

Profile



£180 spent on a promotional postcard helped **Steve Webb** and **Andy Yates** create a business with a £5M turnover and offices in London, Birmingham, Bristol and Dubai.

By Jackie Whitelaw.



STEVE WEBB



ANDY YATES

After eight years of many meetings in various pubs plotting an independent future, Steve Webb and Andy Yates finally made the decision to quit their respective employers and set up their own practice in 2005.

Over 14 years at Webb Yates, the pair have created a multidisciplinary organisation

that turns over £5M and employs 75 staff working on projects ranging from arts to aviation, prototyping to housing and inflatables to loadbearing stone. And at the heart is a philosophy of collaborative creativity that engages the broad range of engineers as well as the architects in the team.

From the start of their careers, like so many engineers, the men had enjoyed imagining themselves as their own bosses. But it took 10 years of working life, a growing dislike of big corporate culture, and the sunlit economy of the mid-2000s to give them the courage to turn the dream into a real, live business.

It is a business that last year won two Structural Awards from the Institution of Structural Engineers – for the Hoover Building (Figure 1) and Haiti Chapel (Figure 2) – as well as winning engineering consultancy of the year in both the *Building* and *Construction News* Awards. Clearly, what was discussed over drinks over two decades ago had some serious substance.

Humble beginnings

To get started though, Webb and Yates had to work their socks off in the evenings and at weekends on private commissions, while still fully employed during the day, to build up enough cash in the bank to provide them with capital.

'We wanted £6000 to £10 000 each for three months, and we got that by doing loft extensions and some steelwork design,' says founding partner Steve Webb. With money tight, they took all the charity they were offered, from a tiny 20m² of office space in the loft at Rybka Battle mechanical and electrical engineers, to some old desks and chairs that RMJM were throwing out, which necessitated a trip with a van to Cambridge to collect them. 'And we made a table from some glass I had in the garden and some trestles,' says fellow founding partner Andy Yates. 'It's amazing to remember that when we started we had four desks, three chairs, a homemade table and just one computer. But it was efficient and we just got on with it,' says Webb.

Work came in quickly, much faster than they expected. Early commissions came from former employers – Capita for Yates, and SKM for Webb.



← **Figure 1**
The Hoover Building

Client: IDM Developments
Key to converting the Grade 2 listed building to create 66 residential units was adding additional levels between the existing floor slabs. Various prefabricated timber trusses hidden in walls are used to either support or hang the new floors and roof, meaning that the new walls could be simply lifted in and stacked on top of each other, forming both the structure and partitions.



GUYLEE SIMMONDS

← **Figure 2**
Haiti Chapel

Architect: Guylee Simmonds
Client: Hope Health Action
Webb Yates worked with Hope Health Action – a British healthcare charity – to construct a new chapel in northern Haiti. The primary element of the brief was to produce an 11m spanning roof structure, but in a building that would have seismic and hurricane resistance.

‘They gave us commissions and Capita kept me on for a day a week for a while,’ Yates remembers. ‘That was when we found out how supportive and encouraging other engineers can be.’

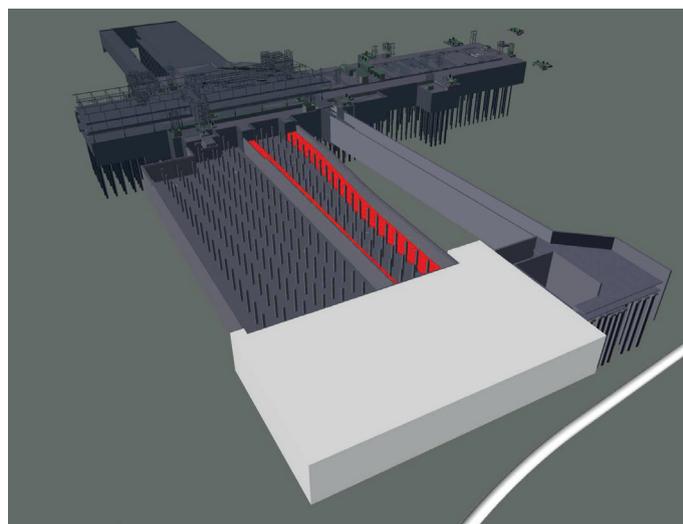
Nevertheless, they were careful with the money. It became a major decision to spend £180 sending out a promotional postcard of a modular hotel at Gatwick Airport that the new practice was involved in.

‘We were reluctant to spend the money on the mailshot, but off the back of that we were hired to work on Yotels (hotels with capsule, cabin-style, smart but inexpensive rooms) at Gatwick, Stansted, Heathrow and Schiphol airport in the Netherlands. We worked with Conran and Partners and The Manser Practice to develop the modular, flat-pack approach to Yotel construction,’ says Yates.

And from there, the practice, and in particular Yates himself, developed an airport speciality that contributes around 30% of the business’s current turnover.

Complementary strengths

‘The contractor we worked with on Yotel was Mansell. It had not been confronted before with a consultant that was light on its feet, reactive, and probably a lot cheaper than bigger firms, so it hired us for a modular, lightweight passenger bridge at Heathrow



↑ **Figure 3**
Kilo box, Heathrow Airport

Webb Yates is civil and structural engineer for the reinforced concrete 200m x 100m basement structure, 18m below ground. Complex geotechnical ground movement analyses have been carried out to ensure that heave and settlement movements are adequately resisted by the structural frame.

Terminal 1 and I found myself in the airport world,’ Yates says.

Originally, Webb too was involved in the airport work. ‘But it’s a bit too procedural for me,’ he says. ‘Andy swung to the rescue and since then it must have contributed around £10M to the coffers over the years. Andy has an excellent reputation and the projects are massive, far bigger than you would expect for a company of our size.’

The latest aviation job is the Heathrow Kilo box (Figure 3) for Gebler Tooth Architects and

Ferrovial Agroman. Webb Yates is the civil and structural engineer at Terminal 2B for the demolition of several existing buildings, and construction of a very large buried basement structure measuring 200m x 100m with a base 18m below ground. The space is for a future terminal transit system and baggage handling, while on top will be new aircraft stands and a taxi lane.

Meanwhile, Webb is playing to his strengths in the technically challenging, architectural end of the business, leading a team

designing the sun shading for the Hopkins Architects Dubai Expo 2020 pavilion, which involves a series of hanging cable nets for aluminium panels that turn in the wind. And he is also just finishing the Anna Freud Foundation building, a £16M timber-and-concrete composite office and school in Pentonville, London (Figure 4).

‘Clients come to us for Andy’s airports genius, but also because we have a reputation for good-quality structural design in unusual materials,’ says Webb. ‘It’s a house flavour that architects respond to – we are always looking for more characterful and inventive solutions for structural frames.’

‘There are a lot of engineered steel frames and concrete decks out there, but we try to make every project an opportunity to exploit different ways of building that are more environmentally friendly, by using timber or stone for example.’

‘We don’t get the easy jobs. That’s our culture and we work with others to come up with a better solution – the best for the project rather than the one that is easiest for us. We are doing a lot of slightly unusual projects that give the clients something special.’

‘That’s not to say we don’t like really straightforward, highly paid work,’ he says. ‘We do, and please send it through!’

Formative experiences

Webb and Yates met in the late 1990s at Whitby Bird. Yates had joined the firm in 1995 after graduating from the University of Dundee, in civil engineering. ‘I had originally wanted to follow

my dad and be an electrical engineer, but I'm colour-blind, which is not good when you are dealing with wiring. I turned over the page in the careers brochure and there was civil engineering. I'd found A levels and in particular pure maths very difficult, but at Dundee they taught it all in a very practical way and I got a first.'

After six years, he went, with his teacher wife, to work in Ethiopia for a year designing primary schools. 'We'd always wanted to work abroad and once I was chartered we decided that was the right time. It was a proper job in Ethiopia, paid at local wages. I was working with a Danish architect called Heidi Norman and we made sure 500 primary and 16 secondary schools were built with World Bank money.

'The World Bank insisted we design for concrete masonry blocks, but we also did some drawings for traditional materials so those villages not receiving World Bank money could take the plans and build their own schools. It felt like we did a really good thing, and that I left a legacy.'

When Yates came back to Britain in 2003, he joined Symonds, which was taken over by Capita the following year. 'On 19 September, at Steve's birthday lunch, we decided to start Webb Yates and the company began the following April.'

Steve Webb took a civil engineering degree at Queen Mary and Westfield College in London. 'I'd half grown up in the Middle East; dad was a telephone engineer and a lot of his friends were civil engineers building dams and airports and such. But when I got to college, what I really wanted to do was archaeology and I tried to swap course. I'd even got an offer from the Mortimer Wheeler Foundation, but that depended on how well I'd done in my first-year civils exams, and as I had done next to no work that didn't pan out.

'I was being sponsored by Laing on a sandwich course. I



Figure 4
Anna Freud Foundation building

Architect: Penoyre & Prasad
Client: Anna Freud Centre

An existing chocolate factory warehouse is extended with a new building comprising a basement, three storeys at the back and up to five storeys at the front of the site along the street. Above the ground floor is a traditional concrete frame consisting of exposed columns and shear walls, and above the first floor is a laminated veneer lumber frame. The timber frame elements have been designed to act compositely with an *in situ* concrete deck at each floor level.

"OUR ENGINEERS ARE NOT THERE JUST TO DO CALCULATION ... THEY ARE THERE TO BE CREATIVE, INGENIOUS SOCIAL ENABLERS"

got the degree, but found my own sandwich site experience after an unpromising start. The contractor was paying me £450 a month for a 10-hour day and my rail fare from home in London cost me £350. Added to that, I was left on site unsupervised with a theodolite and an irascible chain man. The higher-ups would then tell me off, or words to that effect, for getting things wrong.

'So I resigned and went to Guatemala for the rest of the year, laying concrete floors in shanty houses for a charity, and learning Spanish.'

Webb graduated in 1995, worked as a tunnel engineer for two years on the London Underground Jubilee Line Extension and then joined Whitby Bird.

'Whitby Bird was a stylish and exciting environment to work in – not at all what you imagined an engineering practice to be,' he remembers. 'And Andy and I were

given so much responsibility very early on. We were on Sadler's Wells Theatre, a couple of good bridges, Milton Keynes Theatre, the Forum in Norwich and there was a £20M office building that we pretty much did on our own at 26.

'We went to big design team meetings that could be aggressive and we dealt with it all. Would we send our 26-year-olds out like that now? I'm not sure.' Webb moved on from Whitby Bird after two years to work with Modus, Stephen Morley on Wembley Stadium and then the London Olympic Stadium in Stratford. There was a two-year spell in Spain with Calatrava, including a year on the Turning Torso tower in Malmö, Sweden, and then he joined SKM, again for Wembley Stadium.

Creative agency

The decision to set up the Webb Yates business was born of the

frustration of working with big corporate practices. 'There are a lot of people with MBAs in big firms,' says Webb. 'Engineers lose agency to business administrators, so if you are interested in being an engineer you're either subservient or you turn into a manager. We were both turning into managers and wanted to be hands-on engineers.'

Yates, an enthusiastic learner, has now got an MBA himself, ironically, along with an earth sciences degree. 'I wanted to know more about running a business. What surprised me was that the MBA didn't tell you that, but about how to think about things or approaches to take.

'Given the size we are now, we could do with improving the way we manage things. I do struggle to balance the workload and wouldn't mind reducing the project work. Steve, I think, would go the other way,' Yates says.

As the business develops, both men are keen for the culture to remain the same. 'Our engineers are not there just to do calculation, we want to imbue our engineers with an understanding that they are there to be creative, ingenious social enablers,' says Webb. That is why it is so important they work with the other disciplines in the practice and understand all aspects of the job.

'Engineers are often happy to bury themselves in the calcs, but by working with other practitioners they have to take responsibility for wider things.

'What is key to our success is getting our engineers into the mindset that they have creative agency, while getting our architects to engage with the technical aspects.'

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