



# NEW ZEALAND WINTER EQUIPMENT NOTES

Due to the nature of the mountain environment, equipment and clothing must be suitable for its intended purpose. It must be light, remain effective when wet or iced, and dry easily. These notes will help you make informed choices, which will save you time and money.

Bring along the mandatory clothing, wet weather gear and any equipment you already own that is on the equipment checklist. This gives you an opportunity to practice with your gear and equipment so that you become efficient at using it out in the field.

Adventure Consultants is able to offer clients good prices on a range of clothing and equipment. Please feel free to contact us if you need assistance with making a purchase or advice on specific products.

## Body Wear

There are numerous fabrics which are both water-resistant and breathable, such as Gore-Tex, Event, Polartec Neoshell, Pertex Shield and Entrant etc. These fabrics are expensive but can last for years if well looked after. Shell clothing should be seam sealed during the manufacturing process (tape sealed on the seams) or it will leak through the stitching. It also should be easy to move in and easy to put on and take off when wearing gloves or mitts. Shell clothing made of PVC or similar totally waterproof non-breathable material is not suitable, as moisture cannot escape when you are exerting energy, which results in getting wet from the inside out! Therefore, fabric breathability is very important when you are active in the mountains.

		
Marmot Spire Shell Jacket	The North Face Point Five NG Shell Pant	Rab Photon X Hoody

### Waterproof Shell Jacket

This can be made from Gore-Tex or a similar waterproof breathable material. Look for a model with a full front zipper and a large attached hood with draw cord for adjustability, so it will fit snugly over a helmet. Preferably the jacket should be long enough to allow a generous overlap with your waterproof shell pants. Technical mountaineering jackets are ideal, but many general purpose jackets are sufficient as well.

*We recommend The North Face Summit Series L5, Marmot Spire or the Rab Latok Alpine Jackets.*

### Waterproof Shell Pants

These can be made from Gore-Tex or a similar waterproof breathable material. These must have full length zips down the legs so they can be put on and taken off, when wearing boots and crampons. The bib/salopette types are warmer as they extend above the lower back/kidney area giving a good overlap with your jacket. Make sure they have sufficient movement to enable you to lift your legs high, and enough room to wear light fleece pants underneath.

*We recommend The North Face Point Five NG, Marmot Precip or the Rab Latok Alpine Pants.*

## Down/Primaloft Jacket

During the colder winter months, a good quality down or Primaloft jacket can be a lifesaver! A midweight down or Primaloft jacket with a hood is highly recommended.

*We recommend The North Face Nuptse, Marmot Ama Dablam and the Rab Positron Down Jackets, or The North Face Thermoball Hoody, Montane Prism and the Rab Photon X Primaloft Jackets.*

## Softshell/Wind Jacket

Insulated softshell jacket with a full front zip for ventilation and a hood is a bonus.

*We recommend the Rab Vantage, Vapour Rise Alpine and Flex Jackets, or the Marmot DriClime Ether Jacket or Hoodie.*

## Lightweight Fleece Top

A lightweight (100 weight) or expedition weight fleece top is a good addition layer to keep your thermoregulation perfect. Wear it as your top layer when warm and then put your midweight jacket over it, when it gets colder. It can be a light fleece pullover or have a full zip. A zip chest pocket is useful for keeping sun cream and snack bars accessible.

*We recommend The North Face TKA 100 Glacier ¼ Zip, Rab Power Stretch Pull-on or the Montane Allez Micro Hoodie.*

		
Marmot Ether DriClime Hoodie	Rab Exodus Softshell Pants	Rab Merino+ 160 Long Sleeve Zip Tee

## Softshell Climbing Pants

100 weight fleece pants or ideally, the more versatile slightly insulated softshell pants are recommended. If you tend to get cold easily then it's good to have looser fitting pants that you can fit thermals underneath. Softshell pants have water and wind-resistant qualities that can be used independently of your waterproof shell pants in fine weather. However, these are not a replacement for your waterproof shell pants.

*We recommend the Marmot Scree, Montane Super Terra or Terra Guide, or the Rab Exodus Pants.*

## Base Layer Tops & Leggings

Long sleeve thermal tops made of polypropylene, merino or polyester are excellent. A high neck with a zip gives good temperature control. Bring at least two tops (one for climbing in and one for wearing in the evenings, or to double up if you are really cold).

Thermal long-johns made of the same materials as the thermal tops. Long-johns should be light to midweight and can provide an alternative, if your climbing pants are wet or too warm. They can also provide lots of additional warmth if worn under your climbing pants.

*We recommend The North Face Warm, Earth Sea Sky First Layer, Montane Primino and the Rab Merino+ Base Layer Ranges.*

## Underwear

Bring sufficient changes of underwear. Polypropylene, silk or merino briefs and singlets are warmer and dry faster if you get wet. However, your normal and most comfortable underwear are usually suitable.

*We recommend the Smartwool, Earth Sea Sky, Montane Primino and the Rab Merino+ Ranges of Underwear.*

## Socks

Have at least two complete sets with you for a trip. Wool or mixed fibres which have good thermal properties are a good choice. Often people wear combinations of thick (wool socks) and thin (polypropylene or ski liner socks) rather than just one thick pair. Try your socks out with your boots beforehand if possible.

*We recommend Smartwool, Bridgedale, 6 Point 6 and MUND Socks.*

## Gaiters

Full calf-length gaiters are best at keeping the snow out and protecting your pants from crampon snags. They will need a good tie down system under the in-step of your boot to stop them creeping up, plus a velcro or zip closure at the front.

*We recommend the Sea to Summit Alpine or the Rab Latok and Latok Extreme Gaiters.*

## Headwear

### Sun Hat

A wide-brimmed soft hat or baseball cap in conjunction with a bandana or buff to protect you from the sun.

*We recommend the Adventure Consultants Sun Hat and Buff, available from our office.*

### Warm Hat

Wool, Windstopper or fleece extending over the ears with a secure fit to prevent flying off in a strong wind.

*We recommend The North Face Bones or Rab Logo Beanies.*

### Sunglasses

Preferably the glacier glasses style with side protection, though there are some excellent 'wraparound' styles available. Light reflecting in from the side can cause lots of damage to the eyes. The lens should be dark enough to withstand the intense reflection from the snow and must filter 100% of UV light.

*We recommend Bolle, Julbo and Smith Sunglasses.*

		
Sea To Summit Alpine Gaiters	Julbo Explorer Sunglasses	Rab Alliance Gloves

## Ski Goggles

Ski goggles are for use in high winds and heavy snow. These should be lightly tinted but not so dark that the lens will reduce visibility in low light conditions. If you wear prescription glasses, please ensure they fit under your goggles.

*We recommend Julbo, Bollé and Smith Ski Goggles.*

## Scarf, Bandana or Buff

A fleece or silk neck gaiter, neck warmer or Buff is also a good idea for added warmth or sun protection.

*We recommend the Adventure Consultants Buff, available from our office.*

## Hand Wear

### Mountaineering Gloves

A warm pair with a wind and waterproof shell is essential. We generally use Gore-Tex (or a similar waterproof fabric) gloves with removable liners for faster drying. A good model will also have abrasion resistant palms and shaped fingers.

*We recommend The North Face Vengeance, Rab Alliance, Marmot Randonee and the Outdoor Research Alti Mountaineering Gloves.*

### Fleece/Liner Gloves

Have at least two pairs of liner gloves; one pair of polypropylene and a second of polypropylene, fleece or Windstopper. Additional liners can be used as spares for your removable liner gloves or doubled up, if it is really cold.

*We recommend the Mountain Adventure Polypropylene, The North Face or the Marmot Powerstretch Gloves.*

## Boots

Plastic or new-generation synthetic fabric boots with a rigid sole and a removable liner are ideal for New Zealand winter climbing conditions. The fit should be snug with room to either tighten or loosen the laces to adjust for different circumstances. They need to be comfortable to walk and climb in for many hours and for several days in a row. Some hard shells can be heat moulded by ski shops to ease out any minor pressure points.

An insulated leather mountaineering boot can also be suitable. Just make sure they are warm, waterproof and supportive for winter mountaineering.

The boots must have a reasonably sized welt at the back and front to accept clip-on crampons. There are different models designed for different kinds of use, from glacier walking to steep ice climbing. As they don't wear out that quickly its worth thinking about what your end use is going to be before purchasing a pair.

*We recommend the Scarpa Mont Blanc and Vega, or the La Sportiva Spantik and Nepal EVO Boots.*

		
La Sportiva Nepal Evo Single Leather Mountaineering Boot	Scarpa Vega Plastic Mountaineering Boot	La Sportiva Spantik Mountaineering Boot

## Technical Equipment

### Climbing Harness

Alpine harnesses should be lightweight, adjustable around the waist and legs, and have padded waist and leg-loops to increase comfort as you may be sitting in it for quite a length of time whilst belaying your climbing partner. It is best if your harness has a belay loop and solid plastic gear loop attachments.

A specially designed alpine harness is easier to get in and out of when you have boots and crampons on. Many rock-climbing harnesses have fixed leg loops which cannot be adjusted for clothing layers. Wear your mountaineering layers when trying on a harness to ensure it fits over the clothing layers.

*We recommend the Petzl Adjama and the Black Diamond Aspect Harnesses.*

### Climbing Helmet

Climbing-specific helmets are lightweight and designed to deflect falling ice and rocks, as well as protect the head in the case of a fall. Plastic becomes brittle as it ages so it should not be more than 4 years old. Check the size and make sure that it will adjust when wearing a hat underneath. Ski and bike helmets are not suitable.

*We recommend the Petzl Meteor and the Black Diamond Vapor or Vector Helmets.*

		
Petzl Adjama Climbing Harness	Black Diamond Vapor Helmet	Petzl Reverso 4 Belay Device

## Carabiners

Bring 3 screw-gate locking carabiners and 4 snap-gate carabiners.

*We recommend the Petzl and Black Diamond Carabiners.*

## Belay Device

You will need a belay device. We use tubular style units which have two holes for the rope to pass through. They are lightweight, easy to use and are compatible with single or double ropes.

*We recommend the Black Diamond ATC-XP or Guide, and the Petzl Verso or Reverso Belay Devices.*

## Personal Anchor System

This device is attached to the belay loop on your harness and with the use of a small carabiner, the excess chain links are tucked away on one of your front gear loops. This device is used as your safety when reaching an anchor point on a rock, snow or ice climb. We use a chain link style system because it's safer, more convenient and more adjustable than other methods, plus can be used to equalise anchors.

*We recommend the Metolius PAS 22 Device.*

## Prusik Cord

Generally, 6mm kernmantel cord is used for prusiks. We require 3 prusik cords; one in a 3.2m length and two in 1.6m lengths. A double fisherman's knot is generally used to create the loop. Your guide can help tie these during the course.

*Adventure Consultants has prusik cord available for purchase.*

## Sling

One 3 metre untied sling is required. Slings are either made from tubular webbing or Dyneema/Spectra. The former is more economical, whereas Dyneema slings are much lighter, but also more expensive and need to be replaced more frequently.

*Adventure Consultants has unsewn sling available for purchase.*

## Ice Tools

A wide range of good ice tools are available so it pays to know what you will be using it for when purchasing one. Some tools are brilliant for vertical ice and useless for climbing snow and vice versa. Some tools are acceptable for both.

### Ice Axe

For general alpine climbing, you need a straight shafted axe between 55cm to 65cm long, depending on your height. A longer tool is more practical on the moderate ground and even the most difficult climbs have approaches and descents for which this is useful. Short axes with curved shafts and moulded hand grips are fine on hard technical ice climbs, but not as well suited to most alpine climbing.

**The head of the axe** should be comfortable to hold when using the axe as a walking stick and be free of protrusions which will dig into your hand.

**The pick** can be a normal curve or a 'reverse curve'. The steep picks and reverse curves hold better to steep ice, although they are more difficult to self-arrest with. Many tools come with replacement picks so check that the bolts are tight before each climb.

**The adze** is still used a lot for chopping steps in ice and snow and must be a good angle to do so. Some adzes are too dropped to chop steps easily and instead are designed for climbing steep unconsolidated snow.

**Shafts** are either metal or glass composites and some have rubber hand grips. A rubber grip at the base of the shaft makes it easier to hold when self-arresting or climbing steeper ground, as well as keeping your hand warmer. The shaft must be smooth enough to be forced into the snow and should not have protrusions, which can get caught up on crusty surface snow.

**The spike** at the bottom of the tool should be sharp enough to penetrate hard snow.

**A wrist loop** is needed for support when climbing on steeper ground. The correct length allows you to hold the bottom of the shaft with the sling tight.

*We recommend the Grivel Air Tech EVO, Black Diamond Venom or the Raven Pro Ice Axes.*

## Ice Hammer

This can be shorter than the axe (45cm to 50cm) as it is often only used on the steeper sections of a climb, and for hammering in stakes and ice screws. Some people find it easier to have axe and hammer of the same length when climbing on steeper ice, but for most mountaineering terrain a walking axe with a shorter hammer is the best combination. The head of the hammer receives quite a lot of abuse on a climb and must be very secure with a good striking surface. The pick is generally a reverse curve at a steeper angle. Most climbers opt for a short technical tool with a bent shaft to protect the knuckles on steeper climbs.

*We recommend the Grivel Air Tech EVO, Petzl Quark and the Black Diamond Vemon Hammers.*

## Crampons

We recommend the New-Matic clip-on type as they are the quickest to put on and take off. Classic strap-on crampons are suitable if you are planning on doing mainly trans-alpine tramping trips with leather boots, which don't accept a clip-on crampon. If you do have strap-on crampons, then the 'Scottish' system is much faster to use (it has a ring on a strap over the toe). The front points of your crampons should stick out from the front of the boot about 2.5cm. Be sure to check the heel piece of the clip on crampon is compatible with your boots and stays in place when in the up position. If possible, practice putting on your crampons before your trip.

*We recommend the Grivel G12 New-Matic, Black Diamond Sabertooth Clip and the Petzl Vasak Leverlock Universel Crampons.*

		
Black Diamond Venom Axe	Grivel G12 Mountaineering Crampon	Black Diamond Turbo Express Ice Screws

## Ice-Screws

These range in quality and price, and we recommend avoiding cheap aluminium screws. Ice-screws are available in a range of different sizes from 12cm to 22cm in length. Make sure you have one to two long screws 22cm in length, as these will be used for anchors. Winders assist with faster placement, but can also take up room on your harness.

*We recommend the Black Diamond Turbo Express and Grivel 360 Ice Screws.*

## Snowshoes

Snowshoes will be needed on the approach to the climbing areas. The latest models are lightweight featuring ice-claws for firmer snow conditions.

*We recommend the MSR Revo Ascent Snowshoes.*

## Trekking/Ski Poles with Snow Baskets

A collapsible model with snow baskets for use with your snowshoes.

*We recommend Leki and Black Diamond Adjustable Poles*

## Camping Gear & Accessories

### Backpack

There are many models available which are suitable. Your pack should have at least a 50 litre capacity but no more than 65 litres in volume and have an expandable lid and compression straps. Make sure the pack has attachment points for your ice axe, hammer and crampons plus a top pocket.

*We recommend The North Face Prophet 52, Black Diamond Speed/Mission 50 or the Lowe Alpine Metanoia 65:80 Backpacks.*

## Sleeping Bag

A down filled sleeping bag is preferable as they are extremely warm, light and compact. It is a good idea to store your sleeping bag in a plastic bag inside a stuff sac in your pack. This is to avoid it getting wet, as down loses its insulating qualities when wet. A sleeping bag rated up to 4 seasons or better (approx. -10C and containing 600-800gms down fill) is ideal for New Zealand winter mountaineering conditions.

*We recommend the TNF Blue Kazoo, Mountain Equipment Glacier 750 and the Rab Neutrino 600 Sleeping Bags.*

## Sleeping Bag Liner

If you are hiring a sleeping bag, you must use a sleeping bag liner which can be made from silk, cotton or wool. Thermal liners are also available which can increase the warmth of your bag while helping to keep your bag clean.

*We recommend Sea to Summit Silk and Thermal Sleeping Bag Liners.*

## Headlamp

You will need a good headlamp and don't forget spare batteries.

*We recommend the Petzl Actik or Myo, and the Black Diamond Storm or Spot Headlamps.*

		
The North Face Prophet 52 Backpack	Mountain Equipment Glacier 750	Black Diamond Storm Headlamp

## Water Bottle

The wide mouth plastic bottles are best. Camelbak style water bladders are good in theory, but can often freeze and are easily punctured. It pays to have sufficient capacity to carry two litres as you dehydrate easily in the dry mountain air. If you like add an insulated flask for hot drinks.

*We recommend the Adventure Consultants Branded Nalgene Bottles, available from our office.*

## Toilet Bag

Bring a small toilet kit – flannel or small towel, tiny soap, toothpaste and toothbrush.

## Sun Block

A small tube of max protection sun block, plus sunscreen lip balm (with SPF 15+) for day application.

*We recommend AloeUp Sunscreen, available from our office.*

## First Aid Kit

A basic personal first aid kit is necessary. Blister tape, gauze pads, crepe bandage and painkillers. Also, any personal medication required (*Please remember to inform your guide if you are on any medication*). Store the first aid kit in a waterproof container or a plastic bag inside a stuff sack is often adequate.

## Stuff Sacks & Plastic Bags

For keeping your gear organised and dry

*We recommend Sea to Summit Stuff Sacks, Dry Bags and Compression Sacks.*

## Optional Extras

### Thermos Flask

A small thermos flask (500ml) – vacuum insulated bottle for hot drinks made from stainless steel.

## Earplugs

Can be a good idea if sleeping near a snorer!

## Notebook & Pencil

Preferably waterproof paper notebook or wrapped in plastic bags.

## Map

The relevant map can be bought at our office.

## Compass

Any compass which is suitable for orienteering will do. The magnetic declination is different in the Southern Hemisphere, so compasses designed for the Northern Hemisphere will stick if you use them here.

*We recommend the Silva and Suunto Compasses.*

## Tool Kit/Pocket Knife

*We recommend the Leatherman Multi-tools and Victorinox Knives.*

## Chemical Hand & Toe Warmers

You can bring 2-3 sets of lightweight disposable chemical hand and toe warmers.

## Personal Entertainment

Consider taking an iPod/E-reader or a good small book. We recommend *A Climbers Guide* by Adventure Consultants

## Avalanche Rescue Equipment

Winter conditions require the following avalanche safety items, which we will supply free of charge. If you own avalanche safety equipment, then bring it along so you can practice and become efficient with your particular model.

### Avalanche Transceiver

Transceivers are used to locate a buried victim in the least amount of time possible. If purchasing a transceiver, look for a digital 3 antenna model that is easy to use. All avalanche transceivers transmit on the same 457kHz frequency and are compatible with all other analogue or digital models.

### Avalanche Probe

Avalanche probes are made up of multiple aluminium sections, tensioned by a cable. These sections extend to form a 2-3 metre pole for probing avalanche debris deep into the snow.

### Snow Shovel

Shovels should be a lightweight avalanche specific model. Plastic shovels are not recommended. A telescopic handle and a large metal blade will allow you to move more snow at a faster rate.

*We recommend Pieps, Voile, Backcountry Access or Ortovox Transceivers, Shovels and Probes.*

		
Black Diamond Quick Draw Tour Probe 240	Pieps DSP Sport Transceiver	Black Diamond Deploy 7 Snow Shovel

**Please check your equipment checklist as there may be other requirements not listed here.**

**Please do give us a call or send us an e-mail, if you have any questions as we are always happy to help.**