



# Albert Williamson-Taylor

This year's Gold Medallist, **Albert Williamson-Taylor**, talks to Helena Russell about his passion for the fundamentals of engineering and why he's not afraid to be controversial.

When AKT II co-founder Albert Williamson-Taylor was told that the president of the IStructE wanted to talk to him, his immediate reaction was bafflement and a mild curiosity. 'So I didn't respond. A month later, he finally caught me on the phone early in the morning,' he says.

Matt Byatt revealed that the IStructE intended to award him its prestigious Gold Medal – unexpected news to a man who rarely grants interviews and steers clear of committees.

'I thought that the award had to be linked to a particular project, such as having designed an amazing bridge, or being good with glass, which was to some extent the issue for me. But after reading the citation, I saw that it was more to do with the process of my

▼ **FIGURE 1:**  
The unique twisting form of the Generali Tower in Milan by Zaha Hadid Architects was realised by Williamson-Taylor's AKT II team



thinking and how I approach engineering,' he says.

'I was also aware that the IStructE is changing, it's becoming more dynamic and relevant. I felt things were moving in the right direction, and that it was important to be a part of that process.'

All the same, accepting the honour left him with a conundrum. Williamson-Taylor acknowledges that he often feels estranged from the established industry, and was worried that his address might ruffle feathers. But having recently been appointed the first president of Open City, and as a trustee for the African Futures Institute (AFI), it seems he is ready to step up his public profile.

## Overcoming prejudice

It's hard to imagine Williamson-Taylor in conflict with anyone, given his open demeanour and softly spoken delivery. But it is accompanied by a razor-sharp clarity and confidence that some might find disarming.

Conflict, and the need to develop strategies and the tenacity to deal with it, is a recurring theme for Williamson-Taylor. A lifetime of battles – or 'inconveniences' as he prefers to call them – has led to this. 'Using design and innovation to make things better is a passion of mine,' he says.

His passion for structural engineering was piqued at an early age, traced back to a single encounter in Lagos, Nigeria. Despite studying the appropriate courses in London, where Williamson-Taylor was born, his father's ambition to become an architect in the 1950s was dealt a painful blow when, as a black person, his application would not be considered by RIBA. Instead, he pursued a career in surveying, taking his family back to Nigeria, and subsequently Sierra Leone, to use his skills in the newly independent West African countries.

But with exceptional sketching ability, his father was still in demand among

his network of architect contacts. One day, Williamson-Taylor, aged 14, was waiting in a drawing office for his dad to finish a meeting, when his attention was drawn to an imposing figure, seated at a huge drawing board raised up on a stage. 'He explained that he was doing a reinforcement drawing and that he knew exactly what every line was, where it was, and what it was doing. I thought to myself, he must be the cleverest guy on the planet! And that was it, I wanted to be an engineer, I wanted to be like him.'

Williamson-Taylor laughs as he recalls thinking it would be easy. He had exceptional maths skills but learned to read 'very, very late', eventually being diagnosed as dyslexic at university.

But the academic challenges were secondary; he was up against the racism of 1970s Britain, and the associated pigeon-holing of someone of his background and colour. With a West African Schools Certificate instead of conventional A-levels, his only option was to study for an Ordinary National Diploma; a qualification not seen as a pathway to a university degree, rather a prelude to vocational study at a polytechnic.

He was discouraged but applied anyway. 'I got just a single offer from Bradford University, and the grade demanded was exceptionally high, making it seem that they didn't really want me,' he recalls. When his hard graft was rewarded, they had to take him, but he describes his experience there as 'a battle from day one'; there were only two other black people on the course, and 'half the department wanted me out'.

Luckily, two of his tutors were also hugely supportive and committed to keeping him there. Threats were real for young black men at that time, and his discovery of the martial art of taekwondo – in which he excelled, establishing a large club at the university – proved helpful as a form of self-defence.

He still had to contend with tutors who refused to mark his coursework fairly, and even had to find his own placement for his third year, rejecting the university's suggestion he skip the industry experience and aim for a BSc rather than a BEng. After graduation, he



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## CAREER MILESTONES

- 1978** OND in building construction from Brunel Technical College, Bristol
- 1982** BEng in civil & structural engineering from University of Bradford
- 1983** MSc in structural engineering from University of Bradford
- 1983** Started work at John Gregory Associates
- 1987** Joined Price & Myers
- 1989** Joined Anthony Hunt Associates
- 1996** Founded Adams Kara Taylor (now AKT II) with Hanif Kara and Robin Adams
- 2008** Became a Fellow of IStructE
- 2009** Awarded honorary fellowship of RIBA
- 2021** Appointed a trustee of Open City
- 2022** Appointed a trustee of African Futures Institute
- 2023** Appointed inaugural president of Open City

remained at Bradford as one of just five students on the university's first Master's course in structural engineering. 'It was one of the best courses I ever did; I learned the fundamentals of analysis and programming and so on,' he says.

### Standing up for his beliefs

These programming skills came to the fore in his first job, at a small structural engineering firm in Bedford where he cut his teeth – the only company out of 130 to reply to his job applications. Computers were just starting to be used in design offices, and any analysis was a long-winded iterative process of parameters faxed to Arup, run through the program and error messages faxed back for correction, all for a fee. Williamson-Taylor spent every evening coding, and created a viable program that could carry out simple stiffness analysis in house.

His subsequent move, to Price & Myers in London, was the start of a difficult period. This time the battle was more about his engineering approach – something he feels he still has to defend at times – and he found little support.

'The issue is that I know my engineering and I won't back down,' he says firmly. 'For me, the project is paramount – I'm quite happy to challenge the client, the architect, everyone. When I'm presented with a brief that has no logic, I question it. But that sometimes makes waves,' he admits.

Acting unilaterally to follow his instinct didn't win him any favours either – particularly the time he recalls when a new detail proposed for a glass facade and roof had been deemed too risky by his boss, despite the client being keen. While his boss was on leave, Williamson-Taylor designed, detailed and tested the element, worked with the supplier and put it out to tender – by the time his boss got back from holiday it was all sewn up. He recalls being strongly reprimanded, but the structure got built, and the innovation was well received by the industry.

'To be honest, these were all inconveniences,' he says. 'My focus was always on the engineering – how do we push the boundaries?'

Moving on to join Tony Hunt's practice, he was in his element. 'Everyone was so passionate about engineering, and they were doing some amazing projects,' he says. 'Tony Hunt was a mentor to me, he very quickly had me doing competitions with him. I took on the projects that no one else wanted to do, such as East Croydon Station with its huge glazed canopies and sloping ramps. I was given free rein to pursue projects and make them work.'

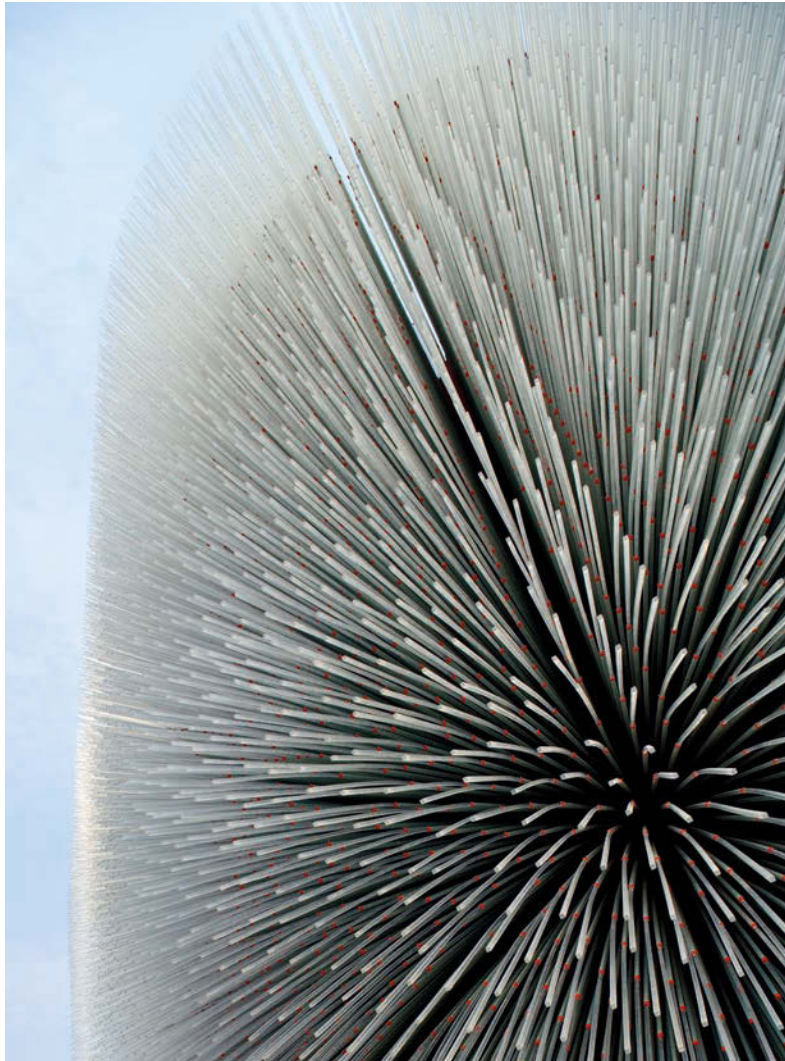
### Blazing a trail

In the late 1980s, Hunt's practice joined with YRM and the landscape changed again for Williamson-Taylor, who decided to start his own company. It took a former

**↑↓FIGURE 2:** Williamson-Taylor has worked on major projects in London, including innovative vertical extensions for Supreme Award for Structural Engineering Excellence 2022 winner HYLO (below) and Southbank Tower (above)



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**FIGURE 3:**  
The 'hedgehog'  
style facade of  
Heatherwick's Expo  
Pavilion 2010 in  
Shanghai created a  
diplomatic issue for  
Williamson-Taylor

colleague to point out that he would be blazing a trail. 'I looked around and realised there was not a single black-led engineering practice in the country, and only two architectural practices. I thought, OK, this is going to be a challenge!'

He and colleagues Hanif Kara and Robin Adams deliberately established a practice with a diverse leadership, making it difficult for them to be pigeonholed. Adams Kara Taylor, now known as AKT II, was established in the mid-90s at the height of a recession. 'That's when you find out who your friends are,' Williamson-Taylor remarks wryly.

His contacts came through and he quickly picked up three projects, including a successful competition entry with architect Ray Hole to design the Rainforest House for Hanover Expo in Germany. Around the same time, the Eden Project was in development, initially proposed with glass for the huge biome domes. The Rainforest House innovated with PTFE, which is not only lighter, it admits UV rays and offers some insulation, and this was subsequently picked up by the Eden Project, he recalls.

Another early success was the renovation of the National Gallery in Dublin, where Williamson-Taylor designed a hydraulic lift that was hung from the roof of the existing structure, to eliminate the need to blast rock for foundations.

The practice's strategy of employing Architectural Association students to assist with research brought them into contact with Zaha Hadid, and led to a number of successful collaborations on her complex projects (Figure 1).

### Innovating from first principles

By his own admission, Williamson-Taylor 'could write a book' about the 130+ projects he's worked on worldwide (Figure 2), and the arguments he's had about engineering, such as proposing aluminium rather than steel for a huge staircase on the Britannia oil rig in the North Sea, where the maintenance benefits of the material were at risk of being derailed by the insurer's demands.

Even high-profile projects such as Thomas Heatherwick's Expo 2010 Pavilion (Figure 3) were not immune to

such challenges – specifying acrylic and aluminium for the spikes of the dramatic 'hedgehog' facade created a diplomatic issue as they weren't approved for structural use in China.

Williamson-Taylor is stubborn in the face of demands that he cannot put a logic to, his mantra being that engineering principles should never be subservient to codes. 'The codes are a check and are not for establishing design principles.'

He is also forthright in his belief that if senior engineers ('myself included') are not willing to defend this position and pursue innovation, they should retire and let younger engineers take over. He sees an urgent need for mentoring and support for mid-career engineers, whom he believes are being 'stamped on and suppressed' by those who insist that design should be driven by codes.

'Young people come up with great ideas, and are the ones who are going to help us solve the challenges we are facing such as climate change.' He is excited that AI will help, freeing engineers from mundane tasks and give them greater opportunities.

### Expanding horizons

His role as trustee for the AFI allows him to share his experience of the international built environment with professionals in Africa, helping them deal with the local challenges they face, and demand better contextualisation of projects in their own countries. The institute organises talks and educational events in Africa, and this year took part in the Venice Biennale.

'As a British-West African I am very disappointed when I go overseas and see buildings designed by lazy architects and engineers that are badly interpreted or not fit for purpose, simply because they have not been analysed in context. Local engineers are just as annoyed and upset, and history has put them in a place where they lack exposure and confidence to address it.'

What's more, a lot can be learned from the African engineers in terms of techniques such as rammed earth, he says. 'We haven't tried to understand how they do it and we haven't tried to help them improve it and codify the process.'

In his new role as president of the Open City charity, he hopes to shake up the industry and get design firms, clients and developers to recognise – ideally with financial support – the huge potential the charity has for raising the profile of their schemes and making the profession attractive to young people. 'I want to expand the stewardship nationally and persuade the industry to fund an organisation that's actually advertising their buildings!' he says.



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