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IN PURSUIT OF DESIGN EXCELLENCE

Today the global concern for our dwindling resources has made industry, and particularly the building industry, acutely aware of sustainable building and what this means now and in the future. Designers can no longer be content to provide an aesthetically pleasing building without considering the many aspects that contribute towards greener building and healthier environments.

In many instances choices are made related to local resources, consideration to transport cost, shipping, recycling, rain water collection and storage, heat retention, solar energy...and so the list goes on. Each aspect can and does play an important role in the evolution of a building and contributes in some way towards improving our future living and working spaces. It is within these constraints and opportunities that Studio MWA excel. The Dulieu home is an excellent example of what can be achieved blending design and sustainable building practice.





The clients, Dianne and Barry Dulieu having just purchased their site, were advised by the previous owner to discuss the potential of the site with Davor Mikulcic, Studio MWA Ltd. Wellington, as he had been commissioned to do some site analysis and preliminary sketches which may prove beneficial.

Davor was quick to point out that although he was familiar with the site it was crucial they visit the site together as it was important the Dulieu's expressed their impressions of the site and which aspects of the property they enjoyed. Building this rapport and understanding is the key to any sucessful project.

For Davor and his team design is more than a business, it is a passion. "The budget (large or small) does not reflect the success of the project. You can recognize a project that is driven only by money,' says Davor. "The defining factor is the degree of personal involvement and understanding between the design team and the client. This is the separator between good design and excellent design.

The site is magnificent and the client brief was relatively simple with nothing particularly unusual. A contemporary residence, on a single level with a simple indoor / outdoor flow. The home should take advantage of every aspect of the very unique site. Easy maintenance inside and out with the maximum usage of passive solar energy and good building orientation, under floor heating – heat pumps were installed to heat the under floor water system, double glazing and maximum thermal insulation for floors, walls and ceilings.

Discussion between different clients and site visits is always beneficial and often leads to a refined brief and detail, "says Davor.

An example on the Dulieu residence was related to the exterior cladding. In the first instance there was a desire to











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use natural schist, which proved very expensive. Having visited other projects and seeing first hand the visual effect achieved with a combination of schist and the vertical metal cladding a decision to use metal could be made with confidence. This is now a feature of the residence.

"At the outset I asked Dianne and Barry for their permission to explore many different options from the bizarre to the conservative. They were open to this approach and this latitude and freedom to explore is vital to the creative process of design."

Barry built and project managed the house "part time" with help from his son, Rhys Dulieu. (Rhys is owner and director of Rhys Construction from upper Hutt – www.rhysconstruction.co.nz)

Often when clients decide to manage a project it is a recipe for disaster but in this case there was no doubt they had the skills and experience to complete a high end residential project.

There are always many practical aspects of any design that have to be considered and these included factors which are influenced by; the clients' brief, site, surroundings, context and a variety of compliance criteria. This site is within the 100-year flood zone and required design solutions to ensure it would not be an issue in the future. Two large water tanks, a septic tank with inffluent field and the inclusion of gas for hot water where mandatory. Some of these elements represent a design challenge and must be incorporated as an integral part of the design, not added on. Something that is often over looked.

The building that others describe as a "Butterfly" is first seen from above (fifth elevation) making the roof a prominent aspect of the design that forms two connecting "L" shapes. These forms allow shelter in all weather and take full advantage of the sun and assist with natural ventilation throughout the building via strategically placed opening windows.





Part of the sustainable strategy and one of the goals of the design was the use of passive solar energy, natural ventilation, rain water collection and the use of natural materials. In essence to be sensitive to the site and enhance the natural aspects of the surroundings.

The building platform is on one level to allow residence, now and in the future, to enjoy easy access to the home with no compromise.

Polished concrete floors with under floor heating was one of the imperatives from the start. With good building orientation, this project maximized the use of passive solar energy with highly compressed polystyrene thermal insulation under the concrete slab.

To achieve large open plan areas, with more than 70 % of the buildings elevations in glass, an elegant steel cantilever structure was chosen as the main form. The structural steel was incorporated into the thickness of roofing structure or walls giving the entire composition a light appearance

To achieve these big open spaces without any additional support between, a simple yet elegant support was designed at the end of the cantilevered eaves that turns down the roof to touch the ground. This creates a very simple, clean line that frames the view from the interior. This cantilevered section provides bracing to the "virtually glass structure", with eaves that extend 3-4 meters providing shade during the summer.

The "trough section" metal profile of the Dimondek 400, was an excellent cladding choice as it helps to maintain simple clean lines in both sloping and vertical planes, Sharp lines emphasize the simplicity of straight lines. Roof and wall claddings are without any penetrations avoiding potential problems and give an aesthetically pleasing appearance. Schist was



strategically used on corners in L shaped forms and with the intention of creating a dramatic appearance to the exceptionally well-executed masonry. From the outset the intention was to use some of exterior materials (like schist) and incorporate them as interior details providing continuity and a connection between the inside and out. Mr. Glen Bosworth, from Bosworth Stone Ltd., and his team worked nearly 6 months to achieve an incredible, unique finish – definitely one of "key" features in new Dulieu Residence.

Throughout the house halogen lighting is used in blocks of usually 2,3 or 4 lamps. This gives a bright, dramatic appearance and in the evening transform the house. Exterior halogen lamps, strategically located, provide lighting to the covered exterior decking making a soft transition between the very bright interior light and pitch-black exterior.

In the final analysis of any home design the ultimate judgement will be from the client. In this case Dianne and Barry Dulieu have aptly called their new home "Paratiho" which is the Maori for paradise. "We are living in Paradise",says Barry, "everything is in harmony with the preservation of natural beauty."

This is what Studio MWA strive to achieve ...the moment when the synergy between client and designer produces a result they are both proud of.

Studio MWA

Studio MWA now works in collaboration with the new, Brisbane based office of Davor Mikulcic Architect.
The range of projects is a spread between commercial and residential. Our primary focus is on high end residential and new clients predominantly are the result of recommendations, or they are people who have seen our work through publications, Industry Awards or from visiting completed projects.

The core team at Studio MWA consists Davor Mikulcic (Architect) and Micheal Maddren (interior design and ArchiCAD specialist).

Micheal teachers at Wellington Weltec in interior design and ArchiCAD systems and Davor Mikulcic teachers in the Queensland University of Technology (QUT) - faculty of Build Environment- School of Design

Davor was on the jury for the 2009 Royal Australian Institute of Architects (now AIA) for Queensland and Brisbane and this year AIA– Queensland, have chosen Davor to chair the 2010 Judging for Award in Architecture in the Brisbane region in most prestigious category – Public architecture.

In 2010, for the second year in sucession, Davor was invited onto the jury for the international architectural student's competition in Denver, Colorado, USA for the Socio Design Foundation.

Client: Dianne and Barry Dulieu

Project Design Team:
Architect: Davor Mikulcic Dipl. Eng. Arch. (Sarajevo) ANZIA, RAIA
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Roof & wall metal cladding:
T.W. Clark Roofing 202 Ltd
Metal profile: Dimond – 0.55 mm
Dimondek 400.
www.dimond.co.nz

Engineer: Whakatiki Engineering Ltd.
Telephone: 04 528 8982

Windows: Mr. Paul Cunningham
Westview Aluminium Ltd
Telephone: (04) 526 4400

Kitchen: Mr. Hadrian Noble
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