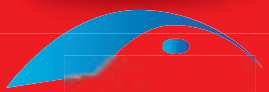


ISSUE 1  
AUGUST 2002

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NZ Metal Roofing Manufacturers Inc.







## PRESIDENT'S FORWARD

Welcome to the first issue of Scope the official publication of the N.Z. Metal Roofing Manufacturers Inc. While primarily promoting the use of steel technology, Scope will also play an important role in reporting the results of research and development carried out by the association. Such research includes a roofing test programme which examines elements such as: life cycle cost, embodied energy, fire resistance, collection of potable water, structural performance, resistance to wind uplift, weather-tightness and thermal protection. Publication of research results will provide important information that will be of interest to those involved in the roofing and cladding industry.

The N.Z. Metal Roofing Manufacturers Inc. was originally formed through the efforts of a small group of manufacturers, who met in 1966 to form the New Zealand Metal Rollformers Association Incorporated. Since then, the association has gone through five name changes and has actively contributed to many changes and developments within the industry. The N.Z. Metal Roofing Manufacturers Inc. provides its members with guidelines to ensure that the products and services that they offer meet the standards required to fulfil codes of compliance, warranty, and durability.

One notable achievement to date, a five year long task, was to gain recognition as an industry training organisation (ITO) offering NZQA units of learning in the manufacture of metal roll forming.

# SCOPE

ISSUE 1 SEPTEMBER 2002

Another major achievement was our collaboration with paint companies and coil coaters to overcome a problem that had occurred in polyester paints in the mid-eighties, a resolution being found in the use of ceramic pigment. Such collaboration, the first of its type in the world, was only possible because of the organisational force of our body, and its foresight in tackling problems of non-performance such as this.

In more recent years, and as a direct result of our aim to become a market leader, we have taken a very pro-active stance in respect of research and development. Our association is not prepared to accept unacceptable practices within our industry and is taking all steps necessary, such as the funding of research, to identify acceptable solutions.

Yet another achievement has been the compilation of an Industry Code of Practice which will be available later this year. This publication will provide the New Zealand Metal Roofing Manufacturers with a Building Industry Authority approved "Acceptable Solution."

An ongoing aim is to broaden our membership of 23 companies to others involved in manufacturing lightweight steel roofing and cladding products. We also intend to involve, and work closely with other associated industry groups such as Roofing Association New Zealand and the Cladding Institute of New Zealand. The more we are involved with our industry partners the more likely we are to achieve superior practices.

The association is also communicating with bodies such as BRANZ, New Zealand Standards and Building Industry Authority on matters of development and specifications.

We also offer a warranty exclusively written by the N.Z. Metal Roofing Manufacturers Inc. for our association members. It is the task of the association to negotiate and communicate with various trade groups, and act as an intermediary between suppliers and fixers, to ensure that best practice standards are achieved and the conditions of warranty are not compromised.

The Association is proud of its achievements. In an age of rapid technological change, we have a positive commitment to keeping our members fully informed and advised of developments within the industry. We welcome enquiries from prospective members who wish to be part of such an organisation.

Darrell Back  
President  
N.Z. Metal Roofing Manufacturers Inc.



Darrell Back  
President

Darrell Back is the Managing Director of the Steelform Group of Companies. He has been in the industry since 1972, based in Stratford, Taranaki. Executive member of the NZMRM for 20 years.



Dennis O'Sullivan  
Vice President

Dennis O'Sullivan has been involved with the Roofing Industry for 30 years. He was previously Manager of Dimond Industries, Palmerston North and Hamilton and he is now Manager of Metalcraft Industries, Hamilton. He has been an Association Committee Member for the last 8 years.



Tony Barbarich  
Executive Member

Tony Barbarich is the immediate Past President of the Association. He has been on the Executive of the Association since 1983 and President for two terms. He has been involved in the Industry since 1983 and was General Manager of Dimond Industries until 1998. Currently he is the Director of Business Development for Metalcraft Industries.



Brian Cosgrove  
Executive Member

Brian Cosgrove is Director and Roofing Division Manager for Dan Cosgrove Limited, Timaru. He introduced the Roof Manufacturing Division for their firm back in 1966 and was one of the pioneer members of the Corrugated Iron Manufacturers Association. He has been an executive member of the current Association since 1980 serving a period as President.



Gary McNamara  
Executive Member

Gary McNamara has been the New Zealand Sales and Marketing Manager for AHI Roofing since 1998 and an Executive Member of the NZMRM since 1999.



Phil Hogg  
Executive Member

Phil Hogg has had 13 years in Sales and Marketing, Building Products, and 9 years in Sales and Marketing, Roofing Products. He is currently Manager of Roofline Marlborough.



Gregg Somerville  
Executive Member

Gregg Somerville is Marketing Manager for Dimond. He has 14 years in the Roof Manufacturing Industry holding various technical, sales, management and marketing roles.

Above is a brief introduction to the 2002 executive of the Association. 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.

**If you would like to submit material please contact Peter Rasmussen, Executive Officer, any member of the executive or the publisher.**

## INDEX

- 3 *Testimony to our Nations Excellence. Establishing a permanent home for the development of rugby.*
- 7 *Doug Mills. The Supreme winner of the 2001 Harvey Roofing Systems design award*
- 9 *A new look for New Zealand Steel. Moving with the Market.*
- 11 *Scope Forecast*
- 12 *Scope News*
- 13 *Paris Magdalinos The HortResearch building Havelock North*
- 14 *A fresh look at The New Zealand Metal Roofing code of practice*
- 15 *A fascinating story. The history of Metal tiles in NZ.*
- 17 *Kauri Cliffs luxury lodge at Matauri Bay.*
- 19 *Members of the NZ Metal Roofing Manufacturers Inc.*

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# TESTIMONY TO OUR NATIONS EXCELLENCE

## THE VISION

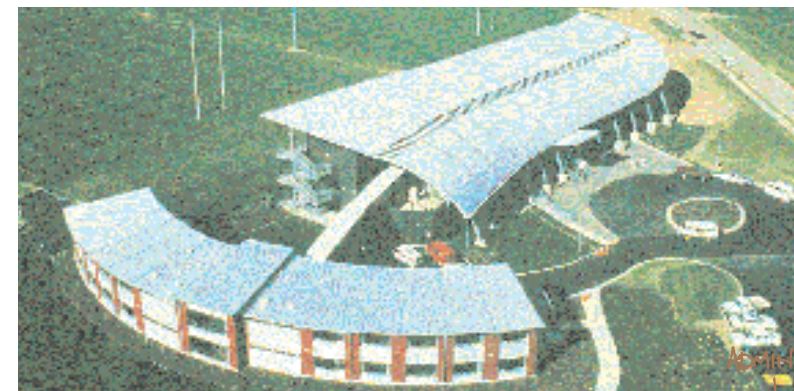
In 1997, the New Zealand Rugby Football Union conceived the idea of establishing a permanent home for the development of rugby.

The adidas Institute of Rugby has three pitches, all floodlit, with plans to develop a fourth at some point in the future. The landmark building includes an accommodation wing for up to forty players, changing and physiotherapy rooms, teaching spaces, administration offices, boardroom, weights room and a full-contact gymnasium with state of the art, non-abrasive, artificial turf.

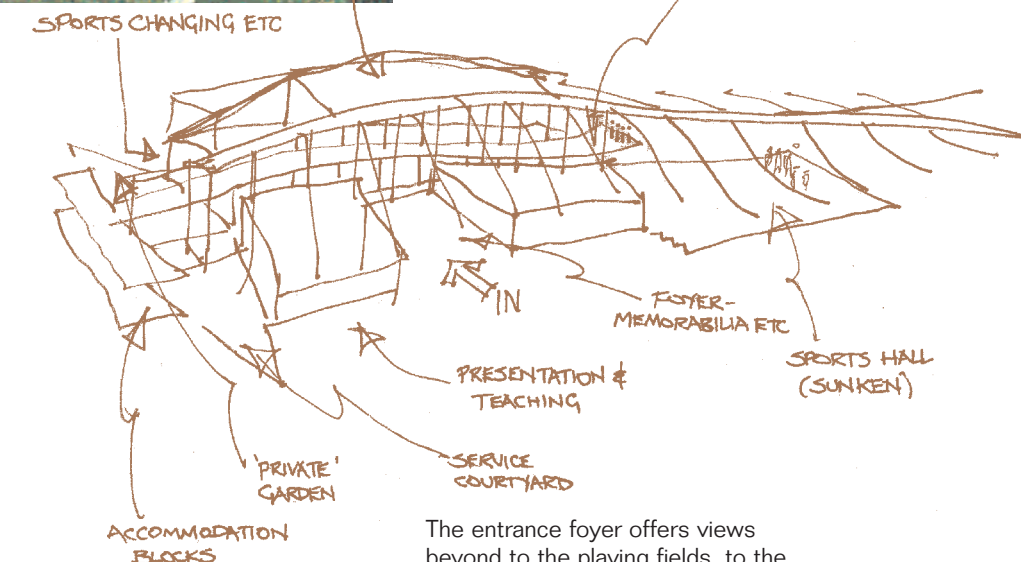
The Institute is perceived as being one of the tools needed to maintain New Zealand as a "leader" in the world of rugby. The building can be

The plan alters this form as if the fern is not as yet fully developed, just as the players entering this facility are yet to develop to their own full potential. The accommodation wing in it's circular form, at the stem of the fern, symbolises the victor's laurels as a testimony to our nations excellence in the game of rugby.

First impressions are vital and this modern, state of the art facility encapsulates a sense of the history, tradition and pride that is synonymous with New Zealand's national game and combine it with the NZRFU's forward-looking approach. Visitors disembark into a welcoming plaza and on approaching the building, must climb up stairs or a ramp to a grandly scaled entrance, before then crossing a bridge separating the 'outside world' and the elite world of representative rugby. All of this heightens the sense of the drama of entering these "hallowed portals".



After successfully bidding against several other tertiary educational institutes, Massey University won the right to provide a facility which would fulfil this role at its Palmerston North campus, using an Opus International Consultants concept design for the facility as part of its bid. The facility houses the education, coaching and training of all rugby participants from amateurs through to All Blacks.



seen as a symbol of the innovation the NZRFU brings to rugby development in order to maintain this dynamic, leading edge position.

The building form is based on the Silver Fern emblem, using the strong central spine and tapering shape as an organisational principle. The single large roof abstractly captures the image of a silver fern, as viewed from the main entrance.

The entrance foyer offers views beyond to the playing fields, to the soaring void of the gymnasium alongside, and of the two floor levels above. The ground floor is 1.5 metres higher than the gymnasium to increase the available height in the gym, allowing direct access to and from the playing fields. The raised entrance level allows the changing and physiotherapy rooms to be housed in a semi-sunken basement with access from the accommodation,



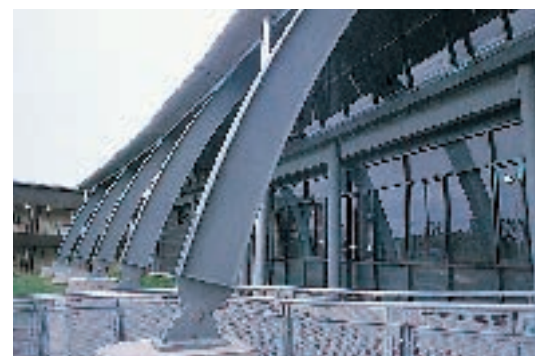


main building, playing fields and gymnasium. The main portion of the facilities building is structured according to function and level of privacy required, with flexible, ground floor teaching and dining rooms (the day-to-day functions), first floor weights room, management offices and boardroom and second floor management suites overlooking the fields.

The building is intended to be bright and spacious, with the glazed spine and glazed walls allowing the maximum amount of natural light to penetrate to the centre of the building. The spine splits the building in two allowing daylight into the heart of the ground floor, creating a central 'high street' for the Institute, around which the life of the building will occur. Glazed walls to rooms on the west side and a 7 metre high sloping monolithic timber veneered wall to the east,

enclose this void. This allows certain functions to be openly conducted whilst shielding more private functions from the public gaze - a reminder that even a high profile body like the NZRFU demands privacy from time to time. The spine walkway on ground and first floor ties all areas of the building together, from the gymnasium, through the main block, past the garden courtyard to the accommodation block beyond. Bridges from the spine across the three storey internal void in two locations provide dramatic access to the boardroom and offices on the first floor.

As players will spend up to four weeks at the Institute, it is necessary to have pleasant relaxed surroundings for accommodation, where players and coaches can feel a definite separation between the 'work' of the day and the relaxation



of 'free' time. To achieve this the accommodation blocks are separated from the main building at the northern end of the development and the space between opened up to form a private garden. Making the accommodation block two stories, with two wings of five double rooms on each story, organised around communal lounges and ablution areas, helps increase the feeling of enclosure and privacy on such an open site.



The building's form and orientation are intended to provide maximum shelter and use of natural light, heat and cooling. The roof is shaped to take account of the prevailing north-westerly and southerly winds, whilst the large eaves, orientation of glass, and thermal mass of the concrete floors make use of low morning and winter sun to warm the interior whilst shading from the strong summer sun.

## THE EXTERIOR

The silver fern is depicted through the main stem and secondary off shoots being constructed of glazing on a background of BHP Zinalume® coated steel. In addition to contributing to the aesthetic appearance, the glazing also has a functional purpose of providing natural light to the building.

Turning the architects vision into reality presented special challenges for both the roofing design and detailing. For technical support the architect sought assistance from Dimond Industries and a glazing supplier. One of the main problems to overcome was the provision of suitable flashings between the roofing and the glazing elements, given the three different slopes within the plane of the roof. This lead to the development of appropriate details to suit this particular application.

0.55 BMT G550 corrugated Zinalume® steel was selected as the main roofing material. The corrugated profile is symmetrical allowing the curved roof shape to be achieved. In addition to providing the eye catching silver colour, the Zinalume® coating also combines the corrosion protection of aluminum with the sacrificial protection of zinc, giving the advantages of both metals. The resulting alloy significantly enhances the corrosion resistance of roofing in the aggressive New Zealand environment where prevailing winds can carry salt laden air many kilometres inland.

The metal roofing, soffit and ceiling contract was awarded to Metalcraft Industries and Lance Berry Roofing, a manufacturer backed supply and fit partnership. From the outset it was clear that this project would provide some challenges and it would require all the skill and expertise of the installation team to transform the visual concept into reality.

Some 11 tonnes of 0.55 Zinalume® steel was installed on the main roof. The upper area

(above the central glazing spine) was fixed as a conventional straight section at 10 degree pitch using G550 high tensile sheeting. The lower curved section has a radius of 15 metre and G300 low tensile sheeting was selected for this area. The sheeting was drape laid over the fire retardant paper, 50mm insulation, fire retardant foil and netting with a slight longitudinal twist following parallel to the adjacent sheet. This resulted in roof sheets being 300mm out-of-square at the gutter line, requiring insitu trimming.

An additional 10 tonne of corrugated 0.55 Zinalume® steel was installed reverse drape laid to the soffit linings. Internally, P119 perforated 0.55 corrugated Zinalume® steel was also reverse drape laid to the ceilings as an acoustic lining, with the 10,000 holes per square meter assisting installation through its reduced strength.

## Project team:

*Client: Massey University and the N.Z.R.F.U.*  
*Architect: Opus International Consultants Ltd.*  
*Structural Engineer: Opus International Consultants Ltd.*  
*Project Manager: Opus International Consultants Ltd.*  
*Quantity Surveyors: Rider Hunt Kitching Ltd.*  
*Main Contractor: McMillan and Lockwood P.N. Ltd.*  
*Steel Fabrication: Stevenson's Structural Engineers Ltd.*  
*Steel Detailers: BDS Donpel (NZ) Ltd.*  
*Structural Steel Suppliers: BHP New Zealand Steel Ltd. BHP Steltech Structural Ltd. Steelpipe New Zealand Ltd. Fletcher Steel Ltd.*  
*Purlin Suppliers: Dimond Industries Ltd.*  
*Roofing Suppliers: Metalcraft Industries Ltd.*  
*Roofing Fixer: Lance Berry Roofing Ltd.*

*A casebook study of this project is available from BHP New Zealand Steel Ltd. P.Bag 92 121 Auckland*







## THE SUPREME WINNER OF THE 2001 HARVEY ROOFING SYSTEMS DESIGN AWARD

Drawing from architectural history, they chose Otago schist, textured cement plaster, and board and batten claddings topped with a large roof as a backdrop to the multi-roofed elevation – thus creating a blend of traditional shapes and textures.

A roof of this size needed to be lightweight so as to reduce the size of rafters and beams to the variety of sloping ceilings within, and also to reduce the settlement effects that a concrete tile roof could have had on the entire structure of the building.

The style and pitch of the roof dictated a no-maintenance surface finish – this has been achieved by selecting Harvey Oberon Shingles (colour - Eclipse) with the natural stone chips embedded into the acrylic basecoat.



Overall, the finished result is a strikingly well balanced presentation of different geometric shapes that form an interesting facade to a functional family home.

*Project – Private Residence for Ross and Julie Tucker, Glenbrook*  
*Designer – Doug Mills*  
*Architectural Designer*  
*Box 13034 Tauranga*  
*Tel/fax 07 574 9777*  
*tel 09 235 3714*  
*Email doug@dmdesign.co.nz*  
*Structural Engineers – Mitchell*  
*Vranjes Consulting Engineers Ltd,*  
*Papakura tel 09 298 8800*  
*Builder – Ross Tucker (owner)*  
*Steel Roofing – AHI Roofing*  
*Tel 09 978 9010*  
*Cedar Joinery – Brian Bishop*  
*(qualified joiner and family friend of the owners)*

2001 saw the introduction of the Harvey Roofing System Design Award. This award is judged by majority votes from all sectors of the industry and interested members of the public. It therefore represents a balanced view of the universal appeal and excellence of the Supreme Award Winning design.



*Designer Doug Mills*

### Designers Statement

One of my early visits to see Ross and Julie at their old bungalow was a surprise, as Ross, a qualified cabinet-maker and builder, had constructed a 1:50 scale model of the house that I was preparing construction drawings for. This model was to closely resemble the traditional style residence that is now their home. They also took the opportunity to sit the model on the site to determine sun penetration at the shortest day of the year, prior to setting up the profiles.

Working in conjunction with Ross and Julie over the next 12 months

we developed solutions to improve the use of the spaces available under the 45-degree roof pitch, without losing the original design concept.

Ross and Julie had recently purchased a lifestyle block of land with an intensive rural outlook plus water views of the Manukau Harbour. They had a vision for a Country Manor style of home for them and their 3 young children, with the possibility of home-stay accommodation in the future.

With this in mind Ross and Julie wanted to create a home with a positive New Zealand influence.

The dark colour of the Oberon Shingles contrasts with the warm glow from the cedar barge and fascia boards, complimented with copper spouting and downpipes.

A combination of aluminium-framed joinery was chosen for the maintenance-free aspect and value for money, while timber-framed joinery was chosen for reasons of traditional character and as a feature in the main living areas.

To anchor the house to the ground and give it a feeling of permanence, the variegated hue of Otago schist adds interesting shadow and texture.

*Aluminium Joinery – Alti from Maddren Joinery, Kumeu*  
*tel 09 412 6509*  
*Premier Aluminium Joinery,*  
*Drury tel 09 294 8868*  
*Plastering - Rockcote*  
*Stonemason – Dave Tudor from Otago Natural Stone*  
*tel 07 847 7340*  
*Size of dwelling – Ground floor = 248m2; Upper floor = 157m2*





Prepainted steel was being rapidly accepted in developed countries when New Zealand Steel decided to build a coil coating line, some 20 years

*Cyril Benjamin, President, New Zealand Steel, showing the new signage and logo of BHP New Zealand Steel*

ago and market this solution to New Zealand consumers and the building industry.

## NEW ZEALAND STEEL. MOVING WITH THE MARKET

The strategy for a coil coating line had been an integral component of New Zealand Steel's long-term business plan for a number of years. New Zealand Steel became seriously interested in coil coating after a visit to John Lysaght Australia Ltd in 1978. Prepainted steel was expected to have a major market in New Zealand and substantially increase the company's export product range.

The continuous coil coating line was installed at New Zealand Steel's Glenbrook works and was commissioned in March 1982. The first product produced on the coil coating line was a primed only product for AHI Industries who used the steel in their pressed metal

roofing tiles. The construction cost of the plant was about \$15 million and covered an area 37 metres wide and 140 metres long, almost equivalent to the area of Eden Park.

The coil coating line was built to a design recommended by John Lysaght (Australia) Ltd, and incorporated the best in design of the John Lysaght lines. Although much of the specialised equipment was of necessity imported, an Otahuhu company Taylor Instrument

COLORSTEEL® product launch was the biggest ever undertaken by New Zealand Steel. Members of the trade, local and metropolitan press were invited to a line tour and talks on the COLORSTEEL® prepainted steel history and applications. This was followed by widespread advertising and exhibits at the September 1982 Auckland Home Show. The Home Show was a huge success for COLORSTEEL® pre-painted steel, with many people visiting the stand. The



Limited, won the contract to install the coil coating lines computer control equipment. John Lysaght (Australia) Ltd provided much of the initial training and technical assistance.

The coil coating line has the capacity to paint over 60,000 tonnes of steel a year. The paint is applied to both or only one side of the base steel at speeds of up to 75 metres a minute. The operation involves a number of production stages including cleaning, specialised pre-treatment, primer/topcoat application and oven curing.

To gain maximum exposure, an advertising and publicity campaign for COLORSTEEL® pre-painted steel was launched in June 1982 with the aim of making the brand COLORSTEEL® a by-word on the New Zealand market. The

COLORSTEEL® product stand was on display again at the Local Government and Public Works Exhibition in November, at the Wellington Home Show in February 1983 and at the Buildex Exhibition in May 1983. By September 1982, the New Zealand Steel coil coating line was selling 1000 tonnes of COLORSTEEL® a month. Along with this domestic demand Pacific export markets were also being established.

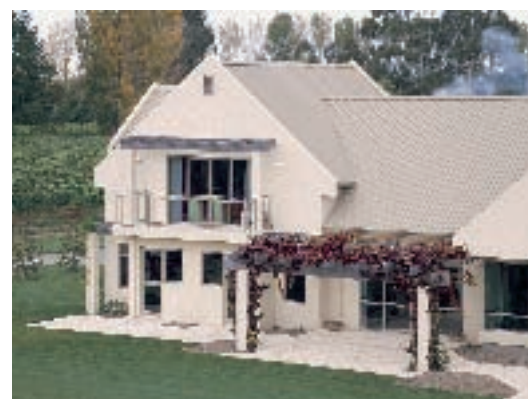
The initial product marketed was COLORSTEEL® 5000, an exterior roofing and walling product with a galvanised steel base coated with silicone polyester paint. This was available in six colours based largely on the colours of New Zealand's indigenous plants and minerals. Where a premium decorative performance was required, COLORSTEEL® 8000 was recommended. Although the main



focus was on the building market, COLORSTEEL® prepainted steel was also marketed into other end use applications such as office furniture, drums and consumer durables.

In June 1984, New Zealand Steel launched a new product onto the domestic residential and commercial markets – COLORSTEEL® VP. COLORSTEEL® VP combines a galvanised steel base with an extra heavy duty vinyl plastic paint system designed for very severe conditions, such as right on the coast, in geothermal areas, or where there is aggressive industrial fallout. With the continuous improvement of the COLORSTEEL® paint systems, in October 1990, New Zealand Steel launched a new prepainted steel product to the domestic market to replace the then current COLORSTEEL® 5000 and 8000 products. COLORSTEEL® G2 was introduced as a "one size fits all" with improved corrosion resistance. The image of COLORSTEEL® pre-painted steel was lifted into the high fashion, high quality market. A new television commercial and print advertising campaign was launched to promote steel roofing as having style, fashion and many colours.

In June 1994, BHP New Zealand Steel commissioned a new ZINCALUME® coated steel plant and introduced ZINCALUME® steel to the New Zealand market. ZINCALUME® steel is a new but internationally proven addition to the New Zealand Steel range. The ZINCALUME® coating is a mix of both zinc and aluminium which offers superior corrosion resistance when compared to traditional galvanised steel in most environments. ZINCALUME® steel became the substrate for the new COLORSTEEL® G2z product launched in 1994. Taking advantage of the new superior corrosion resistance of COLORSTEEL® G2z, new warranties were issued allowing the product to be used closer to the coast. COLORSTEEL® G2z and COLORSTEEL® VP are still the products being produced today.



*From the top:  
COLORSTEEL® Karaka, South Island  
COLORSTEEL® Titania, Rotorua  
COLORSTEEL® Lichen  
COLORSTEEL® New Denim Blue*

## IT'S A ROOF MADE FOR NEW ZEALANDERS

There's a roofing material that's made in New Zealand, by New Zealanders, for New Zealanders. COLORSTEEL® roofing's hues of nature reflect our natural heritage and lets homeowners capture and share the spirit of what it is to be a New Zealander.

COLORSTEEL® roofing helps free every Kiwi to create the home they want – elegantly traditional or challenging and contemporary, strong straight lines or gentle curves.

It's NZ Steel COLORSTEEL® prepainted steel roofing and it adds lasting beauty and value to every New Zealand home.

COLORSTEEL® roofing's baked-on colours allows New Zealanders to enrich the appearance of their homes.

And like every good Kiwi there's a solid core. This time it's made of steel, and ZINCALUME® coated to resist corrosion. Ask for COLORSTEEL® roofing....it's guaranteed



**The roof of New Zealand.  
0 8 0 0 - 1 0 0 - 5 2 3**

COLORSTEEL® is a registered trademark of New Zealand Steel Limited. ZINCALUME® is a registered trademark of BHP Steel Limited. Note: Colours shown in this advertisement may differ from COLORSTEEL® colour charts due to differences in printing processes.



# SCOPE FORECAST JULY/AUGUST

Information supplied by BRANZ

## August 2002 Building activity outlook

New dwelling consents numbered 22,573 in the year ending June 2002, the latest data available. Numbers have been rising since the low point of 19,200 consents in May last year. Low interest rates, the strong domestic economy, and migration inflows have assisted the turn-around. The latter two factors continue, but interest rates are now rising.

The BRANZ forecast is for new dwelling consents to peak early next year at 23,200 on an annum basis. Non-residential building consents are expected to remain at current levels of activity for the next 12 months. Factors influencing the forecast are:

### Interest Rates.

Since the start of this year the OCR (Official Cash Rate) has risen from 4.75% to 5.75%. The peak in mortgage interest rates is expected later this year and will remain at that level for the first half of 2003 and then decline slightly.

### Migration.

Net inflows were 32,800 for the year ending June 2002, a higher level than the peak inflows of the mid 1990's. see Figure 1. Then there was strong demand for new housing reaching over 26,000 consents per year. This time the migrants are different, there are more students (about 40% of the inflow) and fewer cashed-up families looking to establish homes. Even so the level of permanent migrants has increased significantly in the past

Figure 1.

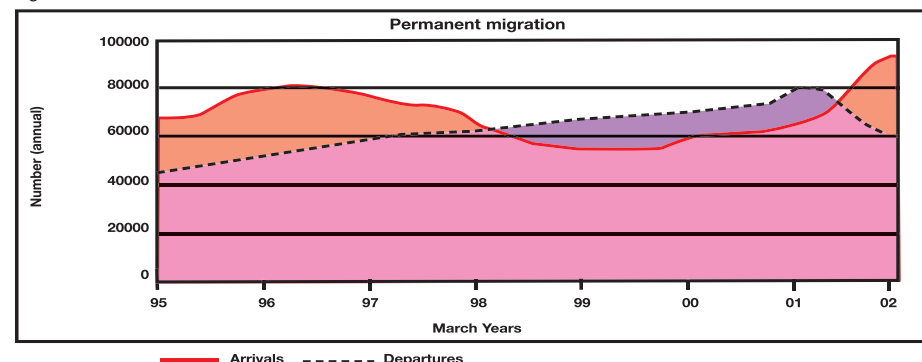
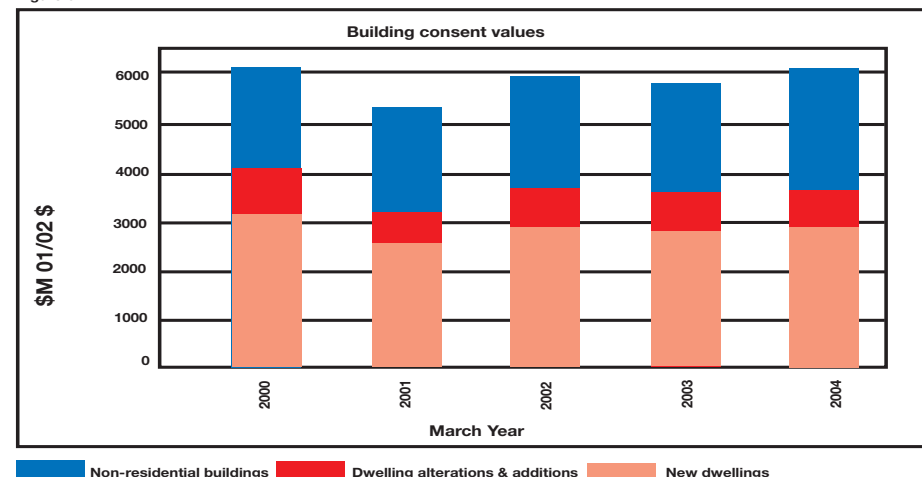


Figure 3.



year. Officials were surprised by the number of applicants that were achieving "pass mark" in the entry criteria, over 50,000 new residency permits were approved in the year to June 2002. In response the number of points required for entry was raised last month, and this will have the effect of reducing inflows within a few months.

Existing house prices have moved 6% on average over the last year, and this is a very much smaller movement than occurred in the mid 1990s migration inflows, when Auckland prices typically increased by 20% per annum. The current small movement in the housing market is constraining new starts to some extent. Labour policy on state rentals is to build or acquire another 2,500 units over the next 4 years and this policy is expected to remain largely unchanged in the new Government. This amount is only about 3% of the expected number of new dwelling starts, but is a welcome addition to the industry.

Employment prospects over the next 9 months are good due to continuing GDP growth, forecast at about 3.4% for the March 2003 year. In the following year growth slows to about 2.5% and unemployment rates may rise slightly. But the general outlook for employment is good and will maintain household confidence to invest in new housing.

Migration, the moderately strong existing house market, and good employment prospects are positive factors for new housing starts over the next 12 months, but this is offset by rising interest rates this year. On balance the BRANZ forecast is for new housing starts to go a little higher, peaking in early 2003 at 23,200, and then decline to about 22,000 consents for the year ending March 2004.

Non-residential building starts are expected to remain at the current moderate levels of activity,

underpinned by continuing work in the health and education sectors. In the commercial sector there is some uncertainty due to volatile world markets and falling business confidence locally. The latter probably reflected uncertainty about the Greens influence in the new Government. However, confidence may improve in the next survey as it currently appears the Greens influence will be less than anticipated during the election campaign.

# SCOPE NEWS A N N D V I E W I S E

## New Zealand Steel Returns to Glenbrook

The name "New Zealand Steel" has returned as the brand and logo for the country's largest steel mill at Glenbrook, south of Auckland.

This comes 10 years after the operation was bought by BHP.

Since then, it has been known as BHP New Zealand Steel.

President of New Zealand Steel, Cyril Benjamin, said the return of the brand is representative of the heritage of steel production in New Zealand.

"New Zealand Steel" is a brand that recognises over thirty years of steel production at Glenbrook and we are proud to bring it back.

It is also a name that reflects the enormous contribution thousands of people have made to the steel making operation, which has become an efficient world class producer servicing global markets."

The new logo draws on the New Zealand identity of the steel operation, while maintaining a visual link with the origins of its parent



company, BHP Steel Limited, and the flat steel products synonymous with the company's business. The launch of the new brand and logo comes just a few months before the planned public listing as an independent public company that will trade as BHP Steel Limited.

The new BHP Steel will have assets of more than A\$4.7 billion, sales exceeding A\$5 billion and annual production in excess of 5 million tonnes from plants in Australia, New Zealand, Asia and USA.

New Zealand Steel will remain an integral part of the BHP Steel group of companies.

## Four decades and still weather proof

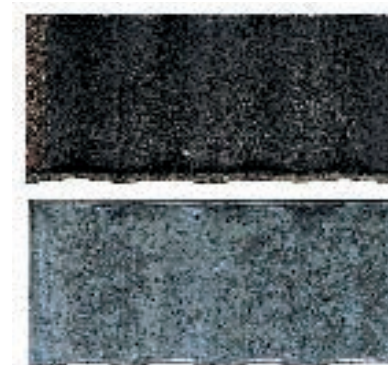
On the 29th of May 1961 this new family home was built in Mt. Roskill, Auckland. The owners chose the new pressed metal Fisher Tile for their roof. The photograph shows the original textured roof in Terracotta as it was 14 years ago.



The original roof prior to reroofing

In 2001 the roof was replaced with a new Harveytile Satin Graphite roof.

After 40 years of service the tiles were in remarkably good condition and showed no sign of corrosion or rust. This is testimony to the strength and durability of what was then a revolutionary innovation in roofing.

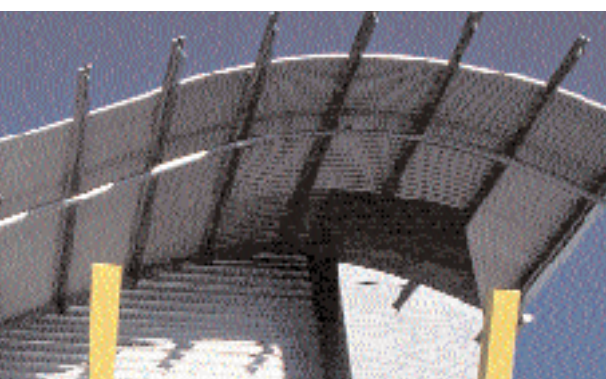


Tiles removed from the home were in remarkably good condition

Since the production of this tile in 1961, AHI Roofing have replaced the original Mastic surface coating with an Acrylic coating which provides better texture adhesion and weathering properties. The galvanised coated steel substrate has been improved with the use of a zincalume coating which offers even greater protection against corrosion. Further design and manufacturing innovation has resulted in a better interlocking system and a variety of profiles improving both the function and appearance of today's roof.

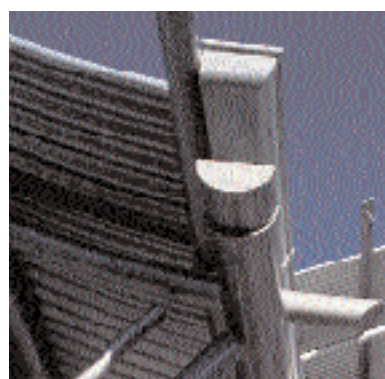


The Hortresearch building by Paris Magdalinos is featured on the cover of this issue of Scope



The HortResearch building Havelock North was designed and specified by Paris Magdalinos Architects Ltd, Napier. Telephone 06 835 6173. Paris Magdalinos also designed the award winning three storey technology block at Napier Girls High School using similar product specifications. (NZIA Resin Colour Award) ColorCote® ZRX™ Metallic Silver, manufactured by Hawkes Bay Longrun.

## LOOKING GOOD, LONG LASTING PERFORMERS



We at Pacific Coilcoaters have always maintained that longevity is not just about performance – it's about out-performance. A mindset that has been integrated into our range of ColorCote® pre-painted metal roofing and cladding systems. Within the range you'll find a system that withstands the environmental challenges you demand of it, including severe marine, geothermal and industrial conditions anywhere in New Zealand. ColorCote® is available in an extensive range of colours to match your architectural or design taste. ColorCote® coating systems are designed to provide advanced corrosion resistance and hold their original colour too. Every part of a ColorCote® roof is made to last... made to last longer.



For further information on ColorCote® pre-painted metal products call 0800 279 979 now, or write to Freepost ColorCote®, Pacific Coilcoaters PO Box 12 046, Penrose, Auckland.

## THE NEW NZ METAL ROOFING CODE OF PRACTICE

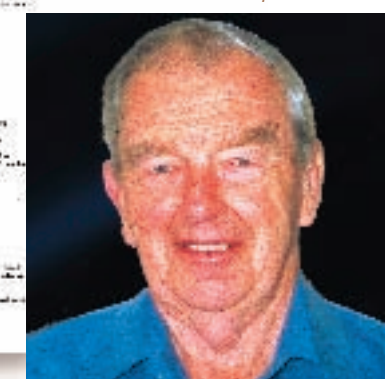
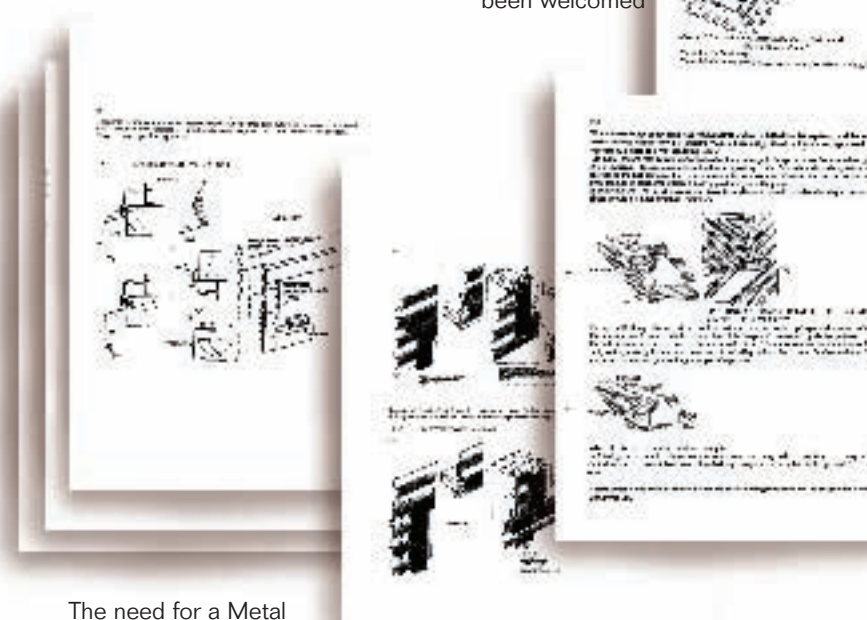
In order to protect the consumer the Metal Roofing Manufacturers are now actively promoting and supporting those people who buy their goods, not as "stand alone products", but as a "weathertight system." To this end the NZMRM commissioned a "New Zealand Metal Roofing Code of Practice" to be written and accepted as an Acceptable Solution by the Building Industry Authority. This initiative has been welcomed

revised and updated in 1988 and 1995.

However, the latest initiative by the N.Z. Roofing Manufacturers Inc. is a major step forward as the "New Zealand Metal Roofing Code of Practice" is a comprehensive prescriptive document.

Watch this space for its release, which is expected later this year.

With early beginnings in the plumbing industry in N.Z. and the UK Stuart Thomson has now become a recognised authority in the Metal Roofing Industry in New Zealand. Stuart's experience in



The need for a Metal Roofing Code of Practice dates back to the Building Act which was passed in 1991 as a direct response to the historical over regulation of the building industry. The intention of the Building Act was to make the existing system "easier, cheaper and more innovative."

The new environment was to be a performance based self regulating system. Unfortunately, what was not envisaged was the impact that "price" was going to have on lowering building standards.

Without the registration of builders or roofers, anyone could operate in these areas.

As a result, "cowboys", those labour only contractors who make a killing until the truth catches up with them, have become a major issue over time.

by the Authority and will be a New Zealand first.

The N.Z. Metal Roofing Manufacturers Inc. is very aware that it has a responsible role to play in the education of Territorial Authorities, Builders, Architects, Engineers, and consumers as to how their products should be used to comply with the Code. To this end a lot of money, time and effort is being invested into trade literature, appraisals, research and the testing of various products.

This move is not the first time that the N.Z. Roofing Manufacturers Inc. has made such a contribution.

Twenty years ago they produced the first "Profiled Metal Roofing Handbook" and this has been

design, manufacture and installation has spanned 5 decades. He formed Thomson Metal Industries in 1958 which was sold to Dimond Industries in 1977. After five years involved with Research and Development with Dimonds, Stuart joined NZ Steel as Development Engineer until his retirement in 1988. Currently Stuart is consultant to the N.Z. Metal Roofing Manufacturers Inc. and the Roofing Association of New Zealand. The experience and knowledge Stuart has brought to the industry has resulted in his recent commission to write the N.Z. Metal Roofing Code of Practice for the N.Z. Metal Roofing Manufacturers Inc.

Stuart W. Thomson  
Auckland, New Zealand  
Telephone: 09 576 0047



# AN EYE FOR AN OPPORTUNITY

Behind the sophisticated range of metal roofing tiles currently produced by AHL Roofing Ltd lies a fascinating story.

## PART 1. METAL TILES

Extracts from "The History of Metal Tiles" researched and written by Kate Hill.

Beginning in the early years of World War II, when linseed oil-based paints became impossible to obtain, the British Government requested an all-



L.J. Fisher

out effort by leading bituminous emulsion manufacturers to produce an alternative protective coating material which could be applied to both new and existing steel and corrugated iron structures and which would also provide a camouflage effect. Industrial Chemists then came up with an emulsion which was "... designed to present a tough waterproof membrane to steelwork, and to have the highest bitumen content possible". Using this emulsion the Decraspray Company (Welling) Ltd in Kent produced the exclusive Decramastic brand which also claimed to be "... acid proof and chemical-fume proof, [with] ... a very high resistance to water vapour."

Throughout the war Decramastic went into service assisting "... in the Protection of the Nation's Food ... [and] in the Protection of Britain's Airfields, Royal Ordnance Factories, Etc.". Grain storage depots



The 85,000 sq. ft Glen Innes factory of L.J. Fisher and Company Ltd.

throughout the country were shielded by the new product as was Tate and Lyle, the world's largest sugar warehouse (Decraspray brochure).

In the years following the war, various attempts were made to remove this functional paint work which, having served its original purpose, was now considered drab and unfashionable. However, the product was found to resist such attempts to the point of impossibility and, furthermore, to have protected the underlying metal so well that the potential for its commercial use soon became apparent. From 1946 the black protective coating was specified and applied "in situ" to many large buildings throughout Britain by well known organisations such as the Port of London Authority and the Air Ministry. Within a matter of two or three years industrial building contractors were demanding that new iron sheeting be treated



L.J. Fisher & Co Decramastic brochure.

with Decramastic. Initially sand was spread between the stacked sheets to facilitate handling during transportation, but this proved to be an unsatisfactory method of



Decramastic advertisement and press release which appeared in the N.Z.Herald on 20th April 1968

protection and eventually natural coloured stone chip replaced the "untidy" sand (L.J.F. Folio).

Early in 1954 Mr L.J. Fisher was perusing an English trade magazine when an advertisement for the product caught his eye. Working on the assumption that a factory-produced local equivalent would be an extremely saleable domestic product, he promptly flew to England, where he obtained the rights to manufacture for supply to markets outside the United Kingdom.

However it wasn't just good luck and an "eye for an opportunity" that was to make Lou Fisher one of the countries most innovative industrialists. By 1954 he had been already successfully manufacturing aluminium and steel doors and windows for sixteen years. It was from this strong base that Lou Fisher was to establish the first overseas plant coating corrugated iron sheets with a waterbound Bituminous Emulsion.

To be continued next edition





# ON THE EDGE OF THE PACIFIC OCEAN

KAURI CLIFFS LODGE AND  
COTTAGES, MATAURI BAY,  
NORTHLAND

Kauri Cliffs luxury lodge at Matauri Bay, Northland is the home of a spectacular championship golf course rated as best new international golf course of the world. Kauri Cliffs is set on 1618 hectares with magnificent views over the Cavalli Islands and the Pacific Ocean. In addition to the golf course, it features tennis courts, an infinity-edged pool and spa, a fitness centre and three swimming beaches.

The main building is the two-and-a-half-storey lodge, modelled on Northland's 19th century mission houses and designed to resemble a large homestead with wide verandas and porches. Eight guest cottages, each with two suites, are sited so guests can enjoy Kauri Cliffs' atmosphere and facilities against a backdrop of native bush and ocean views. Pacific Coilcoaters' ColorCote® ZRX™ pre-painted steel roofing was chosen for both the clubhouse and the eight guest cottages. The main building has a Eurotray profile from Calder Stewart Roofing while the cottages have a corrugate profile. ColorCote® ZRX™ is ideal for Kauri Cliffs marine environment overlooking the Pacific Ocean. The exterior coat of ColorCote® ZRX™ provides excellent corrosion resistance, colour and gloss retention.

Owners:  
Julian & Josie Robertson  
Architects:  
Wade Setliff, Architectural Design  
Group (Lakeland, FL, USA)  
Kerry Avery, Avery Team  
Architecture (Auckland)  
Main Contractor:  
Haydn & Rollett Construction  
Roofing:  
Lodge - ColorCote® ZRX™  
Sandstone Grey

Cottages - ColorCote® ZRX™  
Greyfriars Profile:  
Lodge - Eurotray supplied by  
Calder Stewart  
Roofing Installation:  
Lodge - Calder Stewart Roofing





For further information on Metal Roofing or Cladding or details of any of the articles which appear in this publication please contact any of the members listed below.

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*Calder Stewart Industries Limited  
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Contact: Andrew Protheroe*

*Dimond  
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Contact: Gregg Somerville*

*Metalcraft Industries Limited  
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Contact: Dennis O'Sullivan*

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