



caunton

ENGINEERING



Steelwork for

Energy



EcoPark , North London
Waste Project , Edmonton

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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 Energy 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.

EcoPark, North London Waste Project - Edmonton



Main Contractor: Taylor Woodrow
Engineer: Waterman Structures
Architect: Grimshaw Architects
Tonnage: 1,700 tonnes

Caunton Engineering supplied the structural steelwork for a major Energy Recovery Facility for main contractor Taylor Woodrow. Construction North London Waste Authority (NLW) have redeveloped the Edmonton EcoPark site in Enfield, London. The facility expects to cater for up to 700,000 tonnes of residual waste from the seven north London boroughs. The North London Heat and Power Project (NLHPP) aims to replace this with a new and substantially more efficient Energy Recovery Facility which will generate up to 70 megawatts of electricity, enough to power around 127,000 homes as well as providing residual heat to local heat network.

The project comprises three buildings, the Recycling and Fuel Prep facility (RFPF), the Reuse and Recycling centre (RRC) and the two storey office - EcoPark House. The RFPF building requires seven 150 tonnes trusses. The initial design has trusses at 8 metre centres, but after a value engineering exercise this was rationalised to fewer trusses spaced at 24 metres and as well as cost and programme benefits, this design enhancement contributed towards a carbon reduction of approximately 720 tonnes in the frame.

Hooton Bio Power Centre

Caunton Engineering has supplied and erected the structural steelwork for a new Bio Power facility constructed by Burmeister & Wain Scandinavian Contractor (BWSC). The project, comprising of over 900 tonnes of steelwork, consisting of framing for the Boiler House, Turbine Hall, Fuel Storage and Fuel Unloading Building, together with the secondary steelwork supplied by Caunton's Secondary Steelwork Division. The steelwork connections are designed by the Caunton Technical Team.

It proved a very tight site, with the structures all adjacent to each other on a relatively small footprint. Site and erection logistics played a key role here as the Caunton erection team had to work around the other trades, most notably the equipment installers. During the steel erection process, Caunton left large openings in the roofs and elevations to allow main contractor BSWC's sub-contractors to install the plant's large boiler and processing equipment. Once the majority of this had been installed, Caunton returned to infill the remaining steelwork areas.

BWSC have previously built nine biomass-fuelled power facilities in the UK. Caunton are very proud to have worked on six of these projects.

This project is contributing to the UK's Government policy to be carbon neutral by 2050.



Client: Hooton Bio Power
Main Contractor: Burmeister & Wain
Scandinavian Contractor
Engineer: Krabbenhoft & Ingolfsson
Tonnage: 900 tonnes



BWSC, Biomass Plant - Cramlington

Caunton Engineering were delighted to have been entrusted with the order of the steelwork for a biomass-fired Energy Plant at Cramlington, Northumberland. This was the fourth order for Caunton, for power plants constructed by Burmeister and Wain Scandinavian Contractor (BWSC).

The steelwork framed the Boiler House, Turbine Hall, Fuel Storage, Conveyor, Wood Chip Buildings and Secondary Steelwork. Caunton's Secondary Steelwork Division also added access stairs, ladders, flooring and hand-railing. This project was engineered by Niras.

The facility supplied low carbon heating and power into chemical company Aesica Pharmaceuticals' Cramlington factory. The plant will also feed power into the national grid. The plant will produce 27MWe of electricity, enough to power 51,500 homes and will save over 66,000 tonnes of carbon dioxide equivalent each year.



Main Contractor: BWSC
Engineer: Niras
Tonnage: 900 tonnes

Hinkley Point C, Segment Production Factory - Avonmouth Docks, Bristol



Client: EDF Energy
Main Contractor: Costain Construction Ltd
Engineer: Ramboll UK
Tonnage: 500 tonnes

Caunton had the pleasure of contributing to the construction of EDF Energy's Hinkley Point C, nuclear power station in Somerset. The company was awarded the contract to provide a structural frame for a factory building at Bristol Port, Avonmouth, which is now used to manufacture precast concrete tunnel segments.

These have been constructed approximately 20 metres beneath the sea bed. Caunton was involved in the construction of the factory that will make the tunnel segments, which weigh between 4.2 and 4.8 tonnes each.

The steel frame for the buildings was designed, manufactured and erected by Caunton. It is 14.5 metres in height and 36 metres wide by 150 metres long. Caunton are responsible for not only the near 500te steel frame but the cladding and the doors. The design is to EC3 to accommodate the crane loadings.

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

BWSC, Biomass Plant - Snetterton

Caunton were pleased to have been entrusted with the order for the steelwork for the new straw-fired Renewable Energy Plant (REP) at Snetterton, Norfolk. Alongside the structural steelwork, Caunton's Secondary Steelwork Division supplied the Access Stairs, Ladders, Flooring and Hand-railing.

The facility will be operated by BWSC and has a capacity of 44.2MW. Snetterton Biomass Plant has brought significant benefits to the local economy in Norfolk. As well as providing a number of jobs associated directly with the plant, it has generated an annual investment of around £9 million to the agricultural economy through contracts for the supply of around 240,000 tonnes of straw per year.

Caunton are proud to be associated with this project.



Client: BWSC
Main Contractor: BWSC
Engineer: Ramboll
Tonnage: 1,400 tonnes



Renewable Energy - Sandwich, Kent

This project was constructed to be a £160 million bio-mass fired combined heat and power plant for Discovery Plant, Sandwich, Kent.

The plant will eventually produce all the power and heat requirements for the site's 150 plus companies. This is Kent's first biomass power plant and will have a capacity of 27.8 MW and will be fired primarily with virgin wood sourced in the UK, including coppice grown locally in Kent and East Sussex.

The project required over 800 tonnes of structural steelwork to frame the Boiler House, Turbine Hall, Fuel Storage buildings, Conveyor support, Woodchip buildings and Secondary Steelwork. Caunton's Technical Team were responsible for designing the connections - the crane connections are to EXC3. Caunton also supplied, fabricated, fire protected and erected the steelwork. The secondary steelwork is being supplied by Caunton's Secondary Steelwork Division.

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



Main Contractor: BWSC

Engineer: Niras

Tonnage: 800 tonnes

EFC Trident Park Facility - Cardiff



Caunton Engineering has completed the erection of an architectural steel flue stack support for the 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 five sections, with each on trial erected in the fabrication yard to make sure the bolted connections were plumb, before being delivered to site. The initial four sections vary in height from 15.2 metres to 26 metres and consist of three 813mm diameter CHS columns, weighing up to 15 tonnes each, connected by a curved ring beam and steel bracings. The fifth and final section consisted of a single 14.8 metre high continuation of one of the columns, forming an architectural pinnacle to the structure.

Main Contractor: Lagan Construction

Engineer: Westmuckett Hawkes

Tonnage: 180 tonnes

Other Projects Include:

- Energy from Waste (EfW) Plant - Buckinghamshire
- Sleaford Renewable Energy Plant
- Ward Recycling
- Magnox - Interim Storage Facilities for Nuclear Waste
- Green Incubator Building, South Shields



(Sleaford Renewable Energy Plant)

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