

INTERVIEW

Affinity Water's Richard Lake On WWP19



Dr. Richard Lake
Business Lead for Production Innovation
Affinity Water

The international conference on water & wastewater pumping takes place in Cambridge on 20-21st November, addressing the challenges facing the water industry in response to OfWat's objectives for PR19 and AMP7. Duncan Leathley, BHR Group's Director of Water & Wastewater, chatted to key note speaker, Dr Richard Lake in the run up to the event:

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Thank you for taking the time to talk to us today Richard. To start, it would be great to understand a little about yourself and your role at Affinity Water

I started in Affinity Water, actually before it was Affinity - we were General Utilities at the time. That was 21 years ago in 1998! I began in the water quality research department. After a few years, I was running the department, which I did for around seven years. In a move to integrate R&D within production our operations director asked me to move into the profuction department. Since then I've been ploughing an innovation R&D furrow with this team directly rather than having a stand alone R&D department.

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I've been in the water industry myself for over 20 years, and clearly you've worked with water for a long time as well. - What's kept you in the industry for so long, when it's probably fair to say it's not the perceived glamour?

Thinking about it, it wasn't a conscious decision to work in the water industry. When I came out of University with a PhD, it was hard to get a job, as I was considered either "over qualified" or "under experienced". However joining the water industry, my role became really interesting really early on. I also find it easy to explain to people why my job is so important. We ensure people get the right amount of water and we make the water safe, so when you drink it, it doesn't make you ill. Over the past 20 years we've really progressed and we're making it safer and safer as we go along. - If I look back over my career, it's good to see how far we've come along.

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What are the top priorities for Affinity Water for AMP7/PR19

I think there are two big priorities. From a quality point of view, the progress we've made is remarkable. So much so, that now it's more of a question of "how do we move water around?" to better serve our customers.

Ground water levels are as low as they have ever been at this time of year for example, so we're doing everything we can to avoid hosepipe bans. This means working out the best way to move our water from places where we have more to where we have less, and addressing questions such as "how do we keep the chalk streams running?" We've returned a lot of water to the environment

over the past five years, and we want to do more of that, continuing initiatives such as extracting less from the chalk streams, focusing on keeping the environment safe. Over the last few years we've also been working to reduce capital consumption. In the South East, I think comption is around 155 litres per person per day on average, and we'd like to get usage down. We can't rely just on people turning their taps off, certainly not in the short term. There is a longer term strategy to educate children from an early age to limit consumption wherever possible, but this, of course, takes time. That's why we're making the most of our resources and doing more to move water around in the most efficient manner possible, aiming for resilience.

Another part of this is to move towards renewables where energy is concerned, getting away from fossil fuels. This involves considering ways we can get better use from our assets such as resevoir sites and water treatment works, utilising them to create our own renewable energy and cutting back on the amount we have to import from the grid. We're doing some work with Lancaster University, making sure we don't damage any water quality within the resevoirs if we move towards these sorts of solutions, but all in all,



“My role is to ensure we challenge ourselves, to answer the question “how can we do it better?”

I think it's a good way forward. Ultimately it will extend to our fleet for example, with an ideal being that we operate a fleet of electric vehicles that are powered by solar energy.

How do these priorities impact on your day-to-day role within Affinity Water?

There are a number of things. With innovation, we're always looking for ways to work more efficiently, so from using microthermal technology to increasing capacity of pumps, we're looking at a range of solutions to get the most out of what we have to benefit our clients. It all fits together and we challenge ourselves “yes we can do it, but how can we do it better?”

Are water companies responding to AMP7 challenges differently to Water/Wastewater companies?

Certainly on water treatment/water production, the challenges are very similar. I spend a lot of time talking to my counterparts in other organisations, and in terms of drinking water, the fact that they're dealing with wastewater as well doesn't come into it.

It's great to hear you talk about that level of collaboration

I think it's always happened, it's not necessarily been shouted about, however we meet each other at conferences and other industry events and that collaborative environment provides a great framework within which to help each other out.

In terms of pumping, what's Affinity Water's biggest challenge as an organisation?

Essentially, energy is our biggest cost. Most of the costs are around pumping water to areas with not so much water, from those with more water. If then the areas without much water are the areas that have bigger population growth and of course that will increase costs.

We need to ensure pumps are running as efficiently as they can be, and that power is as cheap as possible. Key issues such as ensuring the right pumps are used for the right flows at the right pressures is another challenge. As monitoring goes on, conditioning monitoring will help us identify where pumps are failing.

Being proactive in this way is much smarter than just running pumps to destruction, we have to weight up the cost benefits of acquiring as new pump versus the cost of the extra energy that is used for a failing pump.

We're really excited that you are one of the keynote speakers at WWP19, what topics will you be covering?

Everything, all the water treatment work we do! - No actually, I'm going to go through some of the work we're undertaking at the moment, which will cover our work with pumps, but also a lot of which is on data, because that's where the industry needs to move to. We have a lot of data that we probably don't know we've got and we've certainly got a lot of data we don't make any use of at all which in hindsight always turns out to be useful. - So how do we better manage that, how do we turn data into information? We need to use it as a process control tool rather than something that we look back on when we've had a problem and identify in hindsight what has gone on.

It will be a little bit source to tap, mostly around the things that are going on at the moment, we might touch on water quality, but as it's a pumping conference I'll mainly be focusing in on data and energy.

You touched on the benefits of attending industry-specific conferences, what made you want to be involved in WWP19?

It looked relevant. There's a lot of conferences out there at the moment that are around the edges of what we're doing. However the Water and Wastewater Pumping Conference looked relevant to how we are looking to move forward. As I said before, energy is the biggest part of our challenge going forward, and pumping is the biggest part of that. So it was a question of the right conference, addressing the right challenges at the right time really.

What are you looking forward to most about the conference?

It's the opportunity to talk to people, it's finding out what other people are doing in the same sort of area. To go back to what innovation is all about, it's about taking two or three ideas, combining them and coming up with a new one, and hopefully there might be something out of that.



It's talking to people informally as well during the social elements of the conference, just having a natter. 0 It's amazing what things come up when you're just doing that.

It's important to have work/life balance when you're not driving innovation, what are your interests?

My main interests outside of work are sports mostly. I run an under 13's rugby team. I've got two boys, the eldest doesn't play any more but the youngest still enjoys the game. I'm Chairman of Chess Valley Youth and Minis teams in addition to running the under 13's. I've always enjoyed rugby, even though I stopped playing over 25 years ago!

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Lastly, thinking about the environment and how we can all do our bit, how do you manage your commute to work?

I've currently got a diesel car, which will be the last one I ever have, but unfortunately I bought it just before diesels were condemned as the worst vehicles for the environment.

I drive to work because I spend a lot of my time going from site to site as part of my role - I tend to drive a lot for work.

The office is about four miles away from where I live, we have a number of different offices around our area, so I locate myself at the nearest one to home in order to cut down the commute.

As a company, we encourage people to work from home where they need to and from a local office when they can. We're getting better and better at teleconferencing as well, particularly as our geography covers a large area.

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Thank you for time Richard, we look forward to hearing your keynote at the conference in November!

"WWP19 is the right conference, addressing the right issues at the right time"

Profile: Dr Richard Lake, Business Lead for Production Innovation, Affinity Water

Richard is a Chemical Engineer, who started his career in the water industry shortly after the North London Cryptosporidium outbreak in 1998. Since then, he has worked on all aspects of drinking water treatment, from developing drinking water safety plans, to optimising coagulation and ozonation.

Richard sits on the CIWEM Drinking Water panel and is a regular on the steering group of UKWIR projects. His presentation will consider a wide variety of new research that is currently taking place to look at how water companies can produce better quality water while reducing the cost of production. This includes how to deal with emerging contaminants, but also how to reduce energy and chemical usage while having better control of processes.

Profile: Duncan Leathley, Director, Water & Wastewater

Duncan heads up BHR Group's Water and Wastewater business activities. For the past 20 of his 30-plus year career, he held senior commercial and technical engineering roles in the municipal, utilities and water industries.

An industry influencer and relationship builder, Duncan is passionate about the benefits of collaboration in the Water sector.

He plays a key role in the conference's Technical Advisory Committee and is committed to sharing best practice and adopting innovation through this open forum.

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If you'd like to find out more about WWP19 or BHR Group's services to the water and wastewater industry:

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