


# TRENCHLESSWORKS

THE VOICE OF THE TRENCHLESS COMMUNITY **ISSUE 204** AUGUST 2023

Official Magazine & Media Partner:  **UKSTT**

Official Publication of the International Society for Trenchless Technology



## GUIDED AUGER BORE ENSURES DIFFICULT SEWER REPLACEMENT

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Trenchless Works is published 12 times a year by Westrade Group Ltd | Carotino House | Bury Lane | Rickmansworth | WD3 1ED | UK

Contributions: Contributions are invited and articles should be emailed to [editorial@trenchless-works.com](mailto:editorial@trenchless-works.com). No responsibility can be taken for drawings, photographs or written contributions during delivery, transmission or when with the magazine. In the absence of an agreement, the copyright of all contributions, regardless of format, belongs to the publisher. The publishers accept no responsibility in respect of advertisements appearing in the magazine and the opinions expressed in editorial material or otherwise do not necessarily represent the views of the publishers. The publishers accept no responsibility for actions taken on the basis of any information contained within this magazine. The publishers cannot accept liability for any loss arising from the late appearance or non-publication of any advertisement for any reason whatsoever.

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# SPOTLIGHT



Ian Clarke, Editor-In-Chief,  
Trenchless Works

So, it appears that we have left the era of Global Warming behind us and have now entered the period of Global Boiling! It is amazing what these PR people come up with these days to frighten the living daylights out of us poor simple folk!

However, in some ways one supposes that it may have some impact as we are now hearing more and more about long-term security in terms of food supplies and in particular energy security.

The recent images on the news channels, wherever one gets one's news from today, are full of floods, violent and destructive storms, heat-waves and forest fires, with politicians in particular wringing their hands whilst telling us that the carbon reduction measures they are putting in place will save us all (hopefully).

Thinking of energy security however, there are some distinct differences in how some places are approaching this conundrum. In some parts of the world, we hear little about the steps being taken to move towards net-zero other than the plea for more cash to help the process move forward. In other parts of the world where some of the impact of global warming are already felt regularly there are moves to mitigate these impacts. In the USA for instance there have been strides in some states and counties towards undergrounding their electricity supply cables to ensure that they are not impacted by the expected storms or forest fires, thereby maintaining supplies that would otherwise be cut-off, potentially for extended periods of time. Unfortunately, one is getting a bit older than one would like and which states or counties these are I cannot remember. How are they planning to do this? The thoughts have moved towards trenchless technology given the lengths of cabling that would be required and the impacts on the populous of such installations using open cut.

In the UK, however, there has been in the news lately talk of paying members of the public cash money (Government money or to those that pay taxes, our money!) to ease the pain of having pylons erected near them so as to expand the power grid to ensure the capacity to meet demand that is anticipated as we all move away from gas and other fossil fuels to more general use of electricity.

Yet, we too in the UK are experiencing the sort of violent storms that bring down overhead power lines more and more regularly and are told this will probably get worse. However, the Government is still in talks with power suppliers about pylon-based supplies! >

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# SPOTLIGHT



I can already hear the voices in the power sector screaming 'You cannot take power cables off pylons and bury them – you have to de-rate the cable and it cannot carry the same amount of power'. I know that, it has been told to me more times than I care to remember.

No-one is saying just take the cables off the pylons and bury them. It makes one wonder if the 'mantra' just mentioned is either a throw away comment meant for those who cannot understand the underlying physics or is the comment of a power engineer that does not understand that the burying of cables requires a cable redesign to suit the ground and power requirement conditions needed. Burying cables is possible if it done correctly, it already has been, with the right calculations to design the right cable for the situation in hand.

Burying cables starting now will gain a significant measure of energy security that pylon-based systems will not have, simply because as the weather gets worse the impacts on pylon-based supplies will also get worse, unless of course the pylons are significantly over-engineered to cope with the sort of extremes of climate we are being told are likely to arrive including heat, cold and wind at a cost that may well be better spent on burying them in the first place.

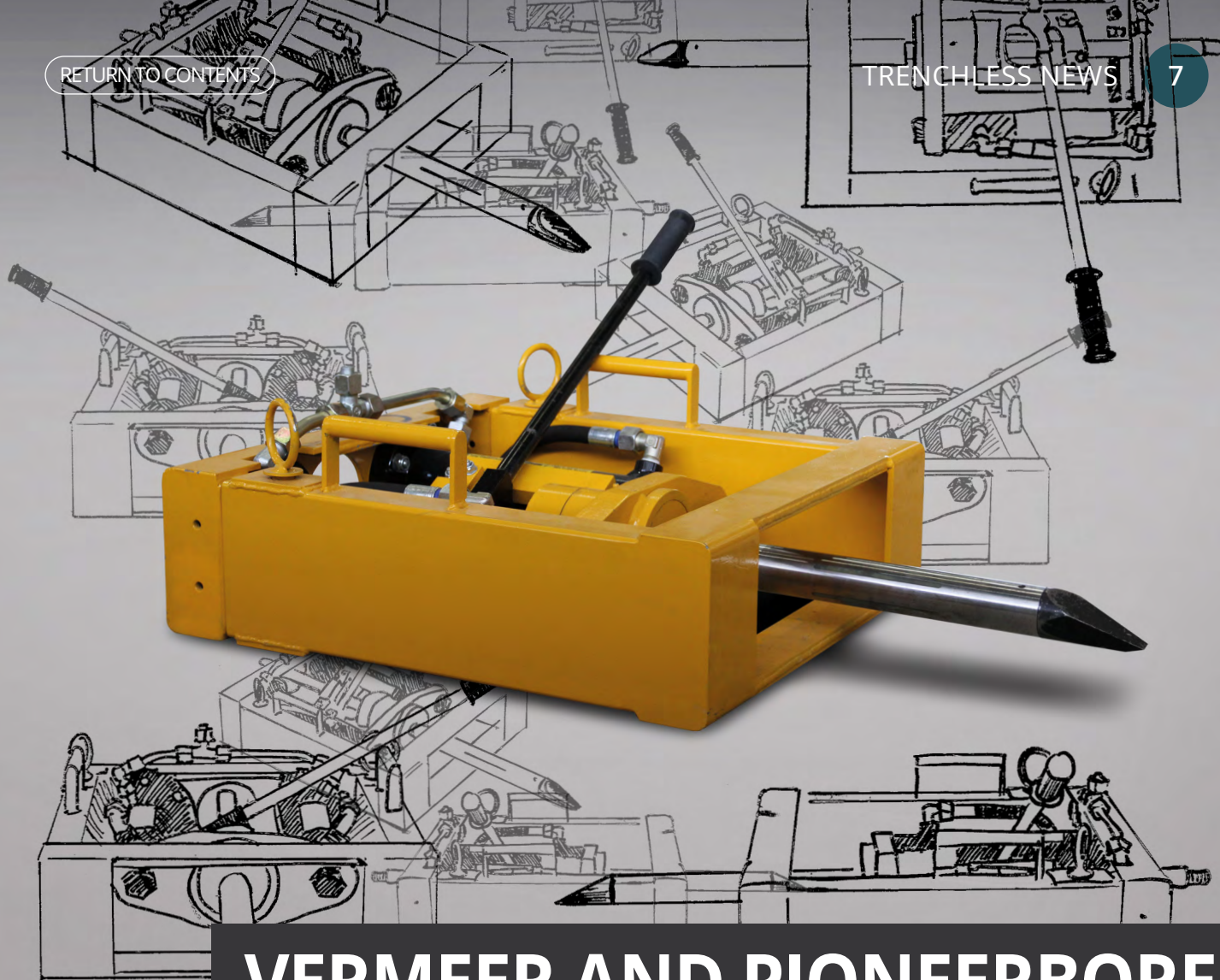
Global warming (boiling!) will only get worse for the foreseeable future in terms of impacts on the human population of the world, before any turnaround/reversal of the warming process even starts to be seen. Why is probably not an argument on these pages. But to not use the design capabilities, skills and materials technologies that are now available to us as well as the installation possibilities that are offered with the likes of trenchless technology to better ensure our energy security does not seem to make any sense. Either the power companies are not looking to change their ways as they think they know and understand pylon options best, they do not understand the advantages that could be gained long-term by burying their cables or, and this may be more likely, the Government and its Department of Energy politicians and 'Whitehall mandarins' simply do not understand that there are alternatives out there that might give a better outcome. So, they simply continue to talk the energy companies about the one option they do know about without the presence of mind to look at whether some better way may be available.

Perhaps a visit to the Department of Energy from someone with experience in trenchless technology might be useful, just to bring our politicians and officials up to date and arm them with knowledge that may be useful to us all in the future?

Ian Clarke  
Editor-in-Chief Trenchless Works

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# VERMEER AND PIONEERBORE DISTRIBUTION AGREEMENT

Vermeer PioneerBore  
Partnership

Vermeer Corporation has announced a new alliance partnership with PioneerBore GmbH, a new and leading provider of trenchless products for fibre installation in Switzerland. This strategic distribution agreement will enable Vermeer customers in Europe to access a wider range of trenchless products to support the fibre installation market. PioneerBore branded trenchless housing connection machines will be distributed across Europe through this agreement, enabling the Vermeer dealer network to better serve the needs of fibre installation in diverse ground conditions.

According to Steve Schemm, Managing Director at Vermeer: "The alliance partnership with PioneerBore GmbH is part of Vermeer's strategy to meet the growing demand for equipment to serve the underground installation industry and provide its customers with a greater range of options."

Included in this partnership are the PioneerBore Mini Twinny and E-Z-Jet systems, which are unique on the market due to their lightweight and modular design. These machines are ideal for drilling from a basement to the street or as a pit-launched system. They are designed to meet the market demand for lightweight and compact equipment used to install in tight interior spaces.

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## VORTEX TAP CUTTING INSTITUTE™ OPENS

The training facilities



Recognising an industry-wide need for experienced sewer line tap cutters, the Vortex Companies (Vortex) recently announced the launch of the Vortex Tap Cutting Institute. Located at the Vortex Products facility in Greenville, South Carolina, USA. The Tap Cutting Institute features a fully functional robotics simulator to teach individuals how to cut taps without the risk of damaging pipe or liners. "Proper lateral reinstatement is a critical part of the sewer rehab process," said Mike Vellano, CEO of the Vortex Companies. "The bottom line is that there simply are not enough experienced tap cutters in our industry and we are in a great position to provide training to anyone who wants to learn."

"Through the Tap Cutting Institute, we have made the training affordable to individuals who want to expand their capabilities and learn the tap cutting trade or for contractors who want to send their technicians here to hone their skills," stated Kenny Cochrane, VP, Schwalm Products at Vortex. Although tap-cutting is only small part of a Schwalm robot's capabilities, it represents the bulk of its workload.

The Vortex Companies is a leading provider of advanced trenchless water and sewer technologies. Through its products and services divisions, Vortex delivers a comprehensive suite of rehabilitation products, equipment, services, and field support to the municipal, industrial, and commercial marketplaces. This includes pipe and manhole lining systems, sewer robotic, mortars, epoxies and resin materials, installation equipment, contracting services, training, and field support.

Operating globally, Vortex is focused on providing customers a broad range of industry leading, cost-effective trenchless solutions and technical expertise, best suited for their project needs. Website: [www.vortexcompanies.com](http://www.vortexcompanies.com)

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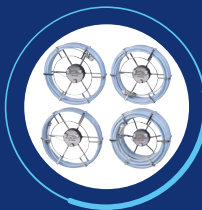
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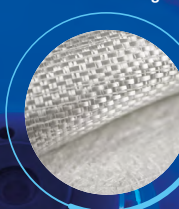
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SES Water presented its iDMA project at Spring's first innovation showcase webinar.

## VIEWS SOUGHT ON UK WATER INNOVATION STRATEGY

Sector-wide views on the UK 2050 Water Innovation Strategy are being sought, to inform the future direction of the joint document.

Spring, the UK & Ireland centre of excellence for water innovation, is inviting water professionals to complete a survey to share their views on how they see the strategy developing, three years on from its publication.

Feedback received will be considered during a planned refresh the document, to ensure it remains relevant and valuable to today's water sector.

The UK 2050 Water Innovation Strategy was published in 2020 by all 19 UK water and wastewater companies, containing seven key themes and ambitions to work towards. It was the first time the sector had outlined its vision for collectively delivering transformative innovation. In 2021, Spring was launched to support the sector in delivering the ambitions set out in the strategy.

Imelda Fossu, Spring communications and engagement manager, said: "The UK 2050 Water Innovation Strategy was created with a common purpose of driving change in our sector through collaborative innovation. It is an opportune moment to shape the future of water in the UK and everyone has a role to play. That is why we are seeking the views of the sector ahead of updating the strategy. The survey asks participants for their views on the effectiveness and relevance of the current themes, what areas they see as working well and where adjustments could be made. This will ensure we are focusing on the right areas as we move forward. The survey should take no more than two minutes of your time and I would encourage anyone with an interest in water innovation to take part and have your views heard."

The UK 2050 Water Innovation Strategy survey can be accessed before the closing date at: <https://form.typeform.com/to/K9O5wb9l> ■

UK 2050  
WATER INNOVATION STRATEGY  
PUBLISHED SEPTEMBER 2020

"The survey should take no more than two minutes of your time and I would encourage anyone with an interest in water innovation to take part and have your views heard."

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Water Industry  
Awards - Winner

OnSite, a leading provider of specialist engineering services, recently announced that it has been awarded the prestigious title of Contractor of the Year at the Water Industry Awards 2023. This accolade recognises the company's exceptional achievements, innovation, sustainability efforts and commitment to its employees.

OnSite's growth and financial success in the water industry during 2022 has been nothing short of remarkable. The company now operates on 22 national water sector frameworks, which is a 25% increase on the previous year. Working with all UK WASCs, WOCs and non-Ofwat-regulated water companies, OnSite has established a strong presence in the industry. Turnover has soared to an impressive £100 million, marking a 25% growth compared to the previous year and a staggering 37% growth over the past two years. This expansion has been driven by the company's ability to deliver outstanding results across multiple performance targets, including leakage reduction, water conservation, flood risk mitigation and pollution reduction.

OnSite is at the forefront of innovation, continuously leading the industry with new techniques and practices. The company has formed exclusive partnerships with international technology providers, bringing cutting-edge solutions to the UK water sector. One such example is the introduction of Kando, an international wastewater analytics product that identifies pollutants in sewers. This ground-breaking technology has been successfully trialled by three water companies, with ongoing projects aiming to identify pollutants, polluters and prevent future occurrences. Additionally, OnSite has partnered with Phoslock Environmental Technologies (PET) to improve excessive richness of nutrients (including phosphates) in a lake or other body of water. The company has also incorporated digital signage on its vehicles, promoting its clients' brands and messages while enhancing customer engagement. >

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“This is an incredible recognition for the OnSite team, a business with ambition, a first-class leadership team and an industry track record to prove its pedigree.”

OnSite is dedicated to minimising its environmental impact and optimising resource utilisation. The company fosters a culture of employee-led innovation, encouraging new ideas to enhance sustainability and reduce carbon footprint. Projects prioritise no-dig technology, recycled materials and the creation of nature habitats from project waste material. The company has made significant investments to reduce its fleet's environmental impact, employing the 'Lightfoot' data-led driver coaching technology and fleet telematics system, resulting in a 29 t reduction in CO<sub>2</sub> emissions within four months. OnSite has also introduced environmentally-friendly sewer CCTV vehicles with integrated solar panels, reducing noise pollution and carbon emissions. By leveraging AI-powered software, such as VAPAR, the company has increased efficiency in pipeline inspections, minimising time spent on site and providing added value to clients.

OnSite firmly believes in investing in its people for long-term success. The company has embraced the Human and Organisational Performance (HOP) approach, fostering a no-blame culture that promotes continuous improvement and employee wellbeing. Through initiatives like the employee health and safety conference, Work Insight workshops and MindSafety training, OnSite actively engages its workforce in improving skills, safety and wellbeing. The company's commitment to learning and development is evident in the average of seven training sessions each employee received in 2022. Furthermore, OnSite celebrates success by sharing client feedback, rewarding achievements and launching annual employee recognition awards.

Simon Dray, Managing Director of SSI, Water, Waste and Infrastructure, expressed his gratitude and excitement, stating: “This is an incredible recognition for the OnSite team, a business with ambition, a first-class leadership team and an industry track record to prove its pedigree. A huge thank you to all the employees and for the recognition from the Water Industry Awards panel of members.”

The Water Industry Awards 2023 serves as a platform to acknowledge and celebrate the remarkable achievements of companies within the water sector. OnSite's win as Contractor of the Year showcases its industry leadership, innovation and commitment to sustainability and employee development. ■

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**Svanbjörg Vilbergsdóttir**  
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## BARHALE OPERATIONS CONTINUE

Barhale and Thames Water continue framework agreement

It was announced recently that Thames Water has extended Barhale's AMP7 framework appointment by five years to the conclusion of AMP8 in March 2030.

The AMP8 (2025-2030) programme will see Thames Water continue to invest in its water and wastewater network which serves 15 million people across London and the Thames Valley. The water company is spending £2.3 billion on infrastructure improvements through the current AMP7 period (2020-2025).

Civil engineering and infrastructure specialist Barhale will continue to operate under FA1488 covering Lot 1, the Non-Infrastructure framework, and Lot 2, the Infrastructure framework. Lot 1 focuses on capital maintenance and enhancement across many of Thames Water's own operational sites, and Lot 2 includes new installations and capital maintenance of existing key assets. Lots 1 and 2 will be the principal delivery route for the AMP8 capital programme.

Thames Water has also confirmed the extension of Barhale's appointment to FA1495 – Lot 5 of the AMP7 framework, covering the delivery of the water and wastewater AMP7 infrastructure programme across North London.

Activities will include the new installation and replacement of existing trunk and rising mains, pressure management, the inspection of aqueducts, bridges and tunnels, the rehabilitation of sewers, pumping station refurbishment and gravity solutions to maintain asset health and accommodate growth. The programme will also continue work on SUDs and pipeline-related emergency works. >



Shane Gorman, Barhale's Water Director, Southern Region, believes the extension reflects the strong positive relationship between the two businesses and Barhale's deep understanding and experience of some of Thames Water's most important assets.

"We are very proud of the work we continue to carry out for Thames Water," he said. "Water infrastructure across London and the South East presents some unique challenges, not least responding to the huge demand from the country's most dense population. At Barhale, we have fully embraced Thames Water's collaborative approach which has yielded some impressive benefits under AMP7 already including greater agility in the way we have been able to deploy our teams to react to changing conditions, better utilised and shorter planned outages and swifter programme delivery. We look forward to continuing to work closely with Thames Water through the AMP8 period."

### New Office

Furthermore, Barhale recently announced the opening of a new office in South Yorkshire, UK as part of a two-part strategy to increase 'on the doorstep' support for clients and to promote local workforce recruitment.

The new location in Mexborough strengthens Barhale's representation in the county and completes its planned network of offices through the Network Rail Eastern Region as the business continues to grow its rail infrastructure business. Barhale's office locations now include London, Walsall, St Albans, Peterborough, Great Billing, Wisbech, Leeds and Edinburgh.

The opening also reflects Barhale's commitment to its social value and diversity strategy which focuses on sourcing, training and retaining people from local communities to work on its civil engineering and infrastructure contracts.

Barhale Chief Executive Martin Brown sees establishing local points of presence as important to both the business's operational approach and to its philosophy of supporting local communities.

"We take great pride in our direct delivery model," he said. "We believe it provides clients with a better, more agile workforce motivated by common purpose and values. To support the model, there is obviously an advantage from recruiting locally in terms of speed of deployment and being able to tap into local knowledge. There is also a real benefit from the sense of ownership the team has when it is working in and improving its own community which drives better results. From a social perspective, we are also strongly committed to putting something back into the communities where we are active, through recruitment and helping people develop their careers and through our local corporate responsibility programme."

The new office is housed in the former Mexborough Grammar School building. The school included former poet laureate Ted Hughes among its alumni.

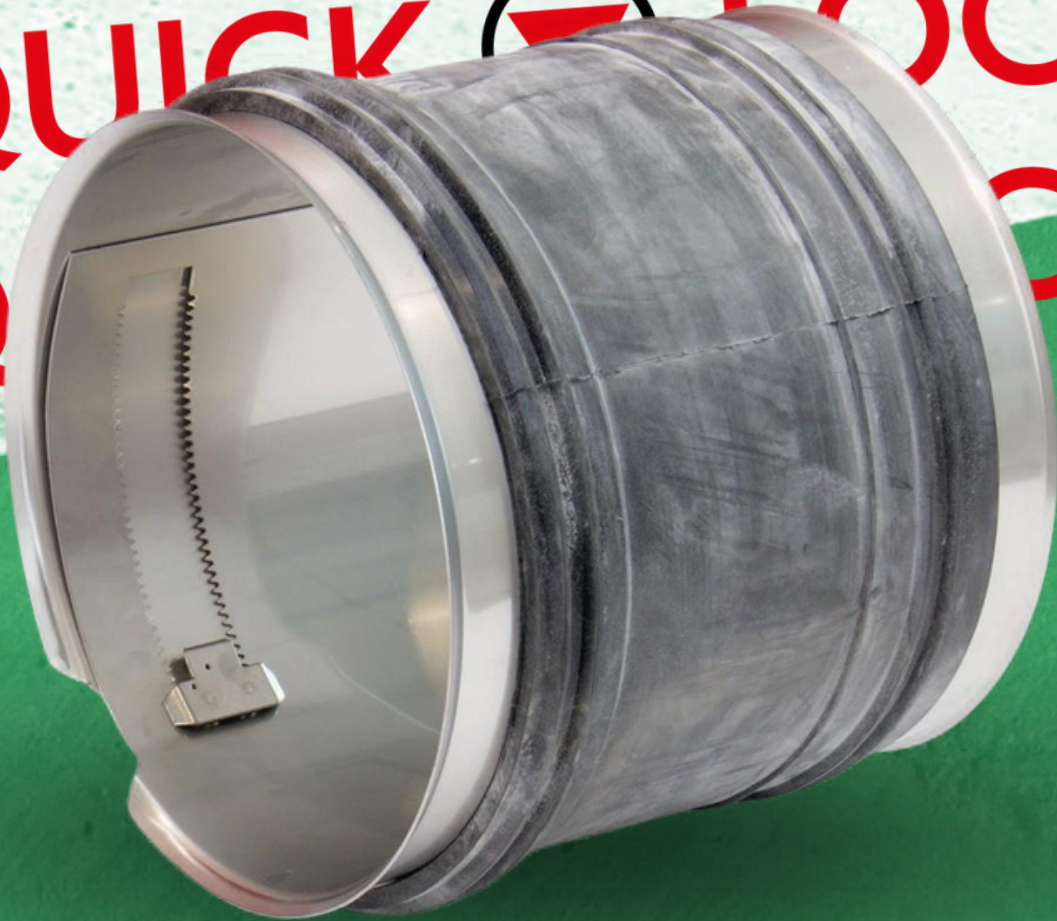
Locally-born, professional Castleford Tigers rugby league player George Hill and former Leeds and Great Britain rugby league legend Adrian Morley attended the official opening. Both are supporters and ambassadors of Barhale's social value and diversity strategy.

Adrian Morley, now Development Director of Impact Resourcing which provides specialist support services to Barhale in recruiting people from disadvantaged communities, said: "It is great to see Barhale continue to invest in to the local communities and people, the business's actions really are reflective of their company values." ■



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Installing the Naylor Denlok pipes to complete the installation

"This project demonstrates that the new partnership between Naylor Drainage and Trenchless Pipe Supplies is working."

## GUIDED AUGER BORE ENSURES DIFFICULT SEWER REPLACEMENT

In the village of Leeming Bar, some 6 miles west of Northallerton in North Yorkshire, UK, the local Parish Council experienced flooding and a sink hole in a recreational playground. CCTV inspection work was carried out by the local water company responsible for the sewer, Yorkshire Water (YW), and a collapsed sewer was found to be the cause.

Above a YW framework contractor appointed Trenchless Solutions Limited (TSL) to dig up and repair the collapsed sewer. However, as the repair was being undertaken further collapses appeared along the sewer pipeline route. Further investigation including cleaning of the remaining sewer length by TSL led to the conclusion that the whole sewer length of 50 m required replacement. The solution chosen was to install 35 m of DN225 foul sewer pipe. Given the poor ground conditions experienced in the area during the initial dig/replace operation, namely running sand, high water table and environmental issues which included Tree Preservation Orders due to mature tree canopies, the solution proposed was to utilise Guided Auger Boring (GAB) techniques. >

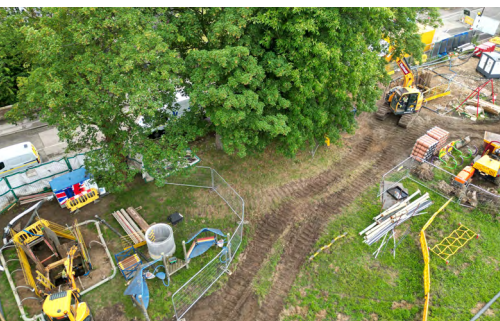
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The launch shaft site at Leeming Bar



The pilot bore at Leeming Bar underway

## Installation

To facilitate the DN225 GAB installation two shafts were required at either end of the proposed pipeline route facilitating two shafts for one DN225 bore. Vertical bores were drilled by the client YW to establish the existing ground conditions across the proposed route.

The high-water table level meant that the launch and reception shafts had to be de-watered throughout the installation operation which utilised a Perforator PBA85v guided auger boring system. Alignment of the route was undertaken using the system's Perforcam-Nova optical-electronic navigation system. The new pipeline was to comprise Naylor Denlok DN225 NC VC jacking pipes in 1 m lengths which were provided and supplied direct to site by Trenchless Pipe Supplies.

From start to finish, including the sinking of the shafts, the installation took just 15 days. During the works, the Parish Council Recreational Playground had to be closed. However, if GAB had been selected as the preferred installation technique initially, then only local closure would have been required.

Commenting on the project for TSL Simon Marsh, Contracts and Technical Sales Manager, said: "This project demonstrates that the new partnership between Naylor Drainage and Trenchless Pipe Supplies is working. With Naylor Drainage holding a stock of pipes at its Cawthorne Works and Trenchless Pipe Supplies having a dedicated team which can react to the customers' requirements as necessary, it means that projects such as Leeming Bar can be delivered when required, ending the road and park closure for residents and businesses caused by the construction site." ■

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The GRUNDOBURST 800 G rig  
in the launch pit

“Using trenchless technology is great from a H&S perspective as there are just two small pits to cordon off from the public.”

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## SAVING TREES ONE PIPEBURST AT A TIME

A stunning park in south London, UK is a peaceful haven for thousands of visitors in a busy residential area. With a lake, extensive grounds, a historic Palladian villa and a children's splash area, Danson Park in Bexleyheath has a long and interesting heritage dating back to the 1700s and is a much-appreciated focal point for the local community.

Thames Water, the local Water Company, recently contracted with Cappagh Construction Ltd of Wimbledon to upgrade an ageing sewer pipe in the park and, thanks to trenchless technology techniques, this was achieved with minimal disruption to the beautiful surroundings. >





Local MP, Sir David Evennett and Friends of Danson Park visit the site

“The comments from Sir David Evennett have been so positive for the trenchless technology sector. He recognised that the pipe burst on this job pretty much saved the park and the mature trees that would have been felled without the ability to drill underground.”

The former 300 mm diameter clay pipe had previously been repaired by relining, but after persistent blockages, Thames Water decided to invest in a larger capacity pipeline manufactured from modern PE materials, with an outside diameter of 355 mm. Cappagh, a company well versed in trenchless methods of pipe installation, recommended a static bursting solution to insert the larger pipe through the existing void beneath the surface, displacing the existing pipe in the process. This method would avoid the need to dig a large, open trench which would not only spoil the surface of the ground but would require trees to be felled to make way for the pipe.

The size of the job precluded the use of the Cappagh's own GRUNDOBURST 400G, so the company approached TRACTO UK with a view to hiring a larger unit. A GRUNDOBURST 800G was able to provide the required pulling power for the significant upsize of pipe along the required distance. The compact unit was lowered into a very small launch pit ensuring minimal disturbance of the ground. A ladder-rod system ensured fast, light, and safe work for the operators, whilst the large range of TRACTO accessories ensured the right tooling could be selected to complete the job reliably and quickly. In fact, the first section of the pull of 100 m was completed in under 5 hours.

Local MP, Sir David Evennett, accompanied by local politicians, council members and representatives from the 'Friends of Danson Park' visited the job on the day to see the pipe bursting in process. Delighted by the use of the innovative technology, which helped to preserve the mature trees above the sewer pipeline, he personally thanked the teams from Thames Water and Cappagh for 'saving the park'.

The second and final pull of 78 m was concluded quickly and successfully a few days later.

Jamie Muldoon, Thames Valley Area Manager for Cappagh Construction Ltd, was delighted with the result saying: “By using the more powerful GRUNDOBURST 800G, we were able to complete this job very quickly and with very little detriment to Danson Park. During the installation the public was able to continue to use the park and most had no idea that major work was taking place underfoot only metres away. That is the beauty of this technology, everything can safely carry on around it.” >

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The picturesque Danson Park, information boards inform the public of the area's wildlife.



Jess Ferncombe, alongside the GRUNDOBURST set up, was the Cappagh Health & Safety point of contact for the duration of the project.

Jess Ferncombe was the Cappagh Health & Safety point of contact for the duration of the project and oversaw the whole job. As the great granddaughter of the company founder, Jess has been working in the business for many years and has overseen many projects. Commenting on the project she said: "Using trenchless technology is great from a H&S perspective as there are just two small pits to cordon off from the public. The TRACTO products have been designed with safety in-built, so as long as they are operated correctly, we can be confident there will be no issues. As TRACTO has provided all our training, our operators are very well versed in the technology."

From Thames Water's perspective, the new installation will mean the blockage issues will be a thing of the past and the new pipe will have a very long lifespan. A regional spokesman attended the pipe burst and was exceptionally pleased with the outcome stating: "This pipe renewal will last for approximately 100 years. Installed with little damage to the locality, bursting is pretty much the most sustainable method of renovation, and we are increasingly looking at this type of technology going forwards. This has been a highly successful job that will ensure the effective working of the sewer pipeline under Danson Park for many years."

Roger Wahl, Managing Director of TRACTO UK, was also present for the first pull. Having paid witness to similar jobs, Roger knows first-hand the benefits of bursting techniques and how the technology can be used to preserve the environment whilst installing the necessary infrastructure for modern life. He was delighted at the speech of the MP who publicly demonstrated his support for the pipe bursting process saying: "The comments from Sir David Evenett have been so positive for the trenchless technology sector. He recognised that the pipe burst on this job pretty much saved the park and the mature trees that would have been felled without the ability to drill underground." ■

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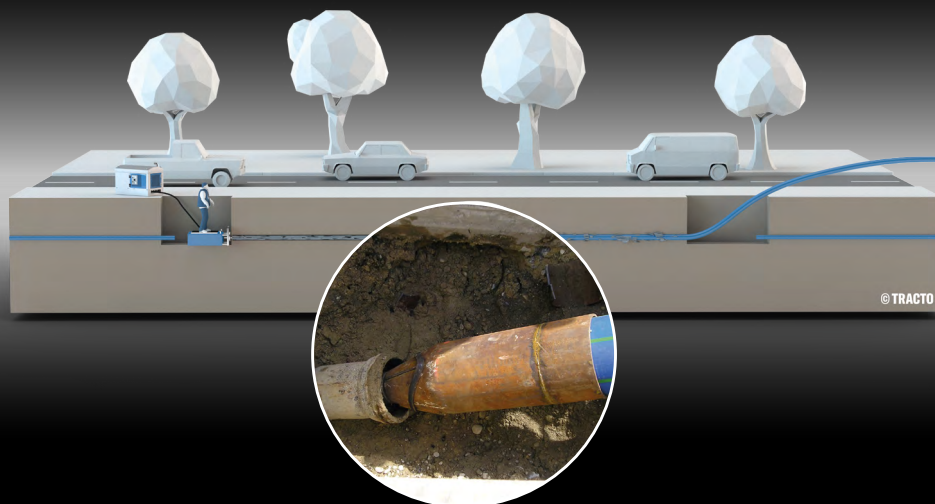
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Old route of A303

Approx 200 m

Up to 40 m

An illustration of where the tunnel will be built under the World Heritage Site, further away from the Stonehenge monument.

"The A303 Stonehenge scheme is part of the biggest investment in our road network for a generation, and I am really pleased the project has been given the green light by the Secretary of State for Transport"

## GREEN LIGHT FOR STONEHENGE TUNNEL

The UK Government has given the formal green light by granting a Development Consent Order for the A303 Stonehenge scheme, which will help to unlock congestion and transform journeys for millions of people using the A303 between the south-east and south-west of England.

The proposals were initially granted consent in 2020 and following a legal challenge and a High Court ruling against the decision-making process, the application has undergone a thorough redetermination process of more than 12 months before this announcement.

The transformational and sensitive upgrade will tackle congestion on the notorious, traffic-clogged single carriageway section of the arterial A303 route, and the announcement is a significant step towards unlocking economic growth and improving journey times and reliability between the M3 and M5.

Some eleven Development Consent Orders have been granted since April 2022 and the announcement follows the go-ahead for another major infrastructure project in the Southwest of England, the A417 Missing Link dualling scheme in Gloucestershire. >

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Schematic of  
the proposed  
Western Tunnel  
Portal

Highways England Chief Executive Nick Harris said: "The A303 Stonehenge scheme is part of the biggest investment in our road network for a generation, and I am really pleased the project has been given the green light by the Secretary of State for Transport, a decision which will enable us to progress this transformational scheme and deliver the planned benefits. The decision follows a lot of work on a comprehensive year-long process to reassess our Development Consent Order, looking in detail at alternatives, also including cumulative carbon and heritage issues. It means we are now a step closer to solving the longstanding issues of congestion and delays on the existing A303, improving journeys for all our customers, and bringing much-needed relief to local communities. The investment, along with other improvements along the A303, will help to boost the Southwest economy, improve journey reliability, remove the sight and sound of traffic from this very busy road and return one of our most important World Heritage Sites to something like its original setting."

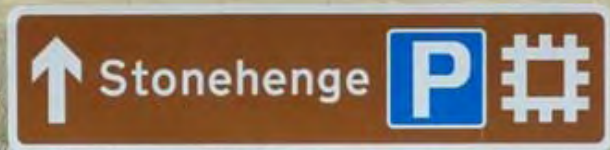
### Details Of the Scheme

The A303 Stonehenge upgrade includes eight miles of free-flowing, high-quality dual carriageway between Amesbury and Berwick Down in a tunnel at least two miles long underneath the World Heritage Site, which closely follows the existing A303 route, but a further 50 m away from the Stonehenge monument, avoiding important archaeological sites and avoiding intrusion on the view of the setting sun from the stones during the winter solstice as well as a new bypass to the north of the village of Winterbourne Stoke junctions with the A345 and A360 either side of the World Heritage Site.

Derek Parody, Project Director for the A303 Stonehenge scheme, added: "It is a scheme objective to conserve and enhance the World Heritage Site and this is being achieved through close collaborative working with heritage groups, including English Heritage, National Trust, Historic England and the independent A303 Scientific Committee. The scheme will not only sustain the Outstanding Universal Value of the Stonehenge landscape, it will also have a beneficial effect and extensive archaeological studies and assessments have been undertaken to provide evidence of the benefits that the scheme will deliver for the World Heritage Site. The decision represents a major milestone, not only for us as the project team but for all those who have supported this project over a number of years, our stakeholders, the heritage bodies, local and regional businesses and indeed local communities. We are currently analysing the detailed changes within the Development Consent Order and assessing timescales but we anticipate being able to start preparatory work in 2024." >



Congestion currently occurring on the existing road system



### What Happens Next?

There is now a six-week period in which parties can lodge an intention to legally challenge the decision, and in the meantime, Highways England will be renewing its plans to prepare for the scheme.

Last year the company awarded the Main Works contract to the MORE joint venture, comprising FCC Construcción, WeBuild and BeMo Tunnelling, to deliver the £1.25 billion tunnel and main construction work.

Costain and Mott MacDonald will be operating as the company's Delivery Assurance Partner, providing technical and construction management expertise by helping mobilise the main works contractor, oversee construction, assist the discharge of consent requirements and assure the design.

The construction phase is scheduled to take five years to complete and ahead of the main work, Wessex Archaeology will carry out archaeological mitigation work, while Octavius (formerly Osborne Ltd) will undertake preliminary work, including the reconfiguration of local authority roads.

Archaeological fieldwork and preliminary work will start first, with the main five-year construction phase to follow that programme.

Cllr Caroline Thomas, Wiltshire Council's Cabinet Member for Transport, has also welcomed the decision and said: "We are delighted that consent has been granted once again for the A303 Stonehenge project and it can now move forward. This huge infrastructure project represents a significant investment in Wiltshire that will boost the economy of both our county and the wider region, unlocking jobs and investment. Along with the construction, there will also be comprehensive programme of archaeological mitigation, which will enhance our understanding of the World Heritage Site. We can now look forward to construction starting and unlocking all the benefits the scheme will bring both to Wiltshire communities and the wider South West region."

David Tucker, Federation of Small Businesses Transport Chair, added: "This is very welcome news. Upgrading the single carriageway sections of the A303 is key to supporting the South West economy, particularly as the only alternative route via the M4 and M5 into the region is already heavily used. Investment in improving key links on the country's 'A' roads is a positive and vital way to support our local regional economies."

Rachael Webb, Wiltshire Team Leader for Natural England, added: "We have worked with National Highways to get some really great outcomes for wildlife from the A303 Stonehenge scheme. The verges and embankments will make for a flower-rich, six-mile long, butterfly highway and large areas of species-rich chalk grassland will be created."

Local communities will be able to find out more about plans for the A303 Stonehenge upgrade at a series of public information events to be announced in due course. ■

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## SAFE TEMPORARY ABOVE-GROUND PRESSURE PIPELINE

In the south of France, Primus Line® Overland Piping is laid out by means of a mini-excavator along a service road

Primus Line® Overland Piping has been developed particularly for the temporary above-ground transport of demanding and potentially hazardous media. Domestic or industrial wastewater, brine, seawater, or raw water can be transported just like heavy oil, hydraulic oil or oil-water mixtures. Primus Line® Overland Piping has a long service life and is reusable and is therefore an environmentally friendly solution.

Whether as a bypass during rehabilitation work on a pipeline for which operation must nevertheless continue or as a pipeline for the temporary above-ground transport of large quantities of fluids in the oil and gas industry, Primus Line® Overland Piping is a safe and reliable solution of these cases. As different as the fields of application are, Primus Line® Overland Piping, consisting of a flexible pipeline and special connectors, has convinced customers of its benefits.

### Safety

Both the inner and outer layers of the high-pressure pipeline are made of thermoplastic polyurethane (TPU). These two layers are reinforced by a core of seamlessly woven aramid. This synthetic fibre impresses by its strength which is five times higher than that of steel and twice that of glass-fibre or nylon. The aramid fabric makes the pipeline flexible and, in combination with the TPU layers, safe at the same time. Based on the standard API 15LF, the burst pressure is at least two and a half times higher than the permissible operating pressure. Its three-layer structure with the resulting resistance distinguishes Primus Line® Overland Piping from other systems, leads to a generally longer service life and ensures operation without leakage and environmental damage.

The resistance of the flexible pipeline also allows the Overland Piping system to be installed and operated at very low temperatures. It does not corrode and is protected from UV radiation by its black outer layer. >

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The motor-driven transport reel helps to quickly roll off and up again the flexible pipeline.

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Leakproof end connectors complete the Primus Line® Overland Piping system. During installation, the assembly teams do not have to weld or handle hazardous materials.

The fact that the entire production process of the flexible pipeline is consistently monitored also contributes to safety. Sensors and cameras continuously capture the process parameters which form the basis for extensive control mechanisms for wall thickness and strength. Furthermore, each manufactured flexible pipeline undergoes a pressure test at the factory before delivery to the construction site.

### Costs

Primus Line® Overland Piping can be reused several times. Depending on the diameter, up to 4,500 m of flexible pipeline are delivered to the installation site on a single reel. In combination with the product's low dead weight, this saves storage and transport costs. The same amount of HDPE pipes requires about ten times more space. Compared to HDPE, the flexible pipeline exceeds the break-even point in terms of costs after only a few applications.

### Efficiency

As with all Primus Line products, installation lengths of up to 1,000 m and more in one piece as well as multiple changes of direction are possible. The long lengths significantly reduce the number of joints and therefore potential weak points. Due to its flexibility, the pipeline adapts to the surface of the terrain.

The flexible pipeline handles large flow volumes of up to 500 l/sec. It is laid directly from the reel to the ground using a winch, lorry or mini-excavator. In contrast to HDPE pipes, installations of up to 6 km/day are possible. The assembly team sets the connectors on site with hand-held tools.

### Eco-friendliness

Primus Line® Overland Piping is installed with little equipment, either, as already mentioned, with a winch, lorry or mini-excavator. This significantly reduces the carbon footprint on site. Heavy equipment is not required.

Sensitive and protected areas such as nature parks or river courses are not affected by installing the Primus Line® Overland Piping system. >





Welding not necessary: The assembly team mounts the connectors on site with hand-held tools

### Applications

Primus Line® Overland Piping has already been used in many areas and under a wide variety of conditions, whether in the municipal sector for wastewater, for transporting produced water in the oil and gas sector or as a brine transport pipeline in industry.

**Wastewater bypass in Norway:** In Fossumbekken, an urban district of Oslo, a DN 900/ DN 1000 wastewater pipe had to be rehabilitated. For the seven-month rehabilitation period, the client, the Municipality of Oslo, and the contracted company, Primus Line installation partner Kjeldaas AS, was looking for an efficient and safe bypass solution. The easy and fast installation method as well as the reusability for other bypass projects convinced the end customer. In addition, the bypass ran through a difficult-to-access and ecologically sensitive area: The high product safety of the aramid-reinforced flexible pipeline was therefore crucial to protect the ecosystem.

The bypass had to cope with up to 300 l/sec of wastewater. For this purpose, the rehabilitation experts of Kjeldaas AS installed two parallel pipelines with Primus Line® Overland Piping, each with a length of 1,050 m. Both DN 300 aramid lines were operated at an operating pressure of 1.5 bar and only during the week while the actual construction work took place. At weekends and on days without construction work or during heavy rainfall, the existing pipeline was used. This approach enabled an optimal, fast and safe implementation of the project from both the economic and ecological point of view.

A Canadian oil and gas producer had previously used temporary above-ground pipes made of HDPE for transporting the water produced, which has varying contents of hydrocarbons, chemicals and minerals, or transported the water by lorries. Due to the many joints, HDPE proved to be very time-consuming and the transport by lorries consumed a lot of fuel. After rigorous testing, the oil and gas producer chose Primus Line® Overland Piping as an alternative. >





All-terrain: Due to its flexibility, Primus Line® Overland Piping naturally adapts to the ground.

The special thing about this project was the installation at -30 °C. In this project, 6,200 m of flexible pipeline DN 300 were laid in just one day.

During the eleven-day service period, the flexible pipeline transported more than 363 million litres of produced water. According to the customer, the installation of Primus Line® Overland Piping saved around 7,000 lorry trips and cut down the transport distance by around half, avoiding a total of more than 320 tonnes of CO<sub>2</sub>.

Bypass to transport brine in Southern France: KEM ONE, one of Europe's largest vinyl producers, is currently rehabilitating an 8 km section of a transport pipeline for brine. In order to maintain the brine supply to the production plant in Fos-sur-Mer, the transport pipeline is being rehabilitated in sections of 1 km. To do so, a bypass is used for every rehabilitation section. To prepare for installation, the assembly team mounted valves to obtain isolated sections of the same length. The Primus Line® system is used for both the rehabilitation and the bypass in this project. Thus, the assembly team uses the same DN 300 PN 16 flexible pipeline eight times for the bypasses, with a length of around 1,000 m. Each bypass is laid along the existing pipeline and service road.

The operator KEM ONE opted for the Primus Line® solution since the transport pipeline for the brine with a content of around 300 g/l of sodium chloride runs through the Natura 2000 protected area of the Camargue. Safe transport and protection of the environment have the highest priority. In addition, according to the operator, this pipeline saves around 200 truckloads per day that would otherwise have to be transported between the saline production site in Vauvert and the plant in Fos-sur-Mer.

### True alternative

Flexible and robust, all-terrain and reusable, quickly rolled off and up again, economical and environmentally friendly, Primus Line® Overland Piping offers to operators looking for a solution for the above-ground transport of fluids for a limited period of time a true alternative. Whose resilience has been proven by rigorous laboratory and field tests under the supervision of independent testing institutes. ■

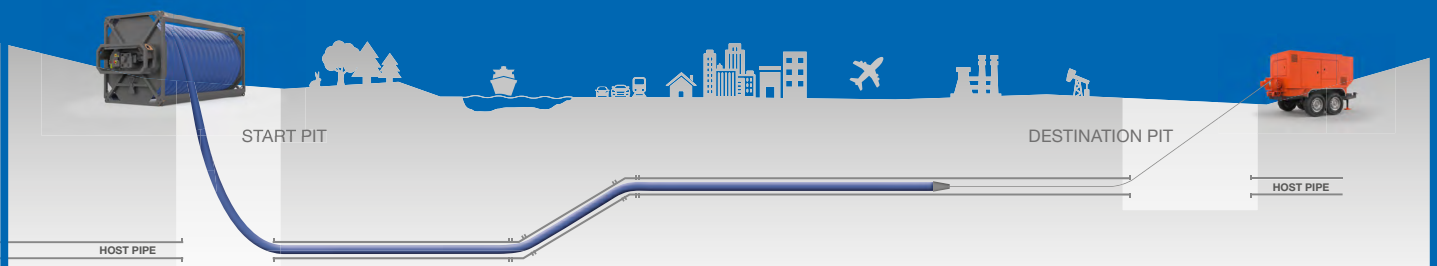
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# DERBYSHIRE GULLY SENSORS

Overlooking a  
Derbyshire Village

High performance gully sensors are a great way to monitor water levels in gully pots, especially in areas at high risk of flooding. April 2023 saw highway asset management expert KaarbonTech embark on a project with Derbyshire County Council (DCC) in the UK, installing gully sensors to provide real-time water level information, informing cleansing schedules and allowing advanced warning of flooding.

## How do they work?

Attached to the underside of the gully grate, these high-performance sensors record an accurate measurement of the water level in the pot below. Readings deliver precise water level percentages, allowing for timely flood alert warnings. Monitored in real time, data is transmitted to dedicated software, integrating seamlessly with KaarbonTech's Gully SMART solution, streamlining the observation process efficiently. This data can be viewed against current and historic readings, providing vital, accurate information to inform gully cleansing programmes, allowing a true risk-based approach to be taken.

Dales in partnership, KaarbonTech and DCC selected an area in Masson, in the Derbyshire Dales, identified as an area of high vulnerability to flooding. Ideal installation conditions ensured the best quality sensor operation and results.

These included:

- Ensuring there were no obstructions in the gully pot where sensors were installed.
- Ensuring strong signal strength for battery longevity and consistency of results.
- Installing multiple sensors in proximity, to mitigate any potential sensor malfunctions. >

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A Derbyshire Skyline



A Gully Sensor installed under the Gully grate



A flowing Gully

Placing sensors on gullies in this location supported a proactive approach to address the critical need for enhanced flood monitoring and allowed the right mitigation measures to be put in place, using accurate and real-time data.

### Results so far

In place for around four months, the sensors are providing regular transmissions and returning accurate data in line with the rainfall data seen in the area. This data provides valuable information to drive decision making around cleansing programmes and will be used alongside flood event forecasting and weather alerts. With a lifespan of up to six years, the sensors' prolonged and reliable performance will help inform maintenance, management, and flood risk well into the future.

KaarbonTech's Managing Director, Mark Entwistle said: "Gully sensors are a critical tool in the management of flood risk and the efficient programming of cleansing schedules. I am delighted that we are seeing such good results from the first few months of this project, and that Derbyshire can take a much more detailed approach to their maintenance programming. I believe that sensors are a valuable resource, streamlining management of gullies and keeping the road network safer."

[kaarbontech.co.uk](http://kaarbontech.co.uk) ■

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## TOWARDS A TRENCHLESS FUTURE – USING MULTI-SENSOR FUSION AND AI TO MAP THE UNDERGROUND

GPR surveying  
underway in  
France

Every day, all over the world, thousands of construction projects are underway, providing places for communities to live and work, transportation to get people where they need to go, and energy to light and heat homes. To improve the safety of these projects, development teams need to see what is underground, before the projects begin. New technology for comprehensive underground mapping enables non-invasive, trenchless installation and repair of utilities and underground infrastructure.

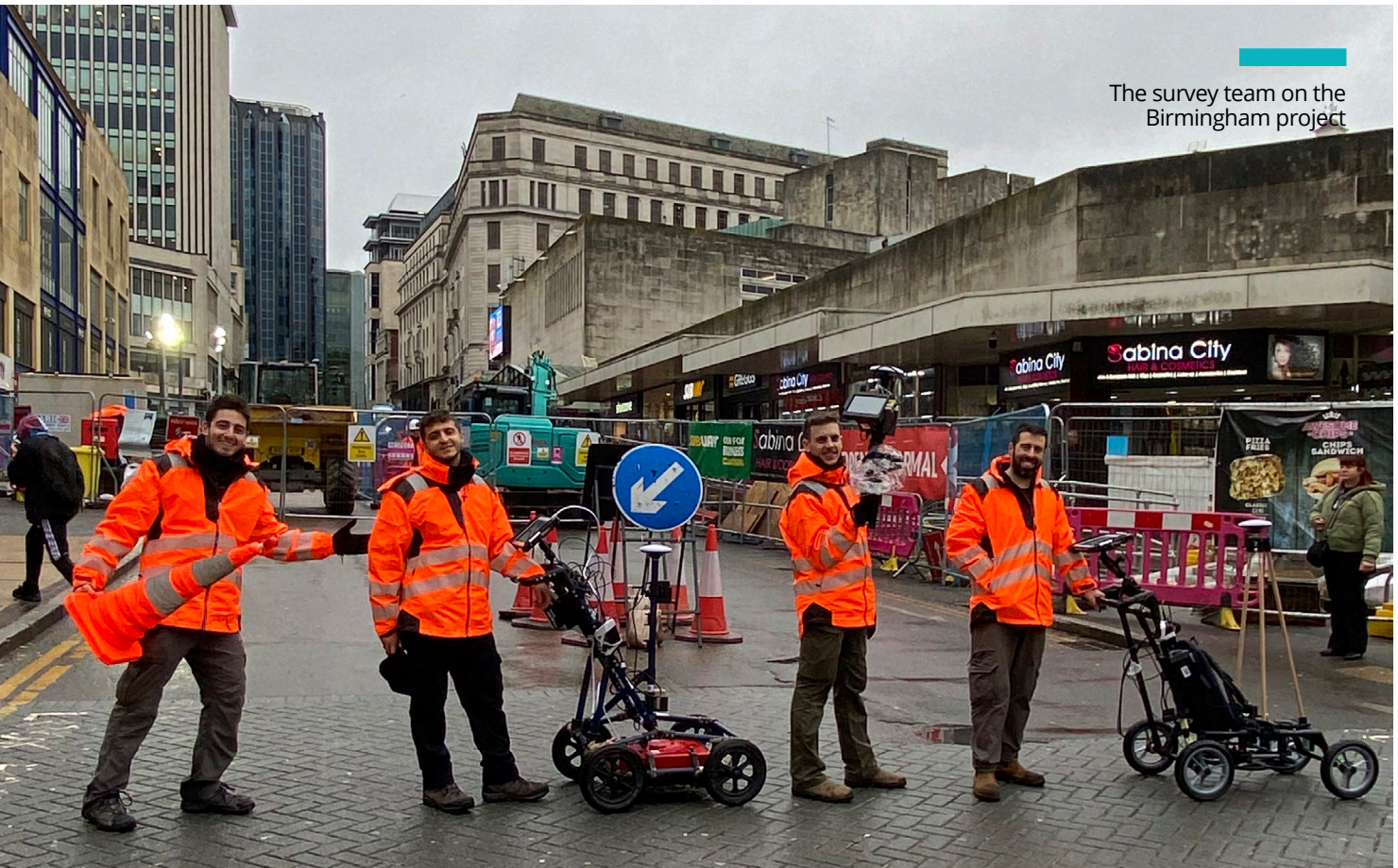
While trenchless utility installation, maintenance, and repair is by far the safest option to minimise disruption for communities, keep crews safe, and reduce harm to the planet, it has been difficult to accurately map the underground without surface damage until now. This limitation has restricted the use cases for trenchless construction technology to areas with confirmed, accurate underground records (which are uncommon). But with advanced signal detection and recent developments in artificial intelligence (AI), trenchless underground discovery is not only possible, but also incredibly accurate, capturing even abandoned lines and uncharted services.

New underground mapping tools can shorten project delivery timelines by providing a complete picture of the underground, preventing delays, redesigns, and costly utility strikes. For example, the Exodigo platform fuses data from the most advanced sensors in multiple fields of physics to create a clear picture of the underground without disturbing the earth. It is like combining an MRI, CT scan, and ultrasound into one image that provides a single source of truth for what lies beneath. Exodigo accurately and non-intrusively maps the underground using multiple sensors and AI. Having precise, complete knowledge accelerates project delivery, which provides compounding ROI through time and cost savings and increased safety and sustainability during the lifespan of the project. >

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The survey team on the Birmingham project

“Exodigo was able to detect more below-ground utilities than that we received from other utility survey providers and what was indicated on the statutory record information.”

According to estimates, over US\$100 billion a year is spent on unnecessary excavation and drilling globally and the additional cost of that, in dollars, time, and pollution, is far too high. As this is a global problem, Exodigo offers global solutions. Recent Exodigo projects with Colas Rail in the U.K. and VINCI in France demonstrate how a better view of what lies beneath the surface can cut costs and reduce safety risks for any construction project, large or small.

### Avoiding costly setbacks for Colas Rail

Colas Rail, an international leader in railway infrastructure and one of the largest civil engineering firms in the United Kingdom, understands the importance of safer, efficient projects. During the construction of several new light rail stations for the Eastside Metro Expansion project in Birmingham, Colas Rail encountered various challenges, including delays and strikes due to unidentified utilities, despite its diligent use of existing records and traditional survey methods. Colas Rail collaborated with Exodigo to meticulously scan and locate all utilities along the route, preventing further costly setbacks.

Exodigo's advanced technology, incorporating multiple sensors, camera images, and centimetre-precision RTK GPS, collected over 500 Gb of data per acre, providing a comprehensive visual underground network model. Exodigo located more than 280 lines over three sites in a dense urban area of Birmingham, including 51 that no other locator had found and several that were also not listed on any records.

As excavating around buried services is a primary risk for Colas teams, the reliable data and visual insights Exodigo provided allowed Colas to rapidly, and effectively, redesign the project to avoid further clashes with existing services. The project's success has paved the way for Exodigo's ongoing involvement in commercial projects across the UK. >

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An overview of the Colas Rail survey area on Bull Street Birmingham

"Exodigo was able to detect more below-ground utilities than that we received from other utility survey providers and what was indicated on the statutory record information. Exodigo provided invaluable data that reduced redesign and delays due to uncharted services. We look forward to implementing this technology on future projects to ensure safe and timely project delivery." said Alejandro Moreno, Colas Rail UK's Business Development Director for Urban & New Business.

### Solving the Underground in France

In France, strict legislation requires accurate location and marking of underground utilities before and during construction. However, due to outdated written records, utility teams often face difficulties in ensuring accurate field markings without resorting to intrusive methods. In an effort to reduce the 13,000 gas lines damaged annually at construction sites across France, VINCI Construction, a global leader in construction, infrastructure, and urban development, and GRDF, the largest gas distributor in France that distributes natural gas to more than 11 million customers daily, tested Exodigo's solution for safety, budget, and compliance needs on future projects.

Through VINCI's foresight and innovation platform, Leonard, GRDF and VINCI partnered to test Exodigo's underground mapping capabilities on a site in a suburb of Paris. The company's platform identified 57% more utility lines than shown on existing records, successfully locating 30 lines in an area where existing records identified only 19 and an additional 35 lines in an unmapped area. Furthermore, Exodigo's multi-scanning technology accurately located 18 out of 19 recorded lines when cross-checked with three different existing records. Furthermore, no, that is not a mistake or typo, Exodigo's data suggested that the 19th line did not even exist!

Alongside locating the lines, Exodigo also provided depth details for 28 out of 50 fully identified lines, "Precision and accuracy are critical for safe, efficient and timely project delivery. Exodigo proved its ability to offer exactly that for capital projects teams in France and beyond." noted Louis Cottin, Catalyst Program Manager with Leonard. >





The survey area for the VINCI project

## Transforming the Project Lifecycle

The goal at Exodigo is to revolutionise the capital project process, enabling non-intrusive, trenchless practices at every step of the way. Abandoned lines, uncharted utilities, and inaccurate utility records, when discovered during construction, are a common cause of project delays and costs. Every additional day spent on a worksite doing excavation can add thousands of dollars to a project, as well as massive environmental implications as most construction equipment relies on heavy diesel to operate.

With Exodigo's detailed maps, clients can dig only where necessary (if at all). By fully mapping the underground, we enable teams to effectively plan around utilities and other obstacles, thereby shortening timelines and keeping crews safer. Accurate underground mapping helps avoid utility strikes that risk the lives of construction crews and disrupt the surrounding community, while minimising the use of pollutive equipment.

Reducing the need for invasive equipment (ensuring crew safety and protecting the planet in the process) should be a primary objective at every point across a project's lifecycle. Exodigo is setting a new bar for underground exploration and aspires to become the global standard for underground mapping as it further expands its footprint in geographies throughout Europe, the Middle East and North America. As the company's non-intrusive underground mapping technology continues to prove its accuracy and value for capital projects, Exodigo hopes to play a critical role in making trenchless underground discovery the new norm for the industry.

Website: <https://www.exodigo.com/>

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By Trevor Moore, UK Director, Exodigo



# NO-DIG ROADSHOW BRISTOL

2023

NO-DIG ROADSHOW

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TO ATTEND  
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## WEDNESDAY 29 NOVEMBER 2023

De Vere Tortworth Court, Tortworth, Wotton-under-Edge GL12 8HH

### Sign up now for the final Roadshow of 2023 in Bristol

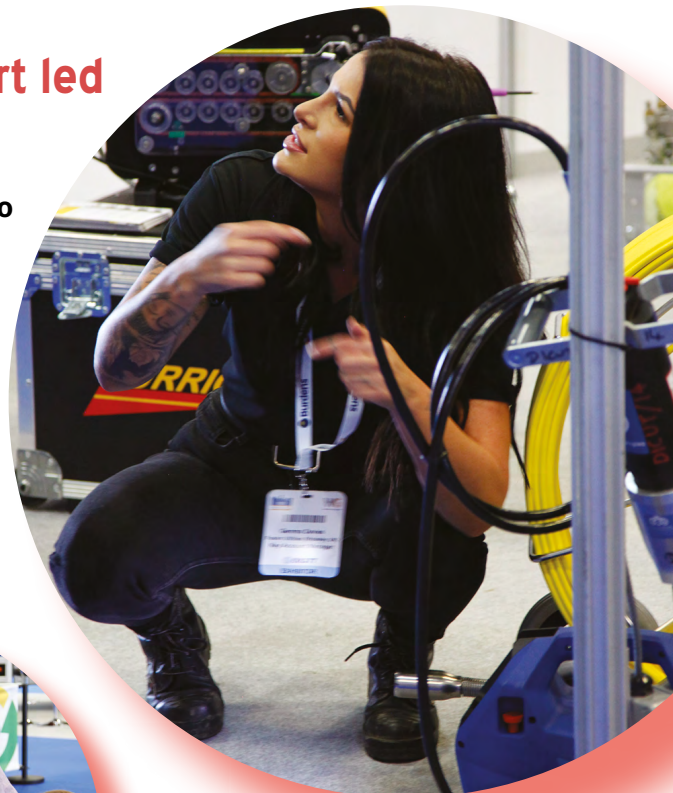
**FREE to attend including access to expert led technical sessions**

No-Dig Bristol Roadshow is a highly focused event providing a forum for trenchless technologists and industry professionals to meet and discuss the latest developments.

Experience the best in No-Dig technology and catch up on industry research and leading edge thinking.

## Exhibitor List

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DIE DRAW LIMITED  
HERMES TECHNOLOGIE GMBH & CO. KG  
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[www.nodigroadshows.co.uk](http://www.nodigroadshows.co.uk) | +44 (0)1923 723 990 | Kathryn Boi [kboi@westrade.co.uk](mailto:kboi@westrade.co.uk)

The No-Dig Road Show series is organised by Westrade Group Ltd and supported by the United Kingdom Society for Trenchless Technology (UKSTT)

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## WELCOME FROM THE CHAIR



Ian Ramsay, Chair, UKSTT

Well, half the year is over and we are looking forward to the rest of the year's up and coming events. A highlight will be in November during the UKSTT's Annual Dinner & Awards Ceremony when Julian Britton from Wessex Water will be presented with a Lifetime Achievement Award for his outstanding contribution to the trenchless world. Julian has always been a good friend and I am so proud of the work he has undertaken and the value he has added to the industry over his illustrious career.

He has always been a driver of technology and innovation and will leave a large gap as he takes his well-earned retirement. One of Julian's key focus areas was to support and develop new talent. He supported the UKSTT's young engineer programme and many of the recipients of the Award came from Wessex. These 'young engineers' have gone on to develop further in the industry both domestically and internationally and making serious contributions. The Awards Dinner is being held at the De Vere Tortworth Court on 29 November in conjunction with Bristol NO-DIG Roadshow. Details can be found on the UKSTT website and in Trenchless BUZZ. Tickets are selling out very quickly so do not leave it too late to buy yours.

Entry into the UKSTT Awards is now closed. We are really pleased with the number of submissions we received and look forward to announcing the shortlist in September. In addition, it is great to see both new members and the long-standing ones equally enthusiastically sending in projects and innovations that show the fantastic development in the industry. Onwards and upwards.

Several members from the UKSTT Council met with the NADC team in Westminster a few weeks ago with the aim of collaborating on several areas. Full details of what we are planning and hoping to develop will be announced shortly. I am keen to develop this partnership and bring additional benefits to the membership and industry. Let us raise the quality bar higher!

Lastly, the ISTT plans for the International NO-DIG show taking place in Mexico between 17 and 18 October are nearly complete and the technical paper section of the conference has received great contributions from UKSTT members. It looks like it is going to be a well-attended and exciting conference and trade show. If you would like more information, please let me know.

Until next month, I hope you have a productive time.

Ian Ramsay  
UKSTT Chair

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## UKSTT COUNCIL MEETS AT CAMDEN HOUSE



After years of SBWWI and Future Water Association looking after the Society's secretariat services, UKSTT made the decision to become independent and is now fully established as an employer with HMRC and the administration and secretariat services are now the full responsibility of the UKSTT Council. UKSTT would like to thank Future Water, especially Paul Horton, for all of the support that has been provided over the years and the help in making this transition as easy as possible. We look forward to what the future now brings.

The Policy & Strategy committee is in the process of reviewing the current Articles of Association and any recommended changes will be put to the Council for approval during the October Council meeting.

The Working Group's established in 2022 are considered to be working well and allow for shorter meetings to pro-actively work on specific projects.

The Marketing committee created a new Award design to better reflect the UKSTT brand. This was approved and passed to Westrade to use when marketing the awards.

A motion was approved to update the 'Claret Jug' previously awarded to winners during the annual ceremony. A new design was suggested and approved. We look forward to showcasing this in November.

The Technical & Education committee is currently working on programmes for masterclasses, Roadshows and NO-DIG Live 2024.

Full minutes will be available shortly.

The next meeting will include the [AGM and Council meeting](#) which will take place on [12 October 2023](#). [All Members are welcome.](#)

### AGM TIMELINE:

- 11 August: Email requesting nominations to join the UKSTT Council will be sent to all UKSTT members
- 25 August: An email will be sent to all members with the unconfirmed minutes from 2022 AGM and proposed agenda for 2023 along with an attendance and proxy form.
- 11 September: Deadline date for Council nominations to be received in the office
- 19 September: Ballot papers will be issued to membership if necessary
- 26 September: Deadline date for Ballot papers to be returned
- 29 September: Proxy forms deadline date
- 5 October: AOB needs to be received if to be placed on the agenda
- 12 October AGM 10:30am, Camden House, Kenilworth, Warwickshire, CV8 1TH ■



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UKSTT Awards Gala Dinner



## JULIAN BRITTON RECEIVES UKSTT LIFETIME ACHIEVEMENT AWARD



Julian Britton

UKSTT is pleased to announce that the Lifetime Achievement Award for 2023 is being awarded to Julian Britton. Throughout his career Julian has been a tremendous ambassador for trenchless technology and a great supporter of the UKSTT and its members. The following is an interview with Julian taken when it was first announced he would be presented with the Award this year.

**Q:** First of all, congratulations on being presented with the UKSTT Lifetime Achievement Award. What does it feel like to be recognised for what, for those of us that know you, has been a significant part of your working life?

**A:** So, its quite overwhelming to be ranked alongside those who have received this prestigious UKSTT Award in the past. Also, over the five years I was a UKSTT Council member, I observed so many members who gave huge amounts of their personal time to drive the organisation forward and I greatly admired all of them as it perpetuates today. >

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Julian Britton Lecture in the 'Orangery'  
Tortworth Court 2019



My working life became entwined with 'Trenchless' after my mentors Barry Underwood (Principal Engineer Woodspring District Council) and Chris Rees (Sewer Services Ltd) launched GRP lining with the trials at Weston-Super-Mare in 1979, which supported the designs in the WRc SRM manual launched in 1984. I wanted to be involved and moved to the Bristol City Agency for Wessex Water in 1986, to undertake a year of lining in the Feeder Road. From there I started 20 years of tunnelling.

I am really satisfied that I found in civil engineering, a niche expertise that stole my imagination.

**Q:** What does the Award mean to you personally (and/or to your family)?

**A:** The first half of my career in tunnelling was exhilarating, I was promoted to Senior Engineer on four large tunnelling schemes with a cumulative drive of 15,000 m of pipejacking, 'Drill and Blast' hard rock and 'Roadheader' soft rock tunnelling, the majority of which was 2 to 4 m diameter and up to 70 m deep, all for Wessex Water.

The Award is a recognition of the time and effort I committed to those 16 years in the design office and 4 years underground. Long days, great camaraderie with engineers and miners striving for the same goal.

In addition, the second part of my career was primarily 'Cured in Place Pipelining' (CIPP). I commenced in 1999 and by 2004 Wessex Water asked me to set up their Critical Sewers Team, responsible for all sewer and tunnel rehabilitation. This became a 20-year period of innovation, looking worldwide for solutions and where we could not find solutions, we invented our own.

Over the period 1987 to 2023, I mentored around 20 engineers and I am very proud of all of them and some went on to win the UKSTT Young Engineer Award from 2008 to the present day.

**Q:** What was your background/experience originally and what brought you into the trenchless industry?

**A:** I wanted to be a civil engineer and was offered a job as a draughtsman at Bristol Water Works in late 1978. It was a great family orientated business with fathers and sons forming the gangs, and a relaxed approach with old fashioned leadership. They encouraged me to go to college and after 6 years of day release at West of England University, I found myself at Woodspring District Council on the sewerage side of the business, which was agent for Wessex Water. So, in the first 7 years, I was a general engineer doing pipework and sewerage design, Developers infrastructure etc. >



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Julian leads a lecture  
by the Wessex Water  
Critical Sewers team

As mentioned, the SRM Manual was launched in 1984 and I wanted to be part of that movement in avoiding excavation. After a year of GRP lining, I was designer for a large pipe jacking scheme at Avonmouth with contractor Laserbore Ltd. My next mentor Roy McCourt (Principal engineer Bristol City Council) asked me to set up the team for the Northern Foul Water Interceptor. At some 6,000 m of 4 m diameter hard and soft rock tunnelling, it all started with my 70 boreholes up to 100 m deep and 2,000 m of rotary drilled core with Dr Hawkins, geologist at Bristol University.

Brian was to become a tremendous friend and I would sneak into the back of his engineering geology degree courses at the Wills Building top of Park Street. I learned so much about engineering geology and we were also together on The Frome Valley 2 Tunnel in 1991, the Weston-Super-Mare tunnel in 1995 and the Ice Rink Tunnel in 2005, amongst others.

**Q:** What has been your most challenging trenchless experience over those years (project/product development)?

**A:** Without doubt it was the Northern Foul Water Interceptor tunnel which absorbed 7 years of my life between 1987 and 1994, three years in design, tendering and then four years on site engineer with Donelon Ltd and Balfour Beatty Ltd contractors. With shafts at every 1,000 m on 2.44 to 4.0 m diameter tunnels, we had to confront the quartzitic sandstone 70 m under Clifton Village with UCS strengths of 450 MPa, one of the strongest rocks in the UK. We had a very conservative peak particle vibration constraint of 10 mm/sec so the advance was slow and careful. Other interventions included abandoned wells, caves, geology saturated in petrol which had leaked for a filling station, river crossings, railways crossings, underground rivers of 'running sand', you name it!

**Q:** What do you see as being your own greatest personal achievement in the trenchless industry?

**A:** Of course, CIPP became a passion when I understood its attributes, 95% less CO<sub>2</sub> (thanks to the NASTT carbon calculator) and excavation avoidance per annum of some 500,000 tonnes of muckaway and therefore imported backfill, taking some 35,000 lorry movements off of our customers roads, a huge clean air and safety benefit. ➤

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I was fortunate to work for a company like Wessex Water, that believed in its staff and allowed them to explore without too much constraint. I devised my vision of the 'Needs' and then collaborated around the world with like-minded people to bring those solutions to the business. I filled the gaps with innovation, the last being Telesto, the LiDAR survey platform. I asked two geospatial engineers if they could take a floating platform and scan up to 4,500 m of tunnel in one pull, up to 5 m diameter, whilst mathematically discounting for the semi-turbulence of flow without a gimbal or keel, to give us a steady state model in the X/Y/Z. We seed-funded the concept and they made it happen. Incredible.

**Q:** Have you any now or when you started in trenchless did you have any role models in the industry? Who? Why?

**A:** Yes, loads. Listing them is the most important aspect of this interview for me. Roger Wyatt at Bristol Water for setting me off in my career (1978), Barry Underwood at Woodspring Council for teaching me water engineering (1984), Chris Rees of Sewer Services Ltd for always having a solution over 40 years!! Roy McCourt, Bristol City Council, for believing in me and giving me a huge opportunity on so many tunnel schemes (between 1987 and 1998), Ian Armstrong who asked me to form the Critical Sewers Team at Wessex Water and gave me room to explore and innovate (from 2004 to 2010), John Thompson Chief Operating Officer at Wessex Water who expanded Ian's initiative and brought me into the commercial world with our own CCTV and CIPP lining teams (from 2010 to 2023), and of course Colin Skellett our CEO who I have known since the Northern Tunnels in 1989. Colin has always been so supportive because he always recognised that trenchless solutions bring so many benefits to our customers, and that is why we are there.

**Q:** What do you currently see as the UK's and the industry's most urgent challenges and where do you hope to see the trenchless industry in the next 10 to 20 years?

**A:** Believe me, I think the trenchless industry worldwide has made a tremendous fundamental progression this last 20 years and since 2005 we at Wessex Water have been looking at material and resin modifications and from 2015 we were exploring artificial intelligence in CCTV defect recognition algorithms for sewerage classification.

There are so many opportunities to innovate out there in the extensive supply and waste networks and I leave the business at a time where the opportunities to bring bold and exciting concepts have become exponential, it is an exciting time to be a young engineer.

Will CIPP materials always be available in the quantities we need as we move to carbon zero? I have been concerned recently about the acquisition of any of our resins and polyolefin materials derived from the petrochemical cracking of oil extracts, primarily in regard to CIPP manufacture of linings, but that of course extends to plastics across the rehabilitation field as we reduce reliance on oil. Do we have to reinvent ourselves now?

**Q:** If there is anything else trenchless related you would like to mention that we have not covered already, please feel free to comment.

**A:** I would thank all of the colleagues with whom I have worked over the years, especially my direct reports in teams I have led since 1987. I would also like a special thank you to Dr Dec Downey who has had intrinsic role in my team advising on innovation since 2005.

From us all at UKSTT we would like to wish Julian all the very best in his retirement, he will be sorely missed. ■

If you would like to join us at the Annual Awards tickets can be purchased here <https://www.westrade.co.uk/cgi-bin/htmllos.cgi/files/UKSTT-Awards-2023/initialise.html?workdetail=index.html>

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# UKSTT Annual Awards Dinner 2023

Join us for the annual UKSTT Awards Dinner on the evening of Wednesday 29 November in partnership with Westrade Group at the Bristol No-Dig Roadshow, De Vere Tortworth Court.

**Venue:** De Vere Tortworth Court, Tortworth,  
Wotton Under Edge, GL12 8HH

**Dress Code:** Black Tie Preferable

**Date:** Wednesday 29 November

**Time:** 7.00pm till late

**Tickets:** £210 + VAT

CLICK TO  
BOOK  
TICKETS  
NOW

On arrival, guests will enjoy a festive champagne reception sponsored by UIS Ltd before sitting down to enjoy a fantastic 3 course meal. The event will showcase and recognise this year's best performing and most innovative trenchless technologies.

Our guest speaker will be **Kyran Bracken MBE** sponsored by **OCU Group Ltd.**

**We are proudly supporting Mind and the Christy Charity**

Further details are available - [www.nodigroadshows.co.uk/ukstt-awards](http://www.nodigroadshows.co.uk/ukstt-awards)

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- Young Professional Award

**We still have a few category sponsorship opportunities available. For further details please contact Trevor Dorrell on [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk) or +44(0)1923 723 990**

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- Your company logo on all event marketing and advertising including the roadshow show guide, dinner ticket and awards booklet
- Your company logo displayed on all event signage including the presentation screen
- Your company profile on the UKSTT event website with logo
- Opportunity to place one promotional video on the UKSTT website
- UKSTT direct marketing via website, social media sites (FB, LinkedIn & Twitter), newsletter, enews and emails
- Trenchless Works social media and magazine coverage

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## UKSTT MEMBERSHIP SERVICES SUBCOMMITTEE REPORT

by co-chairs Leon Woods & Dawn Greig.

We have had a very busy time within the membership services committee and spreading the workload through three working group committees seems to be working well so far. The following is a review of actions and discussions the three working groups have been developing from the start of this year.

**Communications & Marketing** - Chair, Andy Gundry, confirmed the new 'Tech Bursts' are still being worked on and will be published soon.

- 4 new flyers had been created, designed to promote the UKSTT Award Dinner, award categories, trenchless enquiry service and the recently received Patrons Testimonials.
- Trenchless BUZZ is currently published at the end of each month and statistics show it is reaching 36 countries and gaining more readers each month

### Awards Dinner Report

by Dawn Greig

- Sponsorship packages have been agreed and are now on sale.
- This year UKSTT will be supporting two Charities: 1) MIND 2) The Christie Charity. Donations taken on the night will be split between the two charities.
- Due to the Dinner being held on 29 November and so close to Christmas this year there will be a Christmas Theme.
- UKSTT is working closely with Westrade to make this a great event.

### Membership Report

Chaired by Phil Steele.

The committee has recently contacted all Society Patrons for testimonials to help promote the benefits of being a member. The results were passed to the Marketing committee to design a flyer. ■



Leon Woods  
Membership Services co-chairs



Dawn Greig  
Membership Services co-chairs



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Iain Naismith  
Technical & Education sub-committee Chair

## TESTIMONIALS



The UKSTT is a great organisation for bringing people together to collectively understand the challenges, promote technologies and develop innovations to meet the needs both now and in the future



UKSTT are experts in their field of trenchless technology and champions of innovation. Through our partnership with them, Cadent is able to engage a wider group of supply chain partners, collaborate with partner utilities and access the associated technical know-how and expertise to minimise the impact of our operations on our customers.



With the magnitude of benefits that Trenchless Technology offers, the UKSTT brings together industry experts to expand and advance cutting edge technologies



UKSTT has provided me with a wide variety of different benefits, including obtaining a new circle of contacts within the industry enabling me to gain knowledge, share best practice and learnings and receive support when required



our collaboration with the UKSTT and the ISTT have instigated the adoption of techniques which have benefitted our customers, bringing down costs and providing advantages of short mobilisation times on site, and a reduced carbon footprint over traditional excavation

## UKSTT TECHNICAL & EDUCATION SUBCOMMITTEE REPORT

### Working Group 1 Standards, Research & Awards – Chair Richard Swan

As mentioned last month, we are looking for a new UKSTT representative to join BSI's working group PRI/88 /3 for rehabilitation of pipeline systems using plastics piping materials and components. Since Richard became the Group's chair he can no longer vote on its decisions. Anyone with relevant experience on the topic who is interested can get in touch with Richard via [admin@ukstt.org.uk](mailto:admin@ukstt.org.uk)

### Working Group 2 Events – Chair Iain Naismith

We are working on compiling the conference programme for the Bristol No-Dig Roadshow, which is followed in the evening by the UKSTT 30th Anniversary Awards Dinner. The programme will focus on hearing about the needs that network owners and patrons have for trenchless technology. For the next UKSTT Masterclass we have decided to focus on CIPP for pressure pipes for sewers, water and gas, we will keep you updated.

### Working Group 3 – Education, Client Organisations and Patrons WG – Chair Tim Sargent

For the rest of the year there will be a particular focus on building the Society's relationships with its Patrons that include asset owners, such as Scottish Water, Cadent and Bristol Water, and developing relationships with universities focused on innovation in our world. This will involve improving liaison with them and their engagement in society events as speakers and attendees. ■

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# TRENCHLESS ASIA 2024

26-27 June

SMX Convention Center Manila, Philippines

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Stuart Hillyard at [shillyard@westrade.co.uk](mailto:shillyard@westrade.co.uk) or +44 (0)1923 723990

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# SOCIETY NEWS [istt.com](http://istt.com)

ISTT News brought to members by Trenchless Works

## A MESSAGE FROM THE CHAIR



Keh-Jian (Albert) Shou,  
Chairman, ISTT

Hi ISTT members

I think you will agree with me that the vacation spots are full of people. I hope you enjoy this first summer after the pandemic. Again, I would like to remind you that we will have more International and Regional No-Dig events over the next few months, including No-Dig Down Under 2023 (Brisbane), No Dig Poland, No Dig Czech Republic, NSTT No-Dig (Netherlands), The 2023 International No-Dig Mexico, No-Dig North (Canada), No-Dig Turkey 2023 and others. I am planning to attend No-Dig Under 2023 in Brisbane, Australia, No-Dig Poland in Krakow and No-Dig Turkey 2023. I must say our industry is extremely vibrant now, as other exhibitions have been full of people. I will try my best to attend as many events as possible to encourage our Affiliated Societies.

For the International No-Dig Mexico, which is being held between 17 and 18 October 2023, in Mexico City, preparations are well underway. To encourage and allow more attendees, we have decided to provide live Spanish translation. Please be aware that we will have other activities like the ISTT International Council Meeting, the ISTT Awards as usual, a student paper competition and other events, please submit your papers and applications in time. To make sure you have smooth travel arrangements, please kindly book your ticket and hotel as early as possible.

In addition, we keep hosting the ISTT educational webinars, that can be replayed in the member space. We will have more educational webinars over the next few months. ISTT is trying to provide more services to its Affiliated Societies through the website. Please keep watching our new developments and feel free to provide us with your comments or suggestions. I am looking forward to seeing you soon either during our webinars or at the International or Regional No-Dig events.

With my Best Wishes!

Keh-Jian (Albert) Shou  
Chair, ISTT



# INTERNATIONAL NO-DIG 2023

MEXICO

THE 39th INTERNATIONAL NO-DIG

Conference and Exhibition

17-18 October 2023

Expo Santa Fe, Mexico

## REGISTRATION NOW OPEN

For further event information, the latest conference programme details and to register - visit [www.no-digmexico.com](http://www.no-digmexico.com)

International No-Dig Mexico is the major annual international gathering for trenchless technologists to meet and discuss the latest industry developments.

To be amongst the worlds leading providers and show your innovations, book a stand at International No-Dig Mexico. Sponsorship opportunities available!

Contact Trevor Dorrell at [tdorrell@westrade.co.uk](mailto:tdorrell@westrade.co.uk) or +44 (0) 1923 723990



[www.no-digmexico.com](http://www.no-digmexico.com)

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# SOCIETY NEWS

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## ISTT INTERNATIONAL COUNCIL MEETS

A screen shot of the online meeting if the ISTT Council

The International Council of the ISTT met virtually on 25 July 2023. Thirty-two delegates representing 19 ISTT Affiliated Societies and ISTT Board of Directors attended the two-hour meeting. ISTT Chair Keh-jian (Albert) Shou (CTSTT) welcomed everyone and assumed meeting chair.

**International No-Dig Conferences:** 17 to 18 October 2023, Mexico: Kim Staheli, ISTT Vice Chair, (NASTT) reported on a change to the usual Chairmans Reception & Gala Dinner which will now be one event named 'Awards Dinner'. Plans are proceeding well: <https://www.no-digmexico.com/>

16 to 19 November 2024, Dubai: Discussions are underway regarding a collaboration with ISTT and Trenchless Middle East for an International show in 2024.

28 to 29 October 2025, Vancouver: NASTT and ISTT have entered into a partnership for ISTT to join NASTT for the No-Dig North show in Vancouver, Canada. >

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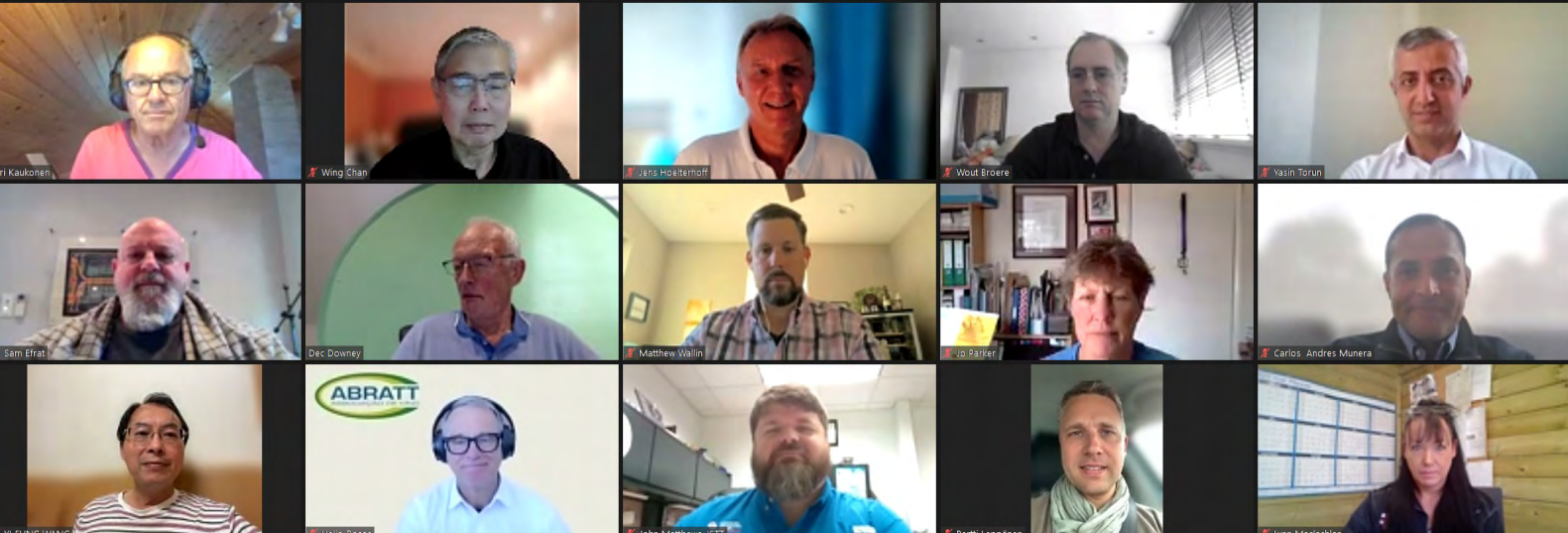
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Proposals sought for 2026 International No-Dig Conference: The deadline date for proposals is 16 September 2023 and proposal presentations will be delivered at the International Council meeting in Mexico City on 16 October 2023.

**ISTT Finance Committee:** Chair Jari Kaukonen (FiSTT) informed the meeting that the committee reports to the board quarterly regarding the ISTT assets and is currently preparing the 2024 budget for approval by the International Council on 16 October.

**ISTT Support Fund Committee:** Chair Wing Chan (CHKSTT) reported that the ISTT Grant programme was increased from US\$15,000 to US\$30,000 for 2023. Seven applications were received and the results will be announced in August.

**ISTT Outreach & Marketing Committee:** Chair Trevor Gosatti (ASTT) announced the creation of a survey document that is due to be forwarded to Affiliated Societies in August to solicit views on the ISTT website, magazines, newsletters, social media, training, webinars, conferences, membership and other communications instruments. Mapping of responses will be completed and summarised around the end of September/October.

**ISTT Governance Committee:** Chair Sam Efrat (SASTT) reviewed previous activities that included creating review and updating of the ISTT Bylaws and Operating Procedures. The committee plans to present bylaws revisions to the International Council at its October meeting.

**Improvements in ISTT Communication:** Programme Director Kyoko Kondo introduced the 'Google Workspace' that she has been working on to allow all committees to simultaneously work on the same documents and share files. This is now in place and plans are to have the function available for committees to send group emails and provide an online translation service. The YouTube channel 'ISTT Trenchless Talks' was launched and contains webinar videos and student class lectures from the Helsinki event.

The next meeting is due to take place on 16 October 2023 in Mexico City. ■

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# NO-DIG TÜRKİYE 2023

31 October / 01 November 2023 - Istanbul  
WOW Istanbul Hotel & Convention Center

TRENCHLESS TECHNOLOGIES,  
INFRASTRUCTURE CONSTRUCTIONS  
MACHINERY AND EQUIPMENT FAIR

## NO-DIG TÜRKİYE 2023

Theme: **Earthquake Resilient  
Underground Pipelines**

WOW Istanbul Hotel and Convention Center

31 October-1 November 2023

[www.nodigturkey.com](http://www.nodigturkey.com)

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[www.waterlossforum.org](http://www.waterlossforum.org)



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# SOCIETY NEWS

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## INTERNATIONAL NO-DIG 2023

MEXICO

THE 39th INTERNATIONAL NO-DIG

Conference and Exhibition  
**17-18 October 2023**  
Expo Santa Fe, Mexico

## NO-DIG MEXICO CONFERENCE PROGRAMME ANNOUNCED

ISTT is delighted to announce that the conference programme for International No-Dig Mexico is now available to the public!

Scheduled to take place on 17 and 18 of October 2023, at Expo Santa Fe México, the technical programme committee has curated a programme featuring 50 to 60 cutting-edge papers on trenchless technology. The topics include pipe rehabilitation, new installation, pipe inspection, asset management and others. To see the latest programme, please visit the website: <https://www.no-digmexico.com/>

While the conference programme is now available, please be aware that it may be subject to changes without prior notice. For any questions, please contact the ISTT Conference team by emailing: [nodig\\_conference@istt.com](mailto:nodig_conference@istt.com)

### No-Dig Mexico Student Paper Competition Deadline Extended

As previously announced, The International Society for Trenchless Technology (ISTT) is hosting a Student Paper competition at the forthcoming International No-Dig Show which is taking place in Mexico City, Mexico between 17 and 18 October, 2023. ISTT has recently announced that the deadline for entries into this competition has now been extended to 15 September, 2023. Students are invited to submit papers to the Technical Program Committee for Review. Four Winning Papers will be selected for presentation at the event.

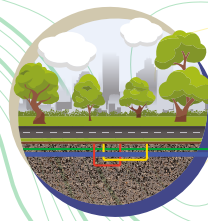
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Please submit your papers, which should be between 4-8 pages, by using the dedicated submission form which can be found at the website:

<https://www.istt.com/main/task.announcement/id.wrbxWH1XOVBlshoquV4pxQ==>





**GREEN ABOVE.  
GREEN BELOW.**

## THE NASTT 2024 NO-DIG SHOW MUNICIPAL & PUBLIC UTILITY

# Scholarship Program

The NASTT No-Dig Show Municipal & Public Utility Scholarship Award has been established to **provide education and training** for North American municipalities, government agencies and utility owners who have limited or no travel funds due to restricted budgets.

Selected applicants will be awarded **complimentary full conference registration** to the NASTT 2024 No-Dig Show in Providence, Rhode Island, April 14-18, 2024. One day conference registrations will also be available. Registration includes **full access to all exhibits and technical paper sessions...**

all you have to do is get yourself to the conference! Selected applicants will also be eligible to receive **overnight accommodations**. Selection based on responses to the application as well as need.

**APPLY TODAY!** Application deadline is November 1, 2023.



NETWORKING EVENTS | EXHIBIT HALL | TECHNICAL SESSIONS

Visit **[nodigshow.com](http://nodigshow.com)** to learn more



The No-Dig Show is owned by the North American Society for Trenchless Technology (NASTT), a not-for-profit educational and technical society established in 1990 to promote trenchless technology for the public benefit. For more information about NASTT, visit our website at [nastt.org](http://nastt.org).



# NASTT SOCIETY NEWS

nastt.org

NASTT News brought to members by Trenchless Works



## NASTT UPCOMING EVENTS

**September 7, 2023**

Seminario de Tecnologias de  
Rehabilitacion sin Excavacion en  
Mexico

MEXICO CITY, MEXICO

**September 21, 2023**

Gas Distribution Good Practices Course  
VIRTUAL

**September 26**

South Central Regional Conference  
SAN ANTONIO, TEXAS, USA

**October 11**

RMNASTT Trenchless Elevated  
GOLDEN, COLORADO, USA

**October 17-18, 2023**

39th International No-Dig Mexico  
EXPO SANTA FE, MEXICO CITY, MEXICO

**October 23-25, 2023**

No-Dig North 2023  
EDMONTON, ALBERTA, CANADA

**November 7-9**

Western Chapter Good Practices  
Course and HWEA Conference  
HONOLULU, HAWAII, USA

**November 13-14**

Northeast Regional Conference  
ALBANY, NEW YORK, USA

**November 16, 2023**

Municipal Sewer Grouting Good  
Practices Course  
VIRTUAL

**December 13-14, 2023**

Pipe Bursting Good Practices Course  
VIRTUAL

**April 15-17, 2024**

NASTT 2024 No-Dig Show  
PROVIDENCE, RHODE ISLAND, USA

**October 21-23, 2024**

No-Dig North 2024  
NIAGARA FALLS, ONTARIO, CANADA

**March 30 – April 3, 2025**

NASTT 2025 No-Dig Show  
DENVER, COLORADO, USA

**March 29 - April 2, 2026**

NASTT 2026 No-Dig Show  
PALM SPRINGS, CALIFORNIA, USA

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For more information and the latest course offerings, visit [nastt.org/training/events](https://nastt.org/training/events).





# AFFILIATED SOCIETIES

## ISTT Affiliated Societies around the world



### Austrian Association for Trenchless Technology (AATT)

c/o TU Wien Resselgasse 5,  
1040 Wien, Austria  
Phone: +43 664 5184084  
Email: office@grabenlos.at  
Web: www.grabenlos.at



### Brazilian Association for Trenchless Technology (ABRATT)

Alameda Santos, 1773 – Jardim  
Paulista Sao Paulo  
01419-002 Brazil  
Phone: +55 11 983893450  
Email: hrosas@abratt.org.br  
Web: www.abratt.org.br



### Australasian Society for Trenchless Technology (ASTT)

18 Frinton Place Greenwood,  
6024, WA, Australia  
Phone: +61 (0)8 9420 2826  
Email: jeffpace@astt.com.au  
Web: www.astt.com.au



### Bulgarian Association for Trenchless Technology (BATT)

Kaprinka Lake Village Kazanlak  
6100, Bulgaria  
Phone: +359 2 4901381  
Email: info@batt-bg.org  
Web: www.batt-bg.org



### China Hong Kong Society for Trenchless Technology (CHKSTT)

Tsimshatsui Post Office 91499 Kowloon  
Hong Kong  
Phone: +852 9201 1952  
Email: chkstt@gmail.com  
Web: www.chkstt.org



### China Society of Geology - Trenchless Technology Committee (CSTT)

Xicheng District Room 151, 26  
Baiwanzhuang Street, Xicheng District,  
Beijing 100037 China (PR)  
Phone: +86 10 6899 2605  
Email: yan64843889@126.com  
Web: www.cstt.org



### Chinese Taipei Society for Trenchless Technology (CTSTT)

3F, No 92, Roosevelt Rd., Sec. 4,  
Zhongzheng Dist, Taipei City, 100  
Taiwan  
Phone: +886 2 2362 0939  
Email: zoradrc@gmail.com  
Web: www.ctstt.org.tw/en\_index.asp



### Czech Society for Trenchless Technology (CzSTT)

Bezova 1658/1, 147 14 Praha 4 Czech  
Republic  
Phone: +420 244 062 722  
Email: office@czstt.cz  
Web: www.czstt.cz



### Danish Society for Trenchless Technology - NoDig Infra (DKSTT)

Odinsvej 29 Silkeborg Denmark  
Phone: +45 50894489  
Email: tina@juul-consult.dk  
Web: www.nodiginfra.dk/nodig-infra/  
startside



### Finnish Society for Trenchless Technology (FISTT)

c/o Sari Pietilä, Haapasuonkankaantie 10  
90830 Haukipudas, Finland  
Phone: +358 504132484  
Email: info@fistt.net  
Web: www.fistt.net



### French Society for Trenchless Technology (FSTT)

4 rue des Beaumonts, F-94120  
Fontenay Sous Bo, France  
Phone: +33 1 53 99 90 20  
Email: contact@fstt.org  
Web: www.fstt.org



### German Society for Trenchless Technology (GSTT)

Kurfürstenstr. 129 (Building:  
German construction association)  
Berlin, Germany  
Phone: +49 30 81 45 59 84  
Email: beyer@gstt.de  
Web: www.gstt.de



### Italian Association of Trenchless Technology (IATT)

Via Ruggero Fiore, 41 Rome Italy  
Phone: +39 06 39721997  
Email: iatt@iatt.info  
Web: www.iatt.it



### Iberian Society for Trenchless Technology (IBSTT)

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Web: www.ibstt.org





# AFFILIATED SOCIETIES

## ISTT Affiliated Societies around the world



### Japan Society for Trenchless Technology (JSTT)

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Tomioka, Koto-ku, Tokyo 135-0047 Japan  
Phone: +81 3 5639 9970  
Email: office@jstt.jp  
Web: www.jstt.jp



### Latin American Society for Trenchless Technology (LAMSTT)

Medellín Highway (Calle 80) KM3.5  
via Bogotá-Siberia south side, Bogotá  
Terrestrial Cargo Terminal, Office C-12,  
Cota – Cundinamarca, Colombia  
Phone: +57 1 8764675  
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Web: www.lamstt.org



### Malaysia Association for Trenchless Technologies (MATT)

No 44, Jalan Dungun, Damansara Heights,  
Kuala Lumpur 50490 Malaysia  
Email: trenchless@matt.org.my  
Web: www.matt.org.my



### North American Society for Trenchless Technology (NASTT)

22722 29th Drive SE, STE 100,  
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Web: www.nastt.org



### Netherlands Society for Trenchless Technology (NSTT)

Postbus 79, 3769 ZH Soesterberg,  
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Phone: +31 346 723450  
Email: info@nstt.nl  
Web: www.nstt.nl



### Polish Foundation for Trenchless Technology (PFTT)

Ul. Warkocz 14, 25 - 253 Kielce, Poland  
Phone: +48 41 34 24 450  
Email: parkaa@tu.kielce.pl  
Web: www.pftt.pl



### The Russian Society Trenchless Technology Association (RSTT)

Severnoy proezd 12, Balashikha Moscow  
region, Russian Federation  
Phone: +7 (495) 521 78 82  
Email: gnb.06@mail.ru  
Web: www.s-gnb.ru



### Southern African Society for Trenchless Technology (SASTT)

1053 Hyde Avenue, Eldoraing ext 1,  
Centurion Gauteng, South Africa  
Phone: +27 (0) 82 551 7458  
Email: director@sastt.org.za  
Web: www.sastt.org.za



### Singapore Society for Trenchless Technology (SgSTT)

84 Toh Guan Road East, Singapore Water  
Exchange, #02-02 608501, Singapore  
Phone: +(65) 97124054  
Email: singaporestt@gmail.com  
Web: www.sgstt.org.sg



### Scandinavian Society for Trenchless Technology (SSTT)

Gezelius väg 12, 134 31 Gustavsberg  
Sweden  
Phone: +46(0) 70 438 01 54  
Email: Kontakt@sstt.se  
Web: www.sstt.se



### Trenchless Romania Club

Roma Street, No. 16, Ap.2, District 1  
Bucharest Romania  
Phone: + 40724 550 830  
Email: maria.nae@trenchlessromania.ro  
Web: www.trenchlessromaniacub.ro



### Turkish Society for Infrastructure and Trenchless Technology (TSITT)

Gayrettepe Mah. Huzur Sok. No:1A  
Besiktas 34349 Istanbul, Turkey  
Phone: +90 212 603 11 01  
Email: info@akated.com  
Web: www.akated.com



### Ukraine Association for Modern Trenchless Technology (UAMTT)

83A Srednyaya Str., Odessa 65005 Ukraine  
Phone: +380 50 3953280  
Email: trenchless.as@novatec.ua  
Web: www.no-dig.odessa.ua



### United Kingdom Society for Trenchless Technology (UKSTT)

Camden House, Warwick Road,  
Kenilworth, Warwickshire, CV8 1TH, UK  
Phone: +44 (0)192 651 3773  
Email: admin@ukstt.org.uk  
Web: www.ukstt.org.uk



# EVENTS AND MEETINGS

## 2023

September 13-14: ASTT NO-DIG Downunder  
Brisbane Convention and Exhibition Centre  
[www.nodigdownunder.com](http://www.nodigdownunder.com)

September 19-20: CzSTT-28<sup>th</sup> Conference and Exhibition  
on Trenchless Technology-Tábor  
Hotel PALCÁT  
[www.czstt.cz](http://www.czstt.cz)

September 27-28: Finnish Society for Trenchless  
Technology  
Event center Little Finlandia,  
Finland, Karamziniranta 4, 00100 Helsinki  
[www.fistt.fi/fistt-vuosikonferenssi-2023](http://www.fistt.fi/fistt-vuosikonferenssi-2023)

October 17-18: International No-Dig Mexico 2023  
ISTT's 39<sup>th</sup> International No-Dig Conference  
and Exhibition  
Expo Santa Fe, Mexico  
[www.no-digmexico.com](http://www.no-digmexico.com)

October 31- 1 November: 7<sup>th</sup> Water Loss Forum  
and Exhibition  
Wow Istanbul Hotels and Conference Center  
[www.waterlossforum.org/en\\_US/](http://www.waterlossforum.org/en_US/)

November 1-2: No-Dig Turkey 2023  
Conference and Exhibition  
Darulbedai Cad. No 4 Harbiye Sisli,  
Istanbul 34367, Turkey

November 1-3 November: 18<sup>th</sup> International  
ACUUS Conference  
Singapore  
[www.acuus.org](http://www.acuus.org)

November 8-9: STUVA-Expo 2023 in Munich  
Messe München, Messegelände, Hall C1  
81823 München, Germany  
[www.stuva-expo.de/en/start-stuva-expo-2023.html](http://www.stuva-expo.de/en/start-stuva-expo-2023.html)

November 29: No-Dig RoadShow Bristol  
& UKSTT Annual Awards  
De Vere Tortworth Court, Wotton Under Edge  
[www.nodigroadshows.co.uk](http://www.nodigroadshows.co.uk)

## 2024

June 26-27 Trenchless Asia 2024  
SMX Convention Center Manila, Philippines  
[www.trenchlessasia.com](http://www.trenchlessasia.com)

October 1-3 No-Dig Live 2024  
NAEC Stoneleigh Park, Warwickshire  
[www.nodiglive.co.uk](http://www.nodiglive.co.uk)

18-19 November: International No-Dig  
Dubai 2024  
ISTT's 40<sup>th</sup> International No-Dig Conference  
and Exhibition  
Dubai World Trade Centre, Dubai