

JAGUAR LAND ROVER - WARWICKSHIRE

Creating a sense of community and maximising the potential for interaction

Project Name: Jaguar Land Rover – Advanced Product Creation Centre

Company: B&K Structures

Sector: Commercial

Technology: Cross Laminated Timber (CLT)

Overview:

The ambition for the Jaguar Land Rover scheme was to create one of the foremost Advanced Product Creation Centres in the world. The new building reflects the design quality and company values associated with one of the UK's most iconic businesses.

This development is integral to Jaguar Land Rover's wider expansion programme at the Banbury Road site in Warwickshire. Facilities include new design and engineering studios, state-of-the-art offices, a restaurant, a multipurpose hall together with other amenities. A new internal thoroughfare connects all areas creating a sense of community and maximising the potential for interaction.

This diverse range of spaces has been brought together under one of Europe's largest offsite manufactured timber roofs designed, engineered and installed by B&K Structures – the UK's leading sustainable frame contractor. Encompassing 1,512m³ of glulam beams and 2,674m³ (19,101m²) of spruce cross laminated timber (CLT) panels, the roof makes a vast design statement covering an area of 51,097 m² (GIA).

The design and detailing were split into six phases over a period of five months, a significant design consideration was the development of the steel to timber connections to provide the engineered tolerances critical to the buildability and accuracy of the finished project.

The build was sequenced over an eight month build programme, critical to the installation was the development and implementation of strict moisture control procedures. These procedures were developed alongside Laing O'Rourke and provided for a robust and effective control of water/moisture during the construction phase of the build.

The engineered timber roof was delivered through offsite manufacturing technology combined with Design for Manufacture & Assembly (DfMA) processes. The design and connection detailing were optimised and tested in a virtual and pre-production environment before reaching the full manufacturing process – reducing costly reworks and errors onsite. Such a methodology has an affinity with one of the core activities at the heart of Jaguar Land Rover.

The £200m expansion represents the first major construction project at one of the company's non-manufacturing sites in more than a decade. The new facility will deliver transformational change in the company's practices and working environment to help attract and retain the best staff. 3,500 designers, engineers, purchasing and support staff occupy the new building, which will take the overall site population up to 11,500 – the size of a small town.



