



Network Rail Signals Bright Future For HBPW

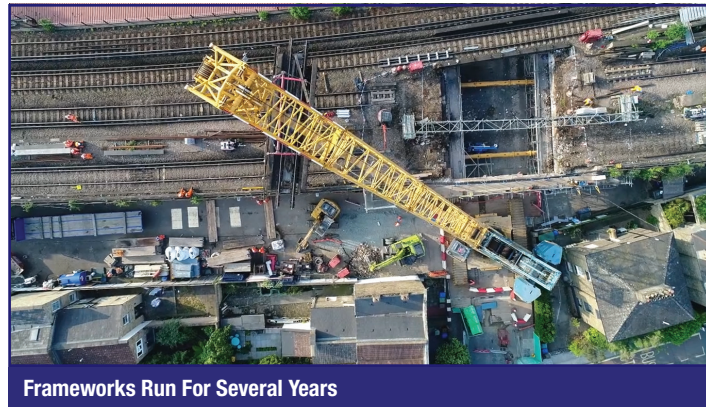
The announcement by Network Rail that Amco won lots on the £645m frameworks for Control Period 6 (CP6) has signalled an even more positive 2019 for HBPW.

Retford based HBPW – one of the premier rail engineering practices in the UK and East Midlands – has been working successfully with Amco on CP5 for several years however, it came to an end at the close of March.

“Frameworks run for several years,” said Partner, Jon Livesey, “and, whilst Amco, is one of the country’s grade A contractors and a close partner with Network Rail, it goes without saying that there is always an air of trepidation when they come up for renewal.

“HBPW has been working with Amco on various frameworks and individual contracts, throughout CP5 and, as part of that work, we were asked to tender with them as one of their main designers, specifically for the £190m fund that will support work on the London to North East (LNE) route.”

Overall there are two frameworks covering Scotland and the North East (SNE) as well as the LNE route, embracing renewals and enhancements along with



Frameworks Run For Several Years

geotechnical works. HBPW has its own geotechnical department in addition to a highly experienced team of rail engineers.

“This latest framework is set to run for five years, with an option for NR to extend by a further two, all good news for HBPW. Not only does this maintain the professional relationship between ourselves and Amco but it also provides continuity for Network Rail by keeping existing delivery teams in place,” added Jon.

Network Rail regional director for SNE Kris Kinnear said the contracts were important for shaping the future of the rail network.

“Our CP6 contracts provide suppliers with substantial work-banks and the opportunity to be part of delivering essential improvements that will help shape the future of Britain’s rail network,” he said.

Network Rail maintain that CP6 will also start the railway’s digital age with digital train control and signalling that will enable more services to run, more safely and at a lower cost.

Credit:

Additional information courtesy of New Civil Engineer.



Delivering Essential Improvements

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called ‘snow’ could have had disastrous consequences. Read the story and think ‘engineer’!

And HBPW’s engineering team has also been making a difference at Burnham Station. Again our professionals played a key role in the introduction of step-free platform access, a huge benefit for Persons with Reduced Mobility, removing the occasional need by some people to continue their journey to the next station, where they did have step-free access, and then take a taxi back. That’s a positive, engineering led outcome for members of the public.

Another example from the client perspective, is our story on Asda’s new Worksop store in which HBPW had a hand. Here, strategic engineering took 15% out of the supermarket chain’s steel costs.

Much of what engineers help achieve is invariably ‘hidden’ and our work can be part of a far bigger plan so, every now and then, someone like me has to take to the soapbox to remind discerning clients and fellow professionals that engineers, supported by a good head wind, might just make the difference; only occasionally of course!

For now we continue to work on some great projects so please keep an eye on the HBPW blog to see what we’ve been up to (www.hbpw.co.uk).

Enjoy the read!

PAUL WITHERS
MANAGING PARTNER
HBPW LLP

Welcome



Paul Withers - Managing Partner

When you run an engineering company there comes a point where you win and deliver projects, often without too much thought as to the blood, sweat and tears that invariably go into individual schemes, not just by me, but by the team of engineers and members of the wider supply chain tasked with making such projects come to fruition.

And how often do we look to consider the difference engineers make? Rarely! However, good engineering can have major benefits for both clients as well as members of the public.

Take Paul Jacklin’s editorial on Associated British Ports’ push towards the use of more solar power. The move is to be applauded, however, it took someone with an engineer’s eye to realise that eco energy to one side, the warehouse roofs upon which the solar panels needed to sit had to be properly engineered in order for the plan to succeed. A little thing

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Burnham Waves Goodbye to Restricted Access



Burnham Station Access Improvements

An exercise in value engineering by HBPW and Buckingham Group was instrumental in securing a major Network Rail contract that has subsequently given Persons with Reduced Mobility (PRM) a major boost at one of the south’s busiest stations.

Burnham Station is located between Slough in Berkshire and the Buckinghamshire town of Taplow, serving the up and down relief lines for the Great Western Main Line.

However, the station building and its two operational platforms are located on a raised embankment, approximately 4.5m above the surrounding land area which has, over the years, created major access issues for a range of people from mothers with prams to the disabled and elderly infirm.

Partner, Paul Monaghan, takes up the story: “There was no lift at Burnham Station and pedestrian access to the platforms and main building was from the station drop off area via a subway and staircase. There was a situation

where some people – unable to physically use Burnham station – had to travel to the next stop then take a taxi back. Consequently, one of our engineering goals was to facilitate the construction of a new lift shaft in order to provide step-free access to platforms.”

A piled wall was required to support excavation for the new shaft, lift lobby and staircase and initial thinking had been to use sheet piling. However, research by HBPW determined that a contiguous bored pile wall was not only stronger but took considerable cost out of the project and improved construction methodology, a key factor in winning HBPW / Buckingham the tender bid.

“There have been a range of works at Burnham station,” added Paul, “including widening the access staircase. We also increased the size of the individual steps to 300mm, and all of this was done whilst maintaining full operational capacity at the station thanks to a series of innovative temporary works measures.”

The Government’s ‘Railways for

All’ strategy, originally launched in 2006, committed politicians to spending £370m on a programme of station accessibility improvements across the rail network.

Branded as ‘Access for All’ the scheme has been managed and delivered by Network Rail in line with the Equality Act 2010.

Focussing on the provision of step-free accessible routes to and between platforms at priority stations, the programme has been designed to deliver significant benefits for disabled people and Persons with Reduced Mobility. Burnham Station was one of over 200 priority stations selected for improvements.

Client: Network Rail
Contractor: Buckingham Group

Value Engineering Exercise Trims 30 Tonnes Of Steel

Asda supermarkets are in the black after an exercise in value engineering delivered a 15% saving in steel costs at a new development site.

Clugston Group were invited to lead the design and build of Asda's new 6,500 square metre store which is being constructed as part of a £5m redevelopment of the former Vesuvius Works site in Worksop, East Midlands.

"It began with an incredibly tight timescale," said Paul Withers, HBPW's Managing Partner, "however, there is always time to save money and, with cost in mind, we value engineered the structural steel drawings, taking 30 tonnes out of the original 200 tonnes calculations."

"When you have initial drawings to work from it allows you to focus on the 'value' elements and with some lateral thinking it is amazing what can often be achieved."

The overall scheme, which will involve developing an Asda supermarket and petrol station is expected to create up to 200 jobs. HBPW will complete engineering work on the ancillary structures as well as the main supermarket structure.

It is also hoped, over time, that additional retail, leisure and



Asda Supermarket

entertainment facilities will be drawn to the site, which has lain derelict for more than a decade after the factory closed in 2006.

HBPW has worked with the Asda

brand before and, towards the end of 2012, was involved in the 'ground up' design and build of a new £3m Asda store in Shepshed near Loughborough in Leicestershire.

Client: Asda

Contractor: Clugston

"There is always time to save money"

Drax Contractor Village Moves Home!



Drax Power Station near Selby

Hundreds of contractors have descended on one of the country's biggest power stations to begin a special assignment.....moving their own village a few hundred yards across the site!

Drax Power Station near Selby in North Yorkshire is one of the most important power stations in the country, having gone from

the country's largest polluter to Europe's largest decarbonisation project.

It is hugely dependent on contractors, so much so that over the years an entire 'contractor village' has slowly developed on the sprawling site.

Associate, Paul Jacklin, said: "Drax is an enormous operation with one

of the highest generating capacities in the country and, by the nature of its business, can have hundreds of maintenance contractors on site at any one time.

"Obviously they need to be housed and there are a range of portakabins and steel-framed buildings, along with swathes of parking, to accommodate them all."

However, Drax is now re-configuring part of the site to facilitate plans to convert its final coal units to gas and needs to move the existing 'village' a few hundred yards to a new 8.5 acre site at the other side of the facility. HBPW has been asked to lead the engineering element of the project.

"This is a major job," said Paul, "and will feature 690 new car parking spaces, the majority of which are used by contractors which in itself, gives a measure of the important role that contractors play."

"This is a major job"

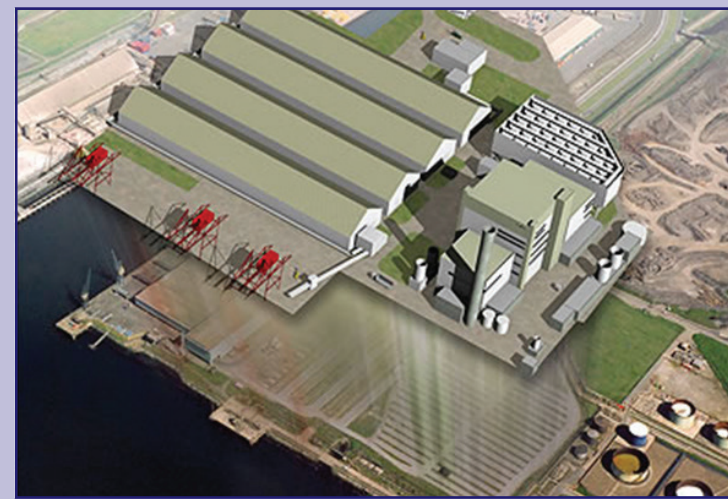
There will also be 10 new buildings as well as site access roads and associated drainage.

"Ironically, contractors have been engaged to make all this happen so they have a vested interest in making sure that everything is done on time and to their own exacting standards!"

Client: Drax Power Ltd

Contractor: Britcon

A Billion Dollars Of Biomass!



An artist's impression. Image MGT Power.

A billion dollar biomass power station that will help shift UK energy production firmly down the path of 'renewables', has been given a helping hand by HBPW.

Tees Renewable Energy Plant (Tees REP), near Middlesbrough, is a 299MW £650m biomass-powered, combined heat and power (CHP) plant being developed by MGT Teesside and, when finished, will help generate part of the UK's projected 15% renewable energy target.

HBPW's Paul Withers said: "Part of the structure involves the building of a wood pellet receiving pit which, simply, is a huge, square hole in the ground measuring 10m in depth, nearly twice the height of an average house!"

However, digging the 'hole' wasn't easy. "We had to design a cofferdam so that we could create a reinforced concrete sub structure and a watertight enclosure that paved the way for us to carry out the necessary excavations below the water table.

"Graham Construction wanted to slipform the walls of the basement construction and required as few struts as possible so HBPW adopted external reinforced concrete walings to span large distances. By minimising the use of struts we were able to create a clearer working area for the excavating plant machinery."

Tees REP will diversify the UK's energy resources and enable it to meet the larger target of generating 15% of all energy consumed from renewable sources by 2020. The project will account for approximately 1% of the larger target.

"It was a complex piece of engineering," added Paul. "We had to include well points which involved drilling holes into the ground around the external perimeter of the cofferdam so that we could lower the external water table which, in turn, reduced the forces on the sheet pile."

When finished Tees REP will generate enough electricity a year to power 600,000 homes, equivalent to annually displacing 1.2Mt of CO2 emissions. It is scheduled to come online in 2020.



Client: MGT Teesside (MGT Power)

Contractor: Graham Construction



Cofferdam

Solar Panels - Snow Laughing Matter!



Solar Arrays

As the UK starts to take advantage of summer 2019, HBPW has revealed the part 'snow thinking' played in enabling award-winning Associated British Ports (ABP) to become one of Britain's highest generating corporate solar power producers in the UK.

The port giant has installed 20MW of solar arrays across 1.4 million sq m of covered storage

space nationwide, one 30,000 sq m scheme covering multiple warehouse roofs at Immingham, Britain's biggest port.

Associate, Paul Jacklin, said: "Immingham is one of two locations - the other being Goole - which together are now delivering 4.5MW capacity, enough to power almost 750 homes.

And, once complete, the UK-wide investment could see ABP's 21 ports featuring 100,000 solar panels generating up to 22,400,000kWh of clean electricity each year - enough to boil more than 1.12 billion kettles!

But 'snow thinking' was instrumental in setting the ABP eco dream on the road to reality.

"Solar panels, by their nature, are heavy and ABP wanted to be sure that their existing buildings at Immingham and Goole were capable of taking the additional weight at roof top level.

"Many structures are designed with bad weather in mind and snow is notorious for adding sudden and unexpected weight to rooftop structures. However, ABP needed to be 100% certain that their Immingham and Goole buildings were capable of taking the additional and more permanent weight, of solar panels."

With that in mind 'bad weather' engineering principles, similar to those used to calculate snow weight, were applied to make the necessary load calculations.

"We were able to prove that the steel frame structures were suited to ABP's ambitions," added Paul, "helping pave the way for this hugely positive initiative by Associated British Ports."

Electricity generated will power port operations for ABP and its customers, with excess power fed into the National Grid. The majority of energy generated on site will be

used to power port equipment such as cranes, conveyors, lock gates and offices.

The Port of Immingham was awarded the title of 'Commercial Rooftop Solar Installation of the Year' at the Solar Power Portal Awards in Birmingham.

Client: Associated British Ports

Contractor: Custom Solar



Installing the Solar Panels