



London Road Award Nomination

The bridge designed by HBPW to help alleviate congestion in Derby has been entered into a prestigious engineering competition by the City Council.

The stunning new bow string bridge, which is located to the south east of Derby's town centre, replaces the former London Road over bridge which took the two lane A5194 across a total of seven railway lines and sidings, forming part of the Derby to Birmingham line.

Now a delighted local authority has entered the engineering scheme into the Institution of Civil Engineers (ICE) East Midlands Merit Awards which will be judged later this year.

HBPW Managing Partner, Paul

Withers, said: "The ICE Awards are an annual celebration of the very best civil engineering projects in the region so we are delighted to be standing shoulder to shoulder with some of the best projects in the UK.

"The team worked so hard on this project, specifically engineering designer Stephen Wilde, with Paul Monaghan and James Cable quite literally burning the midnight oil as they worked through the night to oversee the sliding into place of this impressive structure."

As part of the Derby scheme four old bridge spans have now effectively been replaced by two new superstructures. Three have been lost to the bow string arch bridge which, in turn, has also enabled two supporting piers to

be removed to create a more open throat to Derby station.

In addition the vertical alignment has also been altered to increase minimum vertical clearance from the railway to 4.78m in order to allow for future electrification of the lines. The scheme also features a traditional pre-cast concrete bridge deck across the remaining Bombardier span.

The project has been entered into the awards' Medium Project category for schemes with a value of £750k - £10m. The winners will be announced at June's ICE dinner.

Client: Derby City Council / Network Rail
Contractor: Morgan Sindall



Bridge being slid into place

Nearly there!

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All said, we are working on some interesting, some would argue, fascinating projects. I was as intrigued as anyone to read about Edward Needham's work on the Bennerley Footbridge Replacement Scheme and, while it may not be the biggest project on our books, I can't say it's every day that we discover a German Zeppelin connection on one of our jobs!

Paul Monaghan also points out how we have been expanding our staff resources rapidly over the last few months to cope with the steadily increasing workload, and I agree that it is thanks to our careful recruitment that, as a firm, we now have a broad spectrum of Engineering professionals ranging from the newly qualified to the very experienced.

Business continues apace, change is never far away, and something tells me that the July edition will be telling yet another story. Until then keep an eye on the HBPW blog to see what we have been up to (www.hbpw.co.uk)

Enjoy the read!

PAUL WITHERS
MANAGING PARTNER
HBPW CONSULTING

Welcome



Paul Withers - Managing Partner

Time waits for no man (or woman) and I find it mildly disconcerting that I am writing this welcome to our latest newsletter towards the end of March with the weather improving, to raise spirits, and Easter hovering into site.

Time flies when you are busy but I am happy to report that from HBPW's perspective, our caseload has been as heavy as ever (we are not complaining!) and, despite some political protestations to the contrary, the economy does appear to be experiencing a positive shift in the right direction.

However, I fear that as we brave the run up to the pending election on May 7th, we will all be so confused by the machinations of political debate that I feel sure none of us will know whether or not the economy is really doing well.

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HBPW Can't Hope For Better!

Client: Hope Construction Materials Ltd
Contractor: A Torn Construction Ltd



Hope Construction Materials' Industrial Director Ashley Bryan inside the new 20,000 tonne capacity clinker store

A 20,000 tonne capacity clinker store designed by the HBPW engineering team, is playing its part in the £14m expansion of the UK's leading independent supplier of cement and concrete.

A.Torn Construction Ltd was commissioned to build the new structure at Hope Cement Works in the Derbyshire National Park on behalf of Hope Construction Materials Ltd.

HBPW Managing Partner, Paul Withers, said: "The bulk storage shed, which will be used for storing cement clinker, was commissioned in August last year with the brief that it needed to be open and operational by the end of November.

"Consequently, we designed it very quickly and, working in close collaboration with A.Torn Construction, everything came together on-time and within

budget. All parties worked brilliantly."

The building, which features a reinforced concrete ground floor, also has 5m high perimeter concrete walls and a steel work building superstructure built off the top of its walls.

"Experience counts for everything," added Paul. "This job was very familiar to us because HBPW has been producing similar engineering details for Associated British Ports' storage sheds for many years."

The clinker store is part of Hope Construction Materials' wider £14m investment in its East Midlands plant aimed at enhancing sustainability and the efficiency of operations.

Key projects also include the completion of a multi-million pound system to increase the

amount of sustainable waste-derived fuels the operation can accommodate as well as an internal overhaul of the iconic Hope chimney.

"We are very excited to be involved in the largest investment programme on site for many years," said Ed Cavanagh, Hope Works Operations Manager. "This works has operated for more than 85 years and directly employs nearly 200 people.

"Once this programme is complete, we will have an upgraded production plant, ready for the challenges of an increasingly busy time for building in the UK," he added.

Charges Introduced For 'Soil Dating'

The not for profit organisation behind the drive to reduce the volume of soils going to landfill, has introduced a new charging structure.

But, according to HBPW Geoenvironmental Engineer, Jay Fox, the benefits of using 'the CoP' (Definition of Waste: Development Industry Code of Practice or DoWCoP) still far outweigh any new charges now in force.

The 'DoWCoP', which was originally established by the CL:AIRE organisation

(Contaminated Land: Applications in Real Environments), provides a process which enables the re-use of excavated soil materials rather than classifying them as waste.

Scenarios include;

- re-using excavated materials (contaminated or clean) on the site of origin
- direct transfer to another site (uncontaminated natural materials only)
- sharing materials between sites via a 'Cluster' system or by using a fixed soils treatment facility.

Jay said: "As a Qualified Person – someone registered with CL:AIRE to make Declarations to the Environment Agency for sites in accordance with DoWCoP – I am able to seamlessly manage these changes for clients.

"Realistically they are modest charges which only become payable on projects where the volume of materials re-used exceeds 5,000m³. Thereafter they are on a sliding scale starting at £60 for up to 6000m³ and increasing by £10 for every additional 1000m³ of materials.

"The charges are all about covering costs rather than making money. The fees are relatively small and, whilst they can rise to a significant sum for larger sites, almost without exception, the financial and environmental benefits of using the DoWCoP far outweigh the cost," added Jay.



Jay Fox

Controlled Growth Is Secret Of HBPW Success

As HBPW announces two more graduate engineer appointments, Partner Paul Monaghan, says that two years of stunning growth has gone hand in hand with a series of key strategic appointments.

Despite one of the worst economic downturns since the 1970's, HBPW has bucked the trend among many competitor firms, partially the result of Network Rail investing millions of pounds revitalising its UK network.

Working closely with AMCO Rail - one of NR's key CP5 suppliers - HBPW has responded to a raft of prestigious contract wins by appointing staff to meet the demands of an ever increasing workload.

Paul Monaghan, said: "The increase in our turnover has been the result of organic rather than 'explosive' growth and, whilst there may have been pressure points when everyone was working to capacity, I am pleased to say that the increasing number of contract wins has never outpaced our ability to recruit top quality engineering staff."

In February, Bradford University Masters engineering graduates Thomas Ormonde and Nicholas Chia, joined HBPW.

"It is important that we bring the next generation of graduates through," said Paul, "however, equally important, is the need to strike a balance between experience and relative inexperience."

Partner Jon Livesey joined HBPW in the second quarter of last year, to support the expanding team, followed quickly by graduate engineers Edward Needham and Roy Bailie, along with CAD technician Ben Daly from Rotherham.

"Allied to that we have a



Ben Daly



Roy Bailie



Nicholas Chia



Edward Needham



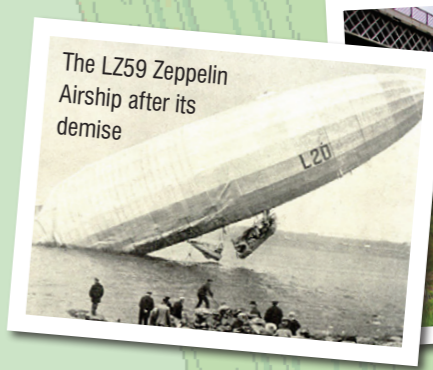
Jon Livesey

number of experienced contractors, including engineering draughtsmen Bill Gould and Andy Wolstenholme and, recently CAD technician, Mike Gresty, became part of the full-time team after a long period as a contractor.

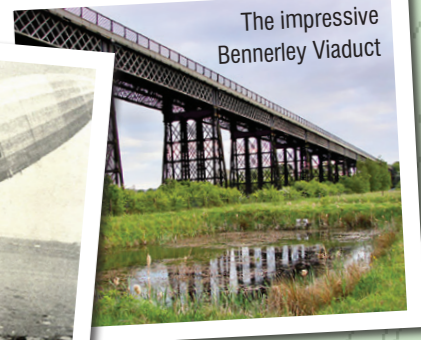
"It is important that we continue to recruit with the long term in mind, whilst also ensuring that we have the right balance of skills for an ever evolving and maturing engineering sector," added Paul.

In The Shadow Of The Kaiser's Zeppelins

Client: Network Rail
Contractor: AMCO Rail Ltd



The LZ59 Zeppelin Airship after its demise



The impressive Bennerley Viaduct

Geoenvironmental engineer Edward Needham unwittingly found himself in the middle of his own Time Team investigation after research turned up more than he'd bargained for!

HBPW was asked to carry out a feasibility study as part of the Bennerley Footbridge Replacement Scheme, which is being carried out by AMCO on behalf of Network Rail.

Edward Needham takes up the story. He said: "The new bridge, which will help improve safety, is located close to the River Erewash and a former colliery site,

between Awsworth in Nottinghamshire and Ilkeston in Derbyshire.

"As part of the studies for the scheme it was discovered that the site not only had a complicated mining history, but was also bombed by the German Navy during the Great Midlands Zeppelin Raid of 1916."

On 31st January that year nine Zeppelin airships of the German Airship Naval Division conducted a bombing raid over the British Midlands.

One of these airships, the L.20 (LZ 59) based at Tondern in Schleswig - now part of Denmark - conducted a bombing raid in the area around the Bennerley Viaduct, dropping seven high-explosive bombs in the vicinity, one of which fell just to the north of the Viaduct on the Midland Railway line at Bennerley Junction, which served the local ironworks. Damage was caused to the Midland line but the Viaduct emerged unscathed.

"We were all taken aback by this discovery," said Edward. "Clearly this was a major local event of the time which has largely been forgotten about by most people but it was, nevertheless, a fascinating 're-discovery' on our part."

As part of the bridge replacement scheme a new Network Rail standard footbridge, located close to the Viaduct structure, will replace an existing wrought iron lattice footbridge deck structure. HBPW's geoenvironmental engineering team was asked to carry out ground investigations in support of the civils and structural design by HBPW engineers.

"As is often the case with railway projects, ground conditions can be complicated and this area was no exception. In this instance there had been previous mining and historical river diversion works," added Edward.

The new footbridge main deck and associated staircases, will be founded on new piled foundations, which will be designed to suit local ground conditions, and the clearance beneath the new structure will be increased to allow adequate clearance for future electrification.

"We are used to carrying out unexploded ordnance searches for our various sites," said Edward, "however, I can say with confidence that is the first Zeppelin discovery we have made!"



The old bridge which will be replaced



The view from above the Bennerley Footbridge

An engineering perspective