

Water-born

A small firm is enjoying strong growth through not manufacturing. Andrew Warmington visited **BWA Water Additives**

Strictly speaking, the name is not logical, because the 'WA' in 'BWA Water Additives' already stands for 'Water Additives'. It is also becoming quite unusual these days for a chemicals industry company to have a name that actually states what it does. However, none of this seems to be doing BWA any harm.

When the company became independent in 2006, it already had considerable brand equity in the name, which stood for BioLab Water Additives. This a part of the former Great Lakes that was active in different areas of non-bromine-based water treatment, mostly for pools, spas and recreation. It could not use the name BioLab, however, so BWA Water Additives was the option chosen.

Dr David Cartmell, executive chairman and CEO, who is based at the world head office in Manchester, UK, has been with the company under various guises for 25 years. COO Paul Turgeon, who is based in Atlanta, has been Cartmell's number two for 20. Both have technical backgrounds - Cartmell's doctorate is in nuclear energy, Turgeon is a chemical engineer with a masters degree in business and both have worked in water treatment throughout their

whole career.

The many changes the firm went through gave them a solid grounding in some very different ways of doing business. What is now BWA Water Additives was originally part of Ciba-Geigy in the 1980s, with manufacturing at a large integrated site at Trafford Park, near the current head office.

"The old Ciba-Geigy was very research-oriented. It was all about patents and technology; the philosophy was about being the best and being a technology leader. Financially, they looked at the gross margin rather than the control of working capital," Cartmell recalls.

The business was then sold to FMC, a more commodity-focused company whose approach was very different. The move, Cartmell admits, was a bit of a culture shock at first.

"FMC looked at return on capital employed, net working capital as a percentage of sales and other such measures. Working there was like doing an MBA on the hoof. They taught us terrific financial control."

Water treatment never really fitted into FMC because the Trafford Park site was essentially a flame retardants manufacturer with water treatment products based on the same core chemistries. In 1999, FMC sold it on



Cartmell – Short-sighted to cut back on R&D in a downturn

to Great Lakes. The flame retardants part became part of Great Lakes' Industrial Chemicals division, while the water treatment part was merged into BioLab, which was already an established customer to FMC.

All went well for some five years, but then Great Lakes began to suffer financial problems. Although BioLab performed well, it was too small to make much difference and it was put up for sale. Not wanting to go through being sold again, Cartmell left in early 2005 to become the CEO of another firm.

By the time this move had gone awry, the sale was off because Great Lakes had agreed the merger with Crompton that was ultimately to form Chemtura. At this point, Cartmell saw the opportunity to take the water treatment business independent.

"We had the management team in place and a good business. And in 2005 and 2006, it was much easier to get investment money from bankers," he says. Having raised the \$85 million price from Close Brothers Private Equity (CBPE), BWA came into being in May 2006, with Turgeon in charge of day-to-day operations and Cartmell taking a supervisory role; only Turgeon and the finance director report to him.

By 2008, with the end of CBPE's three-year commitment to ownership looming, Cartmell and Turgeon began the process of looking for a new buyer. They targeted Middle

Eastern backers because of the large amount of money floating about in the region and its strong growth potential in water treatment. Between February and September 2008, presentations were done to many interested parties.

Finally, that September, CBPE sold up to United International Bank, an investment bank based in Bahrain which has since been renamed Seera. It said at the time that it had wanted to hold onto BWA for longer but the offer they had received was too attractive to turn down. Seera is looking at a five-year time frame.

Like CPBE, Seera is the private equity arm of an investment bank. According to BWA, it "has a strategy of buying companies that are leaders in their respective industries, that have a strong growth potential and that have strong management teams which can achieve this significant growth". BWA was bought with such growth potential in mind.

The company mainly supplies scale, corrosion and microbiocide products and services to the industrial water, desalination and oilfield markets. What it does not do, however, is manufacture. Being 'asset-light' is fundamental to its strategy. Of course, as part of Chemtura, manufacturing assets were part of the business unit and Cartmell and Turgeon knew them well. So why was this path taken?

"The issue was the assets. Water treatment products were made in multi-purpose plants that were producing many other products for different applications. It was impractical even to think about fencing them off," Turgeon says. "More importantly, we wanted to be able to develop the best products for specific customer needs rather than have a set of products and be driven by the need for an ROI on them."

All too often, he continues, owning assets in the chemicals industry means having to develop products, then "creatively try to get the customer to buy them, whether or not they are best for his needs. From a customer-centric point of view, we want to research, develop and mar-



Turgeon – BWA wanted to develop best products for specific needs

ket products that are a glove-fit for customer needs rather than be wedded to assets."

"Other chemical companies essentially make products and focus on selling them to any market that will buy them," Cartmell says. "They may have a water treatment department, but what they know best is the product. We are a water treatment company; we sell knowledge rather than pitching a brand of chemicals."

With the ownership of assets, he adds, flexibility is lost because one type of chemistry cannot simply be put through the pots associated with another. "It's hard to have both deep chemical knowledge and deep market knowledge. In some markets, you can't be customer-focused but in water treatment you can; it will never disappear, it just won't have the booms and busts."

Cartmell adds from his past experience of trying to shut down a plant in West Virginia that owning assets also carries other hidden costs, in this case in terms of Superfund issues, other clean-up problems and many others. As a relatively small competitor, BWA wanted to avoid this.

"We aren't a volume player," he says. "We want to sell as much as possible, of course, but it must be the right volume. When you have fixed assets and throughput is an issue, the phrase 'We have a plant to fill' comes to dominate your business."

BWA, therefore, develops its own IP and its own processes, as well as the understanding to run these processes. It takes new products from the lab, then concludes royalty-free manufacturing licences with a network of producers who make the products for them, from 20 different locations world-wide.

"We are a chemical producer," Cartmell stresses. "We own our IP and processes, the toxicological data and the regulatory information. The only thing we don't do that a typical chemical producer does is own our own assets." Indeed, the water treatment business of Chemtura was already doing this in pre-BWA days, being supplied by eight companies in eight other countries that could offer products better than it believed it could develop in-house.

Often, customers come to BWA with a specific process problem to solve. If it believes that an existing product on the market is the answer, Cartmell says, it will point the customer in that direction; if not, it may

set out to develop the chemistry for a new product, then - and only then - find a manufacturer.

Such a product may be made wherever in the network makes most sense from a geographical or variable cost point of view. It depends in part if the value of the product is greater than the cost of shipping. Turgeon adds that the company has inherited strong skills in supply chain management from its former owners. Everything is organised via a single ERP platform that would suit a larger company.

"We don't go looking for short-term suppliers, only long-term partners," says Cartmell. "We work hard alongside them and pick them carefully. We have never moved away from a significant supplier."

He lists his order of priorities in terms of partners as products as: first, safety; second, quality; and third, price. This is simply because they are selling products to treat water, which is essential for human health, for the environment and for the proper functioning of an industrial infrastructure.

"Our chemicals are critical to the production of water in places like Saudi Arabia. Although their cost is tiny relative to the equipment, without them the equipment would scale up in a matter of days. And, whether it goes into drinking water, industrial water or wastewater treatment, the chemical ultimately ends up in a river, a sea or groundwater, so it has to be absolutely safe."

For the same reason, if BWA believed that a customer could not or would not handle its products correctly, it would refuse to supply them - and this situation has happened. Usually, Cartmell says, issues arise in storage and disposal rather than use, as its customers are industrial, chemical and water companies who would know the correct procedures, rather than end-use consumers.

Although precise figures are not disclosed, it has been reported that about two thirds of the products BWA sells are made in Chemtura facilities. As Turgeon says, the transition from Chemtura ownership naturally created a legacy of connections between the two firms that continues, despite Chemtura's recent Chapter 11 bankruptcy in the US.

"Chemtura has weathered bankruptcy well and has gone on producing products as well as or even better than ever before, so they are a



BWA develops but does not manufacture water treatment chemicals

good supply partner to us," Turgeon says. Indeed, the process gave customers like BWA vital stability after a period of uncertainty. BWA also has secondary and sometimes tertiary back-up on all products bar.

Trafford Park is, unsurprisingly, a major supplier to BWA, being both nearby and familiar. However, Cartmell stresses, BWA is no more wedded to this facility than any other and treats it no differently to any other supplier. There are also five locations in North America and others in Taiwan, Japan, China, Italy and Thailand, in some cases with more than one site or one product.

The value of the arrangement for BWA is obvious. Why, though, did Chemtura agree to a deal that seems to have benefitted the other party more? "We stood firm in negotiations," Cartmell says. "And ultimately they are a manufacturing company where we are not, so they understood the logic of it too."

BWA runs light on employees as well as assets. From 35 when it started out, it now has about 80 worldwide. Of these, about half are in Manchester, with the next largest office being in Atlanta. Others, in many cases single person outfits, are dotted around China, Japan, Taiwan, Egypt, the United Arab Emirates (UAE), Italy and Spain.

80 employees is strikingly few for a company of BWA's turnover (\$130 million in 2008), a fact that reflects the way it emerged from Chemtura. "We have doubled the staffing of the business in the core areas of research, sales and marketing," notes Turgeon. These functions, and others such as operations and customer

services, came at the outset; hundreds more in manufacturing stayed behind.

Corporate functions that needed to be built from scratch were created by hiring in the case of finance or outsourcing, as was done with communications and HR under Jon Amdursky, a well-known figure in the industry. BWA also has a very large agents and distributors, many of whom were entrepreneurially-minded ex-Chemtura people. It also has a larger than usual number of regulatory specialists.

The company has averaged 20% year-on-year growth since it began. 2006 and 2007, says Cartmell, were very good years because it was able for the first time to focus all of its energy on business rather than being half-absorbed in corporate functions. 2008 was also strong.

2009, by contrast, was "difficult but not disastrous". One period straddling Q2-3 saw a downturn in sales, due to the destocking going on in pretty much every sector of the chemicals industry, at least in the developed world. Some industrial customers closed or mothballed certain plants and consequently bought less, though desalination and potable water demand continued to grow.

Even when plants are running at 60-80% of capacity, though their water treatment needs do not fall in proportion and they may not even fall at all. It is only when they cease to manufacture permanently or temporarily that BWA will feel the effects.

Nonetheless, the financial crisis did bring issues to the fore. It was also now that the benefits of private ownership became apparent. Seera

asked Cartmell if he might cut some costs in response. He refused to do so and they continued to support the company strategy.

"If you let people go, it takes a long time to replace their experience and knowledge," he says. "Customers also appreciate the fact that we are continuing to bring new products to market when others aren't. It is short-sighted to cut back on R&D but then if you are run by a quarterly balance sheet, you have to short-sighted sometimes."

In any case, the upward trend in the industrial water treatment market resumed strongly in Q4 2009 as customers restocked and the company is now running ahead of forecast. This year has been very strong to date and the expectation is that the 20% growth target will be hit. Indeed, 2010 should be stronger overall than 2008.

"People - and industry - still need water and they always will," Turgeon says. "Even if production falls in some industries and demand for water treatment products goes down temporarily, the fundamental need for more and better products is still basically there."

The main growth market is undoubtedly desalination. This has been growing at 15-20%/year and, Turgeon believes, will carry on doing so for the foreseeable future because of the intertwined mega-trends that are pushing in that direction and leading to growing demand for water: an ever-growing world population that needs more water to drink, to water crops with and to feed its developing industrial infrastructure.

In regions where there is not enough fresh water to cope with booming needs - China, India, and Australia in particular - hundreds of desalination projects are being announced, mostly using reverse osmosis. Thermal desalination is still growing in the Gulf and in Africa. About 100 plants were due onstream world-wide between mid-2009 and the end of this year. Of course, having a Middle East-based owner with industrial contacts there can only help.

BWA is also active in the industrial market, where it is a supplier to service companies like GE Water and Nalco. Here growth is continuing but at a lower rate than desalination. The company is targeting segments within the industrial market where it sees



Microbial control is an important element of water treatment

stronger than average growth opportunities, notably oilfields and cooling water, with environmentally friendly products that still meet highly demanding performance requirements.

One area of long-term ongoing growth in the industrial market is construction. As Cartmell points out, very few new large buildings in temperate regions, were fitted with air conditioning 20 years ago. Now it is becoming the norm.

"How we grow in the next few years will depend on the penetration of our new products," says Turgeon. "Adoption rates for new products can be very slow, because it all depends on people, capabilities and assets. There is intense pressure to bring out new products, but then they have to be sampled, tested and subjected to extended field trials before people will buy."

In late 2009, BWA announced that this year would be an important one in terms of technology roll-outs. A number of new products are now at or near market launch, most importantly the new Bellacide 303 biocide. This is currently at the last stage of the EPA approval process and BWA is pre-marketing it to clients in the run-up to full commercial launch, enabling them to begin the three to four-year process of evaluation.

Bellacide 303 is the second generation version of Bellacide 350, which was EPA-approved in 2006 and has been on the market since 2007. The new product has a broad spectrum of operation, is non-oxidising and, claims Turgeon, is particularly effective against such hard-to-treat bacteria as sulphur-reducing bacteria (SRB), *Pseudomonas fluorescens*,

slime-forming bacteria and anaerobic bacteria.

These bacteria can all cause significant problems for end-users because of their resistance to traditional biocides. SRBs in particular are a major problem in industry, as they do not need oxygen to live and can therefore live below surfaces, excreting acids that can cause severe pitting and corrosion. They are commonest in oilfields and other areas vulnerable to process contamination of cooling water. The options for dealing with them are currently rather limited.

BWA supplies more polymers than biocides to the North Sea market, but it is still keeping a close eye on the ongoing revision of the BPD - and, indeed, REACH. With its limited resources, it needs certainty before making a decision to invest that its products will ultimately be able to compete on a level playing field.

Turgeon is at least optimistic that Bellacide 303 will soon be available in the US. Its European introduction will depend on the economics of REACH and the BPD.

Several other new products are also in the pipeline. BWA is working on some environmentally friendly anti-scalants for its Belasol range based on Scandinavian and UK guidelines for oilfield applications that would be well adapted to regulatory requirements. One of these is still under wraps as the company is beginning full-scale industrial production ahead of a marketing campaign.

"We have looked at what we think the North Sea oil and gas sector will need over the next five to ten years and have developed a couple of anti-scalants we think have better profiles than anything else on the market," Turgeon says. "The oil industry has shown interest and there is little regulatory pressure at the moment, but in the light of recent events in the Gulf, all that may change!"

BWA's range of thermal desalination products is now three to four years old, so some new products are under R&D here too. In reverse osmosis distillation, the product basket has been widened to the point where, Turgeon believes, the company has all the products an end user could need.

In geographical terms, the US is BWA's single most important market, followed by Japan, the UAE and Saudi Arabia. South Africa, Germany

and the UK are also important. A good geographical spread, says Cartmell, is just as important as a spread of customer industries, as some will go up even as others go down, allowing for the relatively recession-proof nature of the customer industry.

During 2009, Japan was surprisingly strong, despite the economy as a whole flatlining. China has also been doing well for BWA, as has South Africa. The one region that has failed to develop as originally anticipated, considering its massive natural resources, is Australia, but BWA has longer-term hopes for that.

The industrial markets in Europe and the US suffered in the downturn but have recovered. Because of the larger population base, the desalination market is actually growing more rapidly in southern Europe, especially Spain and Italy, than in the Middle East, albeit from a lower base.

Overall, BWA expects Europe to resume modest growth but it will need to bring in new products if it is to beat the market. Biodegradability is expected to be a major driver.

In the longer term, the company aims to double sales to \$250-300 million by 2014-16 and is targeting acquisitions to achieve that aim. Obviously, these will not be manufacturers; most likely, they will be technology-based firms like Kintec, which BWA acquired in 2007, that have a promising new technology and lack the scale to bring it to market or others that are limited in geographical terms.

The company takes a three-year view of the future, believing that any longer is pointless. Over time it has evolved from a focus on technical service to emphasise bringing new products to market but its USP remains the same: bringing through any product that is a speciality water treatment chemical and that offers sustainable growth potential.

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