I AM NOTHING OF A BUILDER
BUT HERE I DREAMT I WAS AN ARCHITECT

— The Decemberists —
WINGS OVER MALIBU

After using refrigerator panels and sailing boats as building materials, David Hertz tries his luck with the wings of a Boeing 747.

Text: Michael Webb / Photos: Caleb Coppola
A new Boeing 747 costs around $300 million, but the stripped shells of discarded models are cut up and sold as scrap for as little as $22,000 – an amount that made it feasible to transport wings and other sections from an aircraft graveyard in the southern California desert to a remote site in the Santa Monica Mountains and recycle them as habitable sculpture. The complex is called the Wing House. It was designed by architect David Hertz, an architect and scientist whose profession for the environment was spurred by the pollution of Santa Monica Bay. Throughout his 25-year practice, he has recycled industrial materials to conserve energy and natural resources. Giving new life to an airplane was a logical culmination of his earlier efforts.

Chances played a big role in this six-year project. Francis Robb, who inherited her father’s Mercedes dealership, bought the Malibu ranch of Tony D’Amico, a brilliant designer who designed movies and follies built from scavenged objects. A brush fire devastated the estate in 1995, and Robb went searching for a Los Angeles architect to create her dream house in a setting of wild natural beauty. She called Hertz as he was about to leave for a family holiday. In Scotland and drove him around her rugged, 22-bureaucrat on a quiet she could barely control. “I had to hold on for dear life, but it took in an initiation test,” says Hertz. “The next day she walked around my house in Venice, telling me that she loved what I had done but found it too angular, boxy and masculine for her taste. ‘I want something that’s curvilinear and feminine,’ she said, and gave me the commission.”

In Scotland Hertz began sketching swooping roofs, just as his mentor, John Lautner, used to do. “Like him, I imagined myself standing on a ridge beneath a canopy that flowed above a membrane of clear glass,” he recalls. “I drew an ellipse inspired by a sailboat or a surfboard, and it reminded me of the limbus flow of air of an airplane wing. Then it struck me: why not use a real wing?” As a kid he had marveled at the rows of airliners mothballed on the tarmac at Mijas, and the idea took root. On the trip back to L.A. he photographed details of aeroplanes, focusing on their curvaceous geometry, shaped by engineers in response to natural forces. Planes have evolved, like birds and sea mammals, to function with maximum efficiency in their chosen element. They are light, strong, durable and precisely engineered. Those qualities allied to their functional beauty convinced the Mercedes-driving client to embrace his architect’s vision. Before anything could be ordered or built, Hertz had to win over 17 official agencies and secure a stack of permits. The chief planner checked

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encored that nothing in the building code prohibited using a wing for a roof, but he demanded to know how it would fare in a high wind. These critics cuffed 200,000 kg of fuel and up to 400 passengers at 1000 kph through the jet stream; I think they’ll withstand a Malibu gale,’ declared in a voice expert whom Hertz had brought to the meeting. However, to sign off on the project his engineer needed to know more about the interaction of the wing with the building was willing to share. Repeated calls to the company’s legal department prompted a visit from the Depart- ment of Homeland Security officials, sessions to know whether the architect was part of a terrorist cell. Rereassured that his intentions were peaceful, they offered their technical expertise in stabilizing air flow on their Crry supercomputer.

Then followed an encounter that would be eliminated, as wildly implausible, from any movie script. Hertz was taking his kids around the International Spy Museum in Washington, DC. Later that day, he kept his appointment with a homeland security official, who met him in the lobby of the hotel next door, handed him a CD containing the analyses, whispered: “I don’t mind you loot off. That gave the engineer the data he needed to confirm that each of the two wings could be supported, like a tabletop, on four slender columns. More prophetically, Hertz had to remedy a rash of code violations on the property for Duquette had never troubled to secure any permits. Though the architect had decided to realize the existing pods on the ridge, first he had to add cushion and re-pour the concrete, re-grade the access roads, drill a well, and install new electrical conduits and a septic tank.

Meanwhile the design was flashed out. Hertz discovered that the 31,000 sq ft / 2,900 sq m wing of a 747-200 were a good fit for the ridge; their angles framing views of mountains and ocean. He set the master bedroom at the top, with the two horizontal stabilizers joined to form a butterfly roof, and stopped the wings down the slope. From the side they appear as thin, slyly slivers that are a far better fit for the site than the big boxes that dot neighboring hilltops. From the top of the slope, you look down onto the cantilevered wings and imagine you are flying. Hertz has always been inspired by the Ingenuity of Native Americans, who once used every part of the buffalo they hunted – before being driven from their ancestral lands. In a second phase of construction, he plans to use the nose cone as a meditation pavilion, the double-height business section as a galleries and dining pavilion, and a middle section as an art studio. The vertical tail section will contain a viewing site. A few of Duquette’s pegusa like fllsers survived the fire, and these conduct a lively dialogue with the latest exercise in adaptive reuse.

Four years after the client agreed to the concept, the permits were in hand and the site prepared. The wings were cut in two and tracked to the Camarillo Airport, from where a huge Chinook helicopter carried them to the site in four half-hour flights. They were set down on tires so that they could be craned into place once the concrete block retaining walls and pipe columns were completed. The two-hour burst of carbon emissions from the helicopter, so Hertz states, was far less than the pollution potentially generated by trucks winding up narrow roads for two years to bring materials and workers to a conventional building site. Recurring delays pushed the budget higher, but the cost of building a dramatically curved roof from scratch was estimated at four times the price of flying in a wing. Smaller sections of the plane will be tracked in as they are needed.

For Hertz, the challenge was to keep the structure as simple as possible to preserve the integrity of object and landscape – a juxtaposition that Richard Neutra called ‘the machine in the garden’. Modernist pioneers idealized the functional beauty of the machine, La Corbusier built airplanes as his model and created a table from the ovoid section that linked the wings of...
"This structure respects and exploits the technological sophistication of a 747."

David Hertz

engineers and artisans to produce an airplane. It seems a pity to chop that up for cans of peas that may end up in a landfill. This structure respects and exploits the technological sophistication of a 747.

An aircar is easy to cut up with a laser saw, and it is incredibly light in relation to its strength. It's prefabricated, requires no finishing and has a built-in eco system. The wing's air cavity supplies insulation, the flaps offer shade and natural ventilation, and the thermal mass provides passive solar heating. Slip joints allow for thermal expansion, and the buildings sit lightly on the land. Glass sliders open the interiors to the native plantings and terraces. The county planner was quick to understand how appropriate this structure was — in contrast to the more "Mediterranean" mansion that she was customarily asked to approve. The Wing House captures the long-forgotten romance of flight and the age-old dream of freeing our bodies from the tug of gravity."

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63 ROOF.
64 AERODYNAMIC VIEW.
65 MASTER BEDROOM IN TAIL WING.
66 KITCHEN IN MAIN WING.
67 GARDEN BETWEEN MAIN WING AND SILENT WING.
THE HOMELAND SECURITY OFFICIAL WHISPERED 'I DON'T EXIST' AND TOOK OFF