Manchester Engineering Campus Development

Location
Manchester

Client
University of Manchester

Main Contractor
Balfour Beatty Construction Ltd

Engineer
Arup

Architect
BDP

Tonnage
4,100

The Manchester Engineering Campus Development (MECD) has been dubbed 'The Northern engineering powerhouse' – and with good reason.

The University of Manchester's bespoke campus is the result of more than £300 million in investment, that will enable it to lead the way with world-class research, teaching and learning.

With four buildings to tackle in the scheme, we played our part in creating one of the best engineering facilities in the world.

There are always surprises and challenges with large scale projects and in this case, we had to consider the location of a Victorian sewer running through the proposed site. This meant we needed to use large truss steelwork to reduce the amount of foundations and support required. The steelwork spans 23 metres across the width of the sewer, with columns at both ends, meaning no supports are needed in between.

Using steel in this way means we didn't need to worry about anything on the line of the sewer. Concrete would have needed additional support, but with a good mix of fabricated steelwork, produced by our Dalton and Lostock facilities, we were able to span a larger distance. The result of this for the completed building is that it allows for maximum open space in the lecture theatres.

We used crawler and mobile cranes to install some of the steelwork - some of the truss booms themselves weighed up to 25 tonnes each. We faced some challenges unloading around the sewer, but the crawler cranes helped us navigate this without causing any damage.

Often projects requiring this much steel are those such as distribution centres that are out of town and provide laydown space for steel prior to construction. So when working in a highly congested, city centre location, much more careful planning and time management is required - luckily our team's expertise is vast and this posed no huge problem. The steel was ordered on a 'just-in-time' (JIT) basis, to ensure it would not need storing or holding, it arrived on site in perfect time for use.

Of course, with changeable English weather, some days were trickier than others, but we made it work, thanks to our incredible team. The project was made possible owing to the use of four tower cranes, but means we were subject to the impact of high winds derailing our plans. It came down to some excellent expertise, knowledge and a little meteorological guesswork to make safe decisions about what we could do when to stay on track but protect our workforce.

Severfield

Severs House
Dalton Airfield Industrial Estate, Dalton, Thirsk, North Yorkshire, YO7 3JN
Tel: +44 (0) 1845 577 896 / Fax: +44 (0) 1845 577 411 / info@severfield.com / www.severfield.com