



I R Group Ltd

Design - Project Management - Planning

P O Box 40 -651 Upper Hutt

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Phone: (04) 5267711

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St Peter Chanel School Motueka

Re- Roof Rear Lean-to Block A

Prepared for

Archdiocese of Wellington

P O Box 12341

Thorndon

Wellington

Tender Response Form

Tenders sent to:

IR Group Ltd
P O Box 40-651
Upper Hutt

ian@irgroup.co.nz

Tender For: St Peter Chanel School Motueka: Re –Roofing Block A

I / we the undersigned do hereby tender and offer to undertake the works described in the attached documentation in accordance with the conditions herein for the sum of

Roofing Work	\$.....
Subtotal	\$
GST	\$.....
Total	\$ =====

Tender Information

Tenderer:

Address:

Phone:

Fax:

Date: **Signature:**.....

Tenderers Remarks:

St Peter Chanel School Motueka: Block A - Lean To Re-Roofing

Extent of Work

This contract is for the replacement of the existing profiled metal roof cladding with new "Colorsteel" profiled roof cladding on the rear lean-to roof of Block A at ST Peter Chanel School Motueka, in accordance with the attached information and specifications and as described below.

All work is to be carried out in strict accordance with the manufacturer's instructions, the New Zealand Building Code and all relevant Standards, to the very best of trade practice.

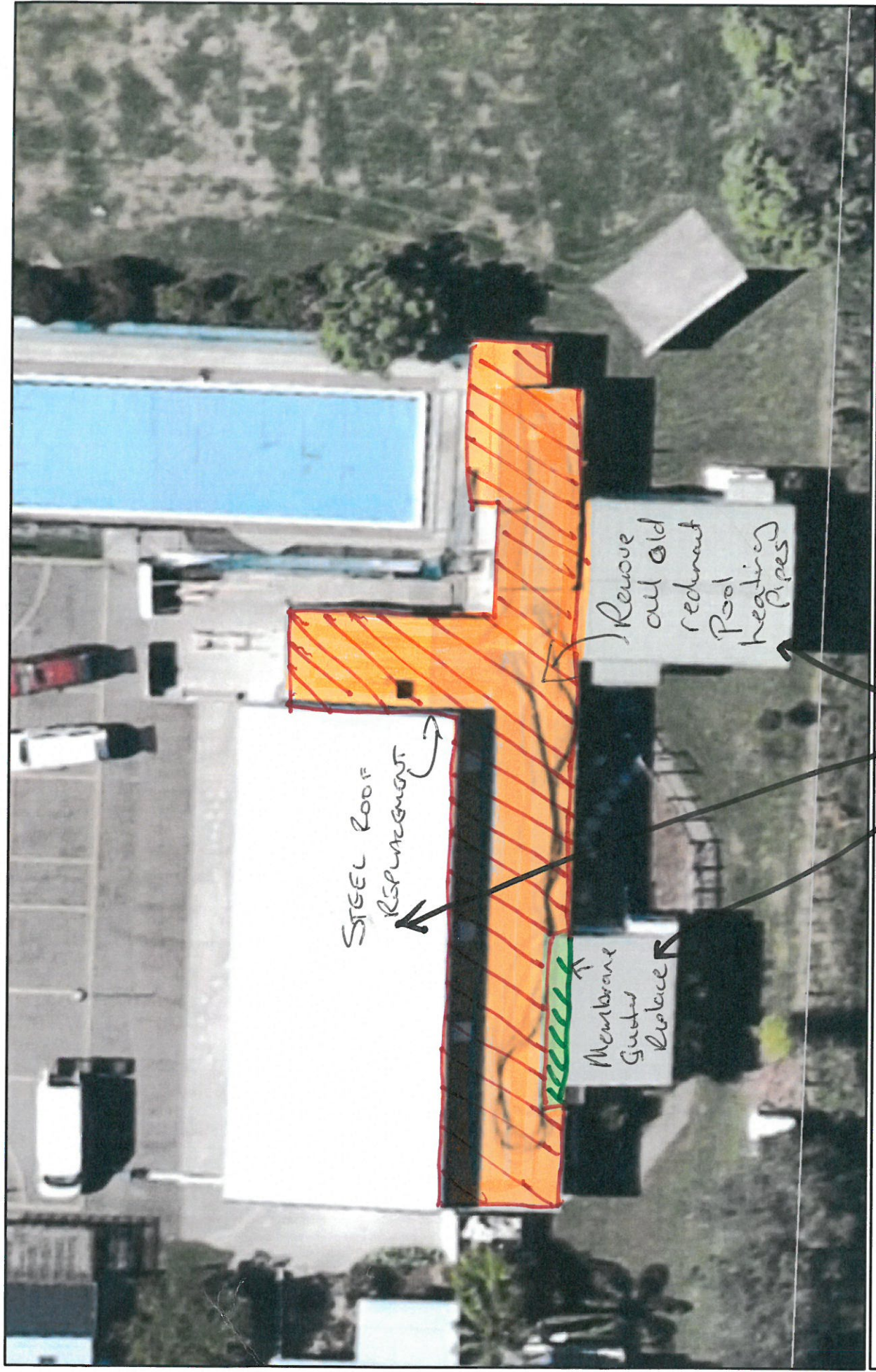
All prices should be based on measurements made on site.

Allow to undertake the following works to all areas indicated on the attached plan

Block A Roofing

- Allow to strip existing roofing and underlay. This process shall be carried out in a staged manner that will maintain the weather tightness of the building, and shall be done in conjunction with the laying of the new roof. All removed materials and debris shall be removed from site on a regular basis
- Allow to supply and install new .55 gauge Colorsteel Maxx long run corrugate profiled roofing, complete with associated screw fixings, flashings and accessories. Colour to be match new main roof. Profile "Trimrib TR" or similar approved.
- Allow to replace building paper, all in accordance with the attached specification and the best of trade practice with new "Thermacraft Covertex 405" fire retardant roof underlay. Run underlay across the roof and lapped in accordance with manufacturer's instructions.
- Note: In areas like barges where a new flashing is fitted over a painted board, ensure the new flashing is deep enough to cover any unpainted areas of the barge boards
- Allow to supply and fit all flashings, upstands, accessories, etc to provide a watertight finish. Refer to attached details for specific details. Provide additional timber blocking as necessary to ensure proper fixing of roofing and flashings. Saw cut chases in the concrete structure and embed new cap flashing to cover over new apron flashings were concrete structure is exposed
- Replace butyl rubber membrane and substrate to existing boxed gutter to meet butyl rubber manufacturer's instructions.

- Upon completion remove all surplus materials and debris from site, leave the entire site in a clean and tidy condition.
- Provide a producer statement for watertightness upon completion for both the material and the installation.



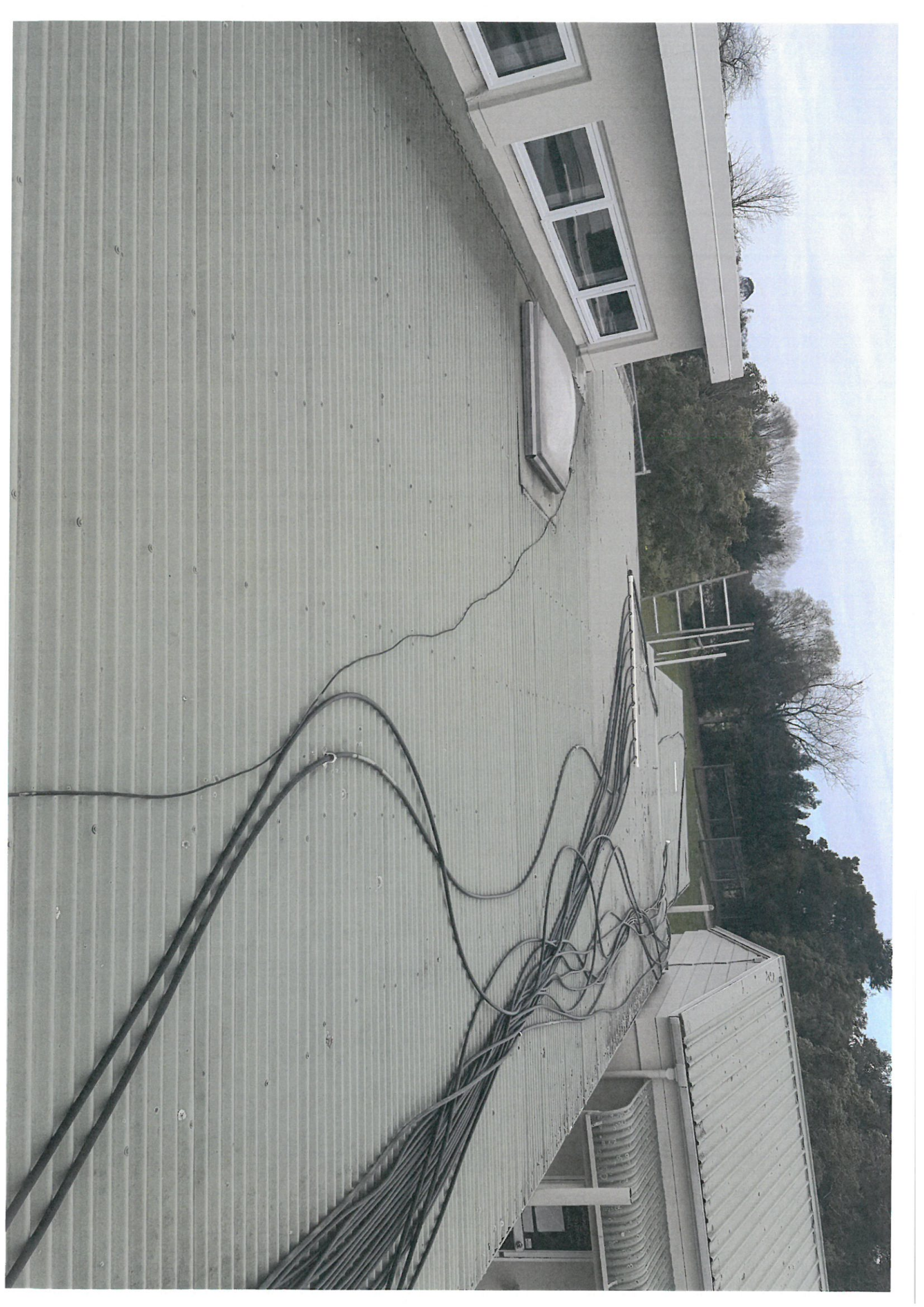
SPC Motueka




03 October 2016

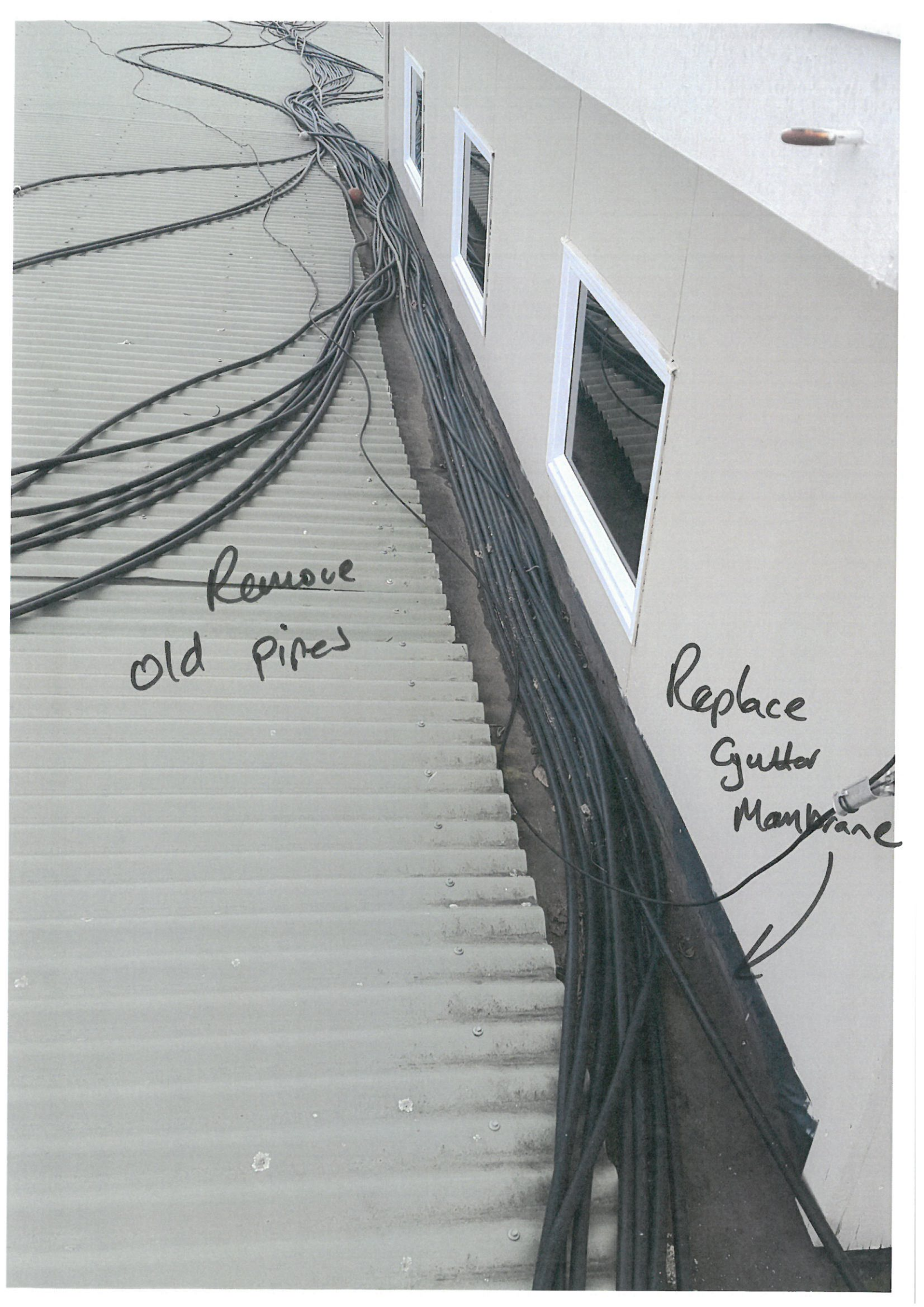
The map is an approximate representation only and must not be used to determine the location or size of items shown, or to identify legal boundaries. To the extent permitted by law, the Tasman District Council and Nelson City Council, their employees, agents and contractors will not be liable for any costs, damages or loss suffered as a result of the data or plan, and no warranty or representation of any kind is given as to the accuracy or completeness of the information represented. Top of the South Maps information is licensed under a Creative Commons Attribution 3.0 New Zealand License, and the use of any data or plan or any information downloaded must be in accordance with the terms of that licence. Cadastral and NZTopo50 related data is sourced from Land Information New Zealand





A photograph of a roof edge. On the left, there is a corrugated metal roof surface. A black cable runs diagonally across the upper left. Below the cable, a dark gutter is visible, which is heavily clogged with a thick layer of white, fuzzy mold or debris. To the right of the gutter, the roof surface is a smooth, light-colored material. A black arrow points from the handwritten text towards the clogged gutter. A white light fixture is mounted on the smooth roof surface below the gutter. A skylight is visible in the bottom right corner.

replace Gutter Membrane



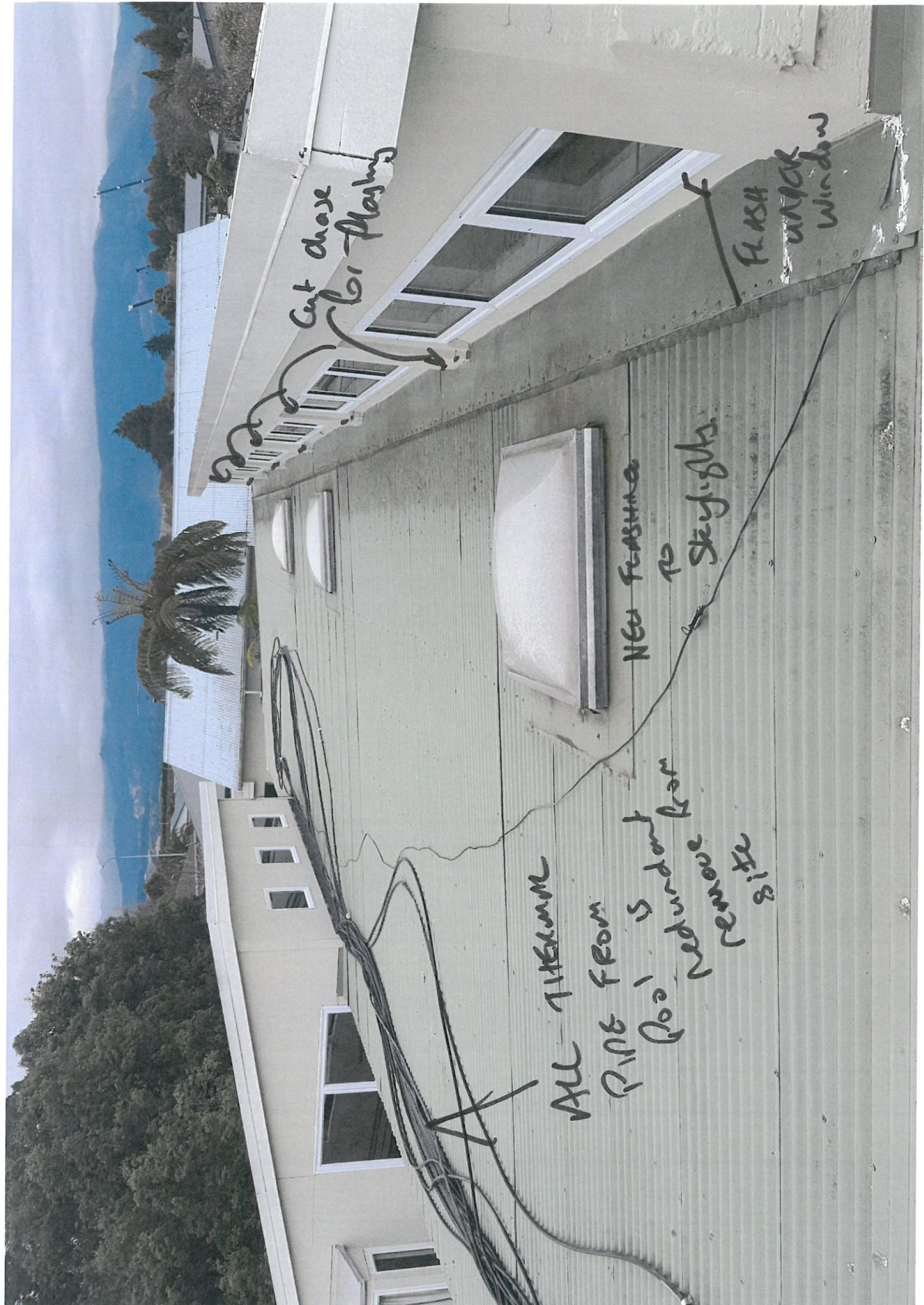
Remove
old pipes

Replace
Gutter
Membrane



redundant
pipe work





Cat chase
6:15 playing

FLASH
unpack
window

NEW FLASHING
to
Skylights.

ALL THE SAME
PIPE FROM
Qoo' is redundant from
Remove
gite



Bracker Mount

Heater
to wall



AKON FLOORING

--- CASE FOR NEW ---
--- CASE FOR NEW ---



diverted
to
AC
unit
AC
unit



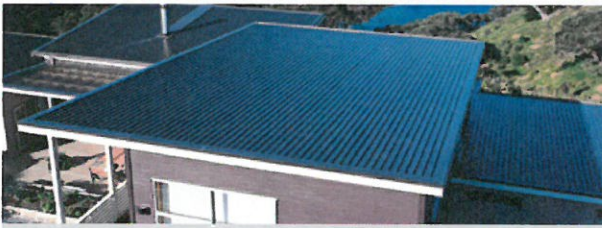


Saw out for
Chase

Apr 22

TRIMRIB®

Roofing
Industries
roof.co.nz

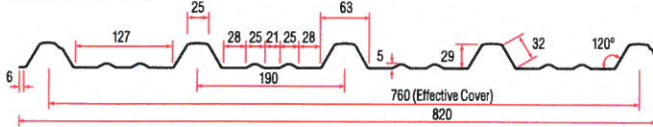


TRIMRIB®

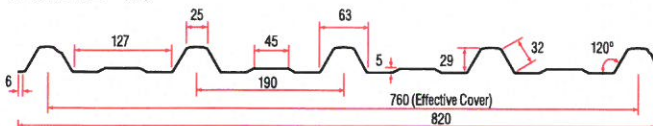
TRIMRIB® (TS)



TRIMRIB® (V)



TRIMRIB® (S)



All measurements are in mm and are nominal.

Description

Utilising the very latest in rollforming technology, Trimrib® can be manufactured as either Trimrib® (S) single swage Trimrib® (TS) twin swage, or Trimrib® (V) two "V" swages.

Each profile is aesthetically pleasing, having been designed with modern building style in mind and creating contrasts of light and shade in straight lines. Trimrib® enables rapid water shedding from the roof with a low minimum pitch requirement of 3 degrees, and when combined with one of the pre-painted surface finishes, Trimrib® ensures the completed project provides both purpose and visual appeal.



TRIMRIB®

Applications

- Residential roofing and cladding
- Rural and lifestyle roofing and cladding
- Industrial and commercial roofing and cladding
- Drape/spring curving
- Crimp curving
- Fencing

Roof Pitch

In accordance with E2/AS1 of the NZ Building Code, the minimum pitch for Trimrib® is 3°. For roof lengths greater than 18m, contact Roofing Industries for specific advice.

Materials

- Zincalume® Steel: 0.40 or 0.55 mm BMT, AZ150 (150gm/m²) G550 Mpa Yield Stress

- Galvanised Steel: 0.40 or 0.55 mm BMT, Z450 (450gm/m²) G550 Mpa Yield Stress
- Prepainted ColorCote® or COLORSTEEL® over Zincalume® 0.40 or 0.55 mm BMT, AZ150 (150gm/m²), G550 Mpa Yield Stress
- Prepainted ColorCote® or COLORSTEEL® over Galvanised Steel: 0.40 or 0.55 mm BMT ZM275 (275gm/m²) G550 Mpa Yield Stress
- Prepainted ColorCote® over ZAM™ .40 mm BMT or .55 mm BMT, ZA275 (275gm/m²) G550 Mpa Yield Stress.

For information on Aluminium, Stainless Steel, unpainted ZAM™ and Copper Trimrib®, contact Roofing Industries.

MANUFACTURER'S SPECIFICATIONS for compliance with E2/AS1

Sheet width: 820 mm	Sheet coverage: 760 mm
Sheet length: Any length (Subject to transportation)	Minimum Pitch: 3°

SPAN TABLES (Steel Substrate Material)

Type of Span	Maximum Span (Metres)	Maximum Span (Metres)
	0.40 mm BMT	0.55 mm BMT
Intermediate	1.200	1.800
End	0.800	1.200

Durability

Selection of the correct grade of material and appropriate surface coating is imperative to ensure Trimrib® will perform satisfactorily in the environment it is to be installed, and meets the requirements of The NZ Building Code. Environmental Categories and Surface Coating literature is available on request.

Accessories

A full range of matching accessories is available, including rainwater and construction flashings, underlays, insulation, fasteners, guttering, spouting, metal fascia, downpipe and gutter protection systems.

Translucent and Transparent roofing

Trimrib® is available as glass reinforced translucent roofing and cladding. A similar 5 rib polycarbonate product can also be supplied.

Fixings and Fasteners

Fixings and fasteners are to be of an approved type, compatible with all materials, the environment and meeting the requirements of the NZ Building Code. Installation is to be in accordance with E2/AS1 and the NZ Metal Roof and Wall Cladding Code of Practice. Further information is available via the www.roof.co.nz website.

Roof application

- Timber Purlins** 12 x 65 Timbertite® Class 4 or 5 screws with Neos*
- Steel Purlins** 12 x 55 Steeltite® Class 4 or 5 screws with Neos*
- Fix every crest to: Ridge, Hip, Valley, Gutter and Periphery areas
- For the remainder of the roof: Fix side laps, Miss 1, Hit 1 etc

*For sheet lengths 8-18 metres the lower 50% of the roof should be fixed using oversize holes at fastening points and a 30 mm EPDM and matching metal profile washer. For sheets in excess of 18 metres refer to our website www.roof.co.nz.

Wall application

Fix in the pan adjacent to every rib using class 4 or 5 Timbertite® or Steeltites® and Neos as appropriate, ensuring that when the fastener is into timber it is of sufficient length to penetrate the framing by 30 mm. Note: the above recommendations are suitable for steel based materials, for other materials and fixing methods refer to our website www.roof.co.nz.

Curving

Steel substrate Trimrib® can be draped curved to a minimum radius of:
0.40 mm BMT - 80 metres
0.55 mm BMT - 40 metres
Whilst a tighter radius is achievable, aesthetics may be affected. For other materials, refer to our website www.roof.co.nz.

Ordering

Roofing Industries staff can provide technical assistance to ensure accurate ordering of roofing and accessories thereby avoiding costly errors. Trimrib® is manufactured and delivered cut to length subject to transport restrictions.

Handling and storage

- On delivery, visually inspect sheets for damage.
- Store Trimrib® and accessories on evenly spaced and supportive dunnage, clear of the ground and under cover. If packs become wet and the product not used immediately, separate the sheets to allow air circulation and drying.
- Do not drag sheets across each other.
- If protected with strippable plastic film, keep under cover and remove as the product is being installed.

Installation

Prior to commencing your project, Please refer to Roofing Industries; Handling Storage and Installation Guide, E2/AS1 and the NZ Metal Roof and Wall Cladding Code of Practice. Failure to install the product to industry requirements will void the warranty.

Maintenance

Regular maintenance will extend the life of the roof and accessories. It is strongly advised that areas not receiving regular rain washing should be washed with freshwater on a regular basis. On purchasing your roof it is imperative to request a copy of the maintenance guide(s) and familiarise yourself with industry requirements. Failure to do so can void the warranty.

Warranties

Warranties meet the statutory requirements of the NZ Building Code, are available on request and reflect our New Zealand owned and operated company, test facilities and local climatic conditions. Sample warranties are available by contacting any one of our branches via our website www.roof.co.nz

ROOFING INDUSTRIES BRANCHES

Auckland	(Head Office) 5 John Glenn Avenue, North Harbour 0751.
Whangarei	6 Fraser Street, Whangarei 0112.
Pukekohe	212 Manukau Road, Pukekohe, South Auckland 2120.
Hamilton	78 Sunshine Avenue, Te Rapa, Hamilton 3241.
Tauranga	49 Aerodrome Road, Mt. Maunganui 3116.
Taupo	1158 Rakaunui Road, Taupo 3351.
Palmerston North	653 Tremaine Avenue, Palmerston North 4410.
Wellington	2 Cashew Street, Grenada North, Wellington 5028.
Christchurch	12 William Lewis Drive, Sockburn, Christchurch 8042.
Cromwell	18 Wolter Crescent, Cromwell 9342.

Ph:(09) 414 4585	Fax:(09) 414 4586	E:auckland@roof.co.nz
Ph:(09) 437 2040	Fax:(09) 437 5010	E:northland@roof.co.nz
Ph:(09) 238 0050	Fax:(09) 238 6639	E:franklin@roof.co.nz
Ph:(07) 849 5115	Fax:(07) 849 2115	E:waikeato@roof.co.nz
Ph:(07) 929 7034	Fax:(07) 929 7035	E:tauranga@roof.co.nz
Ph:(07) 376 7971	Fax:(07) 376 7972	E:taupo@roof.co.nz
Ph:(06) 353 8480	Fax:(06) 353 8470	E:central@roof.co.nz
Ph:(04) 238 4390	Fax:(04) 238 4391	E:wellington@roof.co.nz
Ph:(03) 339 2324	Fax:(03) 339 2325	E:christchurch@roof.co.nz
Ph:(03) 928 6869	Fax:(03) 928 6610	E:cromwell@roof.co.nz



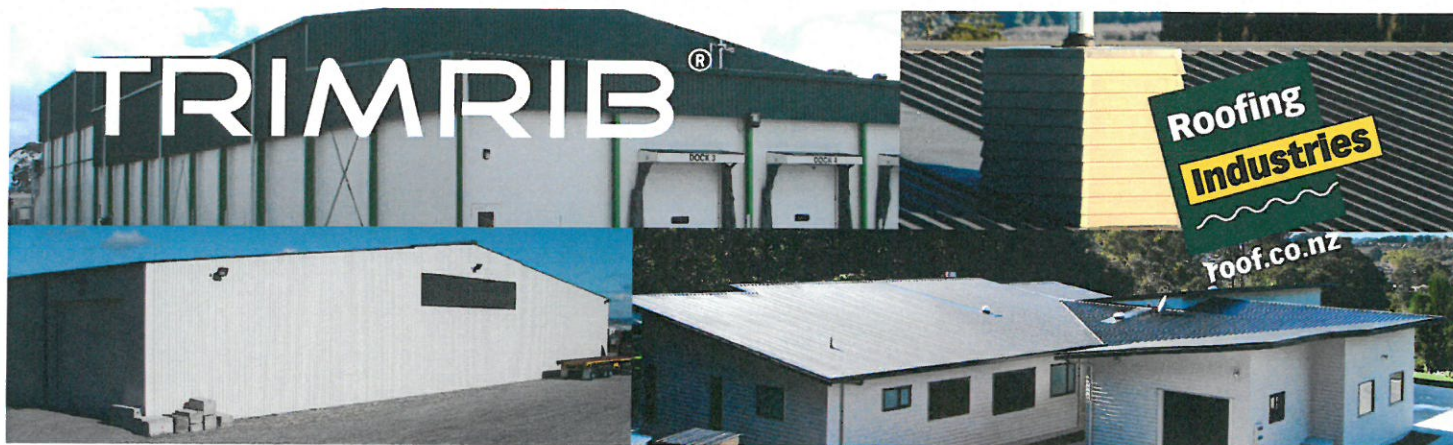
It should be noted that this technical data sheet is based around the requirements of E2/AS1 of the NZBC. For buildings or uses that are outside the scope of, or NOT required to comply with E2/AS1 alternative technical data may apply. Please refer to our website www.roof.co.nz. This literature should be read in conjunction with our Trimrib® profile technical summary at www.roof.co.nz.



Roofing Industries Technical Helpline 0800 844 822

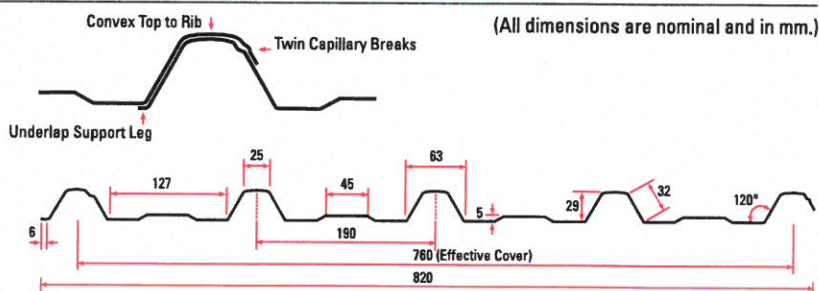
WWW.ROOF.CO.NZ

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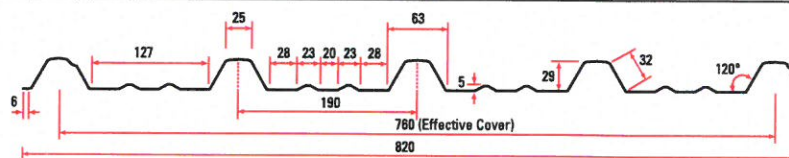
PROFILE TECHNICAL SUMMARY

Trimrib lap



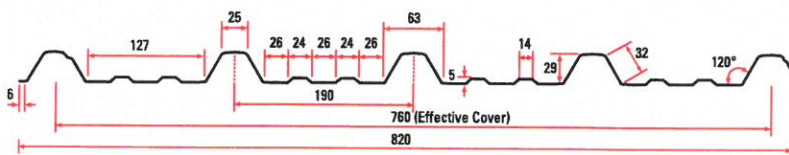
Trimrib S

Dimensioned Drawing of Trimrib S
(Manufactured at all branches)



Trimrib V

Dimensioned Drawing of Trimrib V
(Manufactured in Taupo and Palmerston North)



Trimrib TS

Dimensioned Drawing of Trimrib TS
(Manufactured in Auckland and Christchurch)

Minimum Pitch

The minimum roof pitch for Trimrib is 3 degrees (approx 1:20).

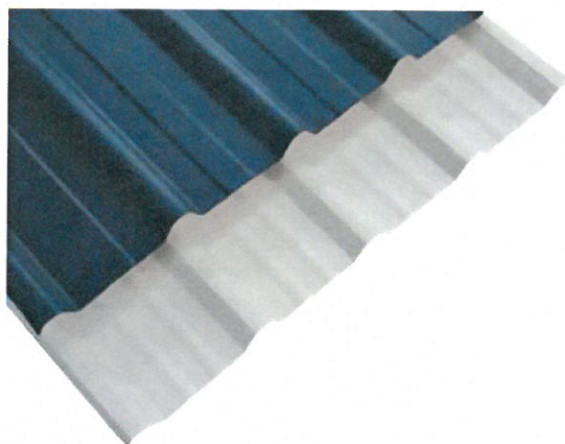
When a combination of sheets provide a run of in excess of 40 metres and up to 60 metres the roof pitch should be increased by 1 degree. Longer lengths require specific design.

When rainfall intensity exceeds 100mm/hour the minimum pitches need to be increased by a further 1 degree for every 10 metres of run over 40 metres

The building design pitch may need to be higher to take into account any cumulative deflections of the frame, purlin and roof sheeting or penetrations.

With curved roofing the roof cladding must **not** terminate at a pitch lower than permitted above.

Side laps of curved sheets must be sealed to any areas below the minimum pitches permitted above.



Branches: • Whangarei • Auckland • Pukekohe (Franklin Metal Folding & Roofing Ltd) • Hamilton • Taupo • Palmerston North
• Wellington • Christchurch

- Manufactured custom cut to length subject to transport and site limitations.
- Sheet lengths in excess of 28 metres require specialised transportation.
- Maximum recommended sheet lengths for **Aluminium** is 10-12 metres for dark coloured and 12-15 metres for plain and light coloured. Refer to Roof Expansions Provisions of this summary.
- As sheet lengths increase higher transportation costs may be applicable.
- Sheet lengths for pre-curved material are subject to handling and transport limitations.

Information Table

Substrate Material	Steel		Aluminium	
Thickness	.40mm BMT	.55mm BMT	.70mm BMT	.90mm BMT
Aprox weight per lineal metre for substrate material (kg/lm)	3.2	4.27	1.84	2.37
Purlin Spacings -General	Refer to separate section.		Refer to separate section.	
Unsupported Overhang (mm) ¹	200	250	150	200
Drape Curved Roof -min Radius (m)	80	40	80	40
Purlin Spacings for Curved Roofs -Intermediate (mm)	1200	1450	1200	1450
-End (mm)	800	1000	800	1000
Precurved Roof -min Radius (mm)	N/R ²	300	Refer to Roofing Industries	
-Recommended Minimum Radius (mm)	N/R ²	400		

¹ Not suitable for roof access without additional support)

² N/R - Not recommended

This technical data sheet is for steel and aluminium based substrates. Trimrib can also be manufactured in other metals such as Copper or Titanium Zinc. Refer to Roofing Industries.

Specification

Refer to our Full Specification on Masterspec, our website, and our Selection Guide.

Building Design / Performance Criteria / Product selection

During the design of buildings, it is necessary for the designer to take into account a number of issues to ensure that the most appropriate roofing and cladding product is chosen.

Whilst aesthetics and product availability do play a part, the chosen profile must meet certain performance criteria. These are centred around the profile's ability to shed water from the roof and the ability of the product to span purlin and girt spacings and meet design criteria. The minimum pitch for this profile is outlined elsewhere within this literature.

In terms of purlin spans and girt spacing it is necessary to follow due process.

If a building is being designed and constructed in full accordance with E2/AS1 and roofing and cladding products as covered by that document are chosen, then it is necessary for the design spans and fixing methodology to comply with those of E2/AS1. However E2/AS1 states that the use of the manufacturers information may provide a more optimum spacing of fixings, and this is recommended by Roofing Industries.

Further where a building is outside of the scope of E2/AS1 and the building or parts thereof are of specific design then it is necessary for the roofing and cladding to be suitable for the design and vice versa.

Loadings referred to in Roofing Industries graphs are the result of testing to a serviceability limit state which is more conservative than an ultimate limit state as quoted by some manufacturers.

Our Design Graphs are presented in a form to allow the designer to select suitable products and purlin spacings.

For most roof installations the purlin spacings will be limited by the trafficable limitations of the profile or the structural design. It is then necessary for the designer to calculate the design wind load for the roofing and cladding in accordance with generally acceptable

practice, by reference to AS/NZS 1170.2: 2011, and/or NZS 3604: 2011 as appropriate. For a fuller explanation of this refer to the NZ Metal Roof and Wall Cladding Code of Practice. This result should be referenced to the Wind Load Span Design Graphs.

The purlin spacings should be limited to the lower of the trafficable limitations and design wind load with the capacity of the structure being greater than the design load for the application. However for roofs that are not able to be walked on and for wall cladding applications, the trafficable limitations may be exceeded providing the design wind loading criteria is met. However this should be done with caution as it may require considerable extra secondary fasteners within the laps.

The designer should always take into account in areas of heavy roof traffic, snow loadings, or where the roofing supports such items as air conditioning units, purlin spacing should be reduced accordingly. Consideration also needs to be given to limitations of purlin spacings for any translucent sheeting.

Reference should be made to the notes in the graphs.

It is our recommendation that for commercial and industrial roofing applications that .55mm BMT steel or .90mm BMT Aluminium is used as it has more resilience to damage particularly by other trades.

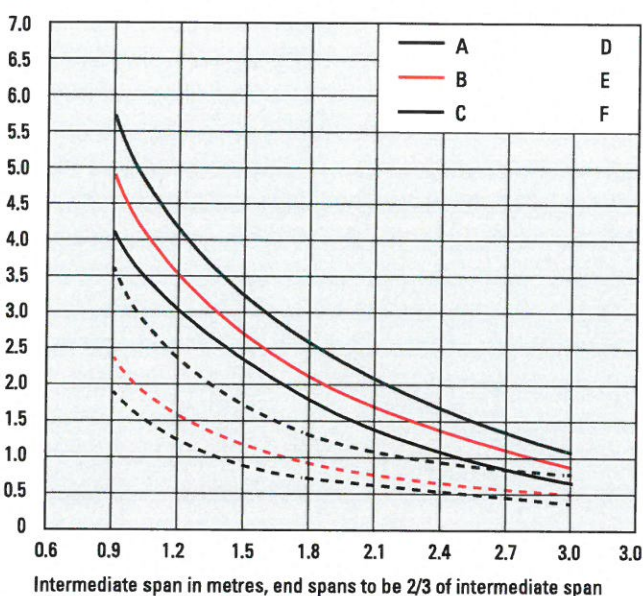
Underlay as per the project specifications should be used.

With an aluminium substrate steel netting should not be used where it may be in contact (either directly or through underlay degradation) with the aluminium roofing or cladding. Alternative material such as polypropylene strapping should be used where support is required, or the cladding separated from the underlay by a high density polystyrene batten or Thermakraft Drainage Matt or similar, and the use of an aluminium gutter flashing. This is also applicable to coated metal and zinc roofing in severe marine applications. In all the above cases self supporting paper should be used, including when support is required.

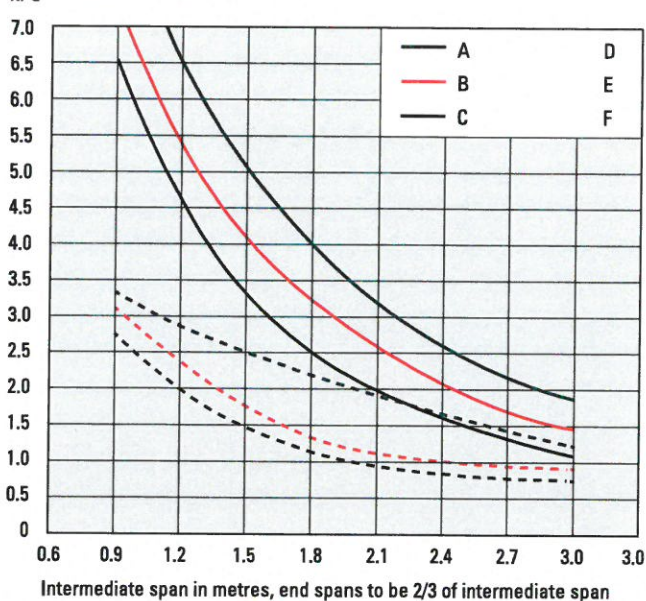
WIND LOAD SPAN DESIGN GRAPH

Roofing - Steel Based Material

kPa **.40 Steel G550 High Strength**



kPa **.55 Steel G550 High Strength.**



Testing confirms that .70mm Aluminium has similar results to .40mm Steel and that .90mm Aluminium has similar results to .55mm Steel and is adjusted for practical application. Aluminium requires load spreading washers and EPDM washers at all times.

A-F represent alternative Primary Fixing Methods.

For compliance with NZ Metal Roof and Wall Cladding Code of Practice and E2/AS1.

Primary Fixing Methods*

- A** Fixed every purlin on every rib with approved screws and neos and load spreading profiled metal washers and EPDM Washers.
- B** Fixed every purlin on every rib with approved screws and neos and 25mm Aluminium embossed washers.
- C** Fixed every purlin on every rib with approved screws and neos alone (i.e. no washer).
- D** Fixed every purlin at side laps and every alternate rib with approved screws and neos and load spreading profile metal washers and EPDM Washers.
Fix every rib to Ridge, Hip, Valley, Gutter and Periphery areas.
- E** Fixed every purlin at side laps and every alternate rib with approved screws and neos and 25mm Aluminium embossed washers.
Fix every rib to Ridge, Hip, Valley, Gutter and Periphery areas.
- F** Fixed every purlin at side laps and every alternate rib with approved screws and neos alone (ie no washer).
Fix every rib to Ridge, Hip, Valley, Gutter and Periphery areas.

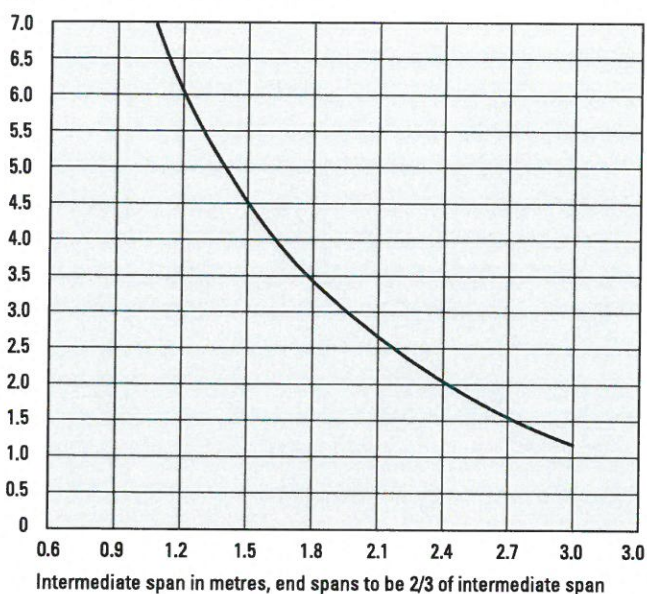
* Note - Compliance with E2/AS1 is dependent on purlin spacing and gauge of roofing. See section on Purlin/Girt Spacing Limitations and Recommendations.

Drape Curved Roofing

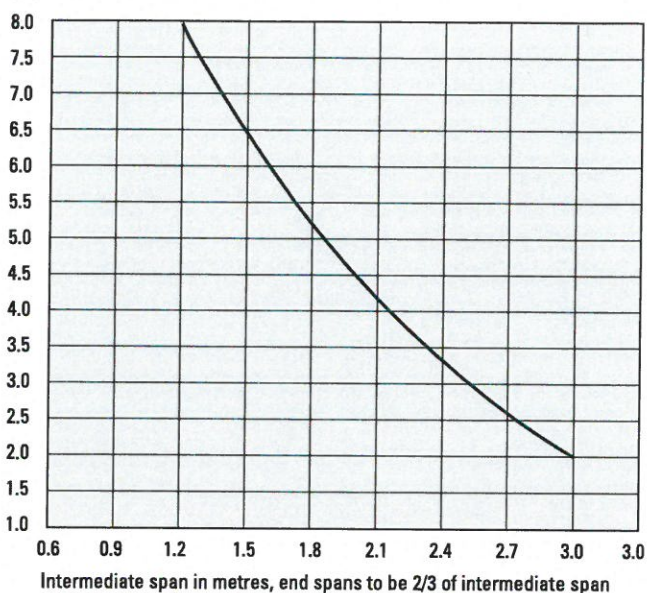
The first two purlins at each end of the sheet in drape curving situations should, in all cases, be fixed using profile metal washers and EPDM washers with the balance of the roof fixed as above.

Wall Cladding - Steel Based Material

kPa .40 Steel G550 High Strength



kPa .55 Steel G550 High Strength.



Testing confirms that .70mm Aluminium has similar results to .40mm Steel and that .90mm Aluminium has similar results to .55mm Steel.
For compliance with NZ Metal Roof and Wall Cladding Code of Practice and E2/AS1.

Primary Fixing Methods**

Fixed in the pan adjacent to every rib every girt. At the laps the fixing is to be adjacent to the lap rib. All external and internal corners to be fixed.

** Note - Compliance with E2/AS1 is dependent on girt spacing and gauge of cladding. See section on Purlin/Girt Spacing Limitations and Recommendations.

PURLIN/GIRT SPACING LIMITATIONS AND RECOMMENDATIONS

Dimensions in metres

Section 1. For compliance with E2/AS1		Fixing Patterns (Refer to section on Primary Fixing Methods)						Aluminium H36	
		Steel Based Material						.70mm BMT	.90mm BMT
		.40mm BMT			.55mm BMT				
End Span	Intermediate Span	Windzone			Windzone			Refer to manufacturers recommendation.	
		Low & Med	High & Very High	Extra High	Low & Med	High & Very High	Extra High		
0.4	0.6	F	F	C	F	F	F		
0.6	0.9	F	C	C	F	F	F		
0.8	1.2	F	C	C	F	F	F		
1.2	1.8	Refer to manufacturers recommendation			F	C	C		
N/A - Not applicable									

N/A - Not applicable

Section 2.

Manufacturers recommendation in accordance with NZ Metal Roof and Wall Cladding Code of Practice (When compliance with E2/AS1 not required)

		Steel Based Material		Aluminium H36	
		.40mm BMT	.55mm BMT	.70mm BMT	.90mm BMT
Restricted Access Roof (Type 2B) (Where walking is permitted within 300mm of the purlin line or in the pan of the profile)	Intermediate	1.600	2.200	0.800	1.200
	End	1.100	1.500	0.550	0.800
Unrestricted Access Roof (Type 2A) (Where walking is permitted anywhere on the roof cladding)	Intermediate	N/R*	1.500	N/R*	0.900
	End	N/R*	1.000	N/R*	0.600
Non Accessible Roof and Wall Cladding (Type 3)	Intermediate	2.400	3.000	1.500	2.100
	End	1.600	2.000	1.000	1.400
Maximum Recommended Purlin Spacing for standard roof (See notes below)	Intermediate	0.900	1.500	0.800	1.200
	End	0.600	1.000	0.550	0.800
Wind Design Load using fixing method C2 (minimum) as an example at these purlin spacings from the Wind Load Span Design Graphs	Intermediate	1.9kPa	2.3kPa	1.9kPa	2.3kPa
	End	2.5kPa	3.6kPa	2.5kPa	3.6kPa

* Not recommended

Classification Types are from the NZ Metal Roof and Wall Cladding Code of Practice.

For other than compliance with E2/AS1 purlin spacing limitations to be read in conjunction with Wind Load Span Design Graphs.

In areas of heavy traffic purlin spacing should be reduced accordingly.

For curved roofing refer to Information Table.

When self supporting paper is preferred to be used (without any support) purlin spacings must be limited to a maximum of 1.200 mtr centres for vertically run underlay and 1.150 mtr centres for horizontally run underlay. This is particularly relevant with aluminium and /or severe marine environments for the reasons designated under Building Design/Performance/Product Selection part of this document.

Snow Loads

When the possibility of snow exists it is necessary to allow for the extra imposed snow loads by increasing the strength of the structure, and/or minimising the build up of snow, and this is generally achieved by increasing the roof pitch by allowing easier shedding of the snow or otherwise as the designer determines.

The objective is to simplify rather complex loading patterns while remaining adequately cautious. The design loads should take account of drifting snow due to wind, but wind loads are not required to be combined with snow loads.

As snow loads are uniformly distributed loads they are similar to wind loads.

Snow loadings are not required to be taken into account for the North Island of New Zealand north of a line drawn from Opotiki to Turangi and New Plymouth.

However for other areas snow loadings may need to be taken into account dependent on the area and altitude of the proposed project. A fuller reference including a map and chart is available from the NZ Metal Roofing Roof and Wall Cladding Code of Practice Section 3.5.

PRIMARY FIXING CHART

Roofing - Crest fixed (To be read in conjunction with Roof Expansion Provisions and Load Span Design Graphs)

	Wood Purlins	Steel Purlins or girts up to 1.5mm	Steel Purlins or girts 1.5-4.5mm	Steel Purlins or girts 4.5-12mm	Washers (When required)
Steel Based Material	12-11x65 Class 4 Type 17 Woodteks or Roofzips with neos	12-14x55 Class 4 Steelteks with neos or 12x65 Roofzips with neos	12-14x55 Class 4 Steelteks with neos	12-24x65 Class 4 Series 500 Steelteks with neos	Trimrib load spreading profile Steel and 30mm EPDM or 25mm Aluminium embossed washer
Aluminium Based Material	14-11x73 Alutite with bonded washer and Trimrib load spreading profile 1.2mm Ali washer & 30mm EPDM	Stainless steel grade 304, 14-14x70 Steelteks and bonded washer through a 10mm dia. clearance hole with Trimrib load spreading profile 1.2mm Ali washer & 30mm EPDM	Stainless steel grade 304, 14-14x70 Steelteks and bonded washer through a 10mm dia. clearance hole with Trimrib load spreading profile 1.2mm Ali washer & 30mm EPDM	Fabco stainless steel grade 304, 14-14x70 Type B screw and bonded washer through a 10mm dia clearance hole with Trimrib load spreading profile 1.2mm Ali washer & 30mm EPDM	Trimrib load spreading profile 1.2mm Ali and 30mm EPDM

Wall Cladding - Pan fixed

	Wood Purlins	Steel Purlins or girts up to 1.5mm	Steel Purlins or girts 1.5-4.5mm	Steel Purlins or girts 4.5-12mm	Washers (When required)
Steel Based Material Direct fixed	12-11x40 Class 4 Type 17 Woodteks with neos	12-14x20 Class 4 Steelteks with neos	12-14x20 Class 4 Steelteks with neos	12-24x32 Class 4 Steelteks Series 500 with neos	
Steel Based Material 20mm Cavity	12-11x50 Class 4 Type 17 Woodteks or Roofzips with neos	12-14x45 Class 4 Steelteks with neos or 12x50 Roofzips with neos	12-14x45 Class 4 Steelteks with neos	12-24x50 Class 4 Steelteks Series 500 with neos	
Aluminium Based Material Direct Fixed	12-11x35 Alutite with bonded washer	Stainless steel grade 304, 14-14x25 Steelteks and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	Stainless steel grade 304, 14-14x25 Steelteks and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	Fabco stainless steel grade 304, 14-14x20 Type B screw and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	19mm bonded Ali washer
Aluminium Based Material 20mm Cavity	14-11x55 Alutite with bonded washer	Stainless steel grade 304, 14-14x70 Steelteks and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	Stainless steel grade 304, 14-14x70 Steelteks and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	Fabco stainless steel grade 304, 14-14x70 Type B screw and bonded washer through a 10mm diameter clearance hole with 19mm bonded Ali washer	19mm bonded Ali washer

Note: All primary fasteners to have a minimum embedment into structural timber of 30mm. Adjust fastener length for both timber and steel fixings when necessary for battens etc. When using load spreading profile washers or 25mm Aluminium embossed washers for roofing fix ridding, roof flashings etc. using a 25mm Aluminium embossed washer and appropriate screw.

Secondary Fasteners (To be used in accordance with the NZ Metal Roof and Wall Cladding Code of Practice.)

These should be:

- Aluminium Blind Rivets AS5-3 x 4mm minimum (Residential)
- Aluminium Blind Rivets AS 6-3 x 4.8mm minimum (Commercial)
- Aluminium Bulb-tite Rivets
- 12-11x35 Alutites
- 12-11x25 Class 4 Type 17 Woodteks (Steel based material only)

ROOF EXPANSION PROVISIONS

Fix with recommended fasteners and systems from the Primary Fixing Chart and additionally allow for the following where applicable.

Steel Based Material				
E2/AS1 Compliance				
Sheet Lengths	Up to 8 metres	>8-12 metres	>12-18 metres	>18 metres
	No special provision	Lower 50 % of the roof should be fixed using oversize holes at fastening points with approved load spreading profile washer, and 30mm EPDM washers		Not Applicable
NZ Metal Roof and Wall Cladding Code of Practice Compliance				
Sheet Lengths	Up to 15 metres	>15-18 metres	>18-24 metres	>24-30 metres
Zincalume and light colours in Favourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	No special provision	No special provision except screws are recommended	No special provision except screws are recommended	Solid fix using screws from the ridge down 24 metres and oversize holes should be used for the remainder of the sheet with approved load spreading profile washers, and 30mm EPDM washers
Dark Colours in Favourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	No special provision	No special provision except screws are recommended	Solid fix using screws from the ridge down 18 metres and oversize holes should be used for the remainder of the sheet with approved load spreading profile washers, and 30mm EPDM washers	Not recommended*
Zincalume and light colours in Unfavourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	No special provision	No special provision except screws are recommended	Solid fix using screws from the ridge down 18 metres and oversize holes should be used for the remainder of the sheet with approved load spreading profile washers, and 30mm EPDM washers. *Maximum recommended sheet length is 25 metres	
Dark Colours in Unfavourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	No special provision	Solid fix using screws from the ridge down 15 metres and oversize holes should be used for the remainder of the sheet with approved load spreading profile washers, and 30mm EPDM washers.		* Not recommended over 25 metres

For sheet lengths in excess of the above a step joint or other special provision for expansion is required. Refer to Roofing Industries Ltd.

When using load spreading profile washers for roofing fix ridding, roof flashings etc. using a 25mm Aluminium embossed washer and appropriate screw. Oversize holes should be 3mm greater diameter than the screw or as per the Primary Fixing Chart for stainless steel screws.

For further information on the fixing of Trimrib refer to E2/AS1 of the NZ Building Code and NZ Metal Roof and Wall Cladding Code of Practice, www.metalroofing.org.nz

These publications along with the foregoing technical data should form the basis of the design and installation of metal roofing and cladding

Also refer to our suite of detail drawings, and to NZ Steel Ltd and Pacific Coilcoaters literature.

ROOF EXPANSION PROVISIONS

Fix with recommended fasteners and systems from the Primary Fixing Chart and additionally allow for the following where applicable.

Aluminium				
Sheet Lengths	Up to 10 metres	10-12 metres	12-15 metres	>15 metres
Plain Aluminium & lighter colours in Favourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	Fix using oversize holes with screws and approved load spreading profile Ali washers, and 30mm EPDM washers			Not recommended
Dark Coloured Aluminium in Favourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	Fix using oversize holes with screws and approved load spreading profile Ali washers, and 30mm EPDM washers		Not recommended	
Plain Aluminium & lighter colours in Unfavourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	Fix using oversize holes with screws and approved load spreading profile Ali washers, and 30mm EPDM washers		Not recommended	
Dark Coloured Aluminium in Unfavourable Installations (Refer NZMRM C.O.P. Section 4.1.6)	Fix using oversize holes with screws and approved load spreading profile Ali washers, and 30mm EPDM washers.	Not recommended		

For sheet lengths in excess of the above a step joint or other special provision for expansion is required. Refer to Roofing Industries Ltd.

When using load spreading profile washers for roofing fix ridging, roof flashings etc. using a 25mm Aluminium embossed washer and appropriate screw.

Oversize holes should be 3mm greater diameter than the screw or as per the Primary Fixing Chart for stainless steel screws.

For further information on the fixing of Trimrib refer to E2/AS1 of the NZ Building Code and NZ Metal Roof and Wall Cladding Code of Practice, www.metalroofing.org.nz

These publications along with the foregoing technical data should form the basis of the design and installation of metal roofing and cladding

Also refer to our suite of detail drawings, and to NZ Steel Ltd and Pacific Coilcoaters literature.