

SHEDDING LIGHT

The structure is clad in a shimmering skin of inox steel, which contrasts beautifully with the muted greens of the surrounding plain and mountains

Opposite, the school's workshops are flooded with soft northern light, thanks to a series of large windows in the sawtooth-shaped roof



Nerves of steel

Swiss architects Durisch + Nolli showed they were up to the challenge when it came to designing a construction college slap bang in the middle of a flood plain

PHOTOGRAPHY: DAVID WILLEN WRITER: SOPHIE LOVELL



Whether in fiction or reality, we are rarely gifted with the perfect plot. And yet, for some architects, the most difficult terrain can prove not only a challenge, but an inspiration. In the 1960s the Swiss Society for Construction Entrepreneurs (SSIC) chose, perhaps rather rashly, to build its vocational training college on an alluvial flood plain by the village of Gordola in the Swiss canton of Ticino. The ground is spongy here, and the water table very close to the surface. In 2000 alone, the nearby Lake Maggiore burst its banks twice, soaking the entire campus. So when in 2004, SSIC held a national competition to design a new workshop building for its trainees that would also contain half a million Swiss francs-worth of digital machinery, priority number one was that it be flood-proof.

Unsurprisingly, many of the submitted designs involved building dams or raised mounds to hold back the waters when they came. But the competition winners, architects Pia Durisch and Aldo Nolli, of Durisch + Nolli Architetti, chose the path of least resistance, and put their building on stilts. If and when the lake floods again, they reasoned, the water will pass underneath, otherwise the space under the building can serve as a useful parking and storage area. 'It also seemed a terrible shame to break the topography of the plain,' explains Nolli.

Completed in 2010, their building is a 140m-long volume set on a single concrete slab sitting on 68 slim concrete stilts, which in turn are standing on a gravel base. So far, so solid. Above the slab is where all the poetry begins: the architects chose a lightweight steel shed roof construction that covers a combination of single- and double-height

spaces in a sharp sawtooth silhouette that contrasts wonderfully with the flatness of the plain. A shimmering outer skin of inox steel enhances the effect of a floating, slightly other-worldly yet obviously functional building. Viewed from the west, its long serrated profile is rather fort-like, but since it appears to hover above the ground on almost invisible stilts, one is reminded of the expression 'castles in the air' – in the nicest possible way. From this angle, the new structure hides the rest of the campus' buildings. In front is a large expanse of bare ground called the 'paddock' where students are trained to operate heavy site machinery such as excavators and cranes. This area of naked earth provides an eye-catching visual contrast to the shiny metal technical construction resting lightly upon it.

The form, says Nolli, arose purely from the parameters of the brief: firstly, a raised base because of the terrain, and secondly, teaching spaces with ideal conditions according to a set of strictly defined workstation ergonomics from the client. Durisch + Nolli often create their buildings using a module format: 'We discovered that a three-metre module worked well for the arrangement of the workbenches and machines and also provided similar conditions to those found in a factory, where many of the students would later work.' The shed roofs arose out of this module solution

HIGHER GROUND

Set on a single concrete slab sitting on 68 slim stilts, the SSIC college hovers above a flood plain in Gordola, near Ticino's Lake Maggiore

and allowed each workspace its own source of diffuse north light from above. 'We oriented the building along this long north-south axis,' says Nolli, 'because we wanted to give the students natural light without them being exposed to blazing sun.' The east and west sides are punctuated by windows purely to provide an occasional view to the outside.

The vocational centre contains three teaching workshops for woodworking, metalwork and the sanitary trades that accommodate approximately 150 students in total. The three double-storey sections house classrooms, with shower and changing rooms below. All the interiors are sparse and functional, with exposed structural elements.

When asked whether he would describe the vocational centre as a typical example of one of their buildings, Nolli replies: 'The idea of an architect having a particular style is somewhat out of date these days. Typical for us is that each building is a bespoke individual designed according to its own specific demands. Also typical for us is that we try to bring together very complex requirements within a simple system, as seen in our Max Museum in Chiasso or our new Federal Criminal Courthouse, now being built in Bellinzona.'

Durisch + Nolli are also rather proud of their record in keeping costs down: 'The building costs were way below the average price of a school building, and a little higher than those of a standard factory,' says Nolli. 'This is because we tend to build with simple materials and standard elements, but nevertheless, it is a new object in its own right.' Simple, bold and functional, the SSIC takes industrial chic back to its roots. ★

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Choosing the path of least resistance, Durisch + Nolli put their building on stilts