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THE CIRCLE OF STYLE

CATCH THE SPELL

ENVIRONMENTALLY SOUND

words Deen Sharp

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An interview with Nabil Gholam on Environmental Architecture and the new engineering building at AUB. He set up his own practice, "Nabil Gholam Architecture and Planning" (NG architects), in Beirut in 1994 and in Barcelona in 2006. Currently NG architects are undertaking projects in Beirut, Doha and Barcelona.

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In tune with the topic of this article, 360 interviewed Nabil Gholam in his Beirut offices, although Nabil himself was sitting comfortably explaining his work's green credentials out of his Barcelona office. The wonders of conference calling are not only time efficient, but also naturally carbon efficient. However, it was well before that Nabil proclaimed he was constructing "environmentally sound" buildings. The first project, that Nabil Gholam architects began in Yarze 15 years ago, had all the essentials of a 'green building'. "[In our] first house in Yarze, the building used no air conditioning or heating virtually throughout the year. It has been an obsession of mine to steer my clients to have a more responsive attitude towards the environment and we managed to succeed at different degrees, as some clients don't want to hear about it. But, interestingly, more and more often we are getting people who are listening and willing to put in the extra capital, because sometimes it adds an extra cost, and if it is a little bit more complex so be it. In Yarze, there are solar panels, double walls that were one-meter thick, the collecting of the [rain] water, the deep recessed windows the stone local material, basements that are cool in the summer and hot in the winter". Ensuring that this environmental consciousness continues to run through all of his buildings, Nabil extols the environmental virtues of 'Clouds', one of his firm's latest projects in Faqra, which is a row of sixteen houses. In this project, the stones, which are a mixture of yellow and grey and used for the cladding of the building, were taken from right across the street. Not only did the stones travel very little distance to the construction site, usually a large factor in emitting carbon emissions, but also the rocks were not quarried. This meant that the environmental implications of quarrying were avoided, the profile of the land unaltered, and a plot of land cleared.

Nonetheless, Nabil does not wish anyone to confuse him as a fundamental environmentalist or a member of Green Peace. Do not expect him to be running in front of aeroplanes to protest at their emissions or turning away clients that drive gas guzzling 4x4's. "Bringing a degree of realism with our environmental consultants is always one of my concerns. Because if a client, knowing less about these things than you, trusts you and you create something that is complex but does not produce much result is not something you want to do. So you have to be pragmatic". For those architects and environmentalists that are nostalgic about the environmental efficiency of the vernacular architecture, in that they were often well suited to their environment and constructed in a far more sustainable manner than many modern buildings, Nabil has little sympathy. "All this low rise vernacular architecture in the mountains of Lebanon with two stories and a basement that has a great thermal mass with small windows and a little red roof worked quite well; but needs have changed". Now, in Nabil's opinion, people demand and need buildings that are high rise and have density. "This more vernacular model is useless as a direct metaphor of what you want to do, you have to abstract and take from it what can be useful in whatever size building you are working with and try to learn from it. The system is far from perfect and being entirely idealistic about it usually tends to paralyse you and you don't make any difference, as you don't build".

Thus, despite the fact that 'Clouds' has a stone cladding that was brought from across the road, another chalet that NG Architects is working on used imported timber from Spain. The reason for the use of

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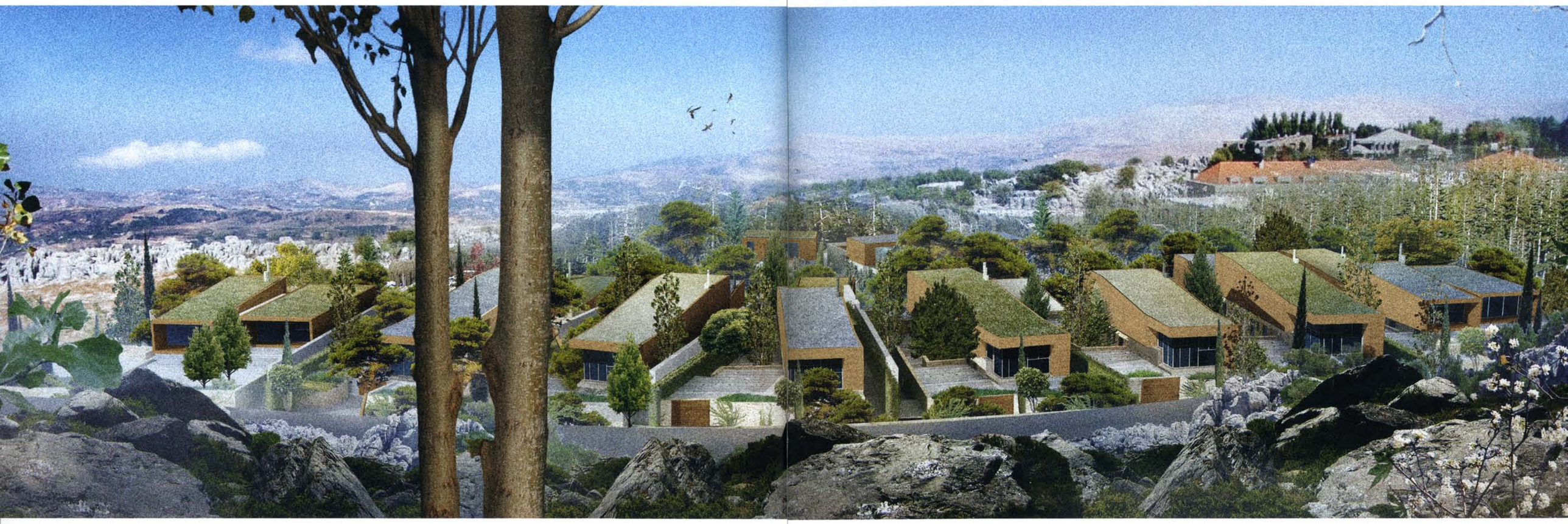

wood was mainly aesthetic, "I wanted to clad the building in wood, with very simple shapes and not [create] another folkloric fake Lebanese building". Nabil, in this case, sees the importing of wood as give and take. Not to source materials locally is not environmentally sound but the better quality wood means that it is stratified and needs little maintenance, so can last for much longer. The wood can be used as a second skin so the hot and cold are stopped to protect the inner skin as much as possible. The resulting approach is one of pragmatism and means that the environmental emphasis in Nabil's projects will be, to a certain extent, client driven.

AUB presented a seemingly willing client that wanted a new complex for their Engineering Department, aiming to achieve the building's LEED certification. The Leadership in Energy and Environmental Design (LEED) began in 1994 in the US and created a rating system that addressed six major areas: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and the design process. From these six categories, the building is rated on a points' system that can achieve the four levels of certification: certified, silver, gold and platinum. The IOEC-AUB engineering complex is aiming for gold. Nabil is enthusiastic about this process and is looking forward to the challenges that LEED certification may confront his firm with. One that has forced Nabil and his firm to rethink is the way in which materials are selected. "There are a variety of materials that come into play in a building--such as the different kinds of timber, the floor, the walls, the screens, some of the curtains--and must be carefully selected in order not to be harmful to the environment".

The process that NG Architects went through to ensure that the IOC-AUB "high-tech engineering complex" is as environmentally sustainable and efficient as possible occurred in many layers. The first of these is the position the building takes within the site. "For example, you can make a building and orientate it in a completely wrong direction, so that it faces West, in which you get the sun all the time in the afternoon, especially in the summer and it would be difficult to manage this". The orientation of a building is the most basic step in ensuring that it is as energy efficient as possible. In AUB, the site favors an orientation of North-South, a very good one in Lebanon as the North gives you a lot of light but no direct sun virtually, and the South gives you a lot of sun low in the winter and high in the summer. The second layer in the thought process brings the more technical aspect of the cooling and heating of the building. Nabil explains that to achieve an energy efficient building, the architect must attempt to create an "envelope that has a certain thermal mass, meaning that the building will have a cycle of heating and cooling, which you bring closer as much as you can to the opposite cycle of the natural heating and cooling of the season's days and nights. Thus, you manage to have the building cool during the day as it absorbs the heat while having all the coolness in it.

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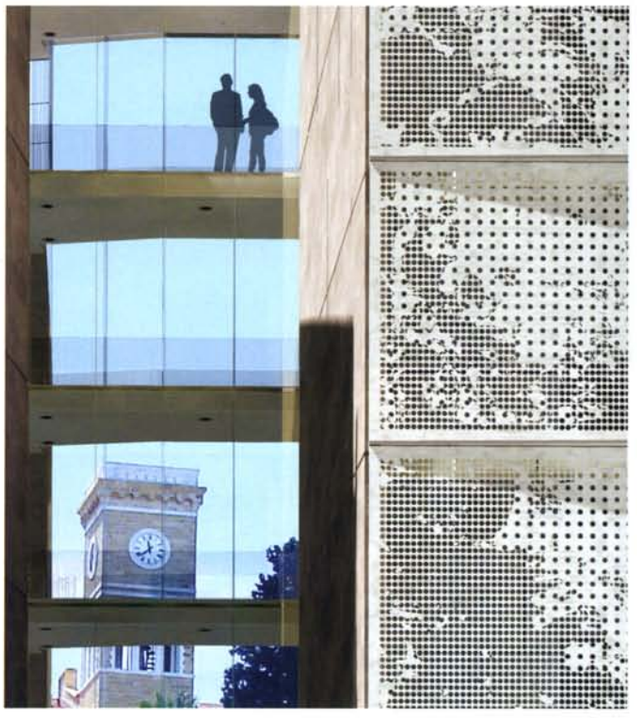

A more unusual equation for what is thought of as environmental architecture has also been implemented by Nabil into the construction of the AUB Engineering Department. "This building is a lab for the engineering school of AUB, where most of the engineers whether mechanical, electrical or structural will be studying and experimenting. So the fuels and services that we will bring, for example pressurized air and oxygen, need to be piped in. We will take special care of these via air conditioning through ducts, so that the students can see how the building is wired. There is a didactic ambition here, if you are exhibiting a certain degree of environmentally friendliness, it will have an impact on the students because they will be looking at how you can do something. In Lebanon, the profusion of cheap energy at least on the fuel side, although changing now, has had the result of many engineers not worrying too much about the [environmental] aspects. Although the new generation is more concerned, it is not yet as prevalent as in Europe or other countries that are really sensitive".

Hopefully, the IOEC-AUB Engineering Complex will achieve its Gold LEED certification and produce students that will design similarly well thought through buildings. These will be working within an environment that is becoming increasingly aware of the way in which the man-made interacts with the natural. Already, LEED has expanded to the Emirates and green building regulations are quickly spreading beyond idealistic enclaves. And Nabil concludes, "to a certain degree, everyone has to start at some scale to impact what is happening".