



Glue laminated timber structures

Selection of first-class references

Retail and Industrial Storage



Photo credits: B&K Structures

Retail and Industrial buildings are the most challenging projects in the building industry. They need to be very economic and competitive and just in time with a very short lead in time. The beauty on timber structures for industrial buildings is that they are also ecological and carbon saving. To deliver on time and to be competitive against steel and concrete is our daily challenge.

ASDA Store Liverpool/Bootle

Owner
ASDA

Client
B&K Structures
High Edge Court
Heage, Belper
Derbyshire DE56 2BW

Glulam
460 m³

Derix service
glulam production and
machining

Max. span
18,00 m

System
single-span

Date of completion
2008



Taking responsibility for our planet



Photo credits: B&K Structures

Tesco Store Cheetham Hill/Manchester

Owner
Tesco

Client
B&K Structures
High Edge Court
Heage, Belper
Derbyshire DE56 2BW

Glulam
377 m³

Derix service
glulam production and
machining

Max. span
18,00 m

System
bow string main beams

Date of completion
2008

Cheetham Hill is Tesco's first store built using Tesco's new, low-carbon blueprint – the result of bringing together everything that has worked well in Tesco's existing environmental stores. The store has a carbon footprint 70% smaller than an equivalent store built in 2006 and this will be Tesco's model for stores built in the UK from now on. The carbon savings come from an innovative mix of environmentally friendly design, materials and technologies. These include a frame made from timber instead of steel, 12 roof lights each measuring six metres across to cut down on artificial lighting, and a refrigeration system which uses CO₂ as a coolant rather than more potent greenhouse gases.

"Tesco's climate commitments are proving that it is possible to combine new technology and good business sense to make dramatic reductions in their carbon footprint. This new blueprint store design is an example that we hope other businesses will follow."

Steve Howard, CEO, The Climate Group



Smart structures, just in time



Photo credits: Barr Construction

The selection of structural materials and methods for construction are based on a variety of processes executed during the early stages of building procurement. The key drivers for design are invariably determined by the building owners or patrons as part of their project brief. The interpretation and development of this brief is paramount by the building design team for the successful execution of the project. Early in the process, unless specifically requested as part of the brief, the structural solution must be developed.

Tesco Express Store Hinckley

Owner
Tesco

Client
Barr Construction
Heathfield House
Fairways Business Park
Livingston EH54 8AF

Glulam
87 m³

Derix service
glulam production and machining, design, roof panels

Max. span
12,40 m

System
hinged columns with curved beams

Date of completion
2008



Shopping underneath a natural roof structure



Photo credits: Barr Construction

Tesco Store Dumfries

Owner
Tesco

Client
Barr Construction
Heathfield House
Fairways Business Park
Livingston EH54 8AF

Glulam
346 m³

Derix service
glulam production and machining, design, installation

Max. span
18,00 m

System
bow string main beams

Date of completion
2009

The Tesco Store in Dumfries is detracting 211 tons of carbon dioxide from the atmosphere. Continuous beams are an effective and economic solution for large span structures that may be applicable in large production halls or warehouses. For this construction continuous beams are used as the principal load-bearing elements in order to cover large parallel sections of roof. As the moment distribution of continuous beams is excellent, the bending under load and the stress concentration can be optimised. In the case of extremely large spans, joints in the glulam are factory engineered and executed on site in order to facilitate the transport of the individual structural members.



Freedom of shape and design



One of the largest temperate glasshouses to be built in the UK during the last hundred years has created a stunning green world in the heart of the city. Adjacent to the Peace Gardens and the Millennium Galleries the Winter Garden provides visitors with a unique pedestrian link through the city centre.

There are more than 2,500 plants from around the world creating a superb display. The building itself is 70 metres long and 22 metres high (large enough to house 5000 domestic greenhouses!)

Sheffield Winter Garden

Owner

Sheffield town council

Architect

Pringle Richards Sharratt London

Client

Merk Holzbau GmbH
Industriestraße 10
86551 Aichach/Germany

Glulam

280 m³

Derix service

glulam production and
machining

Max. span

22,00 m

System

glulam arches (larch)

Date of completion

2003

It's one of the largest Glue Laminated or 'Glulam' buildings in the UK (Glulam is made by forming and gluing strips of timber into specific shapes).

The wood used is Larch, a durable timber which will, over time, turn a light silvery grey colour. The larch, derived from sustainable forests, requires no preservatives or coatings. This reduces the use of solvents and also avoids the use of chemicals that could kill the plants.



Wood remains young



Photo credits: Peter leenders

Wood is one of the oldest building materials of the world. Because of its sustainability in combination with modern technologies and engineering wood becomes the building material of the future.

The Youghal Leisure centre is an exceptional example how slender and stylish a curved roof structure can be realised. The suspended curved roof beams are very cost effective and create a lightweight roof structure.



Aura Youghal Leisure Centre

Owner
Aura Youghal Leisure Centre
Claycastle, Youghal,
Co. Cork

Client
Rohcon Ltd.

Glulam
44 m³

Derix service
glulam production and
machining

Max. span
25,00 m

System
suspended arched beams

Date of completion
2006

Glue laminated timber at the peak



Photo credits: Barr Construction

The Peak Stirling

Owner
Active Stirling

Client
Solway Structural Steel
Killoch, Ochiltree,
Ayrshire KA18 2RL

Glulam
120 m³

Derix service
glulam production and
machining

Max. span
24,80 m

System
single span glulam beams

Date of completion
2007

Stirling Sports Village at Forthside, is the biggest single development for sport and leisure in Stirling for over 30 years with an investment of £27.3 million funded by Stirling Council and sportscotland. The Peak is the brand new indoor complex at the heart of the Stirling Sports Village, which already boasts third generation (3G) outdoor football, rugby and hockey pitches.

The swimming pool is set out with 6 dedicated lanes for serious swimming with plenty of space around for a more relaxing dip and fun for all the family. Swimmers have the choice of enjoying 3 separate pools from a 25 m pool with 6 lanes, an 80m² teaching pool and a 100m² confidence water pool. The latter is specially designed for babies and toddlers with shallow water, a slide and water spouts.



Wide span wing structure



Historically timber has been always the appraised material of choice for wing structures in the aircraft industry. The idea of using a wing shape for the new terminal building in combination with a free span glued laminated beam structure makes the building a landmark in the European Airport scene.

Cork Airport

Owner
Aer Rianta International

Client
Rohcon Ltd.
Building Contractors
Euro Business Park
Little Island

Glulam
768 m³

Derix service
design, glulam production
and machining, installation

Max. span
40,00 m

System
continuous beams

Date of completion
2006

The new terminal opened on 15 August 2006. Designed by HOK and Jacobs Engineering Group, the new terminal is Ireland's first 21st century airport terminal. In terms of further expansion, the terminal can be extended in the form of additional piers which can be constructed to the north and south.



How you can benefit from our know-how



Please don't hesitate to contact us by mail, fax or phone. We are looking forward to offer advice and assistance or provide a quotation.

Your direct contact in the UK:

Michael Keller
Senior Timber Consultant

Office Aichach
Eckbacher Weg 20 · 86551 Aichach · Germany

tel +49/82 51/ 82 73 46
fax +49/82 51/ 82 73 47
cell +44/78 79/06 26 09

m.keller@derix.co.uk · www.derix.co.uk

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LAMINATED TIMBER
DERIX

W. u. J. Derix GmbH & Co.
Laminated Timber

Dam 63 · 41372 Niederkrüchten · Germany
Tel: +49 (2163) 89 88 0 · Fax: +49 (2163) 89 88 87
www.derix.de · info@derix.de

LAMINATED TIMBER
POPPENSIEKER
DERIX

Poppensieker & Derix GmbH & Co. KG
Laminated Timber

Industriestrasse 24 · 49492 Westerkappeln · Germany
Tel: +49 (5456) 93 03 0 · Fax: +49 (5456) 93 03 30
www.poppensieker-derix.de · info@poppensieker-derix.de