FK

Pushing BIM boundaries at the Etihad Stadium

CONTRACT NAME

Etihad South Stand Stadium Expansion

MAIN CONTRACTOR

Laing O'Rourke

**CONTRACT VALUE**

£1,700,000

PRODUCTS

Kalzip standing seam roof
Brett Martin polycarbonate roof lights
Feature inclined polycarbonate wall sheeting
Rainwater gutters & drainage
Feature PPC aluminium rafter cloaking details
Walkways & fall prevention systems

DETAILS

The expansion of the South Stand at the Etihad Stadium in Manchester took capacity to 54,000 and has helped to cement its position as one of the premier sporting venues in the world.

FK Group were appointed by main contractor Laing O'Rourke to deliver the new roof on the South Stand - a complex, twisted design envisioned by global design agency Populous.

The project carried no specific requirement for BIM but FK's design team thought differently. The nature of the multi-faceted roof design was such that they could spot significant advantages in using BIM - for the client, for themselves and for their supply chain.

Unperturbed by the fact that the tools didn't even exist in Revit, they created their own adaptive

components which allowed them to extract and automatically schedule items down to the level of individual roof sheets.

BIM was also used to facilitate the direct fabrication of bespoke unitised ancillary components.

The model allowed for early collaboration with other design stakeholders and facilitated clash detection. It also saved significant time and improved accuracy compared to manual drawing and scheduling, allowed for programme improvements to be achieved through unitised assembly methods and led to greater efficiency in material usage due to reduced tolerances.

FK Group were finalists in the BCI Awards 2015 BIM Project Application category for their use of Level 2 BIM on this project.

bciA british construction industry awards 15 FINALIST

☑ BIM Level 2
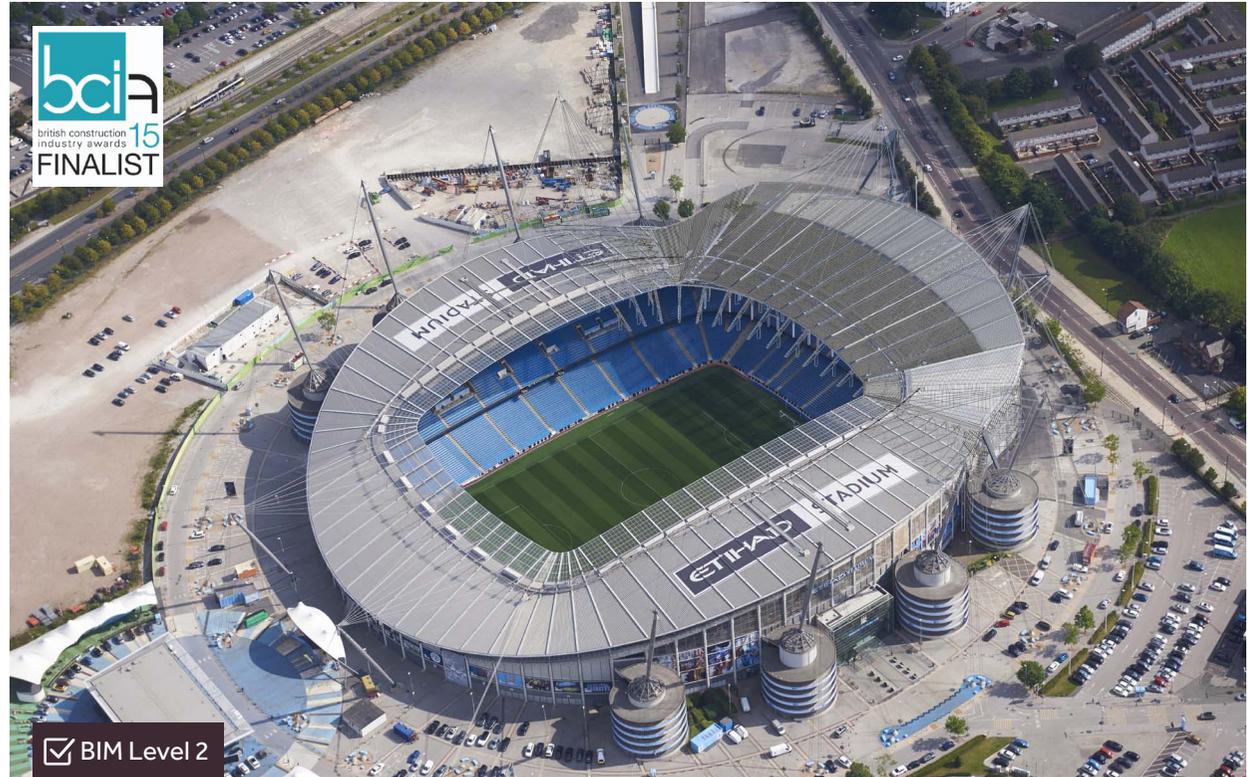
"FK fully embraced Digital Engineering (BIM) on the Etihad Stadium South Stand Expansion project. The complex roof modelling techniques employed by FK are a first of their kind and really pushed the envelope of roof cladding modelling within Revit."

Matt Anderton BIM AP, Digital Engineer, Laing O'Rourke