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Architecture of a new world

12 REMEMBERING THE STRUGGLE

The Museum of People's Struggle, South Africa

ARCHITECTURE The Reversible Destiny Lofts in Japan, the first example of procedural architecture promises to calibrate your life **RESIDENCES** Three outstanding projects from Lebanon, Italy and Mexico **LANDSCAPE DESIGN** Four exclusive projects from across the world **URBAN DESIGN** Micro Compact Communities - the way forward? **CONSERVATION** Divine Interventions **SMART ENVIRONMENTS** Six articles including the multi-award winning Haybarn, eco-design for offices and the first dedicated nature spot for children **VIEW POINT** The value of mistakes + more

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Andalucian Spirit

A young Lebanese family living in Paris wanting to build a house in Yarzé, a leafy suburb of Beirut, the capital city of Lebanon, commissioned the Lebanese architectural office Nabil Gholam Architecture & Planning to design their home. "Perhaps a stigma of the war that ravaged Lebanon for years," recalls the architect, "they stipulated that the house had to be introverted with its back to the street and its front opening into the garden". Moreover, the house had to be a home and not a large-scale villa, with minimal intrusion to the site.

Designed over a period of 12 months and constructed over another 24 months, the two-storey house occupies a built up area of 800 sq. metres (400 sq. metres above ground and 400 sq. metres below ground as parking and a small loft for children). Situated on the southern hillside of Beirut, the site measuring 1,800 sq. metres, was considered relatively small when compared with some of its neighbours in this upscale residential neighbourhood, of mostly private houses, encouraging a limited footprint to maximise open space. »

PROJECT DETAILS
TITLE S & O house
CLIENT Private
LOCATION Yarzé, Beirut, Lebanon
ARCHITECTURE Nabil Gholam Architecture & Planning
INTERIOR DESIGN Owner
LANDSCAPE DESIGN Nayla Dohs Camilleri
STRUCTURAL DESIGN Sol et structures
HVAC DESIGN SERT
LIGHTING DESIGN Nabil Gholam Architecture & Planning
KITCHEN DESIGN Builtwood
PROJECT MANAGER Zaki Mandini
PROJECT QS Zaki Mandini

PROJECT TIME FRAME
DESIGN / DETAIL 12 months
CONSTRUCTION 24 months

PROJECT FACTS
SITE AREA 1800 sq. metres
BUILT UP AREA 800 sq. metres
BUDGET US\$1.2 million
STATUS Complete



Embracing Tradition

Based on a 16 m x 16 m plan and taking advantage of a central hall and patio above, in a true Mediterranean house tradition, the plan is oriented to the south with careful thought given to the cross-ventilation and the valley rising winds. A mobile sun-shading tensile fabric in true Andalusian spirit covers the deck at first floor level (this simple device originated on the shores of the eastern Mediterranean to mostly disappear but surviving to this day in southern Spain); thus the courtyard becomes an indoor-outdoor living room with a teak deck and potted orange trees again not unlike the Moorish houses of Grenada and Seville. Moreover, the favourable orientation, thermal insulation and use of passive energy devices (fabric above the upstairs patio, reflecting pool, etc.), allows the house to be completely free of the need for air conditioning and to use very little heating throughout the year. According to the architect, "both systems were installed at the owner's request, not to be used since!"

Four materials, simple and noble, are predominantly used throughout the home: Lebanese golden limestone (furni), teak and red cedar wood, low-E clear glass and black steel. The entrance door including hand-blown glass panels with lenticular finish is designed and manufactured especially to allow cross-ventilation and privacy when the door is closed and the glass folded.

Intelligent Building Design

The building is characterised by a system of thick double walls (one metre thick at the base) that taper as they go up and incorporate the seismic-resistant structure including load bearing walls and pillars designed in accordance with the soil investigation report recommendations. Additionally, the tapered walls house all the technical networks of the building. There are no ducts, pipes, electrical, data, air conditioning, heating or any technical element outside these walls, leaving the plan of the house completely free and allowing maximum flexibility for its owners. Thus, the technology, while present, remains virtually invisible, leaving room for simple, beautifully lit spaces.

Interestingly, closets and shelves are also built into the thickness of these walls in the periphery of the rooms and provide access to the technical plenum located behind, thus giving easy direct maintenance to the entire network. Furthermore, the thickness generates and secures complete privacy to all the rooms and protects from the sun. It also helps to frame the best views of the gardens that the client stipulated should have a 'natural' feel; hence, the upper terraces, being more mineral, are more 'man-made' while the lower garden is allowed to 'return to nature'. All key rooms extend into the garden or a landscaped patio while the entire plan of the house is carefully positioned between three existing pine trees. These were the only trees on site and were preserved throughout the development.

Naturally Lit

The house takes maximum advantage of natural light supplemented by limited non-incandescent light sources; extensive natural lighting is employed throughout the design - even the car park area is naturally lit. Where artificial lighting is used, this is limited to indirect dimmable fluorescent warm white main lighting. No direct light source is visible. A feature of the dining room: fibre optics with zodiac signs of all the family members is used to light this space.

This family home in Yarzé successfully responds to the specific needs of the client, climatically to its location in Lebanon, and contextually to the hilly environment of the suburbs. The architects have carefully reinterpreted a traditional Lebanese model stretching over two floors without indulging on stylistic pastiches. Meanwhile, the intelligent walls, natural solar protection, orientation, rainwater collection for irrigation and grey water, patio shading with fabric, and full cross-ventilation, make the building highly energy-efficient. Text: NG Architecture & Planning, images: Nabil Gholam, Samir Saddi (pp.48,49,50) and Richard Saad (p.51). Edited: Architecture+

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