

[Home](#) ■ [News](#) ■ [Huber Technology UK News](#)

Developing the bioresources market – exploring the options to encourage greater trading uptake

25.01.2021

As Ofwat ponders how to explore, how stimulate more trading in the slowly developing bioresources market, Mike Willis, Business Development Director at HUBER technology, takes a look at some of the supply chain solutions already available to the UK water companies with the potential to make a significant contribution to enhance growth.

Mike Willis: *During the last price review period Ofwat published it's **Towards 2020** paper setting out how it wanted to approach PR19. Part of their strategy was to develop markets in order to encourage competition.*

One of these was bioresources – specifically sludge treatment, transportation and disposal - a market which Ofwat has identified with a potential value of £780 million.

According to the regulator's latest bioresources monitoring report published in October 2020, water companies, which make better use of bioresources activities – transporting, treating, recycling and disposing of wastewater sludge to develop low carbon energy -, could provide real benefits to customers, society and the environment.

However, the report reveals that Ofwat has concerns about how trading in bioresources is developing and as a result the regulator is now in the process of conducting a review.

Over the next few months, Ofwat is taking a more comprehensive look at the market, including assessing the current barriers to competition and the development of the market.

“Trading of sludge for treatment is very low and falling”

The report says that while there is a reasonable degree of competition in the market for sludge transport and disposal – with third parties providing for 43% and 45% respectively – the trading of sludge for treatment is very low and falling. The water and sewerage companies have also reported a number of barriers to competition.

As a provider of key technologies in the bioresources marketplace, we see the work streams identified by Ofwat of treatment, transportation and disposal of wastewater sludge as intrinsically interlinked.

So HUBER takes a particular interest in how the market is or is not – developing. We have technologies, which allow you to either thicken or dewater sludge more cheaply than conventional solutions on the market. We also looked at this in the context of how it can contribute towards reducing transportation costs.

In particular, from where we stand, the choice of initial biosolids treatment directly dictates how the product is subsequently transported and disposed – and has a significant impact on overall costs.

It is already generally acknowledged that the planning and design phase at the start of a project has a major impact on its overall success– not simply on the upfront capital investment cost, but also on Whole Life Costs over what are frequently many years of operational life.

Early supply chain involvement has a key role to play in the development of the bioresources market – and in my view, it can make a major contribution to delivering the most effective solution in terms of cost, operational performance and carbon savings, to mention just a few.

According to Ofwat's monitoring report, the regulator is particularly concerned by the fall in sludge treatment between the water and sewerage companies WaSCs over the three-year period it has been collecting data from the WaSCs.

This has fallen from 2% in 2017/18 to 0.8% in 2019-20 – and appears to be mostly made up of short-term “emergency trades” resulting from either temporary outages or a large unexpected increase in volume at a site.

Ofwat's concern is understandable, given that treatment made up approximately 70% of bioresources expenditure in 2019-20, with transport and disposal accounting for around 15% respectively.

Part of Ofwat's **Water 2020** analysis suggested that up to 13.5% of sludge could be traded across company borders without facing



HUBER Disc Thickener S-DISC



prohibitive transport costs – but evidently the market is currently operating far below this level.

Why the bioresources market activity in sludge treatment under is- developed?

So why is market activity in sludge treatment much less developed – and what are the barriers hindering the expansion of longer – term trades?

It seems clear to suggest that a greater focus on this stage of the process holds the key to unlocking the potential for further expansion in the market – which would in turn be likely to result in more competition in sludge transport if volumes increase.

In particular, the choice of thickening and dewatering services at treatment stage should be seen as crucial to enabling trading optimisation both within a Water Company's own region and cross-border activity between regions.

Ofwat's activity dashboard based on companies' 2019-2020 information identifies the following types of treatment works spread across the WaSCs in England and Wales, together with details of the volume of sludge generated on a site-by-site basis:

- 275 Sludge Treatment Centres
- 1516 Wastewater Treatment Works
- 4129 small Wastewater Treatment Works

Therefore, a technology, which could cut down on process operation and transportation costs, is undoubtedly crucial to helping with further market development. It is clear to us from the work we are already doing in the water sector in this area that technology has a key role to play.

HUBER is now working with some of the WaSCs to put technologies in place, which enable them to either thicken or dewater more cheaply than conventional solutions on the market – technologies that are already being used extensively by public utilities outside the UK. Ofwat itself has separately pointed out “there is precedent to draw from in Europe.”

The technologies offer WaSCs the opportunity to make an immediate and significant impact on their sludge treatment costs and operational performance – and step up their activity in bioresources trading as a result.

The key feature of our technology solutions is that they are all based on equipment that rotates very slowly using one, low power motor running slowly. This not only reduces energy consumption but maintains the integrity of the poly generated flocculant, reducing consumption and enhancing cake quality. It is also the reason why we come out much cheaper on a Whole Life Cost basis compared to alternative technologies on offer.

I want to emphasise that this is based on evidence-based data - both from our work on municipal sludge applications outside the UK and the results of trials at a number of sites with some of the UK WaSCs.

Technologies that deliver in terms of capital, energy and transportation costs – and cut operational carbon in the process

I am pleased to say that the trials, which typically take between 2 to 4 weeks to deliver results, have been so successful that we are seeing increasingly greater uptake of our solutions by the water companies.

Take the HUBER Q-PRESS® for example, which has specifically been designed for dewatering sludge at small to medium sized treatment works and which is now in place at South West Water's Plymouth Central WwTW. This first of kind in SWW was facilitated by our early involvement, and collaboration with SWW's Tier one contractor Kier.

On capital costs alone, we were 25% cheaper than our nearest competitor, 30% cheaper than the replacement cost of new centrifuges and about 7% cheaper than the existing temporary solution in place.

The Q-PRESS® delivered equally significant savings in terms of operational costs, including:

- a saving of £60k a year just on tankering transportation costs alone
- less than 10% of power consumption compared to energy used in a centrifuge solution
- roughly half the amount of polymer consumed compared to centrifuge solution

Other options we've explored on behalf of WaSCs include localised treatment hubs with our equipment in place as a means of consolidating sludge treatment from a number of works (which could extended across cross-border sites) which are roughly equidistant from a hub, thereby reducing tanker volumes. After thickening treatment, it could then be transported to bigger strategic Sludge Treatment Centres to be used for biogas energy generation, for example.

I would like to conclude by highlighting two other issues, which may be relevant to encouraging greater trading activity in the bioresources sector.

Firstly, as part of its current review, Ofwat is considering how to assess different forms of competition and market models. The regulator might like to consider whether the 5-year regulatory cycle itself is distorting the picture in terms of a company's ability to make informed decisions to invest in the best technology solutions based on a true analysis of Whole Life Costs, which may be spread across two or more 5-year investment periods.

Need for a truly integrated bioresources strategy at both company and sector-wide level

Finally if it is not in place already, the need for the water companies themselves to avoid a disconnect by having a truly integrated bioresources strategy in place in order to realise the benefits that increased trading could offer.

The ability to see the picture in the round and pull a variety of different operational issues and drivers together is key to delivering this.

For instance, if separate divisions within an organisation deal with treatment and transport / disposal, are the opportunities in place to discuss how their individual decisions could potentially impact their bioresource strategy? Likewise, how are their choices considered in the context of meeting their carbon net zero goals in terms of cutting energy use and carbon emissions?

The key question is – in considering one without the other how are they going to make progress and really capitalise on the commercial market opportunities opening up?

To sum up, as a supplier we occupy a place at the beginning of the process.

However, it seems clear that only by having integrated strategies in place across the whole value chain – both within the individual WaSCs and on a cross-border basis - will Ofwat see the step change in bioresources trading it is looking to the market to deliver.

For further information contact Mike Willis at email mike.willishuber.couk or phone on +44 7887 897322

This is the first of a series of articles from technology specialists HUBER in the run-up to publication of the outcome of Ofwat's Bioresources Market Review in 2021 and the interview was carried out and written by Elaine Coles from Waterbriefing.



ROTAMAT Ltd. t/a HUBER Technology
 Units C&D Brunel Park Bumpers Farm Ind. Est.
 Chippenham Wiltshire SN14 6NQ
 Registered in England No. 2874696 VAT Registration No. 639396393
 Telephone: 01249 765000
rotamat@huber.co.uk www.huber.co.uk

A member of the HUBER Group

