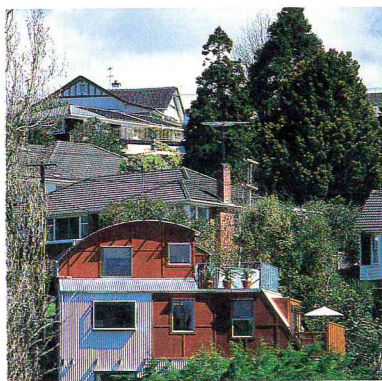


edge of the envelope



The house that designed itself – LES DYKSTRA turns tight restrictions into design solutions.

Photography: Michael Ng

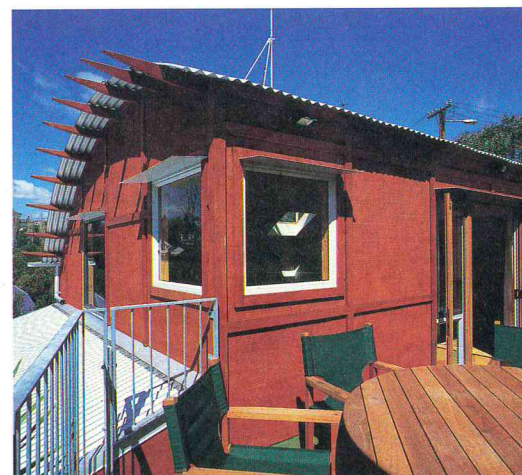
Architecture is often driven by the demands of difficult sites. Finding solutions to these problems drove the design of the house I created for Tracey and myself on a challenging site in Remuera. A close investigation of the site problems suggested the best possible design solutions. The brief was to design a contemporary free-standing family home while maintaining the original 1960s state house. At the lower end of the site there was a building restriction. Due to the 1 in 3 grade over the site, vehicle access was very restrictive. The location of the existing house, limited vehicle access and the 10-metre coastal yard restriction, determined that the proposed house be built between the existing house and the road. This resulted in a building area of 175m².

I wanted to maintain the existing trees while taking advantage of the sun and the views without compromising privacy. It had to be allergy-free, have





TOP RIGHT:
Entrance

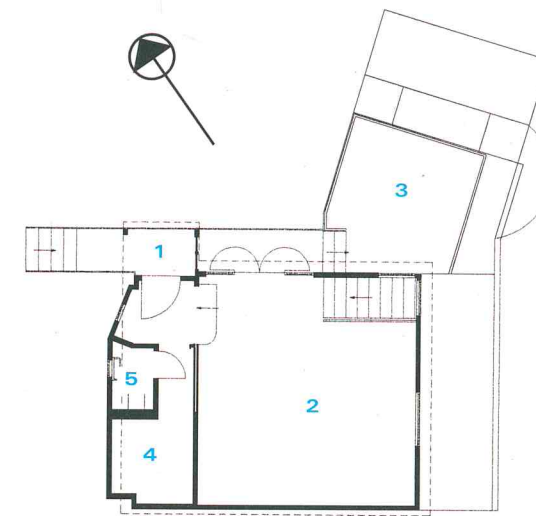


BOTTOM RIGHT:
Roof deck detail.

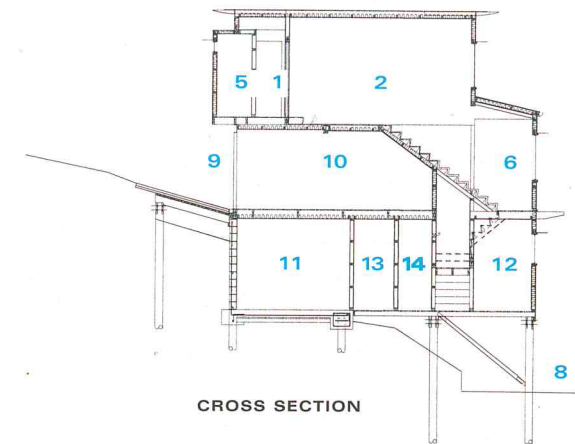
market appeal and meet a budget of \$250,000. This family home needed to include three bedrooms, separate study and double garaging. Adding to these requirements was the necessary compliance with the transitional scheme and coastal management zoning.

There were many site restrictions, so many in fact that they provided the solutions for the design. The plan of the house was determined by the front landscape and vehicle access requirements. These established a L-shaped plan with a kink. The kink in the "L" was the result of an existing tree and the southern height to boundary plane. After providing vehicle access, a living court and rear yard, the available house footprint area was 65m².

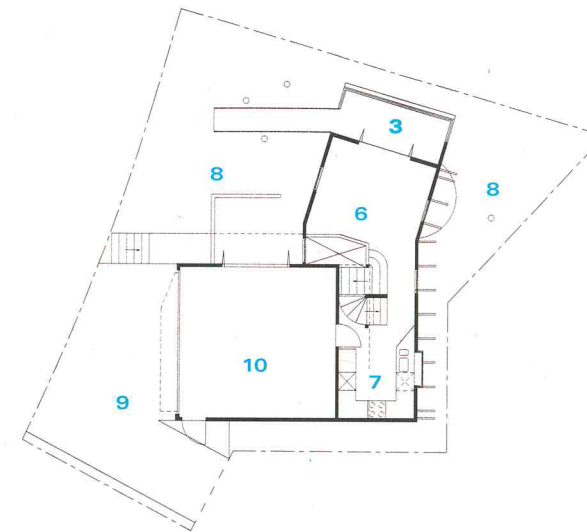
It was clear that the accommodation brief could only be met by creating an optimal envelope within the required height to boundary and maximum height. The envelope is reflected in the final roof forms. Close couple roof construction was employed to maximise internal volume and introduce shape to



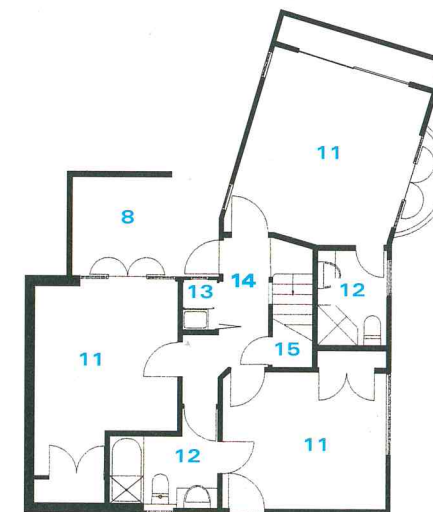
UPPER LEVEL



CROSS SECTION



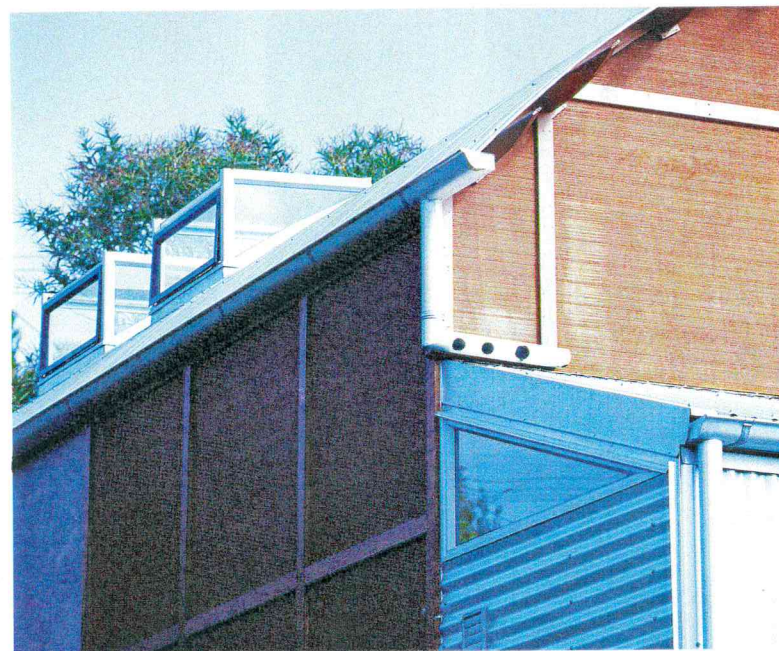
MID LEVEL



LOWER LEVEL

LEGEND

- 1 Entry
- 2 Lounge
- 3 Deck
- 4 Study
- 5 WC
- 6 Dining
- 7 Kitchen
- 8 Court
- 9 Drive
- 10 Garage
- 11 Bedroom
- 12 Bathroom
- 13 Laundry
- 14 Passage
- 15 Storage



TOP: View of north elevation.

ABOVE: Exterior detail showing use of Texture 2000 with cedar battens, plaster and zinacalume.

the ceilings of the spaces. This determined a potential floor area of 175m² and a potential deck area of 30m².

The organisational brief stipulated that the bedrooms be on the same level and that one be self-contained. Bedrooms, an en-suite, bathroom, laundry and storage occupy the lower level. Under this level is a basement that allows the yard to extend under the house, providing further storage and the potential development of a future bedroom.

Access for cars to both houses had to be provided

and a solution for this was to enter on the southern part of the site. A short steep drive which accesses garaging for two cars established the location of the kitchen, dining and the suggested the order of the levels. The kitchen and garage are linked and the dining rooms opens to a small deck that leads across a bridge to a barbecue area. The upper-most level has the best views and easy access for guests so it became the lounge, entry and study.

Guests arrive at the entry by ascending a short flight of steps and crossing a short bridge. The lounge opens onto an entertainment deck utilising the roof of the dining room. The front facade was designed with minimal openings. By retaining some existing trees, the potential for loss of privacy from the street was minimised. On the eastern facade the windows were strategically sized and placed to capture the views of the surrounding landscape while maintaining privacy.

The three levels of the house are linked spatially by a weaving stair and a three-storey void to connect the levels physically and visually but retain a sense of separate identity. Limitations of the site determined that some of the accommodation requirements were provided by multiple use of rooms. In the final design the garage also functions as a games room; the study is large enough to be a small bedroom; and the laundry increases in area by opening into the passage. The frontyard landscape area doubles as part of the living court.

The restrictions of the site and the demanding brief resulted in parts of the design not being in compliance with some of the planning ordinances. Approval had to be obtained from Auckland City to allow bulk excavation; non-contiguous living courts; and reverse manoeuvring onto the street.

In order to create the bridges for the entry, roof deck and barbecue court, the front landscape area had to be encroached. To allow the dining room deck to be feasible a height to boundary infringement was also required.

As a condition of building, soils tests had to be carried out. The test results revealed that the building area was covered by two metres of uncertified fill. Subsequently, the engineers established that 22 piles driven an average of six metres and a substantial block retaining wall would be necessary to support the house. This had a significant effect on the cost of the project and therefore on the selection of materials and construction.

Construction was limited to NZS3604 and essential engineering solutions. This decision was made to compensate for the "getting out of the ground cost" and also to minimise the superimposed loads which had the potential to drive the foundation costs higher. Cost also drove the method by which the house was constructed. This ultimately resulted in deciding to build the house on a labour-only basis.

In addition to my role as architect in this case I



undertook to perform the tasks of ordering materials, organising labour and negotiating sub contractors. The experience gained by having performed a main contractor's role has given me more understanding of how to design solutions that not only achieve the desired design intent but are easily constructed. For example, elements such as the projecting tapered floor joists were designed to assist construction as well as provide for future maintenance. To create a contemporary aesthetic an array of natural materials and minimalist detailing were employed. The exterior is finished with plaster, Zinacalume, Texture 2000 and cedar battens. Plaster is used to define the street facade; Texture 2000 the living areas; and Zinacalume to identify the sleeping areas externally.

Internal materials and details were selected to minimise the accumulation of dust. Floors are natural timber and bleached strandboard with tiles in wet areas. Interior details consist of negative reveals at the skirting, cornices, window and door frames. The walls are stopped and painted as are most of the ceilings. The kitchen has exposed rafters and clear lacquered MDF. The joinery is clear lacquered MDF with finished stainless steel to the kitchen top and Granite 90 is used in the bathroom and ensuite.

We have been living in our new house for the past year. It has been designed to maximise the view and the sun while maintaining optimum privacy. It creates the feeling of being above the trees and houses. Privacy is maintained by the picture type windows which frame the views. It is a delightful house to live in throughout the year as the treescape and view changes with the seasons. The materials used and the type of details in the

TOP LEFT: Interior, looking towards lounge.

TOP RIGHT: Interior, looking towards kitchen.



design have reduced the amount of housedust. It is a warm, sunny, allergy-free house.

Tracey and I enjoy living in this house which, despite its difficult site and construction problems, was designed within the budget to meet our specific needs. ■

Les Dykstra is currently in Macau working on the CCMBECA Macau Tower.

DYKSTRA HOUSE

Architect is Les Dykstra.
Key Consultants Soils Engineer Geotek Services.
Structural Engineer Petrenko Consultants
Key Contractors Foundations Ground Stability Limited. Builder W&R Phillips Partnership.
Windows & Exterior Doors Alwest Aluminium.
Roofers City Roofing. Gas Enerco. Plumbers Advance Trade Services. Electrical Gard Electrical. Plasterer Texturite Coatings. Painters Jayem Decorators. T&G Flooring The Polished Floor Company. Steel Balustrades Ashworth Sheet Metals. Joinery Huge Joinery.
Building Materials Key Building Supplies.
Zinacalume BHGP Steel Building Products. Fibre Board James Hardie Building Products. Plaster Board Winstone Wallboards. Plaster Equius Industries. Flooring & Cedar Cedarcorp.
Hardware Halliday & Baillie. Tiles Jacobsen Creative Surfaces. Chinaware Caroma. Tapware Metrix Imports. Kitchen Appliances Smeg.