Contractors Mechanical Plant Engineers

NATIONAL NEWSLETTER

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Welcome to another edition of your National Newsletter.

CMPE NEWS

Preston & Fylde Branch

On Sunday 18th February 2024, Preston & Fylde Branch held the second of their “Sunday Lunch with Friends” at the **Ship at Freckleton**, Preston.

THE SHIP
AT FRECKLETON

25 members & guests were treated to a subsidised 3 course lunch which was thoroughly enjoyed by all who attended. The meal was excellent and the staff very attentive. We will definitely be returning at a future date.

On Friday evening 12th April 2024, Preston & Fylde Branch will be taking a Canal Cruise with entertainment from “Mama Mia - Abba Tribute” and a Fish & Chip supper. This event is always good fun and the branch have booked almost every seat on the barge.

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Wessex Branch

I’M A DIVER by Peter Attwood

My interest in Diving started nearly 65 years ago, when I was TEN. I lived in a small village in Hampshire, which sat astride the river Itchen.

Like all young kids I watched the underwater exploits of Jacques Cousteau, Hans and Lotte Haas, etc, and in my own way I tried to emulate them with a cheap pair of goggles and a SNORKEL with a PING PONG BALL on the end. Initially I went paddling in the river and peered under the water until the goggles filled up with water. The SNORKEL was purely COSMETIC, as I had NO IDEA how to use it.

From there I progressed to the local (outdoor) swimming pool, with a face mask and a set of ill-fitting ‘Flippers’ (REAL DIVERS call them FINS), and there my interest stopped apart from the occasional T.V. documentary.

Interestingly, my best friend Bob (sadly no longer alive - he lived with M.S. for the last 25 years of his life), told me he started in much the same way as me, but he made himself an underwater camera case from a plastic container bought in Woolworths, the lid being held down with 4 wing nuts and sealed with a rubber gasket made out of a ‘John Bull’ puncture repair kit, with a puncture patch to press the ‘button’ through.

In 1981 I bumped into an old work colleague of mine at the local (indoor) swimming baths and asked him, purely out of interest, if he was still diving? He said he was and on explaining that I had always wanted to try diving he suggested I join the local branch of the British Sub-Aqua Club, which met every Wednesday at that very place. I never looked back, although my diving has changed dramatically over the last 43 years. But I STILL Dive!

I started out with a second-hand wet suit, which was far too big for me, cut it down, and glued it back together, an ordinary glass mask and a second-hand **AIR** cylinder, plus a NEW air valve, weight belt and weights and a ‘Horses Collar’ type Buoyancy Compensator’. (Divers don’t dive on OXYGEN other than in EXCEPTIONAL circumstances, but they DO dive on high Oxygen mixes, called NITROX to assist de-compression and avoid the BENDS). I was OFF !

Well, being short-sighted, the only way I could distinguish anything underwater was to GLUE the lenses from an old pair of glasses onto the inside of my mask – not very successful as the salt water dissolved the glue. However, I found an Optician that was prepared to BOND a pair of LENSES onto the inside of

my mask, not particularly special, but better than nothing! Nowadays you buy complete optical lenses which clip into special masks.

After completing my initial training, which took 6 months including a swimming test, theory lessons and POOL sessions, I was ready for the SEA.

My first dive was on the 'Old Harry Rocks' out of Swanage with my friend Bob. I couldn't believe what I was seeing, there were FISH EVERYWHERE. I felt like I was in a FISH TANK. Well all too soon the dive was over and we scrambled back into our 'Inflatable' boat. We were luckier than most clubs that had to wade out from the shore to dive!

Since then I have progressed to a DRY SUIT – you climb into it with all your cloths on and ZIP It UP, with a rubber neck seal and wrist seals to keep the water out (sometimes, if you're lucky!). I also dive with a much bigger air tank, 15litre capacity, rather than the 7 litre I started out with. I also have a 'bail out' emergency 3 litre bottle called a 'Pony' with a separate valve and contents gauge, which clips onto my (very sophisticated) 'Stabiliser' Jacket (Life-jacket). This can also act as another spare air supply – with its OWN 'DEMAND' valve. In theory the whole set-up gives you 'BELT and BRACES' safety equipment.

I have now done nearly 850 dives, not many by most divers, but I started diving late, in my thirties, but that's still 20 dives per year on average. I've dived in the Red Sea (No Houthis pirates about at the time), Estartit (a marine reserve) in Spain, Gozo, off the Island of Malta, Scapa Flow in the 'Orkneys', the Scillies, West Wales, the Farne Islands, etc. but extensively along the South Coast of England, from Brighton right through to Cornwall, north and south.

The first thing people ask me is, 'Have you ever seen a SHARK?' Well the answer is, 'Not as many as you would think'. Firstly they are quite elusive (in my opinion). I saw ONE in Egypt back in 1987. I was the only one that saw it out of 8 divers, who all did 10 dives that week. I saw another about 10 metres BELOW ME once, when I dived out of Newquay. But

it was GONE within a few seconds. And I also saw a 1.5 metre THRESHER shark BREACH out of the water, when I was waiting to dive off of Sandown on the Isle of Wight. It didn't do it once, it did it about 8 times! And then someone shouted 'QUICK – GET A CAMERA'; too late, we missed it! I thought they were a 'warm water' fish, but obviously not!

The other question I get asked is 'Have you ever found any TREASURE?' Well the answer is, 'what do you call 'Treasurer'? I've collected quite a few 'TRINKETS' over the years, mostly old bits of brass which have been worth nothing (and which I HAVE declared to H.M. Receiver of Wrecks). I have my 'trusty' Port Hole (no glass) hanging on the wall at the back of my house, a lead 'Sounding Shot', by which the sailors of old used to work out the DEPTH of water they were in (by the mark 'EIGHT' etc.), and a lovely little SOUP BOWL, with a Royal Navy crest, that I picked up off the sea-bed, when I dived up the mouth of the Tamar River in Plymouth. Essentially it has a few BARNACLES still stuck to it, so I know it is authentic!

Next question: 'Which is your best dive?' I've had quite a few, but what is all important is the **visibility** under water. Recently, I dived a World War one U-Boat, UB74, west of Portland Bill, in 35 metres of water, which had obviously been blown in half (by depth charges I subsequently found out). I could have swam inside it quite easily and safely, but out of respect for the poor 'Devils' that must have perished, I kept outside. Be they British or German, it was a terrible way to die!

Final question: 'How long will you keep diving?' Well I'm 75 now. I'm getting a bit too old to be 'bumping up and down' on the water on my way to the DIVE SITE, and I find the equipment, especially the TANKS are getting HEAVIER, as I get older. But I work hard at keeping FIT. I go to the gym a couple of times a

week; I do a few on-line cardio ‘work-outs’ every week. I watch my weight by eating sensibly and I only drink moderately.

HOWEVER, I still get a BUZZ out of diving. Flipping over the side of the boat and pulling myself down the ‘SHOT-LINE’, is as good as the first time, all those years ago. AND LONG MAY IT **CONTINUE** !

Pete Attwood. Wessex Branch Member since 1977.

INDUSTRY NEWS

Bricklaying robot secures $25m investment.

A Dutch company that has developed an automated bricklaying machine has secured US$25m in funding from investors.

Monumental builds construction robots that are supplied bricks by electric autonomous ground vehicles (AGVs) moving around site.

Monumental was founded as Terraform in 2021 by chief executive Salar al Khafaji and chief technology officer Sebastiaan Visser with a vision to solve the labour, cost and sustainability challenges facing the construction industry.

It has now raised US$25m in funding led by Plural and Hummingbird. Northzone, Foundamental and NP-Hard Ventures, as well as angel investors, also participated.

Above: Monument’s brick laying machine

Monumental’s robots are fitted with sensors and small cranes able to place bricks and mortar with human-level precision, accuracy and efficiency, it is claimed. The robots are controlled by Monumental’s AI-powered software, Atrium, and are small enough to go anywhere a human can, whether that’s in tight corners, through doorways or in a van.

Following pilot test cases in the Netherlands, Monumental completed its first large-scale, 15-metre facade for an office and warehouse building in 2023. It has since deployed its robots on several other projects, including social housing and has partnerships with multiple contractors.

JCB unveils new diggers, dumpers and rollers.

JCB has taken the wraps of several new and improved products, including excavators, dumpers and compaction rollers.

JCB is expanding its range of compact excavators, with the launch of two 2.5-tonne platform machines. The 25Z-1 is a zero tailswing model that replaces the previous 8025 ZTS, while the 26C-1 is a conventional counterweight replacement for the 8026 CTS.

The 25Z-1 tips the scales at 2,550kg, while the 26C-1 weighs in at 2,675kg. With an overall width of just 1,500mm, either machine can be towed behind a van or a 4x4 on a 3.5-tonne trailer, making it easy to move the excavators between job sites. It is equipped with nine tie-down points, for secure transport without chains or straps cutting into rubber tracks.

Above: The JCB 25Z-1 replaces the 8025 ZTS

These machines are fitted with an EU Stage V/ Tier 4 Final compliant Kohler diesel engine, that develops 18.4kW (24.7hp).
The mini excavators share the design and styling of JCB's larger 3.5-tonne Next Generation models, with pressed steel bodywork and a cast counterweight ensuring maximum durability and service life. The two machines have the same cab structure, which benefits from flat glass and steel panels, while the door locks back within the profile of the counterweight, to reduce the risk of damage when rotating.

Also new from JCB is a three-tonne battery-powered site dumper. The 3TE electric swivel tip dumper, powered by lithium-ion battery technology, is similar to the existing 1TE one-tonne model, only bigger.

It comes with an electric motor that connects to a drop box, to provide full-time all-wheel drive. A 22.3kW electric motor delivers drive to the drop box, while a second 16.1kW electric motor powers the machine's standard hydraulic circuit, for steering and skip lift, via a hydraulic pump. The power is supplied by a 20kWh lithium-ion battery pack, capable of providing full shift operation in normal use, JCB says.

Above: The JCB 3TE electric dumper

Other new additions to the JCXB product line-up include the CT380-130 and CT430-140 tandem vibratory rollers, completing a line-up of sub-five-tonne compaction machines.

Targeted at the rental industry, the two machines sit above the current CT160-80/100 and the CT260-100/120. The first number represents the weight category that the machine competes in, the 3.8-tonne market in the case of the CT380-130, with the second number denoting the drum width in centimetres.

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Contracts Awarded

Beard picked for £25m Bristol redevelopment.

Specialist development manager Bankfoot APAM has appointed Beard Construction as main contractor for a £24.5m redevelopment of Bristol's One Friary building.

One Friary is owned by Britannia Invest A/S, a Danish company set up specifically to invest in British real estate.

Beard is set to start on site in April 2024, adding three new floors on top of the existing structure and adding a glass-reinforced concrete (GRC) façade.

Once complete, the building will provide 80,000 sq ft of office space in Bristol's Temple Quay.

The redevelopment focuses on maximising sustainability by reusing 99.5% of One Friary's existing structural frame. The project is designed to achieve BREEAM Excellence, as well as NABERS and WELL certification.

Matt Cooper, Beard's Bristol director, said "This exciting flagship project puts sustainability front and centre – the carbon savings through the reuse of the building's existing structural frame will be significant."

Bankfoot APAM managing director Chris Moore said: "We are hugely excited about the project and we believe it will be one of the best buildings to work in Bristol once finished."

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Homes England signs with Vistry for Milton Keynes housing.

Vistry has exchanged contracts with Homes England and Paradigm to build 196 more homes at Tattenhoe Park in Milton Keynes.

The 196 mixed tenure homes, including 59 designated as affordable, are being built under Vistry's Countryside Partnerships for Homes England and Paradigm Housing.

This phase of the village-style neighbourhood on the outskirts of Milton Keynes marks a milestone for Vistry at Tattenhoe Park following the launch of phase three in 2022.

In total, Vistry will deliver a total of 514 new homes across phases thee and seven along with a range of amenities and landscaping in the wider Tattenhoe Park site.

The reserved matters application for this phase was submitted at the start of the year and a determination is expected in early spring. Work is expected to start on start at the end of 2024, pending approval on the application.

The first units within this fourth phase are expected to be completed in summer 2025.

Above: Tattenhoe Park

Great Yarmouth's new bascule bridge now open.

Norfolk County Council has marked the official opening of Herring Bridge in Great Yarmouth, following the completion of one of East Anglia's most significant infrastructure projects.

The twin-leaf bascule bridge, which represents an overall investment of £121m, was built by Bam Farrans Joint Venture.

Now open to river and road traffic, Herring Bridge connects the A47 Harfrey's roundabout to the port and enterprise zone on the other side of the river Yare.

The project involved in-river marine works and the construction of approach embankments that support two underpasses and the bascule bridge. The local road network has also been upgraded with a five-arm roundabout and dual carriageway.

Construction took place surrounded by a live and operational marine port, with commercial and residential properties along the approaches to the river crossing.

While the construction process was complicated enough at the best of times, the project has also had to contend with the impacts of supply chain shortages, input cost inflation and, of course, the covid pandemic. When construction started in 2020, completed was scheduled for summer 2023. Opening on 1st February 2024 represents only modest slippage, under the circumstances.

Bam Farrans Joint Venture project director Tony Mulholland said: “We’re proud to see Herring Bridge open and delivering for the people of Great Yarmouth following many years of positive collaboration between our team, Norfolk County Council and all stakeholders involved in the project. One of the features that made this project truly special was that a twin bascule bridge, of such size and scale, is not common in the UK. This bridge has been designed to ensure minimal disruption to highway traffic and river traffic, so it opens and closes within 90 seconds, 20-plus times per day.”

HS2 completes first of four Delta Junction jacks.

Belgian steelwork specialists have jacked a 300-tonne viaduct beam into place for HS2 over the weekend.

Victor Buyck Steel Construction has moved the first viaduct section into place over the motorway network in North Warwickshire as part of HS2’s Delta Junction.

The contractors used a specialist push-pull technique to move the 84-metre, 300-tonne steel viaduct section into place over the westbound link road between the M6 and M42 near Coleshill.

This is the first of two moves to install the deck for HS2’s east link viaduct, which is part of the triangular Delta Junction. The second operation, in April, will create the full 158-metre long composite deck over both westbound and eastbound motorway link roads. Further work, including in-situ concrete deck works and parapets installation will be undertaken to complete the structure.

Before the end of this year, a similar two-stage operation will move the identical west link viaduct, which runs parallel to the east link viaduct.

The first east link viaduct launch takes it to its halfway position over the westbound link road. Three more steel girders will now be welded to the back of the structure and 40 precast concrete slabs will be installed on top of the girders. In April this entire structure, weighing 1,100 tonnes will then be moved to its final position over both westbound and eastbound motorway link roads.

The Belgian steelwork specialists, working to HS2’s Anglo-French main works contractor Balfour Beatty Vinci (BBV), used a proprietary push-pull jacking system to have greater flexibility during the launch operation. It was the first time that Victor Buyck has used this technique in the UK.

The team completed the move ahead of schedule in 11.5 hours during a weekend closure of the motorway link roads. The roads were re-opened at 2.35am on Sunday morning.

The Delta Junction is made up of embankments, cuttings and a total of 13 viaducts taking new rail tracks over motorways, local roads, existing rail lines, rivers and floodplains. The viaducts include six precast segmental viaducts, four composite viaducts and three low viaducts.

Approved

CMPE Certificate of Competence

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