



Dr Alan Richardson (second from left) has been sworn-in as a City of Durham Freeman by the Mayor of Durham, Councillor William Kellett (photo credit: Geoff Kitson)

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Academic cements long-standing family ties to city Freeman

A Northumbria academic, who has led ground-breaking research into the development of self-repairing concrete, has been sworn-in as a City of Durham Freeman.

Dr Alan Richardson, an associate professor of civil engineering at Northumbria University and Chairman of the Concrete Society, has a lifelong expertise in concrete. He is at the forefront of research introducing cultivated

bacteria into concrete mix to provide a catalyst for a self-regeneration process, which enhances durability and reduces life-cycle costs.

He was brought up in his family's construction business in Durham City, mixing his first batch of concrete at the age of ten. He has now followed in the footsteps of his grandfather after being admitted into the Freeman's Masons' Company, in recognition of his work and achievements in the field of construction and masonry.

Dr Richardson, 65, took over as managing director of the family business in 1973 at the age of 21, following the death of his father. He stayed until 1996, collecting national awards along the way, before leaving to take a teacher training course.

That move led to further study for a Master's degree in Project Management at Northumbria University before he went on to complete his doctorate in Civil Engineering at Newcastle University nearly ten years ago.

As well as working on self-repairing concrete, another stream of his research involves introducing 3D fibres to concrete to provide an added toughness. These fibres can significantly reduce fatal injury and collateral damage by reducing the 'flying concrete shrapnel' generated by bomb blasts or high energy impact.

Dr Richardson's family link to the City of Durham Freeman stretch back to the early 1800s and include his grandfather Ralph. Speaking about his swearing-in, Dr Richardson said: "It was an absolute joy to follow my grandfather into the Masons' Company. He was a great inspiration in my life and I have vivid childhood recollections of him standing at a wooden kiosk on The Sands taking admission money on behalf of the freemen for entrance into the Easter Fair.

"Being admitted to the Durham City Masons Guild links myself, and Northumbria University, to a medieval heritage of science relating to the construction industry. The Guilds originally held the secrets of their trades and were the educated among the general population.

"The oath sworn on the bible during the ceremony asks for us to use our position of privilege to benefit those less fortunate and this could not be a

better thought for someone like myself, who shares research knowledge with students and supports them to have a better life for themselves through education.”

The Freeman of Durham was originally made up of 16 trade guilds or companies, of which eight survive today – the Barbers, Butchers, Cordwainers, Curriers, Drapers, Joiners, Masons and Plumbers.

To find out more about Dr Richardson’s work, and the courses available at Northumbria, please visit the [Mechanical and Construction Engineering](#) department page of the Northumbria University website.

Northumbria is a research-rich, business-focused, professional university with a global reputation for academic excellence. To find out more about our courses go to www.northumbria.ac.uk

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