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ARTICLES BY NEWS/TECHNOLOGY SUBSECTION

INDUSTRY, COMPANY AND INSTITUTION NEWS

ISTT Gold Medal Award  
14th Annual Ditch Witch® Customer Event  
ER Technical Introduces A Pipe Coating Service  
Suction Power Supports Bridge Reinforcements  
Aqualiner Files Application For Additional Patent Protection  
Specialist Water Services Firm In Buy-Out  
TT-UK Ltd Becomes TRACTO-TECHNIK UK Ltd  
Major Contract and New Consultant  

PIPE JACKING, MICROTUNNELLING, TUNNELLING & AUGER BORING

Successes with Guided Boring and Tunnelling Across North America  
Boring Tunnels Below Indianapolis  
Doha Tunnels Its Way To The Top  

ONLINE PIPE REPLACEMENT

GRUNDOCRACK Going The Distance In Wellington  

ASSET MANAGEMENT AND SURVEY

Network Rail High Speed Adopts Wincan Family  
WRc Assess & Address® Completes 10,000th Sahara Survey  

SUPPORT EQUIPMENT, ACCESSORIES & SERVICES

HammerHead® Trenchless Releases First Of Next-Generation Winches  
New Innovations Offered With TracStar® Series 2  
Subsite® Introduces Its Most Advanced HDD Guidance Display  

UKSTT NEWSLETTER

UKSTT News  
UKSTT Member News  
UKSTT Other News & Events  
ISTT Affiliate Society News  

EVENTS DIARY  

(CURRENT ISSUE CONTENTS  
(A full index of previous articles is available online click [here](#))

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ian@nodigmedia.co.uk by 10 November, 2016

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From time to time the International Society for Trenchless Technology (ISTT) recognises individuals who are judged to have made an outstanding and exceptional individual contribution to trenchless technology with award of its Gold Medal.

At the recent Beijing Conference and Exhibition Gala Diner on 11 October, 2016, ISTT presented its highest award to Dr Dec Downey in recognition of his substantial efforts on behalf of the Society.

Dec attended the 1985 No Dig Conference ‘Trenchless Construction for Utilities’ in 1985 and was amongst the first people to join ISTT. In 1993 when UKSTT was formed he was elected to the first Council and served a term as Chairman from 1999 to 2000. Dec joined the ISTT Executive Steering Committee in 2000 and served until 2013, he was again ISTT Chairman from 2007 to 2010. He has been an ISTT Guarantor since 1997.

Dec is only the sixth person from the worldwide trenchless community to receive the Gold Medal in 30 years. At the event in Beijing he thanked the many people who had helped him make some impact over the years including Chairman Emeritus Ted Flaxman, JSTT Past President Dr Tohyama, former Technical Secretary Dr John Heavens, Past Chairmen Sam Ariaratnam and Derek Choi, Executive Directors John Castle and John Hemphill, Westrade founders Richard West and Caroline Prescott and colleagues from UKSTT particularly Martin Kane, Norman Howell, Steve Kent and Ian Vickridge.

The ISTT Gold Medal comes hard on the heels of the UKSTT Lifetime Achievement Award presented at the recent No Dig Live 2016 which took place at the Peterborough Arena, UK in September. “It has been a very satisfying month.” said Dec. “The best Autumn I can remember, perhaps I should retire whilst I am winning.”

Dr Dec Downey (2nd right) receiving his Lifetime Achievement Award at the UKSTT Dinner in Peterborough alongside Environmentalist and television presenter Chris Packham (left) and UKSTT Chairman Ian Vickridge (2nd left) and one of the IT Girls who performed at the event.
14th ANNUAL DITCH WITCH® CUSTOMER EVENT

Ditch Witch®, a Charles Machine Works Company, hosted its 14th annual international customer event on Friday, 14 October, 2016 at the Ditch Witch Barcelona Support Centre. As one of the largest underground construction events in Europe, 320 customers attended, representing 24 countries across Europe, the Middle East and Africa.

“Global customer events such as this help us grow our international presence and showcase our valued partnership with customers around the world.” said Shan Kirtley, Ditch Witch vice president of sales and marketing. “Continued dedication from our worldwide dealer network and staff help us live by our customer commitment, ‘We're in This Together.’”

The one-day event included revealing the next evolution of horizontal directional drills, and hands-on equipment demonstrations of a variety of Ditch Witch products, including drills, trenchers, compact equipment, vacuum excavators, parts, as well as HammerHead® piercing tools and Subsite® Electronics technology. The event concluded with a gala reception and dinner.

In addition, various customer teams competed in a drilling contest during the event. As the winners, teams from Denmark (first place), UK (second place) and Germany (third place) walked away with custom-made Ditch Witch trophies.

Ditch Witch dealerships operate in more than 100 countries, on six continents with more than 175 locations worldwide. Website: www.ditchwitch.com

ER TECHNICAL INTRODUCES A PIPE COATING SERVICE

Many drainage contractors are often faced with a pipe repair or renovation where traditional methods of lining or patching cannot be applied. There are many reasons for this, from access issues to multiple bends, diameter changes to time and costs. Pipe Coating is one possibility often overlooked and certainly not widely available in the UK until now.

ER Technical Services now includes the Picote Pipe Coating system in its ever increasing range of pipe repair and renovation services.

Using a specially designed 2-part resin, pump and delivery system coupled with the appropriate diameter brushes the system can be used in all pipe materials, PVC, clay, concrete and cast iron in diameters 32 mm to 150 mm, and can coat vertical and horizontal pipes.

It can negotiate bends and diameter changes and can cope with temperatures ranging between -40 to +120°C giving a life expectancy of between 30 to 50 years.

The resin is brushed rather than sprayed giving a uniformed finish of between 2 to 4 mm thick depending on the diameter of the pipe and the number of coats applied. As this is a brush coating system there is no need to use cutters to reopen lateral connections.

Features include:
- Quick & Easy solution
- DN32 to DN150
- Horizontal and vertical pipes
- Multiple bends and diameter changes
- PVC, Cast Iron, Clay, Concrete
- Non corrosive and hard wearing finish
- Coating can withstand temperatures of -40 to 120°C
INDUSTRY, COMPANY AND INSTITUTION NEWS AND RESEARCH

- Life expectancy 30 to 50 years
- Brushed not sprayed
- No lateral cutting or reopening required

ER Technical can now offer its valued customers yet another service when it comes to pipe repairs and another option for tricky projects where normal solutions cannot be applied. Leaving customers to concentrate on their main programme of works.

So whether it is lining, patching, lateral cutting, camera surveying, leak detection, manhole chamber renovation and leakage repairs and now pipe coating - ER Technical is rapidly becoming a ‘go to team’ for all drain and sewer related projects. Website: www.drainage-support.com

SUCTION POWER SUPPORTS BRIDGE REINFORCEMENTS

A comprehensive improvement plan identified a railway bridge on the network that required reinforcement. With several utilities buried under the bridge's road surface, including gas, water, electric and telecommunication lines, a safer option for excavation was needed.

Vacuum excavation was chosen as the ideal solution to expose the buried assets, with hire provider Pier (UK) commissioned to complete the works.

Contractors specifically chose the equipment as it is less intrusive compared to traditional options, with suction power reducing the risk of damage to the bridge structure and buried services.

Pier (UK)’s Managing Director Sean Quinn said: “Contractors were aware of the potential conflicts that could incur if the bridge structure was damaged during the works, so we were delighted to see them opt for vacuum excavation as a safer alternative. A vacuum excavator is ideal for this kind of application. Not only does it reduce risk of damage, but the equipment also emits less noise into the neighbouring area.”

Operators excavated along the bridge, carefully lifting material around the utilities until all lines were exposed. This safer, no-dig approach ensured work was completed without any delays or damage to the bridge. Website: www.pier-uk.co.uk

AQUALINER FILES APPLICATION FOR ADDITIONAL PATENT PROTECTION

Aqualiner Limited, a company commercialising a unique trenchless pipe renewal technology for the drinking water and sewerage markets, recently announced that it has filed for further patent protection with the U.K. Patent and Trademark Office. The Patent Application (1616384.2) covers an invention that significantly improves its equipment for the drinking water market with potential for use in other lucrative pipe renewal applications including gas distribution and rising (pumped) sewer mains.

The invention is a direct result of the external review of the overall equipment design along with the Company’s new engineering team that has been put in place over the past six months. The invention is now incorporated into the heating device which is a core part of the Company’s process. The patent application covers the high ratio expansion of the compressed air entering the heating device’s canister in a very short distance. This achieves as near as possible even flow of air across all of the electrical heating elements.

This is a material milestone as it reflects the progress and significant improvements in the design and its potential to be used in other markets outside the water industry. This is the first patent application the Company has made in its own name. It intends to file additional patent applications to cover aspects of the ongoing engineering design work.

The expected result of the current development work is to achieve a reliable process that can accommodate fluctuation in speed and other operating conditions. This provides a solid basis from which to expand out to the full portfolio of equipment.

“The project has moved from what had been perceived as a simple engineering project to one that includes a significant element of advanced fluid dynamics. This level of complexity presents a significant barrier of entry for any competitor.” stated Archie Adams, Aqualiner’s Managing Director, who added, “Aqualiner’s value lies in its unique process that is protected by existing patents. The ability to enhance these by critical development and as a result apply for protection until 2036 is key to the Company’s strategy to license the use of its technology. In addition, further patent applications are being considered that relate to other aspects of the design review.” Website: www.aqualiner.co.uk

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SPECIALIST WATER SERVICES FIRM IN BUY-OUT

IETG Group, a water and wastewater specialist, has undergone a management buy-out from its US parent company IDEX Corporation. IETG and its sister company 40Seven will now become a standalone business under new parent company IETG Holdings, led by Ian Edwards, Managing Director, and Richard Bond, Finance Director. The MBO has been supported by funding from Bentley O-S Limited.

IETG provides clean water, wastewater, drainage and CCTV services and is a global leader in flow monitoring, while 40Seven provides specialist surveying services including utility, land and topographical surveys to users in industry, construction and the utility sector. The group employs 150 staff across the UK, operating from headquarters in Leeds and its offices in Sevenoaks.

Dow Schofield Watts provided corporate finance advice and due diligence services to IETG Holdings with legal firm Gordons providing legal advice.

Ian Edwards said: “Richard and I are delighted to have had the opportunity to complete this management-led buy-out. IETG and 40Seven represent great brands in their respective markets and, with Bentley O-S’ support, we very much look forward to continuing to build on the recent historical success of the business.”

Tony Norwood, who led the transaction on behalf of Dow Schofield Watts, said: “While IETG has had fantastic backing historically from IDEX, it is great to see the Leeds-based business re-establish itself as an independent company again. Ian and Richard’s leadership combined with the support of the Bentley O-S provides the group with the ideal platform for future growth.” Jeff Gardner and Rob McCarthy from Dow Schofield Watts’ transaction services team completed financial due diligence.

Jonathan Asquez, Duncan Firman and Lucy Leyland of Gordons in Leeds provided legal advice to IETG Holdings with Jonathan Simms and Sarah Harrison of Clarion Solicitors advising management. Website: www.ietg.co.uk
INTRODUCING THE NEW DITCH WITCH JT40

KEY FEATURES / BENEFITS

POWER
160 HP, Tier 4 Cummins diesel engine provides 18 Tonnes of Thrust & Pullback, 5,500 ft. lb Spindle Torque 70 gpm on board Mud Pump.

PRODUCTIVITY
New hydraulic platform utilizes proven technology to provide most efficient power downhole.

SERVICEABILITY
Fold-out, Lift-off service doors provide easy access for maintenance and contain no daily grease points.

OPERATOR’S STATION
Best-in-class operator’s station, designed for optimal drilling comfort, provides operators with the most advanced cab on the market.

VISIBILITY
Best access to drilling vision points with patented, open-sided vice wrenches, and improved view of tool joint, when making and breaking pipe.

ADVANCED DISPLAY
Most transparent operation system on the market, featuring an advanced display, delivering unparalleled job site data.

For more information contact us on

Tel: 01792 895906
E-mail: info@ditchwitch.co.uk
Ditch Witch UK & Ireland, Phoenix Way, Garnogch I/E, Gorseinon, Swansea, West Glamorgan, SA4 9WF
MAJOR CONTRACT AND NEW CONSULTANT

Leeds-based Ant Hire, one of the UK’s leading suppliers to the water industry, has appointed Graham Tattersall to the role of Strategic Business Development Consultant.

With over 37 years’ experience in the drainage industry, Graham was previously Joint Managing Director at wastewater solutions provider Lanes For Drains, which he built into a £110 million turnover business with 22 offices and more than 1,100 employees across the UK.

Graham will support Ant Hire’s new business programme which aims to increase turnover from £4 million to £10 million in the next five years by delivering an ambitious sales strategy as well as advising and leading on acquisition activity.

Graham said: “Ant Hire has real potential for growth over the next few years and is the perfect company within which to channel my industry experience and expertise, particularly in respect of achieving growth and leading acquisitions. This presents an exciting opportunity for me to help take the business onto the next stage of its development.”

Further to this, Ant Hire also recently announced it has been appointed by Industrial Water Jetting Systems Limited (IWJS) as its water and drainage solutions provider in a contract worth £1 million over the next five years.

Under the contract, Ant Hire will provide IWJS, an approved sub-contractor for Yorkshire Water, with lateral pipe cutting robots, its revolutionary PatchBox Pipe Repair Kit and other drain consumables to help the wastewater management company deliver planned and reactive works for its water utility clients.

The contract, with IWJS’s Leeds depot, builds on Ant Hire’s existing relationship with its Manchester and Suffolk depots. With six strategic locations throughout the UK, IWJS delivers national drainage and waste water management support to clients.

Antony Scott, Director at Ant Hire, said: “We are delighted to have secured this significant contract which not only strengthens our existing relationship with IWJS, but also allows us to showcase our commitment and dedication to providing innovative products and customer-focused solutions by working closely with one of the leading drainage contractors within Yorkshire Water.”

Ronnie McMillan, IWJS Contracts Manager, said: “Ant Hire’s innovative products and solutions are competitively priced, have widespread availability and are perfectly suited to our day-to-day needs. As well as Ant Hire’s ability to cater to our requirements regardless of the geography or complexity of the project, the team’s friendly and pragmatic approach, willingness to exceed expectations and first class service delivery are what set them apart from the competition. We look forward to further developing our business relationship with them and helping thousands of businesses across Yorkshire to access essential water services.” Website: www.anthire.co.uk
In spring 2016, Minger Construction, Inc. of Jordan, Minnesota, US completed 1,800 ft (548 m) of sanitary sewer with two Akkerman guided boring machine (GBM) systems on Nicollet Avenue in Minneapolis, a popular social, shopping, and dining destination in the heart of downtown. The complete Nicollet Project, aims to transform the area for additional green space, pedestrian-friendly features and regions for social engagement. The Nicollet Mall Sanitary Sewer Replacement, Phase 1 & 2 projects are located at 12th and Nicollet Avenues, referred to as the Loring Woods section on the design.

The area’s sewer system was originally constructed in the 1890s and is in need of capacity upgrades. Today this is a highly urbanised region with many subsurface utilities making it ideal for pipe jacking with guided boring system technology. Minger Construction Inc. was the sole bidder, has much trenchless technology experience and a history of completed projects with the City. Minger crews were able to conform to the tight time frame for completion in order to coordinate with other Nicollet Project work. The contractor simultaneously used 4812 and 4800 GBM Series jacking frames, an increased Powered Cutter Head (PCH) to install the 30 in (7,620 mm) diameter steel casing with an 18 in (460 mm) diameter VCP carrier pipe, a 20 in (510 mm) diameter Powered Reaming Head (PRH) to install 15 in (380 mm) i.d. VCP, as well 12 in (305 mm ) i.d. VCP for a standard three-pass installation.

Some 1,800 ft (549 m) installed in nine total runs. Installation depths ranged from 14 to 20 ft (4.3 to 6.1 m), and the longest alignment was 425 ft (129.5 m). The sanitary sewer enhancements began in December 2015 and the last run was installed in May 2016.

On another project, at the end of June 2016, Neptune Coring (Western) Ltd of Edmonton, Alberta, Canada completed a 183 m (600 ft), 1,500 mm (60 in) i.d. RCP tunnel using an Akkerman Series I TBM 600 and its new 5200 Pump Unit. The tunnel on the Ekota Dry Pond and Menisa Storm Relief Project, located in the Ekota Subdivision of Mill Woods in Edmonton will alleviate sanitary sewer backups and surface flooding in the two neighbourhoods. The general contractor on the project was Sureway Construction Ltd. and it was designed by Sameng Inc. The project is owned by the City of Edmonton – Utilities Infrastructure.

Neptune, a longtime 5000 Series pump unit customer, reported that its crew was very pleased with the performance of the new 5200 pump unit on this run. Mitchell Campbell, project manager stated: “It operates much quieter than its predecessor, the controls are user-friendly and the separate pump was more efficient.”

He further added that: “The added hydraulic oil flows on the 5200 pump unit made for quick pipe installation, even in adverse geology.” Crew experienced relatively low thrust pressures throughout, ranging from 3,800-5000 towards the end of the run.

Production was enhanced with the use of bentonite at several locations throughout the tunnel which helped to keep the pressures low. No intermediate jacking stations (IJS) were needed.

The alignment ran through glacial till conditions. Several large rocks were hand-mined along the way. In the end, crews were able to achieve an average production rate of four pipes per day. Website: www.akkerman.com

Holing out on the Neptune Coring project in Edmonton, Alberta.
On Tuesday, September 6, 2016, one of the longest-running Robbins TBMs embarked on its most extensive project yet. The 6.2 m (20 ft) Main Beam machine, owned by the Shea-Kiewit (S-K) JV, is boring the 8.5 km (5.3 mile) long White River Tunnel as the first in the next phase of the DigIndy wastewater tunnels below Indianapolis, Indiana, USA. In addition to that work, the machine will bore the Lower Pogues Run, Fall Creek, and Pleasant Run Tunnels, a scope of work totalling about 28 km (17 miles) through limestone and dolomite rock.

The rebuilt Robbins hard rock TBM was first used in Indianapolis on the 12.5 km (7.8 mile) long main tunnel, called the Deep Rock Tunnel Connector (DRTC). On that tunnel, the speedy machine achieved world records in its size class of 6 to 7 m (20 to 23 ft), including ‘Most Feet Mined in One Day’ (124.9 m or 409.8 ft); ‘Most Feet Mined in One Week’ (515.1 m or 1,690 ft); and ‘Most Feet Mined in One Month’ (1,754 m or 5,755 ft). “It is nice to start the job with a machine that has already been proven and successful.” said Stuart Lipofsky, Project Manager for S-K JV.

However the DRTC was far from the TBM’s first job. The machine, originally built in 1980, has been used on New York City’s Second Avenue Subway, as well as projects in Massachusetts and Canada. Once the machine has completed the DigIndy network of tunnels, it will have bored more than 51 km (32 miles) of tunnel, an achievement making it one of the hardest working Robbins TBMs ever put into service. “The age of the machine was not a concern for us, it was a positive. We knew it could perform in harder, abrasive rock.” said Lipofsky.

The machine was launched from the 67 m (220 ft) deep White River shaft following a refurbishment that included new motors, gearboxes, electronics, and other elements. As of the last week of September, the TBM has bored over 300 m (1,000 ft) of the White River Tunnel. About one mile into the White River Tunnel, the drive will bifurcate eastwards to bore the 2.7 km Lower Pogues Run Tunnel in front of Lucas Oil Stadium in downtown Indianapolis. The machine will then be backed up to the bifurcation point before continuing north for completion of the White River Tunnel.

As the machine bores, Robbins continuous conveyors remove muck in an extensive system that was highly successful at the DRTC. Much of the conveyor structure remains the same for the new tunnels, with new horizontal and conveyor belting provided. The conveyors will wind through curves as sharp as 300 m (1,000 ft) radius, as the tunnels follow the path of the White River overhead.

The S-K JV has until 2021 to complete the White River and Lower Pogues Run tunnels for local owner Citizens Energy Group, and until 2024 to complete all the tunnels. The use of one TBM was seen as a positive. “The use of one machine was more efficient for our crews. The schedule allowed us to run with one TBM and we feel we can do it with one machine. It also was a less costly option than running two machines in terms of the owner funding the project.” said Dan Martz, vice president for J.F. Shea. Once complete, the EPA-mandated deep tunnel project will reduce the amount of raw sewage overflows and clean up tributaries along the White River.

Website: www.robbinstbm.com

The Robbins TBM was launched from the 67 m (220 ft) deep White River shaft.
Managing 21 TBMs working smoothly beneath a metropolis like Doha is only possible for Dr. Markus Demmler, Senior Director of the Qatar Integrated Railway Project, one prerequisite was vital for the success of the planning, expertise and high material and machine quality. In addition to excellent operation on the huge construction site around the clock, seven days a week. In addition to excellent staff and specialists from 19 countries were at hand wherever contractors, machine technology and shafts ready for the next section and once again tuned for speed. Up to 125 Herrenknecht service breakthroughs and more than 40 times the machines were quickly pushed forward in intermediate workshops worldwide.

The world has never seen such performance. What Qatar Rail and our contractors in Doha have accomplished in just 26 months of construction time with the highest standards of performance, safety and quality is an absolutely Olympic achievement in modern infrastructure development.” said Herrenknecht Chairman of the Board of Management Dr.-Ing. E.h. Martin Herrenknecht in summing up the mega tunnelling project Doha Metro. High-level political guests such as the Qatari Prime Minister and Minister of the Interior H.E. Sheikh Abdullah bin Nasser bin Khalifa al Thani, the Minister of Transport and Communication of Qatar H.E. Jassim Saif Ahmed al Sulaiti as well as the ambassadors of France, Korea and Japan in Qatar showed their admiration at an official completion ceremony. A total of around 200 guests, including the top management of Qatar Rail and leading representatives of the joint venture contractors, celebrated a unique technical construction and engineering achievement. The 111 km of newly bored and built tunnels under the capital of Qatar in just over two years outshine everything previously achieved in urban metro tunnelling worldwide.

**TUNNELLING INTO THE GUINNESS BOOK OF RECORDS**

From August 2014 to September 2016, on the three main lines (Red Line, Green Line, Gold Line), four international joint ventures consistently pushed forward a total of 21 TBMs designed and equipped by Herrenknecht specifically for the project. The performance includes: 470,497 individual concrete lining segments which were mechanically assembled into 70,071 high quality tunnel rings. At peak times 20 TBMs tunnelled their way forward simultaneously, with up to 2.5 km per week of metro tunnels growing beneath Doha. This Olympic quality parallel performance has gained the project a place in the Guinness Book of Records. In addition to the geology consisting primarily of Simsima Limestone, the demands on each TBM were complex just from the dense urban development alone. The routes of the individual metro lines run under highly populated areas, for example near the impressive beach promenade Corniche, under the high-rise neighbourhoods of Doha City and the tourist centres with their attractive hotel facilities. Settlement-free tunnelling was therefore one of the core requirements during construction.

With innovative German tunnelling technology the construction joint ventures completed a total of 76 breakthroughs and more than 40 times the machines were quickly pushed forward in intermediate shafts ready for the next section and once again tuned for speed. Up to 125 Herrenknecht service staff and specialists from 19 countries were at hand wherever contractors, machine technology and extraordinary events required them.

In order to keep to the ambitious masterplan and the tight schedules, man and machine were in operation on the huge construction site around the clock, seven days a week. In addition to excellent planning, expertise and high material and machine quality, for Dr. Markus Demmler, Senior Director of the Qatar Integrated Railway Project, one prerequisite was vital for the success of the project: “Managing 21 TBMs working smoothly beneath a metropolis like Doha is only possible with 100% commitment from all partners involved.” All the participating companies handled the gigantic project with pioneering boldness and the highest degree of team spirit and operational professionalism. The TBM breaking through marked the spectacular finale of one of the most ambitious tunnel structures in the world. Cleverly master-planned and highly professionally directed by client Qatar Rail, it took just 26 months to provide the capital of Qatar with three citywide metro lines including 111 km of brand new, ultra-modern metro tunnel systems.

By September 2016 all tunnelling work on the three new metro lines has been complete.
Herrenknecht full-service competence centre set up near Doha specifically for the project provided additional support. Competent and proactive contacts were available here for all matters relating to tunnelling technology, assembly and disassembly, provision of specialist personnel, tunnelling support, spare and wear parts management as well as the maintenance and refurbishment of the used cutting tools.

THE CENTREPIECE OF A GRAND VISION.

The newly emerging metro system in Doha is only the beginning of the mobilisation of public transport in Qatar. Whether in the urban centres or in the countryside, everywhere people will be able to travel by public transport. “Qatar’s vision is to connect every corner of the country by public transport.” explained Demmler. “The Doha Metro project represents the supporting backbone of an integrated public transport system.” said Qatar’s Minister of Transport Katar H.E. Jassim Saif Ahmed al Sulaiti in describing the substantial significance of the metro network, the first three lines of which are scheduled to be opened by 2020. By 2026 an extensive expansion by 72 additional stations and another metro line is planned. The Msheireb station in the centre of the metropolis already forms the accumulation point of the whole system. All lines meet here, 12 breakthroughs ended at this mammoth station alone. Linked in all directions of the city, soon every metro journey will save valuable time and several kilograms of polluting greenhouse gases compared to a trip by car. Acceleration, mobility and environmental protection are the driving forces of the mega project. The development of the regional and national network will conveniently bring all residents of Qatar closer together. Website: www.herrenknecht.com

Guests at the final breakthrough ceremony included (from left to right) the CEO and Chairman of Qatar Rail Abdulla Abdulaziz Turki al Subaie, the German ambassador to Qatar Hans-Udo Muzel, the Minister of Transport and Communication of Qatar H.E. Jassim Saif Ahmed al Sulaiti and Dr.Ing E.h. Martin Herrenknecht.
GRUNDOCRACK GOING THE DISTANCE IN WELLINGTON

Trenchless contractor GP Friel Ltd was recently engaged by Wellington Water to renew an existing 6 in (150 mm) diameter section of earthenware (clay) sewer in Adelaide Road, Wellington, New Zealand.

CH2M Beca designed a pipe bursting solution that minimised the hazards associated with open trenching and reduced the duration of traffic disruption. This design solution was ideal for the location.

Upon inspection of the site and the design G.P Friel realised that there was only one intermediate manhole with no significant change in grade and alignment. Therefore, in order to capitalise on a smart design, a plan was put in place to break out in the intermediate manhole and pull the new 160 mm o.d. HDPE pipe into place in one continuous length. This further reduced the number of excavations needed and the amount of time that would be required to work with traffic management. It also turned the pipe burst into a massive 180 m long renewal project, the longest G.P Friel had ever attempted with its GRUNDOCRACK PCG 130 and maybe even a record for New Zealand! It was going to take a bold construction team to pull this one off.

CHALLENGING INSTALLATION

After consulting with TT Asia Pacific’s product specialist Daniel Toms, G.P Friel was confident that its new state of the art GRUNDOCRACK PCG pipe bursting tool and 5 tonne GRUNDOWINCH constant tension winch (both supplied through TT Asia Pacific in Brisbane, Australia) were more than capable of safely completing a burst of this magnitude. But that was only half the story.

*A view along the 360 m long pipe burst route to replace a sewer beneath Adelaide Road, Wellington, New Zealand.*

For General Information on Bursting, Reaming, Cracking, Eating and Pulling click here

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In order to pull a 180 m length of HDPE pipe there is a need to have somewhere to weld it into one length. G.P Friel liaised with Wellington City Council Parks & Gardens and secured a section of the nearby McAlister Park for that purpose. A launch pit was prepared the day before the burst run which used compliant skid resistant plates to protect it overnight. G.P Friel also ensured that the receiving manhole and intermediate manhole were prepared and ready to go.

G.P Friel’s supply chain partner ATMS provided traffic management for the pipe burst. The work site needed to be over 360 m long in order to encompass the receiving pit, launch pit and the 180 m length of welded pipe all in one line. The site also included a busy signal-controlled intersection between Adelaide Rd and Luxford St, so it was imperative for the team at G.P Friel to liaise with the residents of the nearby Village Park care home to ensure that no accesses were blocked in such a long worksite.

The preparation work really paid off and the burst was completed in a little under 3 hours as planned. There were no incidents and only minimal disruption to the travelling public was encountered. At the time of writing G.P Friel had a few more days of reinstatement to do in Adelaide Road and a new manhole to construct which once completed will improve maintenance access in the future, and leave the residents with a new robust sewer.

G.P Friel looks forward to continued success utilising trenchless technology techniques and further strengthening their relationship with Wellington Water. Website: www.tracto-technik.com

Pull-in of the 180 m long, 160 mm o.d. HDPE pipe gets underway from the reception pit.
The HS1 route formally known as the Channel Tunnel Rail Link runs from St Pancras Station in London to the Eurotunnel’s terminal at Cheriton, near Folkestone. The HS1 route is a 109 km high speed railway between St Pancras international station and the south coast, that is used for domestic and international train services as well as transporting freight.

As with all such engineering constructions there is far more to the successful running of the HS1 route than just getting the trains from A to B at the required times. To keep the trains operating to schedule there is a significant amount of ‘behind the scenes’ work that needs to be undertaken on a daily basis. Not least of this is the need to ensure that track, earthworks and structures have fully functioning drainage irrespective of the prevailing current or expected future weather conditions.

Due to the railway being a relatively modern route, the HS1 infrastructure has the opportunity to operate under different and more relevant operating standards and asset data storage systems to those used by other infrastructure managers which may have to manage assets that may be over 100 years old. Therefore it is more appropriate for Network Rail High Speed Ltd to utilise a different approach with regards to drainage management. According to Thomas Morgan, Asset Engineer with Network Rail High Speed: “One thing that we ensure we do is that we share best practice where appropriate with our industry and railway partners to support and assist in future innovation.”

Network Rail High Speed has been monitoring and analysing the degradation of railway assets, including drainage assets that will allow the use of quantitative data to determine appropriate intervention points for asset maintenance and renewal operations.

Having investigated a number of potential software options both domestically and internationally, Network Rail High Speed was looking for a strategic solution that would enable engineers to visualise assets and asset condition and to identify a suitable platform to support future maintenance records. Network Rail High Speed’s preferred option was a GIS system underpinned by a database.

Ultimately the search brought Network Rail High Speed to WinCan which at the time was finalising development of its latest CCTV reporting software WinCan VX as well as its WinCan Web remote storage and access facility and its WinCan Analyst and WinCan Map support systems. Discussions with WinCan highlighted how working together in the development of a specific system suited to the requirements of Network Rail High Speed would provide the strategic solution needed by Network Rail High Speed.

At the time Network Rail High Speed operated its asset management utilising some 250 survey DVD’s and their associated reports. WinCan was able to convert this historic drainage data and CCTV video into the latest WinCan VX format and produced a GIS model which can be interrogated to determine asset type and condition.

Network Rail High Speed has to manage some 225 km of track drainage with over 10,000 drainage assets, which includes a significant amount of under-track structures such as culverts etc. as well as the main track drainage system. The implementation of the new WinCan suite has allowed the organisation to visualise the entire drainage network using the latest available information and heat map drainage assets with regards to hydraulic and structural defects. This has enabled engineers to understand how the drainage network performs across each drainage catchment area.

Thomas Morgan said of the system: “This now allows us to prioritise our drainage maintenance works and support and inform our future drainage management strategy to ensure that our budget is spent wisely. The WinCan suite allows us to implement targeted maintenance on our most critical drainage assets and efficiently identify any defect ‘hotspots’ which require maintenance activities to be undertaken prior to any potential service affecting faults to be realised.”

The WinCan Web software also allows Network Rail High Speed operatives to

Asset data overlaid onto an aerial view of St Pancras Station.
see accurate records in real time on site, via iPad/Tablet applications to enable an informed decision on how to rectify any reported defect. From a strategic point of view for Network Rail High Speed, the WinCan Analyst and Map tools allow decisions to be made on drainage maintenance and enables the planning engineers to export map layers to Network Rail High Speed’s own GIS route model, which was a key requirement for any new drainage asset management system.

INTEGRATED ACCESS WHEN NEEDED
Where the traditional reporting systems fall short of requirement is that they are often paper/DVD/Video recording based and can be difficult to access without significant time and effort on the part of the engineers concerned. This may lead to assets being examined not on an ‘as and when required’ basis but on ‘rotation’ as that asset comes to the ‘top of the pile’ with potentially some defects not being recognised at an early enough stage.

The availability of the WinCan Web, Analyst and Map software means that new surveys will be accessible more quickly with ability to highlight potential trouble spots.

The WinCan’s Analyst software tool offers a good visualisation of active location conditions and can highlight local hotspots that may need further investigation or maintenance work before they become a significant problem. Any additional survey works that may be required to supplement the original data collection and confirm any potential problematic areas in the network can also be uploaded to the WinCan Web system as and when required.

WinCan Analyst is a software system that is able to evaluate, manage and analyze sewer networks. The software is based on the WinCan VX platform, which secures a direct integration of the inspection data to the analysis, without a need to interchange the data, which could reflect in loss of specific information (like inclination measurement). One of the main values of WinCan Analyst is the seamless integration into different GIS Systems and the optimisation for high performance, also with high data volume. WinCan Analyst contains different functional areas: Management of status data of the sewer systems including their automated classification, analysis of the characteristics of the sewer systems in GIS systems, issue of statistics and reports as well as maintenance and rehabilitation planning for pipes and manhole systems.

The WinCan Map VX system is a geographic information system for sewer networks. This software allows engineers to navigate and analyze inspection data using familiar GIS views and tools and Map VX accepts all major GIS data formats including ESRI, AutoCAD, DXF/DWG, MapInfo, OpenStreetMap, etc. or as in the case with Network Rail High Speed its own in-house mapping system.

This highly flexible interface offers easier interaction where it can group interface elements according to function, resize them, and turn them on or off with interface customisations that can be saved for easy recall and sharing. Also when an asset position is unknown, WinCan Map VX can accept coordinates directly from a GPS unit and map it.

In terms of data visualisation, WinCan Map VX offers colour-code map elements according to asset attributes (material, age, profile, damage classification, etc.), and can then save those preferences as a template. Several standard templates also come with the software.

Given that during a mainline inspection, important information is gathered about lateral connections such as location, angle and clock position, WinCan Map VX can also use this data to display laterals on GIS maps, and to export them to DXF and Shape files and the whole process is fully scalable.

Summarising Thomas Morgan said: “With the WinCan software suite Network Rail High Speed is confident that it now has the correct platform to record future maintenance activities and support and inform the future proactive drainage strategy for the route. Some 98% of validated drainage data is now up and running on the new WinCan system already from the historic data that WinCan has reformatted for us, and we now have the right platform on which to build and to make future updated information effective.”

For WinCan, Paul Woodhouse said: “We are very pleased to have been able to work with the Network Rail High Speed team to develop a product that will enable them to manage, plan and implement their drainage works based on current and easily accessible data without the need to ‘man-handle’ reports as has been necessary in the past. This type of situation is precisely the sort of operation that WinCan Web has been designed to handle quickly and effectively. We will of course be available to offer any support that is necessary to the Network Rail High Speed team as the new WinCan system develops further.” Website: www.wincan.com
WRc ASSESS & ADDRESS® COMPLETES 10,000th SAHARA SURVEY

WRc, the innovation consultancy working in the Water, Environment, Gas and Resource Management sectors, was recently delighted to announce that its Assess & Address® business specialising in pipeline condition assessment has completed its 10,000th Sahara survey.

Since 1998, WRc has been providing trunk main inspections for the water industry using its proprietary under-pressure inspection system, Sahara®.

The Sahara® platform has evolved over the last 18 years to include a variety of condition assessment techniques such as gross metal loss, sonar and conductivity, building on its successful acoustic leakage detection, CCTV and deep main tracing capabilities.

Keith Walker, Head of Commercial Enterprise for WRc: “We have been experiencing steady growth and interest in trunk main leak detection and condition assessment services. Improved understanding and recognition of trunk main losses across the industry, coupled with an ever increasing need to manage risk of these critical assets, has led to a tripling of our operational teams. We are all delighted to have reached this milestone.”

Building on the successful application of the Sahara® Leak Location system and Sahara® Pipeline Inspection platforms, WRc provides a number of complementary non-disruptive inspection and location technologies for accurate leak detection, and line location services on live water and gas pipelines, and for fault detection and location on critical sewer rising mains.

WRc’s Assess & Address® portfolio of services includes accurate pipe location and tracing to depths of up to 30m, with an in-house capability to integrate asset information and fault history into a client’s existing GIS platform.

WRc’s Assess & Address® portfolio of services includes accurate pipe location and tracing to depths of up to 30 m, with an in-house capability to integrate asset information and fault history into a client’s existing GIS platform. Service Offerings from WRc include: In-line Leak detection services for large-diameter pipelines; Pipeline pre-commissioning: zero leakage for new pipelines; Leak & gas pocket detection; Deep pipeline location and tracing as well as GIS and mapping services.

Website: www.wrcplc.co.uk/pipeline-assess-address

WRc ASSESS & ADDRESS® COMPLETES 10,000th SAHARA SURVEY

Sahara in action on site.
HAMMERHEAD® TRENCHLESS RELEASES FIRST OF NEXT-GENERATION WINCHES

HammerHead Trenchless Equipment, a Charles Machine Works company, has introduced the powerful, new HammerHead HydroGuide® HG1200 winch optimally designed to be more efficient and easy to use in pipe-bursting, slip-lining or slitting applications. This new iteration of the popular HydroGuide line of winches features a patented, self-deploying hydraulic downrigger, improved performance and additional safety features.

While other winches on the market require manual assembly of heavy, bulky components, the HG1200 makes setup easy with its industry-changing hydraulic downrigger. With the touch of a button, users are able to automatically deploy the boom down hole and can fine-tune the depth up to 18 ft (5.5 m) without having to jack up the machine. With the hydraulic boom, setup and teardown take just minutes, which saves valuable time on a job site.

A key feature of the new HG1200 winch is its precision controls. Not only can users adjust the boom to any depth, but they also have total control of the line speed and pressure. Pull force can be set anywhere between 0.5 to 12 tons, and the line speed can be set anywhere between 0 to 111 ft per minute (0 to 34 m per minute).

“We know job conditions and specifications can vary greatly so we created a machine that can be infinitely adjusted within its parameters to fit each individual job exactly.” said Josh Hood, HammerHead product line manager. “This level of control is critical to the success of gas pipeline slitting applications, which was a driving factor in the improvements we made from the previous version. We worked to create a winch with the necessary power and agility for a wide range of situations to ensure customer success.”

The new HammerHead HydroGuide HG1200 winch.
The HG1200 winch is powered by the Kubota D1105, a vertical, water-cooled, four-cycle diesel engine that complies with Tier 4 emission regulations. This lightweight, dependable engine increases the unit’s performance and fuel efficiency. The radial piston motor provides a smoother, more consistent pull.

The HG1200 has several configuration options available from the factory to meet specific customer needs:

- Optional Tracks – The optional track-mounted HG1200AT reaches difficult areas on your job site that the standard, wheel-mounted units cannot.
- Electrical Strike Identification system (ESID) – The optional ESID system is designed to provide additional safety on the job site when working near adjacent underground utilities.
- Hydraulic levelling jacks – The hydraulic option allows users to easily adjust downhole access, improving project efficiency.

The HammerHead HydroGuide HG1200 winch is available directly from HammerHead Trenchless Equipment or from authorized dealers worldwide. Website: www.hammerheadtrenchless.com

NEW INNOVATIONS OFFERED WITH TRACSTAR® SERIES 2

McElroy recently announced the launch of a new series in its long-proven TracStar product range that is more functional and efficient than ever before.

The TracStar Series 2 for medium-diameter pipe now shares a common vehicle that is interchangeable with the 28, 250, 412 and 618 fusion machines for 2 in (50 mm) IPS to 18 in (460 mm) o.d. thermoplastic pipe. The cowling was redesigned to provide better airflow and heat dissipation. There is also easier access to the engine when maintenance is required. An updated electrical system increases the circuit protection and a standard battery disconnect is now incorporated for easy lockout.

“The TracStar has been depended on for years because it manoeuvres so easily on any jobsite with its self-contained, self-propelled and rugged all-terrain system,” said McElroy Director of Product Development Jason Lawrence. “Part of its success is the fact that we continue to listen to our customers and incorporate many machine advances based on their experiences.”

The TracStars are powered by a diesel engine and feature a patented Centerline Guidance System for equal distribution of force around the joint. The carriage can be converted from 4 to 3 jaws for a more compact unit and is easily removable for in-ditch fusion. An on-board generator powers the hydraulics and heater, and dual hydraulic pipe lifts aid in transferring pipe. Website: www.mcelroy.com
SUBSITE® INTRODUCES ITS MOST ADVANCED HDD GUIDANCE DISPLAY

SUBSITE® Electronics, a Charles Machine Works Company, has introduced the Commander 7 HDD Guidance Display. A direct result of customer input, the Commander 7 is the company’s most advanced display ever.

“Today, much of the industry wants all vital tracking data delivered to both the tracker operator and the drill operator,” said John Bieberdorf, product manager, HDD guidance systems, Subsite Electronics.

“The Commander 7 does just that, putting everything in the hands of the two most skilled workers on the site.”

Offering enhanced capabilities to the new TK RECON™ Series HDD Guidance System, the Commander 7 utilises an upgradable technology base that allows the company to incorporate several advanced features now, and accept upgraded features in the future.

“This new technology approach will allow users to upgrade their displays in the future much like you would a smart phone.” Bieberdorf said. “You will be able to update software and add features, letting you keep your hardware longer.”

The new upgradable technology base also allows the company to debut the Commander 7 with a number of impressive features. For example, Commander 7 is compatible with both Apple® iOS and Android™ devices, making the display available to whole new user base that is not currently being serviced by competitive offerings.

The Commander 7 also features an expanded communication range, faster data rate speeds and a large, high-resolution 7 in (178 mm) screen with intuitive, user-friendly icons that make the new display quick to perform and easy to use.

A new quick-release remote mount allows users to easily remove the unit for security and storage, while an ultra-strong magnetic base stays put in the toughest conditions. It has even been tested to withstand wind speeds of 100 mph.

“Commander 7 showcases a lot of state-of-the-art features.” reported Bieberdorf. “The thing we are most proud of though is the different viewing options we offer our users. Commander 7 does not box you into a single view.”

Bieberdorf is referring to the exclusive Commander 7 feature of offering users three different ways to view their tracker data. These include:

- an enhanced Classic Walkover mode
- Subsite’s exclusive Drill-To™ mode
- the all-new Advanced Drill-To mode featuring PerspectiveView™.

“Our Advanced Drill-To viewing mode featuring PerspectiveView is a game-changer,” Bieberdorf said. “Our engineers have developed an intuitive leap forward in data presentation that is truly out of the box.” Website: www.subsite.com

The Commander 7 HDD Guidance Display mounted on an HHD unit.
UKSTT NEWS

UKSTT AGM 22 SEPTEMBER 2016

The Council of the United Kingdom Society for Trenchless Technology (UKSTT) held its annual general meeting on 22 September 2016, at the Peterborough Suite, Peterborough Arena.

Chairman Ian Vickridge took the chair and presented his report. Among the report highlights was the Society’s intention to continue on from the success of the recently developed Masterclasses and deliver two more in 2017, one on Horizontal Directional Drilling and the other one on Condition Assessment. Another highlight was the Society’s success in securing funding from the International Society for Trenchless Technology (ISTT) to record these masterclass seminars with the intention of making them available for all to view via the UKSTT YouTube channel.

Ian was delighted to welcome Tom Sangster and Phil Letchford, who were co-opted as members during the 2015 AGM, onto the Council. Also elected was Marc Jones, Sewertech. Ian took the opportunity to record the departure from Council of Brian Symns and offer his sincere appreciation for all the support and effort that Brian has given the Society over the years.

The meeting also announced the Council members for 2016/17.

- Ian Vickridge (Chairman)
- Matthew Izzard (Vice Chair)
- Ian Ramsay (Immediate Past Chair)
- Colin Tickle (Treasurer)
- Norman Howell (Honorary Secretary)
- Claire Gowdy (Chair of MS Sub-committee)
- Dawn Greig (Vice Chair of MS sub-committee)
- Stephen Taylor (Chair of T&E sub-committee)
- Tom Sangster (Vice Chair of T&E sub-committee)

Co-Opted members - Jo Parker & Martyn Kelly

- John Beech
- Drew Holland
- Luke Steadman
- Shauna Herron
- Simon Little
- Jim Albarella
- Mark Lusher
- Phil Letchford
- Marc Jones

UKSTT AT THE ISTT BOARD MEETING IN BEIJING

The ISTT Board of Directors held its Annual Board Meeting on Sunday 9 October 2016, at the Great Wall Sheraton Hotel in Beijing.

Of the 27 ISTT member Societies, 21 attended the 2016 ISTT Board meeting. Representing the UK was Matthew Izzard - Vice Chair, Ian Ramsay – Immediate Past Chair and Lynn Macalchan – Business Development.

After completing his term in office, Derek Choi welcomed Enrico Boi as the new ISTT Chairman for the next 2 years and Jari Kaukonen as Vice Chairman.

Six Affiliated Societies each nominated a candidate to fill three openings on the ESC. One opening was created by the departure of Ian Vickridge (UKSTT). Ian has served on the ESC for a number of years and has served as Chairman for both the UKSTT and the CHKSTT. Another position up for election was held by Yasin Torun who completed a 3 year term and was standing for re-election. The nominees were Mark Andre Haebler (AATT), Jens Hoelterhoff (GSTT), Matthew Izzard (UKSTT), Luis G. Maldonado (CISTT), Yasin Torun (TSITT) and Fuming Wang (CSTT).

The Board of Directors, by majority vote, selected Yasin Torun (TSITT) and Jens Hoelterhoff (GSTT) whilst the 3rd position was tied between Matthew Izzard (UKSTT) and Mark Andre Haebler (AATT). A second vote took place resulting in a delighted Matthew Izzard being elected to serve on the ESC for the period 2016 to 2019.

The UKSTT, alongside Westrade Group, had been working on a presentation to host the 2019 International No-Dig bid for the last year. The Society had previously submitted a report to the Board Members, highlighting the trenchless activity that is happening in the UK now and in the next few years and together with a financially viable and rewarding report we were confident in our bid. After the Italian Society delivered their bid to host the International No-Dig to the Board, Matthew stepped up and delivered the UK presentation. A secret ballot took place after both presentations had been heard and after a tense few moments and time to count the votes the results were in. The winning bid for the 2019 International No-Dig goes to……Italy! Although the UK contingent were disappointed with the result we would like to wish the Italian Society well with their preparations for the International 2019 event and as always would offer our support. UKSTT lives to bid another year!

In 2017 the ISTT board meeting will take place in April during the NASTT No-Dig Show in Washington DC and the exhibition will be held in Columbus between the 25 and 27 September. In 2018 the ISTT will join with the South African Society for Trenchless Technology (SASTT) in hosting the 2018 International No-Dig.

2015 UKSTT AWARD WINNER, ASHLEY WILLIAMSON, VISITS CANADA

What follows is a summary of the visit to Canada made by UKSTT Young Engineer winner Ashley Williamson of Wessex Water utilising his winners bursary.

13 – 16 October 2015: Mark Andrews from Andrews Infrastructure in Toronto, kindly agreed to host me for 4 days in his office in Toronto. Andrews infrastructure is a company that specialises in large trunk main sewer condition assessment. I took the time in Toronto to learn how they inspected sewers for Toronto Water.

I attended several sites where pipeline and manhole inspection was being undertaken. I was surprised at the length of cable provided on the standard set up for CCTV surveys – in the UK the typical CCTV van would not be carrying a 1,500 m cable!
While back in the office, I viewed footage from Panoramio CCTV where I was impressed by the quality and capability of the survey equipment, particularly how pipes can be measured within the software package. I know that this is a more expensive survey technique but it does have additional features. I also enjoyed looking through the record drawings of the Toronto sewer network.

I took the opportunity to discuss with Mark, the issues Wessex Water has been having with a large sewer tunnel back home and compare survey techniques. Mark’s team is currently looking into MRI scanning, but having difficulties due to the size and weight of the equipment. I will be keeping in touch with Mark to see how this develops.

On my final day, I gave a presentation to the Andrews Infrastructure Team on how trenchless technology is undertaken at Wessex Water.

19 – 20 October 2015: I spent 2 days with Ward & Burke, a tunnelling contractor working around the Toronto area. I visited 3 microtunneling sites including The G Ross Lord Dam and Reservoir, Toronto Pearson International Airport and Mississauga. During this time I observed how construction sites are run in Canada, large diameter shaft sinking and pipe installation by microtunnelling.

It was clear to see at the G Ross Lord Dam and Reservoir project that the only sensible construction method was tunnelling. I’ll mentioned that the site team had difficulty going through this material and progress was often slow at 15-20 mm per minute. The site engineer showed me how the returned water was tested to ensure the ultimate mix of polymer/bentonite by density and velocity tests.

At the Mississauga site, I witnessed a 5 m diameter shaft being constructed by caisson. Although in the UK most shafts are constructed using pre-cast concrete sections, Ward & Burke always construct their shafts using concrete and shutters.

This is because it is not easy to hold of pre-cast segments and they prefer the concrete/shutter method. I was also informed that the muck excavated cannot be stored on site and must go to a waste facility, even if the muck is to be re-used on site during reinstatement!

21 – 23 October 2015: I spent 3 days in the Pure Technologies office, located near to Toronto Pearson International Airport. Pure Technologies is a company that specialises in pipeline condition assessment, mainly by using free swimming technologies under live condition. My primary focus on the visit was to learn about the SmartBall inspection technique for an upcoming job I have to survey an 8 km long, 30 in (760 mm) diameter cast iron sewage rising main. I was going to attend a night-time inspection; unfortunately the inspection had to be postponed so I did not get the chance to attend. I did however have the chance to discuss in detail the requirements for a successful survey and will be taking this into account for the upcoming works.

During my visit I also spent time with the R&D team where I was shown a new CCTV robot that has the benefit of being able to undertake electromagnetic testing without the need to enter a pipe. Pure are also investigating ways of installing sonar to this also. The device looked like two mini army tanks!

Pure Technologies also presented to me, many case studies where they had detected damaged pipework using the PipeDiver on pre-stressed concrete water pipes. The analysis team played footage of the inspection and showed me how to interpret the noise and graph readings.

26 – 29 October 2015: For the final four days of my trip I joined up with Calgary City Council’s water department. I was looked after by a former Wessex Water employee, Andy Hughes, who now heads up the asset management programme. My time was split between the office and site visits.

In the office I was introduced to the council’s asset management plan and how they implement it. Unlike the UK, the Calgary sewer and water network is relatively new with the average pipe only 33½ years old. Trenchless technology is not used as much as in the UK.

I think mainly this is down to equipment availability, less restricted road space with less service congestion compared to the UK.

The roads are also much wider and services are kept suitable distances apart. They do undertake pipe bursting and have a large programme of sewer lining. Some minor pipe repairs are undertaken by using leak seals and quick lock repair cans.

I was fortunate to attend a sewer lining being undertaken in Downtown Calgary by Insituform. This was a 250 mm diameter CIPP lining and cured by steam.

I was given a tour of the city’s Pine Creek STW that was constructed in 2009. All plant and processes are contained within buildings, covered with roofs or underground to cope with the winter temperatures of -30 degrees!

On my final day, I gave a presentation to the pipe rehabilitation technical team on the trenchless techniques used by Wessex Water and within the UK. I also joined a webinar by LMK Technologies, a company that specialises in cured in place trenchless products and technologies.

I would like to thank the UKSTT, UKSTT sponsors, Wessex Water and the companies that hosted me during my time in Canada. It was a once in a lifetime opportunity where I was able to see how water and construction projects are managed and constructed overseas. I would highly recommend young engineers to enter the UKSTT awards so they can also have the opportunity to learn and gain more experience in the trenchless technology.
MEMBERS NEWS

WORK BEGINS ON MAJOR DRAINAGE SURVEY OF SEVERN TUNNEL

Lanes Group drainage engineers have begun the task of carrying out a survey of tunnel drainage along the 7 km long Severn Tunnel. The company has been commissioned by Amey, working for Network Rail, to carry out the surveys in the tunnel, which for over 100 years was the longest main line railway tunnel in the UK.

The work is one of a number of enabling projects preparing the way for the electrification of the Great Western Main Line between London Paddington and the west of England and South Wales.

In the first of yearly packages of examinations completing various sections, four teams of Lanes Group drainage engineers completed CCTV drainage surveys along 1,600 m of track through the tunnel in 30 hours.

Ben Forsyth, National Business Development Manager for Lanes Group, said: “Thanks to careful pre-planning, and very good team working between Lanes and Amey personnel, we completed the planned surveys more than six hours ahead of schedule. This trial run gives us a very good insight into what we can achieve in the packages of work that will follow. Conditions in the tunnel can be challenging, but we’re confident we know now how best to complete the surveys.”

Robert Woods, Senior Project Manager for Amey, said: “We know from experience that track access can be a challenge when carrying out inspection work. Together with Lanes Group, we used CCTV and new ways of working to overcome this issue and deliver this part of the project ahead of schedule.”

The CCTV surveys are being carried out on the ‘six foot’ central tunnel drainage culvert between the two lines that run through the tunnel, which is 7,008 m or 4 miles and 624 yards long.

The culvert ranges up to 1,200 mm wide and up to 500 mm tall. Over a number of decades, the original brick-built culvert has been repaired, so in some places is lined with concrete or steel.

One of its main tasks is to collect water from the ‘Great Spring’ which seeps into the tunnel. An estimated 50 million litres of the spring water are pumped from the tunnel every day and released into the River Severn.

The joint Lanes Group and Amey teams had to walk three miles to the Welsh end of the tunnel, then up to another mile into the tunnel, to reach their work sites, with equipment transported on rail trolleys.

Working in 12-hour shifts, two four-person teams, made up of two CCTV survey engineers and two Amey track operatives, worked away from each other from a central point, overseen by a Lanes Group supervisor.

Robotic crawler cameras were used to record HD-quality video of the inside of the track culvert. This method was augmented by the deployment of zoom-focus pole inspection cameras.

Lanes Operations Manager Mark Scott, one of the site supervisors, said: “Where track ballast had blocked the culvert, stopping the crawler camera from getting through, the pole camera allowed us to look past the blockage and ascertain its condition. It was one of the approaches we devised for this particular project to allow us to maintain high levels of productivity in challenging conditions, as we want to achieve as much as possible in the track possession time we have.”

The Severn Tunnel was built by the Great Western Railway between 1873 and 1886. It held the record as the longest main line rail tunnel until the High Speed 1 tunnels in Kent opened in 2003. More than 200 passenger and freight trains run through the tunnel every day. Website: www.lanesfordrains.co.uk

NEW BUSINESS DEVELOPMENT MANAGER FOR JET AIRE

Jet Aire is pleased to announce the appointment of its new Business Development Manager Clark Williams to the growing company. Clark comes with many years’ of senior sales and managerial experience, as well as extensive drainage knowledge. Having worked his way up from Management to a joint Managing Director role at one of his previous companies T.G.M Limited, TGM provide roof drainage and roof maintenance services making Clark’s transferable skills easily applicable to the Jet Aire setup.

Since then, he has worked as a Business Development Director for HD Sharman Ltd and Sales Director for Platform Events limited, working closely to ensure all strategies are well planned and implemented.

Clark’s main role within the company is to drive through and develop Jet Aire into new market sectors, helping to obtain new contracts and ensure that all communication and growth, along with Commercial Director Keith Ferris, is consistent with the company’s 5 year plan. Clark will spend most of his time in the North East office (Middlesbrough), whilst traveling to the Leeds head office and covering the entire UK on larger accounts.

Speaking about the appointment, Commercial Directors Keith Ferris said: “The appointment of Clark reinforces our commitment to employing high quality and experienced members of staff. I am very much looking forward to working with Clark and developing Jet Aire further over the coming years. I know he has some big plans and I am excited to see how he can help to strengthen Jet Aire as a superb drainage company in the North of England.”

OTHER NEWS & EVENTS

TRENCHLESS MIDDLE EAST 2017 - 13 and 14 March 2017 in Dubai. Website: www.trenchlessmiddleeast.com

ISTT AFFILIATED SOCIETY NEWS

THE NASTT 2017 NO-DIG SHOW - April 9 to 12, 2017 - Washington D.C., USA Details from: www.nastt.org

Don't forget!
UKSTT members are entitled to access the services on the ISTT website including free downloads of technical papers and reports from the Technical Resource Centre TRC. Please contact admin@ukstt.org.uk for your password.
Soft technics for underground networks

FSTT - French society for trenchless technology

For all reservation / information:
Monique Lac: lacmonique@gmail.com
+33 (0) 6 20 39 46 22

www.fstt.org
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<th>Year</th>
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<tr>
<td>2016</td>
<td>October 30 - November 2</td>
<td>AWWA Water Infrastructure Conference &amp; Exhibition - Phoenix, USA.</td>
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<td></td>
<td>December 8-9</td>
<td>No-Dig India 2016 - New Delhi, India.</td>
<td><a href="http://indsit.com/">http://indsit.com/</a></td>
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<td>December 12-15</td>
<td>BAUMA CONEXPO INDIA 2016 - New Delhi, India.</td>
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<td>2017</td>
<td>January 31- February 2</td>
<td>UCT 2017 - Fort Worth, Texas, USA.</td>
<td><a href="http://uctonline.com/">http://uctonline.com/</a></td>
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<td>March 7-11</td>
<td>CONEXPO-CON/AGG - Las Vegas, USA</td>
<td><a href="http://www.conexpoconagg.com">www.conexpoconagg.com</a></td>
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<td>March 13-14</td>
<td>TRENCHLESS MIDDLE EAST 2017 - Dubai.</td>
<td><a href="http://www.trenchlessmiddleeast.com">www.trenchlessmiddleeast.com</a></td>
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<td>March 28-31</td>
<td>Wasser Berlin International with No-Dig Berlin - Berlin, Germany</td>
<td><a href="http://www.wasser-berlin.de/en/">www.wasser-berlin.de/en/</a></td>
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<td></td>
<td>April 9-13</td>
<td>International No-Dig Conference &amp; Exhibition With the No-Dig Show (NASTT) - Washington, DC, USA</td>
<td><a href="http://www.nodigshow.com">www.nodigshow.com</a></td>
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<td>April 26</td>
<td>WRc Innovation Day - Swindon, UK.</td>
<td><a href="http://www.wrcple.co.uk">www.wrcple.co.uk</a></td>
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<td>October 11-12</td>
<td>NSTT No-Dig Event – Nijkerk, The Netherlands</td>
<td><a href="http://www.no-dig-event.nl">www.no-dig-event.nl</a></td>
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<td></td>
<td>December 6-7</td>
<td>STUVA Expo 2017 - Stuttgart, Germany.</td>
<td><a href="http://www.stuva-expo.com">www.stuva-expo.com</a></td>
</tr>
<tr>
<td>2018</td>
<td>March 13-16</td>
<td>BAUMA CONEXPO AFRICA - Johannesburg, S. Africa</td>
<td><a href="http://www.bcafrica.com">www.bcafrica.com</a></td>
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<td></td>
<td>March 25-29</td>
<td>No-Dig Show (NASTT) - Palm Springs, USA</td>
<td><a href="http://www.nodigshow.com">www.nodigshow.com</a></td>
</tr>
<tr>
<td></td>
<td>September 18-20</td>
<td>No-Dig Live 2018 - Peterborough, UK.</td>
<td><a href="http://www.westrade.co.uk">www.westrade.co.uk</a></td>
</tr>
</tbody>
</table>

If you have an event, course or meeting scheduled and would like to add it to this listing please forward details to: ian@nodigmedia.co.uk