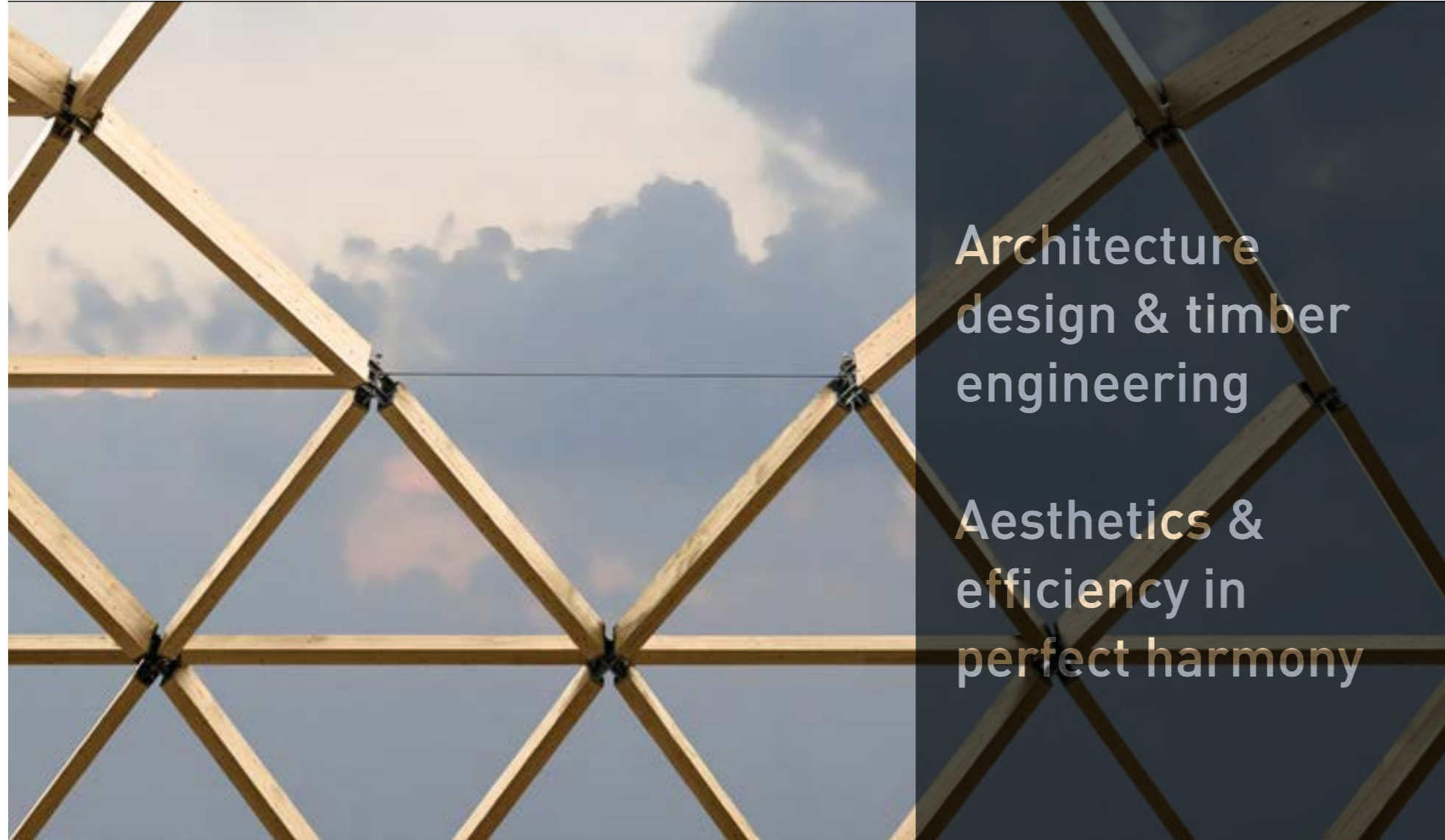


leading timber engineering

SUSTAINABLE ARCHITECTURAL PROJECTS IN TIMBER

SPREAD YOUR IDEAS

WiEHAG
TIMBER CONSTRUCTION



Architecture
design & timber
engineering

Aesthetics &
efficiency in
perfect harmony

Dear Architects, Clients and Engineers

We love timber. With our pioneering spirit in engineering, we are expanding the horizons of this material and inspiring architects, builders and investors for a sustainable future. WIEHAG has built its reputation as a leader in exceptionally complex and high profile architectural projects throughout Europe. Renowned Architects and Engineers value our competence and skill.

Why is that?
Spread your ideas: At WIEHAG, creative ideas in design and architecture meet with implementation-oriented solutions and approaches in engineering and construction. Building on our experience and expertise, we show imagination and foresight, while never neglecting economic efficiency and required functionality. This defines our approach to exceptional projects.

Technology and Safety: WIEHAG combines structural engineering, design, and state-of-the-art production technology all under one roof. Using a holistic approach everything is coordinated & closely monitored, which creates the quality and safety that Contractors and Clients value.

Sustainability: Society is increasingly demanding that our actions follow sustainable paths and timber construction contributes

positively towards this goal, because timber is a renewable raw material that helps to substantially save energy and reduce CO₂ emissions.

Anyone who has ever built with wood understands these outstanding properties.

Our built landscape is an investment, which over time shapes our culture and future generations so we bear a great responsibility to positively impact both. We welcome the opportunity to advise and assist you in the realisation and delivery of your project.

CONTENT

Leading Timber Engineering Structural Possibilities in Engineered Timber	04
Crossrail Place Canary Wharf Symbol of Innovative Architectural Art	06
The Macallan Whisky-Distillery Exceptional Engineered Timber Roof Construction	08
The Import Building 10-storey engineered timber atrium at the heart of a London office building	14
Bread Museum „Paneum“ Freeform Architectural Visions in Wood	16
Additional references	
• Cargo-Partner, Fischamend Austria	
• Swimming pool and teaching area, Freemen's School, Ashted UK	
• Abbey Wood Crossrail Station, London UK	
• Subtropical swimming paradise, Center Parcs, Longford Forrest, Republic of Ireland	18



Leading
Timber
Engineering

Structural
Possibilities
in Timber
Engineering

Redefining Architecture

We have made a name for ourselves internationally as Europe's leading specialist for load-bearing systems and complete roof structures using glue laminated timber. We have been a family-owned business since 1849 with over 170 years of experience in timber engineering and an

Timber at its Peak

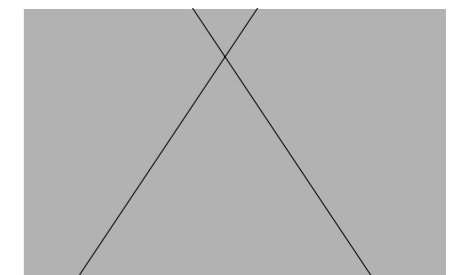
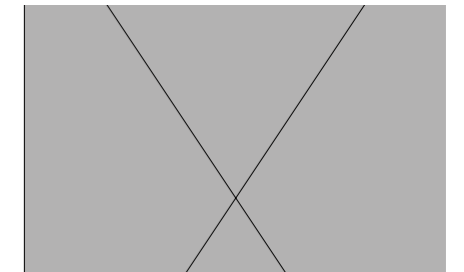
Aesthetics, functionality as well as economic profitability, all help make modern timber engineering more competitive than ever. Wood has a high strength to weight ratio and the advancement of joining technology, digital design, CNC manufacturing & installation methods has all contributed to an unprecedented level of efficient construction.

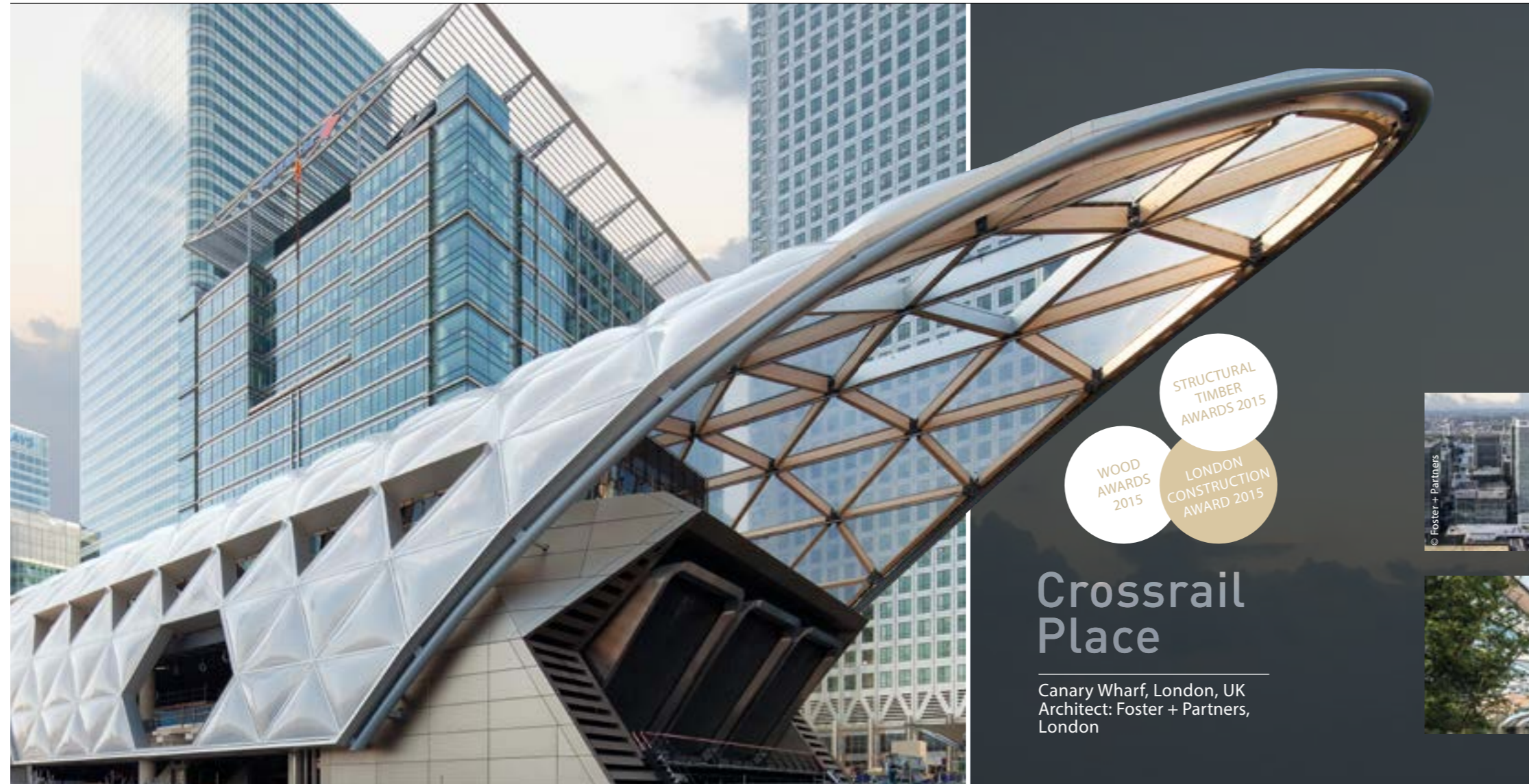
Optimized Complete Solutions

More design ideas can now be realised as enormous creative potential gains traction in numerous major international projects. This is showcased in timber structures built in a variety of sectors including stadiums, sports and leisure centres, conference and airport halls, railway stations and shopping malls, as well as multi-storey office buildings, towers and bridges.

"We play a decisive role in the international market with our proprietary design and manufacturing technology innovations, which include patented steel connectors for standard and customized applications."

Dr. Erich Wiesner, WIEHAG Owner & Managing Director





WOOD AWARDS 2015

STRUCTURAL TIMBER AWARDS 2015

LONDON CONSTRUCTION AWARD 2015

Crossrail Place

Canary Wharf, London, UK
Architect: Foster + Partners, London



Symbol of Innovative Architectural Art

Conceived as an iconic, grid shell timber structure over a stunning park in the heart of London's second financial district, Crossrail Place sits 7 storeys above the new Canary Wharf Crossrail Station as a state-of-the-art engineering masterpiece. An outstanding symbol of sustainability in the urban landscape, it is the largest engineered timber construction to date in the United Kingdom. Totally surrounded by water amongst the glass & steel skyscrapers, this 300 metre long structure unfolds in the form of a majestic ship. The architectural design comes from world-renowned Architects Foster + Partners.

"Our aspiration was to create a high quality eye-catcher in the centre of a world metropolis. Our Architects Ben Scott and Jonathan Rabagliati were responsible for the architectural planning. They developed nine different models, however all of them shared the wooden lattice structure."

Lord Norman Foster

"Following the natural topography of the gentle hilly landscape of the rugged North, we embedded the distillery in the form of five adjacent domes into the landscape."

Graham Stirk, Senior Partner, Rogers Stirk, Harbor + Partners

The Macallan Whisky Distillery

Speyside, Scotland, UK
Architect: Rogers Stirk Harbour + Partners, London

STRUCTURAL
TIMBER
AWARDS 2018

TTJ
AWARDS
2018

One of the Most Complex Roof Structures in the World

The Macallan – Considered by many the Rolls Royce among whisky brands. The Macallan Whisky Distillery in the Speyside region of Scotland brings together the expertise of Architects Rogers Stirk Harbor + Partners, Engineers ARUPs, Main Contractors Robertson, the beauty of the rolling hills of Scotland and a striking dome roof construction. The state-of-the-art distillery and visitor centre are housed under the five undulating domes covered with grass and meadow flowers. The project was completed in three and a half years.

As a full-service provider, WIEHAG carried out the detailed design, production, logistics, and installation of the huge 12,300 m² roof, which stretches over a length of 207 metres and consisted of 1,798 single beams, 2,447 roof elements and 380,000 individual components. The exceptionally complex installation was executed using a number of innovative methods including WIEHAG using massive temporary props made of block-laminated glulam. Natural materials such as wood, stone, and meadow flowers for the green roof were favoured throughout, and furthermore, the Macallan Distillery was built using low-energy construction and with sustainable water management.





The Alchemy of Wood

For ages, mankind has marvelled at the extraordinary properties of wood – its aesthetic qualities, structural integrity or its distinct aromas and flavours, as is the case in Scotland, where whisky is aged and matured to perfection in wooden casks. Then there are the people who think about timber and re-define its scope to create new forms of architecture by transforming the tried and tested into the sublime.



An Outstanding Roof Construction for an exceptional Scottish Whisky

The Import Building

East India Docks, London, UK
Architect: Studio RHE, London

OFFSITE
CONSTRUCTION
AWARDS 2018

STRUCTURAL
TIMBER AWARDS
2018



An engineered timber atrium at the heart of a London office building

The solid timber atrium within an existing 10 storey office building is constructed using Glulam & cross-laminated timber (CLT) and is a model of sustainability, quality and efficiency in timber engineering. WIEHAG's package was for detailed engineering, production, logistics and installation, and included a design that offered 90 minutes fire resistance.

The challenge was to install the engineered timber elements through a very narrow entrance and was further complicated by full scaffolding and the building remaining in use throughout the refurbishment. To meet these particular demands, the smallest possible timber members were prefabricated in WIEHAG's high-tech manufacturing plant in Austria. WIEHAG once again sets new standards in timber quality, cost efficiency and in the realization of architectural requirements. The Architects have transformed the Import Building into a modern, light-flooded atrium in engineered timber construction, with overhanging balconies for offices, cafes and bars.

Scope:
• BSH columns and beams
• CLT – walls, -floors, -roof elements and -steps
Fire protection: Fire resistance class R 90
Timber: Spruce painted in light oak





Architectural Visions of Wood with Free Span Timber Construction

Bread Museum “Paneum”

Asten, Austria
Architect: Coop Himmelb(l)au, Vienna

"Wood creates a special atmosphere in the interior. We specifically rejected smooth surfaces in favour of showcasing the complex forms that are feasible in wood."

Wolf D. Prix, Architect

Timber constructions are the future, whether in urban spaces marked by high-rise construction, in logistics halls or in spectacular architectural landmarks. An impressive example of wood's aesthetic and structural possibilities can be found in the 'Paneum' in Asten, Upper Austria. The futuristic bread museum of baking powder giant, Backaldrin, is constructed in cross-laminated timber and was the vision of Architect Wolf D. Prix of Coop Himmelb(l)au. WIEHAG acted as general contractor and also provided its expertise for the structural engineering and construction.



Fischamend, Austria
Architects: POPPE*PREHAL, Steyr



iLogistics Center cargo-partner

Sustainable Logistics Innovation and Clear Architecture

A huge logistics centre in Fischamend was built for leading logistics company Cargo-partner. WIEHAG designed, supplied & installed 19,000 m² of roof and wall elements made from 4,200 m³ of engineered timber. The building envelope was installed in just ten weeks and, with the exception of the stairwell it is a pure wooden building.

London, UK
Architects: Fereday Pollard



Abbey Wood Crossrail Station

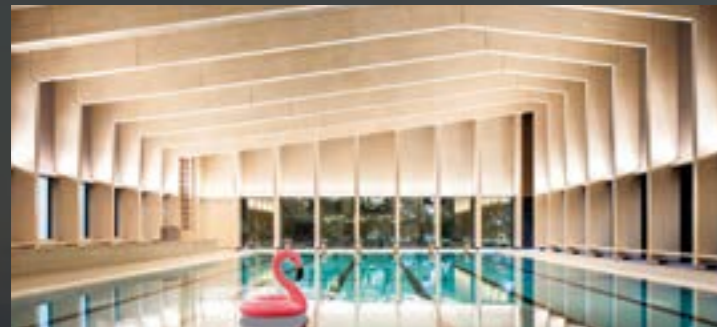
Enhanced Passenger Experience

WIEHAG provided detailed design, supply & installation of the freeform roof structure to the new £132,000,000 railway station. This unit consisted of single & double curved Glulam, CLT panels, steel members and columns to form the distinctive 'manta ray' shaped roof. Despite being one of the most complicated projects WIEHAG has worked on so far, both in terms of design and logistics, we delivered on time, on budget and to a quality that delighted

OFFSITE
CONSTRUCTION
AWARDS 2017

STRUCTURAL
TIMBER AWARDS
2018

Ashted, UK
Architects: Hawkins\Brown, London



Freemen's School

Swimming Pool and Teaching Area

The timber package comprises Glulam portal frames with CLT roof & wall panels and includes CLT benches. The deceptively complicated design had to achieve the Architects Hawkins\Brown desire to have no visible bracing and hidden connections, whilst meeting the clients budget and timescales. On site, the WIEHAG installation took just under three weeks.

STRUCTURAL
TIMBER AWARDS
2018

Ballymahon, Republic of Ireland
Architects: Holder Mathias



Center Parcs Longford Forest

A Subtropical Swimming Paradise

The engineered timber package to this incredible roof structure includes massive curved Glulam beams, purlins and CLT slabs, and fits perfectly into the forest location. Challenging logistics included transporting to site the longest Glulam beams ever to Ireland on a site where particular care was taken to preserve the local habitat.

ref eren ces

CROSSRAIL PLACE, CANARY WHARF, LONDON, UK | MACALLAN WHISKY DISTILLERY, SPEYSIDE, SCOTLAND, UK | THE IMPORT BUILDING, EAST INDIA DOCKS, LONDON, UK | BREAD MUSEUM "PANEUM", ASTEN, AUSTRIA | CARGO PARTNER, FISCHAMEND, AUSTRIA | SWIMMING POOL AND TEACHING AREA, FREEMEN'S SCHOOL, ASHTEAD, UK | ABBEY WOOD CROSSRAIL STATION, LONDON, UK | SUBTROPICAL SWIMMING PARADISE, CENTER PARCS, BALLYMAHON, REPUBLIC OF IRELAND

DISCOVER ALL PROJECTS & REFERENCES AT WWW.WIEHAG.COM

WIEHAG GmbH | AUSTRIA

Linzer Straße 24
4950 Altheim
T. +43 (0) 7723 465 0

WIEHAG UK Ltd | UNITED KINGDOM

4th Floor, 140-142 St John Street
London EC1V 4UB
T. +44 (0) 7757813278

WIEHAG GmbH | SPAIN

C/Larrauri, 1-A, 3º. Dpto 8
48160 Derio, Vizcaya
T. +34 (0) 649 324 038

WIEHAG
TIMBER CONSTRUCTION