

Silicon & Software Systems



Polished Reconstituted Stone Precast Panels by Techrete Ltd.

Silicon & Software Systems - South County Business Park.

Dublin based FKL Architects recently completed a landmark company headquarters for Silicon & Software Systems, an Irish based software development company specialising in combined software and hardware design for the microelectronics industry. The design which has been described as 'unusually bold' for an out of town office building, features black polished, reconstituted stone precast panels on all four elevations. The panels were specifically designed by FKL architects in collaboration with precast panel specialists Techrete, to give form to the Architectural concept.

Conceptually, the Architects have devised the building as a solid block, black on the outside, out of which three smaller blocks are carved and removed to create voids.

These 'cut out voids', located at the entrance lobby, training room and atrium, have contrasting, lighter coloured panels with a textured surface.

The rich black/grey Techrete panels are formed from black basalt, sand and aggregate. Basalt was particularly chosen because of its colourfast properties which will prevent fading as the panels weather. The larger units measure 5.4 m high x 1.5 m wide x 150mm thick and weigh 7.5 tonnes.

Units are stepped out of line between floors so as to avoid vertical alignment of windows. This, according to the Architects is a device to maintain 'tension' in the



*Precast Sandblasted panels by
Techrete Ltd.*

elevation which would be lost if windows and panels were aligned in vertical columns. The effect is enhanced by overlapping the panels to create a subtle interlocking pattern. The absence of

parapets and sills, the sharp edged window opens and stark black polished surfaces all combine to create the illusion of a 'sliced black cube' silhouetted against the sky.

Due to the staggered layout of the panels, it was not possible to stack the units on top of one another, as normally happens, transferring the vertical loads downwards to the ground floor. In this case, each panel is independently supported off the floor slab edge by means of two concrete corbels which form part of the panel. These are housed within the wall zone and beneath the raised computer flooring. The corbels carry the vertical self weight of the panels and the windows housed between them. In addition, each unit is restrained at four points (two at the head and two at the base), by means of angle cleats, fixed to the concrete structure with cast-in Halfen Channels. The restraint fixings are designed to take lateral loads - particularly wind load.

The panels located at the entrance lobby, training area and atrium were designed to create visual contrast. Here, the panel which is faced with granite, sand and aggregate is sandblasted to produce a

