

Equipment – detailed list

Below is equipment information concerning anything you may need on our summer climbing trips. Please see your particular trips gear list to know what is required for your trip. To help with your selection we have collated some notes which may help you save time and money.

Summer climbing in New Zealand is a mix of the incredibly hot with the incredibly cold. We need to be prepared for both extremes.

Clothing: outer layers

Shell gear should offer protection from wind and water and not be an insulating layer. Avoid shell gear that has any mesh or insulating material which will be hot and heavy. There are numerous fabrics which are both water resistant and breathable. Gortex is the most common brand name but there are many other excellent fabrics. Shell clothing should be tape sealed on the seams and be easy to move in and be put on and taken off when wearing gloves or mittens. As with all mountaineering equipment weight is a factor.

- **jacket/waterproof shell**: Look for a full front zipper model with a good attached hood with draw cord which will fit over a helmet. Some models have adjustable hoods. Obviously a technical mountaineering jacket is ideal but many general-purpose jackets are sufficient. There are numerous fabrics, which are both water resistant and breathable. These fabrics are expensive but can last for years if looked after well. Shell clothing should be tape sealed on the seams, be easy to move in and be put on and taken off when wearing gloves.

Guide tip #1: All breathable fabrics lose their waterproofness after hard usage. Most climbers have a closet full of well made, expensive jackets that they don't wear anymore because they are no longer waterproof. Waterproofing sprays only postpone the inevitable. After a season or two of hard use your shell gear will leak. Most top rated companies make shell gear that is less expensive and lighter than their top of the line models. While these items will not be as heavy duty as the more expensive models, they may be a better option if you need to replace either one after two years to be waterproof.

- **overpants/waterproof shell**: These must have full length zips down the legs so

they can be put on and taken off when you are wearing boots and crampons. The 'bib' type are warmer as they extend above the lower back, but not essential. Once again light weight and well made is good. Make sure they have sufficient movement to enable you to lift your legs high.

- **gaiters**: Full calf-length gaiters keep the snow out and should have a sturdy tie down system under the instep to stop snow creeping up into the boot. These are essential to keep snow from getting in the top of the boot and melting creating a steady flow of meltwater through the boot. Some gaiters are designed to close in front of the leg rather than behind. Front closing gaiters are much easier to use since they are easier to reach.

Clothing: mid layers

- **“soft shell” insulating jacket**: Primaloft, synthetic down or fleece. Should be the full front zip variety to allow ventilation. Zip up pockets help avoid losing items which are stored there.
- **fleece sweater**: A lighter weight sweater (100-200 POLARTEC) is a good addition if you need extra warmth or it is not cold enough for your regular jacket.
- **climbing pants**: These should be made from quick drying synthetic material. Some come with zip off legs that are quite handy for hot weather. Pants should be flexible and not constrict your movements. Make sure pants are not too long in the legs since your boots and gaiters will cover your legs from the calf down anyway.
- **down jacket**: Regarding the general query as to whether a down jacket can be substituted for

a fleece one; we find that they tend to complement each other rather than act as a replacement, a fleece jacket is quick drying and breathes yet retains good insulation values and is ideal under an outer shell. A down jacket tends to come into its own at the end of the day when you want to put something really warm on but is still lightweight and packs down into your pack.

Clothing: baselayers

- **top:** Bring two high zip neck, full sleeve polypropylene or merino shirts. A long sleeve shirt with a collar can be useful for those hot days on the glacier. Wool-based thermals such as Icebreaker provide high quality protection with reduced odor. Recommended thermal underwear brand: www.icebreaker.co.nz.

Guide tip #2: For long days on a sunny glacier, keeping cool is a real challenge. A large white shirt with long sleeves and a collar can be a help. Buying a cheap oversized synthetic (no cotton) at an Op Shop is what many guides do, remember, it's not a fashion show.

- **long johns:** Polypropylene or merino wool long johns are lightweight and provide a change if your fleece pants are wet or too warm. They provide additional warmth if worn under climbing or shell pants.
- **underwear:** Bring sufficient changes of your regular underwear.

hands

- **warm gloves:** Good quality warm gloves are essential. Gloves need to be windproof and well insulated. Gloves with a nylon shell material and leather palms are best, avoid gloves that are totally leather since they are heavy and difficult to dry. It is best if the gloves have removable liners so you can choose to use the two layers separately. Avoid mittens, as temperatures are not usually cold enough to warrant the loss of dexterity.

□ light gloves:

Thin gloves are essential. Skin is no match for sun and abrasive snow, so a very thin, inexpensive pair of polypropylene gloves are needed even when the weather is hot. Use these thin gloves as much as possible and save your warm gloves for when you really need them.

Guide tip #3: Gloves should have an attachment so you can clip them to your harness. Some models have the clip on a finger so the gloves hang fingers up. This way the snow does not collect into the gloves when they are on your harness.

Only wear your warm gloves when you absolutely have to. This will keep them in good condition and dry for when you really need them. Once you warm up and your hands start to sweat, take your gloves off rather than having them get damp. Keep your thin gloves handy to use most of the time.

head

□ warm hat:

Either wool or fleece and must extend over the ears and should not have a tendency to fly off in a strong wind. A polypropylene balaclava is good to carry as a spare

- **sunhat** Full brim hats do not work when you have to wear a helmet over them. A baseball cap is good but won't protect your ears from the sun. A scarf is a handy addition for ear protection but the best option is some form of "legionnaires" hat with maximum neck and face protection.

feet

- **boots:** Steeper climbing on snow and ice demands a boot with a rigid sole (B3). Modern boots built from leather or synthetic materials are suitable for ice and mixed climbing in winter or snow and ice ascents in spring and early summer. Double boots (with a removable liner) are very specialised and designed for high altitude ascents. They will be too warm for most summer climbing objectives but can be good for the depths of winter.

For trips without steep snow or ice climbing and late summer season ascents on rock, boots with a less rigid sole are more comfortable (B2).

Second hand or old boots are fine but once the toe and heel begin to wear down they should be replaced. The heel and toe welts are often the only thing holding your

crampons on and there is a large amount of torque on them when climbing steep snow and ice.

Boot Ratings - Mountaineering boots come with different ratings. Our summer climbing trips (except for non-snow and ice trips) require either B2 or B3 rated boots

B1: Four season boots with a stiff midsole suitable for traversing fairly steep slopes.

B2: Four-season mountaineering boots with a stiff flex.

B3: Technical mountaineering boots with a fully rigid midsole and supportive upper.

☐ **socks:** Thermal properties or merino wool are the best choice. No cotton. No more than two pair of socks is needed on a trip. Keep one pair dry for night time and one pair to climb (and sweat) in.

☐ **running shoes:** Lightweight shoes are handy for lounging in the hut; and at the end of the day. If you are walking out of the mountains in a specific region you will need a trusty pair. "Cros" are a popular option (there are no fashion police!).

hardware

☐ **crampons:** The clip on type are the quickest to put on and take off which can save an appreciable amount of time on a mixed climb. The front points should stick out from the front of the boot about 2.5cm. Be sure to check the heel piece is compatible with your boots and stays in place when in the up position. A well adjusted 'strap on' crampon can be more secure than a 'clip on' but it takes practice to become efficient with them. If you're bringing your own crampons we highly recommend you have anti-balling plates attached to them. 12 point crampons are recommended for most ascents however 10 point crampons are acceptable for courses and some lower angle ascents.

Crampon Ratings - Please ensure boot and crampons are matched. For a crampon to work successfully, it must be attached to a boot that has an equal or better rating. For this reason all suitable boots are given a rating (B1, B2 or B3), which corresponds to the rating of the crampon (see below). All summer climbing trips (except for non-snow and ice trips) require C2 or C3 crampons.

- **C1:** Designed for walking purposes only, attached with straps.
- **C2:** Suitable for general mountaineering and low-grade ice climbs.
- **C3:** For technical ice climbing, with modular front points - attached with a heel clip and toe bail.

Boot Rating	Crampon Rating
B1	C1
B2	C1, C2
B3	C1, C2, C3

☐ **ice axe:** For most alpine climbing you need a straight shafted axe between 60 cm to 80 cm long. A longer tool is more helpful on moderate ground and even the most difficult climbs have approaches and descents for which this is helpful. Short axes (45cm - 60cm) with curved shafts and rubber hand grips are fine on hard technical ice climbs but not so suited to most alpine climbing. The head of the axe should be comfortable to hold when in the walking stick mode and not have any protrusions which may dig into your hand. The pick can be curved or banana shape. Shafts are either metal, or carbon fiber and some have rubber hand grips. A wrist loop is needed for support on the steeper stuff and you should be able to hold the bottom of the shaft with the sling tight.

☐ **ice screws:** We use Grivel Helix 20cm and Black Diamond Turbo Express 19cm.

☐ **ice hammer:** This can be a shorter tool (45 cm to 55 cm) 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 the same length on steep ice and others like a combination. Only experimentation can identify your own preference. The hammer head receives quite a lot of abuse on a climb and must be very secure with a good striking surface.

- **helmet:** The plastic helmets designed for climbing are lightweight and really only designed to deflect falling ice and rocks. They also protect the head in the case of a fall. Check the harness size and be sure it will adjust for when you wear your warm hat underneath. Do not borrow a helmet made of plastic if it's more than 4 years old.
- **harness:** The sit harness type is mainly used. These should be lightweight and adjustable around the waist and legs. A specially designed alpine harness is easier to get in and out of (which is important when nature calls) and they can be put on even when you have boots and crampons on. Many specialised rock climbing harnesses have fixed leg loops so will not do this. Comfort is essential. If you're bringing your own harness, please ensure you have a "cows-tail" or lanyard which is an arms reach long.
- **carabiners:** Bring your own screw lock and snaplink carabiners - otherwise use ours.
- **prussic slings:** 1 x 2.8m - 2 x 1.6 m (loop length). 6mm kernmantel. A double or triple fisherman's knot ties these into slings.
- **tape slings:** Regular climbing tape slings (25mm) at a variety of lengths (e.g. 1 x 1-1.5m loop length).
- **avalanche transceiver:** Any time the avalanche hazard is judged to be present, transceivers will be required. There are many models but all modern transceivers operate on the same frequency. Roughly (it can change quickly with a snow storm) we require transceivers from June to December.
- **snow goggles:** In glaciated terrain, goggles are an essential safety item. In stormy weather it can be impossible to navigate without proper eye protection. At least two people in the party should have good quality snow goggles in case they are required. Goggles with dark lenses can be used as a backup in case sunglasses are lost or broken.

- **rock shoes:** In the event of bad weather we often go rock climbing on the crags around Wanaka. If you are a keen rock climber feel free to bring your shoes just in case.
- **walking poles:** Some people prefer to use one or two walking poles. Poles need to be collapsible so they will fit on your pack when not in use. Poles should not be used where you may need your ax to self arrest.
- **crevasse rescue kit:** Although not strictly necessary, it can be useful for trips involving glaciers to have some specific bits of equipment to help with crevasse rescue. These include lightweight pulleys or progress capture devices such as the Petzl Micro Traxion.

sleeping & carrying

- **bivi bag:** A bivi bag may be required depending on the type of trip, venue, weather, desires, etc... . It is a lightweight bag to use when spending the night out. A bivi bag is much lighter than a tent and handy to have in an emergency. The best type are full Gore-Tex or similar.
- **sleeping bag:** Down or synthetic is fine. From January to April a light weight summer bag is usually fine. For the shoulder seasons a 3 season bag good to -5 degrees C (23 degrees F) is needed.
- **sleeping pad:** Most trips are based out of huts where mattresses are supplied. However if a bivi is planned then a sleeping pad will be needed. A "thermorest" type pad is most comfortable. ¾ length pads are fine but if the plan is to sleep on snow you will need a double layer. Save weight, avoid the full length thick sleeping pads.
- **backpack:** There are many models available which are suitable. You must have at least a 50 litre capacity. You do not need a pack larger than 65 litres. A day pack (30-40 litres) can be useful for local day trips and some mountain locations if you are not expecting to walk out. Ensure the packs have ice tool attachments.
- **pack liner:** Many people use heavy purpose made pack liners available in either plastic or "dry bag" materials. These are good for hiking where

weight is not such an issue and you tend to actually be out in the rain more. A better solution is to have a couple new plastic trash bags which are new and kept for use in an emergency. They are light, have many uses and best of all they will not have any holes in them when the time comes.

- **headlamp:** Black Diamond & Petzl have great headlamps. Bring two extra alkaline batteries for the trip.
- **sun glasses:** Preferably the glacier glasses type with side protection. The lens should be dark enough to withstand the intense reflection from the snow.
- **sun block:** A small bottle of maximum protection sun block and lip protection.
- **water bottle:** Be prepared to carry 2 litres of water. Camel backs are fine but require care.

Guide tip #4: "PET" bottles (like a plastic coke bottle) are lighter, crushable and much cheaper than nalgene bottles.

optional bits `n' pieces

- **stuff bags:** Lightweight nylon bags with draw cords to store spare clothes etc. Bring 2 or 3. This will keep all the stuff in your pack organized.

- **toilet bag:** Soap, toothpaste and toothbrush in plastic bags. Also any medication required. (Please inform your guide if you are on prescription medicine)
- **plastic bowl, cup & spoon:** A light non-breakable bowl and spoon. The cup can be tin or non breakable plastic. If you are big eater, bring a big bowl.
- **first aid kit:** In a small stuff bag or container carry blister tape, 2nd skin, anti-inflammation drugs. Ensure contents are kept watertight. Your guide will have a full first aid kit.
- **compass, note book and pencil:** Any compass which is suitable for orienteering will do. Ensure your compass is suitable for the Southern Hemisphere. Notebook and pencil should be water proof or wrapped in plastic bags.
- **ear plugs:** For light sleepers these can be a great help!
- **a good book:** Good for bad weather or rest days. A light paperback is fine.

please check the equipment list for your particular trip