

# Rjukan Ice – A Summary Guide

This guide is based on the original guide by Jon Haukåsveen *Isfører for Rjukan*. Jon has also co-authored a completely new Rockfax guide *Heavy Water – Rjukan Ice* which is available from December 2005 and is recommended. Both Jon and Andreas Spak, another local pioneer, have given input to this summary guide over the previous years. However, due to the publication of the Rockfax guide and the likelihood that they will keep the new guide up to date, I will be using less energy updating this guide. Any comments however, are always welcome, and I am always interested in removing any mistakes.

Since 1998, I have climbed extensively in the Rjukan area. It is now, without doubt, one of northern Europe's premier ice climbing areas. The area has been made popular by the availability of this free guide and information through my website and through Andreas Spak's website. The deep Rjukan valley surrounded by large feeder slopes gives the ideal place for forming icefalls. No other area that I know of has such a concentration of water ice routes in such a small area, with such short approaches, and with a long and stable season. There are also good skiing (both alpine and cross-country) and hill walking possibilities close by. Gaustatoppen (1881m) dominates the area and if you are lucky, it is said that it is possible to see one sixth of Norway from the top on a clear day.

In recent years, the area has experienced a boom in visiting ice climbers and there are guides from many countries bringing clients to the Rjukan area. Cheap airline tickets have definitely had their effect. However, because of the areas popularity it is important that one respects the area so that together we can ensure that the area will remain intact and popular for many years to come. Some things will help;

- Support the local economy by using local accommodation and buy groceries and petrol in the area.
- Think about where you park and respect local inhabitants and their access.
- Respect other climbers and normal climbing ethics.
- Do not damage trees when abseiling, abseil from a piece of tat or an ice thread or walk down.

## Local History

The area has a great history and is inspiring. In 1907, only 50 families lived in the area which is surrounded by large expanses of mountain terrain. By 1917 however, the population had reached 10000. This sudden growth was caused by the recognition, by the engineer Sam Eyde and physicist Kristian Birkelund, that the power of the dramatic waterfall Rjukanfossen could be harnessed. Rjukanfossen is located at the head of the deep canyon Marisjuvet, 8km west of Rjukan. Marisjuvet is named after the girl Mari, about whom there are several legends. During these formative years a hydro-electric power station called Vemork and large chemical plant was built by the company Hydro. It is surprising to learn that the local farmers, who held the rights to the water that flowed over Rjukanfossen but were unaware of its value, sold their rights for only 600 Norwegian kroner to the industrialists.

The area continued to develop until German occupation during the Second World War. The Germans recognised the potential for producing heavy water at the plant and in turn how heavy water could be used in the development of an atomic bomb. Heavy water is D<sub>2</sub>O rather than H<sub>2</sub>O, the D being deuterium – a hydrogen atom with an extra neutron. Heavy water is 10% heavier than normal water and when used in nuclear reactors, speeds the fission process giving a sustained chain reaction. The Allies also saw this potential for making an atomic bomb. In the early spring of 1942, the Allies began reconnaissance of the area using local Norwegian freedom fighters and towards the end of the year they attempted the first sabotage. Unfortunately the first attempt failed and the surviving group members had to survive through the harsh winter avoiding detection on the Hardangervidda mountain plateau. In February 1943, with assistance from a new 6 man group that were parachuted in, the Allies successfully destroyed most of the heavy water already produced by sneaking in to Vemork and blowing up the tanks. Following this attack, the German forces rapidly rebuilt the plant and resumed production.

The Americans then decided to stop the production once and for all. In November 1943, they bombed Vemork from the air destroying the plant and killing 22 local civilians. However, this was not the end of the story. Local intelligence sources discovered that the Germans had planned to move the surviving semi-processed water to Germany. They would use the railway from Vemork and the connecting ferry across Lake Tinnsjø, located 15km east of Rjukan. In February 1944, local saboteurs blew up the consignment while it was on the ferry. Be sure to see the film *Heroes of Telemark* before you visit.

## Getting to Rjukan

Rjukan is located in southern Norway and is not far from the vast Hardangervidda National Park. There is good road access with the following distances and travel times from the major points of attack;

Oslo	175 km	110 miles	3¼ hours
Larvik	175 km	110 miles	3¼ hours
Haugesund	290 km	181 miles	5 hours
Kristiansand	300 km	186 miles	5½ hours
Gothenburg (Sweden)	350 km	218 miles	6 hours
Stavanger	370 km	231 miles	6½ hours

When in the area, expect to drive between 10 and 40km a day depending on where you stay and climb. Petrol will set you back approximately 10-12 Norwegian kroner per litre or approximately £4 a gallon.

## Winter Driving in Norway

The journey times above may seem longer than you may be used to for the distances, but driving conditions, winding roads and lower speed limits dictate it. If you are bringing your own car, then be aware of the requirements for adequate winter tyres or *pyg dæk* (those with metal studs) and a set of snow chains. If you hire a car in Norway, then all this should be taken care of. In Norway, they do not use salt on the roads but grit, so your car will get dirty. It is also a requirement that you drive with your lights on at all times, and remember to drive on the right hand side!

## Local Amenities

Rjukan has just about all you need, including cash points, garages, shops, a tourist office, cinema, swimming pool, hospital etc. Normal shop opening hours are 9am to 5pm weekdays, and 10am to 3pm on Saturdays. Note that the tourist office is not open on weekends during the winter. For those of you liking a beer at the end of the day, then you can buy beer in the supermarket but it is rather expensive and to get wine or spirits you have to go to the *vinmonopol*, so remember the duty free when travelling.

## Where to Stay

There are many places to stay, too numerous to mention here. However, there is a hotel and youth hostel in Rjukan centre. Not far from there you will find *Rjukan Hytteby* (pronounced huh-te-bu – 'by' meaning town), here you can rent wooden houses that are replicas of the first workers cottages built in Rjukan in the early 1900's. The nearest campsite can be found at *Rjukan Hytte- og Caravanpark*, 8km east from Rjukan centre. Here you can camp or rent a range of log cabins with space for 2 persons upwards at very reasonable rates. Near the ski area at Gaustablikk, there are a range of options for accommodation and it is perfect if some of your party wish to ski, however be prepared to pay more. In Vår, there are also 2 newly refurbished apartments, owned by some English climbers, available for rent, see their website [Rjukan.co.uk](http://Rjukan.co.uk). If you are visiting during the Christmas and New Year holidays or in week 7 then book early – these are school holidays in Scandinavia. For more information visit the local tourist office website.

## Season & Weather

There is climbable ice in the Rjukan area from the end of October through to early April. However, the best and most reliable time to visit is mid January to mid March. At this time, there are more daylight hours and ice will be in abundance. To give you an idea, in early January it is only properly light from 9am to 4pm. By mid February, there is nearly 2 hours more daylight. The daytime temperature is mostly between +5 and -15°C, the average temperature in February being -6.5°C. The weather can offer clear blue skies, or heavy snow. Don't expect to sun yourself, as the valley bottom and canyon remain in the shade for the entire ice climbing season. It is only the icefalls on the south facing walls of the valley (mainly above the town to the north) and above Dale Bakhus, 5km east of Rjukan, that get the sun later in the season. This also means that they are the first to disappear. Extraordinarily in recent years, Rjukan has seen odd shorts spells of mild weather even in January when it should be coldest. It is a good idea to check out weather forecasts (see <http://vaer.sol.no/> and search for Rjukan) and local conditions beforehand with regard to ambitions. That said ice conditions here are far more reliable than in the UK.

## Useful Links & Contact Numbers

Here are one or two useful links and contact numbers in the area;

Police, ambulance, fire brigade	112	
Rjukan Tourist Office	(+47) 35091290	<a href="http://www.rjukan-turistkontor.no">www.rjukan-turistkontor.no</a>
Rjukan Auto car garage/mechanic	(+47) 35091660	

## Grading System

A major difference from Jon's first guide and previous editions of this guide is the change to the North American grading system from the adapted Scottish winter grading system previously used in the area. The North American system has developed and become popular in the last 10 years for describing water ice, alpine ice and mixed climbs with a Roman numeral grade for seriousness and an Arabic number describing the technicality of the hardest pitch on the route. Jeff Lowe has been a pioneer of this system. A current estimate is that 80% of the worlds known ice climbs are now graded with this system. The reason for the change in the Rjukan area is because most of the climbs are by no way serious, and it is the technical grade that is interesting. Also, the vast majority of climbs around Rjukan are on pure water ice (WI) as apposed to Scottish style snow/mixed terrain. The system is described below.

It should be noted that ice climbs are a forever changing medium and therefore the grade describes the route during an average season. You should therefore always judge the actual conditions of a climb. The line you choose on many of the routes will also influence the grade.

### Overall Seriousness

The overall seriousness or commitment of the climb is indicated by a Roman numeral from I (least serious) to VII (most serious). In Rjukan, most climbs are grade I and II, with some long routes being grade III's. For this reason, the first three seriousness grades are only described below for information, but the guide does not include the seriousness grade;

- Grade I A short climb with a short approach and easy descent. No longer than an hour or two is required.
- Grade II Climbs of only a few pitches with a straight forward short approach with no objective dangers. Descent is straight forward although it may be by abseil or down climbing. The climb may be a single pitch route with a longer approach. Time needed is less than a few hours.
- Grade III Typically a low elevation multi-pitch climb with a moderate approach and long descent. The climb may be single pitch with a longer approach. Approach is often at least 1 hour. Some objective danger may be encountered. Descents typically require abseil from your own anchors. Time required is often half a day.

### Technical Difficulty

The technical grade indicates the type of terrain on which the hardest pitch is found, together with the technical difficulty of the hardest pitch. The type of terrain is described as follows;

WI	Water ice (hard ice formed from water)
AI	Alpine ice (a softer more porous ice formed from snow under high pressure)
M	Mixed, i.e. difficulties on both rock and ice

The technical difficulty is described by an Arabic number from 1 (easiest) to 7 (hardest), although some grade 8's are now appearing. For mixed climbs the technical grade extends to M11 and potentially higher as standards improve. The list below describes each of the grades for water ice climbs;

- Grade 1 Low angle ice inclined at 40-50°. 10 point crampons and one axe are adequate.
- Grade 2 Ice at an average angle of 60° with short bulges to 70°. Climbing is consistent with good protection and belays. Experienced climbers will often solo grade 2 ice.
- Grade 3 Ice at an average angle of 70°. You may encounter short steeper sections to 80°. There will be good rests and stances and the climbing is on thick ice with secure protection easy to find.
- Grade 4 Sustained climbing on 75-85° ice, separated by good belays. The ice is generally thick and of good quality with satisfactory protection easy to find. Ice may include chandeliers.
- Grade 5 Climbing on sustained 85-90° ice, with little or no rests possible. The ice is still of reasonable or moderate quality and can feature chandeliers, cauliflowers etc. Placing adequate protection may require some effort.
- Grade 6 Sustained climbing on 90-95° (i.e. overhanging) ice. Thin ice will be encountered and there can be sections of rotten ice. Ice roofs, free hanging pillars, curtains and the like may be encountered. Protection may be dubious. Typically includes some mixed sections.
- Grade 7 Sustained climbing on overhanging ice with extended sections of thin and/or poor ice. There may be significant deeply overhung sections requiring technical mixed moves. Protection will be marginal.

Additionally, I have used the grade D for dry-tooling routes which are exclusively on rock with no ice.

## Visiting for the First Time?

Rjukan is a fantastic place to discover water ice climbing. There is an abundance of short icefalls within 5 minutes walk of a car park, and many of them can be top-roped. There are also large easy grade 2 and 3 icefalls for practising leading. If you are visiting for the first time, I would recommend the easier routes in the Krokkan area, near Bullen, and those in the lower gorge in Area C. Also, on the road to Gaustablikk near the second road bend, there is a collection of fine 1 pitch routes.

## Attire & Equipment

If you are an experienced Scottish winter climber then dressing for Rjukan will be easy. Although the temperature is often lower than in Scotland, you won't experience the wind in the canyon or lower valley, only on the routes higher up. Regarding equipment, technical axes are advised for climbing grade 4 upwards together with two 60m half ropes (optimal, though a single 60m is best for top-roping), eight or so 22cm screws, four 17cm screws, a bulldog or two, several 120cm slings and karabiners, ten quickdraws and several metres of 7mm cord and a wire hook for making ice threads. On some routes a selection of rock gear including wires and friends will be needed.

## The Climbing Areas

### Area A

Using map series M711 sheet 1614 IV Rjukan, Area A is between 702 361 and 708 368 (the map is not necessary to locate the area). Park at Krokan Fjellstue (705 366). For routes 1 to 17 walk along the small road (past the barrier) towards Gausdalen for 600m to a bridge, the routes are in order going downstream (right to left when stood beneath the routes). It is also possible to drop down through the trees after 400m then Bullen is right in front of you. On the left side of the road beyond the small bridge it is possible to top-rope most of the icefalls. For routes 18 to 21 follow the main road towards the tunnel and then the tourist path for Rjukanfossen. For routes 22 - 26 you can walk down or abseil into the canyon near the road tunnel or walk up from the bridge at Vemork (see Area B).

### Area B

Area B is between 708 368 and 719 376. Drive to the village of Våer and follow the road downhill towards Arbejdsmuseum Vemork. Park in the large car park on the left before the suspension bridge. From here it is possible to get down into the canyon by abseiling from the bridge or walking down from the north east corner of the car park. There are several good routes immediately below the bridge and also several classics and one or two test pieces further upstream.

### Area C

Area C is between Våer and Krosso (745 378). Parking is along the main road 37 in the appropriate marked parking areas. For routes on the south side of the valley above the disused railway, it is possible to walk from above Vemork or Rjukan.

### Area D

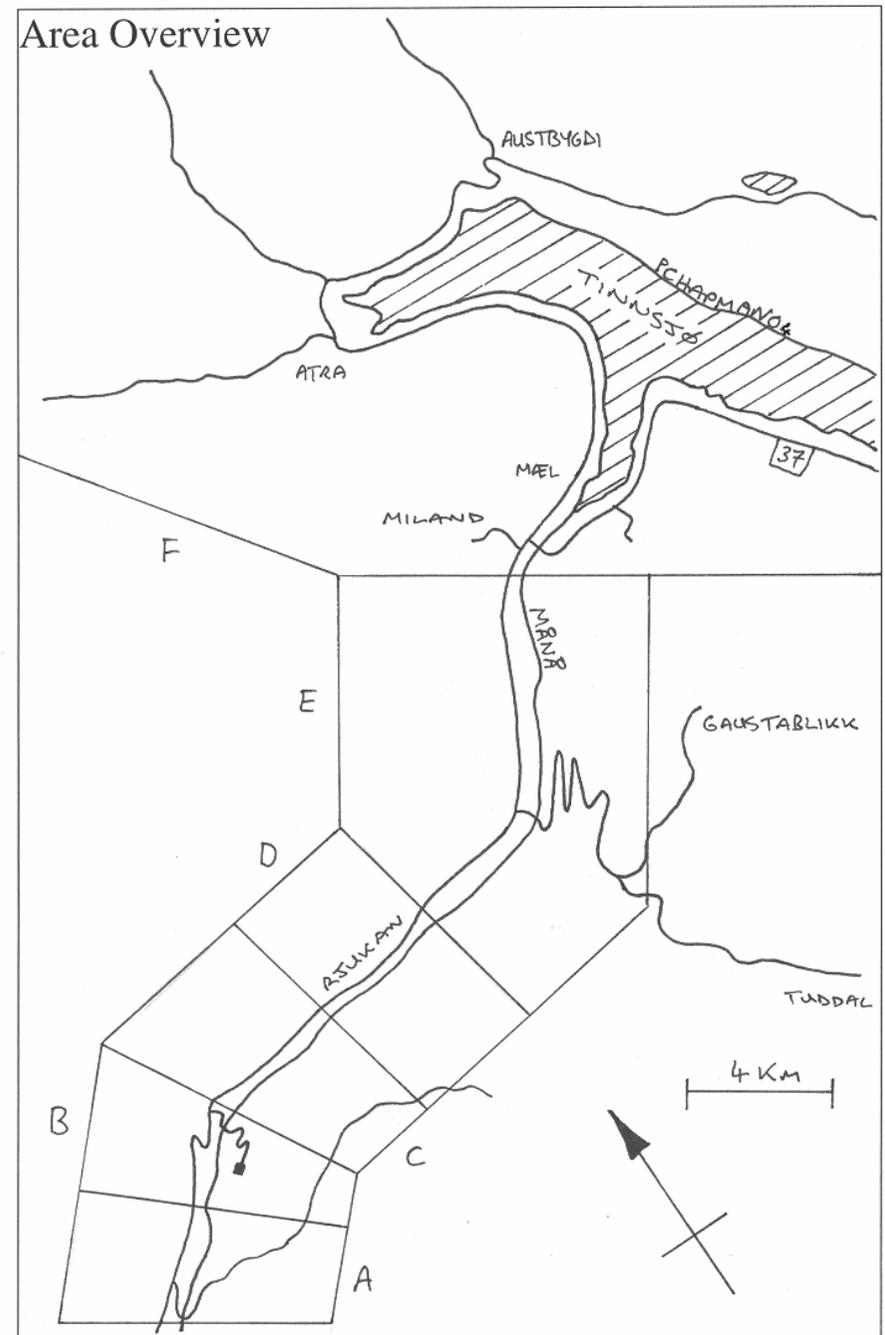
Area D is between Krosso and the eastern side of Rjukan toward Svadde (790 380). For routes on the south side of the valley it is best to park in Rjukan near the youth hostel.

### Area E

Area E is from the area west of Svadde (790 380) to approximately 7 km north east of Rjukan centre. Access to many of the routes is along the road to the Gaustablikk ski area. Some routes are in a remote mountain environment so you should be suitably equipped. The ice falls above the tree line are often exposed to wind making climbing unpleasant or impossible.

### Area F

Area F covers the large area around Tinnsjø with relatively few routes.



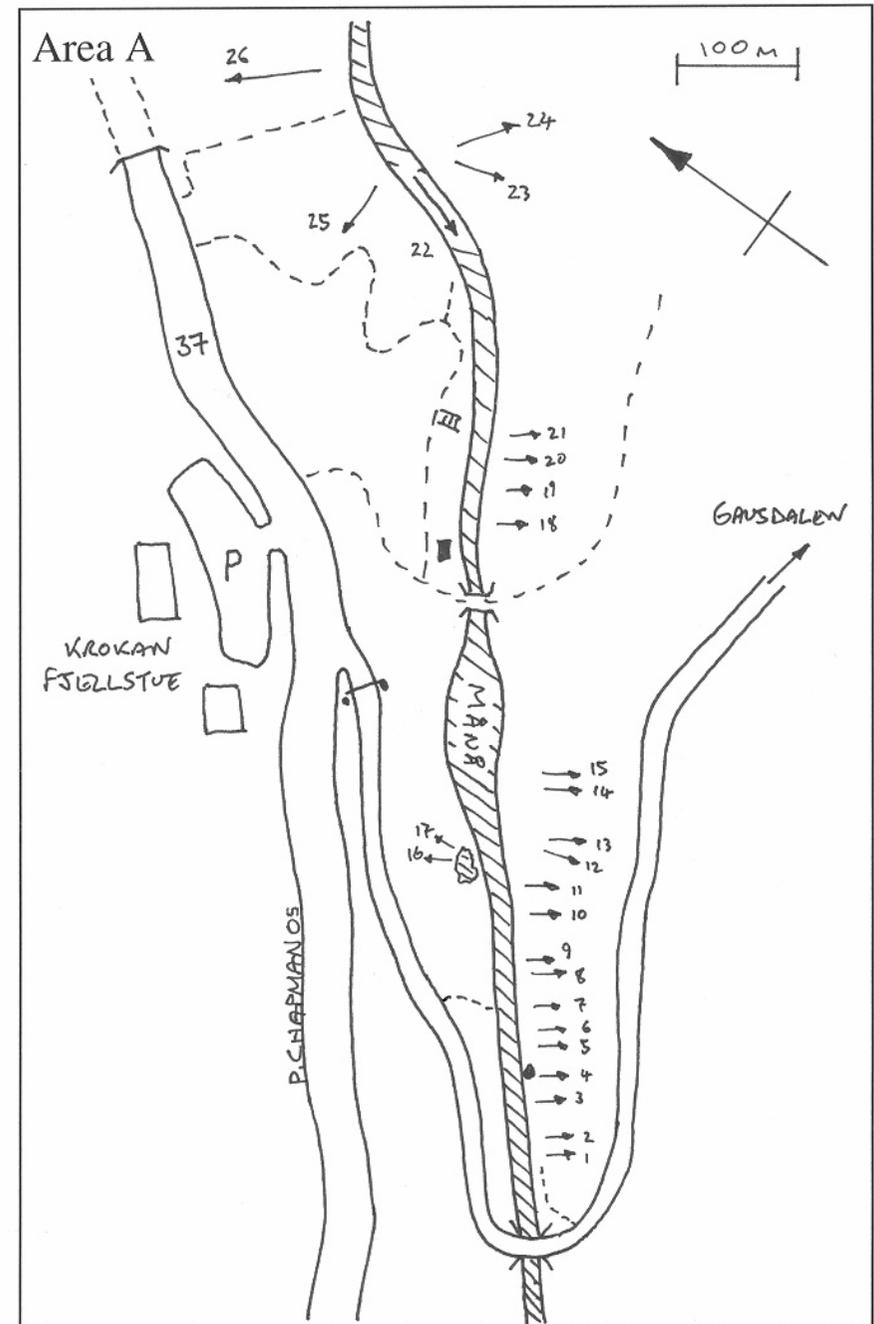
## Area A

Number	Route	Pitches	Grade*
1	Lucky Lisa ( <i>up over the largest ice tentacle</i> )	1	M 8
2	Not Only a (n)ice Guy	1	M 8
3	Fyrstikka	1	WI 5
4	Jomfrau ( <i>by the boulder</i> )	1	WI 4
5	Energizer	1	M 7
6	Super Mario ( <i>when fully formed</i> )	1	WI 6
6a	Super Mario Direct ( <i>mixed start of 6 to ice</i> )	1	M 7
7	Bullen	1	WI 3
8	Gaustaspøkelset (Gausdalfossen)	1	WI 4
9	Tipp ( <i>just left of 8</i> )	1	WI 5
10	Topp ( <i>often with short mixed start</i> )	1	WI 5
10a	De Kaller meg Fjård ( <i>righthand start of 10</i> )	1	M 7
11	Tannpirkeren ( <i>rarely in condition</i> )	1	WI 5
12	Kjøkkentrappa	1	WI 4
13	Bored to the Extreme	1	M 7
14	Karius	1	M 7
15	Baktus	1	M 7
16	Fission	1	D 10
17	Two Assholes & Five Nice Bolts	1	D 6+
18	Starten	1	WI 4
19	Heavy Water	1	M 10
20	Arne	1	M 9
21	Go On	1	M 7
22	Rjukanfossen <sup>#</sup>	3	WI 4
23	Vinduet (Das Fenster) ( <i>serious</i> )	3	WI 7
24	Lipton ( <i>the famous classic</i> )	4	WI 7
24a	Lipton Direct ( <i>right hand variation of 24</i> )	3	M 7
25	Verdens Ende	3	WI 5
26	Juledagsfossen	3	WI 4

\* WI (water ice), M (mixed) or D (dry tooling).

# Danger of sudden water flow, ascent not advised or possibly contact Hydro before climbing.

Between routes 13 & 14 there is also an easy WI 2 route and a short thin WI 5 route that rarely forms fully.



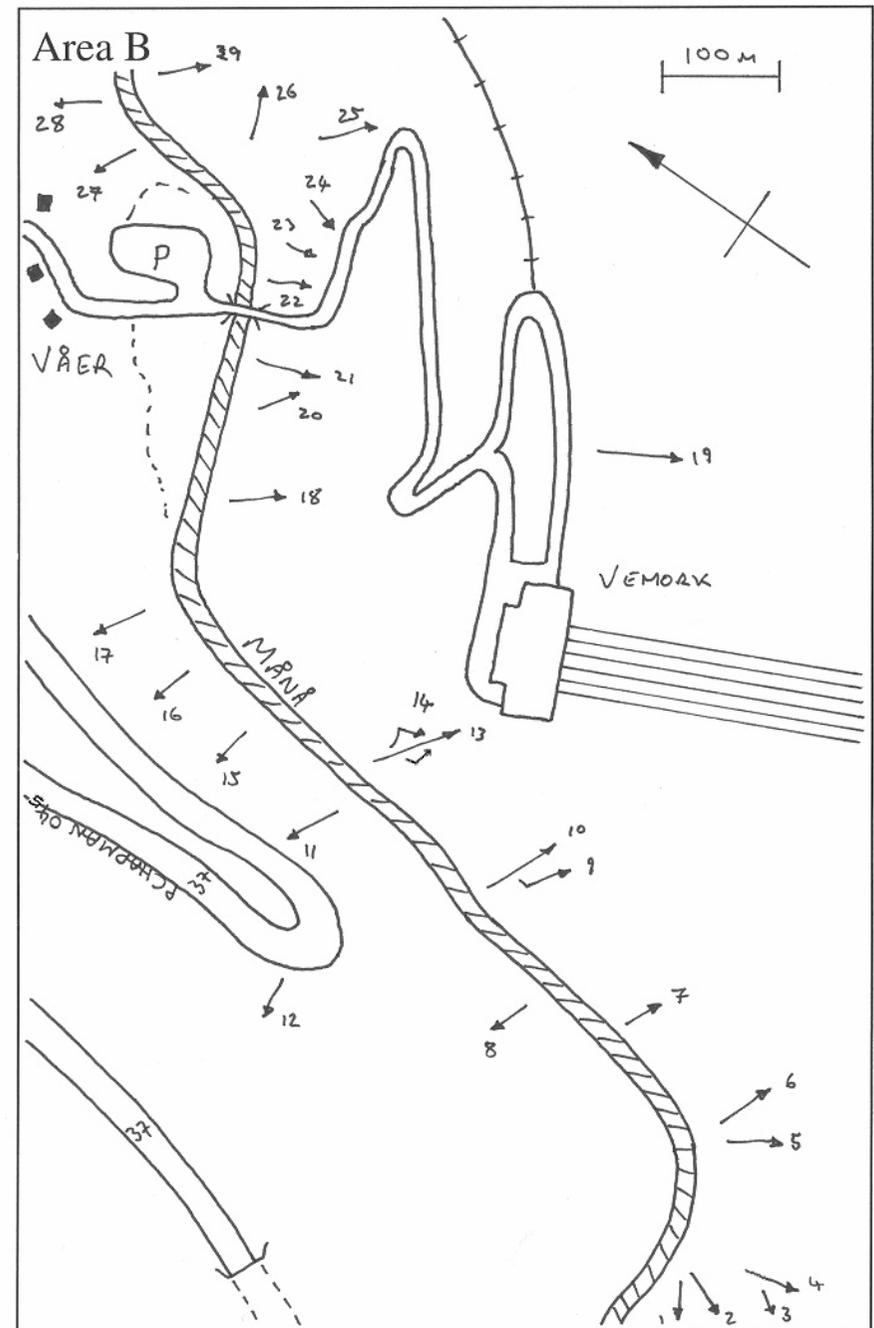
## Area B

Number	Route	Pitches	Grade*
1	Nydelig Glasur ( <i>rarely in condition</i> )	4	WI 4
2	Trappfoss	4	WI 4
3	2 Assholes & A Nice Guy ( <i>serious</i> )	3	WI 6
4	Juvsøyla	3	WI 6
5	2 Nice Guys & A Working Class ...	2	WI 4
6	Blindtarmen	2	WI 4
7	Den Grå (Der Graue)	1	WI 6
8	By The Way	1	WI 3
9	Ronita	3	WI 6, M 5
10	Sabotørfossen	3	WI 5
11	Nedre Swingfoss	1	WI 3
12	Swingfoss	1	WI 4
13	Nye Vemorkfoss	3	WI 5
13a	Tanja ( <i>right hand variation of 13, pitch 2</i> )	3	M 5
14	Bakveien ( <i>left hand variation of 13, pitch 2</i> )	3	WI 4
15	Lettvann	3	WI 2
16	Tracy's Eyes	2	WI 3
17	Snøddvekk	3	WI 3
18	Morsom Start	2	WI 4
19	Susses Veil	2	WI 2
20	Kokosnøtten ( <i>rarely in condition</i> )	1	WI 4
21	Vemorkbrufoss Vest	2	WI 5
22	Vemorkbrufoss Øst	2	WI 4
23	Hark	1	WI 3
24	Host	1	WI 4
25	Sir Psyko ( <i>rarely in condition, thin 2nd pitch</i> )	1	WI 4
26	Dauterium	1	WI 3
27	Tungtvann	2	WI 4
28	Shit Happens <sup>s</sup>	2	WI 4
29	Trollfossen	xxx	xxx

\* WI (water ice) or M (mixed).

<sup>s</sup> This fall is formed from waste water and sewage from the houses above!

xxx Do not climb!! (this fall is part of the outflow from the power plant).



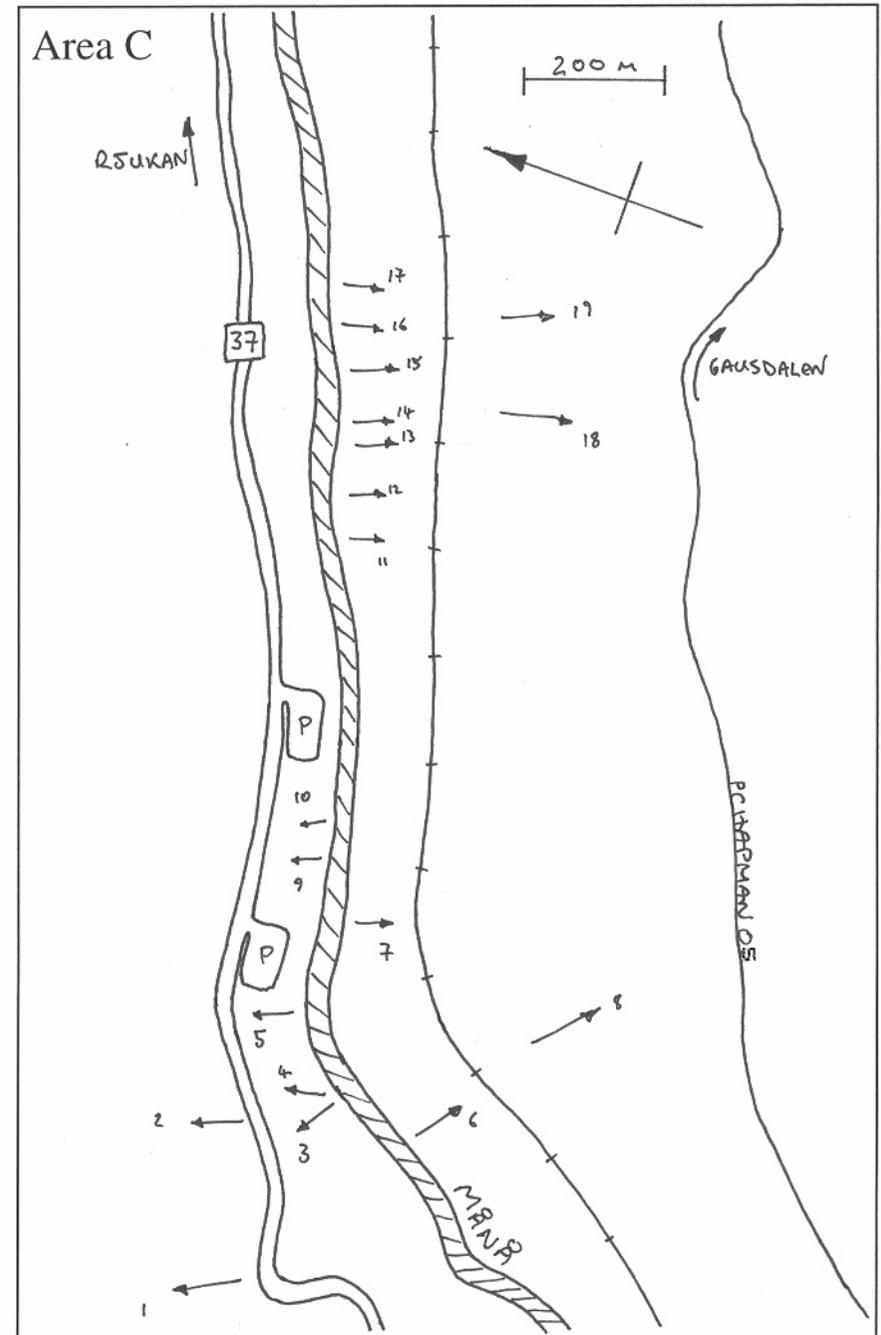
## Area C

Number	Route	Pitches	Grade*
1	Våeråi (Våerbekken) <sup>□</sup>	9	WI 3
2	Dynamittfossen <sup>#</sup>	1	WI 5
3	Twin Ice One	1	WI 4
4	Twin Ice Two	1	WI 5
5	Skrotfossen	1	WI 3
6	Soloisten	1	WI 2
7	Camillas Foss	1	WI 3
8	Jungelboka	3	WI 2
9	Pentium	1	WI 3
10	Swiss Army	1	WI 4
11	Lillebror	1	WI 3
12	Knerten	2	WI 3
13	Verdens Gang (just to the right of 14)	1	M 6
14	Hjemreisen	1	WI 4
15	LP Plata	1	WI 3
16	Trippel	1	WI 4
17	Kort og Godt	1	WI 4
18	Rånåbergfossen	7	WI 3
19	Kaminfossen	2	WI 4

\* WI (water ice) or M (mixed).

# This icefall is right on the roadside so be aware of traffic!

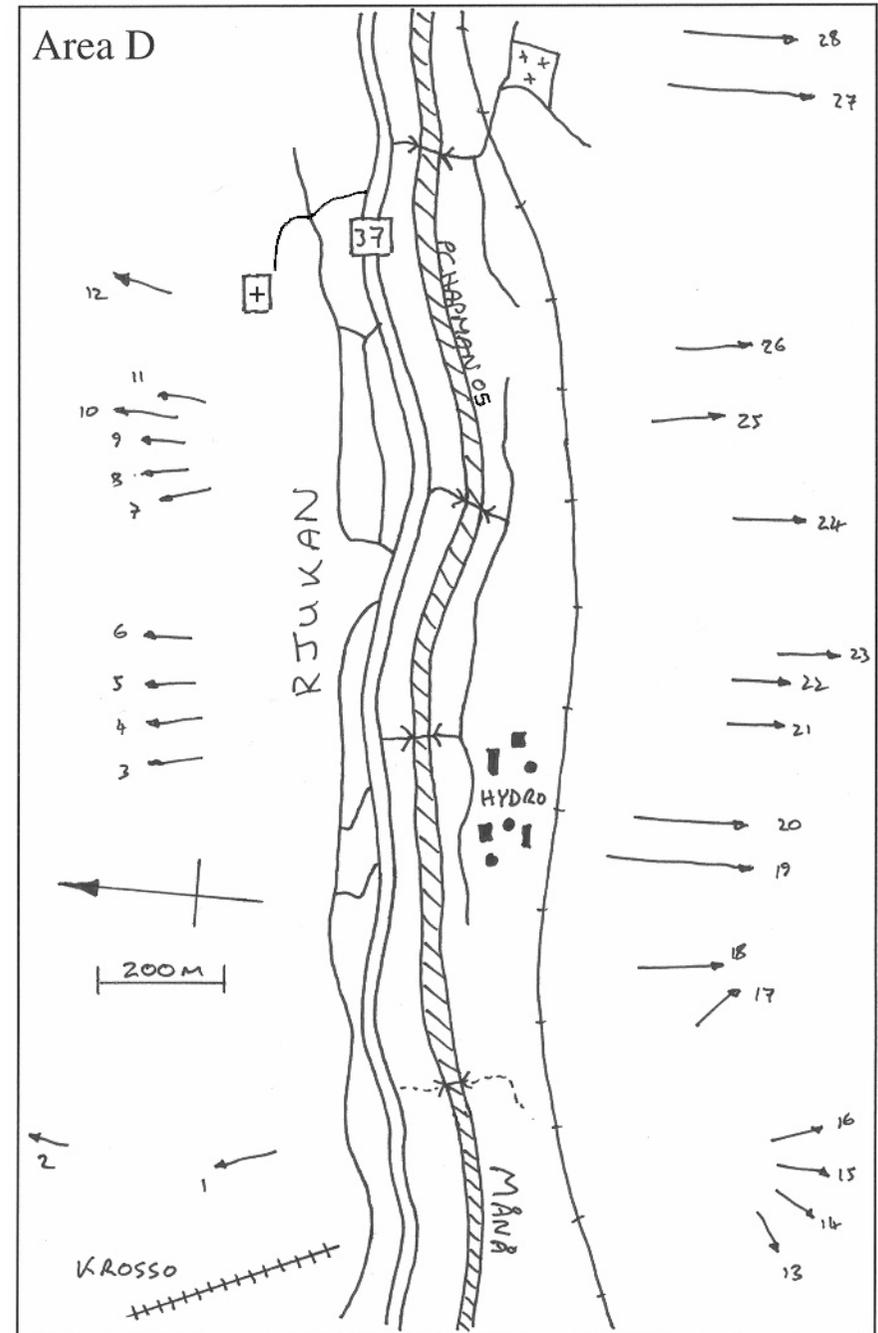
□ Do not climb (this icefall forms the water supply for Våer).



# Area D

Number	Route	Pitches	Grade*
1	Krossobekkfossen	1	WI 2
2	Op i Sola	1	WI 4
3	Fossekallen	2	WI 4
4	Fossekjerringa	2	WI 5
5	Gråbeinsisen	1	WI 4
6	Sidrebekken	3	WI 3
7	Solfesten	4	WI 5, A2
8	For Alle Menn	2	WI 5
9	Klappfoss	3	WI 4
10	Lysløypa	3	WI 4
11	Tjønnsstadbergfossen	4	WI 4
12	Sykehusfossen	3	WI 4
13	Klokkhovdfossen	2	WI 4
14	Klokkhovdsøyla	2	WI 5
15	Den Gjemte Overraskelsen	2	WI 3
16	Blomkålsfossen	2	WI 5
17	Herligheten	3	WI 4
18	Faireyfoss	4	WI 2
19	Pannebåndet	5	WI 3
20	Fabrikkfossen	7	WI 3
21	Harde Tider	3	WI 5
22	Helt OK	2	WI 5
23	Gammel Nok	3	WI 4
24	Rennefossen	9	WI 3
25	Elektrosylen	2	WI 4
26	Hobnobs	5	WI 3
27	Gaustamarathon	17	WI 3
28	Gaustahalvmarathon	15	WI 3

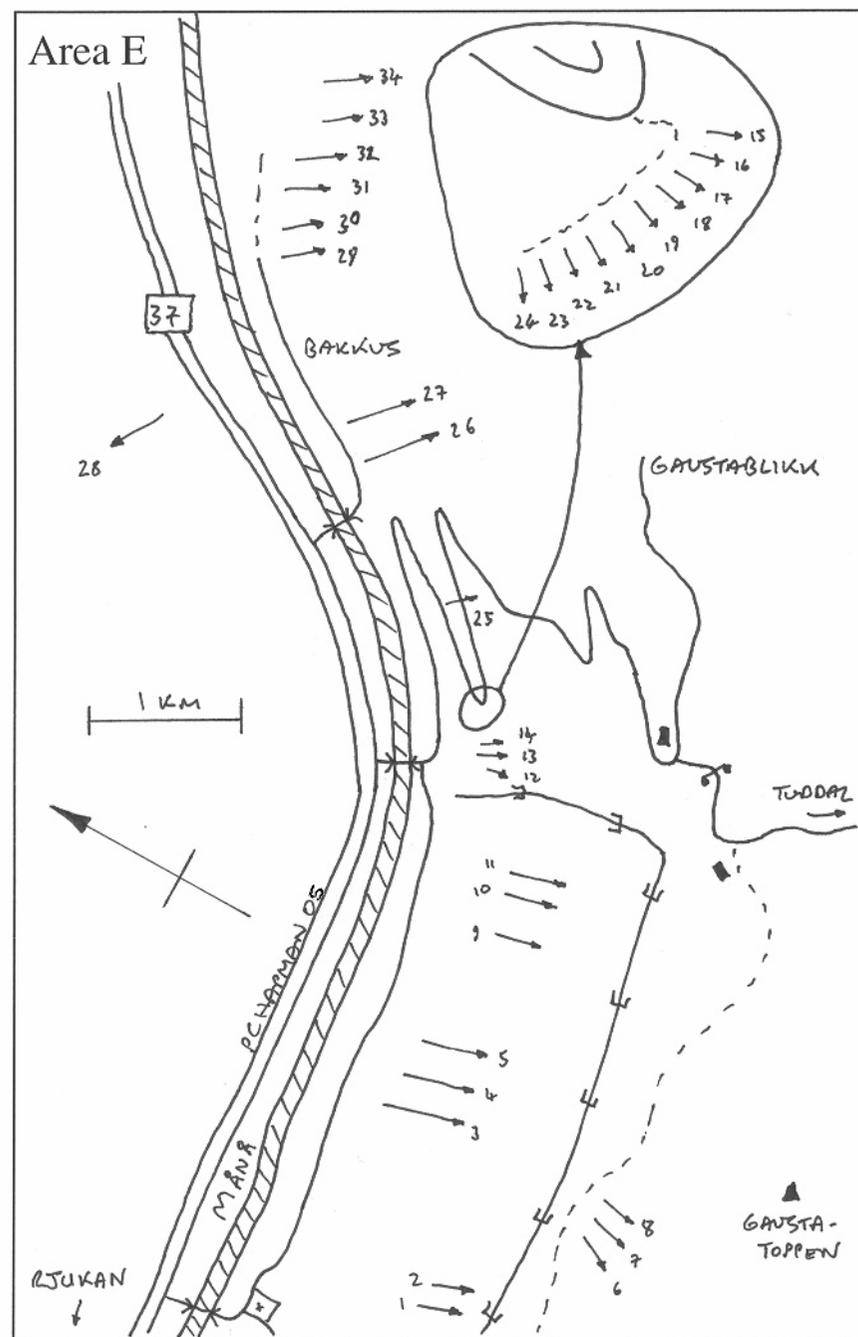
\* WI (water ice) or A (aid).



## Area E

Number	Route	Pitches	Grade*
1	Frihetssøyla	2	WI 5
2	Høgfossen	3	WI 4
3	Topp På Toppen	4	WI 4
4	Svaddefossen	3	WI 4
5	Kyllingtrappa	3	WI 3
6	Gaustatoppfossen	1	WI 4
7	Gaustatoppfossen, Mitre	1	WI 4
8	Gaustatoppfossen, Øst	1	WI 4
9	Jans Foss	1	WI 2
10	Lillelie	1	WI 2
11	Pervosøyla	1	WI 4
12	Dale	1	WI 3
13	Spir	4	WI 3
14	Lost Andres'	2	WI 3
15	Anakje	1	WI 3
16	Minidisken	1	WI 3
17	Ozzimosis	1	WI 4
18	Presangen	1	WI 5
19	Klassisk 4	1	WI 4
20	Svada	1	WI 3
21	Årsdagen	1	WI 2
22	Julevask	1	WI 2
23	Juledusj	1	WI 3
24	Skruéis	1	WI 3
25	Armeringsjernfossen	3	WI 3
26	Kvitåa	9	WI 3
27	Kvitåa Øst	8	WI 3
28	Stampebekken	7	WI 3
29	Plaster På Såret	2	WI 3
30	Bølgen	5	WI 3
31	To Menn Og Et Foster	4	WI 4
32	Sjeldenheten	3	WI 5
33	Solbærtoddy ( <i>serious</i> )	5	WI 7
34	Trefirefemman	3	WI 4

\* WI (water ice).



## Area F

Number	Route	Pitches	Grade*
1	Rollgåsiget	2	WI 3
2	Haugsfossen	3	WI 5
3	Øst Haugsfossen	4	WI 4
4	Vest Isroser	4	WI 4
5	Isroser	4	WI 3
6	Syk-is	1	WI 3
7	Jail House Ice	4	WI 4
8	Skuffelsen	3	WI 5
9	Kong Vinter	2	WI 4
10	Kong Bore	2	WI 4
11	Presenil	3	WI 3
12	Gummiøkksa	2	WI 3
13	Trim For Eldre	5	WI 5
14	Gjuvåi	3	WI 3
15	Digernesfossen	6	WI 4

\* WI (water ice).

Several new icefalls have been developed in the Jail House Ice and Presenil areas during 2005 which makes the drive to these remote but quieter areas much more attractive.

