



NEW ZEALAND ICE CLIMBING 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.

Bring along the mandatory clothing, wet weather gear and any equipment that you already own which 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 can offer clients good pricing on a range of clothing and equipment. Please feel free to contact us if you would like any advice on specific products or if you would like to special order any clothing, gear or equipment for your trip.

BODY WEAR

Waterproof Shell Jacket

Bring a non-insulated, fully waterproof shell jacket with water-resistant zip closures and a good hood capable of fitting over a helmet. The jacket should be easy to move in with your base and mid-layers on underneath, and provide a good overlap with your pants, but should not be so long that it restricts access to your harness. Chest pockets are useful for things like snacks and sunscreen during the day. Pit zips allow for increased ventilation and cooling.

There are numerous fabrics which are both water-resistant and breathable such as Gore-Tex, eVent, MemBrain, PreCip and Entrant, etc. These fabrics can be expensive but can last for years, when well looked after.

Shell clothing should be seam sealed during the manufacturing process or the garment will leak through the stitching. Shell clothing made of PVC or similar is totally waterproof but does not breath, which means you become damp from the inside out as moisture cannot escape while you are moving. This style of waterproof shell is not suitable for mountaineering. A technical mountaineering jacket is ideal, but many general-purpose jackets are sufficient as well.

We recommend The North Face Summit L5 LT Futurelight Jacket, Macpac Lightweight Prophet Jacket or the Rab Muztag GTX Jacket.



The North Face Summit L5
LT Futurelight Jacket



Rab Mustag GTX Pants



Rab Neutrino Pro Down Jacket

Waterproof Shell Pants

Your waterproof shell pants should have good freedom of movement to enable you to lift your legs easily, when worn with your softshell pants or base layer leggings during inclement weather. They should also have $\frac{3}{4}$ to full length zips down each leg to enable you to put them on and take them off, while wearing your boots and/or crampons.

We recommend The North Face Summit Dryzzle Futurelight Pants, Montane Alpine Pro Pants or the Rab Muztag GTX Pants.

Down Jacket

A hooded, midweight and high loft (e.g. 800 fill) down jacket is essential and will be put to good use around camp while belaying your climbing partner.

We recommend the Rab Neutrino Pro Jacket, and The North Face Summit L6 Down Belay Parka.

Midweight Insulated Jacket

This can be a synthetic insulated jacket (Primaloft, etc.), insulated softshell or thick fleece with a full front zip for ventilation. Zip pockets help avoid losing items stored inside and a hood is also a bonus.

We recommend include The North Face Thermoball Hoody, Arc'teryx Nuclei FL Jacket, Macpac Pulsar Jacket, Montane Prism Jacket and the Rab Xenon Jacket.

Lightweight Fleece Top

A lightweight fleece made from Polartec Power Stretch, Polartec Power Grid, Polartec Alpha, Pontetorto Tecnopile micro fleece or an expedition weight base layer is a good additional layer to keep your thermoregulation perfect.

Wear it as your top layer when warm or put your midweight insulated jacket over it, when it gets colder. It can be a light fleece pullover or have a short or full zip. A zip chest pocket is useful for keeping sunscreen and snacks accessible.

We recommend The North Face Summit L2 Power Grid Hoodie, Arc'teryx Delta MX Hoody, Macpac Ion Polartec Fleece Hooded Jacket, Rab Power Stretch Pro Jacket and the Montane Alpine Raid Hoodie.



The North Face Summit L2 Power Grid Hoodie



The North Face Summit L4 Softshell Pant



Smartwool Long Underwear

Softshell Climbing Pants

Stretchy, comfortable slightly insulated softshell pants are recommended although, non-insulated softshell pants which fit comfortably with your base layer bottoms are suitable as well.

We recommend The North Face Summit L4 Softshell Pants, Arc'teryx Sigma FL Pants, Macpac Fitzroy Alpine Series Softshell Pants, Marmot Scree Pants, Rab Spire Pants or the Montane Skyline Pants.

Base Layer Tops & Leggings

Base layers must be made from materials such as merino wool or polyester. No cotton please! We recommend that you 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).

Tops should have long sleeves and a high neck with a zip to allow some ventilation.

We recommend The North Face Warm, Macpac Prothermal, Rab Forge and Pulse, Earth Sea Sky and Smartwool Base Layers.

Underwear

We recommend treated polyester or merino underwear instead of cotton as they dry quickly and wick away sweat from your skin, working with your other layers to keep you dry. Merino has the added advantage of not smelling when worn for long periods of time.

Bring enough changes of underwear for the trip. It is generally possible to wash small items even when in the mountains.

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

HEAD WEAR

Sun Hat

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

We recommend The North Face Horizon Breeze Brimmer Sun Hat or AC Cap, available from our office.

Warm Hat

This hat can be made from wool, merino, Windstopper or fleece. It should extend over the ears and be snug enough not to fly off in a strong wind.

We recommend The North Face Bones Beanie, the Rab Logo Beanie and Smartwool Beanie.

Sunglasses

Preferably a "glacier" style with side protection, although some wraparound glasses rated with a Category 3 lens will provide enough protection from reflected light.

The lens should be dark enough to withstand the intense reflection from the snow and MUST filter 100% of UVA, B and C radiation. Snow reflects up to 85% of solar radiation and the UV index increases 10% with every 1,000m gain in altitude, so it is of utmost importance you protect your eyes. A Category 3 or 4 polarised lens with an anti-fog coating are ideal.

If you wear prescription glasses, we recommend you get grey or amber prescription lenses. If you wear contact lenses, it is advisable to bring a pair of prescription glacier glasses as a back-up.

Eyewear retainers are essential.

We recommend Oakley, Smith, Julbo, Bollé and Adidas Sunglasses.



Black Diamond Guide Glove



Julbo Explorer Sunglasses



Adventure Consultants Branded Buff

Ski Goggles

Bring good-quality goggles for protection from high winds and heavy snow. The lens should offer visible light transmission (VLT) of no more than 30%. Those with light-sensitive eyes may wish to use a darker lens and photochromatic models are ideal for use in changing conditions.

If you wear prescription glasses, please ensure they fit under your goggles.

We recommend Oakley, Smith, Julbo, Bollé and Adidas Goggles.

Scarf, Bandana or Buff

A lightweight Buff or neck warmer is a good idea for added warmth and sun protection.

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

HAND WEAR

Liner Gloves x 2 Pairs

These thin, lightweight finger gloves should fit snugly to allow for handling ropes and carabiners easily. These should fit inside your mountaineering/ice climbing gloves and we recommend bringing at least two pairs so that you always have warm and dry hands.

We recommend the Basic Polypropylene Gloves, Macpac Polypro Gloves, Montane Primino Gloves, Outdoor Research Vigor Lightweight Sensor Gloves and the Rab Stretch Knit Liner Gloves.

Fleece Gloves

Fleece mid-weight finger gloves can be used as an additional layer to protect against the cold.

We recommend The North Face Etip Gloves, Macpac Stretch Gloves, Marmot Power Stretch Connect Gloves, Montane Powerstretch Pro Grippy Gloves or the Rab Power Stretch Pro Gloves.

Midweight Technical Climbing Gloves

A pair of light to mid-weight softshell/Windstopper gloves with a leather or silicon palm for gripping ice tools and for technical rope work. Lighter weight technical gloves should fit inside your warmer ice climbing gloves and this makes for a perfect combination. Lighter tech gloves for climbing (esp. lead climbing) and warmer ice climbing gloves for belaying.

We recommend the Marmot Spring Gloves, Montane Ice Grip Gloves, Rab Velocity and M14 Gloves and the Black Diamond Torque and Terminator Gloves.

Mountaineering/Ice Climbing Gloves

Mountaineering/Ice climbing gloves should be warm and provide dexterity for working with ropes and equipment. A good model will have abrasion-resistant palms, shaped fingers, a waterproof outer and an insulating removable liner. A removable liner allows for faster drying and provides greater versatility as you can use different weights of liners inside for better temperature regulation. Please ensure that you can fit your various liner gloves inside your mountaineering gloves.

We recommend the Black Diamond Guide Gloves, Macpac Powder eVent Gloves, Rab Guide and Pivot Gloves and the Outdoor Research Alti Gloves.



La Sportiva Nepal Evo Single Leather Mountaineering Boot



Scarpa Phantom 6000 Mountaineering Boots



Sea to Summit Alpine Gaiters

FOOT WEAR

Socks

Various combinations suit different people. Some people prefer to wear just one pair of socks in their boots, while others wear two; a thicker pair over a thinner pair. You need at least 2 complete sets of your personal preference. Wool or mixed fibres which have good thermal properties are a good choice.

We recommend Smartwool, Bridgedale and Thorlos Sock Ranges.

Gaiters

Gaiters are used to keep snow out of your boots and protect your pants from crampon snags. They need a good tie down under the instep of your boot to stop them creeping up at the heel when walking in soft snow. These should be a canvas or Gore-Tex combination, sealing around the top of your boots and extending to the top of your calf without being too tight. It is important to make sure that your gaiters fit your boots before you leave.

We recommend the Sea to Summit Alpine eVent Gaiters, the Rab Latok or Latok Extreme Gaiters (for larger volume boots).

Mountaineering/Ice Climbing Boots

New-generation synthetic rigid soled boots with removable liners are ideal. They are produced by several manufacturers as are warm and stable. 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.

An insulated leather mountaineering boot can also be suitable, but make sure they are warm, waterproof and supportive for winter mountaineering. The right fit is more important than for new-generation boots, and they need to be worn in.

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 it's worth thinking about what your end use is going to be before purchasing a pair.

We recommend the Scarpa Mont Blanc Pro, Phantom Guide and Phantom 6000, Lowa Alpine Expert or La Sportiva G2 SM, G5, Trango Ice Cube GTX and Nepal EVO Boots.

TECHNICAL EQUIPMENT

Climbing Harness

Bring a lightweight alpine climbing harness with adjustable leg loops, and belay and gear loops. A harness that is lightly padded around the waist and leg-loops will increase comfort as you're belaying or resting on the climb.

Please check your harness to ensure that it will fit over various clothing layers.

We recommend the Petzl Adjama, Luna or Aquila, and the Black Diamond Technician Climbing Harnesses.

Climbing Helmet

Climbing helmets are lightweight and designed to deflect falling ice and rocks. They also protect the head in a fall. All helmets must meet industry standards for impact protection, with the standard for overhead protection being greater than the side-protection.

There are two kinds of climbing helmets available today: hard shell helmets and shelled foam helmets. Helmet makers use different terms for each type of helmet, so focus instead on tell-tale construction details like shell hardness, foam thickness and number of vents. Check the size and make sure that it will adjust for when you are wearing your hat underneath.

Plastic becomes brittle and foam degrades as it ages so if you are borrowing a used helmet, then it should not be more than 4 years old.

We recommend the Petzl Sirocco or Meteor, and the Black Diamond Vapor, Vector and Vision Climbing Helmets.



Petzl Adjama Climbing Harness



Black Diamond Vapor Helmet



Petzl Reverso 4 Belay Device

Locking & Non-Locking Carabiners

Bring 4 lightweight locking carabiners which have either a 'screw gate' or 'twist lock' gate. Do not get the ball lock type! One large locking carabiner for belaying is advantageous, such as the Black Diamond Rocklock Carabiner. All additional carabiners can be smaller in size to fit more compactly on your harness. Please practice using your specific carabiners with your gloves on.

Bring 4 lightweight non-locking or snap link carabiners.

We recommend Petzl and Black Diamond Carabiners.

Belay Device

Bring an ATC style device for belaying and rappelling. We use the tubular style devices 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.

1 x Long & 2 x Short Prusiks

You should bring one long (3.2m untied length) and two short prusik loops (1.6m untied length). Prusiks should be made from 5–6mm cord and are used for glacier travel, crevasse rescue and abseiled safety backup. A double fisherman's knot is generally used to create the loop and your guide can help tie these during the course.

Adventure Consultants has prusik cord available for purchase.

1 x 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. If you have your own sewn double or triple slings, then please bring them with you.

Adventure Consultants has unsewn sling available for purchase.

ICE TOOLS

Ice Axe & Hammer

For technical ice climbing, you need two short axes of around 50cm long. All modern ice tools come with reverse curve picks. The steep picks and reverse curves hold better on steep ice, though they are more difficult to self-arrest with. Many tools come with replaceable picks so check that the bolts are tight before each climb. Having one tool with an adze is useful as it can be used for clearing away old or rotten ice.

Shafts are usually either metal or carbon fibre and some have rubber hand grips. A rubber grip at the base of the shaft makes it easier to hold when climbing steeper ground. Modern bent shafts are useful for protecting your knuckles and for climbing over ice bulges. The spike at the bottom of the tool should be sharp, but not razor sharp (ouch!).

Many modern tools are not sold with leashes but having umbilical style cords attached to the base of the tools can be useful as dropping a tool mid-route is not ideal.

We recommend the Petzl Quark, Nomic and Black Diamond Viper, Cobra, Reactor or Fuel Ice Tools.



Petzl Quark Ice Tools



Grivel G14 Ice Climbing Crampon



Black Diamond Turbo Express Ice Screws

Crampons

Technical crampons with vertical front points and a new-matic rear closure system are highly recommended for ice climbing. The front points of your crampons should stick out from the front of the boot about 2.5cm. Also ensure that your crampons are fitted with 'anti-balling' plates.

It is extremely important that you try your crampons on with your boots before you leave home to ensure they fit securely. You may require longer bars or extended straps. Please contact us if you are at all unsure.

We recommend the Grivel G14 Crampons, Petzl Lynx and the Black Diamond Cyborg Crampons for ice climbing.

Ice Screws

Ice-screws are available in a range of different sizes from 12–22cm in length. Make sure you have one to two long screws 22cm in length, as these will be used for anchors. Most modern ice screws have winders for faster placement.

We recommend the Black Diamond Turbo Express, Petzl Laser Speed and Grivel 360 Ice Screws.

Snowshoes

Snowshoes are often needed on the approach to the climbing areas and for walking out of the Wye Creek basin. The latest models are lightweight featuring ice-claws for firmer snow conditions.

We recommend the MSR Lighting Ascent and Revo Snowshoes.

Adjustable Trekking/Ski Poles with Snow Baskets

Poles are useful for taking the strain off your knees, improving balance on rough terrain or walking through deep snow with snowshoes on. Larger sized snow baskets are better than small trekking baskets when used in snow. The telescopic feature to adjustable poles is essential as the poles can easily store on the outside of your backpack when not in use.

We recommend Leki and the Black Diamond Expedition 3-piece Adjustable Poles.

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.

If you would like to purchase avalanche equipment prior to your trip or course, please get in touch. We have avalanche safety kits for sale in our office retail store, and we can also order in individual items of transceiver, shovel or probe.

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.

We recommend the Pieps DSP Sport, BCA Tracker Series, and the Ortovox Zoom or 3+ Transceivers.

Avalanche Probe

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

We recommend the Black Diamond Quick Draw Tour 240 or 360, Backcountry Access Stealth or the Ortovox 240 or 320 Light PFA Probes.

Snow Shovel

Shovels should be a lightweight avalanche specific model. A telescopic handle and a large metal blade will allow you to move more snow at a faster rate.

We recommend Voile, Black Diamond Deploy 7, Backcountry Access B-2 EXT or RS EXT and Ortovox Beast or Badger Shovels.



Black Diamond Quick Draw Tour Probe 240



Pieps DSP Sport Transceiver



Black Diamond Deploy 7 Snow Shovel

CAMPING GEAR & ACCESSORIES

Alpine Climbing Pack

Your pack should have at least a 50-litre capacity but no more than 65 litres in volume. Required features include a good expansion/compression system, attachment points for ice axe, hammer and crampons plus a top pocket.

We recommend The North Face Phantom 50, Cobra 60, Macpac Sentinel 50L, Osprey Mutant 52, Arc'teryx Alpha AR 55 or the Black Diamond Speed 50 Packs.

Sleeping Bag

You will need to bring a 4 season down sleeping bag that is rated to around -10C/14F. Synthetic bags of this warmth rating are too heavy and bulky. A down bag with 700g or more of down fill is preferred as this provides greater warmth for weight, while also keeping the sleeping bags volume to a minimum.

It is a good idea to pack your sleeping bag in a plastic bag or dry compression sack. This is to avoid it getting wet, as down loses its insulating qualities when wet.

Please note that the ratings quoted above are the sleeping bags Limit or comfort temperature. If you are a cold sleeper, consider a warmer bag. If you are using the EN temperature ratings when choosing a sleeping bag, a general rule is most women or cold sleepers should tend towards the Extreme rating and most men should tend towards the Comfort Limit rating. Sleeping bags that do not have the EN rating tend to be rated at their Comfort Limit temperature.

We recommend The North Face Blue Kazoo, Macpac Epic HyperDRY Down 600, Marmot Helium, and the Rab Ascent 700 and Neutrino 600 Sleeping Bags.

Sleeping Bag Liner

A sleeping bag liner must be used if you are hiring a sleeping bag. Although we do highly recommend sleeping bag liners in general as they prolong the life of your bag by keeping it clean and dry. Liners can be made from silk, cotton or wool, and thermal liners are also available which can increase the warmth of your bag.

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

Headlamp

We recommend a headlamp with at least 300 lumens which features a long range ultra-bright beam plus smaller LED lights with short range lighting for around camp. A long-range beam with a dimming function for around camp is also suitable. Rechargeable models are fine if standard batteries can also be used. Please bring a pair of spare batteries.

We recommend the Petzl Actik or Actik Core, LED Lenser MH5 or SEO 7R, and the Black Diamond Storm or Spot Headlamps.



Black Diamond Speed 50 Pack



Rab Neutrino 600 Sleeping Bag



Black Diamond Storm 375 Headlamp

Water Bottle

Two plastic bottles with heat-resistant qualities and a wide top of at least 1 litre capacity are recommended.

A bladder hydration system is useful in theory but will freeze on cold mornings, even with an insulation sleeve on the tube. These are also prone to punctures from sharps such as crampon spikes when stored together in your pack.

We recommend the Adventure Consultants Branded Nalgene 1 Litre and 500ml Wide Mouth Bottles, available from our office.

Personal Toiletries

A small toiletries kit which can include a toothbrush, tiny toothpaste, soap, and a small flannel. Make sure everything liquid is in containers that don't leak or break.

Sun Block

A small tube of max protection sun block, plus sunscreen lip balm (with SPF 30+) for day application.

We recommend AloeUp Sunscreen, available from our office.

First Aid Kit

You should always carry a basic first aid kit including blister tape, second skin, gauze pads, crepe bandage and painkillers.

Include any personal medication required plus extras and please remember to inform the office and your guide if you are taking any prescription medicine.

Store your first aid kit in a waterproof container.

Stuff Sacks & Plastic Bags

Lightweight nylon stuff, compression and dry sacks are perfect for keeping your clothing and gear organized and dry.

We recommend Sea to Summit Pack Liners, Ultrasil Stuff Sacks, Dry Sacks and Compression Sacks.

OPTIONAL EXTRAS

Small Thermos Flask

A small Thermos flask for hot drinks, made from stainless steel with a capacity of 300ml to 500ml.

We recommend Primus and Lifeventure Vacuum Flasks.

Earplugs

A handy way to get a good night's sleep when sharing a tent with a snorer!

Notebook & Pencil

Preferably, a waterproof paper notebook or standard notebook wrapped in plastic bags.

Map

The relevant map can be purchased from our retail box at the Heliworks hanger.

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.

Pocket Knife/Leatherman/Tool Kit

Swiss Army Knife, Leatherman tool or equivalent. A personal repair kit for your own equipment is useful as is a lighter.

We recommend the Victorinox Knives and Leatherman Multi Tools.

Chemical Hand & Toe Warmers

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

We recommend the Grabber Brand of 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.

Camera/Smart Phone

Camera and spare batteries or Phone with power bank/portable charger.

**Please check your equipment checklist as there may be other requirements not listed here.
Give us a call or send us an e-mail if you have any questions as we are always happy to help.
Adventure Consultants provide a retail order service should you wish to purchase equipment.
Please contact us if you would like to know more about this service.**
