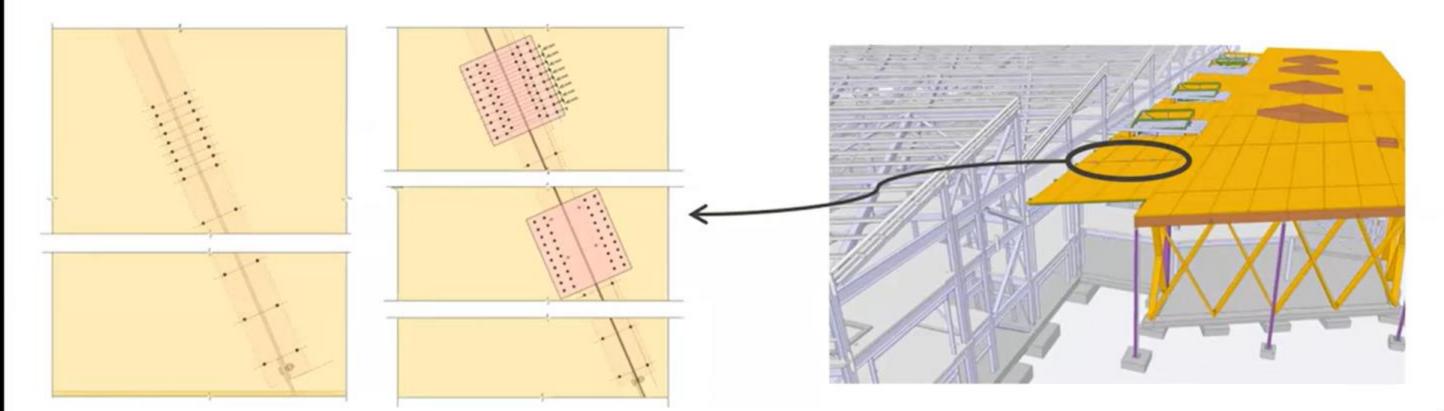


Swelling during construction: +2mm (based on average moisture change from 12% to 15%). Shrinkage during early operation: -2mm (based on average moisture change from 15% back to 12%). Shrinkage during use: -2.7mm (based on average moisture change from 12% to 8%). hermal expansion/contraction: +0.5mm/-0.5mm (based on +/-15oC temperature change during service). Sway due to wind loads on glulam roof: +/-4mm.

Maximum expansion = 2+4.0+0.5x0.5 = 6.3mm Maximum contraction = -2.7-4.0-0.5x0.5 = -3.7mm

welling during construction: +5.1mm (based on average moisture change from 12% to 15%). hinkage during early operation: -5.1mm (based on average moisture change from 15% back to 12%). hinkage during use: -6.8mm (based on average moisture change from 12% to 8%). hermal expansion/contraction: +1.7mm/-1.7mm (based on +/-15oC temperature change during service).

aximum expansion = 5.1+14.0+0.5x1.7 = 20.0mm aximum contraction = -6.8+15.0-0.5x1.7= -22.7mm





# designTimber



New Temple Complex

21 February 2024

**Durley Chine Environmental Hub** 

13 March 2024

Black & White Building

10 April 2024

Spruce House & Studio

8 May 2024

**Field Station** 

12 June 2024

The Boathouse

3 July 2024

**Eton Sports & Aquatics Centre** 

7 August 2024

National Manufacturing Institute Scotland (NMIS)

11 September 2024