

ISSUE 15

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COPE





Below is a brief introduction to the 2006 executive of The NZ Metal Roofing Manufacturers Inc. It is intended that Scope be representative of the industry and therefore material of interest is welcomed from all sectors of the building industry be it design, research, manufacture or construction.

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SCOPE

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PAGE 23 Sylvia Park completes stages 3 and 4. The complex reportedly is within 20 minutes drive time to 50% of the Auckland population.



Our congratulations to Architect, Bruce Scott, of Whangamata who was the winner of our draw for the 19 inch LG computer screen. We offer our thanks to all those who filled in the questionnaires which have provided an insight into your views on the COP and Scope Magazine.

If you would like to submit material please contact any member of the executive or the publisher.

Opinions expressed in Scope do not necessarily reflect the views of the NZ Metal Roofing Manufacturers Inc., it's executive, committee members or publisher unless expressly stated.



VECTOR ARENA

AUCKLAND'S WATERFRONT JEWEL

There is no getting away from it, Auckland gets more than its fair share of rain. Surprising enough however, up until now Auckland City hasn't had a covered arena to encourage fans off the sofa, and bands and sports teams into the heart of the city. Positioned about as close to the Waitemata Harbour as you could possibly manage without taking a dip, the recently opened Vector Arena has changed all that. Keeping the punters warm and dry is a priority, and to do so Peddle Thorpe Architects specified a Dimond roof, which was installed with considerable skill by Clarke Roofing.

"Having been involved in almost all stadium or events centre projects in New Zealand, including Telstra Clear Pacific Events Centre, Jade Stadium and Waikato Stadium, Dimond had the required depth of experience to successfully complete this project," says Dimond's Scott Townsend. "In this case, the main roof consists of two elliptical, tilted planes. The challenges, which were all successfully overcome, resulted from the arena's height, the roof's angle and the length of the sheets to be installed."



The roof features Dimondek 630 concealed fixed roofing in Colorcote® ZRX™ - the only product in New Zealand that met the architect's specific requirements. With sheets up to 47.5m, it was necessary to manufacture the sheets using the Dimondek 630 onsite manufacturing unit. The absence of any steps or joins in the continuous sheet lengths greatly increases the roof's

difficult to access for maintenance. The ever increasing line-up of international acts wanting to perform at the Vector Arena is a testimony to its success, quality and value as an entertainment venue. The arena has provided another jewel in Auckland's waterfront crown and the roofing and cladding materials used in its construction will ensure it remains just that for years to come.



weather-tightness and protection against corrosion. The concealed fixing system used with Dimondek 630 also ensures no fixings pierce the roof eliminating a common source of leaks from incorrectly installed screws.

Client: Quay Park Arena Management Ltd.

*Architects: Crawford Architects
New South Wales, Australia
Telephone: 61 2 9660 3644*

*Architects:
Peddle Thorpe Architects
Telephone: 09 379 9405*

*Main Contractor:
Mainzeal Construction Ltd
Telephone: 09 375 2100*

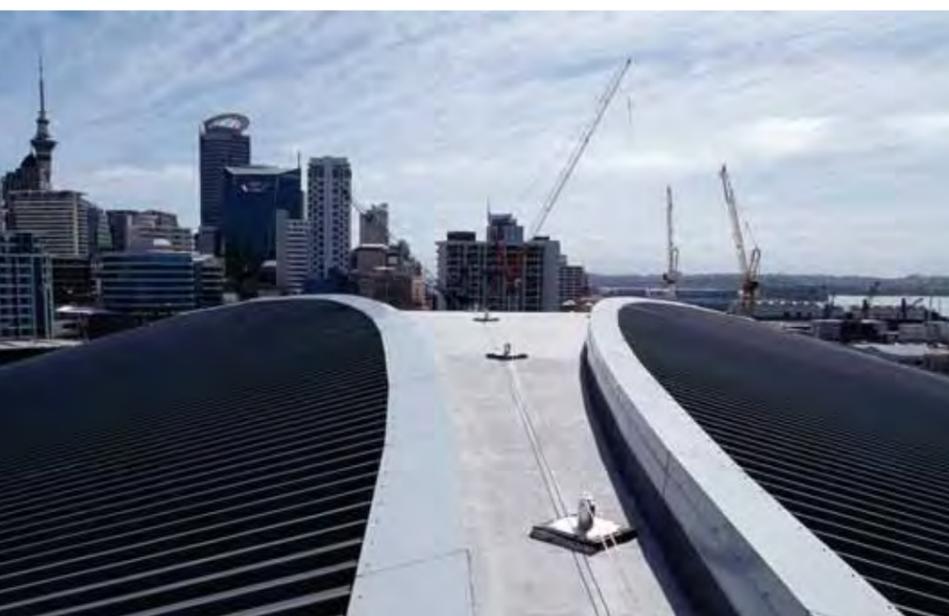
*Roofing Installer: Clarke Roofing Ltd
Name: John Matheson
Telephone: 09 579 9483*

*Roofing Manufacturer: Dimond
Telephone: 0800 Dimond
(0800 346 663)
Email: dimond@dimond.co.nz
Website: www.dimond.co.nz*

*Cladding Product: Dimond
Brownbuilt 900, Dimond Corrugate
and Dimond V-Rib in
Colorcote®ZRX and
ColorcoteARX™*

*Roofing Product: Dimondek 630 in
Colorcote® ZRX™*

Whilst perfect for patrons, the Vector Arena's harbour side, inner city location required durable roofing and cladding materials that would perform in the salt laden environment. Dimond recommended a material and paint coating system called Colorcote® ZRX™ which is specifically designed for severe marine environments where there is a high risk of corrosion due to corrosive elements in the atmosphere. Other Dimond profiles, such as Brownbuilt 900, Corrugate and V-Rib were used as wall cladding materials at the ends of the structure and under the eaves. They utilised the Colorcote® ZRX™ system as well as Colorcote® ARX™ which features aluminium as it's base material and is ideal for use in severe environments on areas of cladding that aren't regularly washed by rainfall or

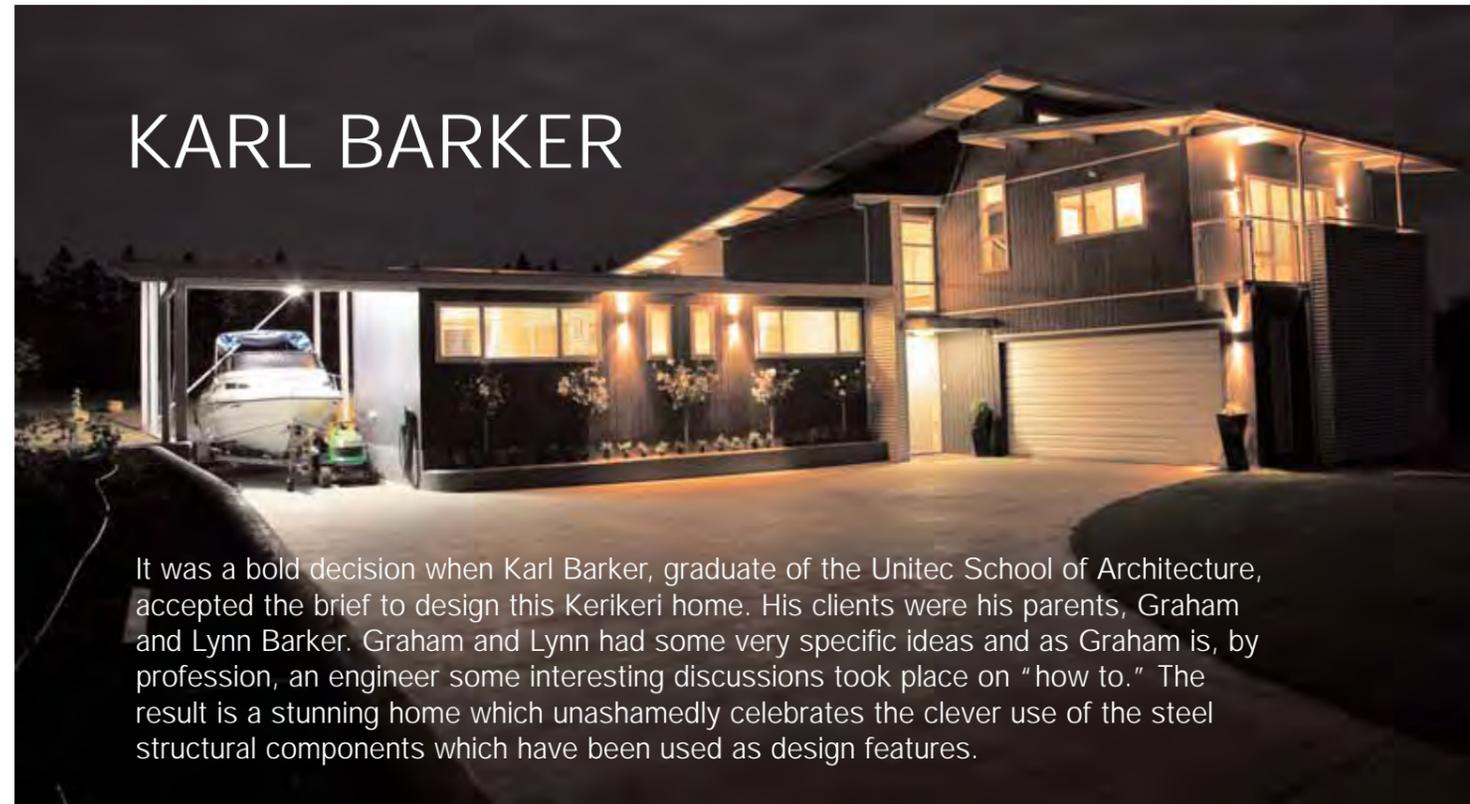


The spectacular Vector Arena roof utilises the unique Dimondek 630 concealed fixing system. The male component shown above slots into the Dimondek 630 profile holding the sheets securely without penetrating the roof surface. This system is particularly suited to marine environments.

Dimondek 630 roof sheets up to 47.5 meters in length were installed by Clarke Roofing. A task requiring considerable skill and not for the faint hearted!



KARL BARKER

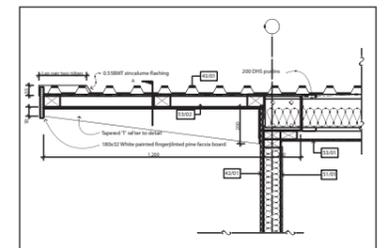


It was a bold decision when Karl Barker, graduate of the Unitec School of Architecture, accepted the brief to design this Kerikeri home. His clients were his parents, Graham and Lynn Barker. Graham and Lynn had some very specific ideas and as Graham is, by profession, an engineer some interesting discussions took place on "how to." The result is a stunning home which unashamedly celebrates the clever use of the steel structural components which have been used as design features.

Both client and designer had carefully considered every aspect of how their new home should accommodate their existing and future lifestyles. From the exterior which includes purpose built boat housing for Graham's pride and joy, to the open plan living spaces to accommodate family and friends, every detail and its function has been considered. Both Graham and Lynn have busy lifestyles running their engineering business which extends to the "home office". Family time and the interaction between the various spaces was of extreme importance.

Privacy and street appeal were considerations as the home was situated on a relatively new subdivision and surrounded by homes of a more conventional design style. Extensive use has been made of Custom Orb .55 gauge ZINCALUME® and shadowclad plywood cladding painted in a custom Resene paint. The shadowclad is treated as the sheet product that it is while the ZINCALUME® is used to wrap around various expressive elements

of the building. The combination of horizontal and vertical texture is used to good effect adding interest to the design which features a variety of roof planes. The design of the roof was of particular importance to Karl Barker who was mindful of the sunlight effects and efficiencies of this passive, environmental design. Particular attention was given to the large 1200mm eaves on the second story. These provided shade during summer hours yet allowed the sun, during the winter months, to penetrate to the heat sink of the concrete floor below. The height of the home gives a sense of grandure from the interior living spaces to the entry and rear of the home. To accommodate the 1200mm eave the design moves away from the conventional timber frame which would have given a heavy appearance to the roofline. To achieve the slender more elegant appearance a steel detail was devised allowing a final eave thickness of 100mm. The steel supports to the roof have been left exposed adding to the exterior aesthetic appeal. The steel structure



Side eave detail reducing the eave thickness to 100mm.

combined with the continuous span Trimline .55 gauge ZINCALUME® roofing allows large uninterrupted interior spaces and sheds water well away from the exterior service and entertainment areas. The use of corrugate has been used to excellent effect and continues under the reversed plane of the boat enclosure.

To reduce the height appearance of the structure many of the exterior walls are dissected by the roof planes. This expression of elements continues to the flashings. Rather than try to hide them they have been used to bring an adjustment of scale to the house. By installing the flashing between the plywood sheet



cladding at 2950mm above the slab level, it adjusts the perspective. The implication of the flashing is that it would be at floor level, this design feature makes the lower floor seem taller and the upper floor lower thus reducing the perception of overall height.

The interior of the home has an ultra modern spatial quality. The house design is comprised of a series of well defined open spaces which flow together to fulfil the Barkers life style. The kitchen opens to the lounge area which is adjoined to the outdoor entertainment area. The office above has an open vista into the lounge allowing interaction between the two. One wing of the house provides all the spaces that the Barkers require for their day to day lives while the second wing acts as more of a guest wing. Graham and Lynn Barker are extremely happy with the result achieved which must be the ultimate test of design. A result Construkt take pride in achieving for all of their clients.

collaboration between the client and architect. We put ourselves "in our clients' shoes" to understand their aspirations and invite their participation in a design process that is made understandable and exciting. We challenge assumptions and look for solutions beyond the obvious, keeping firmly in mind our clients need for their buildings to be on time and on budget."

Client: Lynn and Graham Barker

*Architectural Design:
Architectural Graduate Karl Barker
Architects: Construkt
Telephone: 09 373 4900
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*Builder: Keith Penny
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*Roof Manufacturer:
Steel and Tube Roofing products
Whangarei Manager: Nick Rowson
Roofing Profile: Trimline .55 gauge
ZINCALUME®
Cladding Manufacturer:
Steel and Tube
Profile: Custom Orb .55 gauge
ZINCALUME®
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*Roofing Installer: P K Roofing
Telephone: 09 407 8615*

Cladding Installer: Keith Penny

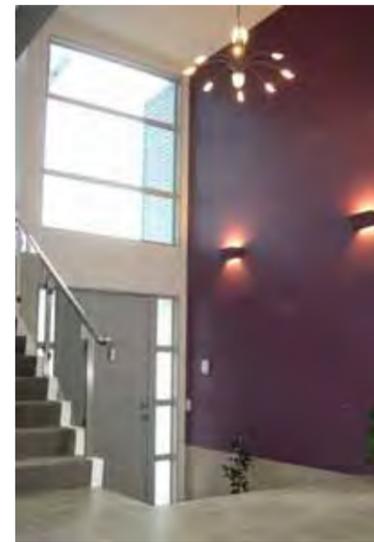
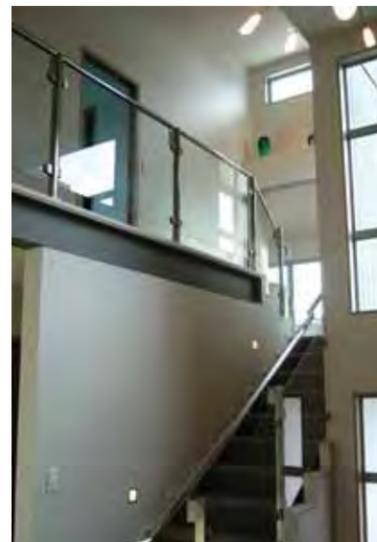
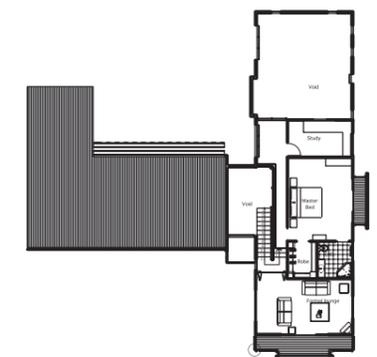
*Steel contractor:
Structural & Stainless Steel
Truweld Engineering Kerikeri
Telephone: 09 407 8600*

*Engineers:
Duffill Watts, Northland
Telephone: 09 407 9332*

Construkt

Karl Barker is an architectural graduate from the Unitec School of Architecture and has been working under the tutelage and mentorship of Construkt Architects.

Construkt Architects Ltd, based in Auckland New Zealand, offer urban design and architectural services. Their work spans through civic and cultural projects to master planned communities and private residences - shaping space is their passion. "We believe that great architecture and urban design requires active





enterprising young student dropped 350 leaflets offering artwork to the locals to identify their farming occupations. He received five replies for work. Next walk was Ashhurst to Masterton and instead of leaflets he took with him photographs of his work to show to prospective customers. From this he had a 20% success rate. Progress!

By this time Jeff had completed his Fine Arts Degree and his first exhibition was held at Albert Park which was a great success. He then spent a year studying at Otago University after being awarded the Francis Hodgkins Fellowship. Next stop was Germany to complete a commission at Berlin Zoo and to participate in various exhibitions.



Jeff is currently completing several international commissions and preparing for an exhibition in the Auckland Botanical Gardens in November this year.

2008 brings an Artist in Residence position in Toulouse France.

That's quite a story.

THE ARTIST

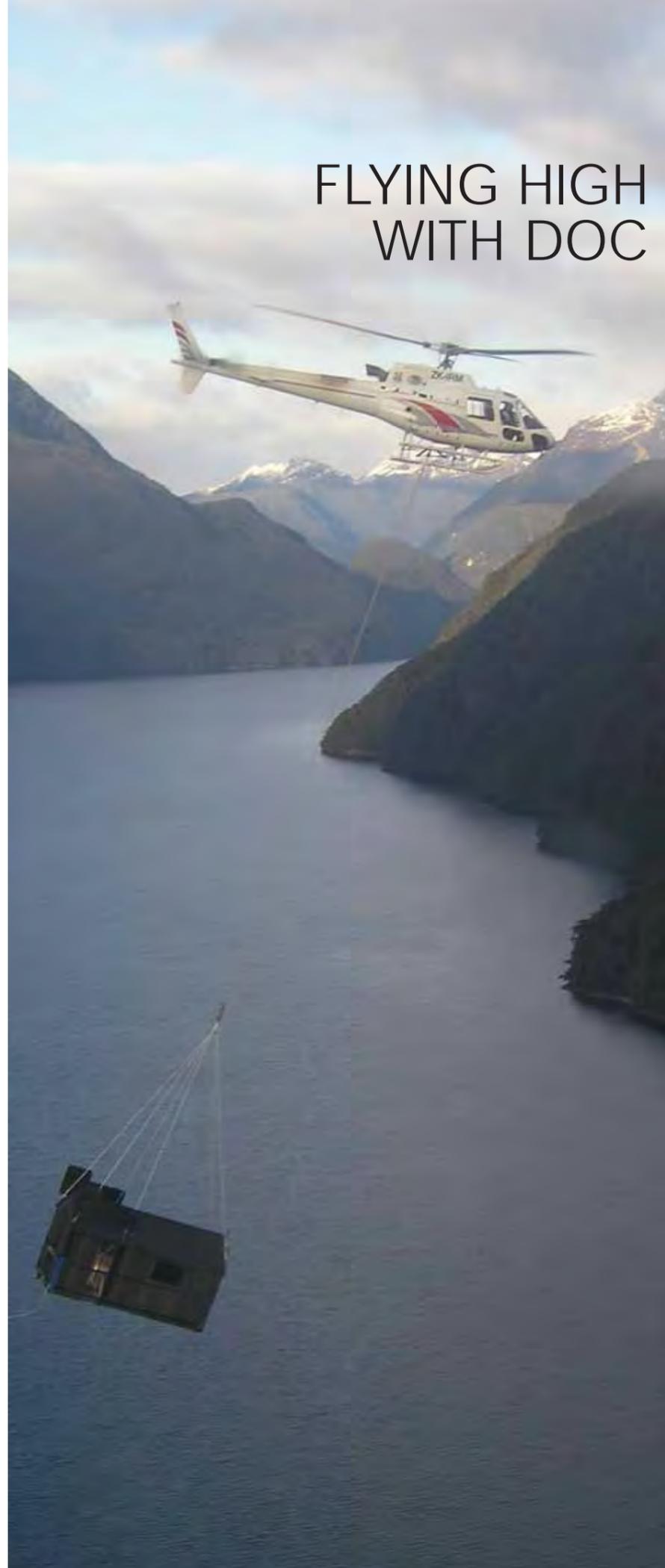
One could say that Jeff Thomson, the artist has thoroughly explored his corrugated medium. He has knitted, woven, laced, stitched, sculpted and designed his way through tonnes of corrugated steel.

In the process of completing a fine arts degree at Elam Art School in 1980, Jeff took off to the South Island to visit family and friends. During this holiday he decided to explore the New Zealand countryside using the oldest form of transportation known to humankind - shanks' pony. Thus began his fascination for rural activities, set amongst the most stunning of pure GodZone countryside.

Jeff's next countryside jaunt entailed a five day walk from Bulls to New Plymouth and along the way this



FLYING HIGH WITH DOC



Frametek Southland Ltd and Don Hawinkels Builders Ltd are constructing thirteen flyable and re-locatable steel framed huts for the Department of Conservation, Te Anau. These huts will provide temporary homes for teams of track cutters, stoat trappers and deer hunters all involved in the battle to restore Resolution Island.

Resolution Island is the latest of a group of islands in Fiordland identified by the Department of Conservation as "restoration islands". The plan is to rid the island of pests, thereby protecting the native plants and animals already on the island and provide a safe haven for many of New Zealand's more threatened species such as Saddleback bird and Kiwi.

Having won the tender to construct the huts, Frametek Southland Ltd and Don Hawinkels Builders Ltd, in consultation with the Department of Conservation, modified the original tender design to one that suited Frametek's framing system. Due to the benefits of steel framing, enhancements were made resulting in a reduction of steel required in the framing, including the built-in bracing. This has resulted in a lighter, stronger and cheaper structure.

A lighter overall hut weighing 690kg has enabled Southern Lakes Helicopters Ltd the option to lift, not only the hut, but also its associated timber framed annex as one unit, rather than separately as originally planned. This has reduced the number of flying hours required and has made it easier to install and handle each unit on site.

WHY THE NZMRM, NEW ZEALAND STEEL AND PACIFIC COILCOATERS INVESTED IN THE NZ METAL ROOF & WALL CLADDING CODE OF PRACTICE.



Stuart Thomson looks back at the building industry and the necessity for a better system.

It is unlikely that anyone could have foreseen what the real implication to the Building Industry was likely to be when the first Building Act was passed in 1991.

A time of major social shift where everyone had had enough of Muldoon controls and the Labour party surprised us all, and

themselves, by espousing the right wing politics of user-pays and market deregulation. It was not only Roger Douglas but most of us thought it was a good idea and time for a change. The Building Industry had long since had a belly-full of every Borough, County or Council, through their little dictators, determining the building controls in NZ. No uniform Building Code and district difference, - with chief building inspectors declaring, "you can't do that in my area so there!" The reform of the Local Authorities helped by cutting their number down in size, but we had prescriptive controls that inhibited innovation and compliance costs were rising steeply.

So major reform was conceived 'to make things easier, cheaper and more innovative' by way of a Performance Building Code and a new authority - the BIA, with a sigh of relief from most of us.

The BIA was to keep a watchful eye on what the 'free market economy' would do, but in hindsight they had no idea what was going to happen either.

Certainly permits were easier to get and innovation became a license for developers and design and build entrepreneurs to make money like never before. Trades were under pressure and 'labour-only' gangs sprung up everywhere.

Good trades people were finding their previously loyal clients were deserting them as the lowest tenderer always got the job. Of course the problem had started long ago and we were just in catch-up mode.

The old apprenticeship system that had served the Building Industry well for centuries, began its slow but inevitable demise about 60 years ago once Government policy set minimum wage rates for young workers higher than those of apprentices. The old apprenticeship system was once attractive to employers but when the rules changed and 'daylight training' replaced previously unpaid and compulsory 'night school', and wage rates skyrocketed the system quickly lost its appeal. The apprentice began to realise that after completing his 'journey', now a 'journeyman' at the end of his 'time', he would obtain his 'ticket', but unlike years past when a trades person could command a premium rate over unskilled workers, the premium for skill had all but evaporated.

Result - a dwindling number of trades people who really knew what they were up to.

Back in the 80's the NZMRM became aware that help was needed and they produced a book entitled 'Profiled Metal Roofing Design and Installation Handbook'. In fact three versions were printed in 1981, 1988, and 1995 and they went like hot cakes with more than 10,000 disappearing of the last version alone.

They were given away because their cost was underwritten by both New Zealand Steel and Pacific Coil Coaters. Every seven years or so it was updated, because we work in a dynamic industry, we needed to 'upskill'.

A few years into the era of our new performance Code some of us at the coal face became very uneasy as it became obvious that all was not right and 'Something was rotten in the state of Denmark'. Rumours of Leaky homes and rotten buildings were

confirmed by inspections and immediately the alarm bells rang and the finger was pointed at untreated timber (chemically-free) and 'false concrete' - fibrecement, EIFS and stucco.

Everyone was passing the parcel when really the problem was not a product one, it was (and still is) a people one.

The TA'S were too trusting. The building inspector (the old builder with a sore back) joined the laissez-faire attitude and signed off buildings while sitting in his car or did not inspect the roof because he did not have a ladder or did not like heights. In many cases this did not matter because the designer and builder knew what they were up to and did a good job and how could a building inspector know it all or see it all anyway? He is the policeman not the lawmaker.

As Len Clapham (BOINZ CEO) said 'if all you guys were honest we would not need building inspectors'. Yeah right!

He has a point though because a recent court decision to land the BCA with a 100% of the blame was unjust. Should you jail the policeman because he did not find the murderer?

However, about (we think) 10% of the buildings built during the 1990's were faulty in one way or another.

Some were designed to leak. The skill of the designer and the trades person will always determine the building outcome. The Building Industry was not squeaky clean either. We were selling products instead of systems and some roofers were using 'flashings in a tube' and missing out the real thing.

The Government had set a poor example by accepting the lowest tender. Even as the successful subcontractor the tender system was flawed. The blatant 'shopping around' (which involved taking on anyone who would cut corners and reduce the price) became the normal part of the tendering process and was just as dicey as 'sleeping around.'

In yesteryear there was a gentleman's agreement that if your 'group' (a loose but nether-the-less knit number of subcontractors), won a contract, it was honoured by the main contractor, who did not consider 'shopping around.' This meant that there were no interface problems because we worked as a team and had a collective responsibility to the client and each other. The current interface problem between subcontractors translates into an interface problem with materials, which coincidentally, is where all our weather tightness leaks are coming from. This 'no-mans land' is where all the penetrations are, the doors, windows and other holes in 'someone else's cladding system.

These 'trickybits' are all now detailed in the NZ Metal Roof & Wall Cladding Code of Practice (COP).

It was in this era that the NZMRM became aware and concerned that their products were specified by or installed by people without the skills to make a good job.

The dilemma was that having entered a 'Performance' area and left a 'Prescriptive' one behind, we were reverting to the prescriptive area again. Newton's third law of motion is 'to every action there is

an equal and opposite reaction'. The pendulum swing may take some time to reach equilibrium. We were determined not to fall into the same traps as before and planned to offer many solutions and not just one way. Although NZ Standards covered materials there was no 'cookbook' written for metal roof and wall cladding for installation and training purposes. New Zealand Steel and PCC technical literature spelt out the basics for their products but to their credit an ambitious decision was made by the NZMRM to write a generic 'how-to recipe book' for all metal roof and wall cladding. Ambitious because it was uncharted waters both cost and time wise.

The logical solution was to ask the BIA for some of the \$14 million they had in the bank but although they heaped praise for this initiative not one dollar was forthcoming.

Undaunted the NZMRM made a commitment to write a 'Code of Practice' an Acceptable Solution for the Design and Installation of metal roof and wall cladding. The decision was supported by New Zealand Steel, Pacific Coil Coaters and the Roofing Association of New Zealand. Little did they know how daunting the task was to become. New Zealand and Australia lead the world in this area (as a percentage NZ has more metal residential roofs than anywhere else) so there was no opportunity to 'cash-in' on overseas publications and anyway NZ's climate, and therefore solutions, are unique.

An early problem became obvious. Consensus was needed to provide credibility and also required by the BIA in order to make the Code of Practice an Acceptable Solution. You and I know that the best committee is a committee of one - democracy is flawed!

After three years of work and a lot of dollars the NZMRM Code of Practice was published in 2003 and was extensively promoted to the BCA's throughout New Zealand. What followed was somewhat disappointing. It appears in the



The NZ Metal Roofing and Wall Cladding Code of Practice will soon be available as a CD format at a cost of \$50.00.

recent survey that purchase price was a deterrent to a lot of designers. Despite the benefits offered by the COP they could download E2/AS1 for free! What happened next was another blow for the NZMRM. The newly created DBH reneged on the BIA promise for an Acceptable Solution but worse still was that they were going to write one of their own.

After many hours of submissions and meetings, some of the NZMRM objections were heeded but their pressure to publish meant that E2/AS1 and the COP now sometimes do not say the same thing. This in itself is not a bad thing. In fact the opposite is the case as there is always more than one way. The rub is that the liability issue highlighted by the Leaky Homes debacle and some subsequent court decisions, has meant that Riskpool, the BCA's insurers, are now by default becoming the arbiter of NZ's building controls! E2/AS1 appears to be, albeit unintentionally, the default document.

Often the limitations of E2/ AS1 are over looked i.e the scope of E2/AS1 is limited to NZS 3604, the Code of Practice has no such limitations.

The COP was written as a living document which will continue to be revised and updated. The hard copy comes with a CD, which gives instant access (through search or hyperlinks) to all references to any subject relating to metal longrun cladding and tiles.

The BCA's and some designers (not you of course) have looked to offset their liability by using the details in the Acceptable Solution, assuming (erroneously) that the crown will pick up the tab - wrong!

If you are not using the COP but prefer to put on your drawings 'all details to E2/AS1 or NZS 3604' and think that you are safe from liability, have I got news for you!

There was a subtle shift in the Building Act 2004 that a lot of people have overlooked. Just four small letters actually, but a large shift in liability. (Code vs Consent). Your specification and drawings provided for consent have become the compliance document.

The Roofer or installer must follow them.

What if he follows your drawings knowing they are wrong...like dog-eared stopends on a high strength profile? To sleep soundly in bed you must be up with the play. It is well worth remembering it is your design that becomes the compliance document. A recent survey indicated that the growing group of designers, roofers and trainees using the COP prefer the clear and precise details. If you are designing or installing metal roof and wall cladding and believe in "getting it right" NZMRM Code of Practice is a worthwhile investment and protection.

The cost of the printed version has deterred some, however, the good news is the revised version will be available on CD for a cost of \$50.00. A decision has been made not to reprint hard copy based on market feedback, but you can always print your own from the CD version. The ultimate goal of the NZMRM is to make this living document and downloadable technical drawings accessible on the internet free of charge. This is not a profit driven exercise but an earnest commitment from major industry players to provide the correct tools to "get it right." Everyone wins; designers, manufacturers, installers and ultimately owners.

Existing version hard copies are available from:
Pacific Coil Coaters
Contact: Tim Rutt
Telephone 09 5711226
New Zealand Steel
Contact: Christine Wilkinson
Telephone 09 375 8999

So what does the COP provide?

The COP is comprehensive. It covers a wide range of the possible options for metal roofing and cladding with sound good practice solutions. The content has been collated and written in easy to understand, step by step, procedures by hands on industry specialists in conjunction with the manufacturers of a variety of metal roofing, cladding and associated products. Each section and topic can be quickly referenced through the search engine by keyword indexing. Each subject provides clear downloadable technical drawings together with the appropriate methodology where required. There is never just one way and COP provides excellent options on alternative acceptable solutions.

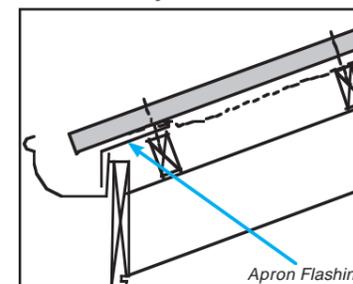
The revised COP will shortly be available as a complete fully functional, stand alone CD version. This is a considerable cost saving in an endeavour to make the COP more affordable to more end users. A recent survey indicates that those who have it prefer the detail the COP offers over both Manufacturers instructions and E2/AS1. At a purchase price of \$50.00 the NZMRM believe it is a worthwhile investment for all industry specialists and will help avoid design, construction and weather issues.

DESIGN CONSIDERATIONS FOR STEEL ROOFING AND CLADDING IN VERY SEVERE ENVIRONMENTS



The very severe marine zone is that area where salt spray (or salt laden sea air) creates a very corrosive environment. When building in this area, the building design should seek to minimise areas that are not regularly washed by rainwater, (this area is commonly referred to as unwashed). Onshore winds will always bring salt with them. When combined with rain, in close proximity to the sea, salt-water rain is formed. Normally rain will remove air born salt from the top exposed surfaces only when it comes via offshore winds or no wind at all. The increasing use of coated profiled steel for cladding, means that both design and installation must be appropriate for the environment and location. This is particularly important where the cladding is not regularly washed by rain, typically under the eaves. When the roofing profile is specified, the roofing manufacturer will have a fastener and placement recommendation. Each profile has a designated fixing type, be they penetrating fasteners (nails or self drilling screws) or clip type fastening. The most appropriate product should be selected for the local environment. New Zealand Steel currently recommends the use of coated steel fasteners manufactured to Class 4 AS 3566.2 2002 in this very severe marine environment. The life of the fastener, like the coated steel roofing is directly related to the level of washing. Fasteners which are

subject to a build up of salt and not washed, will have a reduced life. Stainless steel fasteners are not compatible with zinc/aluminium coated steel based products. Clips (typically galvanised) used for clip fastened profiles are likewise subject to the build up of salt and atmospheric dust. To reduce the impact of airborne salt the use of preformed profiled closed cell foam sealers are essential to prevent salt from entering the roof cavity. The galvanised clips, especially those nearest to the gutter line, should have additional protection by applying a primer and a marine paint topcoat. The positioning of the fascia and gutter will also influence the amount of air entering the roof cavity and should be



installed using an apron flashing as shown in the NZMRM Code of Practice 5.3.5.4. The roof pitch, orientation to the prevailing wind, and the type and positioning of gutters will all impact on the life of the roof. Steel cladding is gaining higher levels of acceptance in both urban and rural environments and its use in very severe marine environments is also increasing. Minimising areas that are unwashed therefore becomes more important. Regular and thorough maintenance by washing down is an essential requirement where metal roof and wall cladding is used close to the sea. The use of alternative cladding materials in areas not washed by rain should be seriously considered, especially where maintenance is infrequent. Refer to New Zealand Steel's

Environmental Categories Guide for recommendations on the correct products and maintenance requirements for this environment. The building design should give consideration to the following:

- Location and orientation of the building, relative to the prevailing wind and the sea.
- Steel Roofing material
 - Product specified
 - Profile
 - Fastener specified
 - Positioning of the gutter
- Steel Cladding
 - Cladding material
 - Fastener specified
 - Flashing designs for windows and doors
- Ease of maintenance
 - Extent of overhang
 - Areas not washed by rain
 - Soffit material and ability to access for cleaning

Details of product maintenance requirements are in the New Zealand Steel Environmental Categories Guide.

Additional information: New Zealand Metal Roof and Cladding Code of Practice from NZ Metal Roofing Manufacturers Inc.

New Zealand Steel Publications: Installers Guide
Specifiers and Builders Guide
Environmental Categories Guide

For further information please contact: Patrick Dwyer, Technical Manager
New Zealand Steel
Telephone: 09 375 8092
Email: info@colorsteel.co.nz
www.nzsteel.co.nz





THE NEW GERARD AMBASSADOR SHAKE



Gerard add another profile to their extensive range of shakes and tiles.

The new Gerard Ambassador Shake has been developed for discerning home owners in New Zealand and the International market. The Ambassador profile features a shake face, which is in keeping with the original timber shake, and a subtle blend of natural stone chip. The blending of stone chip provides a subtle "patch" appearance which changes with the lighting conditions.

The recently introduced shake has now been used on several New Zealand homes and has enjoyed considerable success in France and Slovenia. The profile is a result of new technology developed by the AHI R & D researchers and offers aesthetic and functional benefits to designers and home owners.

Featured is the South Island home of Steve and Julie Schlaadt. Much of this home was designed by Steve and features many very high tech advantages from the roof to the interior.

Steve, together with his wife Julie own the highly innovative Fiordland Electric Ltd. A business which specialises in state-of-the-art electrical and computer controlled electronic equipment. The 5 bedroomed home features HPM "iControl" home automation system which sensors movement throughout the home turning lights off and on. Not only do you save power consumption you actually never need to touch a switch. The home is fitted with air conditioning units which control the interior temperatures and provides continuous hot water for under floor heating. Internal computer networking, Sky Television networking and a state of the art kitchen are just some of the well thought out home features. Much of this electronic wizardry is attributed to Steve's son who has a passion for the electronic business.

Working alongside Steve on the project was builder Lyndon Moffitt. "We discussed many of the innovative ideas that Steve had and together found practical solutions to achieve the results Steve wanted in their family home," says Lyndon. "Steve did not want a conventional home with a longrun roof. He was looking for a roof that would add character and quality. The exterior wall cladding was in Classic Stone and Hebel, it was considered essential that roof and wall claddings work well together. Steve had been impressed with the new Ambassador Shake which was shown to him by Alf Phillips from



EH Ball ITM Ltd roofing division. The combination of materials, the aesthetic values and the benefits of lightweight roofing convinced him Ambassador was the right choice."

Ambassador Shakes

The Ambassador Shake will only be available in a textured finish of natural stone chip. For colour samples and details on the new range please contact Gerard Roofs.

Client: Steve & Julie Schlaadt

*Contractor: Lyndon Moffitt
Lyndon Moffitt Builders Limited
Certified Builder
Telephone: 03 249 7326
Mobile: 021 314 664*

*Electrical contractor:
Fiordland Electric Ltd.
Telephone: 03 249 7319*

*Roofing manufacturer:
Gerard Roofs
Telephone: 0800 104 868
Email: info@gerardroofs.co.nz
www.gerardroofs.co.nz
Profile: Ambassador Shake
Textured*

*Roofing contractor:
Alf Phillips from EH Ball ITM Ltd
roofing division.
Telephone: 03 218 9144
Mobile: 021 483 787
Installer: Clint Brown*

*Photography: Kevin Crawford
UpHigh Photos, Christchurch.
Telephone: 027 241 7601*



The vision for the Remarkables Park development was to create a twin town centre for Queenstown. The topography of the existing downtown, bounded by the mountains and lake, placed limits on further development of the commercial centre. Visitors to Remarkables Park experience shopping in one of the most scenic landscapes in New Zealand.

The principal developers, Alastair, John and Neville Porter, of Porter Group, have Otago family roots going back to 1863. Much of the land was purchased in 1988 and the Porters acquired the balance of the land in 1997. The total area now zoned as the Remarkables Park Zone comprises approximately 150 hectares. Ironically, land in this vicinity had been identified by surveyors in the 1860s as the preferred place to build Queenstown.





The vision the Porter's have for this development is in anyone's language huge. "The Remarkables Park Zone provides for a wide range of uses enabling development of a twin town centre for Queenstown. Remarkables Park complements what is established downtown." Says Remarkables Park Limited's director, Alastair Porter. "Rather than have commercial development growing in an ad-hoc fashion, the size of our site and underlying mixed-use zone means we've been able to take a fully integrated approach and produce a strategic master plan for the whole development."

The development will include everything you would expect to find in a comprehensive mixed use zone; entertainment, shopping, Quayside Village, high density residential and a range of accommodation options for some 12,500 residents and tourists.

To achieve the results that were in accord with the Porter's vision, they retained the expertise of urban design master planner Eldon Beck. Beck who has the distinction of designing many highly successful international resort villages, including Whistler, British Columbia. Beck is one of a number of highly experienced international specialists that have consulted with the Porter's in refining the Remarkables Park Master Plan. Porter says "It was invaluable to learn from international experience. We have been able to build on the features of the successful overseas resort villages and transfer them into our master plan. It also means that we are mindful of the challenges that resort communities face and can accommodate workable solutions in the planning stage."

Today many of New Zealand's major players in retail and support businesses have recognised the potential of Remarkables Park. Those who have already established their businesses report very positive results.

The latest building to be completed at Remarkables Park is simply known as Building 7. The building is designed by architects Mason and Wales who have a long association with the development and the requirements of the local authorities.

Building 7 completes the mid quadrant of the Shopping Centre precinct. It reflects Central Otago architectural design with a contemporary flair. The convenient store front parking, colourful landscaping and sunny orientation are important facets of this very successful shopping destination.

Local materials, which enjoy iconic status in the Queenstown area, including schist stone and iron work, are interlaced with a unique colour palette providing a striking, varied and individual appearance.

The COLORSTEEL® Ironsand and COLORSTEEL® Lichen T-Rib roofing and flashings were manufactured locally by Metalcraft, Cromwell, saving time and transport costs. The T-Rib and 800m2 of butynol was installed by local Metalcraft contractors. The half round spouting, rainheads and down pipes in copper and stainless steel used on Building 7 were also installed by Metalcraft, Cromwell.

Development:
Remarkables Park, Queenstown

Client:
Remarkables Park Limited

Architect: Mason and Wales,
Dunedin - Frances Whitaker

Main Contractor:
Naylor Love (Central) Limited

Roofing Manufacturer and Installer:
Metalcraft, Cromwell.
Telephone: 021 531617
www.metalcraft.net.nz
Roofing profile: Metalcraft T-Rib
Roofing Colour: COLORSTEEL® Ironsand and COLORSTEEL® Lichen

WAITAKERE TRUSTS STADIUM

The Waitakere Trusts Stadium took top honours in two categories at the prestigious Property Council of New Zealand Rider Hunt Awards, winning the Excellence awards for the Tourism and Leisure property sector and the Energy Efficiency Award for excellence in energy efficient building design. For the Waitakere City Council, the Energy Efficiency Award is another example of the Eco City philosophy put into practice; providing for social needs while also caring for our environment.

Completed on time and under budget this was one of the largest projects undertaken by Metalcraft to date.

The Waitakere Trusts Stadium at Central Park Drive, Waitakere is a six-court wood sprung floor indoor stadium with seating for 5000.

With an approximate length of 150m and width of 55m Metalcraft supplied and installed 8000m of METCOM 930. This 0.55 ZINCALUME® roof is drape curved to a radius of approximately 85 metres with the longest sheet length being 26000mm. Fascia/Gutter systems in 2400mm sections from 1.2mm thick ZINCALUME® steel were also supplied and perforated ZINCALUME® steel corrugated profile curved ceilings.



- ❑ Momentum Fitness Centre
- ❑ 400m international-standard athletics track
- ❑ Three sand based sports fields
- ❑ Polygrass all-weather training surface
- ❑ Indoor 65m sprint track / indoor cricket nets
- ❑ Rock-climbing wall

The Professional Team:

*Architects: Warren and Mahoney
Telephone: 09 309 4894*

Project Manager: Suresh Nagaiya

Site Works Project Manager: Peter Sewell

Lead Design Consultant and Engineer: Alan Reay Consultants Ltd

Landscape Designer: Boffa Miskell Ltd

Lead Art Designer: Neal Smith

Contractor: Canam Construction Ltd.

*Nick Page
Telephone: 09 836 3069*

*Roofing and Cladding Manufacturer: Metalcraft Industries
Telephone: 0800 ROOFNZ
0800 766369*

Roofing and Cladding installer: Metalcraft Industries.

The Stadium was developed in partnership with Waitakere City Council and aims to be an icon for Waitakere City, a place for the community to gather and enjoy a wide range of cultural, community, corporate and sporting events.

The Waitakere Trusts Stadium has featured in national and international architectural magazines, attracting accolades for its user-friendly and innovative design, which melds a broad range of functions into a central community hub.

Features:

- ❑ Main 4900m² arena suitable for a wide range of events including trade shows, conventions, music concerts, sports of all levels and other large scale events
- ❑ Fully equipped function centre

Zincalume®



Working greener Building greener

Fact Sheet 1: Urban stormwater and zinc

There has been some confusion around zinc from steel roofs accumulating in sediment in harbours and as a result damaging the ecology.

CLAIM: Zinc levels in the Auckland harbour are increasing.

FACT: *ARC 2005 sediment study shows that, on average, total zinc levels in harbour and estuary sediments have fallen by 10%.

New Zealand Steel is collaborating with authorities to research and better understand zinc run-off under local conditions.



CLAIM: High zinc levels in harbour sediment harm the environment.

FACT: No link has been identified between zinc levels and the health of marine animal biology found in harbour sediment.

You can confidently specify and use COLORSTEEL® prepainted steel and ZINCALUME® steel roofing materials. There is no scientific basis to restrict the use of ZINCALUME® steel or COLORSTEEL® prepainted steel.

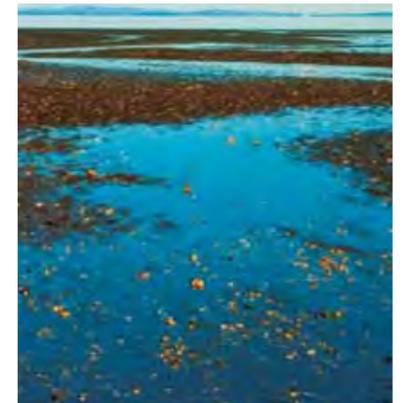


**Marine Sediment Monitoring Programme: 2005 results* ARC TP316, October 2006.

CLAIM: Roof run-off is a major contributor to increasing zinc levels in the Auckland harbour and should be addressed by restricting or prohibiting certain roofing materials.

FACT: There is no evidence to support this claim.

Current scientific knowledge does not show that restricting roofing materials would result in measurable benefits to the environment.



STOP PRESS!

In relation to the Waitakere City Council's network discharge consent and Integrated Catchment Management Plan (ICMP) applications, the ARC have removed any conditions requiring the prohibition or restriction of ZINCALUME® steel roofing products.

Other authorities that have acted on the withdrawal of the ARC's draft policy include:

- **North Shore City Council** who have not asked for source control of roofing materials in its latest submission.
- **Rodney District Council** who have modified its ICMP and discharge consent to delete any reference to any prohibition on the use of ZINCALUME® steel roofing materials.



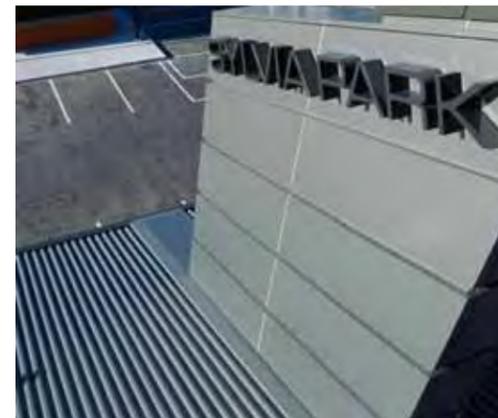
New Zealand Steel Limited
Ph: (09) 375 8999
www.nzsteel.co.nz

New Zealand Steel, committed to our environment



SYLVIA PARK FROM MELBOURNE CUPS & ARMED FORCES TO CLOTHES HORSES...

Up until recently identified by its rows upon rows of military sheds, the Sylvia Park precinct in Mt Wellington has played host to early Maori settlers, European farmers and actually started its developed life as a stud farm in the middle of the 19th century becoming a breeding ground for several successful Melbourne Cup gallopers. However, after being used in the 2nd World War as a US military storage site it sat largely unutilized. That is until Kiwi Income Property Trust (KIPT) recognized the potential of the 24 hectare site and purchased the land in the mid-late 1990s. After much planning, collaboration and consultation the concept of Sylvia Park was born.



It is a much quoted statistic that 50 percent of Auckland's population live within 20 minutes drive of Sylvia Park which lends itself nicely to perhaps the most common of all retail quotes... "location, location, location". Sylvia Park has this in spades providing much of the reasoning behind KIPT developing one of Australasia's largest retail,

entertainment and business centres. With Auckland City Council looking for investment of approx. \$2 billion into growing the surrounding "Tamaki Edge" area, the complex is well positioned to take full advantage of this growth. Currently being built in stages, the completed Sylvia Park will feature over 180 specialty retail stores, major flagship stores in The Warehouse, Foodtown and PaknSave, a Hoyts cinema complex, 3000 car parks and both bus and train stations. A business centre is also proposed as the 5th and final stage of the development.

The architecture of Sylvia Park was shared between 3 parties with US architects, Gensler, initially employed to create the overall master plan before Australian based NH Architecture and Auckland firm Jasmox took over and combined their respective retail skills and local

knowledge. The vision for Sylvia Park was "To meet the emotional and physical aspirations of residents and visitors to New Zealand through offering an exceptional and innovative retail, entertainment and working environment in the heart of Auckland."

Much of the building design draws inspiration from its surrounding environs with cone structures on the roof of The Warehouse and the central cone in the entertainment and leisure precinct paying homage to the volcanic cones of the Auckland region. Sections of angled roofing covering the Southern precinct have been designed to evoke memories of the army sheds that previously inhabited the Sylvia Park site and feature Dimond's Brownbuilt 900 profile.



Brownbuilt 900 Reverse Run also features prominently as a wall cladding with its wider ribs and narrow pans providing a different aesthetic dynamic. Angled orange wedges of Symonite's aluminium composite panel have been cut into the Reverse Run profile producing a striking façade. On other selected sections of the Brownbuilt 900 Reverse Run wall cladding, Habitats metallic colours have been utilised to accent what could otherwise be very large expanses of uninteresting wall space.

Kiwi Roofing were responsible for the installation of all the profiled metal roofing and cladding throughout Sylvania Park which required significant skill due to the number of roof penetrations (over 200 roof top air conditioning units) and the specific wall cladding requirements. Also the scale of the project required highly efficient project management and co-operation between Dimond and Kiwi Roofing to ensure product was produced and installed to the timelines required by KIPT and Multiplex Constructions who were the main contractor.

The walkway canopies that run along the western side of the building are another feature of Sylvania Park's unique exterior design. Horizontal timber battens and Duro-lite Heatguard™ natural lighting sheets combine to form a solar shading system that mitigates the heat and the impact of the setting

Left: Duro-lite Heatguard™ is designed to dovetail with Dimond's roofing profiles.

sun. Duro-lite Heatguard™ is a new natural lighting product which blocks heat and harmful UV rays whilst still allowing the transmission of natural light. This provides further comfort for shoppers moving between the different areas of Sylvania Park.

Landscaping and urban design has also been a focus for KIPT with 22% of the site area devoted to landscaped spaces such as water features, grass areas, trees and nice paving. Thirteen hundred trees were grown off-site for 2 years (50% of which are natives) and the entertainment/leisure precinct includes a park roughly equivalent in size to Newmarket's Lumsden Green. Consideration has also been given to how Sylvania Park integrates into the surrounding residential area in terms of transportation, community facilities and other public amenities. Indeed, Alan McKinnon, project director for Sylvania Park confirms that "Urban design has been at the forefront of all our planning for the last 3 years."

With Stage 1 and 2 completed and 100% leased and 91% of the total leases available already taken, Sylvania Park looks to be on a path towards success. Stage 3 and 4 have recently been completed and all indications are that Kiwi Income Property Trust have transformed those old army sheds into a town centre of which Auckland can be proud.

*Architects:
Gensler, US Architects
NH Architecture, Australia
Jasmax, Auckland*

*Roofing & cladding Manufacture:
Dimond
Telephone: 0800 Dimond
0800 346 663
www.dimond.co.nz*

*Roofing Profile:
Dimond Brownbuilt 900
Cladding Profile:
Dimond Brownbuilt 900
Reverse Run*

*Roofing Contractor: Kiwi Roofing
Ross Clent
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