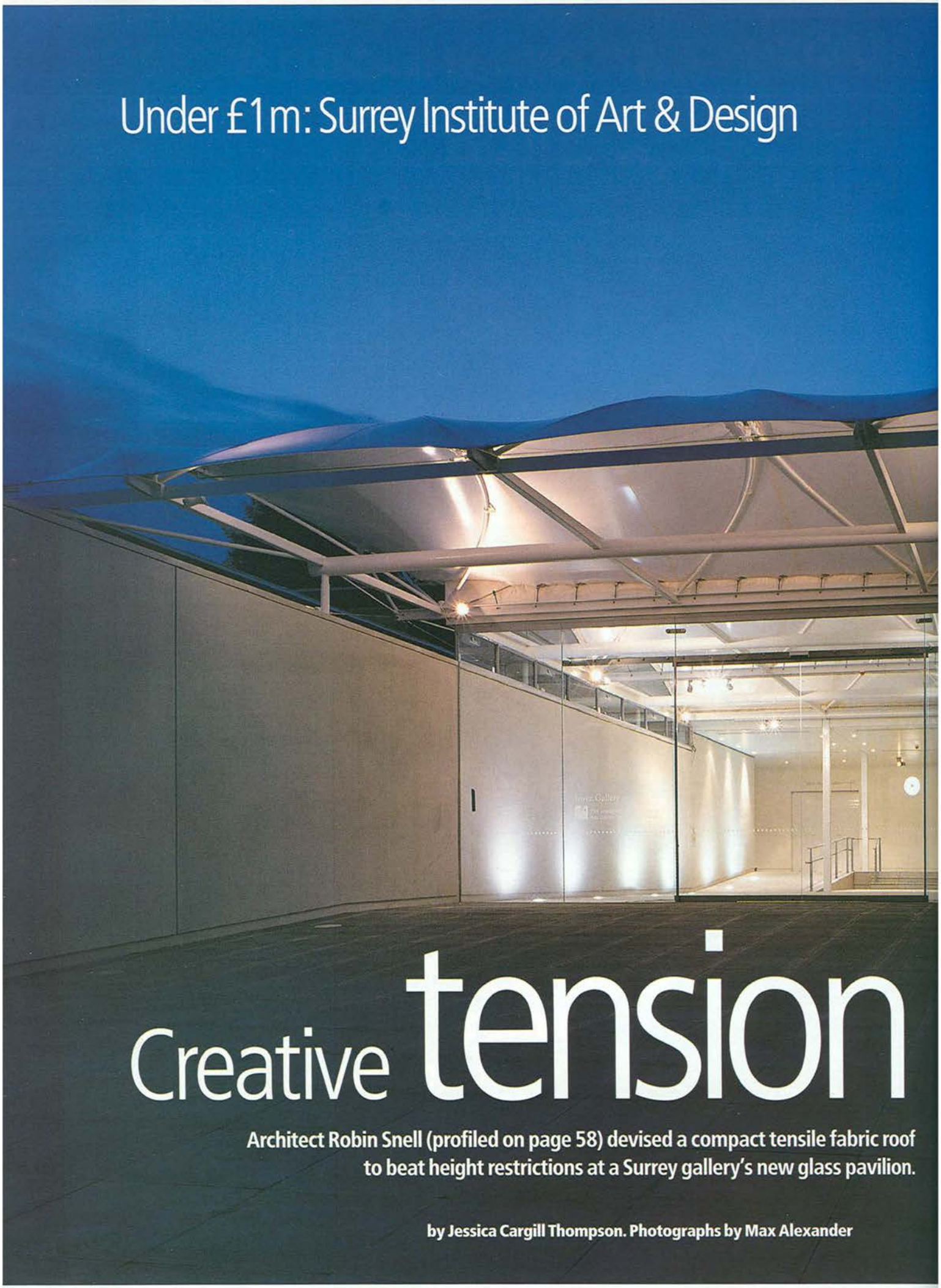
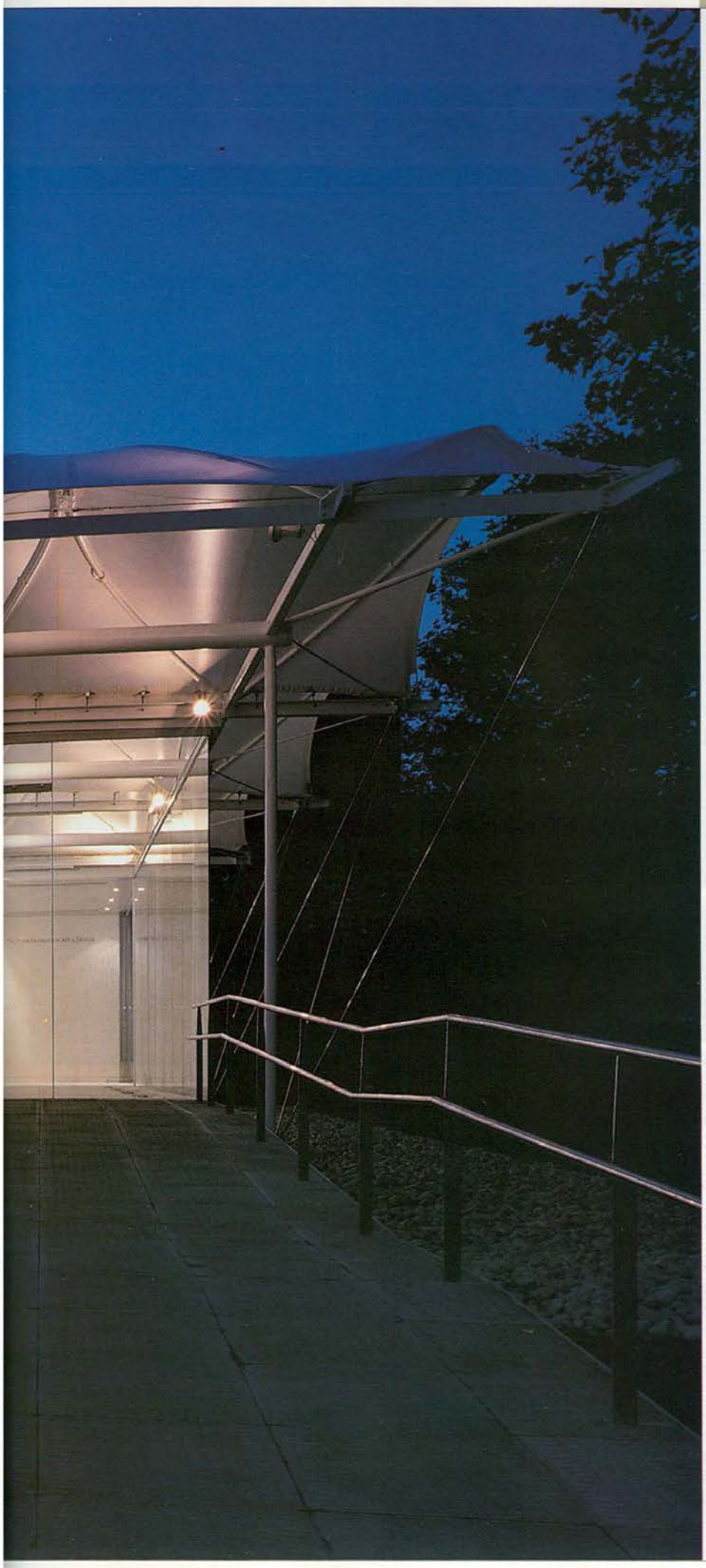
Under £1m: Surrey Institute of Art & Design



Creative tension

Architect Robin Snell (profiled on page 58) devised a compact tensile fabric roof to beat height restrictions at a Surrey gallery's new glass pavilion.

by Jessica Cargill Thompson. Photographs by Max Alexander



A novel lightweight roof, structural glazing, slender steelwork and clever lighting create a foyer that is transparent and enticing.

IT'S A FAR CRY FROM GLYNDEBOURNE, THE £23m award-winning opera house that made Robin Snell's reputation as project architect with Michael Hopkins and Partners. Yet the 130 m², £500 000 canopied gallery extension for Surrey Institute of Art & Design in Farnham – Snell's first major finished project since going solo – demonstrates all the values that drew him to Hopkins in the first place: lightness of touch, painstaking detailing, understanding of materials and a fascination with the way components are put together.

The new Foyer Gallery is a raised transparent glass pavilion in classic Miesian style, paved with cool limestone and topped with a (very Hopkins) tensile fabric roof supported by an innovative array of steel hoops. During the day, it is a light, airy space that welcomes visitors to the institute; at night, it ▶

▶ becomes a giant lightbox, illuminating the surrounding landscape.

"The building is all about being open, like a big shop window," says Snell. "The idea is that there is minimum boundary between inside and outside."

That didn't mean just building a glass box. It also involved creating a series of gentle slopes leading up to the entrance for disabled access, installing automatic doors to draw in visitors, and adding a long, 6 m high wall that extends out of the gallery and down to the road where it stands as a beacon for the institute.

The original competition brief was for a formal entrance, but Snell submitted two proposals, one for the entrance alone and another that showed what the institute could do to make the most of its site, and how it could finance a larger scheme with lottery money. The institute was convinced, and the new Foyer Gallery will not only serve as the college's main reception area but will extend the existing James Hockey Gallery into the surrounding Borelli Gardens, where outdoor sculpture will be exhibited.

The body of Snell's pavilion is classic, late 20th-century, clean-cut modernism, made up of three glazed bays supported on a modular steel frame. Frameless glass walls – 3.75 m high, 1.35 m wide and 15 mm thick – are clamped at the bottom, pinned back at the top and silicon-jointed between panes, rendering them barely visible.

Although fabric roofs are de rigueur among those with a penchant for the light and airy, Snell's fabric roof has been specially designed to suit the site. Most tensile structures are either pushed up from below (Hopkins' office foyer) or pulled from above (the Mound Stand at Lord's). But at Farnham, restricted height and a lack of space below meant there was no room for either approach, so engineer Buro

Left: Height restrictions meant that Snell and engineer Buro Happold had to develop a compact tensioned roof structure based on a regular series of steel hoops.

Right: A single piece of PVC fabric is stretched over the hoops (top) and held in place with Velcro straps. The hoops push out on the fabric (bottom), making it taut and strong.

Happold – the team behind the country's most famous tensile structure, the Millennium Dome – has created a system not dissimilar to an umbrella.

PVC fabric is attached in one sheet and stretched across a framework of slender, high-strength curved, steel bars and held on by Velcro straps. This way, the fabric and steelwork move together under wind loading and the fabric provides a degree of lateral restraint for the arches, allowing their diameter to be kept to a minimum 50 mm.

"We wanted to get the structure as light and elegant as we could," says Snell. "The nice thing about fabric is that when light goes through it, it becomes very diffuse – even and controlled. Inside, it feels as if you're outside."

Services are neatly concealed in the floor and roof to provide a streamlined finish. The motor and track operating the automatic doors is housed within the concrete floor ▶

▶ slab. Lighting is mounted on tracks and integrates into the roof structure, illuminating objects and the underside of the roof at night. No gutters clutter the roofline: water runs off into a bed of large pebbles that filters it into an underground drain.

The interior temperature is regulated by air drawn from beneath the building which is cooled by the concrete floor and the pebbles, and dispensed through grilles in the raised concrete floor. Extraction vents are concealed in the roof. In winter, ventilation is shut off and an underfloor heating system turned on.

A fraction of the size of Snell's previous projects, the gallery's scale has allowed him to keep a tighter reign on detailing and quality control. He has worked closely with the various component manufacturers and visited the site with his two-year-old daughter every Sunday to check on progress.

"The way we work is very much as a combined effort," he says. "I consider the specialists to be members of the design team. The success of any building is how it's put together and how it's made. I'm of the opinion that if the bolts aren't in the right direction, the building's failed. What's nice about small projects is that you can devote more time to them. It allows me to get back to the ways of working that were, I think, the origins of Michael's practice."

Institute director Norman Taylor – who cites Mies van der Rohe's Barcelona Pavilion as his favourite building – is pleased with his new gallery. Due to open next month, it is the latest in a series of developments at the institute. Amounting to a £10m investment over the past five years, they show a commitment to modern architecture that will complement the existing 1960s campus.

"The whole of the front of the building was saying 'Go away'," Taylor says of the institute's former poky entrance. "We decided that what we do should not only be welcoming, it should be transparent. And I don't just mean made of glass – I mean really open. The lightness Robin has introduced has a festive spirit. It's celebratory.

"Our view is that we should say something to the world but also to our own students about design. We hope the pavilion will do a great deal more than just extend the space."

Robin Snell is profiled overleaf.

Above: The low roof accentuates the space revealed by the full-height structural glazing beneath.

Left: Structural glazing and lightweight steelwork in the roof mean unrestricted views and maximum daylight.

Funding breakdown

lottery funding	£260 000
client funding	£80 000
client-funded works separate from main project (including fees)	£160 000
total project cost	**£500 000**

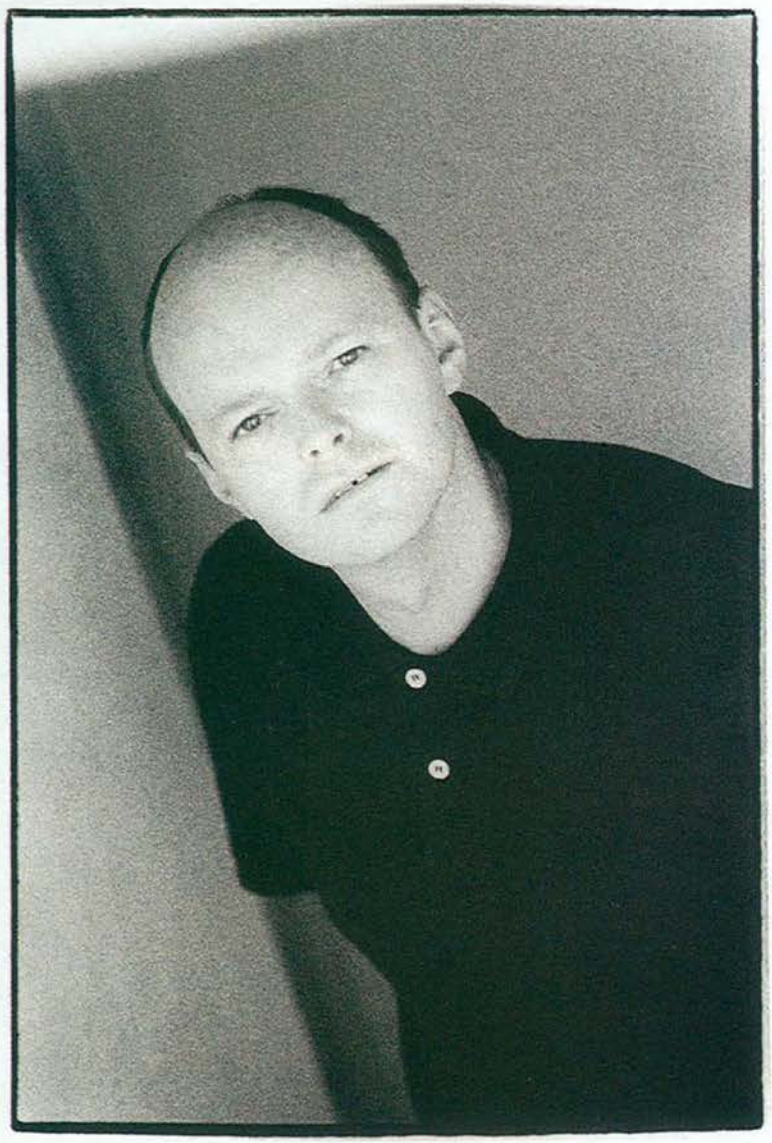
Project team

client
Surrey Institute of Art & Design
architect
Snell Associates
structural engineer
Buro Happold
services engineer
Bruce and Partners
QS
Gardiner & Theobald
main contractor
Mansell
key subcontractors
Littlehampton Welding (steel), Landrell Fabric Engineering (roofing), Alpha Plana (glazing), Brookwood Construction (concrete)

Building 25 September 1998

Surrey Institute of Art & Design: the architect

After 12 years with Michael Hopkins, Robin Snell is celebrating his first solo success.



Portrait by Stephen Parker

IT WILL TAKE ROBIN SNELL A FEW MORE years to shake off the legacy of his former employer, Michael Hopkins and Partners. But, still young enough at 40 to make it into the Architecture Foundation's recent book on new architects, he is on his way.

Snell's credentials are impeccable. He trained at Sheffield under the legendary team of Cedric Price, Frank Newby, David Alford and Patrick Hodgkinson; won the RIBA technology prize for his forward-thinking thesis on an airport at the then unused Canary Wharf, and followed this up with a move to Hopkins' up-and-coming practice.

The job was meant to be an apprenticeship, but, 12 years later, he was still there and coming to the end of a four-year assignment as project architect on Glyndebourne Opera House, a building that won the practice a hatful of awards and Hopkins a knighthood.

Snell considers this experience invaluable but as the practice grew, so did Snell, and, by the end of 1993, he was itching for independence.

"I had a word with Michael and said I was ready to make a go of it on my own," he recalls. "[I wanted] to get back to the roots of why I joined the practice and to the sort of buildings [Michael] was doing in the beginning."

Hopkins' response was to offer Snell his first commission – a new entrance for the practice's London office. This elegant glass box shaded by a tensile roof caught the eye of Norman Taylor, director of the Surrey Institute of Art & Design, who invited Snell to submit proposals for a gallery extension and entrance for his college.

Snell founded his practice in 1993 and, after a year working on competition designs, the wins came in droves: Newcastle Architecture Centre in 1995, the Surrey institute in 1995, the Pavilion Theatre canopy for Worthing Pier in 1996, a masterplan for Ryde Pier on the Isle of Wight in 1997. So far, only the institute has materialised.

Picking up plum jobs doesn't seem to be a problem. But, after his years at Hopkins, how has Snell coped with the sudden change in project size? "I don't consider projects in terms of scale," he says. On the bijou Surrey art gallery, every detail has been carefully specified and regular visits were made to all the component manufacturers. This is a man who knows what he wants.

For the past three years, Snell has operated out of a basement in St John's Wood, in the same road as his house – he has always insisted on living within walking distance of his office. The practice is now five-strong and Snell is looking for bigger premises.

He is about to start on the redevelopment of Cambridge's Amateur Dramatics Club theatre and two new-build houses on Finland's Baltic coast. Enquiries are also coming in from corporate clients, but Snell is wary of letting the practice expand too quickly.

"We need to build up the office to deal with the larger projects – but slowly. There's no rush."