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ENGINEERING

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Steelwork for

Energy



Magnox Nuclear Power Station

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Caunton is one of the UK's leading steelwork contractors, offering a one stop construction solution. Specialising in the design, fabrication and erection of structural steelwork Caunton Engineering can give a first class service every step of the way.

We are a family owned company, established in 1969 and we have since proven to be a progressive pioneer of fully automated manufacture, information technology and innovation.

Our Nottingham based production facility employs some of the most up to date computer numerically controlled machinery within our 150,000 sq foot plant on a 42 acre site.

Ward Recycling

Caunton helped with exciting new recycling process

Caunton Engineering have worked for one of the largest independent metal recyclers in the United Kingdom. Ward Recycling handle in excess of 250,000 tonnes of ferrous and nonferrous metal per year. Caunton supplied and erected the steelwork for a brand new building to house a state-of-the-art recycling system. This will be capable of high-tech waste segregation, resulting in a cleaner waste recycled product.

The building constructed is a 47.26m clear-span Portal Frame Structure, 78m long overall, with 10m clear height. Nearly 400te of structural steel is employed - the design of which is by AJS Structural Design, Uttoxeter.

At one end of the building there is an opening of 2 bays, with 6m high push walls fabricated from 15mm and 20mm thick plate. This is shown in the photograph, and is a first for Caunton Engineering who were to provide and install a series of vertical plates to form this "Push Plate Wall"

In summary, a "wall" of 20mm thick Plates measuring 6m x 4m, then reducing to 15mm thick x 6m x 4 m, are positioned on the internal perimeter forming a recess of solid plate 8m high x 12m deep x 47m wide.

Specialised heavy plant will utilise the plate as a "back-stop" to push against and then scoop up the waste. (The dynamic / impact force exerted on the Push Plate Wall is expected to be in excess of 100 tonnes). This collecting of the waste initiates the recycling process, which is then carried out within the operational area enclosed by the Portal Frame Structure.

Ward Recycling are to be congratulated on their moves towards increased sustainability, and Caunton are delighted to be instrumental in this.



Client: Ward Recycling
Engineer: AJS Structural Design
Tonnage: 400 tonnes

Sleaford Renewable Energy Plant

Sustainable straw-burning power station



Caunton Engineering supplied the steelwork frame for a new renewable energy plant in Sleaford. This will be only the second power station in the UK to be fuelled by burning straw.

Caunton are contracted to North Midland Construction who will be undertaking the construction of the civils and building works for main contractor Burmeister Wain Scandinavian Contractor A/S.

The plant will comprise a pair of 3,000 sq. m straw barns, straw conveyor, straw feeder, wood chip import facility, combined turbine and boiler halls plus administration buildings. The steelwork requires over

1300te of fabrication and erection of the steelwork. Caunton are also Supplying and Installing all of the Miscellaneous / Secondary steelwork such as Steel Staircases, Hand Rails, Ladders and flooring to all buildings. Interestingly surplus heat will be piped to Sleaford's public swimming baths and some other community facilities in the town. The plant is due to be operational in 2014.

On a sustainability note, the Sleaford Renewable Energy Plant will use straw, sourced mainly from local farms, to generate 38MW of recovered energy which is enough to provide power and heat for around 65,000 homes.

The plant will save around 250,000 tonnes of CO2 emissions every year. Ash from the plant will be recycled for use as fertiliser on farmland. The new Renewable Energy Plant is also expected to create 80 permanent jobs and will provide local straw contracts of up to £10m per year.

Caunton are delighted to have helped with such a beneficial project.

Client: Burmeister Wain Scandinavian Contractor A/S.
Main Contractor: North Midland Construction
Engineer: Ramboll
Tonnage: 1,300 tonnes

Magnox

Interim Storage Facilities for Nuclear Waste - at Six Nuclear Power Stations

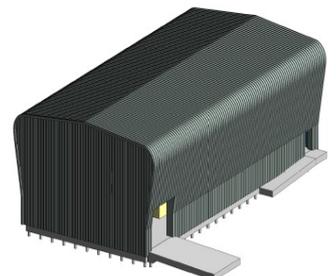
As part of Magnox's decommissioning programme, Interserve, the international support services and construction group, has been appointed as the sole Tier 2 contractor to design and build highly-engineered industrial grade interim storage facilities (ISF) to offer protection for Intermediate Level Waste (ILW) containers until the geological disposal facility is available. This involves the development of a scalable design for facilities to store intermediate-level waste held in ductile iron containers, and then the construction of six such facilities on separate sites with variable ground conditions. ISFs of varying sizes, but similar in design, will be built at Bradwell, Berkeley, Hinkley Point A, Chapelcross, Dungeness A and Oldbury.

Caunton are working alongside Interserve and their technical team to design the steelwork for the structural frames for all the ISF's planned to be built within this programme.



Magnox

Client: Magnox.
Main Contractor: Interserve Construction
Architect / Engineer: Arup
Tonnage: 565 tonnes



Rolls Royce - Total Ofon

Combustion Intake and Exhaust Support Steelwork

This support structure is one of Caunton's more international projects – for the Total-managed Ofon Oil Field in Nigeria. The company was working for some time on this order from Cullum for the Support Structure for a Rolls-Royce manufactured Combustion Intake and Exhaust. The project has involved all departments of Caunton at various times which included a works-applied four coat paint system. In addition the structure was fully trial erected in Caunton's yard (see photograph). The relationship with Rolls Royce and Cullum goes back some while but most interestingly with another not dissimilar steel framework, the Test Bed Support Structure for the world-beating Rolls Royce Trent 1000 Engine, which Caunton supplied to Rolls Royce and Cullum in 2005/6.



Client: Rolls Royce
Main Contractor: Cullum Detuners Limited
Tonnage: 250 tonnes

Green Incubator Building - South Shields

Office Building with state-of-the-art environmental energy systems



Caunton designed, supplied and erected steelwork for a new state of the art business facility in South Tyneside. The building titled the "Green Incubator " Building provides 41 flexible office, workshop and hybrid units—high quality managed workspace and business support for new and growing companies in the low carbon and environmental sectors. It opened in June 2012 creating 30,000 sq ft. of business premises.

The three-storey building incorporates state-of-the-art environmental energy systems and is one of only a few in the UK to achieve BREEAM 'Outstanding' rating. Caunton Engineering is pleased to be involved with a project both exhibiting and encouraging sustainable development.

Main Contractor: Robertson Construction
Engineer: Capita Symonds
Tonnage: 160 tonnes

