Partner of Stora Enso

United Kingdom Atomic Energy Authority – Main Gate Facility Visitor Centre

Culham Campus, UK

The United Kingdom Atomic Energy Authority (UKAEA) Main Gate Visitor Centre serves as the primary entrance to the Culham Campus, in Oxfordshire, UK.

Culham Campus, owned and managed by the UK Atomic Energy Authority, is the national fusion laboratory and one of the most successful fusion, robotics, science and technology hubs. It supports 45 organizations from start-ups to major international businesses. The site covers an area of approximately 80 hectares (0.8 square kms).

The facility is designed to be a dynamic world-class arrival experience to the Culham Campus, with a flagship rotunda-shaped gatehouse formed with a mass timber structure to its core, and renewable technologies utilised to meet ultra-low carbon, expressing the sustainability aspirations of UKAEA and Ridge.

“We aim to create an attractive and sustainable working environment as we strive to realise our goals for Culham Campus’ development and growth. The new main gate facility embodies these objectives and has been built to a BREEAM Excellent standard” said Simon Peck, Interim Head of Campus and Property Development.

Designing and delivering an innovative campus entrance

By delivering the cross-laminated timber elements, (Sylva™ CLT Walls and Floors by Stora Enso) for the future-ready entrance, our partners B&K Hybrid Solutions helped optimise costs, accelerate delivery and ensure the project met the high BREEAM environmental standards.

As a high-performance engineered wood product, Sylva offers superior strength and durability, making it ideal for the structural demands of the curved architectural elements. Its precision in manufacturing ensured that components fit seamlessly, enhancing both the aesthetic appeal and structural integrity of the building.

Carbon footprint of the Sylva elements

Manufacturing: 14 tonnes CO_2e

Transporting: 10 tonnes CO_2e

Carbon dioxide removed and stored: 205.74 tonnes CO_2

Emissions avoided by using wood: 308.61 tonnes CO_2

CO_2e = greenhouse gases

Origin of the Sylva™ CLT elements

The Sylva™ elements were made with wood sourced from PEFC-certified forests, ensuring that the timber used comes from sustainably managed forests. PEFC is one of the most trusted and widely recognised certifications for sustainable forest management.

Learn more about how Sylva is decarbonizing the built environment.

Optimised nested loading plan

A total of 911 bespoke elements were meticulously nested for transport by road and sea trailer. The circular elements, crucial for the building's distinctive curved look, were strategically placed at the top of the pile to ensure their protection and ease of access during assembly.

CNC Precision in Manufacturing

The collaboration with our partners B&K Hybrid Solutions was instrumental in achieving CNC precision in manufacturing. This advanced technology allowed for the production of exactly fitting components, ensuring that each piece met the precise specifications required for the project. The CNC precision not only enhanced the structural integrity of the building but also contributed to its aesthetic appeal, with the curved elements fitting seamlessly together.

Digital Design Coordination

Digital design coordination played a pivotal role in the project's success. By leveraging advanced digital tools, the design team was able to meticulously plan and execute the integration of all components. This coordination ensured that every element was perfectly aligned, facilitating a smooth assembly process on-site. The result was a cohesive and visually striking structure that met the highest standards of quality and precision.

General

Delivery year

2023

Building type

Industrial

Storeys

2



Photo credit: ©Ridge

Products

Products and Services

Sylva™ CLT Floors and Roofs, Sylva™ CLT Walls, Preinserted lifting devices

Product quality

PEFC, NVI, VI, INV

Product volume (m³)

270

StoraEnso

Team

Partner of Stora Enso

B&K Hybrid Solutions Ltd

Developer

UK Atomic Energy Authority

Main contractor

Mclaughlin & Harvey

Consultants: Ridge and Partners LLP

Timber Engineer

Glenfort Timber Engineering

Others

Construction duration (months)

14