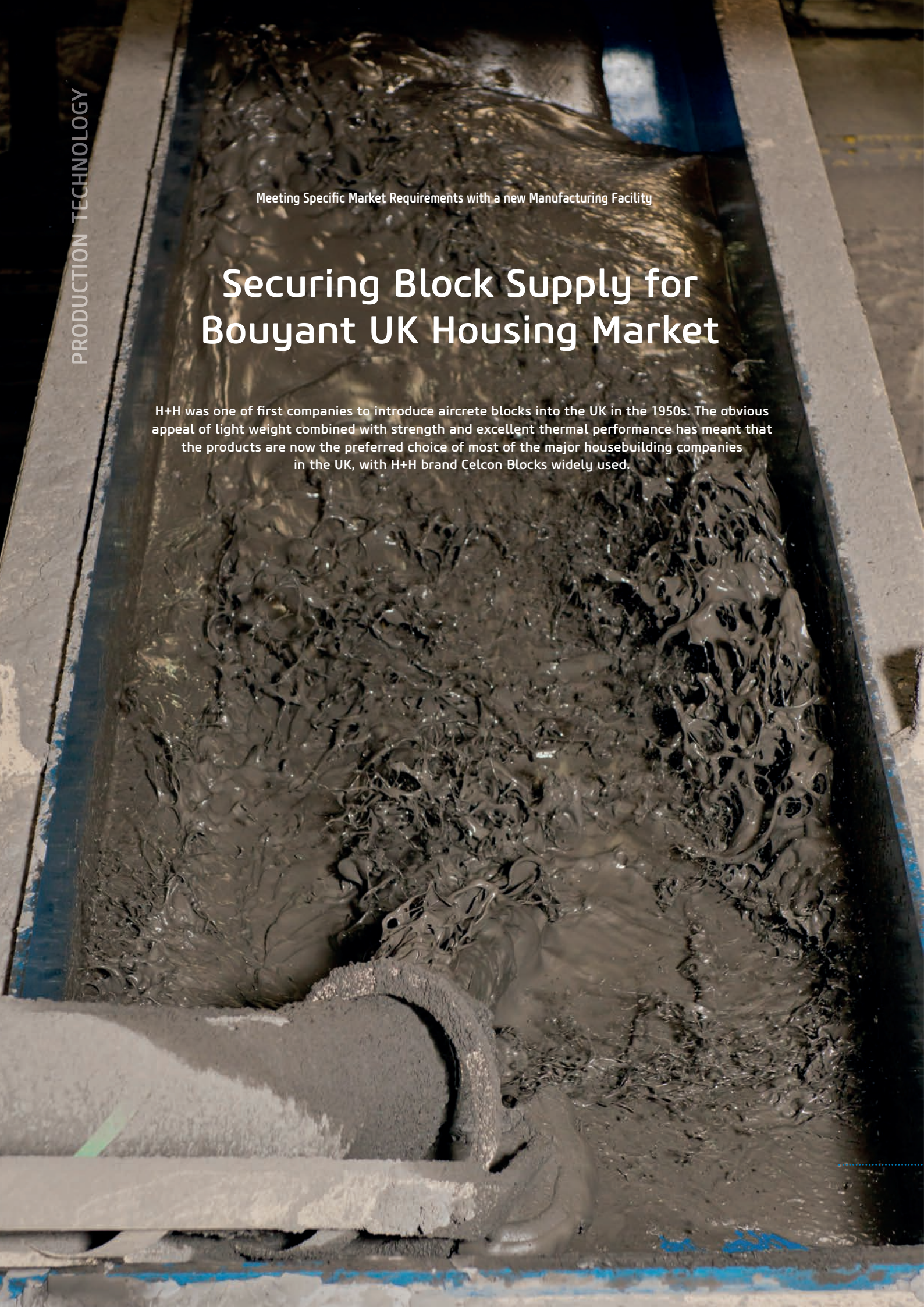
Meeting Specific Market Requirements with a new Manufacturing Facility

Securing Block Supply for Bouyant UK Housing Market

H+H was one of first companies to introduce aircrete blocks into the UK in the 1950s. The obvious appeal of light weight combined with strength and excellent thermal performance has meant that the products are now the preferred choice of most of the major housebuilding companies in the UK, with H+H brand Celcon Blocks widely used.

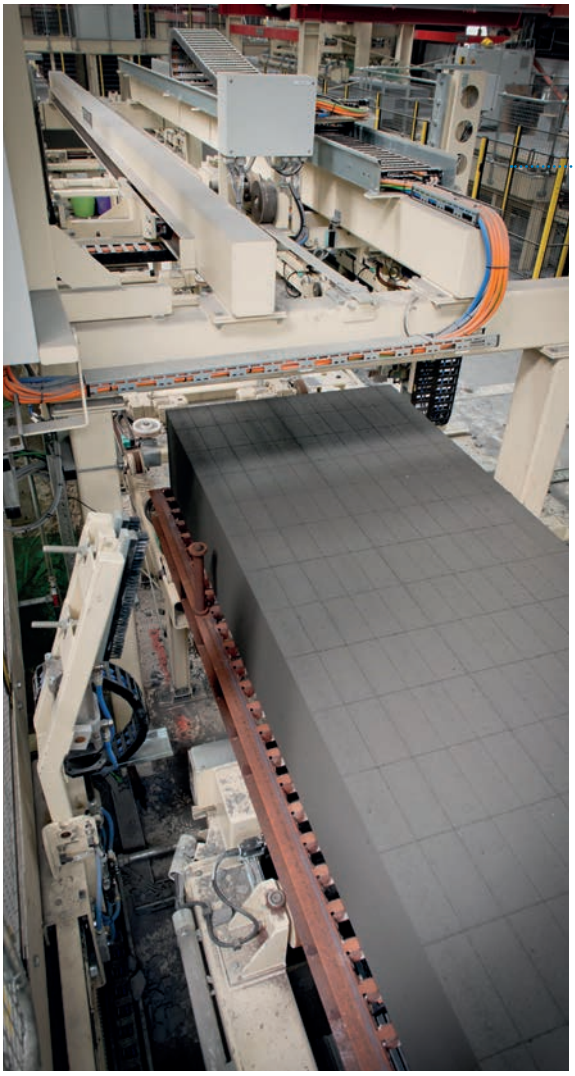


Aircrete cake is removed from the moulds and cut before proceeding to the autoclaves for curing.

With three plants in the UK, H+H has led the field in innovation: Thin-Joint construction, commonly used in Europe, is still a novelty in this territory, while large format blocks, foundation products and the recently introduced Celcon Elements have all met specific market requirements.

The housebuilding sector in this region has been growing steadily since 2013 when a government initiative to stimulate the first-time buyer market, Help to Buy, caused a rapid upswing in house building. Tapping into a huge pent-up demand, housebuilders have increased the rate of new housebuilding and, with the Government focussed on ambitious targets, manufacturers are confident of strong demand in the immediate and medium term.

With this in mind it might seem perverse for H+H to decide to close one of its factories for four months for a major refit. However, the factory at Borough Green in Kent, SE England, had been operating at maximum capacity for years. Its age was starting to cause problems both in terms of reliability.
Plans were being drawn up for a major refit to the factory in 2016 when the Brexit vote cause some European companies to reconsider their investment plans in the UK. Confident of demand continuing in this region, however, H+H's Danish parent company took the opposite view and approved a multi-million Euro investment to entirely rebuild the plant.



The aicrete cake is cut with wires to produce clean, accurate edges.

The slurry that forms the basis of Celcon Blocks. The characteristic grey colour is from the Pulverised Fuel Ash that is used to make the blocks.

Celcon Blocks travelling smoothly along the production process

Given previous experience with H+H's Russian factory, it was not a surprising decision for the company to partner with German specialist Wehrhahn to design and manufacture the production plant to design one of the most technically advanced aircrete factory in Europe.

With the completed plant now back to full production capacity, the team has had time to reflect on the factors that helped this complex project succeed: number one on the list is collaboration.

Right at the start of the project the management team decided to bring independent project management into the mix and commissioned VA Consulting to oversee this vital function. H+H UK MD Calum Forsyth sees this decision as very significant: "We are aircrete manufacturers: we know how to run our factories better than anyone else, but we are not project managers. With an investment of this scale, we turned to specialist expertise to make sure the whole process went smoothly."

Planning began a year before the shutdown. While the engineering design was taking place at Wehrhahn the production and sales teams were fully engaged with managing their supply forecasts and building stock to make sure key customers were served throughout the shutdown period.

Equipment design, being masterminded by Wehrhahn, also benefitted from input from the production experts in Borough Green. Frequent visits were made to the Wehrhahn facilities, with H+H's factory managers able to discuss very specific requirements with the engineers, agreeing modifications where appropriate.

Most importantly, all the individual pieces of equipment were stress-tested comprehensively at the Wehrhahn factory before being shipped over to the UK. Installation was carried out by the H+H team, with Wehrhahn engineers very evident on site throughout, fine-tuning, advising and committed to ensuring all deadlines were met.

The giant autoclaves in which the aircrete blocks are cured.

It was just before Christmas 2017 that the old Borough Green factory closed for the last time. The aging machinery was removed and sent for scrap with an entirely new production facility constructed in the existing factory buildings and using existing autoclaves.

The engineering and electrical teams worked around the clock for several weeks preparing the factory and then commissioning the new plant. Production teams, unable to produce blocks, were frequently on site lending a hand wherever needed and the entire process generated a strong sense of camaraderie and teamwork.
It is a great testament to this spirit that the project was completed on time – slightly ahead of time actually – and production began, as planned, in April.

From a commercial perspective it is obviously critical that manufacturing capacity was recovered as soon as possible. Blocks coming off the production line now have even better dimensional tolerances.

The process is computer-controlled.

Celcon Blocks in the Borough Green yard.

At the same time the factory is now future-proofed. Celcon Blocks from H+H are manufactured using Pulverised Fuel Ash. A by-product from coal-based power generation, PFA is now a finite resource as the electricity generators switch to other, cleaner, fuel sources.

H+H has the ability to use stockpiled PFA that has been lying for years in underground storage and still regards PFA as the most environmentally sound option for aircrete manufacture. However, the new plant allows for a percentage of the PFA to be replaced with sand – H+H owns its own sand stocks – with the ability to move to a 100 % sand mix in the future if required.

High-quality product, excellent customer relations and a world-class manufacturing facility is always the objective for H+H UK. The company has not reached its market-leading position by accident and the improvements to its important manufacturing facility play an important part of its planning for the decades ahead.

Blocks proceeding to the packaging point.

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