

SCOPE

NZ METAL ROOFING MANUFACTURERS INC.





Tom Marshall

50

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SCOPE'S 50TH ISSUE

This 50th issue of SCOPE is a milestone for the publication which was first published in 2002.
The brainchild of MRM's marketing committee, the main objective of the magazine was to encourage specification of metal roof and wall cladding through case studies of residential and commercial projects with the emphasis on the architectural perspective of these buildings.

The marketing committee at that time comprised Darrell Back, MRM President, Gary McNamara (Gerard), Tony Barbarich (Metalcraft) and Gregg Sommerville (Dimond) who were all involved in the early years.

The vision for SCOPE was not only to enhance the image of the NZMRM as a professional and authoritative body, benefitting the building industry as an important segment of the construction industry, but to celebrate the use of innovative design – featuring both longrun and metal tiles.

SCOPE began as a 20-page publication and this has progressively increased to 24, 32 and 40 pages of content which, over 50 issues, has reflected new trends in NZ made metal cladding and roofing that have ensured that architects, designers, builders and roofers are up-to-date with information. The magazine, produced by ICG Limited, is also published on the MRM website so reaches a far wider audience.

Research indicated that the industry wanted more technical information and Stuart Hayman, and the late Stuart Thomson, have over the years, provided a wealth of information on the Code of Practice and sustainable building practices.

SCOPE is a non-profit publication sponsored by Pacific Coilcoaters, NZ Steel and MRM.
The current president of MRM is Tom Marshall (Marshall Industries, Invercargill) and the marketing committee comprises Warren Oliver and Chris Back.



Pacific Coil Coaters and New Zealand Steel
are proud to support the initiatives of the MRM and Scope Magazine



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

If you would like to submit material please contact any member of the executive or the publisher.
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TIMELESS DOUBLE GABLE HOME IN WANAKA

Having already developed a home in Wanaka's Bull Ridge subdivision, builder Nathan Simon had firm ideas about the sort of house he wanted to construct on a neighbouring section.

"We had developed and lived in the house next door on the street, so buying the neighbouring section allowed an upgrade in section size and the move for a bigger house," Nathan said. "We wanted a two-gable style build because the first home was mono-pitch so we wanted something different but we still wanted to use the same claddings." He also wanted the exterior materials – schist and vertical cedar cladding – to transition indoors.

"I wanted to use cedar on a few internal walls down the hallway, one wall had the entry door into the garage. This allowed the creation of a

hidden door using the vertical lines of the timber to blend with the door opening. It has become a real talking point with the house." He added: "We also matched black brick-like tiles in the bathrooms and kitchen to mimic the bag-washed black brick block outside."

The home's clean lines and colour scheme are complemented by the roof in Trimrib 5 Rib in 'Ebony'.

Cam Dunnage, of Next Level Design, who helped Nathan realise his vision for the double-gable design, said the initial idea was to use an alpine tray for the roofing but Trimrib was chosen because it was more cost-effective and a material that roofers were more familiar with and was easier to install and flash.

Indoors, the tones of the cedar cladding are complemented by the warm colours of wooden floors (in the living area) and the wooden cabinetry and shelving. As part of getting the colour scheme right, Nathan was also particular about the type of schist he wanted.

"With the stone I really like the blues and greens of Gibbston valley schist rather than the local stone which has a lot more brown in it. Myself and the stonemason made a trip over and hand-picked feature rocks including the stone mantle above the fireplace."

Cam said of the design process: "When Nathan first came to me, he had already been to an architect and had something designed for the site and he asked me if I could do consent plans and arrange an engineer to sort the structure, however Nathan wasn't happy with the way it looked and asked if I would design something.

Cam added, "I stayed at his place next door while we worked on the design and that allowed me to get to know the area and the views, and to take surrounding photos so I could model the house up with 360-degree views, this gives the ability to see what views you have from all windows while designing.



"Nathan also took me around other houses in the subdivision to chose the styles and elements he liked." Cam said his brief from Nathan was to design a home with living to one side and the bedrooms to the other and it had to be a specific square metreage to stay within budget.

Nathan also wanted the mountain views captured, which is typified by a glazed end wall in the lounge with views either side of the schist chimney. Cam said he came up with a twin gabled design connected by a double-storey centre section, however it was later decided to go with a low profile, single-storey mono-pitch centre section, slightly increasing footprint.

The eastern wing has living, kitchen and dining spaces, while through the central section are two bedrooms, a TV room and the main bathroom. The western gable contains a double garage on the street frontage, and two bedrooms including a master with ensuite. Off this wing is a carport suitable for housing a boat.





Cam said the double gable home fits with the architecture of the neighbourhood and has a timeless look.

Skylights over the hallway and a high slot window over the kitchen help to fill the home with light.



The double gable home fits with the architecture of the neighbourhood and has a timeless look.

Also driving the design brief was Nathan's desire for a home with street appeal and a firm presence. "We wanted to invest in an entrance that looks great from the street. So we designed a flat roof entrance coming out of the gable, clad in stone. To create the flat roof with fall, we ended up with a deep fascia with a negative detail through the middle to stop any oil canning,

"it looks great."

"I also don't like flat barge flashing so we have a 50 x 40 box profile that eliminates any canning of the barges. I also had the gutters custom-made square with 30 x 20 box profile to match the gable barges."

All these elements create strong, clean lines from the street although Cam said they were a challenge to detail and execute – but he and Nathan worked together to solve any problems. Within the home, Nathan said he wanted to create a sense of space as you entered.

"The main feature of the house is in the dining room and the vaulted ceiling with which I decided to create the tongue and groove ceiling with exposed beams look. This also goes into the stone fireplace with full height windows looking north and onto the reserve."

Skylights over the hallway and a high slot window over the kitchen help to fill the home with light. A window over the oven in the kitchen breaks up the solidness of the space and opens up a view to the entrance.



Next Level Design

Next Level Design is a family business, combining two generations of design and based in Timaru.

Cam Dunnage has been working in architecture since 2005 and decided to join forces with his son, Bailey Dunnage, who has the same passion for creativity and fresh ideas.

"We work alongside other professionals in the industry to quickly solve complicated structural issues to choose the best outcome to suit the given requirements.

"Our approach to the design process is straightforward and to the point. We take into consideration the senses, seasons and environment, taking delight in creating and discovering these moments together with our clients and their projects."

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Roofing Industries
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Profile: Trimrib 5 Rib
Colour: Ebony

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Stonework:

Nathan Kelly

FREEMANS BAY SCHOOL. MODERN LEARNING

Freeman's Bay School is designed to create a fresh new centre of modern learning which looks to the future while encouraging close ties with the community



When Freeman's Bay school in Auckland needed redevelopment done, RTA Studio stepped in to design a building that proposes a solution type of architecture that inspires learning and promotes the fulfilment of potential in the local rangatahi (younger generation / youth).

The redevelopment programme saw the school almost entirely rebuilt on the existing site. Classrooms have been shifted around but the school stayed operational during the construction period.

The main drivers behind the need for redevelopment were aged buildings, weathertightness, and asbestos issues. Most of the classrooms were built

in the 60's and 70's. The redevelopment included four new buildings, a hall, administration block, library and a two-storey learning block. The only building left unchanged was a classroom block built in 2010.

"Freeman's Bay School is designed to create a fresh new centre of modern learning which looks to the future while encouraging close ties with the community, history and landscape," says Moshin RTA Studio.

Principal Sandra Jenkins was instrumental in the redevelopment of the school which has pioneered the government's 'innovative spaces' learning strategy. She says the learning-centred approach in an innovative environment aims to inspire and support students develop positive attitudes towards learning.

Sandra was the recipient of a travel fellowship in 2014 to study school design overseas. What influenced her most was visiting schools in



Scandinavia, Denmark and the UK where the role of design links students with what they might expect to find in the 'real world' of an activity-based work environment- a future-focussed approach with inspirational open learning spaces.

This vision has been replicated at Freemans Bay School, RTA Studio embracing the concept of unique learning spaces with both vertical and horizontal connections of the physical space within the school. The double height design includes an internal stairwell, in an area that can become an auditorium where up to 90 students can gather for a presentation or where students can share a sit-down learning space. Children love elevation but also enclosed spaces such as the space beneath the stairwell where a cave-like space is created.

An important feature of the design is that it encourages movement, says Sandra Jenkins. "We don't want our students to be static so the opportunity for activity has been able to be pushed

by the design element so there are lots of ways students can move around. Movement keeps the brain working and ensures students are active and alert. I have more ideas to build on this concept of enabling movement within the spaces we have.

"RTA Studio were great to work with and the learning spaces are really innovative: the collaborative effort of the Board of Trustees, Ministry of Education property managers, school leaders and experts in learning environments has resulted in us achieving something that is different and the high level of student engagement in learning is evidence of what this new strategy can deliver".

The removal of existing 1960s school buildings and carpark facilities made way for four new buildings that open onto a new central courtyard, encouraging social interaction, and outdoor learning.





A visually striking canopy connects the new multi-purpose hall and administration building to the entrance in Wellington Street. The canopy also functions as an inviting outdoor teaching space and covered play area. The ridgeline reflects both traditional Maori designs and typical roof forms of the colonial era flats and townhouses in the surrounding area.

Steel & Tube were heavily involved in coordinating the metal cladding elements.

Moshin from RTA Studio says: "The vibrant and rich colours on the buildings represent the diverse cultural community, and the children's different ethnic backgrounds."

The new learning hub is situated behind the admin building. This building provides advanced 'innovative learning environments' (80-90 pupils per 'classroom' in open-plan spaces), offering a variety of new building materials and technologies.

The exterior cladding uses an innovative curtain wall system which spans past the floor slab. The cladding is made of coloured glass panels, backed with insulation against a pinboard interior, all housed in the same frame. Flexible teaching spaces allow for a variety of pedagogical practice, as well as a multitude of subjects and disciplines, for use by the school and the community alike.

The new whanau ata / library building is situated West behind the hall and the existing 2010 learning building is in the North-east.

The design took into account both the embodied carbon and operational carbon footprint. While not specifically targeting any sustainable rating systems, various sustainable principles and design benchmarks have been applied to this project. Construction methods were encouraged to minimise demolition and construction waste through efficient use and ordering of materials.

Durable low maintenance cladding materials externally, and large Autex acoustic panel internal linings achieved the functional requirements of the spaces, while minimising the ongoing maintenance requirements of the external and internal spaces.

All buildings achieve a high level of thermal and acoustic comfort and performance and a high level of natural light through double glazed windows, above code insulation values. A strong preference for south facing windows with large overhangs minimise solar heat gain. Automatic operable

The vibrant and rich colours on the buildings represent the diverse cultural community, and the children's different ethnic backgrounds



windows offer adequate cross-ventilation of all learning spaces while being linked to weather station control of internal temperature and air quality.

The extensive roof areas provide an ample supply of rainwater harvesting for site irrigation, and Solar power generation via photovoltaics assist with the school's electricity demands. The alternative power generation has also been incorporated into educational activities with tracking display boards.



Awards

- 2019 Auckland Architecture Award
- 2018 Learning Environments Australasia awards, Commendation
- 2018 Resene Total Colour Awards Winner - Colour Master Nightingale Award
- 2018 Resene Total Colour Awards Winner - Education-Primary
- 2018 Architizer A+ Awards, Finalist - Architecture + Community
- 2019 AGM Interior Awards - Civic Winner
- 2019 - Finalist World Architecture Festival

RTA Studio

RTA Studio has received more than 70 New Zealand and international awards, including Home of The Year, a World Architecture Festival category win and the New Zealand Architecture Medal.

"We are a practice that focuses on delivering exceptional design with a considered and personal service. Our work aims to make a lasting contribution to the urban and natural context by challenging, provoking and delighting

Our studio is constantly working within the realms of public, commercial and urban design as well as sensitive residential projects.

We are committed to a sustainable built environment and are at the forefront developing carbon neutral buildings."

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Roofing/cladding Manufacturer:

Steel & Tube
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www.steelandtube.co.nz
Profile: ST 900 Trapezoidal Profile
Colour: Coloursteel® KowhaiGlow®,
Colorsteel® Flax Pod®

**SET IN A RURAL PARADISE:
KOWHAI HOUSE MAXIMISES ITS UNIQUE SETTING**

Nestling the home in its unique environment, the roof form and use of bold colours provides a strong silhouette along the ridgeline



It sits on the crest of a hill, overlooking valleys with Mount Taranaki and the Kaitake Ranges in a direct line of sight and the Tasman Sea in the distance: Kowhai House, with its views in all directions, maximises the experience of the green hues of this undulating rural Taranaki site.

Reflecting the owner’s artistic talent, the brief was for a highly personalised, functional home, enabling Arden Peters Architects Ltd to pay homage to the mountainous backdrop by providing dramatic, light-filled interiors to capture the stunning landscape.

The owners had fallen in love with the location, overlooking native bush which they have augmented by planting additional native trees on most of their land – 4000 so far.

Their brief to the designers was for connected rooms, an open plan that retains some separate spaces, wide corridors for the circulation spaces and an uncluttered, elegant and light home.

Kowhai House has three bedrooms, two living spaces and a home office with abundant framed viewpoints and sheltered out door spaces. The high performance, low maintenance home achieves the project team’s objectives for climate control, energy efficiency and value engineering features.



detailing to merge roof forms with finished profile metal installed vertically and horizontally to create a textured façade.

A key feature of the home is the metal cladding, Colorsteel® Endura® in Kowhai Glow and New Denim Blue on the walls and Colorsteel® Endura® Veedek® in Tui-tuft on the roof. Chosen for its sharp lines, the metal cladding creates strong blocks of colour and contrast of texture.

Instead of being surface mounted, the rainwater heads have been incorporated into the fascia line, Kowhai House featuring a singular, asymmetrical roof with a consistent ridgeline and eave breaks and the entrance to the home and the carport.

The “peak” windows have been evenly spaced to full height with an even larger “peak” window to capture the view of Mt Taranaki in one direction and the ocean to the other.

The footprint for the home consists of both functional and site-specific conditions: views south and west to the mountains and the valley and the sea to the north, weather protection provided throughout.

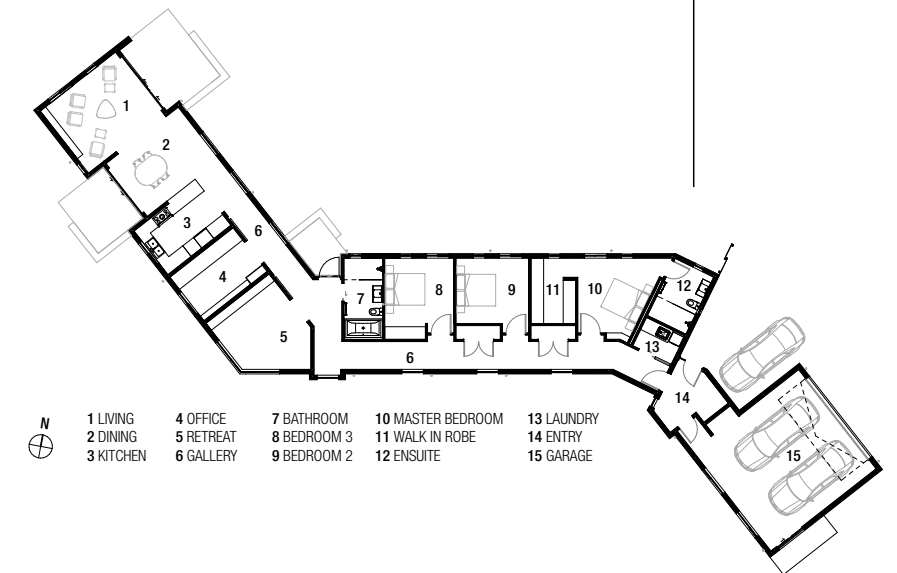
Good insulation and solar gain in winter – cooling in summer – were prerequisites and the owners had stipulated use of a variety of textures (floor tiles, ply and wall tiles) with windows to capture the different outlooks and views available – rather like pictures of the home’s setting – but retaining wall space for book shelves and artworks.

The home has a minimal, clean interior with tiled floors, plaster and stained ply and flush panelled joinery, the finishes being intentionally subdued to emphasise the form and effect of natural light.

Nestling the home in its unique environment, the roof form and use of bold colours provides a strong silhouette along the ridgeline, the roof peaks referencing the mountain ranges with complex



Kowhai House owners, Robert and Karen love the peaked and triangular windows along the bedroom corridor



DIMOND
ROOFING

Sustainability and innovative materials

Ardern Peters Architects have optimised the building environment on this rural home by optimising energy efficient systems, undertaking environmental modelling and life cycle value engineering leading to construction embracing the client's need for fully thermally broken concrete slab to multi-layered envelope insulation. Technology monitors and controls mechanical, heating and lighting systems via a suite of environmental performance indicators, some refinements to the systems being implemented after testing post occupancy.

These special features for the Kowhai House include. -

- Highly insulated house to maximise thermal performance, including multi-layered ceiling insulation
- A custom, fully thermally isolated floor slab to prevent thermal bridging
- Wireless-smart technology to monitor building performance
- Deep eave overhangs sized from solar modelling to limit summer sun and to maximise solar gain in winter
- Hopper-type window system as part of effective cross ventilation
- Interior thermally isolated to the exterior: floor slab, wall and ceiling systems, aluminium joinery and high-performance glazing
- Perforated ceiling – acoustics
- Low maintenance materials
- Hydronic heat pump sourced under floor heating



Kowhai House owners love the peaked and triangular windows along the bedroom corridor, providing a tall view of Mt Taranaki – when it shows itself. They've also loved viewing fantastic rainbows, stars and cloud-scapes from their elevated location. Yet more rewarding features are the grass-green doors along the bedroom corridor, the acoustic ply ceiling in the living space and the white roof – sitting satisfyingly well above the coloured metal walls.

■ |||



Ardern Peters Architects Limited

Established in 2000, the New Plymouth based practice has grown to become one of the largest in Taranaki, reflecting the high level of service provided and customer satisfaction. Four directors are "hands on", operating in a collaborative setting with support from eight talented staff. The firm undertakes work across New Zealand in the commercial, education, child care, aged care and residential sectors.

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Roofing and Wall Cladding Manufacturer:

Dimond Roofing
Walls: Colorsteel Endura
Profile: LT7 horizontally and vertically installed
Colour: Kowhai Glow and New Denim Blue
Roof: Colorsteel Endura
Profile: Veedek
Colour: Tui-tuft

Roofing and Cladding Installer:

Farnsworth Roofing
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Photo Credit:

Chris Hill Photography



THE SUNDERLAND HANGAR RE-BORN AT HOBSONVILLE

Key to the exterior cladding of the project was the selection of Roofing Industries True Oak® Corrugate



Willis Bond & Co Ltd is the developing company of the hangar and six other buildings refurbished at Catalina Bay, having won the rights to develop in 2016.

Built in 1939, the Sunderland hangar had been designed with a lightweight steel roof truss system, 27m high with the hangar interior free of supporting posts so as not to interfere with the large planes that were accommodated in the space.

The shell of the Category 2 listed building was all that remained when foundation RANZ member, Project Unite, commenced the work in July last year to provide roofing and wall cladding to the inspired restoration plan of Simon McLean at Cheshire Architects Ltd.

Respecting the significant wartime and military history of the RNZAF base, the Sunderland hangar has been sensitively stripped back to allow the removal of asbestos ahead of the building's new livery to transform the building.

When a Project Unite crew first walked onto the Catalina Bay hangar site at Hobsonville last year what greeted them was a structural skeleton, only the bones remaining of the historical RNZAF facility which had been home to the air force's Sunderland seaplanes.

The building, which had lain idle for years, was about to be transformed by construction company L T McGuinness Auckland Ltd into a mixed-use precinct featuring retail, hospitality and commercial spaces including a micro- brewery; Project Unite was engaged to install the external cladding.

Owned by Auckland Council, the Hobsonville Land Company (HLC) was established by the government to oversee development of defence department land at Hobsonville with a view to increasing the supply of housing in Auckland.

Inspired choice
Key to the exterior cladding of the project was the selection of Roofing Industries True Oak® Corrugate (Material Colorcote Magnaflow .55BMT) ideally suited for historic buildings with its rounder and deeper profile and fulfilling the architect's need to provide aesthetic and historic appeal. The predominant colour for the cladding is New Denim Blue, interlaced with "stripes" of Slate Blue – an ingenious feature given the links to the military greys in a striped pattern once used as camouflage by seaplanes to detect radar from above - back in the day. After the extensive work afforded to the architects on the suitability of True Oak Corrugate for this contract, the end result must be pleasing to Roofing Industries' David Eccles-Hall and also Steve Haines from PCC for his involvement in this development including provision of the aerial images included with this feature.

The 1500m2 space on the lower floor is home to a new restaurant, bar and Little Creatures microbrewery while a 1300m2 mezzanine level has been created to accommodate offices with a 13m





Accuracy of the lay was extremely important to ensure the striping effect was achieved.

Lion has invested \$20m in the Little Creatures brewery covering the fit out and a ten-year lease



ceiling height. Across the front of the Sunderland facility is a 12m high atrium of glass offering a view of the brewery vats and there are bi-fold doors opening to the public plaza. There was a small amount of Roofing Industries' Trimclad to the interior of the building, this time in a colour finish of Sandstone Grey and flashing work associated with the cladding was installed, in the appropriate colour, with metal guttering and downpipes manufactured from a mixture of purpose-made stainless steel and roll formed Magnaflow.

Draping

A unique feature of the roofing is the draping of the True Oak profile. The lengths were originally going to be 35m draped curved but it proved too difficult to get to site with limited access available. The roof sheeting ran from East to West, incorporating laps along the run of the sheet, starting with a bull-nosed sheet to both gutter lines followed by a 9.3 metre sheet (again to both sides of the roof apex), up towards the apex and then finally a 19.9 metre sheet naturally draping over the apex and lapping into each of the 9.3 metre sheets. Other 1.7 metre sheets were then spring curved and end lapped to come down the side of the building.

Accuracy of the lay was extremely important to ensure the striping effect was achieved. The bull-nosed sheeting to both sides of the building was installed in such a way that it stood 100mm proud of the vertical cladding below but for reasons of both colour coordination and best water flow, the corrugations all line up. Exacting work for the Project Unite installing team. Water is discharged at

the base of the cladding into concrete gutters and the whole effect of the draped roofing and striped exterior is remarkable. It's admitted that there was a degree of difficulty around some of the flashing detail but nothing "that became hard".

Formation and over flashing for an air conditioning unit and a flute for a pizza oven were completed by Project Unite along with forming and over flashing for a number of windows to the vertical cladding which provide light emission – they don't open.

For the majority of the contract Project's crew size was four, split into two-by-two to handle the bull nose and the shorter roof sheets. That crew was supplemented with another member when the central roof sheets were installed and then up to seven crew when the vertical cladding was installed. All of this was under the watchful eye of on-site foreman Jonny Smythe and his ability and attention to detail is excellent. There was also Project's Site Supervisor Richie Powell giving the contract his essential 'overview' of progress on the contract.

Safety

Contractor L T McGuinness had installed safety railings which Project Unite supplemented with their own safe edge protection where it was considered necessary to ensure the safety of the roofing crew. Project also included their 26m and 18m booms on site together with a 14m platform to assist with access and safety.

Project Unite cannot speak highly enough of their involvement with the contractor L T McGuinness and that's based on their portfolio of major buildings for the country's leading contractors. Says Mike Sentch, managing director of Project Unite: "They



were excellent to deal with as was the superb service we received from Roofing Industries which is clear evidence that when a collaborative approach is taken by all those involved in a contract, a favourable outcome results".

Little Creatures comes to Auckland

The Catalina Bay development has been described as the water gateway to north west Auckland with a commuter ferry service to and from the CBD planned at the wharf coming soon.

Occupying most of the ground floor of the restored Sunderland hangar is a Little Creatures brewery with an accompanying beer hall and a number of precincts are planned offering fish and chips, pizza and there's even a cocktail lounge in the mix selling shared plates with an Italian theme.

With the brewery operation viewable from the pedestrian precinct, locals can enjoy all that this exciting new precinct has to offer with Little Creatures future plans to include development of low carb, low calorie and even zero alcohol beers.

New Zealand currently has the most developed craft beer market in the world with 17% of all beer sold being from craft offerings. Little Creatures was

formed in Fremantle in 2000 and in 2012, Lion paid A\$256m to convert its minority stake into outright ownership.

Lion has invested \$20m in the Little Creatures brewery covering the fit out and a ten-year lease and it is expected that 100 jobs will be created. The brewery is able to produce up to 180,000 litres of beer per year – about 90,000 packs. Customers will also be able to buy beer to take home (the Little Creatures manufacturing licence puts it beyond the reach of the two local licensing trusts).



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Roofing Profile: True Oak Corrugate
Material: Colorcote Magnaflow .55BMT

Roofing and Wall Cladding Installer:

Project Unite Ltd, Hamilton



TOCKER HOUSE: A SIMPLE LIFESTYLE IN A COMPLEX WORLD.

The “Olde Beach” area of Waikanae is a tightly held group of bachs and permanent homes located in a microclimate created by Kapiti Island, an hour north of Wellington. There is a French bakery, a couple of convenience stores, three excellent restaurants and a great beach. It is a very desirable area.

Architect John Tocker and Ali Tocker have owned a bach on a site at Olde Beach for many years and when it came time to look to a future with more leisure time it was an easy choice to demolish the modest holiday home and redevelop. John’s brief was to maximise the bach experience for the long term, using simple forms, universal design principles and a responsible level of sustainability.

The Tockers wanted to be able to accommodate guests, entertain and still operate the property with minimum effort, maximum privacy and optimal use of outside space. The guest accommodation is completely self-contained so that guests can operate relatively independently but there is also the potential to run it as a B&B in the future.

The design response has been a collaboration between John and Ali Tocker as having owned the property for 25 years they knew the site well and were able to plan in full knowledge of sun, wind, shade and open space attributes. There were advantages in having prior knowledge of what would work best on the site.

“We didn’t want to lose the privacy we had enjoyed at our previous seven-acre property which was almost all in garden”, says John. “With our knowledge of the microclimate on the site – sun/ wind directions etc – we knew we wanted a home where we could be outside as much as possible. We wanted the sun and didn’t want the cool southerly breeze (we don’t get much wind from the north or west) – hence the idea of building around a courtyard on the south and east sides. And we know the neighbours and didn’t want to affect them so chose a single storey option”.

The main structure arranged along the east and south edges of the rectangular site shelters a big





“We were trying to blur the boundaries between inside/outside and garden/deck”

outdoor room to the north and west. Extensive vitex timber decks provide the connectivity and three raised roof clerestories identify the main areas of the home while providing control of the interior environment.

As you approach from the street the site is screened by fencing and the garage so that entry is into a private outdoor space. Due to floodplain regulations the main floor of this single level home is raised approximately 500mm above ground level. Access is up a ramp and along the decks with the guest suite separated from the main home by a conservatory. There is a large living/dining/kitchen with pantry and laundry plus study, spare bedroom, bathroom, WC and main bedroom suite.

This home is set approximately 200m back from the beachfront and is constructed to high environmental standards, with over code insulation throughout, thermally broken aluminium joinery, electrically operated high-level cross ventilation, low voltage LED lighting, on site stormwater management and rainwater harvesting that feeds laundry, WC flushing and hoses, together with a bore for irrigation.

The timber and steel frame of the home is clad with stained cedar and lined with plasterboard and ply, creating a calm interior for the artworks and a simple backdrop to the highly structured outdoor areas. True Oak roofing enabled a lower pitch than was achievable with other corrugated profiles. The low pitch of the roof allowed the expression of the interior spaces in the raised clerestories – one each for the guest area, living spaces and the main bedroom suite.

The outdoor areas of deck and patio are very harmonious with the structured design of the garden.

John and Ali wanted to be able to operate seamlessly between inside and outside and after years of mowing acres of grass – it took three hours on the ride-on at their previous home – John didn’t want to be limited by lawns which required mowing!

“Then there was the idea of the slightly random grid to order the garden, provide hard landscape and walkways plus allow variation with decorative plants, vegetables and fruit trees all mixed in together,” says John.

“The decks work in three ways; firstly as access to the house, secondly to provide a range of places to sit and relax, and thirdly as the link between house and garden. We were trying to blur the boundaries between inside/outside and garden/deck”.

The Tockers say their home is a calm, private oasis providing a simple lifestyle in a complex world.



Jerram Tocker Barron Architects Ltd

Established in 1986 as David Jerram Architects in Nelson the practice has expanded to have offices in Auckland, Wellington and Christchurch and has undertaken more than 1,500 commissions across a wide variety of project types. It aims to achieve the best design solution based on a clear understanding of need, context, value and construction for every project. The firm is a Green Star accredited practice, incorporating sustainable principles into all projects and the principals are all Registered Architects.

Alongside the principals is a talented and experienced staff of more than 25 architects and architectural graduates giving the firm the ability to resource wide-ranging project types and sizes. Team leaders are qualified architects responsible for the design and management of projects and are supported by architecture graduates who undertake presentation, documentation and site observation roles. Jerram Tocker Barron Architects also offer specialist interior design as required, and are supported by an office management team of two responsible for finance and administration.

John Tocker joined David Jerram to form Jerram Tocker Barron Architects in 2005 after three years as national manager of design for Housing New Zealand. He was previously a principal in Meritec and a director of Sinclair Group Architects. John has extensive experience in healthcare, hospitality and social work environments and has over 20 years of New Zealand and Pacific-based experience.

Architects:

Jerram Tocker Barron
John Tocker
Sam van Zoelen
Telephone: 04 473 9803
Email: john@jtbarchitects.co.nz

Landscape Architects:

Local Collective
Mark Newdick (concept)
Frank Boffa (planting)

Structural Engineers:

Silvester Clark
Richard Mayes

Contractor:

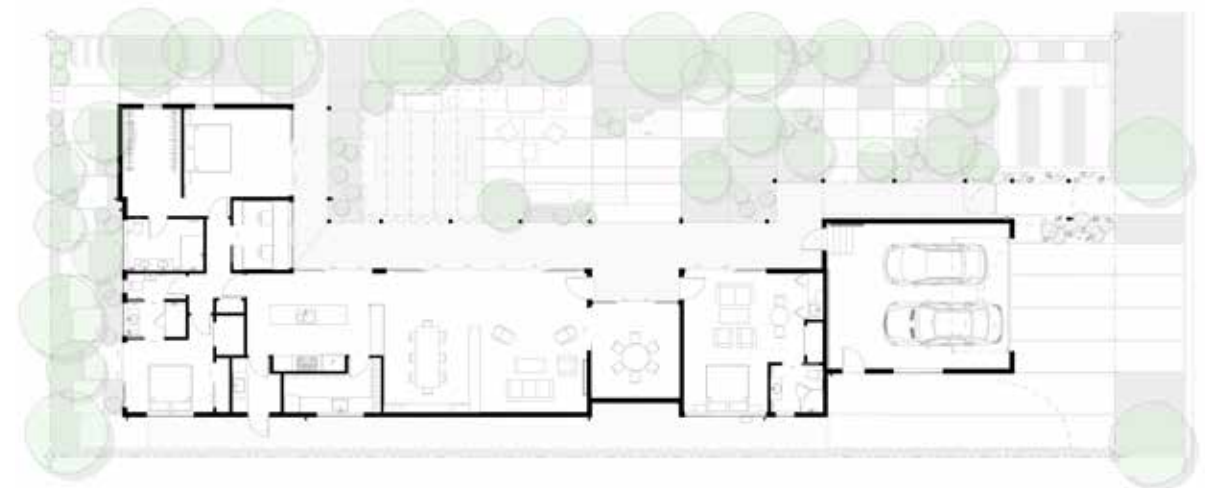
BMK Builders – Ben King

Roofing Manufacturer:

Roofing Industries
Telephone: 03 928 6869
www.roof.co.nz
Profile: True Oak .55
Colour: Flaxpod

Installer:

Capital Roofing Solutions
Zach Fowler



SUSTAINABLE WATER

If the planet is going to be subjected to the extremes of flooding and drought, then security of good quality water supply will be increasingly important.

Back in Issue 25 in 2010 Graham Hepburn reviewed the importance of water and the sustainable process of harvesting drinking water from metal roofs. This article is an update and review of what was written then.

Rainwater Harvesting - increasingly relevant today

Nine years later and access to potable (and indeed any) water has become even more relevant in a world in which water supply is becoming a serious issue. Even in rain-rich New Zealand we are increasingly talking about control of water, water rationing, depletion of aquifers, and so on.

We are also looking at more limited supply of water for urban uses. As this is written, even after what seems like heavy rain, the Hunua Dams on which Auckland relies, have significantly less than desirable levels of water.

There's little doubt that water is one of the planet's most valuable commodities and maintaining water supply will become even more important as earlier predictions about the dire consequences of global warming on water supply become true.

If the planet is going to be subjected to the extremes of flooding and drought, then security of good quality water supply will be increasingly important.

Potable water

In rural areas with no mains supply there has been little choice but to harvest rainwater from roofs and collect it in tanks, and many rural households prefer this source, but in recent years suburban dwellers and even businesses have begun to get in on the act. We are now seeing, belatedly, some farmers or farming regions talking about building reservoirs to gather water when it rains for use when it doesn't. (Seems common sense but apparently rare). This trend is partly due to greater environmental awareness but also to the fact that water is

becoming an increasingly expensive commodity. The charges for water in urban areas steadily increase year on year. Some Councils have also been encouraging home owners and businesses – sometimes with financial incentives - to collect rainwater because this has twin advantages: it helps to reduce stormwater flows and alleviates some of the pressure on water supply and water infrastructure from a growing population.

Of course there is a limit to how far this can go without affecting the economics of urban water supply and e.g. Watercare Services in Auckland prevent collection of roof water for drinking purposes. In addition, the current Drinking Water Standards New Zealand (DWSNZ) do not allow the use of rainwater for potable uses where there is a potable supply available.

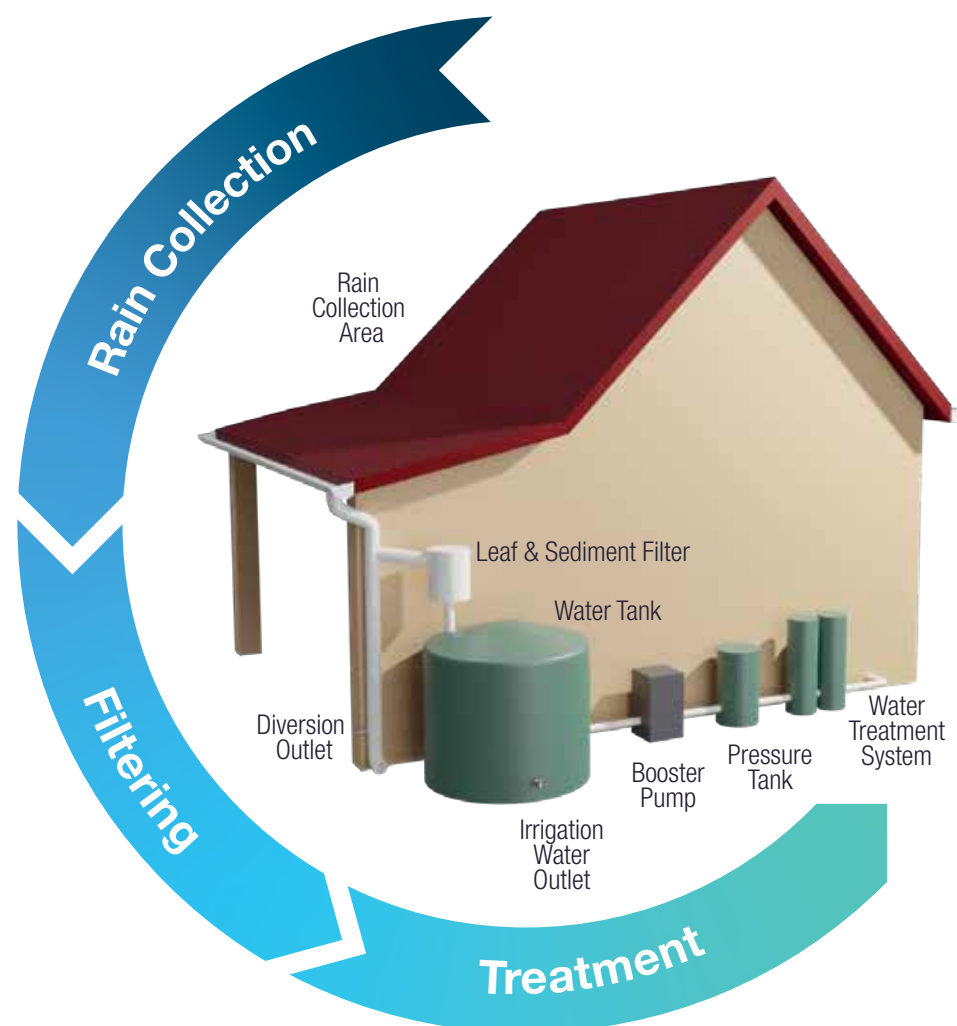
The announcement of a central government Water regulator will result in some changes. This may or may not allow for a wider use of rainwater for potable use (probably with design requirements to be met – e.g. roof type and storage tank materials) along with forcing water authorities to treat all supplies. The cost of water for small communities in rural New Zealand is likely to increase significantly. Certainly, if no central government funding or area-wide rate base is available, many small communities will be unable to afford to comply with DWSNZ. Therefore, we can't help but think that changes in the DWSNZ allowing for rainwater to be used as a potable source in smaller communities should be an option.

The best roofing material for minimisation of the risks of contaminants in long run metal roofing, painted or unpainted.

Flooding mitigation

In urban environments with their proliferation of impermeable surfaces, stormwater during heavy downpours can cause surface flooding and overwhelm sewers (where there is cross-connection between stormwater drains and sewers, as there still is in Auckland), causing foul-water discharge into waterways.





As climate change continues we will see increasingly irregular but heavy rain falls which will exacerbate this problem.

Collecting water and storing water off roofs reduces stormwater problems by attenuating the flood peak. In Australian cities all new properties have been required to provide short-term on-site water storage, not to provide drinking water, but to prevent overwhelming the stormwater drainage systems. Something we should be looking at in New Zealand? Such urban collected water, while not reducing the need for potable water (and its revenue stream) can also be used for greywater and garden watering.

Collection and storage also helps to conserve this valuable resource and will reduce the need for councils to build more dams or find other water sources. If you are providing your own water, then that also cuts demands on treatment facilities and pumping stations, which in turn means they will

need to consume less energy. The individual owner of the storage therefore also uses less water and for those in metered connections will reduce their water cost.

Reducing demand

Just harvesting rainwater for uses other than drinking drastically cuts demand on mains supply. It has been estimated that only 5 litres per person per day is needed for cooking and drinking while 150 litres per day is used for bathing, washing dishes and clothes, flushing toilets, in the garden or for washing down cars etc.

As New Zealanders have known for decades, catching water off a metal roof for drinking and other household uses is easy and safe as long as some basic precautions are taken.

Safety

BRANZ says metal roofs are safe to collect rainwater from but a check should be made to ensure there is no lead, chromium or cadmium

Metal is the roofing material that is arguably the best suited material for rainwater collection, and this is recognised by the NZGBC Homestar rating system.

in the roof and its flashings or in any soldering or paint. Paints used by NZ coil-coaters have been demonstrated to produce no harmful runoff. The roof and gutters need to be cleaned regularly with diverters in place to make sure contaminants such as bird droppings that are being washed away aren't entering the water supply. And, a first-flush diverter and debris diverters should be installed – this reduces the risk of contaminants entering the storage. Treating roof water to potable level can be as simple as coarse filtering incoming and finer filtering and UV treatment before pumping to the house. (see the illustration)

Sustainability

After the NZ Green Building Council (NZGBC) introduced the Green Star building rating system for commercial and industrial buildings in the 1990s, it was realised that there is also a need to encourage sustainable homes, and there are schemes for such less complex buildings elsewhere in the world. NZGBC developed the Homestar system to fill this gap. Then after several revisions, in 2017 Version 4 was issued. This contains a huge expansion in ways to obtain credits and specifically some features of the materials used, and now provides credits for using metal roofing to gather rainwater for much the same reasons as listed above.

The four criteria we consider particularly relevant to metal roofing are WST-1 Construction Waste Minimisation (up to 5 points); MAT-1 Sustainable Materials (up to 10 points); and for houses with rainwater collected from a metal roof – WAT -2 Sustainable Water Supply (up to 4 points) and STE -1 Stormwater Management (up to 4 points). This is covered in more depth in recent Scope article and of course can be found in huge detail in the Homestar Manual, so briefly - Particularly relevant to water are :- WAT-2 Sustainable Water Supply - Aim is "To encourage and recognise reducing a dwelling's demand on water supplies through the collection and use of rainwater on and around the dwelling and by promoting responsible water use behaviour" Clearly, collection of roof water for drinking applies specifically to this.

STE -1 Stormwater Management. Aim - To encourage and recognise houses/sites that

reduce stormwater run-off from buildings and hard surfaces, in order to mitigate flooding, pollution and stream erosion. Specifically points are awarded where the stormwater associated with the roof is effectively managed on site with or stormwater detention tanks.

And while not related exclusively to rainwater processing points for metal roofing can also be gained for WST-1 - Waste minimisation where use of metal roofing cut to length in the factory does minimise waste on site (assuming strippable film is taken away!). And MAT-1 includes metal roofing as sustainably produced material

Manufacture

Pacific Coil Coaters and New Zealand Steel have tested their painting systems for the potential to release contaminants and have shown that there are no contaminants released of any public health concern. Therefore, excluding other environmental factors, when you use COLORSTEEL® or Colorcote® pre-painted metal roofs for the harvesting of rainwater, you can rest assured that the product you are using will not contaminate the water.

Roll-forming of metal for roofing uses no water and the manufacture of the steel coil from which metal roofing is made uses minimal water. As an example, New Zealand Steel's plant at Glenbrook uses about 1 million tonnes of water a day in the steel making process but this is constantly recycled – cleaned, cooled and recirculated - so that only 1% of it is discharged and what is discharged is clean enough to drink.

Overall

Homeowners collecting drinking water and greywater replacement from metal roofs can do so knowing they are risklessly harvesting a renewable resource which can also help with urban stormwater flooding mitigation. Metal is the roofing material that is arguably the best suited material for rainwater collection, and this is recognised by the NZGBC Homestar rating system.

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APARTMENTS IN A RURAL SETTING MIKE GREER HOMES SHOW THE WAY

The Huapai Triangle will ultimately have 1200 dwellings including a retirement village.



A 'satellite' residential area designated a Special Housing Area (SHA) under the government's Housing Accord is in the wine country village of Huapai, West Auckland where Mike Greer Homes has recently completed an apartment complex in Dida Drive.

Located in the Huapai Triangle which will ultimately have 1200 dwellings including a retirement village, the walk-up apartments, comprising twelve two-bed, north facing units comply with the SHA's

Precinct Rules that the developments include affordable housing to address Auckland's acute housing shortage.

The Urban Design and Architectural arm of the multi-disciplinary practice of Woods was engaged to complete feasibility designs – initially for seven traditional two-storey terrace units; this was later extended to twelve, two bed apartments on Mike Greer Homes' 1800sqm site.

Bounded by three roads, vehicle access for the development is provided from the rear of the units meaning all are north facing to maximise solar





Special features include the ground floor units being suitable for wheelchair access and the large north-facing patios and covered decks for outdoor living.

espan® 470 was the chosen profile from Metalcraft, providing a standing seam cladding in appearance with a wide pan, strong vertical rib and concealed fixings

exposure. Surface parking for residents and guests at the back avoids the “shed” appearance of a car port. The rear parking makes for an attractive frontage overlooking a private space to the north with a landscaped green street adjacent.

Woods’ Designer/Architect Paul Edmond worked closely with Mike Greer Homes’ development and construction managers, creating a repeating design identical on the ground and first floors using mainly timber framed construction.

While the units may seem small, they offer alternative and now more popular compact spaces for a large segment of the population who do not want four bedroom, 200sqm homes on a large site. Auckland’s residential extension areas such as those in the Huapai Triangle have demonstrated that apartments don’t need to be viewed solely in urban locations. Statistics New Zealand has noted that by 2030, 30% of households will be one person homes or homes for single parent families or retired couples who find smaller units an attractive option. All the apartments in Mike Greer Homes’ Huapai development have been sold. The six ground floor apartments were bought by Kiwibuild and are accessible for ambulant/disabled occupiers.

Paul Edmond says the special features include the ground floor units being suitable for wheelchair access and the large north-facing patios and covered decks for outdoor living with good accessibility from the living/dining areas. Each apartment has a generous storage locker, adjacent to the front door with five cubic metres of storage volume.

The design features two bedrooms on the south side with an open plan living/dining/kitchen area leading onto the decks and patios. A central “service” zone groups kitchen, bathroom and laundry and the two bedrooms are reached by short corridors, removing the need for opening directly from the open plan living area.

The simple, monopitch roofs extend to cover the north facing decks and there are shared stair and storage lockers recessed deeply on the façade to



define each two-storey block of units. espan® 470 was the chosen profile from Metalcraft for the roof and some areas of wall cladding, providing a standing seam cladding in appearance with a wide pan, strong vertical rib and concealed fixings.

The twelve apartments have fire rating and acoustic performance features also.



Woods Urban Design and Architecture Services

Woods is a New Zealand, employee-owned, multi-disciplinary consultancy with offices in Auckland and Christchurch.

Established in 1970, Woods has a team of 143 specialists in infrastructure, surveying, urban design and architecture, providing a collaborative design



approach to complex problems, delivering solutions, from green, grey and brownfield developments to townhouses, industrial estates and community developments.

Paul Edmond, who established the Architecture and Urban Design team with Woods in 2013, is a registered architect and an accredited HomeStar practitioner. He is also the Auckland NZIA Branch Urban Design Group convenor which advocates for better design and communities.

Woods urban design and architecture services include structure and master planning, concept development plans, urban design policy, design feasibility and residential and town centre development with wide community consultation.

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Telephone: 021 181 4016
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Contractor:

Mike Greer Homes
www.mikegreerhomes.co.nz

Roofing Manufacturer and installer:

Metalcraft Roofing - Hobsonville
Telephone: 09 444 1813
www.metalcraftgroup.co.nz
Material: espan® 470
Colour: COLORSTEEL® Flaxpod®



CURVES IN INVERCARGILL

It was to be a project without limits. Very early on, architectural designer Nathan Shearing knew his biggest challenge would be not “taming” his clients’ bold wishes of their vision for a new home.

From the get-go, owners Andrew and Linda Gunn wanted something different and produced an original sketch resembling a squashed octopus – a plan full of never-ending curves in both form and elevation for Nathan to capture - with little deviation from the sketch.

The Gunns wanted a low-risk home using conventional materials comprising locally sourced timber framing with brick cladding and James Hardie Linea.

Situated on a prominent rural site, sloping towards the Waihopai River, to the east of Invercargill, the design of the Gunn’s home was in constant consideration of needing shelter from prevailing winds but capturing magnificent views while also giving privacy from its location on the corner of Findlay Road and Mill Road North. From the outset, Nathan found the brief refreshing with the clients having very defined ideas on how

the house would function with a large central living space for extended family gatherings with separate wings for more formal living plus separate, north-facing accommodation wings. Inclusion of spaces for a home office and hobbies is provided in a separate annex to the house.

At just over 34m from east to west, the length of the home was to become a factor for the selection of material for the main draped roof, Dimond Roofing in Christchurch provided technical assistance in support of the selection of Colorcote .55 ZR8 Hi Five corrugate material in Sandstone Grey, along with 125mm Hi Line Spouting.

Although the form is radical the client’s brief had a requirement for conservative treatment of both internal and external moisture management and the central tapered section of the home works perfectly to eliminate the requirement for internal gutters.

The material was run at Dimond Roofing’s Christchurch factory and the 34m sheets transported to site arriving at 6am the following day.

A scaffold ramp was erected from the truck onto and across the roof to allow the sheets to be unloaded and “walked” over the roof into position



A scaffold ramp was erected from the truck onto and across the roof to allow the sheets to be “walked” over the roof into position by a team of 16 people.

The owners’ octopus plan has transformed into a stunning rural home that sits well on the rolling Southland landscape



by a team of 16 people. The sheets are directly fixed to the central section over the apex of the roof and then slotted to allow expansion at the ends. There are no penetrations in the roof. Framing comprises parallel chord trusses allowing air flow to the roof space with vents included in the soffits to allow cross ventilation in the roof space. Keith Ivey and Tony Frew of CS Roofing (Southland) Ltd supervised the roof installation.

Praise must go to the brick layer Peter King whose artistry involved changing shapes and cuts required by the complex curves of the design along with having the monumental task of all the raking cuts to the soffits.

The owners’ octopus plan has transformed into a stunning rural home that sits well on the rolling Southland landscape while observing the “curves” so important to owners Linda and Andrew Gunn.

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The Fat Hippo Design Group

Established over ten years ago, partners Martin Gvardjancic and Nathan Shearing first met in South Africa but are now based in Invercargill, Kerikeri and Queenstown providing professional, cost effective solutions for clients’ design requirements.

Nathan grew up in Southland and trained in engineering and architecture before moving to Auckland to indulge his passions of design and sailing. This expanded to working in Asia, followed by a four- year trip around the world, mainly based out of Ireland. Nathan returned to New Zealand in 2001 and worked in a multi-discipline office before establishing The Fat Hippo Design Group with Martin who studied architecture in Slovenia and operated there for a time before discovering the distinctive styles of Central Otago while living in Queenstown. Martin is now based with his family in Kerikeri

Architectural Designer:

Fat Hippo Design Group
Telephone: 027 213 1158
Email: nathan@fathippo.org
<http://www.fathippo.org>

Main Contractor:

Tomlins Building Ltd

Roofing/Cladding Manufacturer:

Dimond Roofing
Material: ColorCote® .55 ZR8 Hi Five
Colour: Sandstone Grey

Installer:

CS Roofing (Southland) Ltd

**AZTECH: BUILDING A RURAL GOAT FARM
THAT HELPS INCREASE PRODUCTION**

Metalcraft's 50mm thick ThermoSpan EPS roof panels were chosen for the roof because of their robustness, insulation values and ease of installation



With 35 years of experience of farming goats, Frans Janssen knows how important it is for good milk production to keep the animals comfortable and healthy.

So when he wanted to expand his Waikato goat farming operation, Elite Goat Milk, at Manawaru, just south of Te Aroha, he set his sights on building the best sheds possible for his animals.

And that meant working in collaboration with Hamilton-based Aztech Buildings, who specialise

in dairy goat sheds as part of their wider operations of designing and constructing industrial, rural and lifestyle buildings.

To maximise milk production, the sheds have to be laid out efficiently and have insulated roofs for climate control so the goats remain at a comfortable, even temperature.

Metalcraft's 50mm thick ThermoSpan EPS roof panels were chosen for the roof because of their robustness, insulation values and ease of installation. The panels consist of a 0.59mm profiled roofing sheet bonded to an EPS core with a ceiling panel sheet bonded to the underside in a choice of colours for both sides.

"Before I came to New Zealand, I had 25 years of farming goats in Holland so we were very familiar there with these sorts of sheds with insulated roof panels," said Frans.

"The panels keep the heat out and they help to get rid of condensation so the barns are drier, and you don't get as much noise inside when it rains – the goats are happier and healthier and it's a nicer environment for staff to work in as well.

"It's all about creating the right conditions for the goats to get the best out of production and to be the best for animal welfare."

The goats are kept in the sheds following a zero grazing principle, which means that grass is cut for them and, along with other feed and supplements, brought to them in the barn's feeding area. They also have a bedding area and still have access to outdoor areas for sunlight, and the sheds have partial walls to allow for ventilation.

Frans added three new sheds to the four already on site at the farm he has owned for just over a year. The sheds are all 25m wide but of varying lengths: 106m, 102m and 60m.

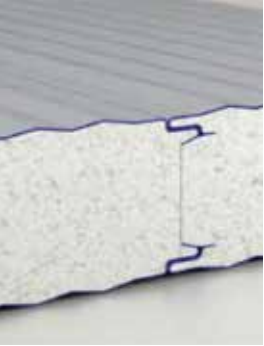
His old sheds are a mixture of wooden frame with steel roof and steel frame with canvas roof.

He said the difference between the old sheds and the new sheds is "like night and day" when it comes to milk production and comfort.

Frans' expansion of his operation to 3000 goats comes as demand for goat milk increases dramatically due to its use in infant formula for children who are intolerant of dairy products.

Daniel Prestidge, of Aztech Buildings, which has been designing and building goat sheds since 2005, said demand for the barns has grown in the past 10 years as goat milk formula has become more commercialised, driven largely by the Dairy Goat Cooperative.





“In broad terms, a well-designed barn will double their milk production.”

Producing more than 4km of panel in between regular customers of Metalcraft Insulated Panels involved considerable planning at the Manukau factory



Daniel said the design of the barns is customised for each farm depending on where they can be sited, how much space there is, and the access to and availability of existing infrastructure. There also has to be the right balance between feeding and bedding areas to maximise production.

“The barns also have to be designed to operate efficiently in both summer and winter, and to deal with storms and rain,” Daniel said.

“Dairy goats need an even temperature to maintain optimum production. Big fluctuations can cause disease like pneumonia. If they get too hot they put all their energy into keeping cool and its milk production drops like a stone,” he said. “They are also very susceptible to disease outside and generally perform poorly outside whereas in a barn they are comfortable and healthy and their feed can be controlled.

“In broad terms, a well-designed barn will double their milk production.”

Daniel said Aztech’s purpose-built sheds were a perfect fit for Frans’ operation, being durable and cost-effective.

“Frans’ new barns are considered market-leading but he has been prepared to invest in them and in time they will prove their value not just with the increased production from the goats but the fact that they will last and perform well over a long time.”

Terry Stevenson, of Metalcraft Insulated Panels, said, “Our story begins with an approach by Aztech Buildings early last year to quote for 50mm insulated panels for the roofs of new 60m and 102m x 25m wide goat sheds, with a 15-degree roof pitch.

“In conjunction with Aztech Buildings staff we set about formulating manufacture and delivery times to meet this large order as with limited site space, a good plan was essential.

“The team at Aztech Buildings decided upon our ThermoSpan EPS 50mm panels, and for us working out the correct lengths including a rebate for the gutter became easy thanks to their high-quality and detailed drawing suite.”

The ThermoSpan roof panels have a 1000mm cover, so the 102m goat shed required 102 panels per side (totalling 204 panels), and the 60m shed needed 60 panels each side (totalling 120 panels).

Each 50mm R1.31 panel is 13.11m in length, with ‘Permanent Green’ colour to the top and ‘Titania’ on the ceiling side.

Terry added, “Producing more than 4km of panel in between regular customers of Metalcraft Insulated Panels involved considerable planning at the Manukau factory. But that wasn’t the only requirement, as 100mm thick ThermoPanels laid horizontally at 1200mm high were specified for the full building lengths, permitting ventilation on both sides.

“Our production manager is top notch and made sure we had enough COLORSTEEL® coil on deck and managed to fit the order amongst our normal production runs.

“I visited the site numerous times during installation and after the 102m shed was finished I spoke to the farmer, Frans Janssen, who said that straight away he noticed the kid goats were a lot calmer inside their new buildings. I understand that goats are highly sensitive to their environment and it became clear that our ThermoSpan roof helped his animals.”

And Metalcraft Insulated Panels were called on again when Frans decided later on to add the third shed – at 106m long.

Terry said, “It took a massive back-office effort to get our panels made and to site on the exact day they were required, and, not without a couple of hiccups, our team achieved that. I really enjoyed working with the Aztech team; we always knew where they stood throughout the build process which meant we were working off the same page.”



Design and construction:

Aztech Buildings
Telephone: 0800 298 324
www.aztechbuildings.co.nz

Roofing:

50mm thick R1.31 ThermoSpan EPS roof panels in COLORSTEEL® Permanent Green/Titania

Cladding:

Horizontal oriented 100mm thick ThermoPanel EPS wall cladding in Titania/Titania

Roofing and cladding supplier:

Metalcraft Insulated Panels
www.metalcraftergroup.co.nz/products/metal-insulated-panels
Telephone: 09 277-8844
Terry Stevenson
Hamilton office
Telephone: 027 493 0423
Email: Terry@metpanels.co.nz

SCOPE

NZ METAL ROOFING MANUFACTURERS INC.

Members

Ashburton

Long Run Iron

PO Box 17
Ashburton 7700
Telephone: 03 308 1850
Contact: Eliza Wasczak

Ellerys Roofing Direct Ltd

250 Main South Road
Karoro
Telephone: 03 7686514
Contact: Clark Ellery

B J Moss Ltd

PO Box 1007
Gisborne
Telephone: 06 867 1219
Contact: Roger Moss
www.bjmoss.co.nz

B R Roofing & Walling Co Ltd

Ford Road
Onekawa, Napier
Telephone: 06 843 6968
Contact: Phillip Fendall

Continuous New Zealand Ltd

PO Box 151
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Telephone: 09 268 1555
Contact: Nick Claridge
www.continuous.co.nz

Contour Roofing Nelson Ltd

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Dimond Roofing

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Contact: Aidan Taylor

Franklin Long Roofing Ltd

PO Box 151
Pukekohe, Auckland
Telephone: 09 238 9249
Contact: Warren Oliver
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Gerard Roofs

PO Box 18071
Glen Innes, Auckland
Telephone: 09 521 8792
Alan Wilson

Marshall Industries Ltd

PO Box 846
Invercargill
Telephone: 03 218 2579
Contact: Tom Marshall
www.marshalls.co.nz

Metal Roofing Systems Ltd

PO Box 117
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Telephone: 09 268 8959
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Metalcraft Roofing

PO Box 51286
Pakuranga, Auckland
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Metal Design Solutions

PO Box 33
Drury, Auckland
Telephone: 09 294 9134
Contact: Jan Alberts
www.metaldesignsolutions.co.nz

Ross Roof Group

PO Box 72-062
Takanini, Auckland
Telephone: 09 299 9498
Contact: Sean Wu
www.metrotile.com

Queenstown Roofing Ltd

PO Box 2418 Queenstown
Telephone: 03 442 3883
Contact: Bill Giller
www.qtroof.co.nz

Quin Roofing Ltd

PO Box 1087
Levin, 5540
Telephone: 06 3679480
Contact: Bruce Love
www.quinbuildings.co.nz

Roof Manufacturers Limited

PO Box 319
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Contact: Martin Smith
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Contact: Paul Ross
www.roof.co.nz/

Roofline Canterbury Ltd

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Hornby, Christchurch 8441
Telephone: 03 349 8439
Contact: Colin Megaw
www.roofline.co.nz

Silbery Long Run Ltd

69 Montgomery Crescent
Upper Hutt
Telephone: 04 526 9343
Contact: Angie Silbery-Dee

Steel & Tube Roofing

PO Box 204216, Highbrook,
Manukau 2162, Auckland
Telephone: 09 273 7628
Contact: Tony Rallis
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Stratco (NZ) Ltd

PO Box 8494
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Taranaki Steelformers Ltd

Wanganui Steelformers
King Country Longrun
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