



Photo: Mark Power Magnum Photos



Macallan Distillery

Easter Elchies, Scotland, United Kingdom

The green wooden roof structure at the heart of the Macallan Whisky Distillery blends harmoniously into the Scottish landscape. Local plants and herbs on the roof provide food and nesting opportunities for birds and insects and promote the biodiversity of the area, which is emphasised throughout the estate.

WIEHAG was responsible for the construction, timber engineering, production, logistics and installation of the 12,300 square metres of roof. Under five adjacent domes and a shading canopy are now the factory and a visitor centre, which is heated with district heating from a nearby biomass-CHP-plant in addition to heat pumps. The 207-metre-long and up to 27-metre-high dome roof consists of 1,800 individual girders, 2,700 roof elements and all in all 380,000 individual components. Each component was a precisely calculated one-off. Four temporary construction supports made of a glued laminated timber solution were used.

Technology Award

WIEHAG GmbH for the timber roof construction

Companies involved

Client

- Edrington Group

Timber roof construction and engineering

- WIEHAG GmbH

Architecture

- Roger Stirk Harbour + Partners

General contractor

- Flexrock Sverige AB

Engineering

- Arup

Steel substructure

- SHS Stahlverarbeitung GmbH

Facts

Distillery

- Completed 2018
- Total area: 5,258 m²

Energy and environmental aspects

- Greened wooden roof as food and nesting facilities for birds and insects
- District heating from biomass CHP plant
- Heat pumps

Characteristics

- Total energy demand: 89 kWh/m²a
(without operating current demand and cooling)
- Primary energy demand: 175 kWh/m²a
- CO₂-emissions: 23.47 kg/m²a

Building labels and awards

- Structural Timber Awards 2018: Engineer of the Year Award (ARUP) & Installer of the Year Award (L&S Baucon GmbH)
- Gewinner des Structural Timber Awards 2018: Winner of Winners Award
- Scottish Design Awards 2018: Culture and Leisure Award
- UK Roofing Awards 2017: Green Roof Award



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