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ENGINEERING



Steelwork for

Tubular



EFC Trident Park Facility - Cardiff

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Caunton Engineering is one of the UK's leading steelwork contractors, fabricating in excess of 40,000 tonnes per annum with a turnover in the region of £100m. Supported with over 50 years' experience we specialise in the design, fabrication and erection of structural and secondary steelwork, operating across all sectors of the construction industry.

Caunton Engineering's reputation is for engineering excellence in the Tubular sector and working with Consulting Engineers on major developments.

We pride ourselves on our ability to remain agile and, as a result, offer a personalised service to our clients. The company is a Gold Status holder within the Steel Construction Sustainability Charter and is committed to delivering Net Zero by 2050.

Leicester Tigers North Stand

Caunton supplied and erected the steelwork for the new North Stand of one of rugby's best supported teams, Leicester Tigers. The stand itself is part of an ambitious 10 year programme to redevelop its Welford Road ground into a modern 30,000 seat stadium, complete with a raft of facilities.

The logistical challenge for this project was that the club needed to retain operation of all 4 sides of the ground during the rugby season. To address this, Caunton erected the steelwork for the new stand's roof including a 108 metre long king truss and the upper portion of the stand above the old wooden stand. The previous stand was then demolished to clear the ground for the lower level to be infilled.

The impressive 108 metres long truss, which is visible for miles around is 35 metres high by 12 metres deep and was delivered to the site in more than 140 separate pieces. It was assembled on ground and then erected in one tandem lift during a long 15 hours period.

The new stand features a number of amenities and below the seating area it has 4 internal levels. The ground floor comprises of the main concourse and entrance area as well as a 700 people capacity march day bar. The first floor there is a 1,000 seat function suite, a second floor concourse and a third floor plant area.

The impressive new stand is 24 metres high compared to be 8.5 metres high stand originally built in the 1920's. An ambitious yet highly successful contract by Caunton.



Client: Leicester Tigers
Main Contractor: Galliford Try
Engineer: AFL Architects

EFC Trident Park Facility - Cardiff



Caunton Engineering completed the erection of an architectural steel flue stack support for the new £180 million energy from waste (EfW) plant at Trident Park in Cardiff.

The steelwork wraps around the flue, forming an independent 90 metres high structure. Caunton erected the steel in 5 sections, with each one trail erected at the fabrication yard - to make sure the bolted connections were plumb before being delivered to site.

The initial 4 sections vary in height from 15.2 metres up to 26 metres and consist of 3 813mm diameter CHS columns, weighing up to 15 tonnes each, connected by a curve ring beam and steel bracings. The 5 and final section consisted of a single 14.8 metres high continuation of one of the columns, forming an architectural pinnacle to the structure.

The main contractor for the project was Lagan Construction, while Tata Steel projects are the lead designer.

This project is contributing to the UK Government's commitment to be carbon neutral by 2050 by means of zero carbon energy production.

Main Contractor: Lagan Construction
Main Contractor: Galliford Try
Engineer: AFL Architects

Mansfield Transport Interchange

In a complex and meticulously planned lifting operation that took place in the middle of the night, Caunton Engineering worked alongside the main contractor Kier Central's site team craned a 73 metres long footbridge into place at Mansfield's new multi-million pound bus station.

The process began over 2 weeks in advance with the delivery of the bridge to the site adjacent to Mansfield's railway station, in 4 sections. Day 1 saw the assembly of 2 of these sections, one weighing in at 18 ton and the other at 12 ton, which were bolted together to form one half of the bridge. This process was repeated the following day to assemble the second half of the structure. In total the 73 metres long link bridge weighs in at over 60 tonnes.



Client: Nottinghamshire County Council
Main Contractor: Kier Marriott
Engineer: NCC Environment
Tonnage: 210 tonnes

The close proximity of the link bridge to the existing railway line and viaduct meant the operation to lift the two sections of the bridge into place had to be carried out at night under a Network Rail possession. The site team assembled at 10pm and after an induction and briefing, began setting up the 350 tonne mobile crane that would be used to lift the 2 halves of the bridge into place. Lifting began just after 1am and after some initial repositioning of the lifting gear, the first section of the bridge was craned into place without any problems.

Due to its position between the first section of the bridge and the new bus station, both now being fixed points, lifting the second half of the bridge into place was always going to be most challenging aspect of the operation - the team had to get it right first time with just a tiny margin for error. But the meticulous preparation and expertise of the team paid dividends and the second piece was lifted into place with perfect precision.

Mansfield's new bus station, which was constructed by Kier for Nottinghamshire County Council, is situated less than 200 years away from the market place and is an integral part of Mansfield's town regeneration plan. The newly erected footbridge forms an important link between the town's railway station and a new bus station whose steel framing is also by Caunton. This will benefit 5 million passengers who used the old bus station each year and will encourage more people to travel by public transport. Caunton are delighted to have been a contributor to this regeneration.

The Wine Society - Stevenage



Client: The Wine Society
Main Contractor: Morgan Ashurts
Engineer: MLM Building Control
Architect: Vincent and Gorbing
Tonnage: 270 tonnes

Caunton has added a most prestigious name to its client list, The Wine Society. At the time of the project The Society had 85,000 active customers and was growing. Hence the need for a warehouse extension, which Caunton supplied on a design and build basis to main contractor Morgan Ashurts.

Until 1965, The Wine Society was based in London, by then moved 25 miles to a large freehold site in the main industrial area of Stevenage, a town minutes away from the A1 Motorway. Here, it combines offices for its planning, purchasing and marketing teams with a substantial warehouse complex, which as been progressively expanded to take account of steady growth.

Prestige clients such as The Wine Society demand quality fabrications and the 46 metres space frame built at Caunton's Works is no exception. This girder, weighing 22te, was fabricated in three major sections and erected and then conjoined in the air, utilising 3 crawler cranes. The girder rests in its final position (in section) as a right angle triangle with the longest side of the triangle supporting translucent sheeting for illuminating the wine warehouse below. Another suitable and eco-friendly feature of this major storage facility is the use of hempcrete walls, whose porosity helps to maintain the necessary humidity for successful wine storage.



Middlesex University - Hendon



Caunton Engineering completed the structural steelwork for a new Learning Resources Centre for Middlesex University in Hendon. The sophisticated design BPR Architects and engineer Bridges Pound focussed on modern sustainability techniques and featured tubular steel columns coated with intumescent paint off-site. Caunton's tubular fabrication facility was augmented with a modern CNC tube profiler, which was to improve handling and accelerate fabrication speeds.

Caunton's own directly employed erection team were to maintain extra vigilance when handling the fire protected steel. They also erected the pre-cast floors and staircases. The project incorporated 500 tonnes of structural steelwork.

Volker Fitzpatrick were main contractors on this most important improvements to facilities within the education sector. This is a fine example of Caunton fabricating tubular sections.

Main Contractor: Volker Fitzpatrick
Engineer: Bridges Pound Ltd
Architect: BPR Architects
Tonnes: 500 tonnes

Cast Technium - Gwynedd

Caunton Engineering supplied the structural steelwork for the University of Bangor's state-of-art research facility, title "The CAST Technium" (*Centre for Advanced Software Technology*), located in North Wales.

The structural steelwork for this 2 storey building commences in fact at first floor level, in order to provide the framing for the most distinctive curtain walling scheme designed by architect TACP of Wrexham. It is anticipated that the function of the building may change from time to time, so steel's flexibility and versatility could well prove to be a further benefit client's requirements in the future.

Contractor Galliford Try secured the project through a 2 stage tender process. This permitted Caunton to contribute to the detailed buildability planning process at an early stage. Engineer for this exciting and distinctive research was the Ove Arup Partnership.

Caunton in fact were to supply 200 tonnes of high quality structural steelwork plus the distinctive and specialist external walkways, balustrading, staircases and canopies that help make the building so attractive.



Main Contractor: Galliford Try Construction
Engineer: Ove Arup & Partners
Architect: TACP
Tonnes: 200 tonnes



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